# REFRAMING THE CASE METHOD IN ENTREPRENEURSHIP EDUCATION

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## CASES FROM THE NORDIC COUNTRIES

*EDITED BY*

### KARIN WIGGER

*Assistant Professor of Industrial Management, Linköping University, Sweden and Associate Professor of Entrepreneurship, Nord University Business School, Nord University, Norway*

### LISE AABOEN

*Professor of Technology-Based Entrepreneurship, Department of Industrial Economics and Technology Management, Norwegian University of Science and Technology (NTNU), Norway*

### DAG HÅKON HANEBERG

*Associate Professor of Entrepreneurship, Department of Industrial Economics and Technology Management, Norwegian University of Science and Technology (NTNU), Norway*

### SIRI JAKOBSEN

*Associate Professor of Innovation, Nord University Business School, Nord University, Norway*

### THOMAS LAUVÅS

*Associate Professor of Innovation, Nord University Business School, Nord University, Norway*

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# CONTRIBUTORS

**Anil Engez**, Doctoral Researcher (MSc Tech), Faculty of Management and Business, Tampere University, Finland

**Bjørn Willy Åmo**, Professor, Nord University Business School, Nord University, Norway

**Carina Lomberg**, Associate Professor, DTU Entrepreneurship, Technical University of Denmark, Denmark

**Dag Håkon Haneberg**, Associate Professor of Entrepreneurship, Department of Industrial Economics and Technology Management, Norwegian University of Science and Technology, Norway

**Even Haug Larsen**, Assistant Professor of Technology-Based Entrepreneurship, Department of Industrial Economics and Technology Management, Norwegian University of Science and Technology, Norway

**Frida Lind**, Professor of Industrial Marketing, Department of Technology Management and Economics, Chalmers University of Technology, Sweden

**Fufen Jin**, Researcher in Entrepreneurship Education, Department of Industrial Economics and Technology Management, Norwegian University of Science and Technology, Norway

**Göran Lindström**, PhD, Senior Lecturer, Department of Civil and Industrial Engineering, Uppsala University, Sweden

**Gustav Hägg**, Assistant Professor, Department of Urban Studies, Malmö University, Sweden and Researcher at Sten K. Johnson Centre for Entrepreneurship, Lund University, Sweden

**Hanna Lehtimäki**, Professor of Management (Innovation Management), Faculty of Social Sciences and Business Studies (Business School), University of Eastern Finland, Finland

**Hannah Suder**, BSc, MSc Student, Copenhagen Business School, Denmark

**Helle Meibom Færgemann**, Special Consultant, Center for Educational Development, Enterprise and Innovation—The Kitchen, Aarhus University, Denmark

**Ingebjørg Vestrum**, Associate Professor of Entrepreneurship, Nord University Business School, Nord University, Norway

**Jens Laage-Hellman**, Associate Professor, Department of Technology Management and Economics, Chalmers University of Technology, Sweden

**Jesper Hart-Hansen**, Venture Capitalist, Lead Investor at Capnova on DataBoard investment, Denmark

**Jørgen Veisdal**, Associate Professor of Entrepreneurship, Department of Strategy and Entrepreneurship, BI Norwegian Business School, Norway

**Kaisa Henttonen**, Associate Professor (tenure track), Faculty of Social Sciences and Business Studies (Business School), University of Eastern Finland, Finland

**Karin Schnarr**, Associate Professor of Policy and Law, Lazaridis School of Business and Economics, Wilfrid Laurier University, Canada

**Karin Wigger**, Assistant Professor of Industrial Management, Linköping University, Sweden and Associate Professor of Entrepreneurship, Nord University Business School, Nord University, Norway

**Karoline Kaspersen**, Assistant Professor of Technology-Based Entrepreneurship, Department of Industrial Economics and Technology Management, Norwegian University of Science and Technology, Norway

**Katja Lahikainen**, Postdoctoral Researcher, School of Engineering Science, LUT University, Finland

**Leena Aarikka-Stenroos**, Professor of Industrial Management, Faculty of Management and Business, Tampere University, Finland

**Linnea Harala**, Doctoral Researcher (MSc Tech), Faculty of Management and Business, Tampere University, Finland

**Lise Aaboen**, Professor of Technology-Based Entrepreneurship, Department of Industrial Economics and Technology Management, Norwegian University of Science and Technology, Norway

**Magnus Larsson**, BA, Lecturer, Department of Civil and Industrial Engineering, Uppsala University, Sweden

**Markku Ikävalko**, Associate Professor, School of Business and Management, LUT University, Finland

**Marte C. W. Solheim**, Professor of Innovation Studies and Head of the Stavanger Centre for Innovation Research, University of Stavanger Business School, University of Stavanger, Norway

**Martin Senderovitz**, Associate Professor, Department of Entrepreneurship and Relationship Management, University of Southern Denmark, Denmark

**Mats Westerberg**, Professor of Entrepreneurship and Innovation, Department of Social Sciences, Technology and Arts, Luleå University of Technology, Sweden

**Meredith Woodwark**, Associate Professor of Organizational Behaviour and Human Resource Management (OB/HRM), Lazaridis School of Business and Economics, Wilfrid Laurier University, Canada

**Mette Lindahl Thomassen**, Associate Professor, VIA University College, Research Center for Innovation and Entrepreneurship and PhD Student, Aarhus University, Denmark

**Michael Breum Ramsgaard**, Associate Professor, VIA University College, Research Center for Innovation and Entrepreneurship and PhD Student, Aarhus University, Denmark

**Morten Dahle Selfors**, Assistant Professor, Nord University Business School, Nord University, Norway

**Niina Nummela**, Professor of International Business, Department of Marketing and International Business, University of Turku, Finland

**Noora Heino**, Postdoctoral Researcher, School of Engineering Science, LUT University, Finland

**Norma Wong**, Researcher II, Centre for Intercultural Communication, VID Specialised University, Norway

**Patrik Rönnbäck**, Professor in Sustainable Development, Department of Earth Sciences, Uppsala University, Sweden

**Petter Gullmark**, Associate Professor of Organization and Management, Business School, UiT The Arctic University of Norway, Norway

**Rasmus Bushøj**, CEO/Founder of DataBoard ApS, Denmark

**Robert D. Austin**, Professor of Information Systems, Ivey Business School, Canada

**Roger Sørheim**, Professor of Entrepreneurship, Department of Industrial Economics and Technology Management and Engage—Centre for Engaged Education through Entrepreneurship, Norwegian University of Science and Technology, Norway

**Sanna Ilonen**, University Teacher, Department of Management and Entrepreneurship, University of Turku, Finland

**Sara Malve-Ahlroth**, Specialist (MSc Environmental Psychology), Turku University of Applied Sciences and Finnish Institute of Occupational Health, Finland

**Simon Jebsen**, Associate Professor, Department of Entrepreneurship and Relationship Management, University of Southern Denmark, Denmark

**Siri Jakobsen**, Associate Professor of Innovation, Nord University Business School, Nord University, Norway

**Sølvi Solvoll**, Associate Professor of Entrepreneurship, Nord University Business School, Nord University, Norway

**Taina Eriksson**, Research Director, Centre for Collaborative Research, University of Turku, Finland

**Terhi Virkki-Hatakka**, Project Manager, School of Business and Management, LUT University, Finland

**Thomas J. Howard**, Associate Professor, DTU Entrepreneurship, Technical University of Denmark, Denmark

**Thomas Lauvås**, Associate Professor of Innovation, Nord University Business School, Nord University, Norway

**Torgeir Aadland**, Associate Professor of Entrepreneurship, Department of Industrial Economics and Technology Management and Engage—Centre for Engaged Education through Entrepreneurship, Norwegian University of Science and Technology, Norway

**Ulla Hytti**, Professor, Department of Management and Entrepreneurship, University of Turku, Finland

**Ulrika Persson-Fischier**, PhD, Lecturer, Department of Civil and Industrial Engineering, Uppsala University, Sweden

**Vegar Lein Ausrød**, Chief Consultant, Enterprise and Innovation—The Kitchen, Aarhus University, Denmark

# PREFACE AND ACKNOWLEDGEMENTS

This edited book is the result of a true collaborative process. It began with several discussions around the case method in entrepreneurship education with colleagues in formal and informal forums. What we learned from these discussions is that the case method is indeed interesting, relevant, and applicable in entrepreneurship education, but that we as entrepreneurship scholars in the Nordic countries could develop our own flavour of the case method to bring into our current and future practices.

This book would not exist without the contributing authors, so first and foremost we would like to thank all the authors for sharing their work with us, for their dedication during the writing process, and for their engagement in the review process. The idea, the editing process, and the result (the book itself) would also not have been possible without generous support from Engage—Centre for Engaged Education through Entrepreneurship, the Norwegian Directorate for Higher Education and Skills, Regionale Forskningsfond Nord-Norge (RFFNORD: 269740), Nord University, and the Norwegian University of Science and Technology. We gratefully acknowledge their support of this edited book. We are indebted to the publisher, Edward Elgar, especially Finn Halligan and Beatrice McCartney. Further, we thank Pam Firth from The Detail Devil for her editing services.

We hope that this book will ignite new ideas and practices around how the case method is applied in entrepreneurship education, as well as related disciplines.

# PART I
# INTRODUCTION

# 1
# Case-based entrepreneurship education in and for the Nordic region

*Lise Aaboen, Dag Håkon Haneberg, Siri Jakobsen, Thomas Lauvås, and Karin Wigger*

## SETTING THE SCENE

Entrepreneurship refers to a process of exploring and exploiting entrepreneurial opportunities to create and capture economic, environmental, and social values (Baron & Shane, 2007). Entrepreneurship is an important means of creating our future (Pacheco, Dean, & Payne, 2010). Educating students to have the necessary entrepreneurial skills and mindset to act entrepreneurially (referred to as entrepreneurship education) is therefore high on the agenda of many higher education institutions. Examples of entrepreneurial skills that entrepreneurship education aims to increase are identifying new opportunities in the presently unknowable, creating value in uncertain situations, and making decisions based on few concrete details (Nabi et al., 2017).

The aim of increasing students' entrepreneurial skills and mindset distinguishes entrepreneurship education from other—more functional—disciplines at higher education institutions, such as business and management education (Nabi et al., 2017). Entrepreneurship educators often draw on experiential learning process and make use of game- and design-based learning approaches to teach students these distinct entrepreneurial skills (Neck & Greene, 2011). Case teaching is a popular pedagogical approach to teaching entrepreneurship (Neck & Greene, 2011) because using cases enhances students' active participation, reflection, and discussion, which are critical elements of an experiential learning process to increase students' entrepreneurial skills and mindset.

Despite these differences between teaching entrepreneurship and more functional disciplines, such as management and business, many entrepreneurship educators currently borrow case teaching methods and accompanying cases from business and management education to teach students the art of entrepreneurship (Neck & Greene, 2011). Scholars argue that too much functionality lessens the entrepreneurial spirit of the students and in the classroom

(Shepherd & Douglas, 1997). Consequently, this book argues that the case method needs to be reframed for entrepreneurship education. This book provides examples of how it can be designed and utilized to ensure that case-based entrepreneurship education facilitates pedagogical interventions aimed at increasing students' entrepreneurial skills and mindset.

Traditionally, the case approach builds on a narrative from the 'real world'—although the case narrative can also be fictional (Greenhalgh, 2007). The case narrative puts the reader in the role of a participant, and thereby provides meaningful connection to practitioners, such as entrepreneurs (Ellet, 2007). In this book, we define cases as authentic and often incomplete narratives of some form of entrepreneurial action that are open to interpretation and subjectivity. Entrepreneurial action, such as sensing and pursuing opportunities and mobilizing resources, happens in all types of entrepreneurial ventures; for example, start-ups and corporate entrepreneurship set the scene for entrepreneurial narratives. Stimulated by the case narrative, teaching entrepreneurship with the case method enables students to step into the role of an entrepreneur and engage in entrepreneurial thinking (Blenker et al., 2011; Fellnhofer, 2017).

Although the case method is a student-centred teaching method, educators play a crucial role during the case process, including their preparation *before* the case intervention, execution *in* class, and reflection and evaluation *after* students have solved the case. Case teaching does not necessarily need to revolve around a pre-written case; other mediums may also be used, and teachers, students, and the 'case entrepreneurs' may have several different roles in case development and solving. Subsequently, there is a lot of underutilized potential in adapting case teaching to entrepreneurship education to ensure that students are actually in the role of an entrepreneur when working with a case.

When reality is brought into the learning space, the challenge of contextualizing entrepreneurship needs to be interpreted (see further Welter, 2011; Welter et al., 2016). The case method, entrepreneurship, and education are practised around the world, and so the particularities of different regions and countries must be considered when borrowing educational concepts, teaching methods, and materials developed in another context. Using the case method in entrepreneurship education requires an understanding of the context in which the case is embedded. To maximize learning from the teaching case, the contextual understanding that students bring to classes and the case study's context should be aligned in the best possible ways. Indeed, Zahra (2007) claims that context matters highly in entrepreneurship.

To further elaborate on the context issue of the case method, we provide illustrative examples of why context matters and why an understanding of the context of the case narrative is essential for an optimal learning outcome. Framework conditions, innovation systems, and other formal and informal institutions, such as regulations, norms, and habits, vary from country to country but are crucial for understanding entrepreneurial action and for practices and norms at higher education institutions. Hence, context is an important aspect of entrepreneurship education because (1) institutions develop specific particularities to respond to the context and (2) students bring with them experiences and backgrounds that define their contextual understandings; at the same time, case narratives are highly contextualized. At the time of writing this book, Nordic higher education institutions tend to use cases from North America that do not consider the Nordic context. Having said this, we acknowledge that case

narratives from all over the world are important; however, they require that students have the necessary understanding of the context.

Hence, this book solves three interrelated issues for case teaching in entrepreneurship education at Nordic higher education institutions. First, it develops cases and case teaching methods *in* and *for* the Nordic context. Second, it suggests case teaching methods that enable students to take the role of an entrepreneur. Third, it provides cases that focus on entrepreneurial action. This book includes entrepreneurial narratives of persons who want to become entrepreneurs, who are at the early stage of venture creation, and who are acting entrepreneurially in established organizations. Hence, the book covers a broad range of entrepreneurship.

## ENTREPRENEURSHIP EDUCATION

Acting like and being an entrepreneur requires a distinct mindset and skills (Kuratko et al., 2021). Entrepreneurship education at higher education institutions aims to provide students with exactly this mindset and skills. Thus, entrepreneurship education is regarded as promoting various forms of entrepreneurship and as a means to increase entrepreneurial activities in general. The main outcomes of entrepreneurship education relate to attitude change, knowledge and skills change, feasibility, entrepreneurial intention, socio-economic impact, business start-up rates, and business performance (Nabi et al., 2017). The outcomes from entrepreneurship education can be grouped into five categories: cognitive, skill-based, affective, conative, and behavioural (Longva & Foss, 2018). In other words, entrepreneurship education provides understanding of entrepreneurship concepts, skill sets for developing business, and changing attitudes and intentions. To achieve all these outcomes, there is an inherent embeddedness in practice where learning is linked to business (Boon et al., 2013); for instance, by entrepreneurs giving lectures, students obtaining real-world experiences by interacting with the entrepreneurial ecosystem, or students doing entrepreneurship (Neck & Corbett, 2018).

Many entrepreneurship educators (e.g. Kassean et al., 2015; Nabi et al., 2017; Pittaway & Cope, 2007) argue that entrepreneurship education should provide students with learning situations where they take part in real entrepreneurship action combined with reflective processes in an environment without too much financial risk. Entrepreneurial knowledge can be seen as a synthesis of primary and secondary entrepreneurial experience, where the primary experience is the act of entrepreneurship, and the secondary experience is the reflection upon the same experience (Hägg & Kurczewska, 2020). The synthesis in turn is the input for new entrepreneurial experiences. To structure the different entrepreneurship education approaches where real-world experience and reflection are combined, Aadland and Aaboen (2020) identified a six-class taxonomy. The taxonomy consists of three categories of learning contexts (imitation, pretence, and real) and three education concepts (teacher-directed, participatory, and self-directed). Case teaching in business schools has primarily been characterized as teacher-directed and imitation; however, in recent years, it has begun to develop in the direction of participation with the introduction of, for instance, live cases. However, entrepreneurship education also covers real and self-directed concepts and thereby challenges case teaching to expand its scope and boundaries.

## The Case Method

The case method was first developed at Harvard Law School in the 1870s and over the following decades spread to most well-known law schools in the United States (Weaver, 1991). When Harvard Business School was established in 1908, its curriculum was based on practice, and the teaching method was the case method, emphasizing classroom discussion (Merseth, 1991). Since then, the case method has spread to other business schools and to other educational fields around the globe. Consequently, various case method types, formats, and traditions have emerged to provide students with a distinct mindset and skills (Greenhalgh, 2007). For example, in medical education, cases pose problems that require objective and analytical solutions, and in business education, cases typically represent business problems that require solutions and decision-making (Greenhalgh, 2007).

The case method is an example of active learning, where educators act as facilitators who pose open-ended questions to stimulate students' self-reflection and interpretation of the case and ensure group dynamics that enable critical and creative thinking and dialogue (Grant, 1997). Using the case method successfully demands that both the educator and students take active roles. In contrast to traditional lectures where the educator disseminates their expert knowledge to students, learning through case activities allows the educator to play the role of facilitator of students' learning. It requires students to read and prepare before class and to be active participators in class (Desiraju & Gopinath, 2001). This is typical for Harvard cases where students prepare written responses to a case text that enables them to participate in an instructor-led oral discussion in a classroom or preferably a Harvard amphitheatre classroom (Forman & Rymer, 1999). The approach is also widely used in entrepreneurship education, and the interactions among students and between students and lecturer during case discussions have been found to improve the emotional engagement of students and thereby their individual learning process and performance (Nkhoma, Sriratanaviriyakul, & Quang, 2017).

However, the traditional case method has met with criticism. Pasricha (2016) claims that most cases used in classrooms are outdated and do not reflect current issues faced by managers, business owners, and entrepreneurs. This aligns with Steiner and Laws' (2006) claim that the Harvard case study is limited in preparing students to deal with real-world problems, and that many lecturers have limited or no working experience in the industry (Pasricha, 2016). Although this critique may be too unilateral, educators may benefit from being aware of both the drawbacks and possibilities of case teaching, and that case teaching may be altered to fit the educational needs of students—for example, entrepreneurship students. There is a growing understanding of the need to adjust and reframe the case method for entrepreneurship education.

Narratives, which the case method typically builds on, are considered an important technique to inspire students, construct entrepreneurial identity, invoke role models, and contribute to the creation of entrepreneurial opportunities (at least from a social-constructionist perspective) (Blenker et al., 2011; Gartner, 2007). Hence, not surprisingly, narratives have been actively used in entrepreneurship education in different forms, such as storytelling, documentaries, or embedded in teaching cases (Fellnhofer, 2017). Following this line of thinking, the case method has the potential to facilitate the learning process in entrepreneurship education.

Typically, case teaching in entrepreneurship education comes with associated action-oriented tasks for students, which provides students with either simulated or authentic entrepreneurial experiences that may be applied in practice. Hence, teaching entrepreneurship with cases calls for creative teaching approaches. Further, and related to today's continuously changing business environment, there is a particular need for teaching methods that reflect these times in both content and context (Neck & Greene, 2011). Thus there is a continuous need for new or renewed cases that can be used in entrepreneurship education, reflecting the entrepreneurial context these entrepreneurship students will face.

## The Nordic Perspective

The Nordic perspective is often associated with a high level of trust, low power distance, a well-developed social welfare system, happiness, independence, and a low-risk acceptance rate (Delhey & Newton, 2005; Dvouletý, 2017; Hjorth, 2008; Hofstede, 2022). Such cultural values, norms, and traditions define how certain phenomena are understood and interpreted, such as entrepreneurial actions and the way people act in particular situations, for instance when facing uncertainty. Moreover, the Nordic countries are small and very open economies, which distinguish them from, for example, North America or China, which are the contexts of many traditional teaching cases. In this book, we argue for the importance of context sensitivity in the teaching materials and learning approach—that is, student-centred learning through real-world cases—as a starting point for the Nordic contextualization and focus in the book.

The Nordic countries are Denmark, Finland, Iceland, Norway, and Sweden, located in Northern Europe. These five countries share similar historical and socio-cultural aspects, such as the Viking era, the Sámi Indigenous people, and the storytelling tradition rooted in Saga and similar business practices, including those linked with starting a company and employee-driven innovation practices (Hjorth, 2008). We acknowledge important differences and nuances among these countries as well. For example, Finnish is a Uralic language, and the other Nordic countries speak languages that belong to North Germanic languages. For this introductory chapter, however, we approach the Nordic as a collection of the five countries and focus on the patterns and aspects that constitute the Nordic, in particular regarding entrepreneurship and education.

The Nordic are known not only for their extensive creative economy, biotech industry, Nordic design, and ICT-related innovation (Hjorth, 2008), but also for more traditional industries, such as timber, fishing, and the oil and gas industry. Moreover, Stockholm's start-up scene and Finland as an innovation nation are often named alongside the Silicon Valley and other innovation hubs and clusters, such as the blockchain hub in Zug (Dvouletý, 2017). Although there are many examples of the Nordic entrepreneurial spirit, the Global Entrepreneurship Monitoring (GEM) report and research on Nordic entrepreneurship show a more nuanced picture. The GEM report shows a lower-than-average rate of entrepreneurial and start-up activities (Dvouletý, 2017). The reasons for the low start-up activities are multifaceted, ranging from incentives to start a company given stable job markets and the large public sector, to the perceived attraction of being an entrepreneur and the lack of entrepreneurial skills and competences. Conversely, entrepreneurship is regarded as an important driver for the transition

of the Nordic movement, in particular of peripheral communities, towards more sustainable Nordic societies and technological advancements. Hence, there is a need to provide prospective entrepreneurs with the necessary entrepreneurial skills.

Prior to the 1980s, entrepreneurship education gained little attention in Nordic higher education institutions. However, since then, new entrepreneurship education programmes and courses have been developed with the aim of increasing entrepreneurial skills and competences, as entrepreneurship is regarded as an important complement to management education aimed at large, well-established organizations, which has led to discussion on how to teach entrepreneurship (Warhuus & Basaiawmoit, 2014). Nordic higher education institutions typically have a stronger focus on basic rather than applied and vocational education, in particular science and technology institutions (Warhuus & Basaiawmoit, 2014). Further, Nordic higher education institutions are known for their close university–industry interaction, which provides access to entrepreneurs and companies. These characteristics influence the way of teaching at higher education institutions. For example, while the case method originates from vocation-based aspects of different types of education, such as business and management education (Rippin et al., 2002), reframing the case method for Nordic entrepreneurship education thus means incorporating these specificities so as to make it relevant and applicable to the context of entrepreneurship education.

While the case method might need to be reframed to utilize its full potential for Nordic entrepreneurship education, we argue that the Nordic tradition of storytelling and learning using narratives favours the use of the case method at Nordic higher education institutions (Blenker et al., 2011). Indeed, storytelling and narratives are an important means of communication and learning and have been used for centuries. Conversely, entrepreneurship scholars argue that through narratives and storytelling, an entrepreneurial mindset comes into being, as they define how students construct their identities and facilitate the creation of opportunities.

## CONTENT AND OUTLINE: PERSPECTIVES ON HOW TO USE THE BOOK

This book consists of 27 chapters divided into three parts. Part I, Introduction, introduces the book, entrepreneurship education, and case teaching. Part II then provides a set of carefully selected chapters that reframe the case method in entrepreneurship education. These chapters inform and inspire theoretical perspectives and practical procedures related to case teaching in entrepreneurship education. By reading Part II, you will be informed about concepts and practices at the forefront of case teaching within the field. Nevertheless, case teaching would be nothing without the actual cases, which is where Part III of this book comes into play. Part III offers a selection of cases that may be used as they are or that have been adapted by educators according to their own needs and preferences.

This book is intended to be useful for multiple audiences and in different situations, although the core readers are entrepreneurship educators at higher education institutions in the Nordic countries. For the experienced reader, the book can provide inspiring, perhaps thought-provoking, perspectives on case teaching (Part II), as well as a fresh set of teaching

cases to revamp their teaching in entrepreneurship education (Part III). For readers who are less experienced in entrepreneurship education, the book is useful as an introduction to entrepreneurship education and to the applicability of case teaching in entrepreneurship education (Part II), as well as providing some hands-on examples of cases that can be applied in the classroom from day one (Part III). The different perspectives on case teaching in entrepreneurship education inform not only how case teaching may be applied in one way or another but also *why* and *upon which grounds* you may choose case teaching as your preferred pedagogical approach in given situations. With this book, we show that there is no one way of case teaching in entrepreneurship education, while there is already a considerable knowledge base to depart from as an entrepreneurship educator. In the book, we provide many examples, hints, tips, and suggestions, but as always, your course or programme—your way.

## Reframing the Case Method: Outlook and Lessons Learned

The chapters included in Part II of this book are divided into three groups: (1) Framing the case method for entrepreneurship education, (2) Applying the case method in entrepreneurship education, and (3) Methods for case teaching in entrepreneurship education. Table 1.1 provides an overview of the chapters included in each group.

**Table 1.1**    Overview of chapters in Part II

| Framing the case method for entrepreneurship education | Applying the case method in entrepreneurship education | Methods for case teaching in entrepreneurship education |
| --- | --- | --- |
| Chapter 2: Breum Ramsgaard and Austin<br>Understanding cases as narratives in entrepreneurship education: a conceptual framework | Chapter 5: Lindahl Thomassen and Breum Ramsgaard<br>Experiences from live casework with Nordic micro-enterprises: contextualizing learning designs in entrepreneurship education | Chapter 9: Larsen and Kaspersen<br>Student case development based on entrepreneurial experiences: a guide for entrepreneurship educators |
| Chapter 3: Woodwark and Schnarr<br>How to conduct live cases in entrepreneurship education | Chapter 6: Westerberg<br>Using self as case in teach-the-teacher courses in entrepreneurship to reflect on experiences as student and teacher | Chapter 10: Solvoll and Haneberg<br>Student challenges in entrepreneurship education: planning for uncertainty |
| Chapter 4: Aarikka-Stenroos et al.<br>Bringing environmental sustainability and the circular economy into entrepreneurship education with stakeholders: four case methods from hackathons to role-model cases | Chapter 7: Ilonen and Hytti<br>Teaching together in entrepreneurship education: live case method | Chapter 11: Åmo<br>Teaching as guiding: the case of live business cases |
| | Chapter 8: Hägg<br>The moral perils when positioning student entrepreneurs in real-life contexts: balancing the nature–nurture of educative live case experience | Chapter 12: Wigger et al.<br>From utopia to sustainable entrepreneurship: a novel case methodology |

The first group of chapters in Part II frames the use of cases in entrepreneurship education. In Chapter 2, Breum Ramsgaard and Austin conceptualize cases as narratives and argue that explanation- and experience-based approaches to case-based education relate to different pedagogical underpinnings and therefore imply different learning methods and processes that need to be scaffolded in different ways. Woodwark and Schnarr introduce live cases in Chapter 3 by defining how they are different from traditional cases and consulting projects, as well as providing practical advice on how to source and teach live cases. Aarikka-Stenroos et al. connect cases, entrepreneurship education, and sustainability in Chapter 4.

The second group of chapters in Part II focuses specifically on the facilitation aspect when applying the case method in entrepreneurship education. In Chapter 5, Thomassen and Breum Ramsgaard contextualize case teaching in the Nordic setting, and Westerberg provides examples of teach-the-teacher initiatives in Chapter 6. In Chapter 7, Ilonen and Hytti show the benefits of including educators from several disciplines in case teaching. In Chapter 8, Hägg warns about the ethical pitfalls when allowing students to engage in action-based education. Action, pushing boundaries, and competitiveness are part of acting entrepreneurially, and when this type of learning takes place in the real world instead of a classroom, it is important that students are equipped with a moral compass.

In the third group of chapters in Part II, four concrete methods for case teaching in entrepreneurship education are presented. In Chapter 9, Larsen and Kaspersen present their experience with the SWIF (student-written, instructor-facilitated) method in a venture-creation programme (VCP) where students start a venture as part of their education. In a VCP setting, SWIF allows entrepreneurship students to write a case based on their own venture, which facilitates reflection and pinpoints issues to be solved in their own practice. Chapter 10, by Solvoll and Haneberg, focuses on student challenges that are defined as different from live cases in terms of their purpose, how the addressed problem is formulated, and the suggested time frame. Using experiences from seven student challenges building on similar pedagogical underpinnings but taking place in different contexts and with partly different stakeholders, they illustrate that in student challenges, students become leaders of an innovation process where they develop and propose solutions to problems presented by an external actor. In Chapter 11, Åmo presents tour guiding, which describes how to best facilitate learning in connection with visits to companies. Finally, Chapter 12 authored by Wigger et al. on utopia shows the benefits of dreaming and represents an example of when students are allowed to depart from the current and mundane nature of entrepreneurship cases, unrestricted by today's problems and practices when solving sustainability issues. All four concrete exercises have elements of live cases in that the teaching and facilitation does not depart from a pre-written text but has components of exploring reality and thereby engages students in authentic learning and wicked problems. The uncertainty aspect of the case may come in many different forms: as part of the case itself, as the solution to the case, or as facilitation of the case.

## Nordic Teaching Cases for Entrepreneurship Education: Outlook and Lessons Learned

Part III of the book consists of 15 teaching cases divided into three main groups related to becoming an entrepreneur, early-phase venture creation, and acting entrepreneurially in established organizations. This is meant as an overall guide according to different phases of the entrepreneurial process; Table 1.2 provides a more detailed overview that will help you choose the right case(s) for your course or lecture. The first column in the table refers to the chapter number and case authors to help you find the right case once you have decided which one to use. The second column will guide you in choosing a case related to different topics such as opportunity development, business models, or sustainability. This column also specifies in which industry the cases are set, which can be useful if you want to relate your lecture to a specific industry. However, if you would rather choose a case to teach a specific theory, the third column provides an overview of the main theories applied in each case. The last column shows the teaching methods employed. Be aware that Table 1.2 is based on the main assignments given in each case, and that there are suggestions for alternative use in most cases.

**Table 1.2**   Overview of teaching cases in Part III

|  | Chapter number: authors | Topic, industry/context | Theoretical perspectives | Teaching method |
|---|---|---|---|---|
| The journey of becoming and being an entrepreneur | 13: Ausrød and Færgemann | Business model, incubators, digitalization | Effectuation, value creation | Decision-making, analysis, reflection |
|  | 14: Persson-Fischier et al. | Sustainability, stakeholder engagement, tourism industry | Effectuation, resource management, co-creation | Role play, discussion |
|  | 15: Lahikainen et al. | Academic spin-off, support system, product development, sensor industry | Effectuation | Consulting, discussion, reflection |
|  | 16: Wong and Solheim | Opportunity development, stakeholder engagement, support system, food industry | Entrepreneurial opportunity, resource management | Analysis, discussion, role play, consulting |
|  | 17: Åmo | Opportunity development, stakeholder engagement, sports industry | Effectuation, entrepreneurial learning, resource-based view | Decision-making, theory assessment |

|  | Chapter number: authors | Topic, industry/context | Theoretical perspectives | Teaching method |
|---|---|---|---|---|
| Early-phase venture creation | 18: Howard et al. | Start-up, investment process, due diligence, valuation, venture teams, IT industry | Practical approaches to analyse investment methods | Role play, discussion |
|  | 19: Laage-Hellman and Lind | Technology development, product development, stakeholder engagement, internationalization, academic spin-off, composite industry | Industrial marketing, research and development management | Role play, presentation |
|  | 20: Senderovitz, Jebsen, and Suder | Business model, sustainability, identity authenticity, pig farming | Triple bottom line, growth, resource management, financing and human capital, marketing | Analysis, reflection, decision-making |
|  | 21: Veisdal | Opportunity development, software development, two-sided platform, pivoting, digitalization | Ambidexterity, critical incidents | Analysis, reflection, discussion |
|  | 22: Aadland and Sørheim | Sources of entrepreneurial financing, aquaculture industry | Financing | Analysis, decision-making |
| Acting entrepreneurially in established organizations | 23: Gullmark and Vestrum | Public sector entrepreneurship, opportunity development, stakeholder engagement, public healthcare sector | Public sector innovation and entrepreneurship, dynamic capabilities | Group work, reflection, discussion |
|  | 24: Lauvås et al. | Sustainability, opportunity development, design thinking, fish-farming industry | Sustainability and triple bottom line, opportunity development, design thinking | Game-based learning, group work |
|  | 25: Eriksson and Nummela | Global value chain, global factory, international entrepreneurship, educational technology | Dynamic capabilities | Role play, discussion |

|  | Chapter number: authors | Topic, industry/context | Theoretical perspectives | Teaching method |
|---|---|---|---|---|
| Acting entrepreneurially in established organizations (continued) | 26: Vestrum | Community, cultural, and public sector entrepreneurship | Resource mobilization, legitimacy, social embeddedness | Role play, discussion |
|  | 27: Lauvås and Jakobsen | Sustainability, circular economy opportunity development, collaboration, furniture industry | Effectuation, sustainability, circular economy | Group work, reflection, discussion |

The first five chapters in Part III are related to the journey of becoming and being an entrepreneur. In Chapter 13, Ausrød and Færgemann present a case about an art student who engages in the university incubator. The case follows the student's initial 2 years from her first encounter with the incubator to her first paying customers. The teaching activities revolve around presentations, discussions, and reflections on effectuation, various forms of value creation, and the affordable loss principle. Chapter 14 by Persson-Fischier et al. follows an entrepreneur in the tourism industry in Sweden. The case focuses on sustainability in offering recreational fishing to customers from all over the world, and through discussions and role play students gain insight into sustainability challenges facing an entrepreneurial venture. In Chapter 15, Lahikainen et al. show the start-up process in a university-based spin-off and illustrate that even in the systematic university setting, entrepreneurs rely on the resources and capabilities they have at hand. The case activities challenge students in applying the theoretical concepts of causation and effectuation when analysing the case and, further, reflect on the context of university spin-offs. Chapter 16 by Wong and Solheim tells the story of an immigrant entrepreneur who grows vegetables in a bomb shelter using a hydroponic method. The case focuses on how the entrepreneur seizes opportunities in the development of his business, and in the case activities students play the role of the entrepreneur's board and advise him on the next steps for his business. The last case in this section is Chapter 17 by Åmo, where an entrepreneur looks back at the last 5 years of his entrepreneurial journey, reflecting on challenges met and decisions made. The students working on this case are invited to sort out the root problem in the complex case story, and to do that they need to select one or more suitable theories.

The next five chapters in Part III focus on early-phase venture creation. Chapter 18 by Howard et al. follows the first investment round between a newly founded IT start-up and a venture capital firm. The case follows the investment process through three parts: (1) the static viewpoint of the first due diligence on the initial investment, (2) the dynamic viewpoint of the progress made until the decision point of the final tranche of investment, and (3) the outcome and reflections. In Chapter 19, Laage-Hellman and Lind tell the story of a Swedish high-tech university spin-off that aims to commercialize a novel technology. To do so, the firm needs to build a collaboration strategy for further product development, and the students working on the case propose this strategy based on the information provided. Chapter 20 by Senderovitz et al. takes us to a small-scale pig farm with a mission to produce premium-quality pork based on sustainability values and considerations. The case activities start with students'

personal reflections on their sustainable purchases before focusing on the firm and its sustainable growth barriers and suggesting possible growth strategies. In Chapter 21, Veisdal focuses on student entrepreneurs and the dilemma of either continuing to sell the software they had developed and risk not acquiring the necessary revenue to fund salaries after they graduate, or risking both the venture and their graduate studies by investing time in a pivot of the service. The case illustrates the paradox of exploration versus exploitation, and the case questions encourage students to map and analyse the activities the student entrepreneurs engage in as either explorative or exploitative. The last case considering early-phase venture creation is Chapter 22 by Aadland and Sørheim on early-stage financing for a start-up in need of more capital. The case illustrates different financial options where all might seem favourable. The case activities put the students in the entrepreneur's position, where they evaluate the different options before deciding.

The last section in Part III deals with acting entrepreneurially in established organizations. In Chapter 23, Gullmark and Vestrum tell the story of a public sector entrepreneur over several years, illustrating the drivers and barriers in public sector entrepreneurship. The case ends when the entrepreneur faces stagnation, and the case activities encourage students to analyse the situation and decide whether the entrepreneur should continue or abandon the project. Chapter 24 by Lauvås et al. takes us to a fish-farming firm on a small island in Norway with high ambitions for sustainability. The case shows how the firm has taken entrepreneurial actions towards sustainability, and the case activities build on game-based learning where the students develop an educational game about the actions made by the firm towards sustainability. In Chapter 25, Eriksson and Nummela present a case about a Finnish small-to-medium enterprise (SME) in the educational technology industry with global operations. It focuses on the value chain and the challenges of managing an international network of partners. In the case activities, students act as the top management team and discuss how they should organize the firm's global value chain. In Chapter 26 by Vestrum, we meet an entrepreneur who develops a music festival in a rural community in Norway. The case revolves around cultural, community, and public entrepreneurship and illustrates the challenging task of mobilizing resources from diverse stakeholders in developing a non-profit community enterprise. From the case activities, students learn how entrepreneurs can build legitimacy to mobilize resources from different sectors. The last case on entrepreneurship in established organizations is Chapter 27 by Lauvås and Jakobsen about a small Norwegian furniture company that has made a strategic choice to become more sustainable. The case describes the process from the decision through to the launch and success of a sustainable product. In the case activities, students employ theories on effectuation and sustainability to map the firm's resources and discuss how they used their existing and new resources to pursue new sustainable opportunities.

# CHANGING THE SCENE FOR THE CASE METHOD IN ENTREPRENEURSHIP EDUCATION IN AND FOR THE NORDICS

This book shows that entrepreneurship education greatly benefits from the case method when designed for entrepreneurial learning purposes. This book includes manifold discussions about case teaching in entrepreneurship education, such as the way reframing the case method and case activities can be approached. Evaluating the lessons from the 26 individual contributions of this book, we argue that the case method provides entrepreneurship educators with great potential to be entrepreneurial and to think outside the box when adjusting the case method for increased entrepreneurial learning. Further, experiences from testing Nordic teaching cases at Nordic institutions indicate that the closeness and authenticity engage students and create immersive learning moments. We believe that this book will provide great inspiration to educators wanting to use the case method in their teaching.

While each chapter makes an important contribution to case-based entrepreneurship education, clear themes emerge throughout the book. First, the book argues that innovative case method designs, such as SWIF (Chapter 9), student challenges (Chapter 10), and tour guiding (Chapter 11), incorporate experience-based learning elements to teach entrepreneurship. In general, the discussions in Part III of this book suggest case narratives that address thorny problems or build on authentic stories to tap into emotions to create novel learning situations, for which traditional analytical teaching cases are not necessarily equipped. Emotions, however, are regarded as important in entrepreneurship education (Arpiainen et al., 2013). Such learning moments are believed to be even more effective when the situation allows for uncertainties. For example, Chapter 10 argues that when students embrace uncertainties, they increase the entrepreneurial learning effects of pedagogical interventions. In general, this book illustrates that the case method does not necessarily need to build on a written case with predefined case activities; instead, the case can be co-created through the learning moment.

Second, and relatedly, we suggest that experiential learning situations can be created by allowing students to create or co-create the case. For example, this can be done by letting the student write a teaching case (see Chapter 9) or by designing an open-ended case approach so the students can define which case they want to work with within a given frame (see Chapter 2). Hence, we suggest that in entrepreneurship education, the case method can be designed more broadly and have a wider scope of utilization than cases borrowed from, for example, business or management education. Thereby, the case method in entrepreneurship education expands the traditional utilization of creating a narrative that students must analyse to make a certain managerial decision (Grant, 1997).

Third, the case activities of the 15 teaching cases included in this book suggest a broad range of case activities and tasks that are suitable for the case method—for example, a game-based approach (see Chapter 24) or role play (see Chapters 14, 16, 18, 19, 25, and 26). We argue that teaching entrepreneurship with the case method allows students to think beyond the traditional set of questions accompanying the case. Further, Chapter 18 is an example where the case is divided into three parts, and a new part is only introduced after the students have completed the case activities of the previous part. Moreover, Chapter 12 suggests that the

case narrative can be introduced later. This is particularly crucial when teaching sustainable entrepreneurship in order to address the normativity and future orientation of the concept of sustainability.

Fourth, we argue that the Nordic tradition of storytelling and learning through the use of narratives favours case-based teaching (Blenker et al., 2011). Moreover, entrepreneurship scholars argue that through narratives and storytelling, an entrepreneurial mindset comes into being, as they define how students construct their identities and facilitate the creation of opportunities (Blenker et al., 2011). To illustrate, the case narratives indicate that Nordic entrepreneurship in many ways builds on a high level of trust, which is not necessarily as common in other parts of the world. For example, Chapter 24 starts by telling the story of how the owner handed over the business to his son-in-law and trusted the new management team to make non-trivial strategic decisions. Further, the contributing authors were met by the case owners with a lot of trust and openness, which was ultimately an important aspect in developing the case narratives included in this book.

Fifth, given the call for more innovative case method designs, case approaches, and activities for Nordic case-based entrepreneurship education, we suggest redefining what a teaching case is. Based on the insights from the chapters in this book, we see teaching cases for entrepreneurship education as entrepreneurial narratives that can also be applied in current and future entrepreneurial situations that require entrepreneurial action. Hence, we regard the case as a tool to frame and package an entrepreneurial story or situation that can be told and retold.

Although the chapters in this book make an important contribution to Nordic case-based entrepreneurship education, further research on the case method in entrepreneurship education and innovative practices and designs to utilize cases remains to be pursued. We are confident that this book will inspire entrepreneurship scholars to further explore the case method in entrepreneurship education with the aim of increasing students' entrepreneurial skills and mindset.

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# PART II
## REFRAMING THE CASE METHOD FOR TEACHING ENTREPRENEURSHIP

# Framing the Case Method for Entrepreneurship Education

# 2

# Understanding cases as narratives in entrepreneurship education: a conceptual framework

*Michael Breum Ramsgaard and Robert D. Austin*

## INTRODUCTION

Applying case-based teaching and learning involves both pains and gains for entrepreneurship education educators. In this chapter, we propose a conceptual framework for understanding cases in entrepreneurship education as narratives in efforts to elaborate the pedagogical vocabulary and understanding of casework. We do this by expanding on a conceptualization from Austin and Hjorth (2012) that distinguishes between explanation- and experience-based approaches to case-based education.

The motivation for this chapter arose from discussions between the two authors about their teaching experiences and their shared feeling that the benefits of case-based teaching and learning might be especially great in entrepreneurship education. Of particular interest to both of us were the pedagogical grounding relevant to cases designed for theoretical/fictional purposes and the cases based in real-life problems and contexts. The shared interest in developing the idea of cases as narratives was found to be an important vehicle to provide further pedagogical discussion and guidance for casework.

Working with cases in a classroom setting, whether cases that faithfully describe real-life events or cases that are predesigned and retreat from real-life events, for pedagogical reasons necessitates considerable pedagogical thought and planning by the educator (Foster & Carboni, 2009). Scaffolding these learning processes therefore involves a multitude of learning forms during a classroom activity (Wraae & Thomsen, 2019). This interplay of learning forms thus establishes an inherent and continuous linkage between explanation- and experience-based styles of teaching and learning (Ramsgaard & Christensen, 2018). These learning forms include both deductive and inductive precognition and consequently relate to different pedagogical underpinnings with implications for learning methods and processes (Neergaard et al., 2012). Thus, we want to address recent calls in entrepreneurship education to bring attention

to the pedagogical grounding of pedagogical methods in entrepreneurship education, specifically the case method (Hägg & Gabrielsson, 2019; Hägg & Kurczewska, 2019).

In this chapter, we argue that case-based teaching and learning can bring a range of learning possibilities to the classroom. As a distinct focal point of case-based teaching and learning, we want to advance the notion of cases as stories consisting of a narrative form containing elements of plot, character, and story. In this understanding lies a connection to the narrative composition and therefore narrative learning forms that can help explain the pedagogical effectiveness of case-based teaching and learning. Thus, the narrative understanding brings to light important features of the relevance of case-based methods for understanding the sequential unfolding of cases (Goodson et al., 2010). In a narrative form, cases serve as a specific way to achieve key objectives in a learning process, namely active student orientation through the construction of a cumulative theoretical framework, as well as nurturing engagement and more active learning (Austin et al., 2009).

The contribution of the chapter is twofold: first, it positions the relevance of seeing cases as narratives consisting of plots, actors, settings, and a sequentially unfolding narrative with relevance for entrepreneurship education. Second, it advances the pedagogical side of casework by proposing a framework for understanding and working with cases as narratives to substantiate analytical and reflective features.

## BACKGROUND AND FOUNDATIONS

### Positioning Cases as Narratives

Greenhalgh (2007) advanced the idea of cases being 'incomplete natural narratives, open to multiple and diverse interpretations' (p. 181). Instead of beginning with traditional and theoretical models for management and leadership, casework enables students to build and develop skills and competencies and to extract for themselves theoretical frameworks from case situations that can be adapted to a multitude of situations (Austin et al., 2009). Stories in this respect have the potential to serve as communication vehicles. As Goodson et al. (2010) express it, stories consist of 'brief exchanges, short anecdotes, things we want to share with others, either for a particular purpose or just for the sake of sharing. Some stories are factual and descriptive; others express our experiences and feeling' (p. 1).

In our efforts to reframe the case method, we particularly advocate a notion where cases serve as 'stories' in the form of narratives (Austin et al., 2009). We further argue that cases and case discussions have a dramatic structure—a *plot* that also often contains and gains pedagogical force from, to cite Aristotle's *Poetics*, 'a change by which the action veers round to its opposite' (Baxter & Atherton, 1997)—a reversal. We are inclined to think that human beings have a history of deep engagement with such narratives. In this light, casework in a classroom involves a process of discovery, which implies not only that the case itself can be understood as a story with inherent dramatic structures, but also that the power of the learning experience is enhanced by the fact that the narrative provokes a change of mind within the student. To

arrive convinced of one thing, but then to be convinced, through a process of discussion, to change one's view, enhances the impact of the learning experience.

The unfolding of the case conjointly involves distinct learning and analysis processes of understanding and revealing the case's plot in notions of:

(1)    a set-up, in which case facts relevant to the issue at hand are surfaced
(2)    a demonstration and discussion of concepts, often drawn out inductively from discussion of case facts
(3)    an analysis, often moving from basic to more in-depth that leads to conclusions relevant to the issues in the case
(4)    a possible pivot when a conclusion is reached that is surprising or counter-intuitive
(5)    a resulting shift in mindset that leads to deep and contextualized understanding.

Case analysis in this sense can be seen as a revelation process that might lead to a revision of 'what you used to think' (peripeteia [Greek: περιπέτεια]: a reversal of circumstances, or turning point, which is an especially powerful human experience). Aristotle considered the concept of *anagnorisis*—reaching a realization of which one has previously been ignorant—to be the mark of the most powerful, memorable drama and stories (according to Aristotle, 'the finest form of discovery'). In casework, this can be orchestrated into the learning journey by the educator in their role as an *aggregator of content* (Henry, 2020). Understanding cases as stories has particular benefits for the entrepreneurship educator since the plot often involves some aspect of value creation (Lackéus, 2018), and aspects of both entrepreneurial thought and action are often included (Williams-Middleton & Donnellon, 2014).

## THEORETICAL AND PEDAGOGICAL UNDERPINNINGS

### Two Types of Casework

A key benefit from an understanding of cases as stories lies in the analytical processes that follow. In narratives lies an implicit, genre-dependent structure that supplies the student with an inherent set of analytical, sequential elements with which to inquire in the form of a narrative learning structure (Goodson et al., 2010). When applied to cases in an entrepreneurship education context, these analytical elements enable the student to reveal and discuss relevant components of the case narrative. Thus, an entrepreneurship education case often consists of problem definition, identification of context (stakeholders, market features, and customer segments), value proposition, organizational strategies, and mission statements. Compared to other narrative structures from, for example, fictional literature, the sequential and temporal developments of the narrative composition will also be an interesting point of analysis. Here, the plot structure, exposition (setting and character introduction), plot (rising action), conflict, climax, denouement, and resolution will be relevant characteristics to investigate. Elaborating on the understanding of cases as stories and the distinction between fictional and real-life cases is relevant in order to illustrate the qualities of these two types of casework.

**Table 2.1**   Characteristics of two types of casework as stories

|  | Fictional cases | Real-life cases |
|---|---|---|
| Critical events | Cumulated plot structure planned by narrator or educator | Non-linear and complex plot development |
| Main characters | Built-in and narrated identity characteristics | Context-specific identity characteristics |
| Sub-characters | Designated role in story timed by plot development | Identifiable through stakeholder analysis but entry of new sub-characters possible |
| Evaluation | Dependent on abstract conceptualization and theorizing | Dependent on outcome and evaluation of success, failure, and process |
| Motivation enabled by | Level of theory conceptualization built into the story | Amount and quality of feedback from case owner and other stakeholders |
| Risks | Low influence on learning outcomes | High influence on learning outcomes |
| Subject matter | Relevant subject matter is story and case dependent | Relevant subject matter is context and problem dependent |
| Complexity | Spectrum from low to medium complexity depending on scope of case | Spectrum from low to high complexity depending on scope of case and problem |

Table 2.1 illustrates a number of important characteristics that mark the differences between fictional and real-life cases. Fictional cases can serve as sources of input for abstract generalizations to provide students with practice or ability in generating implications through analysis. There is a cumulative development of generalized knowledge often presented in a decontextualized format.

Real-life cases bring business reality into the classroom, convey practical contexts, and provide motivation for engagement with theoretical materials. They invite students to 'translate' concepts into a novel domain (practice). The analytical frameworks derived by the student are subjected to ongoing challenge and refinement to add further theoretical nuance.

## The Pedagogical Side of Casework in Entrepreneurship Education

Looking at the pedagogical side of casework in entrepreneurship education reveals some overall pedagogical strategies and models. Many diverse approaches to entrepreneurship education have been evidenced in several literature reviews (Mwasalwiba, 2010; Nabi et al., 2017), accentuating the need to clarify and strengthen the pedagogical side of casework in this field, something Hägg and Kurczewska (2019) elaborated on with a contribution to the philosophical grounding in experience. However, the micro-credentials of applying cases as narratives in this setting have been sparsely dealt with.

To advance the pedagogical understanding of entrepreneurship education, Hannon (2005) suggested applying the notions of teaching *about*, *for*, and *through* in entrepreneurship education, which answered a long-standing need for pedagogical guidance and an elaborated conceptualization for the field. Rasmussen and Sørheim (2006) evidenced how entrepreneurship education 'focuses less on teaching individuals in a classroom setting and more on learning-by-doing activities in a group setting and a network context' (p. 185). Using real-world or fictional cases can be seen as a way of linking course content to the practice

of entrepreneurship (Piihl & Philipsen, 2011). Foss et al. (2013) advanced the action-based approach, highlighting how students can evolve their role based on their interactions with diverse sets of actors facilitated by diverse teaching methods. Recently, Neergaard et al. (2021) extended existing knowledge about the effect of particular kinds of pedagogies with the concept of pedagogical nudging as a means to support enterprising behaviour, illuminating how an exploration of the inner self, identity, and beliefs advances the possibility for students to reshape future outcomes and create value.

Each of the two approaches has qualities and characteristics that resonate with teaching methods relevant for entrepreneurship education. We specifically want to address this call for pedagogical development by repositioning case-based methods so that entrepreneurship educators can design courses and programmes consistent with the pedagogical opportunities at hand. Our suggested framework for understanding cases as narratives is grounded in the distinction between explanation- and experience-based casework because we believe this distinction provides a strong and direct pedagogical grounding for educators—a grounding fit for both pedagogical planning in the classroom and reflective theoretical reasoning. In this light, the educator must be able to assess and reflect upon the qualities of working with fictional or real-life cases based on the content and context. In the remainder of this chapter, we will advance and discuss the constituent features of the proposed framework.

## DESCRIPTION OF THE APPROACH AND TEACHING MOMENTS

### Constituent Features of the Framework

To utilize the potential of adapting case teaching to entrepreneurship education and advance the application of understanding cases as narratives, we suggest the following framework (see Figure 2.1).

The suggested framework has three distinctive features:

- Feature 1: Reflecting explanation- or experience-based casework. Being distinctive about what approach to teaching and learning advances the possibilities for taking a reflected pedagogical choice for learning methods.
- Feature 2: Selecting fictional or real-life cases. The two types of cases have inherent structures and qualities that influence the teaching approach and opportunities for establishing the learning context.
- Feature 3: Advancing cases as stories for narrative learning. Applying an understanding of cases as stories enables a set of analytical tools for the educator in order to advance motivation, engagement, and problem-solving skills.

Below we give two brief examples of integrating the framework in casework sessions and how to scaffold the inherent learning process.
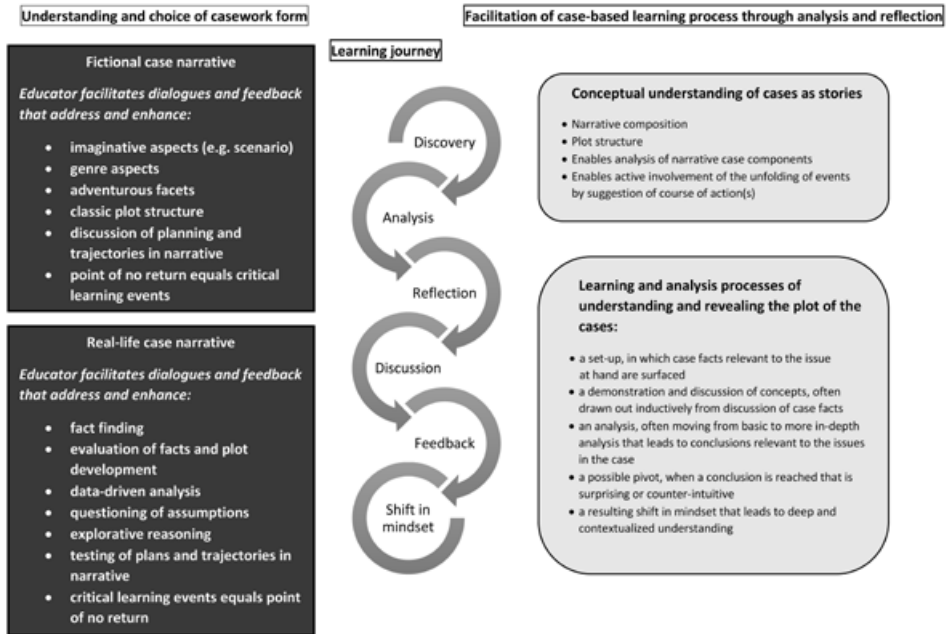
**Figure 2.1    Framework for understanding and facilitating cases as narratives**

## Explanation-Based Use of the 'Teuer Furniture (A): Discounted Cash-Flow Valuation Case' (Fictional Case)

Teuer Furniture provides students with opportunities to practise using valuation and related frameworks, specifically firm value estimation using a discounted cash-flow approach, construction of firm-level estimates of pro forma financial statements, and forecasting of revenues, costs, and so on. The teaching note for the case states that before using the case, students should already have been presented with the theoretical frameworks they need to use for analyses in the case. It also notes that 'assumptions of the case are well enough specified that when correctly done, the students' numerical answers will be relatively close'.

This is explanation-based, deductive pedagogy because it begins with theoretical frameworks and then asks students to apply these frameworks to a specific case. This is case-based learning, but it is deductive and more closely resembles the use of a 'problems set' to give students practise in using a solution concept than facilitating a discovery process.

## Experienced-Based Use of the 'e-Types A/S' (Real-Life Case)

e-Types A/S describes a disagreement between managers and 'creatives' within a Copenhagen-based design firm about which of two proposed designs to present to the client. One design stays close to what the client has asked for (the preference for e-Types managers), and the other is more creatively adventurous (and is favoured by creatives). The case is

intended to engage students in a larger debate about strategy in creative firms. In the process of debating, when it is properly orchestrated, students derive for themselves a theoretical proposition that resembles Porter's (1980) theory of generic strategies. This use of a case is experience-based and inductive because it begins with case facts and helps students discover a theoretical framework. The theoretical knowledge is arrived at in the context of the case situation, making it seem practically relevant and providing students guidance in terms of when the framework should be applied. The case discussion facilitates investigation of the case narrative and involves changes of mind ('reversals') as students realize that the situation is not as simple as 'the customer is always right' or 'you must let the creatives be creative'. Instead, they extract general lessons about the relationship between the firm's long-term strategic objectives and the choices that should be made in situations such as these.

## DISCUSSION

In the following, we will discuss how the two modes of teaching create implications for understanding narratives in the case at hand. We also address what types of students each method might be more valuable for from a learning perspective, in the sense that students and their agency are important for personal development.

Case methods are relevant in order to teach students the skills of identifying and solving problems by discussing facts from the case and then exposing them to logical and rigorous analysis (Greenhalgh, 2007). This form of teaching has been found to advance student engagement (Desiraju & Gopinath, 2001; Foster & Carboni, 2009) because of the inherent approach of asking students to engage in theorizing by making use of concepts to understand case-specific problems (Prince, 2004; Rasmussen & Sørheim, 2006). Engagement of students and more active learning can therefore be seen as some of the main advantages of teaching with cases (Gonglewski & Helm, 2010). However, the possibilities for engagement seem to be dependent on whether to choose the explanation- or experience-based approach to the casework (Austin et al., 2009). Therefore, careful pedagogical consideration by entrepreneurship educators must be a prerequisite for designing meaningful learning experiences.

Specifically, the possibility for students to become agents of their own learning journey is prevalent in this form of casework. Case-based approaches have been highly valued as a way of ensuring adaptability and agency when students must use competencies across complex settings as part of their working practices (Fawns & O'Shea, 2018). Starkey (2019) identified three dimensions of student-centric education: (1) a cognitive focus on student learning progress, (2) a student agency focus on empowering students, and (3) a humanist view on students as individuals. Casework specifically addresses the second notion where student agency is in focus (Biesta & Tedder, 2006), thus making it relevant to scaffold relationships between learning processes and agency in a temporal way, which our proposed framework supports.

The main feature for our framework links to the advancement of cases as narratives; in particular, the possibility of building authentic stories that tap into feelings (joy, anger, anxiety, stress, love, hate, empathy), as well as enabling students to engage in wicked problems. The difference between explanation- and experience-based approaches to teaching and learning

depends on the pedagogical purpose, as well as how directly the learning process should be scaffolded. In both instances, the educator role changes into a role as a narrator or storyteller, making decisions about the delivery of the story as well as the timing and unfolding of events and narratives. The pedagogical role of the educator therefore lies much in preparing the case-work. In either instance, the educator must search for impactful, in-depth, and context-rich situations in order to provide cases where students are able to develop their entrepreneurial skills and mindset. With real-life cases, it is possible to have students co-create and define the scope of the cases, whereas in a fictional case the educator makes these decisions beforehand. Depending on the educational setting, the preparation of casework further involves deciding on whether to aim for grand stories, side stories, or even noir forms of entrepreneurial case storytelling.

The proposed framework answers a specific call in the entrepreneurship education community to address the widespread confusion about pedagogical underpinnings (Jones, 2018, 2019). Frameworks that can be adjusted to a range of entrepreneurship education classrooms enable educators to be more sensitive to the design, delivery, and evaluation of courses where case-based methods play a substantial role. At the same time, the suggested framework can guide the educator to choices about whether fictional or real-life cases are relevant for a given setting and context.

In addition, understanding cases as narratives is a particular characteristic of the case method and holds prominent relevance for entrepreneurship educators. As our analysis shows, the narrative feature of cases provides an opportunity to include suspense, realistic challenges, and a link to an applied knowledge base that puts the student in a professional role of solving complex problems and building solutions. The learning processes instilled around the framework withhold opportunities for strengthening motivation among students, engaging external stakeholders when working with real-life cases, and avoiding a strict educator-centric course design. Applicability and real-life accountability strengthen the learning process where the elements of the case analysis continuously interact with the case narrative and the given unfolding of the case—both fictional and real-life. This places the student at the centre of the learning process but scaffolded by the pedagogical choices made by the educator.

## IMPLICATIONS FOR CASE TEACHING PRACTICE AND REFRAMING THE CASE METHOD FOR ENTREPRENEURSHIP EDUCATION

We conclude the chapter by illustrating some key benefits and pitfalls of case-based teaching and learning in the field of entrepreneurship education as we suggest further avenues for research and theory development. Previous reviews of teaching methods in entrepreneurship education conclude that applied methods are diverse, broad, and unclear (Fayolle & Gailly, 2012; Henry & Lewis, 2018; Mwasalwiba, 2010; Nabi et al., 2017).

With the current chapter, we have been able to reposition the understanding of casework for entrepreneurship education to extend the relevance of seeing cases as narratives, since it brings specific features to the pedagogical side of casework—both in relation to the pedagogical scaffolding and in relation to understanding the learning process to be student-centric.

The main implication is the focus on cases as stories, which contributes to narrative

learning. According to Goodson et al. (2010), narrative learning can take place in two ways. First, it takes place through life narratives as tools for facilitating strategies for learning. Fictional or real-life casework instils this process by the implicit narrative structure, which is open to interpretation and continued development. Second, narrative learning can take place through reflection on the narration itself, which is embedded in our proposed framework.

One of the pedagogical implications for educators that this brings to light is to be attentive to both the case narrative itself and subsequently the narration of the case. Herein lies a distinction between the fictional and the real-life case since it typically instils different forms of learning. However, some archetypical activity ideas can be considered regarding the pedagogical facilitation. Some examples with inspiration from IDEO (2021) are:

- Storytelling is often neglected rather than data and analytics when working, for instance, with developing a business model. Thus, there is potential to explore and include narrative strategies such as storying, improvisation, and plot development.
- The specific entrepreneurial format of pitching can be seen as one approach to developing the skills of narrating a coherent story of a case or venture (Nybye, 2021).
- Context is important; when you consider your listener's background and context, you can tell a more profound case story. Here, life stories or character development can be vehicles to facilitate this.
- Complexity matters; consider students' ability to handle authentic and highly puzzling situations depending on their educational progression.
- Origin stories of a business or idea can reveal underlying rationales and inform analysis of decisions and trajectories.
- The mission story can show how different actors are motivating a team to work towards a mission.

The current chapter has directed attention towards the specific distinction in case-based teaching between explanation- and experience-based approaches and hence the contribution of a fine-grained understanding of the potential for understanding cases as narratives. The chapter further posits that this is an interesting avenue for further research. We are hopeful that we will see much research in this field and understanding in the future.

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# 3

# How to conduct live cases in entrepreneurship education

*Meredith Woodwark and Karin Schnarr*

## INTRODUCTION

Business schools have long utilized the traditional case method (TCM) as a core teaching technique in management to depict real-world situations. Despite its popularity, however, the TCM has faced a plethora of criticisms including being outdated, inauthentic, and not impactful. Applied to entrepreneurship education, the TCM is consequently unlikely to have a positive impact on student entrepreneurial intentions and activity, key goals of entrepreneurship education. In contrast, recent research has shown that competence-based entrepreneurship education—where students produce deliverables for actual firms—increases both entrepreneurial intention and activity (Schultz, 2021). In response to criticisms of the TCM, an alternative form of business case emerged with the 'live case'. We suggest that a competence-based model like the live case method can similarly overcome the limitations of the TCM in entrepreneurship and further the goals of enhancing student entrepreneurial intention and post-course activity.

Live cases are now a common pedagogical practice in many business schools or other faculties where entrepreneurship is taught (Yadav et al., 2019). However, the pedagogical literature about the method has not yet provided a clear definition. Consequently, we suggest that live cases be formally defined as follows: a description of an actual, current, and novel organizational situation, commonly involving a decision, a challenge, an opportunity, a problem, or an issue which remains unresolved, and where proposed solutions are developed through a process of interactive participation between company decision-makers and students. The situation faced by the partner company is described in a written case similar to the TCM. The case document serves as baseline information to guide the student's journey on the issue being explored. Unlike the TCM, where students work on a past decision using only data from the case, live cases focus on a current, unresolved issue in a partner organization, and students are required to conduct external research to ground their recommendations. Live cases allow instructors to incorporate entrepreneurial firms at all stages of development into the class-

room. Because they are dynamic and provide authentic opportunities for students to make a positive impact on a real firm, live cases enhance student learning and engagement.

The objective of this chapter is twofold. First, we clarify how the live case method differs from the TCM. Second, we offer detailed instructions to instructors about how to use live cases in entrepreneurship education. We explain how instructors and their students can work with entrepreneurs with ventures at any stage on a challenging business issue they currently face. The method is ideally suited to senior undergraduate and graduate students since participants must be at a level to provide value to the partner company. Although our experience is primarily from North American business schools, we believe the live case method is well suited to the Nordic region, where the education system focuses on problem-solving and critical thinking, and where flat organizational hierarchies and low-power distance are common. Finally, as education goes virtual, live cases are a flexible tool for classes offered both in person and virtually (synchronous or asynchronous).

## BACKGROUND/FOUNDATIONS

Entrepreneurship education commonly uses case studies that enable students to practise problem-solving in active learning environments (Chang & Rieple, 2013; Sirelkhatim & Gangi, 2015). Fundamentally, the TCM is a pedagogical method used to develop practical problem-solving skills in a 'safe' education space. Conventionally in written form, a traditional business case 'is a description of an actual situation, commonly involving a decision, a challenge, an opportunity, a problem or an issue faced by a person (or persons) in an organization' (Mauffette-Leenders et al., 1997, p. 2). Proponents of the method argue that it offers many benefits to learners, including a deeper understanding of authentic organizational challenges, improved skills in analysis, decision-making, problem-solving, critical thinking, and communication, and an appreciation for self-directed, lifelong learning (Stewart & Dougherty, 1993; Tomey, 2003).

Detractors from the method, however, argue that traditional cases are static, outdated, unrealistic, unidirectional, obvious, single disciplinary, insular, and—from the student's point of view—pointless (Argyris, 1980; Bridgman et al., 2016; Collinson & Tourish, 2015; McCarthy & McCarthy, 2006; Mintzberg, 2004; Podolny, 2009). Even proponents of the TCM must acknowledge that many of these criticisms are at least somewhat legitimate limitations on how it has commonly been used. Although a key motivation behind the development of the TCM was to bring real-world organizations into business schools and prevent them from being seen as ivory towers (Bridgman et al., 2016), most management educators would acknowledge that the TCM has only partially succeeded in that goal despite its now almost global reach.

Since the rise of the experiential learning movement, many management educators seeking to avoid the limitations of the TCM have upped the ante by taking the case method 'live'. As a pedagogical method, the live case is a variation on the TCM, where instead of focusing on a past company decision, students help a partner firm to problem-solve a current issue the organization is facing (Naumes & Naumes, 2014; Rapp & Ogilvie, 2019). Unlike the TCM, the live case method is therefore current, dynamic, interactive, relevant, motivating, authentic,

and impactful. These characteristics suggest that live cases allow students to demonstrate their relevant competencies to actual firms and therefore may be more effective at increasing both student entrepreneurial intentions and subsequent action (Schultz, 2021).

## PEDAGOGICAL DEVELOPMENT APPROACH

A powerful learning experience, the live case is an increasingly important pedagogical tool. However, in the academic literature, live cases are often conflated with consulting projects. While both involve interaction with companies seeking actionable insights from students, at their core they are different. The consulting project is a method where no traditional case that formally describes an issue is used. Rather, a topic or high-level set of instructions may be provided to students (for instance, to develop a sales or marketing plan), perhaps accompanied by preliminary data about the topic. Students must first identify and frame what they believe the problem to be, and if it is suggested by the client, students may choose to refine or challenge the problem definition. Second, students develop their recommendations. Consulting projects are appropriate when learning objectives too closely mimic actual work experience over the medium term because students must grapple with workplace challenges such as relationship management, communication, and organizational politics in addition to analysis and problem-solving. More complex and time-consuming than live cases, consulting projects are typically more appropriate for graduate students.

While the two methods are related, live cases differ from consulting projects in a number of ways. Live cases have a written document that defines the core issue and context for student analysis. They also start with an identified issue, thereby skipping the problem identification and framing stages associated with consulting projects. As such, live cases cover a smaller part of the overall problem-solving process and therefore typically occupy a shorter time frame (from a single class to a month), whereas consulting projects encompass the entire process and can often last much longer. Live cases are appropriate when the learning objectives do not include managing organizational issues but do include research, analysis, and problem-solving.

The live case model can be applied to any management discipline (provided an appropriate case company can be found) and is usually completed in groups. It can be used in individual courses across business disciplines as an interactive graded component for entire cohorts (both undergraduate and graduate), or as an extracurricular competition run by student clubs. When institutional-level support is available, live cases can enjoy a high profile if they are presented in a competition format. In fact, live case competitions are often a highlight of students' experiences at the school. Along with its inherent benefits, the popularity of the live case method may in part be because experiential learning is a key focus of accreditation organizations, and schools are under increasing pressure to obtain or maintain accreditation (Alajoutsijärvi et al., 2018).

## DESCRIPTION OF THE APPROACH AND TEACHING MOMENTS

This section provides specifics about how to conduct a live case, including how to recruit a company, establish a focal question, obtain background information for case development, write an approved outline and case, and ensure a peer review (see Box 3.1). Particular attention is paid to obtaining background information about the firm because early-stage ventures often have little public data available. In addition, this section discusses how entrepreneurship educators can use a live case in a course or programme and explains how to structure a live case experience. The major steps in running a live case exercise are:

(1)   Plan for how, when, and why you want to use a live case.
(2)   Identify your objectives for the live case and the requirements of the partner firm.
(3)   Recruit the partner firm and brief key contact for timing and other requirements.
(4)   Determine your focal case question with the partner firm and understand their objectives.
(5)   Write a draft case outline and review with your key contact and a trusted peer.
(6)   Release the final case to students and clarify deliverable expectations.
(7)   Provide communication between students and the partner firm and offer the partner firm feedback.

For any instructor, the first step is to determine how, when, and why you want to use a live case. This is because instructors must clearly communicate the requirements and expectations of participating to a potential partner company. Because academic schedules are typically inflexible, it is important to know well in advance the dates and times you want your partner firm to participate. We recommend you start by making a detailed plan of how and when you wish to use a live case in your class, programme, or competition. Include dates and times for all the company interaction points such as the case presentation, a question and answer (Q&A) process, and any student presentations or other deliverables being evaluated. This plan is vital to ensure that the partner company and representatives understand and are committed to fulfilling your requirements.

Next, identify the objectives for your live case and the characteristics and data you require of your partner firm. For example, if you require financial data, then you will need to ensure your partner company can provide either actual or disguised financials. Alternatively, your objective might be related to a specific topic (for example, scaling leadership) or business function, in which case you must recruit a firm that is currently facing such challenges which they are willing to discuss. When working with start-up firms, things can change quickly, so we recommend keeping your pedagogical objectives flexible.

The next step is to recruit an entrepreneurial partner firm which will serve as the focal case company. Potential sources include alumni, current students, staff and faculty, local Chambers of Commerce or business associations, and the university development office. We suggest developing a short document with a description of the process, requirements, benefits, and contact information that can be easily shared. Allow plenty of time for recruitment as this is usually the longest task. We typically start recruiting up to 1 year and a minimum of 6

months in advance in order to have a partner secured. Long timelines can be challenging for start-up firms, so it is vital that the partner company understands the constraints you face in using the live case format. We recommend establishing a key contact or sponsor for the case project within the organization who is responsible for liaising between the instructor and the company. Sponsor responsibilities include providing the primary data for the case and organizing all participating company representatives. We assuage any company concerns about case content, giving the company final sign-off before the case is released to students.

The next step is to establish the focal case question with the sponsor. This should be a current challenge or decision the firm is facing. Ensure that the core issue you choose will not be resolved before the end of the students' participation and that it is a topic that students can reasonably research and where they can provide insight. Consider the data the students will need to know about the company and avoid any topics that involve confidentiality issues. Ideally, focal case questions can be selected and adapted to meet the pedagogical objectives, including the appropriate difficulty level for the participating students. Effective focal case issues are ones where different students or groups are highly likely to have a wide range of opinions and ideas so that the firm benefits from their creativity. Focal case questions that demand creative deliverables such as supply chain, marketing, or communication plans work well. Ensure you understand the firm's objectives before finalizing the focal case question and that the company understands the primary data required.

To develop the case, we strongly recommend that the case writer (typically the instructor) begins by developing a detailed outline following the structure of a traditional published case. The writer should use available secondary data as applicable. An outline allows for high-level agreement on the case story early on and for the required data to be identified. Once the outline is approved, the case writer can convert the outline into a full narrative. The sponsor and case writer should go back and forth with feedback, questions, and edits until both parties are satisfied and the company has signed off. Be sure to leave sufficient time for the sign-off process in case legal approval is required. Some firms will ask for schools and/or students to sign non-disclosure agreements in order to access the case. Last, we recommend that a trusted faculty member review the case prior to releasing it to students.

Instructors can adapt the student experience of the live case process to the needs of the course or programme. There are three key activities where the firm is involved that greatly enhance the student experience. First, after the case is announced and released to students, a Q&A session with company representatives is helpful to allow students to clarify, ask for missing information, and trial initial ideas. Second, we recommend that students (or a subset of the best ones) present their recommendations to the company representatives directly. Finally, we recommend that company representatives play a key role in student evaluation and any feedback provided. For example, the company can select the winner(s) and may even want to contact individual students for recruitment purposes. We note that all these components can be adapted for virtual or remote learning via technology.

| Box 3.1    Top five tips for creating a successful entrepreneurship live case |
| --- |
| 1. Ensure the case will not have a live resolution before it is used (at least not a public one). |
| 2. Clearly explain the company commitment and timing requirements that will be required of the entrepreneurial organization from day one. |
| 3. Maintain regular communication with the live case company to ensure you keep to the schedule. |
| 4. Ensure the company's objectives are met as well as the school's. |
| 5. Build a community of referrals for live case opportunities. |

## DISCUSSION

Students want their education to provide them not only with the theoretical knowledge that is required but also with the opportunity to make a tangible impact. Live cases deliver such an opportunity. The method can be used with senior undergraduate and graduate students, and it is scalable to the size of the course or programme. It is a flexible tool that can be used as an individual or group activity early in a programme or as a capstone course. Instructors can tailor the case to the desired difficulty level, the position in the course, and the desired focal topic. For example, a live case involving a brand-new start-up will be very different than one based on a venture that has raised several rounds of funding.

Live cases require time and planning. It takes effort to find a person or company that wants to partner with an instructor and disclose the information students need to provide in-depth answers that will add value to the firm. Because your plan has to be set before the term starts, we find it helpful to have a small pipeline of interested parties in case one drops out at the last minute. Despite all the time and effort required, live cases provide so many unique benefits that enhance student learning and engagement, not least of which is an authentic company challenge that they can solve. The inclusion of live cases in course or programme curricula provides a wide range of benefits for students, instructors, schools, and the company itself; see Table 3.1.

Entrepreneurs are often eager to participate as a subject company in live cases as they receive 'free consulting'. When working with entrepreneurs, be clear regarding the time commitments, particularly if they are responsible for adjudicating student submissions. Entrepreneurial ventures are often short-staffed with competing priorities, so make sure company representatives are booked well in advance.

Live cases are also adaptable to a virtual learning environment, important as management education continues its rapid online trajectory. Our institution has traditionally done live cases in person with students and companies. What we have recently learned is that in a virtual environment, we can involve entrepreneurs and companies who may not be geographically proximate to the business school, which can be a wonderful opportunity to expand the subject pool. Technology tools have also allowed us to include alumni in our virtual judging in real time who would not have been able to physically attend. With some effort it was possible to switch the traditional 'live' format to a virtual one. This can be done by posting documents

**Table 3.1**   Benefits to groups of using live cases in entrepreneurship education

| Group | Benefits |
| --- | --- |
| Students | • Prevents them from using the benefit of hindsight to 'solve' the case<br>• Cannot Google the decision actually made!<br>• Increases challenge and engagement<br>• Illustrates the relevance and applicability of in-class learning vs. the 'real world'<br>• Focuses on topics that are current and future-oriented<br>• Builds experience in coping with decision-making in the face of uncertainty<br>• Gives more realistic view of actual decision-making process in organizations<br>• Possibility of receiving feedback on work and ideas from real entrepreneur<br>• Learning exercise that students perceive as authentic and meaningful |
| Instructors | • Tailored to the concepts you want your students to focus on<br>• Fills a gap in a syllabus where other options are unsatisfactory<br>• Provides level playing field from which to evaluate student performance<br>• Better prepares students for how to work through real-world entrepreneurial challenges<br>• Builds relationships with organizations for research or recruitment |
| Programmes/<br>schools | • Opportunity for alumni to participate in programming and reconnect with school<br>• Builds programme and school reputation with potential partners and employers<br>• Builds relationships between faculty and practitioners<br>• Brings current practice and issues into the school/programme<br>• Builds case-writing capacity of faculty<br>• Makes connections for research<br>• Gets feedback from alumni and practitioners on student job-readiness |
| Subject<br>entrepreneurs | • Free consulting with hundreds of minds focusing on their business problem<br>• Actual, current, novel, and unresolved issues = complex<br>• Access to sought-after millennial and Gen Z perspective on their company<br>• Identification of high-potential recruits<br>• Evaluates school and programme for future recruiting<br>• Challenges or confirms internal decision-making<br>• Alumni can reconnect with school |

and pre-recorded videos to classroom technology tools, using social media platforms like Twitter and Instagram to encourage student engagement, and using communications tools such as Zoom and Microsoft Office Teams to hold 'live virtual' sessions for the company Q&A, student and faculty briefings, and group presentations.

Colleagues have further adapted the live case approach to a completely asynchronous online course design, important as more institutions expand their offerings into this modality. While not as dynamic as a synchronous, online model, they report to us that it is very feasible. Asynchronous live cases are possible because the crux of a live case is the current unresolved issue where students and company decision-makers interact to develop proposed solutions. The unresolved, real-time context helps create dynamism and urgency in asynchronous environments that can be difficult to achieve with the TCM. The description of the case issue and the interactions between students and the company can all be accomplished remotely with participants working on the live case at their own convenience in accordance with a shared deliverables schedule. Again, this involves significant faculty planning to ensure all of the live case elements are created ahead of time, and the timing for the live case exercise is explicitly communicated to students in advance. This asynchronous approach accommodates students who may be located in different time zones. As an example of the transferability of the live

case model to an asynchronous environment, the Q&A with the entrepreneurial team ceases to become 'live'; instead, students have an opportunity to submit their questions, and either a video is posted of the company answering the questions or written answers are provided. The focal case question remains live in that it is still a current unresolved issue facing the firm.

## IMPLICATIONS FOR CASE TEACHING PRACTICE AND REFRAMING THE CASE METHOD FOR ENTREPRENEURSHIP EDUCATION

With all this extra work, are live cases worth it? We believe they absolutely are, particularly if used in a competition which generates excitement, enthusiasm, and social comparison. Even when not a competition, students enjoy the opportunity to work on real-time, genuine issues where their advice can have a tangible impact on the success of an organization. This is particularly true when the live case involves an entrepreneurial venture. We have found that live cases work best where the focal issue students are asked to consider resonates with them and has a variety of potential solutions.

In many ways, entrepreneurs and their companies provide a perfect opportunity to incorporate a live case into your course or business programme. We are often approached by founders or people who work for start-ups who are looking for insight from business students. Former students and alumni are a great place to start for potential company partners. We have also had success partnering with accelerators and incubators who are connected to entrepreneurial organizations trying to work through various challenges. Entrepreneurship-based organizations in the Nordic region, such as Nordic Entrepreneurship Hubs or Nordic Innovation, may be able to facilitate connections to founders. We also contact our local Chamber of Commerce or Board of Trade for connections to members. Finally, our best leads often come from fellow faculty members who pass along potential companies.

We and our students have enjoyed working with founders on live cases. It is critical to remember that founders are working long hours and so are often short-staffed, with many competing pressures each day. With patience and planning, we believe it will be worth your time investment and a huge benefit to your students and school. Our final word is that while the rewards of live cases are many, they come with the risk of being reliant on your partner firm and sponsor. It is therefore always wise to ensure you have a backup plan B should the unexpected occur.

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# 4

# Bringing environmental sustainability and the circular economy into entrepreneurship education with stakeholders: four case methods from hackathons to role-model cases

*Leena Aarikka-Stenroos, Anil Engez, Linnea Harala,*
*Kaisa Henttonen, Hanna Lehtimäki, and Sara Malve-Ahlroth*

## INTRODUCTION

Modern society is facing a sustainability transition that also touches on entrepreneurship education. The rise of environmental sustainability issues, such as climate change, the need to save natural resources, and increased material circulation through the circular economy (CE), highlights the need to incorporate environmental sustainability into education (Kirchherr & Piscicelli, 2019). Many higher education institutions have progressively incorporated sustainability education into their curricula, and novel examples of diverse education methods and courses on how to educate students on CE and sustainability issues have been proposed (Kirchherr & Piscicelli, 2019; Kopnina, 2019; Mendoza et al., 2019). This global megatrend calls upon entrepreneurship education to develop its content and methods to train entrepreneurial change-makers who should learn not only how to start and run businesses but also how to do so in a more sustainable way. Therefore, this chapter aims to develop understanding of how entrepreneurship education and environmental sustainability can go hand in hand and how different case methods allow students to be sufficiently educated on both relevant aspects.

Combining entrepreneurship and environmental sustainability provokes some pressing questions: how can one initiate a new business that is economically feasible but environmentally sustainable? What are the relevant skills and competences of the next-generation entrepreneurs and experts needed to conduct environmentally sustainable business? Is it

possible to be a successful entrepreneur in a way that does not harm the environment—and how? The starting point of this chapter is to explore and discuss how we can employ diverse case methods to support the development of 'conventional' entrepreneurial skills (such as the ability to turn business ideas into plans or to see entrepreneurship as an attractive career path) in higher education while simultaneously providing educational guidance on how to do so in an environmentally sustainable way. In this chapter, we discuss and compare different case methods that enable the attainment of both goals. We also pay special attention to how to involve and engage entrepreneurs and other stakeholders from society in education when aiming to teach environmentally sustainable entrepreneurship via case methods.

The chapter focuses on four different case methods and is based on our education experiences from educational acts and courses at two Finnish universities (Tampere University and its technical campus and the University of Eastern Finland) and one university of applied sciences (Turku University of Applied Sciences). The discussed case methods vary from short-term educational acts, such as listening to visiting lecturers and personal narratives by sustainable entrepreneurs and intensive hackathons, to long-term collaborative methods, such as solving business cases. The aim is to enable students to develop an entrepreneurial mindset and the ability to identify business opportunities that arise from the society going through sustainability transition, and at the same time to breed more environmentally sustainable entrepreneurs and companies for the future. Our presumption is that different case methods call for different pedagogical and didactical approaches but also enable different learning goals; therefore, we also compare the methods.

## BACKGROUND: IMPLEMENTING THE CASE METHOD IN TEACHING AND ENTREPRENEURSHIP EDUCATION, PARTICULARLY IN TEACHING ENVIRONMENTAL SUSTAINABILITY

Conventionally, the case method is based on problem-based learning. It enables students to make sense of complex problems related to professional issues and to assess how certain actions result in different outcomes (Hammond, 1976). In doing so, students learn about facts, conventions, and procedures while discussing different viewpoints relating to the problem. Typically, the basic elements of a case are a rich, complex case narrative and an analytical discussion/reflection of that case. This also entails solving a problem in the case by identifying meaningful determinants and options, evaluating choices of actions, predicting and assessing the effects of such actions, and communicating a solution and action plan.

In entrepreneurship education, case-based teaching methods have been recognized but are underexplored (e.g. Samuel & Rahman, 2018). Case studies present complex examples by illustrating the core issues and offering insights into the context of the issues, and therefore the case method promotes active learning, provides a means of linking theory and practice, and enhances students' understanding of the topics (Mustoe & Croft, 1999). Learning from real cases can particularly increase the authenticity of entrepreneurship education (Aadland & Aaboen, 2020). Real-life entrepreneurs can also serve as role models and influence the entre-

preneurial intentions of their followers (Van Auken et al., 2006), which means assuming that entrepreneurs telling their case narratives can serve as role models for students.

Case-based teaching methods have also recently been studied in the field of sustainability and CE education. Some recent studies have provided good examples of how to use higher education courses and games to educate students about environmental sustainability and the CE (Kirchherr & Piscicelli, 2019; Mendoza et al., 2019; Whalen et al., 2018). However, other studies have critically demonstrated that implementing CE principles, such as reduce, reuse, and recycle, in 'real-life' situations and business cases often seems to be more challenging than the most optimistic visions may suggest (Kopnina, 2019). Therefore, in this chapter we posit that particularly authentic entrepreneurship education methods (Aadland & Aaboen, 2020), such as real-life cases from stakeholder companies, provide a fruitful method for students to experiment in practice and to learn how to conduct environmentally sustainable yet profitable business.

## PEDAGOGICAL DEVELOPMENT: TOWARDS NEW COMPETENCES AND ORIENTATIONS VIA INTEGRATING ENVIRONMENTAL SUSTAINABILITY AND ENTREPRENEURSHIP EDUCATION

In this chapter, pedagogical development concerns how diverse case methods allow the integration of entrepreneurship education and environmental sustainability aims. As we broadly consider case methods, we will include not only the conventional notions of case methods with predetermined case descriptions, but also other related case approaches. This includes comprehensive yet open-ended real-life narrative cases that allow students to develop deeper understandings of complex settings comprising diverse relevant actors, meaningful factors, and essential actions in the focal context. We focus on four distinct case methods that allow the integration of business and entrepreneurship education with sustainability education: real-life business cases addressing business problem-solving (e.g. Kopnina, 2019), entrepreneur and start-up cases allowing students to identify role models (Van Auken et al., 2006), hackathons (Briscoe & Mulligan, 2014) addressing tech-business problem-solving in a short time, and live cases where practising professionals in Executive Master of Business Administration (EMBA) programmes develop sustainable versions of their current business (Berggren & Söderlund, 2011; Kearins & Springett, 2003). We assume that such different case methods call for different pedagogical and didactical approaches but also enable different ways of learning.

Here, pedagogical development also concerns the necessary novel competences students need to learn, as environmental sustainability shapes the entrepreneurial, business, and tech landscape and consequently calls for new learning content and emphases in education. Researchers agree that the environmental sustainability shift pushes all actors in society—consumers, public actors, and companies—to reduce the use of natural resources and the generation of waste (Geissdoerfer et al., 2017; Ghisellini et al., 2016). This shift also shapes business opportunities, business models, and the logic of value creation for both individual firms and whole value chains, networks, and ecosystems (Aarikka-Stenroos et al., 2021;

Lehtimäki et al., 2020). When pursuing more environmentally sustainable business, students need to learn more about sustainable business models and ideas, as many novel companies can compete by serving customers' developing needs for more sustainable offerings (Martín-de Castro, 2020) by providing innovative services such as cars or clothing as a service instead of providing products (Tukker, 2015), or new sustainable technologies, such as plastics substitutes that are biodegradable. Needs and demands for more sustainable offerings are also shaped by social institutions that determine what is valuable and how things are created and captured in certain business settings and locations (Ranta et al., 2018).

Solving environmental challenges often requires companies to interact and innovate with stakeholders, making stakeholder engagement and collaboration crucial in business (Engez et al., 2021). Therefore, it is important to learn how to associate with stakeholders, to obtain their support for the new sustainable offering, and to collaborate extensively, even with competitors, to create markets for more sustainable solutions (Bacq & Aguilera, 2022; Brown et al., 2019, Manzhynski & Figge, 2020). Mature businesses are also renewing and developing more environmentally sustainable operations to which start-ups can contribute by providing new and innovative materials, digital technologies, and products and services (Giudici et al., 2019). However, to capture these business opportunities, new understanding of the rapidly evolving global business contexts must be developed. Sustainability transition also pushes new types of entrepreneurship to emerge, such as ecopreneurship, a type of entrepreneurship that combines strong environmental and social values with an entrepreneurial attitude and a goal of creating an economically viable business (Magala et al., 2007).

In summary, environmental sustainability and CE transition call for the development of particular competences, understandings, and orientations among students interested in entrepreneurship. How such learning goals can be pursued via different case-based methods is explained next.

## APPROACHES: FOUR DIFFERENT CASE METHODS ALLOWING THE INTEGRATION OF ENTREPRENEURSHIP AND BUSINESS AND ENVIRONMENTAL SUSTAINABILITY EDUCATION

Next, we explain how we have used the four chosen case methods—real-life business development cases, role-model cases, hackathons, and embedded cases—to educate on entrepreneurship and sustainability concurrently.

### Method 1: Solving Real-Life Business Challenge Cases by Sustainable Start-Ups and Companies

The first experience involves real-life business development challenges presented by sustainable companies. This experience comes from a course titled Turning CE Technologies into Business that has 100+ domestic and international engineering students. The course is realized in stakeholder collaboration with companies ranging from pre-start-ups to corporations

whose business challenges are solved by international, cross-disciplinary student teams. The business areas of the involved companies vary, including developing a process technology that converts used textiles or pulp into textile fibres, the collection of surplus construction materials to promote reuse and recycling, and underground high-temperature heat storage of solar or wind energy. These real-life cases typically concern business models or commercialization developments. The learning goal here is to develop competences to advance profitable business-making in sustainable CE companies.

In our example, six companies were invited to the course to offer a case challenge to students. The challenges included such elements as competitor analysis, finding new markets, and business model analysis, depending on the company's need. The important variables in the course are the number of staff and students. In our example, there were three course staff members and around 100 students, totalling over 20 student groups or teams. Each staff member was responsible for two case companies and seven teams of four or five students each; thus, each case company accommodated three or four teams. Teams were required to develop a solution to one company's business challenge and return a presentation and a comprehensive proposal, report, or plan. Students formed their teams, acquired some background information on company cases, and selected their preferred company.

Before the casework, some pre-understanding and competences were acquired via lectures on commercialization and business model development, related 'tools' such as models and canvases, and a mid-term exam covering lectures and journal articles on the CE, commercialization, and business model development. The casework consisted of four processual phases held at weekly intervals—a case launch session, case clinics, a group presentation and feedback session, and the final solution. In the case launch session, company representatives explained the challenge and its background and answered questions. The teams then developed initial solutions and obtained feedback from the course staff in the case clinics. In the subsequent presentation session (the week after), the student groups pitched and justified their solutions and received more feedback from the course staff and company representatives. Based on feedback, the teams provided their final solution (commercialization plan or developed business model) and a comprehensive final report. The learned tools helped build students' understanding of the business model elements, the strengths and weaknesses of the companies, and their external environment, but also allowed the students to develop a structured action plan for the companies. The final solutions were assessed by the course staff and the company representatives.

## Method 2: Role-Model Cases via Involving Successful Sustainable Start-Ups and Entrepreneurs

The second method was applied in the 'conventional entrepreneurial' course on Growth Entrepreneurship. Here, entrepreneurs from sustainable businesses shared their personal stories of ecopreneurship and entrepreneurship through guest lectures. The case was the entrepreneur's personal narrative of what sustainable entrepreneurship is about, how it happens, and how the sustainable business idea developed. The learning goal was to get a quick look at the sustainable entrepreneur's work and personal life, career path, and motivation to start

a sustainable business. The entrepreneurs described their motivation to engage in sustainable business by reflecting on their own thoughts and experiences. The students were instructed to get acquainted with the company and its business model beforehand and submit their own considered, focused questions for the entrepreneurs. Thus, the guest lecturer had some prior understanding of the students' interests, allowing them to prepare answers. Discussion and questions during the lecture were encouraged to enhance the interaction between the students and the guest lecturers and thus to build the case narrative through dialogue.

In presenting their motivation, drive, and enthusiasm for their missions, the sustainable entrepreneurs acted as inspirational role models for the students. Their personal narratives intertwined with the success stories of their growing companies, including manageable twists and turns, demonstrating it is possible to build a profitable business and promote sustainability simultaneously. One particular example of an inspiring guest lecturer was the CEO of Norsepower, a company reducing fuel usage for vessels through a wind propulsion system. The entrepreneur described his strong drive towards sustainable business and inspired the students to follow their own interests, values, and motivation to create meaningful careers. For every guest lecture, the students wrote a reflective learning diary where they analysed the personal career and organizational growth paths in the case.

Role-model cases were not only 'given' by the teachers but were also chosen by the students; in one learning event, the students pitched the company's business model to their peers who then selected one and created a growth strategy for it. These companies included a wide variety of sustainable businesses as the students were allowed to choose them according to their own interests. These case tasks allowed students to understand sustainable entrepreneurship and personal career paths and pushed them to gain a deeper understanding of the prerequisites of growth in sustainable businesses.

## Method 3: The Hackathon Method Allowing Students to Solve Sustainability Challenges by Companies

The third case method example is hackathons—intensive events where small teams apply creative ideas to solve real-life challenges and come up with novel solutions. The word 'hackathon' combines the words 'hack', which relates to creative and experimental problem-solving, and 'marathon', which refers to the duration of the event. Hackathons offer networking and collaboration opportunities for participants and encourage them to build long-term connections despite the short duration and high intensity of the event. The event has a specific topic, location, and challenges provided by stakeholders, such as companies or governments. Traditionally, hackathons are mostly related to tech problems and are highly focused on software development and programming. Today, they can be used for any topic without the inclusion of the software development aspect, making them similar to case competitions. Topics can include contributing to a business objective or developing a solution to a social issue. In our hackathons, the focus was sustainability and CE issues. The central characteristics of our hackathons in relation to the other methods are their intensity, competitiveness, and the need for students to work under pressure.

From the students' perspective, these sustainability hackathons increase their creative problem-solving skills while reinforcing motivation and engagement in sustainability issues. Students who have experienced climate anxiety in particular gain a strong sense of agency and empowerment when attending sustainability hackathons. By participating in such hackathons, the student groups get a chance to influence the sustainability-related decisions of the organization that introduce a specific challenge to be solved. In the final phase of the event, the student groups present their solutions to the stakeholders, thus allowing them to develop their presentation skills. From the stakeholders' perspective, hackathons demand significant effort and involvement before and during the event, such as in formulating the challenge and working with and giving feedback to the students. At the same time, the stakeholder representatives can get novel and creative solutions to their sustainability problems and be more inspired and motivated to work towards a more sustainable future. From the teachers' perspective, the hackathon method requires significant effort to organize the event and cooperate with the stakeholders.

In our hackathon example, one company provided a sustainability challenge related to their tech business. For 24 hours, the five multidisciplinary student teams competed to create the best solution. Each team had a more experienced student tutor who provided support relating to different problem-solving methods. In addition to the teachers was a business-minded coach who facilitated the whole process and guided short sessions on ideation, prototyping, and pitching. A jury comprising company representatives and other experts chose the overall winner of the hackathon. The teams' solutions were assessed based on specific criteria, such as feasibility and sustainability, and the winning team was awarded a prize.

## Method 4: EMBA Embedded Case and Adult Education through Experimental Learning

Our fourth example concerns continuing education and professional training for an EMBA where the students increased their understanding of the wide-ranging perspectives on a sustainable CE in different organizations and business areas. Students discussed the implications of a sustainable CE in different industries, critically evaluated the different approaches of case companies, and assessed their personal values and assumptions on sustainable business and sustainability transition.

Cases were selected to cover the different aspects, tasks, and processes of the CE, such as designing for durability, reuse, remanufacturing, and recycling to keep products, components, and materials circulating. The cases were selected from among the organizations where the EMBA students worked to make use of their work experience and insider knowledge. The business models of the case organizations and the opportunities and risks were analysed from the triple-bottom-line perspective (environmental, social, and economic). The proposed solutions ranged from transformative, radical change (e.g. new designs for products and processes) to incremental changes (e.g. recycling initiatives and solutions related to compensation). The students were requested to analyse whether the solution transformed the industry or whether it was an adaptation, what the time frame of the solution was (short, middle, or long term), and what the implications of the solution were for the organization (e.g. hiring, culture, and systems). Students presented their analyses, discussion, and feedback to the whole group. The

diversity of the cases and guest lecturers from various industries ensured that students learned how different organizations and industries approach and implement CE principles.

To encourage mature, experienced students to adopt novel ways of thinking and become exposed to different world views, self-reflection and assessment of personal views on sustainability were encouraged via diaries. Students reflected on how their career and sustainability intentions may intertwine and what sustainability goals they wanted to achieve and how. In summary, the case studies and guest speakers and supportive group and individual assignments enabled students to reflect on how sustainability may feature in their day-to-day work, expert tasks, acts, decision-making, initiatives, and careers.

## DISCUSSION: COMPARING THE CASE METHODS AND SUMMARIZING

After explaining the diverse methods and experiences of integrating environmental sustainability and entrepreneurship/business education, we compare case-based methods in a structured way to highlight their particular features and expose their differences (see Table 4.1). The methods mainly differ in relation to their level of *intensity and length* (from single-day to longer course implementation), *collaboration* (with different peer students and stakeholders and companies), and *reflection versus solution* (the focus being on reflecting students' own values and orientations versus developing problem-solving skills for sustainability). The comparison also builds structured understanding of the pedagogical pains and gains from students' and educators' perspectives and how to engage relevant stakeholders in implementation. Table 4.1 highlights the most important considerations and lessons learned for each method.

Based on the comparison, we propose the most optimal usage of each case method for integrating sustainability, the CE, and entrepreneurship. Solving real-life business cases enables students to interact with companies, generate new ideas and solutions for contemporary sustainable business problems, and improve their teamwork and project management skills because of the method's long-term approach. Role-model success cases deepen students' understanding of sustainable entrepreneurship in practice and personal ambition where sustainability and business orientation may combine. The hackathon is a high-intensity method of engaging students with sustainable entrepreneurship through personal involvement and co-creation with companies. Finally, the embedded EMBA cases allow the mature (postgraduate) student to reorient towards sustainability.

Our four case method examples and their comparisons extend the discussion on entrepreneurship education and the case method towards environmental sustainability learning contents. Our structured comparisons of methods reveal how the different methods enable pursuing versatile environmental sustainability and entrepreneurship education goals. Our case examples with Methods 1 and 4 support earlier papers discussing the implementation of real-life sustainable business cases (Kirchherr & Piscicelli, 2019; Kopnina, 2019), Method 2 explores how role-model cases (Van Auken et al., 2006) encourage ecopreneurial thinking (Magala et al., 2007), and Method 3 shows that sustainability hackathons enable intensive, multidisciplinary learning and engage students with sustainability on a personal level, thus extending current understanding of hackathons (Briscoe & Mulligan, 2014).

**Table 4.1    Key aspects of the four different case methods and a comparison**

| | Applied case methods for integrating sustainability, the CE, and entrepreneurship education | | | |
|---|---|---|---|---|
| Aspects to compare | 1. Solving real-life business challenge cases | 2. Reflecting role-model success cases | 3. Hackathon | 4. Embedded company cases with EMBA students |
| Target group | Students from diverse disciplines, bachelor and master levels | Students from diverse disciplines, bachelor and master levels | Students from diverse disciplines, bachelor and master levels | Postgraduates/executives with work experience in private and public sector organizations |
| Case method-related learning goal and contents concerning entre-preneur-ship and business and sustain-ability | Through real-life business development and commercialization cases, students learn to solve real business challenges of CE companies and understand their business contexts. They learn multidisciplinary teamwork and reporting skills. | Through success case stories of sustainable entrepreneurs, students learn about the career paths and everyday work of entrepreneurs who seek both sustainability and growth. They learn pitching and presenting skills. | Through specific, intensive case problems, students learn multidisciplinary teamwork and collaboration, creative problem-solving tools for sustainability challenges, how to work well under time constraints, and how to prioritize tasks. | Through analysing and comparing their own employer company cases, students learn their own sustainability-related values and actions, understand how their organizations can implement CE in practice, and learn how to develop their own organizations. |
| Key stakeholders to be engaged | CEOs, owner/founders, marketing and R&D managers, researchers, innovation advisers, project managers bring real-life cases. | Entrepreneurs, CEOs, starting members in charge of sustainable business explain the story and their paths. | CEOs, innovation advisers and company experts bring the challenge, and local universities and entrepreneurship societies serve as jury members. | Employer companies of the students are the stakeholders. Students are peer stakeholders for each other. |
| Organizing for the case method implem-entation—key tasks per actor from preparation to assessment | Educators contact and instruct case companies. Companies formulate the case for students and provide feedback to student groups. Students seek relevant information, allocate and schedule tasks within their groups, and present their solutions/plans. Companies and educators jointly provide feedback and assess/grade the business and commercialization plans based on their feasibility, soundness, and clarity. | Educators invite the guest lecturers with their case stories, facilitate the lectures (e.g. sending the students' questions to the lecturers beforehand), and assess the learning diaries on the success cases. Company representatives tell their stories and answer students' questions. | Educators contact companies and organize facilities and catering. Educators and companies formulate the challenges together. Educators facilitate the hackathon. Educators and companies coach the teams and provide feedback and assessment together with the jury after the final presentations. Educators and companies award the winning team. | Educator and students select the cases among the students' organizations to ensure variation of CE businesses. Organizations where the students work provide the cases, students share and reflect on their insights on the cases, and teachers select the cases and facilitate discussion. Instead of assessments with grades, students expect discussions to ensure learning, unlearning, and professional development. |

| Applied case methods for integrating sustainability, the CE, and entrepreneurship education | | | | |
|---|---|---|---|---|
| Time frame for case method implementation: intensity and length | Longer duration (one period recommended to enable iterations and plan improvement rounds); sequential intensity | Longer duration (one period recommended to ensure reflection time between cases) and lower intensity | Short duration event (24–48 hours) and high intensity (work around the clock) | Duration varies depending on the available time frame and needed change-maker reflections: intensive 1-day event or one-period course |
| Educators' reflections on challenges and opportunities | Opportunities: students learn to assess the business models and commercialization of CE companies. Challenges: company representatives need to attend both case launch and presentation and feedback sessions. In case of a cancellation, a substitute representative is needed. The rule to mix and integrate is beneficial to ensure heterogenous student groups with international students to learn even more about different contexts for CE businesses. | Opportunities: students learn and get inspired for change-making 'with profit' through direct interaction with ecopreneurs themselves. Students understand the prerequisites and drivers behind the entrepreneurs' choices and career paths. Challenges: active, enthusiastic role-model entrepreneurs and CEOs typically have busy schedules. Therefore, getting in touch and scheduling can be challenging. | Opportunities: students learn about the challenges of sustainability businesses and how to overcome them through joint creative problem-solving. Students engage with sustainability on a personal level and realize their potential to act as change-makers. Challenges: demands active participation from the companies and much organizing by the educator before and during the event; catering expenses must be covered. Students must be motivated to work hard during the event. | Opportunities: students learn about sustainable decision-making and risk assessment and the complexity of circumstances from their peers' real-life situations. Students understand the diverse ways organizations implement the CE and adopt change-making orientation while developing their own organizations more sustainably. Challenges: time for discussion is limited and deep learning requires much independent work and time investment from busy students. |

## IMPLICATIONS FOR CASE TEACHING PRACTICE AND REFRAMING THE CASE METHOD FOR ENTREPRENEURSHIP EDUCATION

We conclude with the implications of our case method experiences for entrepreneurship education, a discussion of our contributions, and suggestions regarding directions for future research and practice seeking to integrate environmental sustainability into entrepreneurship education.

Our case experiences and analyses contribute to entrepreneurship education and case method understanding (Hammond, 1976) by illuminating how four different case-based methods allow the integration of environmental sustainability aspects. This chapter provided four case method examples varying from intense and fast-paced hackathons to longer courses, from business problem-solving to career and role-model cases (all real-life cases). Thus, we also extend current understanding of how to use entrepreneurship education methods that rely on authenticity (Aadland & Aaboen, 2020). Our structured comparison of different methods complements single method-based studies on how to teach environmental sustainability and entrepreneurship or business (Kirchherr & Piscicelli, 2019; Kopnina, 2019; Whalen et al., 2018). Our chapter also looked at how stakehold-

ers, particularly sustainable companies and entrepreneurs, can be involved and contribute to entrepreneurship education by bringing their real-life business cases and background knowledge and serving as role models in person. This, however, means that stakeholders must benefit from the collaboration by gaining new ideas and solutions to their problems, seeking fresh views from 'the next generation' on how to enhance the sustainability of their businesses, or being able to present themselves as an attractive employer to sustainability-oriented students. In all methods, stakeholder involvement requires critical input and time investment, such as learning event preparation, interacting with and providing feedback to students, and organizing.

Practical recommendations for entrepreneurship educators, education developers, and companies emerge from our case method experiences and comparison. Table 4.1 provides some insights into how and when each method can be optimally implemented. It is recommended to use the *real-life business problem method* for educational settings where long-term work between companies, students, and educators is possible. Stakeholders can easily be engaged as the participating companies can improve their business development and commercialization performance based on student solutions. *Role-model success cases* allow the students to reflect on their orientations and competences for sustainable growth during a longer period. They can be chosen by the educators to display the diversity of role-model entrepreneurs, but it is just as important to allow students to choose their own role models. The *hackathon* method can serve as an intensive introduction to sustainable entrepreneurship for students from all levels and fields, as it provides a platform for more advanced students to apply their sustainability knowledge in practice and increase the multidisciplinary teamwork.

Our method comparisons reveal the value of diversity and variation in learning. The diversity of students, disciplines, and involved companies and stakeholders supports case-based learning. Therefore, it is beneficial to nurture multidisciplinary, multinational, and cross-industry collaboration, to have mixed student groups (students with tech, humanities, and business backgrounds, and with international and domestic backgrounds), and to engage different-sized companies from diverse industries.

The methods discussed in this chapter can also easily be implemented in the digital learning space by using platforms such as open-source learning management systems and online real-time communication and teleconferencing. This allows remote working; increased communication, such as instant notifications, announcements, forums, and information about the related events; and video recordings and access to presentation materials through digital platforms to facilitate students' learning process.

Regarding further research and development, we suggest that company and stakeholder involvement should be further analysed to understand the diverse roles and involvement modes in education. For example, role-model and business cases could extend to field trips that require strong company involvement and access. Second, student diversity should be further examined in relation to case methods to understand how this complicates or facilitates learning. We hope that our experiences stemming from the Finnish university context can bring valuable insights to all entrepreneurship educators and inspire them to integrate sustainability aspects into their entrepreneurship education via diverse case methods.

## ACKNOWLEDGEMENTS

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# Applying the Case Method in Entrepreneurship Education

# 5

# Experiences from live casework with Nordic micro-enterprises: contextualizing learning designs in entrepreneurship education

*Mette Lindahl Thomassen and Michael Breum Ramsgaard*

## INTRODUCTION

The call for entrepreneurship-focused education within higher education institutions (HEIs) has grown from a focus on entrepreneurship education being found solely in business schools with the primary aim of new venture creation (Hindle, 2007) towards a proliferation into all types of education. With this proliferation comes a much broader focus on creating change in society (Bruyat & Julien, 2001; Landström, 2020), designing entrepreneurial learning experiences (Pittaway & Cope, 2007), and new value creation (Lackéus, 2018). In addition, with the triple-helix notion, Leydesdorff and Etzkowitz (2001) advocated an understanding of HEIs engaging in university–government–industry collaboration that impacts entrepreneurship education activities.

First, this has urged HEIs to further actively promote entrepreneurial ways of working as part of the curriculum, and many HEIs have therefore initiated a focus on creating teaching methods to promote the development of entrepreneurial competencies (Mwasalwiba, 2010; Nabi et al., 2017). Second, one of these dominant educational formats is casework, initially introduced through theoretical cases that in written text describe the context, stakeholders, and challenges of theoretical or real-life ventures (Kassean et al., 2015). A more recent form of casework is the real-life case, where students are handed a specific challenge or task from a venture for which they come up with a solution (Cooper et al., 2004) through analysis, teamwork, and collaborative work with the case owner. However, the micro-level processes of high-intensity casework are only sparsely evidenced in the entrepreneurship education literature.

This development calls for research that investigates the factors influencing live casework because there is an important interplay between the various stakeholders (Gibb & Haskins,

2014) and subsequently an interplay between learning forms through the designed learning activities (Pittaway & Cope, 2007; Ramsgaard & Christensen, 2018). Therefore, we ask the following research question: how can live casework be applied in entrepreneurship education?

In this chapter, we specifically address the type of casework where students collaborate with companies or organizations in a learning-through approach (Hannon, 2005, 2006). This form of casework requires students to have an active role in the experiential learning setting (Cope, 2005; Kolb & Kolb, 2005) that enables them to focus on sustainable growth of the involved micro-enterprises (MEs),[1] as well as a learning process based on value creation pedagogy (Lackéus, 2018). The chapter is centred on the Scandinavian Growth Creators (SGC)[2] project sponsored by the European Union Interreg programme that aims at cross-border cooperation on challenges linked to the implementation of the Europe 2020 strategy.

The chapter is structured as follows. First, we lay out the role of live casework in the HEI context. Different aspects of live casework are identified and reflected on in relation to the development of learning designs and educational activities. Then follows a description of the SGC project, illustrating the benefits, challenges, and complexities of live casework. We complete the chapter by proposing a model for contextualizing casework. Furthermore, we indicate practical implications and some main issues within theory that need refinement.

## BACKGROUND AND FOUNDATIONS

### The Role of Live Casework in an HEI Context

How does casework unfold in entrepreneurship education in an HEI context? Casework is generally found to be either theoretical or based on real-life cases (Alderman & Milne, 1998; Garcia et al., 2012). Thus, the subsequent learning form can be either explanation or experience based (Austin & Hjorth, 2012). The traditional lecture-based methods of teaching and learning alone are found to be insufficient when applying casework. Cooper et al. (2004) proposed an experiential learning continuum to create bridges between the acquisition of theoretical knowledge and experience generated through practice. Curtis et al. (2021) pointed out that taking an active and experiential approach to teaching is often assumed to be the best way to promote learning. They articulated an active learning approach that leads to deep learning and authentic assessment.

Specifically, real-life casework involves a range of stakeholders that carry context into the learning design and adds an authentic and timely aspect (Alderman & Milne, 1998). Reeves et al. (2019) reported how providing projects and activities that closely resemble real-world situations tend to increase the amount of knowledge and skills that students can transfer from the school setting into the workforce. This resonates with the arguments from Neck et al. (2014), who offered a comprehensive presentation of practice-based entrepreneurship education 'that represents highly experiential entrepreneurship education where theory is actionable but, more or less, invisible to the student but very present' (p. 3). This extends the above-mentioned theory–practice discussion that dominates entrepreneurship education.

Three interrelated aspects of entrepreneurial learning greatly impact how live casework can unfold—namely, the content, the students, and the educator (Cope, 2005). Hägg and Kurczewska (2020) called attention to this issue by urging researchers and educators to advance the pedagogical foundations in entrepreneurship education. First, regarding the content dimension of entrepreneurship education, Blenker et al. (2012) highlighted that students should use everyday problems and practices as a starting point: 'Opportunities are thus seen as emanating from the individual entrepreneur's ability to disclose anomalies and disharmonies in their personal life' (p. 417). Second, recent developments have raised the importance of student-centric approaches (Starkey, 2019) through the lens of student-centric learning (Neergaard et al., 2016, 2021) that increasingly positions students as agents of their own learning process (Jones, 2007, 2019). Added to this is the idea of value creation pedagogy (Jones et al., 2020; Lackéus, 2018), in which much dependency is placed on the student to actively design and undertake responsibility for the learning journey. However, for the third aspect, Henry (2020) added the educator's position in the role of aggregator of content, highlighting the educator's initiating and scaffolding role (Thomassen, 2020; Wraae et al., 2020), which Neergaard et al. (2021) highlighted as the importance of 'pedagogical nudging' (p. 251). This calls for strengthening the role of reflection in and on the learning process when casework is embedded in learning activities with complex aspects at play (Boud & Walker, 1998).

## PEDAGOGICAL DEVELOPMENT APPROACH

### Cases and Settings: Scandinavian Growth Creators

The SGC project is founded on an institutional collaboration between Danish and Swedish HEIs involving universities, university colleges, and vocational institutions. All partners are involved in facilitating experiential learning designed in a learning-through format and divided into two general phases:

(1)    competence development
(2)    business development.

MEs were chosen as the focus for the SGC project because of the typically minimal available funding, limited access to knowledge-intensive environments, and reduced experience of collaborating with students in this type of enterprise. These companies typically struggle in terms of market adaptation, resulting in lower levels of innovation capacity and scarce resources for entrepreneurial opportunity recognition (Jones, 2021). The mutual collaboration and co-creation between students from HEIs and MEs are particularly productive because students bring updated perspectives on business development, suggestions for innovative solutions, and knowledge about market trends directly relevant to the MEs (Ramsgaard & Oestergaard, 2018). The SGC project has an expected involvement of 225 MEs and 1,050 students. Collaborative facilitation takes place in a diverse set of HEIs in Sweden and Denmark, resulting in a great heterogeneity of cases in this sort of collaboration.

In the first phase, students are prepared for collaborating with the MEs to create sustainable growth. The involved cases are real-life ventures with the goal of creating sustainable value for both MEs and students. The form and content of competence development are contextually adjusted to fit the specific student group. Students from engineering, health, and business participate in different cross-professional constellations across the three case settings. Common content includes preparation for teamwork, interview techniques, business analysis, value creation processes, and guiding methods and tools for the following business development phase. During the business development phase, the students enter into a collaborative development process with an ME. The business development phase includes idea generation, idea development, idea testing, and pitching the idea for sustainable growth. In the process, stakeholders must be consulted, but the frame for the ME's collaboration and involvement varies from location to location.

The two main stakeholders in the project, the MEs and students, bring different preconceptions and resources to the learning journey relevant to the case and educational design. However, other stakeholders, such as the educators and institutions, play a significant role in the collaborative projects. Based on contemporary theories of case-based work, the SGC project directs educators towards casework where collaboration with MEs is mandatory. Subsequently, the casework requires a high level of involvement from students, educators, and MEs.

The five key constituents of the SGC process can be depicted in the following steps:

(1)    building the student team and introduction to toolbox for business development
(2)    preparation for the first meeting with the ME
(3)    first meeting with the ME
(4)    validation through feedback from stakeholders
(5)    new value creation idea presented to the ME.

Following the two general phases, the effect is evaluated through both surveys and an app that aims to track the learning take-aways from students (Lackéus, 2020). The LoopMe app is thus a pedagogical method for scaffolding the live casework in a timely manner. In the next section, we report the experiences from applying this pedagogical development approach as reported by educators from the SGC project.

## EXPERIENCES WITH APPLYING LIVE CASEWORK IN ENTREPRENEURSHIP EDUCATION

Using live casework in learning designs is both challenging and beneficial for all involved actors. The following description comprises the experiences from three SGC learning designs created by three different educators using live casework. The examples are from three different HEI locations—two in Denmark and one in Sweden. In the analysis, the educators are given a voice. The educators were interviewed individually using semi-structured interviews (Brinkmann & Kvale, 2014). Qualitative data was analysed using systemic text condensation (Malterud, 2012) to build an in-depth understanding of the challenges and benefits of using

**Table 5.1**    Perceived benefits and challenges of live casework for students, case companies, and educators (reported by educators)

|  | Challenges | Benefits |
|---|---|---|
| Students | • Navigating in the collaboration<br>• Interpreting communication with external stakeholders | • Learning to use competences in 'real life' to create value<br>• Applying theoretical knowledge<br>• Finding motivation<br>• Gaining confidence<br>• Networking<br>• Gaining insight into how organizations work |
| Case companies | • Can be difficult to commit to being a case company for a longer period of time<br>• Added value for the time invested<br>• Limited resources | • Process brings new perspectives on business opportunities<br>• Questions from students lead to reflections<br>• Opportunity to support education<br>• Networking |
| Educators | • Time-consuming recruitment<br>• Requires a lot to align expectations<br>• Matching students and companies<br>• Difficult to predict turn of events<br>• Finding good cases for educational purposes<br>• Balancing multiple interests<br>• Contextualization<br>• Translation between education and case organization<br>• Motivating students through ups and downs | • Opportunity for educating through entrepreneurship<br>• Engaging students<br>• Networking |

live casework and to explore the different pathways into the live case-based work. Table 5.1 provides an overview of the perceived challenges and benefits of live casework from the educators' perspective.

The educators experienced several challenges and benefits both before and during the live casework. In the following, we report and elaborate on these findings.

## Before

A number of parameters influence the design of live casework, which calls for contextualization. In relation to framing the casework, these are duration, the level of education or experience, and placement of curricular, co-curricular, or extracurricular effects, content adaptation, and evaluation requirements. Moreover, live casework needs to be tailored to the disciplinary setting in mind. It is important to create meaningful learning designs for students that consolidate prior learning and mimic potential future scenarios (Reeves et al., 2019), thus contextualizing the purpose of the learning design. In live casework, students should be given the opportunity to apply their education throughout the process, which will affect the scoping of case challenges. Moreover, educators found that communication for recruitment purposes also needs to be tailored to both the students and the potential case companies, according to the students' professional backgrounds. Both students and case companies need to understand how educational background is relevant in the casework. One educator reported it was much easier for MEs to see the relevance of collaborating with marketing students rather than

engineering students. On the one hand, this testifies to the importance of correctly matching MEs and students. However, on the other, in some cases an articulation of the student's broader competences might also be called for. Live casework can be a great training ground for cross-professional collaboration, which is difficult to circumvent in future careers for students. However, it is often underprioritized in education, plausibly because it complicates teamwork and communication and, specifically for casework, it amplifies scoping challenges.

Related to recruiting MEs, educators unanimously stated that it was important to find case companies who were willing to spend resources on the collaboration. Furthermore, it needed to be stressed that collaboration is a learning design, which should hold opportunities for students to learn and innovate. This means that students work on *creating* a solution for a challenge, not delivering a predefined order. Finally, MEs need to concur that the solution might not be the most rewarding outcome of the collaboration.

Educators expressed that it was time-consuming to find both willing and fitting case companies. To support students' sense-making, it is paramount that they can reach learning goals by using their personal and professional knowledge, skills, and competences to create new value. This requires a case challenge that students can relate to their profession and that is embedded in a carefully tailored and scaffolded learning process (Thomassen, 2020), which both commissions and requires action and reflection from all stakeholders (Kolb & Kolb, 2005).

Another issue emphasized by the educators is that when a case company is found, it is imperative to align expectations in conceiving a productive collaboration. It is important to reach agreement in relation to expected resource investment, the availability of all involved parties, and students' access to the case company. Even though much effort is put into aligning expectations, educators experienced discrepancies between what was expected and what was experienced, which was often the root cause of tensions in the collaboration.

Given the time-consuming task of finding willing and fitting case companies, educators often start well ahead of time. However, it can be difficult, perhaps especially for MEs, to commit to a lengthy collaboration in the distant future because of fluctuating workloads. Educators also perceived that it was perhaps challenging for MEs to assess the added value for the time invested, and given limited resources, it was deemed difficult to commit to the collaboration.

## During

A major benefit in using live casework is that it provides an opportunity to educate *through* entrepreneurship (Hannon, 2005, 2006) without requiring students to found their own businesses. It closely mimics the context of real-life entrepreneurship, strengthens the opportunity for later transfer of knowledge and skills in practice (Reeves et al., 2019), and creates a foundation for experience-based learning (Kolb & Kolb, 2005). Yet it is no simple task. It is impossible to predict and plan for every turn of events in live casework. Educators can design a process, but ad hoc scaffolding is required to motivate students through the ups and downs of the entrepreneurial process and mediate challenges during the collaboration. During this time, educators must also balance multiple and potential conflicting interests; the case company is interested in value creation, while the educational focus is on the learning process and learning

outcome. Both educators and students are challenged with transitioning between education and practice during the collaboration. Using specific theories and models might not be the custom in practice, and communication about their application and value might be needed to achieve buy-in. This is an important part of the process for the student—that is, learning to adapt and apply what they have learned through education to create value in practice.

Students sometimes find it challenging to navigate the collaboration. Some find it difficult to interpret communication with external stakeholders, and they become unsure of their role in the learning design. This again requires scaffolding by educators to support students through reflection (Boud & Walker, 1998) and essentially turn frustrations into learning opportunities.

Educators emphasized that a great benefit of live casework is that students can be inspired by the passion of the ME entrepreneurs. Generally, educators thought that students found it very motivating to work with real-life problems, and though hardship was experienced at some point by most students, the success of overcoming it boosted their self-efficacy. This was also reflected in students' evaluations. Educators noticed that the positive effects of live casework spanned beyond the learning design itself by producing more engaged students throughout their education.

After overcoming the initial barriers of establishing a collaboration, case companies found that the benefit for them lay not only or necessarily in the solutions that students produced, but in the process of live casework, which brought new perspectives. The questions that students asked led to valuable reflections about current business models and growth opportunities. Some company representatives viewed live casework as an opportunity to give back and support education in general. Finally, live casework represented an opportunity to expand and activate networks for all involved parties.

Though challenges are plenty in live casework, one educator concluded that this, too, became easier with experience. Based on the reported experiences, we would like to call attention to three important aspects to consider before utilizing live casework in entrepreneurship education:

(1)     roles and role distribution
(2)     design of the process and collaboration with external partners
(3)     timely scaffolding of educational activities.

Careful consideration and clear commutation about these three points can mitigate many of the reported challenges in live casework. The three points are further discussed in the next section.

## DISCUSSION

In the current chapter, we evidence three cases in a Nordic setting comprising experiences from different HEIs in Denmark and Sweden to investigate how live casework can be embedded in entrepreneurship education. The theoretical framework for the teaching approach draws from a learning-through perspective, acknowledging that other approaches in entrepreneurship education have proved useful in other settings (Hannon, 2005).

We draw inspiration from the sense-making perspective of Weick, who called for changing the research perspective from 'nouns to verbs' (Bakken & Hernes, 2006), accentuating the understanding that researchers should investigate the actionable aspects of phenomena. With this notion, we aim to address the contextualizing processes related to casework in the entrepreneurship education classroom (Ramsgaard et al., 2021; Thomassen et al., 2020). Positioning entrepreneurship education within a notion of action has certain benefits, articulating an action turned into learning (Reason & Torbert, 2001).

The learning-through perspective is often based on real-life projects where students collaborate with external partners (Chang & Rieple, 2013; Kassean et al., 2015). Chang and Rieple (2013) argued that entrepreneurial skills can be improved by facilitating a learning environment in which students interact with professionals on real-life projects, also highlighting the need for structured programmes of skills training in such courses.

Consequently, we identify three interrelated levels with relevance to the pedagogical scaffolding of live casework. This can be seen as our call for live casework in efforts to reframe and challenge the text-based understanding of casework.

## Roles and Role Distribution

First, the educator role is much more extensive compared with other types of learning designs. The educator's span of control varies in the process from full control in the competence development phase to limited control in much of the business development phase. This phase, in which students collaborate with MEs, can only be scaffolded through initial alignment of expectations and mediated meetings between all the involved stakeholders. Much of the collaboration is out of the educator's hands, yet it is still of great importance in contributing to the learning journey. This accentuates the need to give students authority, autonomy, and responsibility (van Gelderen, 2016), and, by extension, also hinges on learners becoming agents in their own learning process (Jones, 2007, 2019). However, how this is scaffolded in learning processes sequenced over longer time periods continues to puzzle entrepreneurship educators (Hägg & Kurczewska, 2020). Henry (2020) articulated the entrepreneurship educator as a 'unique aggregator of content' (p. 657), though this could be extended to an aggregator of collaboration when applied to case-based work. In the SGC project, the educator role is split into two: the person responsible for planning the process (process responsible) and the person facilitating learning processes (facilitator). The process responsible is an experienced educator, and the facilitators are students who have participated in ME collaboration and completed facilitator training. There is a high requirement for active engagement by the participating students; they are expected, upon completion of phase one, to be self-directed in their learning process. The MEs provide the resources for the students to create sustainable new value creation. Therefore, they, too, are expected to actively engage in the collaboration.

## Design of the Process and Collaboration with External Partners

There are different approaches to designing the process and content in the SGC collaborations. The sequence in which competence development and business development is

presented varies in form from formal presentations to being delivered 'just in time' during the business development. Yet close consideration must be given to working with external partners in all the varying forms of educational designs. Coordinating with external partners is time-consuming, and it is important to communicate clearly to ensure expectations from both parties are made explicit. Motivations need to be aligned; it is most important that the MEs are in fact interested in collaborating for sustainable growth through innovation and not just seeking an extra set of hands for operations. It is also important that the MEs understand that the collaboration is part of a learning journey, and they should be willing to co-invest time and resources for the collaboration to gain expected outcomes. On a finishing note, mutual respect and understanding should be instilled. On the one hand, the MEs must give the students access to relevant information and stakeholders to provide the best foundation for learning and developing solutions. On the other hand, students need to respect and appreciate the resources invested by the MEs and repay them by investing effort and engaging in developing solutions.

SGC processes are established as both extracurricular and co-curricular activities. This, of course, influences the purpose of the casework and how it is embedded in education and eventually assessed.

## Timely Scaffolding of Educational Activities

Working with live cases places the educator in an active role (Henry, 2020). Live casework adds the further level of being a 'unique aggregator of process' because the feedback, conflict resolution, knowledge, information retrieval, and so on must be timed with the learning process of the students' work and the reality of the MEs. Thus, the casework becomes a form of temporary organizing (Skade et al., 2020). Transitions or interactions between casework contexts could, in a similar way to Skade et al.'s (2020) notions of 'sequencing, freezing, and merging' (p. 105), indicate a need to further discuss the temporal practices that the different stakeholders are undertaking. One perspective could be that interruptions in the casework can cause higher-level reflection (Cope, 2003), and that situational variability can impose further learning challenges and synergies.

In Table 5.2, we map the different levels of live casework based on context with the perspectives of involved stakeholders.

**Table 5.2     Levels of live casework based on context**

| | Students | Educators | Case | Case owner (ME) | HEI and regional context |
|---|---|---|---|---|---|
| Setting | Educational system | Educational system | Written or verbal narrative | Business system | Policy and regulation |
| Resource context | Sourced as part of the learning process | Limited access to resources | Boundary settings for resources | Provider and 'earner' of developed resources and value | Benefits from successful casework (PR and marketing) |
| Learning context | Situated between classroom, teamwork, and through feedback from educators and case owner | Situated in classroom and feedback sessions | Boundary settings for casework | ME context, which may involve more stakeholders or employees | Accumulated through consecutive casework over time |
| Theory | Inquiry-driven theory adoption and theory acquisition | Timed and contextualized theory presentation dependent on students, teams, and case challenge | Facts can indicate specific theoretical contexts needed for casework | Implicit (and maybe unknown) theory context, which students can inform and elaborate | Institutional and managerial logic of theory needed for students, educators, and case companies |
| Agency | Temporary organized learning context | Temporary pedagogically organized learning context | Fixed boundary-set practice with varied levels of interpretation | Permanent professional or business-oriented context | Peripheral context agent |
| Context role | Facilitate interaction with ME guided by educator | Facilitate dialogue between students and ME; elaborate understanding of case challenge and theory | Provide facts and articulate expectations, resources, and contact | Provide access to knowledge and resources; give formative and summative feedback to students | Acknowledge and support casework |
| Context challenge | Acting as context agent | Timing of context pedagogy | Bring clarity about task and boundary settings | Crucial context provider | Eliminating barriers to casework implementation |

## IMPLICATIONS FOR CASE TEACHING PRACTICE AND REFRAMING THE CASE METHOD FOR ENTREPRENEURSHIP EDUCATION

Our chapter and analysis address the need in entrepreneurship education to establish a pedagogical approach for live casework based on pedagogical differentiation and agency perspectives. Adding the action-oriented and agency-dependent learning conceptualization to this, casework can be seen as a highly interactive form of entrepreneurship education. No casework can be constituted in solitude or through the actions of a singular agent, but is dependent on collaboration.

This chapter illustrates the benefits and challenges of live casework where students collaborate directly with MEs as opposed to learning designs based on simulation (Pittaway & Cope, 2007). We have illustrated the parameters that affect the case-based work, roles,

design, and scaffolding, as well as outlining which aspects contribute to entrepreneurial learning. This type of casework is open to interpretation, not being based on theoretical cases with an embedded predefined learning process. This form of casework is challenging but more engaging because it requires a student-centric (Neergaard et al., 2016, 2021) and agency (Jones, 2007, 2019) focus among all involved stakeholders. The learning format is live, three-dimensional, and with flexible boundary settings because the context dependencies add extra levels of unique context differentiators specific for each case. The current chapter extends the understanding of casework to include live casework with companies, specifically MEs. Thus, the approach excludes theoretical casework because crucial elements of the described learning process are based on active participation, value creation for external stakeholders, and a high level of collaboration between the participating students, MEs, and educators. This concordantly places new responsibilities on the educator because planning a course or a seminar must involve (1) a long-term perspective towards the course design and process, (2) planning activities, including a high level of collaboration effort and coordination between the educational institution and the ME, and (3) team-based support timed and directed to students when needed.

Educators in entrepreneurship education draw upon different pedagogical approaches. However, these typically universal designs are aimed at generic learning processes. There is currently a lack of support and guidance for educators in facilitating highly intensive casework with external stakeholders. Traditional universities and business schools may have formal industry collaboration offices, but the pedagogical management of collaboration is still sparsely evidenced or supported. Therefore, a future focus in both research and development must be how to provide educators with the skills to undertake this challenging task.

Specifically for casework, there is a growing need to establish an understanding of the way context matters to the delivery of case-based work. This type of understanding will enable a reframing of casework in entrepreneurship education to include a contextually structured and guided approach to designing education based on casework.

## NOTES

1. A micro-enterprise is defined as a company with fewer than 10 employees and an annual turnover below €2 million.
2. Project title: Scandinavian Growth Creators (SGC): Business development in micro-companies through co-creation and in-depth learning (Interreg Öresund-Kattegat-Skagerrak Program).

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# 6

# Using self as case in teach-the-teacher courses in entrepreneurship to reflect on experiences as student and teacher

*Mats Westerberg*

## INTRODUCTION

In this chapter, a novel idea of using self as case in teach-the-teacher educational settings is brought forward. Teaching those who are already practising teachers, or teacher students at any level, is a special situation as the impact of the education has both direct and indirect effects. The potential benefit of the education multiplies as each teacher can reach many new students in their future teaching. A successfully executed course thus not only fulfils learning goals for the attending teachers/teacher students, but also lays a foundation for fulfilling learning goals for their future students. As entrepreneurial education is grounded in experiential learning, it is crucial that a course for teachers provides experiences that helps the teacher design their own entrepreneurial course in the future. But it is also important to give tools that help them teach the course in an entrepreneurial fashion, such as pedagogical strategies for entrepreneurial education and how to design education for learning and development, deemphasizing 'the sage on the stage' and favouring 'the guide on the side' (cf. Kehoe et al., 2018).

Based on this, such a teach-the-teacher course should contain two types of cases. The first type is about immersing the teachers in an entrepreneurial process where they experience first-hand what they want future students to experience. Preferably, these teaching cases should be possible to apply in their own education with little or no change. The second type of case concerns cognitively understanding what entrepreneurial education is about and what teacher skills and competences are needed to teach entrepreneurially. Both types rely on using the (becoming) teacher's self as case.

In this chapter, I will display and discuss these cases based on my experiences working with entrepreneurship-related teach-the-teacher programmes, mainly in Sweden but also in other parts of Europe. This chapter is most relevant for those engaging in teach-the-teacher courses

in entrepreneurship, but also for traditional entrepreneurship teachers, as the displayed teaching cases can be applied in their teaching practice or as tools to develop their teaching practice.

The outline of the chapter is as follows. First, I will briefly discuss different forms of entrepreneurial education stances from traditional entrepreneurship education (focusing on venture creation) to enterprise education (focusing on development of life skills in any subject) based on Jones (2019), where both strive to make the student better capable of self-negotiated action. I will then discuss what I see as conceptual building blocks for entrepreneurship education, my approach to using cases, and my positioning as an entrepreneurship educator. Based on this, I will then present two teaching cases focusing on the student perspective and two teaching cases focusing on the teacher perspective. Finally, I will conclude by discussing my experiences when applying these cases in actual teach-the-teacher programmes.

## BACKGROUND/FOUNDATIONS AND PEDAGOGICAL DEVELOPMENT APPROACH

When first mentioned in the literature, entrepreneurship education was framed around business and more specifically new venture creation. Over time, non-business aspects have become more pronounced, where Gibb (1987) has been influential in building the 'enterprise' aspect of entrepreneurship education. As Jones (2019) notes, it is important to know which form of entrepreneurship education you are involved in—the more transactional entrepreneurship education where mainly self-selected students work with ventures and business, or the more transformative enterprise education where any student may experience personal development. However, regardless of the approach to entrepreneurial education, I hold that the following five pillars are important building blocks of the education:

- striving towards a growth mindset (Dweck, 2017)
- experiential learning (Dewey, 1938; Kolb, 1984)
- developing entrepreneurial competences alongside subject knowledge (Palmér & Johansson, 2018; Westerberg, 2020)
- working with real problems and real users—creating real value (Lackéus, 2016)
- striving to develop individuals capable of self-negotiated action (Jones, 2019).

Dweck's (2017) theory on fixed versus growth mindset is powerful in entrepreneurship education as it is about changing focus from performing (looking good) to learning (getting better). Entrepreneurs constantly have to learn to be able to cope and prosper wherever they are and regardless if they are striving towards commercial, social, or other goals. This is true for any entrepreneurial action where uncertainty and ambiguity will be present. Having a mindset that focuses on development and learning is therefore crucial, and I suggest that all entrepreneurial educators should strive towards a growth mindset in all they do to create a good foundation for their educational activities.

'Learning by doing' is a well-known phrase linked to experiential learning. However, as Dewey (1938) noted, experience without reflection will not lead to learning. Many researchers have thought about this since Dewey's time, and perhaps Kolb's (1984) learning cycle is the

best-known model, where he also includes abstract conceptualization and active experimentation as well as experience and reflection. Regardless of the model, entrepreneurial educators need to work with both experiences and reflection.

While entrepreneurial education should of course lead to the development of entrepreneurial competences, it is important to understand that entrepreneurial action is always linked to subject knowledge outside the entrepreneurship domain. By consciously reflecting on these linkages, it is possible to develop better both entrepreneurial competences and subject knowledge. Palmér and Johansson (2018) found in their study that entrepreneurial competences (e.g. tolerance for ambiguity) were key to developing problem-solving skills in mathematics. If the educator can help the student see the link between improved entrepreneurial competences and improved subject skills, this can boost learning.

One important feature of entrepreneurship is to create value. It is the essence of why entrepreneurship exists. Entrepreneurial action has the potential to create value—and this makes it highly motivational. Experiencing your actions creating value for others makes them meaningful and drives intrinsic motivation. Therefore, the educator should facilitate value creation and help the student see how they create value for others.

When focusing on lifelong learning and development, by engaging in real problems and real users, and through constantly applying action and reflection, leading to value creation and developing both entrepreneurial and subject-specific competences, the individual will—over time—be more and more capable of self-negotiated action (Jones, 2019). Such an individual will be able to lead a good life at the same time as being highly influential in developing a better society.

Turning to the use of cases, I found very few instances of this self case study approach in the literature, where it is mainly used in therapy training (e.g. Fraser & Wilson, 2010). Although Fraser and Wilson state that 'Self-case study is recommended as a potentially effective education strategy' (p. 107), it seems this has not been investigated in any education field. Naturally, I concur that the approach has potential, and I hope we will see studies of its effectiveness in the future. Using stories of teachers' lived experiences is not new in the literature, where Jones (2015) and Hannon (2018) are two good examples relating to entrepreneurial educators. Understanding yourself well is always important when teaching, but perhaps more so when being involved in entrepreneurial education. As Hannon notes, 'Change should start within and the reimagining of one's self-identity can become a powerful tool in aligning one's inner beliefs about who we think we are with what we think we should do and why' (p. 703). Understanding ourselves as educators and how we are (and are not) entrepreneurial may be important tools when we teach.

As Hägg and Gabrielsson (2020) point out in their recent literature review of the pedagogy in entrepreneurship education, it has shifted focus from being teacher-centred at the start (1980s), through process-centred in the 1990s, and context-centred in the 2000s, to being learner-centred from about 2010. Although my focus in this chapter is the teacher, the teacher is a facilitator, and by engaging in the proposed cases, the teacher will be better equipped to provide education that is effective for the learner—that is, a learner-centred approach. In Lahn and Erikson's (2016) framework, my approach is partly experienced based and partly design

based as I like reflection to be as authentic as possible and to lead to the teacher better designing their future education.

## DESCRIPTION OF THE APPROACH AND TEACHING MOMENTS

### The Cases: Part 1 (Student-Centred)

Here, the teacher *student* uses themselves as a case through a task in which they are immersed in an experiential learning situation. By reflecting on (entrepreneurial) action they have taken, it is possible to become aware of the potential development of entrepreneurial competences. In the first example, it is based on reflecting on real-time action, while in the second it is based on retrospective reflection on action taken in the past. Both help the teacher student to recognize learning and development situations they later want their students to experience.

By using the learning platform LoopMe (www.loopme.io; see Lackéus & Williams Middleton, 2018) for reporting, it will be easier to capture which entrepreneurial competences are evoked/ trained through the system of tags alongside the reflective report in both the below cases.

### Case example 1: micro-challenges—act entrepreneurially in an everyday situation and reflect on the experience

The purpose of a micro-challenge is to put the student in a situation where entrepreneurial competences are likely to be evoked. This is done by constructing a task that leads to action, lived experience, and reflection. The task should be linked to everyday activities so it can be carried out as part of daily life. Ideally, the task should challenge the person to do something that is not fully in their comfort zone. But at the same time, it should be something that is 'ordinary'. If possible, it should be linked to the subject area that the course is about. The student then reports by describing what was done and reflecting on the action and related situations. The reflection is guided by instructions that help the student see which competences are evoked.

Examples of tasks:

- taking an initiative for positive change
- giving developmental feedback to someone at work/home.

### Case example 2: taking control of my entrepreneurial competence development journey

In this task, the student is asked to map their development trajectory and find instances where they acted entrepreneurially. The number of instances can vary, but it should be more than three (so a development trajectory can be discussed) and fewer than seven (to make it manageable). For each instance, they should report when it occurred, the situation, what they did, and how they see the action in the situation as entrepreneurial. They should also reflect on all the instances as a whole. Was any learning/development related to entrepreneurial competences

over time? Do they see progression of their entrepreneurial competences, or are the entrepreneurial instances more like anomalies in an otherwise non-entrepreneurial process?

## The Cases: Part 2 (Educator-Centred)

Here, the cases revolve around the *teacher* student as an educator. By using themselves in the role of entrepreneurship educator as a case, the knowledge can be contextualized to the circumstances of the individual yet general enough to be valuable for fellow student teachers to discuss during the course. As indicated earlier, even though the educator is at the centre for the following two cases, the goal is to provide better education from a learner-centred perspective.

### Case example 3: my pedagogical principles—based on the five pillars, develop actionable principles for your own teaching

I call these my pedagogical principles—others might call them their teaching manifesto or educational philosophy. Regardless of their name, they are a collection of statements about important aspects in your teaching practice. For me, this is like a mission statement as a teacher. Much like the mission statement of an organization, it should describe what is important in your practice as educator and of course reflect what you actually do with students. I always share my pedagogical principles at the start of every course and they are currently as follows:

- ✓ Learning supersedes control (I focus activities on learning rather than control to adhere more to Dweck's growth mindset).
- ✓ Creativity and initiatives are sought and appreciated (gives autonomy and supplies learning opportunities for both teachers and students).
- ✓ Students and teachers share responsibility for making the course a success (true participation increases motivation and ability to track own learning).
- ✓ Students are allowed to fail—and thus able to perform excellently (point to the obvious—where there are no mistakes, learning is lacking).
- ✓ Let's learn and have fun together (hard work without enjoyment is an impossible combination in the long run).

I also supply a number of other examples for the student teachers to be inspired by but emphasize that it is important they come up with their own principles. In the process to come up with these, I use peer coaching, seminars, and a final written hand-in. The goal is to come up with pedagogical principles that:

- are easy to understand for students
- can be logically linked to better conditions for entrepreneurial education (by adhering to the five proposed pillars)
- have a personal connection to the student teacher.

### Case example 4: designing for learning—applying Dweck's growth mindset in your teaching space

If you want to create good conditions for learning and development, where both positive and negative experiences can be used in the process, it is important to play down innate traits and

focus on capabilities that can be trained, such as entrepreneurial competences. I have found Dweck's (2017) work on mindsets to be a good starting point for this. By outlining central parts of Dweck's research, such as showing that the way you see yourself as having either innate or learned qualities affects how you take on life, it becomes evident that the growth mindset, where learning and development is in focus, is to be strived for. I often confess to students that I have not been displaying a growth mindset in all situations to make them understand that most, if not all, people struggle with this.

When working with Dweck's theory on mindset with teacher students, the focus is to make them see their teaching situation as a case, and the goal is to maximize learning and development for their future students. By pondering some questions individually and in small groups, they can come up with strategies for how to make this happen in their situation. Sample questions:

- How can I/we create circumstances in my teaching that help students apply a growth mindset?
- How can I/we design tasks so that students learn as much as possible when doing them?
- How can I/we design education so that mistakes are valued and not hidden?

## DISCUSSION

I will discuss my experiences using three themes: (1) the power of using yourself as case, (2) action *and reflection* are central for learning and development, and (3) good is the enemy of getting better.

### The Power of Using Yourself as Case

We normally think of 'cases' as examples external to ourselves and also 'alien' in relation to the world we live in. As discussed in Chapter 1 of this book, this can make them less useful for teaching purposes. I propose in this chapter that each (student) teacher uses themself as a case and argue that this can be helpful, especially when working with experience-based education. Instead of trying to understand actors in a traditional case, it becomes a matter of understanding yourself in relation to a stimulus—often your own action. In the example of micro-challenges, it is about tapping into thoughts and feelings evoked by the action taken, and this can be a powerful learning situation. Looking at yourself as you are doing something entrepreneurial helps you become more familiar with the entrepreneurial self and gradually more at ease in these situations. Here, feedback can be important to adjust the challenge level. For instance, for the micro-challenge 'taking an initiative for positive change', some students already take too much initiative in their lives, sometimes curbing other people's initiative, while others need to step up and take more initiative. By doing so, the learning becomes even more tailored to the individual.

Another advantage of using the individual as case is that the lived experience can be activated and used for learning and development, as in case example 2. Here, by evoking memories of entrepreneurial action in the past, students can reflect on their journey and see a progression

over time, helping them understand that entrepreneurial action can be learned. My experience when working with this is that students become empowered as they see themselves capable of more and more entrepreneurial action over time. Even when students are sceptical about their entrepreneurial competence development over time, they feel good about the instances when they acted entrepreneurially and want to become more entrepreneurial. In these cases, I pay extra attention to providing developmental feedback on micro-challenges (which I always include as part of a course). It can be about encouraging the student and making sure the student notices all the entrepreneurial competences they have applied.

## Action *and* Reflection are Central for Learning and Development

Even though entrepreneurship undoubtedly is action-oriented and action should be a major part of any entrepreneurial education, action alone is not enough. Without reflection, the action taken has little or no value for learning and development. Still, it is my experience that educators spend too much time and effort on action and too little time and effort on reflection—both for themselves and when working with students. Hägg (2018) shows that a shift towards more reflection makes students in entrepreneurship education perform better. Therefore, getting in the habit of reflecting is something I try to promote in my courses, especially in the train-the-trainer courses, as these can become role models for many other students. All four cases described above involve reflection as an important part. I have found that teachers who have a stronger experience from the first type of case become more engaged when working with the second type. This reinforces my view that it is vital for future entrepreneurship educators to have deep and meaningful entrepreneurial experiences themselves. This likely motivates them to think more deeply and to work harder to let their students experience something similar.

   Thus, there seems to be a strong interrelation between the two types of cases, and to have the best possible outcome, a future teacher needs to be able to reflect well on both direct entrepreneurial experience and how they can facilitate this for their future students. Apart from reflecting on formal assignments, I also let students regularly reflect on their learning in relation to learning events (such as workshops or seminars) or let them reflect weekly/biweekly on events that occurred during the week(s) in relation to the course. The quality of the reflection normally becomes better the more reflections the student has done. I normally give feedback on all reflections and end my feedback with a reflective question that sometimes leads to a reflective dialogue between me and the student. In course evaluations, students often highlight reflections as an important take-away that they will continue with.

## Good is the Enemy of Getting Better

It is not strange that most people, students included, want to look good in social situations. However, this is not good if we are working to get better, learn, and develop. Then we also need to look bad and make mistakes. It is easy to logically show that without mistakes, there will be no learning—especially in experience-based education and definitely in entrepreneurial education. However, accomplishing this in practice is hard and something the educator needs

to work with constantly. As indicated when describing the fourth case about designing for learning, I often start my courses by confessing how I have cheated and not focused on learning in some situations in my earlier life. I do that to show vulnerability and to point out that in some situations, almost all would try to cheat and pay no attention to learning and development. Therefore, we need to create situations where learning and development come naturally. In addition, we need to reflect constantly on whether we can further improve the situation for learning and development. The last two cases are designed to make the entrepreneurial teacher-to-be more conscious of the circumstances they create for their future students. With pedagogical principles that support the five pillars and an educational design that promotes learning and development, the prospective entrepreneurial teacher will be much more likely to succeed.

## IMPLICATIONS FOR CASE TEACHING PRACTICE AND REFRAMING THE CASE METHOD FOR ENTREPRENEURSHIP EDUCATION

A student using themself as case in entrepreneurship courses is a powerful—yet inexpensive—way to develop understanding about any student's entrepreneurial self. By devising tasks that put the student into entrepreneurial action or tap into experiences of earlier entrepreneurial action, then asking them to reflect on their action in relation to entrepreneurial competences, it is possible for students to make sense of their entrepreneurial experiences. As these experiences are either linked to normal everyday situations or part of their past, it is possible to work with this in any type of education and without any preparation.

For students becoming teachers, it is also important to work with themselves as cases of future educators and to devise tools that help them design their education in a way that promotes entrepreneurial competences in their students. By developing their own pedagogical principles based on the five pillars of entrepreneurship education and designing the education for learning and development, they improve their chances of success.

The main tool when working with the student as case is reflection. When done properly, reflection transforms action into learning. Simply by focusing somewhat more on reflection among both teachers and students, we may see much more learning instead of non-reflected action that may or may not be successful. Especially in entrepreneurship education, where ambiguity and uncertainty are rife, action without reflection is likely to lead astray, while careful reflection on action is likely to promote learning and development.

However, perhaps the most important part of entrepreneurship education is to design so that learning and development can take place. Without careful thought about how to design so that mistakes and struggles are normal and welcome in the process, we may have an education that is not entrepreneurial at all.

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# 7

# Teaching together in entrepreneurship education: live case method

*Sanna Ilonen and Ulla Hytti*

## INTRODUCTION

The working environment for entrepreneurship educators in higher education is challenging as educators are asked to maintain an experiential, entrepreneurial climate (Solomon, 2007) and simultaneously to work with heterogenous students from multidisciplinary backgrounds (Huang-Saad et al., 2020; Pardede, 2015). Live cases in particular represent the challenge of addressing and working with real problems in real time. Team teaching is seen as an effective way to alleviate related challenges. It is a situation where two or more instructors collaborate to design, implement, and evaluate a certain course or courses (see Anderson & Speck, 1998), and it has become common practice in entrepreneurship education. However, it is still presented as an innovative method which differentiates from 'standard practice' involving one teacher responsible for a particular course or module (Carpenter et al., 2007; Minett-Smith & Davis, 2020; Murata, 2002). The interest in and push towards team teaching in several disciplines in higher education reflects an increasingly strong, multidisciplinary demand for effective learning and cooperation across higher education institutions (HEIs) in multiple locations (Minett-Smith & Davis, 2020).

Previous research has shown that team teaching brings several benefits. For educators, team teaching can provide increased emotional and professional support and learning, and decreased workload (Baeten & Simons, 2014; Helms et al., 2005). Challenges are related to compatibility issues of team teachers, power relations, and increased workload among others (Anderson & Speck, 1998; Helms et al., 2005). For students, team teaching increases the amount of support and provides better learning outcomes (Baeten & Simons, 2014). Particularly in entrepreneurship education, team teaching can help students to deal with uncertainty, complexity, and ambiguity included in education (Etivick et al., 2003; Kindle, 2007; Richardson & Hynes, 2008). This is particularly pertinent when using the live case method. Further, team teaching is an opportunity for students to observe teamwork and decision-making in working

life (Helms et al., 2005). Unfortunately, team teaching in entrepreneurship education has remained largely unaddressed by scholars. Overall, we should know more about educators' perspectives on teaching and learning (Hannon, 2018; Neck & Corbett, 2018) and establish practices to share the know-how and educational experiences of entrepreneurship educators (Dominik & Banerji, 2019; Lee et al., 2018).

We address these needs by presenting a conceptual narrative of the benefits and challenges of interactive team teaching when applying the live case method in higher education. We ask, 'What are the benefits and challenges of interactive team teaching when applying the live case method in entrepreneurship education?' This chapter proceeds as follows. First, we discuss our foundations: a live case of a Finnish higher education start-up course that has been organized in collaboration with educators from multiple HEIs. Next, we present the pedagogical development approach—the team teaching setting. Consequently, the benefits and challenges of team teaching are discussed with empirical illustrations of experiences from two team teachers, Johnny and Danny. We conclude by suggesting good practices for enhancing team teaching and avoiding pitfalls. The chapter particularly targets entrepreneurship educators and scholars interested in and/or encouraged towards team teaching when the live case method is applied in higher education.

## FOUNDATIONS: START-UP COURSE AS A LIVE CASE

The case method is often applied in business education as it effectively builds capacity for critical thinking and allows students to experience problems that organizations face (Lincoln, 2006) by making learning fun (Bruner et al., 1999). The traditional case method—that is, the textbook case method—often involves students going through the case material and then the material being discussed jointly in class and/or written analysis being conducted. However, the traditional case method has multiple constraints. Students might experience motivational issues to solve someone else's problem by looking through an unclear rear-view mirror (Lincoln, 2006). Moreover, dated and/or disguised cases do not appeal to students. To provide meaningful learning experiences, students should be able to work in real time with real problems, information, and individuals (Lincoln, 2006). As a form of experiential learning, the live case method allows students to work on an actual business issue and become immersed in a real organizational environment (Culpin & Scott, 2012; Gentry, 1990). Traditionally, live cases involve an entrepreneur coming to class, presenting a real problem, and solving it jointly with the students in real time (Rashford & de Figueiredo, 2011), or students conduct a project for an organization (Elam & Spotts, 2004; Lincoln, 2006). We suggest that venture creation courses provide a unique setting for applying the live case method (see Binks et al., 2006). In these courses, students experience entrepreneurship themselves (see Lincoln, 2006; Rasmussen & Sørheim, 2006). They have a unique opportunity to solve their own problems, instead of solving the problems of others, and to be responsible for the decisions made.

This chapter presents a live case from a start-up course, where the students set up businesses that operate in real markets. The method allows the students to learn by solving problems they face in their own start-ups. The bachelor-level course is organized jointly between three

HEIs comprising a scientific university and two universities of applied sciences. The educators represent all the participating institutions. The non-compulsory course is part of a national Junior Achievement Young Enterprise programme. The learning outcomes focus on supporting and providing students with hands-on entrepreneurship experience in ideation, validation, launching, and running a new business venture in multidisciplinary teams. During the course, the students also train their innovation, teamwork, project management, and communication skills. This 10 European Credit Transfer and Accumulation System (ECTS)-graded intervention takes place over 18 weeks. In all, the intervention follows a common format in venture creation courses (see Rasmussen & Sørheim, 2006).

In the course, students participate in exercises, assisting the start-up process. The exercises comprise different kinds of activities such as idea generation and testing, business model generation and validation, and pitching and marketing the idea. The solutions and their outcomes are decided by the students, and the related learning experiences and solutions are discussed and pondered jointly in the meetings. The meeting themes are presented in Table 7A.1 in the Appendix.

## PEDAGOGICAL DEVELOPMENT APPROACH: TEAM TEACHING

The live case method relies solely on team teaching, and its benefits and challenges are illustrated in this chapter by discussing benefits and challenges from the literature and offering empirical insights from interviews with two of the educators, Johnny and Danny, who were willing to share their experiences of running the course with the live case method in Finland. They were interviewed using semi-structured interviews. They were selected on the grounds of their availability and willingness to participate, as well as their authority in running this well-known course. The interviews encompassed the informants' backgrounds, their descriptions of the live case/course, and their related experiences in teaching. Johnny and Danny were interviewed separately in their native language by one of the authors of this chapter. The interviews lasted from 45 to 90 minutes, and each was recorded and transcribed. After that, the discussed benefits and challenges of team teaching were analysed deductively.

In practice, team teaching can be organized in multiple ways: interactively, participatorily, or in parallel (see White et al., 1998). In interactive team teaching, teachers are actively present in class at the same time, and all contribute to the teaching. In participatory team teaching, all participate, but each teacher presents the material independently with little or no intervention from others. In parallel team teaching, each educator teaches only those sessions assigned to them. In this course, the format is interactive team teaching. Interactive team teaching brings the most benefits for the students but, at the same time, it is the most complex form of team teaching as the educators share the same teaching space and are required to interact and be in dialogue with each other (see White et al., 1998).

Johnny had been involved in the course for 5 years. He had worked as a business researcher for the past 15 years, but the course was one of his very first teaching experiences. Johnny said that it was 'a pure accident' that he was running this course. He had noticed the existence of

this increasingly popular course, and when the previous course educator suggested rotation, he was ready to step in with his colleague. Johnny remembered that it was very exciting to start as an educator in the course. He had no pedagogical training or qualifications to back his work. Danny, on the other hand, was a new educator on the course. He had worked as a lecturer in the field of art for the past 11 years at a university of applied sciences and thus possessed extensive teaching experience. Danny had been involved in some entrepreneurship activities at his institution and thus considered himself a natural choice to run the course. He had completed pedagogical qualifications. Therefore, in theory, Johnny and Danny complemented each other nicely as they had differing experiences and complementary expert areas, as they came from different disciplines, but entrepreneurship seemed to be an interest for them both (see Letterman & Dugan, 2004). In addition, as they came from different institutions, they benefited from access to diverse types of expertise and resources in their contexts and networks (see Crawford & Jenkins, 2018).

## DESCRIPTION OF TEACHING MOMENTS: IDENTIFIED TEAM TEACHING BENEFITS AND CHALLENGES

### Benefits of Team Teaching

At the institutional level, team teaching might be a way to manage and optimize teaching resources (Buckley, 1999). Indeed, Johnny mentioned that the starting point of team teaching was the idea that every involved HEI also provided teaching resources to support the course. Hereby, team teaching is about fair use of resources. Yet for Johnny and teachers in general, this may not be a very important benefit. Baeten and Simons (2014) found that the key benefits for educators were increased emotional and professional support, the possibility of dialogue, professional growth, and personal growth. In line with this, Johnny said that for him, it was very inspiring and rewarding to work with colleagues from other disciplines and HEIs. Particularly at the beginning of the course, he felt energized because of his colleagues. Further, Davis (1995) suggested that team teaching is a response to the isolation that many academics experience.

For novice educators, team teaching may provide possibilities for decreased workload, learning gains, and increased collaboration (Baeten & Simons, 2014). This was the case for Danny. He admitted that in the beginning, his key motivation to join the teaching team was learning: 'I wanted to learn how to run this type of an entrepreneurship course.' Further, he said that it was a relief to be able to rely on others' expertise as a new educator. His coping strategy was to follow Johnny's 'footsteps' whenever possible. Concretely, this meant that he let Johnny take decisions regarding what happened in the course and copied his practices. Johnny also said that when he was a novice in this course, he relied on his more seasoned team teachers: 'For the first year, I considered myself more as a course assistant than as an educator. I did minor tasks here and there, but was more focused on observation and learning.'

In the beginning, the novice educator Danny was not familiar or comfortable with the pedagogical approach (Shibley, 2006). Johnny encouraged the student teams to find their

own unique way of doing, 'to find their own path', as he said. This means that the educators only roughly structured the course and each meeting around the day's theme. For Danny, this came as 'a shock'. This approach was new to him as he was used to careful planning. However, Danny acknowledged that the benefit of this approach was that it brought students closer to the practice of entrepreneurship by providing a real-life entrepreneurial experience, particularly important when applying a live case. Danny asserted that, for him, adaptation required 'throwing myself into the process, similar to the students'.

Danny explained that participating in the team teaching had been a beneficial experience as it changed his whole attitude towards entrepreneurship. In the beginning, he had a narrow idea that the students joined the course to become entrepreneurs, informed by his background in the arts. However, when he had the opportunity to observe the students and discuss with other educators, he started thinking that the course, and entrepreneurship education in general, produced a vast amount of working-life skills which were important regardless of career choice.

## Challenges of Team Teaching

Besides benefits, team teaching can have disadvantages both for educators and students. We identify challenges, particularly in the middle and at the end of the course. Letterman and Dugan (2004) discussed that conflicts among teaching team members can arise if the roles and responsibilities of the educators are unclear or not agreed upon by all the educators. According to the interviewees, the course relying on the live case method seemed to rest on the shoulders of the more experienced educators, including Johnny. In addition, newcomer Danny felt that he was 'a bit lost'. However, because of the power relations, he felt neither allowed nor able to intervene too extensively in the course (see Minett-Smith & Davis, 2020). Concretely, this meant that Johnny decided everything.

Scholars recognize that a lack of compatibility challenges team teaching (Anderson & Speck, 1998; Baeten & Simons, 2014). According to Anderson and Speck (1998), educators' compatibility does not refer to conformity of teaching styles but to how these teaching styles fit together and whether educators share the same vision. Regarding pedagogical differences, Danny brought up the role of planning: he would have been happy if there was more planning. The structure, content, and goal were not completely clear to him, making it difficult for him to contribute in the best way possible. It might be that time was not spent on planning because everything was clear to Johnny, who did not realize the need from the perspective of Danny. Moreover, as Johnny and Danny were used to different pedagogical approaches, Danny wondered whether he would need to compromise too much:

> Team teaching is about compromising. As there are many educators involved, there is a need to find an acceptable solution for all. However, this acceptable solution rarely is an optimal solution for anyone. This is even emphasized in this course where we [the educators] come from different disciplines and institutions. This [compromising] can even hinder student learning, I think.

Davis (1995) showed how by engaging in team teaching, teachers lose their individual autonomy and control: an educator must rely on their co-educator contributing as agreed. Johnny explained that every year, he became frustrated with his co-educators, which decreased his energy levels. He felt that not all in the team were equally invested in developing and contributing. He discussed how communication was key to mutual trust, fair work distribution, and solving conflicts. Johnny admitted that he had been unsuccessful in communication himself and felt there was room for improvement. He said that in team teaching, it was easy to lose your nerve if there were tensions bubbling under the surface regarding, for instance, work distribution or pedagogical ideas. He admitted, 'A couple of times I wondered whether I had gone too far in "my sayings" and lost professional relationships with my co-educators'.

## DISCUSSION

The venture creation course is a unique form of the live case method as entrepreneurship students can solve issues that concern their own ventures instead of solving problems for others. This highlights the role of uncertainty, complexity, and ambiguity included in entrepreneurship education (see Etivick et al., 2003). Luckily, team teaching can reduce these issues as educators from different fields with diverse expertise can mentor and guide students in their decisions. The aim of this chapter is to discuss the benefits and challenges of interactive team teaching when applying the live case method from the educator's perspective (Hannon, 2018; Neck & Corbett, 2018). Given the potential benefits but complex challenges involved in team teaching, it is important to share and develop our expertise in this domain (Dominik & Banerji, 2019; Lee et al., 2018). All the identified benefits and challenges of interactive team teaching when applying the live case method in entrepreneurship education are presented in Table 7.1.

**Table 7.1** Benefits and challenges of interactive team teaching

| Benefits for educators | Challenges for educators |
| --- | --- |
| • Possibility of increased inspiration and motivation when working with new people<br>• Reduced isolation<br>• Decreased workload<br>• Learning gains; easier to run an intervention and try out new methods for the first time when a more seasoned educator is on board<br>• Dare to try out new things and move out of comfort zones | • Unbalanced responsibilities and roles<br>• Unclear responsibilities and roles<br>• Free-riding<br>• Confronting pedagogical approaches; compromising<br>• Conflicts; disappointment |

We learned that, particularly in the beginning, team teaching can stoke enthusiasm and reduce educators' feelings of isolation. This is echoed by Letterman and Dugan (2004), who discussed how team teaching can contribute to diversity among educators who come from different ethnic, racial, and cultural backgrounds, as well as from different disciplines. This allows learning possibilities for educators as well as for students. Helms and colleagues stated that team

teaching may reduce 'silos' of educators coming from different functional areas or disciplines (Helms et al., 2005).

Team teaching can also encourage educators to try new things and step out of their comfort zone. Pedagogical approaches, courses, and methods can be designed differently than an educator would have done alone. Here, team teaching provides possibilities for increased support, interesting and varying teaching and learning activities, and learning gains for the students (Baeten & Simons, 2014; Benjamin, 2000). For novice teachers, this is an important resource, but more seasoned teachers can also receive refreshing ideas through team teaching. We learned that team teaching can help teachers to engage in more philosophical discussions than the usual discourse over class materials (Letterman & Dugan, 2004). These discussions offer unique learning possibilities for both educators and students.

We were able to identify diverse challenges of team teaching when the course proceeded. Team teaching means shifting from a position of managing oneself to managing and operating as a team (Minett-Smith & Davis, 2020). One clear mistake was that time was allocated based on the seasoned educator's needs, which meant obscurity for the novice teacher. This shows that in comparison to solo teaching, team teaching may increase the workload, particularly in the planning stages, as it requires time and imagination from the educators involved (Davis, 1995; Shibley, 2006). When insufficient time was allocated to planning, the educators did not share the same vision about the course (Anderson & Speck, 1998). This confusion and lack of time may have also hindered students' learning, as they were not receiving consistent and coherent communication from all their teachers.

Educators might have similar roles and responsibilities to begin with, but practice might show that more seasoned educators rule out the novices who are afraid to suggest new ideas (see Minett-Smith & Davis, 2020). This is not beneficial for anybody as it may be interpreted as passivity, which in turn can cause tensions or even conflicts among the team teachers. In our case context, this meant that the complementary skills of the educators were not used effectively. Also, the more seasoned educator became frustrated and disappointed with the 'free-riding' of other team members.

In conclusion, team teaching offers an opportunity for complementary skills and experiences, and provides enthusiasm and inspiration, as well as an opportunity for educators' learning, with the potential for improved quality of entrepreneurship education for students. Team teaching can also encourage trying out new pedagogical methods and approaches. These are clearly beneficial when working with live cases where teaching cannot be fully planned. However, it is challenging to take advantage of different types of expertise and backgrounds in team teaching, which are important for educational development. Doing so also requires the team to question as well as compromise on their existing practices (see Farny et al., 2016). It is important to remember that team teaching is a learning process, which allows iteration (Shibley, 2006). It is helpful if the same team continues multiple rotations and engages in open discussions to solve problems and develop existing practices further.

## IMPLICATIONS FOR CASE TEACHING PRACTICE AND REFRAMING THE CASE METHOD FOR ENTREPRENEURSHIP EDUCATION

Our chapter has clear implications for educators and decision-makers within HEIs. There is an urgent need to put more effort into the education of team teachers, becoming aware of the benefits and challenges involved, particularly in using tools to get the best out of team teaching.

By identifying the educational experiences of entrepreneurship educators (Dominik & Banerji, 2019; Lee et al., 2018), we discovered a grassroots-level apprenticeship as a concrete practice for developing team teaching in entrepreneurship education when applying the live case method. Teaching teams could be formed in a way where a novice is accompanied by a more seasoned educator. Moreover, team teachers could jointly decide on novice–mentor roles in the team. Hence, the novice could learn and take responsibility for minor tasks during the first rotation and take a bigger role in forthcoming rotations. This could alleviate some worries that novices might have when joining a new course that involves solving problems in real time. This benefit is particularly important if one has relatively little teaching experience or comes from a different discipline, possessing limited understanding about entrepreneurship (see Gibb, 2011; Kabongo & McCaskey, 2011). It is also always important to understand and discuss one's role as a team teacher. As in every team, it helps to develop strengths and manage weaknesses in a way that contributes to and improves the team (see Belbin et al., 1976). As team teaching is a learning process, which allows iteration (Shibley, 2006), it would be beneficial for educators to be part of the teaching team for several rotations.

Further, resources and time for planning are often allocated based on the needs of the more seasoned educators. However, we argue that it would be beneficial to conduct the allocation based on the needs of novice educators. This would ensure that novice educators are also on track and understand what is going on in the course, providing them with the opportunity to contribute as much as possible. This would also be beneficial for student learning. Overall, time is an important element in efficient team teaching, and it can be enhanced by allocating enough time for open discussion, not only in the beginning, in the planning stage, but also at regular intervals as the issues tend to arise when the course proceeds. For example, there could be time for reflection among team teachers before and after each session. Open discussion is also a way to avoid potential conflicts and disappointments. It might be beneficial to develop a scheme for reflection to allow feelings and concerns to be voiced.

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# APPENDIX 7A.1

**Table 7A.1** Descriptions of the meeting themes and tasks

| Meeting session | Theme | Description of task(s) |
|---|---|---|
| 1 | Boot camp, 8 hours | Teaming, initial ideation, elements of business model canvas |
| 2 | Canvas and validation plans | Discussion on business model canvas and idea validation |
| 3 | Validated problem/solution | Discussion regarding problem–solution testing and its outcomes |
| 4 | Pitching | Keynote on pitching and pitching exercises |
| 5 | Demo and pitching day | Presenting and receiving comments on wire-frame models, pitching |
| 6 | Pitching competition | Pitching exercises, pitching competition among other teams in the course |
| 7 | Competitors and business numbers | Discussion on key competitors, Excel exercise regarding business numbers |
| 8 | Channels (social media, marketing, press release) | Keynote on press release and press release exercise, discussion on social media and possible marketing channels |
| 9 | Canvas, validated problem/solution and demo day | Discussion on updated business model canvas, updated problem–solution testing, and presentation of updated wire-frame models |
| 10 | Pitching | Pitching exercises, pitching competition among other teams in the course |
| 11 | National finals pitching competition | National pitching competition |

# 8

# The moral perils when positioning student entrepreneurs in real-life contexts: balancing the nature–nurture of educative live case experience

*Gustav Hägg*

## INTRODUCTION

The present chapter focuses on moral dilemmas that are an implicit part of entrepreneurial action. From a historical perspective, the entrepreneur has been given multiple narratives, such as the undertaker, as well as the individual who takes on risk or uncertainty (Landström, 2020), but they have also been viewed from a darker side (Kets De Vries, 1985) as being someone who pushes the boundaries of what is morally acceptable (Baumol, 1996; Bryant, 2009). However, morality in connection with entrepreneurship is a marginalized issue in entrepreneurship research in general (Ahsan, 2020; Brenkert, 2009; Buchholz & Rosenthal, 2005) and even more so in entrepreneurial education research (Lourenço et al., 2015; Toledano & Karanda, 2017). In contemporary entrepreneurial society, where the idea of the enterprising individual prevails (Anderson & Smith, 2007; Down, 2009), the moral underpinning of how to act and for what reasons has become a more pertinent question, especially as the responsibilities of the entrepreneur have come under scrutiny because of the increased inequalities in societies, automatization, and the innovative algorithmic interplay between platform owners and service providers (Piketty, 2014; Woodcock, 2020), where boundaries have become blurred (Hägg & Kurczewska, 2021).

It is important to take the moral question into the educational setting and the experiential context in which entrepreneurship education rests (Fayolle, 2013; Hägg & Kurczewska, 2020b) because of the contextual changes in learning that we can see today (Roberts, 2015; Thomassen et al., 2019). Moving back in time, the moral associations with education from a progressive and experiential point of view are clear where educational outcomes were aligned with intel-

ligent (moral) action to develop democratic citizens (Dewey, 1916). However, the contemporary push for experiential education that we see in entrepreneurship by tearing down the walls of academia, often through addressing contemporary challenges such as sustainability, societal causes, and corporate social responsibility (CSR) practices, does not adequately address fundamental ethical and moral questions to balance marketization and the realization of the politically made caricature of the enterprising self who makes investments in the self to stay competitive (Amable, 2011; Ball & Olmedo, 2013; Hägg & Schölin, 2018; Lemke, 2001). The call for a moral discourse in relation to action orientation is fairly straightforward, but has lagged behind because of a rather swift shift from a lecture- and teacher-based educational practice to our contemporary learner-oriented approach (Robinson et al., 2016). The moral underpinning of the *why* of learning activities (I am not addressing the content as that is beyond the scope of this chapter) was not a priority in the traditional teacher-based classroom as there was little concern that learning activities might produce unwanted or unexpected negative side effects. Instead, there was a behaviouristic focus on getting all students above a threshold of knowledge through structured, lecture-based classes (I am here making a very general argument as I will not provide a historical account of all types of behaviouristic teaching). However, multiple layers of complexity emerge when the walls of the classroom disappear and when nurturing facilitation is combined with a natural tendency to act and explore one's surroundings, something facilitators must consider when implementing real-life activities.

In line with the call made in the book, the purpose of this chapter is to address the potential moral and ethical dilemmas that might occur when activating young emerging adults using action-oriented entrepreneurial tools in a 'real' entrepreneurial context, where pushing the boundaries is part of the game. To balance this boundary push, I argue that a main counterweight can be found in the field of moral philosophy, more specifically in relation to the dualist viewpoint of Kantian duty-based ethics (deontology) and consequentialist ethics (teleology). In entrepreneurship research, the main ties to ethics have been made to virtue ethics and the guiding role of prudence, where entrepreneurs continually balance between right and wrong (e.g. Brenkert, 2009; Johannisson, 2016). However, virtue ethics from an Aristotelian viewpoint is adequate when looking back on a life of deeds or when planning for a potential ideal outcome of an educational process to foster prudent individuals. But when having a shorter learning activity or module in entrepreneurship, the overarching goal of becoming prudent might not be achievable because of the restrictions in terms of time.

Therefore, I argue for the implementation of a dualist ethical standpoint of deontology and teleology in the context of engaging student entrepreneurs, especially in live cases that are timebound and constitute specific activities within a broader learning process. When student entrepreneurs engage in highly competitive upfront entrepreneurial activities, it is essential to provide them with a moral compass as such activities can distract even the most thoughtful decision-maker and more so the novice learner. Hence, as a reflective process when structuring and orchestrating the use of real-life cases or when pushing students to learn through entrepreneurial experiences, it is just as important to acknowledge the moral underpinnings of both the intentions and the consequences of the acts as the entrepreneurial insights gained from the act itself.

## BACKGROUND

From a historical perspective, morality has always been closely connected to the education of future generations of citizens (Buzzelli & Johnston, 2001). A main argument put forward by Dewey (1916) clearly addresses the moral underpinnings of the why of education, aiming to develop citizens capable of intelligent (i.e. moral) action, which Rodgers (2002) sees in line with Dewey as an aim where individuals become capable of making moral and socially justified decisions. If we follow the argument made by Buzzelli and Johnston (2001), there is a fine balance to be achieved between authority, morality, and power almost always present in the educational realm. In this balance, there is an intricate fine line between letting students act and explore in a natural real-life context and the facilitator's role of nurturing, which demands forms of power and authority. This balance has an inherent moral process, where students gain an understanding of the world around them through acting in it, while at the same time needing guidance on how to act (Hägg & Kurczewska, 2020a). Additionally, there is the issue of where to draw the line for how far students are to go in the competitiveness that society has championed in the neoliberal world (Down, 2009). Although calls for a more humane view on society are currently being heard, and there are winds of change in terms of a more sustainable discourse, fundamental market capitalism still impacts the behaviour of young adults raised in a highly competitive society.

Therefore, I argue that there is an urgent need to bring moral and ethical theory and practice back into the classroom. I am not talking about the CSR pyramid that starts in profit and ends at the top with ethics, but about fundamentally flipping the pyramid to start with nurturing ethicality. Returning to the argument on guidance and the novice learner, we know from psychology that the developmental period (18–29 years) that coincides with individuals going off to university studies is one of the most turbulent times of personal development (Arnett, 2000). It is a period when emergent adults start to make enduring life decisions, but it is also a time for exploring one's own persona. The emergent adult who begins university studies might also be leaving the family home for the first time to live alone as a large step towards becoming self-responsible. However, as it is a turbulent time when the individual is seeking to form their lifeworld, it also implies that when more individual responsibility is placed on the emerging adult, the more diversified outcomes might be seen as there is little prior knowledge to guide them (Hägg & Kurczewska, 2020b). Hence, when imposing learning activities that push the decision-making boundaries from the facilitator to the learner, we must also be aware of the level of maturity that these learners are at (Hägg & Kurczewska, 2019).

It is from the above point of view that I argue for the importance of moral and ethical theory as a foundational starting point when engaging students in learning from and through real-life experience. This is especially important in a subject like entrepreneurship, where decision-making under conditions of uncertainty (Knight, 1921; Sarasvathy, 2008) prevails and creates high demands on responsibility from the individual (McClelland, 1961). However, to take individual responsibility, one also needs to acknowledge what that implies. To remedy this, I argue for a dualist moral view that could be addressed and employed in entrepreneurship education, especially in upfront, real-life learning experiences based on authentic cases,

where students move outside the classroom walls and interact with society as part of their learning process.

To clarify, I agree with Buchholz and Rosenthal (2005) that 'ethics is about how people ought to act to be moral, not how they do act in a given situation' (p. 314), which implies that we should ethically think through the potential act before it is taken. This means fundamentally following a Kantian deontological view on ethics, which basically says treat others as you yourself want to be treated. Furthermore, in the present chapter, I follow Buzzelli and Johnston (2014) who explain that 'moral beliefs, values, and understandings are played out at the critical point of contact between the private, individual sphere and the social realm' (p. 3), implying that morality is an individual undertaking but has cultural and contextual implications.

To summarize, I lean on deontological and teleological ethical theory. I know that these have a different point of departure, where deontology argues that moral behaviour is based on duties related to how to act, while teleological ethics elaborates potential future consequences of acts that are to be undertaken. These two ethical theories have been combined in previous theorizing by Frankena (1973) and also by Hunt and Vitell (1986). These two ethical theories target two parts of the learning activity, first the underlying intent of the student when deciding what path to take and which action to engage in, which connects to deontology on how one ought to act. The reasoning at this stage poses questions such as:

- What are the moral and ethical justification for the potential act that I will engage in?
- Are the intentions morally justifiable from my individual standpoint?

The other part connects to teleology and relates to making continuous moral analysis while undertaking the learning activity and the consequences that materialize when students act. The reasoning at this stage poses questions such as:

- Do my initial grounds still hold in relation to the reality?
- How can I change my actions based on the insights gained so far in the process?

Hence, the second part addresses the interplay and the changed conditions between the individual and the social sphere (Buzzelli & Johnston, 2014) when performing the tasks that emerge in the live case situation and the effects of the decisions that are being made under conditions of uncertainty. I am fully aware that this is not a full explanation of two fairly complex schools of ethical thought, but an initial call for thought on the more implicit variables that are at play when students act entrepreneurially in a sometimes competitive and natural context.

## DESCRIPTION OF THE APPROACH AND TEACHING MOMENTS

Although the current call for a moral underpinning to balance the experiential activities when making learning environments more authentic is warranted, there is also a need to address how to create a potential learning process, so students not only engage in the activity but also contemplate the potential effects of their actions. In addition, they should also reflect on how competition and struggle influence the decisions made and how they might impact fellow

students and community stakeholders. The practical conditions for accentuating the role of morality and its close ties to action and decision-making can take place on all levels from bachelor to master and up to doctoral education. There is no limit to discussing morals in relation to experiential learning activities, whether they are in an introductory case study or at a later stage tied to real-life venture creation projects. However, the depth and breadth of what to include and how far one would go will be based on the amount of interaction with the surrounding environment and the natural acts that the learning activity entails.

Therefore, in this section, I will address a balanced process consisting of three stages that could assist when engaging student entrepreneurs in live cases and the various moments for introspection and afterthought that follow when students participate in authentic, explicit, entrepreneurial experiences. The three stages connect to the dualist viewpoint on ethical theory presented in this chapter, where deontology sets the conditions, while teleological reasoning portrays the process when students are in the midst of acting.

The first stage is to create clarity about the implicit effects that will always occur when interacting with one's surrounding environment. Even if this is a fundamental and most likely natural process that we always seek to explain to learners, there is always room for clarity on potentially good as well as bad effects of the different decisions and acts that are the outcome of interacting with our environment. When we provide the details of the learning activity and the various parts that the students are to engage in when undertaking a case study, live case, or other upfront experiential activity, the moral dilemmas tied to uncertainty and decision-making should always be addressed. I am not arguing that this is not already the case, and there are most certainly many educators who address these issues when positioning students in real-life situations. But given the shortage of a moral discussion in research on entrepreneurship and the movement towards a more authentic experiential context for learning, I argue that moral questions should be *on par* with issues such as how to develop opportunities, how to act effectually, or how to use bricolage or lean methods, as they are all linked to the development of thoughtful and responsible entrepreneurial individuals. A main part of this first stage is not only to address morality and ethicality as such, but also to focus on the deontological view on ethicality and connect it to the initial stages of the learning activity, such as the intentions about what to do, how to do it, and why the students intend to act on it. This can be achieved either through an informative short lecture and open discussion on the role of morality and how to act or by means of different short scenarios where the students tease out potential moral issues that may occur in the learning process by means of role play.

The second stage involves following the process and making teleological evaluations of the actions taken in the learning activity. Here the importance is on evaluating the input that students gain when they interact in the case, live case, or entrepreneurial project. This can either be conducted through follow-up feedback sessions that the facilitator organizes or through peer learning in smaller groups. It can also take place on an individual level, where students have an opportunity to reflect on the experiences gained. Depending on the length of the learning activity, there will of course be more or fewer opportunities for evaluating the different decisions made. The level of feedback or evaluation required also depends on the scale of the learning activity, which can range from a ready-made case study through to a live case up to upfront entrepreneurial activities. The more interaction with the surrounding environment

and the more cultural differences (i.e. many exchange students or high cultural diversity in the student population), the more important is the role of mid-process evaluations and feedback.

The final stage would be to include and discuss moral reflections on the learning activity undertaken, through either verbal or written reports, both looking back on the learning and looking ahead by addressing potential future what-if scenarios and how the students would engage with them based on the insights gained from the learning process. At this stage, the students have an opportunity to critically evaluate the ethical underpinnings that they have departed from, as well as the evaluations made during the learning process. By reflecting on the learning experience undertaken, the students are given an opportunity to synthesize and transform experience into knowledge, and by looking ahead, they have the opportunity to engage in a thought process that can perhaps prepare them for how to deal with similar uncertain situations in the future. Although this might be considered rather normative in scope, it is not my intention to be overly normative but more to discuss and hopefully contribute some small, additional ideas on how to further prepare students when working with live cases or other learning activities that go beyond the classroom walls.

## DISCUSSION

The argument made so far in this chapter is a call for including moral discussions on a par with other entrepreneurial concepts and activities to balance the nature versus nurture dilemma that might become a reality when engaging students in highly experiential real-life experiences. To do so, on the one hand, I have argued for a dualist view on ethical theory based on the interplay between deontology and teleology. An understanding of deontological premises is needed when students plan for how they will engage in the more natural acts that we champion in entrepreneurial education when interacting with the surrounding environment. On the other hand, I have argued that teleological evaluations are equally needed during the learning activities, as it is only when students act that the premises from a deontological perspective are challenged and new ethical evaluations are needed. In the following discussion, I will illustrate the above three stages with an example related to a live case of a start-up process that deals with decision-making under uncertainty and employing different entrepreneurial strategies when exploring a business opportunity. The example is based on a live case from an entrepreneur building up a company in the beauty industry in Europe.

The case, 'Acting as if—building up a successful brand narrative in the start-up process', is based on academic entrepreneurship where the key entrepreneur initiates and develops a beauty brand by employing various resourceful entrepreneurial strategies learned within a master's programme in entrepreneurship. It addresses various critical incidents where the entrepreneur makes use of bootstrapping methods, guerrilla marketing, effectual reasoning, and a large portion of opportunistic thinking. An example of an ethical dilemma that emerges in the early stage of the case is a hasty idea on a crowdfunding campaign:

> The entrepreneur now admits that they had no idea what they were raising money for when the crowdfunding campaign was launched on Kickstarter. There was no prototype,

no recipe, no clear directions. Only a shock tactic that the moisturizing cream would contain cannabis, but in reality, the cream contained hemp, which didn't sound quite as sensational, as the entrepreneur argued: 'I thought it was a super-cool idea that by saying it was cannabis we were being daring and bold.' But the shock tactic to generate maximum publicity failed as Kickstarter pulled the campaign before it was live (it breached the terms and conditions of the site), leading to the two months of hard work preparing the campaign being worthless.

An initial step that students would need to consider here is how opportunistic action could be questioned from a moral standpoint based on deontological reasoning (the first stage in the previous section). The entrepreneur is clearly pushing the boundaries and acting within a grey zone, something that is often needed when engaging in entrepreneurial processes. However, a main point to consider is whether this hasty attempt to crowdfund something that has not yet been fully thought out is ethically correct with regard to the external stakeholders. It is a first entry to contemplate the moral underpinnings of the 'acting as if' dilemma and the continuous argumentative line in entrepreneurship literature on how to creatively use resources and to bootstrap, as well as to employ affordable loss strategies. I am not arguing that they are flawed, and often they are very useful for survival in the early-stage start-up process (Baker et al., 2003; Fisher, 2012; Sarasvathy, 2008). Instead, I want to highlight the importance of addressing the potential effects of decisions and actions taken, especially if one considers that the student in the classroom is often characterized as an emergent adult (Arnett, 2000) with limited prior experience in complex decision-making situations (Paas & Sweller, 2012) when taking entrepreneurial action in a highly competitive space. Moving forward in the example, in the second stage, the entrepreneur conducts a successful crowdfunding campaign and develops a real product. However, as recognized in the example, another type of moral reasoning is at play:

Although the previous campaign was shut down, the work was not fully worthless as the entrepreneur then went on to another crowdfunding platform, Indiegogo, to launch the campaign. Pride with a touch of embarrassment describes the entrepreneur's recollection of creating the crowdfunding campaign. 'We needed a cute guy with tattoos to be the model in our promotional video' (but funding was scarce). So, our entrepreneur adopted the unorthodox approach of swiping right (liking) on the profiles of potential matches on Tinder, resulting in the recruitment of a model via Tinder. To make the video, they snuck into a tropical greenhouse located inside a botanical garden and bought several designer clothing items, where the tags were kept on as they were swiftly returned to the store for a refund afterwards. The setting is indicative of our entrepreneur's early approach to acting now and dealing with the consequences later … Once the crowdfunding campaign had been fully funded, the arduous task of fulfilling the promises made began. The scramble to create the product started. Step 2 after the crowdfunding campaign was to find a supplier and manufacturer.

As acknowledged in the above excerpt, another line of queries emerges in the 'acting as if' process that the entrepreneur is immersed in. Here it is more of a teleological process of moral

reflections at play (see the second stage), where the example provides multiple scenarios for students to think about how to revise or stay the course regarding the actions taken. There are questionable activities where our entrepreneur is continuously stretching the frontier of what is morally justifiable (Fisscher et al., 2005; Morris et al., 2002) in the process of chasing and realizing the entrepreneurial opportunity. But we can also sense a promise that is made beforehand as the next step is to actually develop a fully functional product that the campaign backers have been promised and seduced into believing exists. This leads to the third and final stage, as addressed in the previous section, which is to reflect on the case and discuss both the past acts taken and the potential future what-if scenarios that can be imagined based on the experience gained.

## IMPLICATIONS FOR CASE TEACHING PRACTICE AND REFRAMING THE CASE METHOD FOR ENTREPRENEURSHIP EDUCATION

This chapter has sought to provide one small brick in the overarching aim of the book in reframing the case method. It has done so by addressing the importance of moral and ethical reasoning that is constantly present in all forms of decisions that entrepreneurs make when acting on opportunities. I have in the present chapter argued for two forms of reasoning based on the intention before engaging with the surrounding environment and during the process, when actual experiences change the initial conditions upon which the actions were based.

Given that entrepreneurship education departs from a basic assumption that learning is best achieved through real-life experiences (Kassean et al., 2015), it is imperative that the activities undertaken are carefully contemplated and critically analysed from both an entrepreneurial and a moral perspective. This is especially important if one considers that we are educating students who are in one of the most turbulent phases of personal development (Arnett, 2000) and positioned in a highly neoliberal space that often creates competitive tensions (e.g. Lemke, 2001; Woodcock, 2020). As a contribution, the present chapter argues for making moral reasoning visible and on par with discussion such as entrepreneurial tools for helping students when making decisions in real-life learning activities where the walls of the classroom have been torn down.

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# Methods for Case Teaching in Entrepreneurship Education

# 9
## Student case development based on entrepreneurial experiences: a guide for entrepreneurship educators

*Even Haug Larsen and Karoline Kaspersen*

## INTRODUCTION

This chapter explains how entrepreneurship educators can facilitate student development of cases based on their own entrepreneurial experiences in order to stimulate reflection and create unique learning experiences (Hägg, 2021). This approach serves as an example of student-directed pedagogy in which learning processes emerge directly from students' own experiences, which has garnered increased interest in recent years among entrepreneurship educators (Hägg & Gabrielsson, 2019; Robinson et al., 2016). If executed well, this method can help students develop skills related to creative thinking, critical thinking, information literacy, analysis, problem-solving, and communication (Beal et al., 2016).

This chapter outlines the relevant theoretical background, describes a practical teaching example, and discusses how various teaching activities could expand the approach. While the practical example described here was tailored to graduate students writing cases about their own start-ups, the method allows flexibility and could be adapted to a variety of contexts and entrepreneurship classrooms. Educators can adjust assignment parameters, such as deliverables (case, teaching note, essay, presentation), grading criteria, assignment length, student organization (individual, paired, group), and type of entrepreneurial experience/activity for reflection. Such experiences are not limited to running a start-up but might include other entrepreneurial actions such as idea generation, experimentation, market research, business planning, and/or pitching (Neck et al., 2020). The educator controls the process by adjusting the assignment settings according to the context and learning objectives. The only absolute requirement is that students have some concrete entrepreneurial experience to draw upon and, ideally, some experience with the case-based method.

The idea of involving students in developing cases is not new; similar teaching methods have been described by Field (2005) in natural science, Head and Bays (2010) in nursing, Ciccotello and Green (1997) in finance, and Ashamalla and Crocitto (2001) in management and organizational behaviour. The present chapter details the method's application in the context of entrepreneurship education, particularly in contexts where students have some concrete entrepreneurial experience to draw upon.

# BACKGROUND AND PEDAGOGICAL APPROACH

## Limitations of Case-Based Teaching

Many business schools and other institutions that teach entrepreneurship utilize traditional case-based teaching and live cases as standard pedagogical practices (Yadav et al., 2019). Although the benefits of traditional case-based teaching (Davis, 2009) and the live case method (Schultz, 2021; Tofighi, 2021) appear across a range of disciplines, the approach has also attracted some criticism (Jack, 2018; Roth & Smith, 2009). Traditional case-based teaching confines students to the analyst's role as passive observers who must respond to historical facts and events presented by a distant third party (Bailey et al., 2005). In live cases, students consult a partner firm to problem-solve a current organizational issue (Burns, 1990; Rapp & Ogilvie, 2019); a drawback is that faculty must be highly involved in live cases, and there may be instances of insufficient client commitment and motivation (Roth & Smith, 2009).

Because case-based teaching focuses on solving other companies' problems rather than understanding and defining problems (Bridgman et al., 2016; Chia, 2005), it can also limit reflection and holistic thinking (Podolny, 2009). Cases may also be contextually complex, and without the requisite experience and domain knowledge of the industry or challenge in question, students are likely to be unduly passive (Mostert, 2007; Roth & Smith, 2009). The cases used in teaching are typically written by faculty or partner firms, but why not allow students themselves to author their own cases?

## The Student-Written, Instructor-Facilitated (SWIF) Case-Learning Method

First introduced by Swiercz (1998), the student-written, instructor-facilitated (SWIF) case-learning method addresses criticisms of case-based teaching by taking student involvement one step further. Following the SWIF model, students develop their cases without pre-written constraints, converting case-based learning into an active experience requiring students to assume a range of new roles beyond analysts of a given case. Instead, students take on more active roles as researchers, petitioners, interviewers, negotiators, writers, editors, and team members (if working in groups) (Bailey et al., 2005). In developing cases, students are challenged to think in new and unexpected ways (Prud'homme-Généreux, 2015), learning to tolerate ambiguity, distinguish between the significant and the trivial, and develop critical

thinking skills (Beal et al., 2016). In short, the SWIF method allows students to move beyond the role of case analyst to that of active case developer (Swiercz, 2003).

## Known Challenges of SWIF Case Learning

Although SWIF case learning is more activating and authentic than case-based teaching, the SWIF method also presents some challenges. For example, when Tarter and Beal (2013) implemented the SWIF case-learning method in a college capstone strategy course requiring students to write cases for third-party companies, they encountered difficulties in finding relevant companies. They also noted struggles in identifying case topics for writing that facilitated student engagement. Identifying the internal difficulties faced by third-party companies can also prove challenging as students are not involved in the company's development, reducing the authenticity of the SWIF case-learning experience.

## SWIF Case Learning in Entrepreneurship Education

SWIF case learning addresses the above challenges in entrepreneurship education settings by inviting students to develop cases linked to their own entrepreneurial experiences, eliminating the need to find a third-party company as a basis for case development. This context makes it easier for students to identify a topic to write about and may increase student engagement by stimulating reflection on authentic entrepreneurial experiences and actions (Hägg & Gabrielsson, 2019; Neck et al., 2020). Researchers have extensively discussed the positive impacts of this kind of active reflection on entrepreneurial learning (see Deacon & Harris, 2011; Lindh & Thorgren, 2016; Neck & Greene, 2011; Neck et al., 2014). To ensure that students have the requisite authentic experiences for active reflection, Hägg (2021) stressed that entrepreneurial activities should include peer interactions and other social contacts.

## A Practical Example

The teaching example described here refers to an activity at the Norwegian University of Science and Technology (Norges teknisk-naturvitenskapelige universitet, NTNU) during the springs of 2020 and 2021 with two groups of entrepreneurship students (44 in 2020 and 40 in 2021). These students were enrolled in a cross-disciplinary graduate venture creation programme (Lackéus & Middleton, 2015), initiating real start-ups as part of their formal studies. In the first semester of the programme, the students screen potential business ideas and form venture teams of two to five students. These new ventures are developed in semesters two, three, and four, supported by relevant courses on entrepreneurship.

### Case development assignment

Over 3 weeks at the end of the second semester, the assignment challenges students to develop a case based on their 5-month-old start-up; each start-up submits one case. We acknowledge that 3 weeks is a relatively short amount of time to complete this assignment; a time frame that was any shorter could diminish the quality of the cases produced and create unnecessary stress in the reflection process.

### The assignment

'During the second semester, your venture team has experienced situations where you have made challenging business decisions with a high degree of uncertainty. In this case development assignment, your start-up team will reflect on these situations, identify an experienced challenge or important decision-making event, and describe this scenario in a case format. As a team, you are encouraged to be creative in how you communicate and design your case.'

## GENERAL APPROACH AND TEACHING MOMENTS

The following 'how-to' guide provides step-by-step guidelines for the case development assignment. The guide serves as an example based on experience with the entire learning process, from introducing the assignment to evaluating the cases created.

It is important to note that the following example could be implemented in any entrepreneurship classroom and tailored to the educator's context, schedule, and learning objectives. Case development can work at different levels (undergraduate or graduate) within a range of timelines, individually or in groups. The only absolute requirement for success is that students have a particular entrepreneurial experience to draw upon; ideally, students will also have experience with the case method.

### Step 1: Introducing the Assignment (100 Minutes)

Based on our experience, the assignment introduction should include insights into the case development method. This step can be completed in person or online. The session structure is flexible, with the following example representing one possible approach.

(a)   Describe the assignment and explain how it links to the overall course learning outcomes. Present the specific learning goals and your expectations for the assignment.

(b)   Specify the target audience for the cases to be developed. We recommend that cases be targeted to students at the same educational level, making it easier for them to understand the assignment expectations and how the developed cases can be used for prospective students.

(c)   Emphasize the importance of identifying and selecting only *one* focal topic when writing the case. Linking case development to authentic experience will increase student ownership of the assignment.

(d)   Present and discuss how individual and group reflection on concrete experiences and actions can facilitate learning in entrepreneurship education (Hägg, 2021; Hägg & Gabrielsson, 2019; Kassean et al., 2015). This discussion can strengthen students' understanding of why case development facilitates reflection and learning. Our students use weekly written diaries and oral feedback from peers and teachers to practise individual and group reflection. If students are unfamiliar with the practice of reflecting on concrete experiences, more time should be set aside here.

(e)   Choose two different cases to teach. We used two cases created by previous students to illustrate different structures, narratives, and formats for organizing and writing a case. We have found that many students are unfamiliar with case learning. The task can seem

overwhelming at first, and students need to gain first-hand experience with cases (Tarter & Beal, 2013). We suggest comparing and discussing two different cases as an excellent way of framing expectations. At the end of each case, we completed a 10–15-minute debrief, asking students to identify case elements that worked well and those that could be improved. Here, we encouraged students to keep their reflections in mind when developing their cases.

(f)   Our suggestion is to explain how a case is typically structured. By introducing this structure after point (e), students experience and discuss case teaching before learning about the theoretical foundations of the case structure. In our context, we explained that the first part of the case usually introduces the narrative and provides a context for debate and development by posing the core problem: what do we want to solve or decide? We then introduced different possible media formats (plain text, video, podcast, PowerPoint, or some combination of these) and shared general tips for case writing. The case format can be adjusted to suit the context, learning goals, degree of flexibility, and student group.

(g)   We recommend offering a clear overview of time schedules and assignment evaluation criteria.

(h)   It can be helpful to provide some examples of possible case topics to get students thinking. It is also advisable to round off the introduction with a Q&A session.

## Step 2: Student Research Phase (1 Week)

This step ensures that each team has time to identify and reflect on a concrete entrepreneurial experience, challenge, or decision-making event from their start-up. We set aside 1 week for this research phase, which is entirely student-driven, allowing a high level of autonomy.

## Step 3: Supervision by Faculty (20 Minutes per Group)

As with any other assignment, supervision and feedback are essential when helping students to write cases. This assistance is particularly important with SWIF learning, which tends to be a new and unfamiliar exercise for students (Prud'homme-Généreux, 2013). Proper supervision by faculty ensures that all student teams stay on track when getting underway.

In our example, each student team received 20 minutes of one-on-one supervised time. To encourage them to take responsibility for their learning, we found it essential to communicate that the students were in charge, setting the agenda based on their findings in Step 2.

To begin, each team presented their initial ideas, including a case study topic and a plan for developing their first draft. This step allowed faculty to provide feedback on the overall vision and the most appropriate format for the case. Some instructors may require all teams to submit cases in a single preferred form, limiting creativity and diversity but permitting easier evaluation and grading.

Following supervision, students should have a clear plan for developing their case (Prud'homme-Généreux, 2015). While this supervisory process may seem time-consuming, it is a critical step in ensuring successful case development because it helps shape the case struc-

ture and allows faculty to provide guidance on completing the assignment. If the supervision session is effective, instructors are rarely called upon during the next step.

## Step 4: Planning and Developing the Case (11 Days)

Once supervision is complete, the teams can develop their cases, working autonomously with little involvement from faculty members, who should only participate when asked for guidance or additional supervision.

## Step 5: Submitting the Case

Eleven days after the supervision session, the teams submit their cases for grading based upon the stated evaluation criteria. When evaluating cases, instructors can note which ones might prove helpful as teaching cases for prospective students and which ones would need additional work.

## Evaluation of Written Cases

Faculty members evaluate and grade the cases, with each student group being assigned a grade. If desired, educators can incorporate strategies for acknowledging each team member's contribution and adjusting individual grades accordingly. Provisions for including 'peer evaluation' are outlined below.

# EXPANDING THE ASSIGNMENT

The assignment described here ran for 3 weeks. Students might spend a longer time on this assignment or incorporate other teaching elements and activities with the proper provisions in place. Below we suggest expansions on the exercise. We have not performed these suggestions in practice but aim to discuss how various teaching activities can expand the approach.

## Peer Feedback

When used appropriately, feedback in its various forms can have powerful and positive impacts on student learning and performance (Hattie & Timperley, 2007; Winstone et al., 2017); variations include feed forward, feed up, process feedback, and peer feedback (Evans, 2013). Feedback may come from teachers or students; it can be corrective and evaluative, or it can facilitate dialogue (Warhuus et al., 2018). For the present purposes, it is useful to focus briefly on peer feedback, where students give feedback regarding both process and outcome.

Peer feedback can be understood as formative assessment (Topping, 1998) and collaborative learning, with benefits for both the student assessed and the peer assessor (Van Gennip et al., 2010). Peer feedback can also help control teachers' workload and increase the number of opportunities for feedback. Although peer feedback may be less accurate than teacher responses, this drawback can be regarded as an acceptable trade-off to the extent that it facil-

itates student progress (Gibbs & Simpson, 2004). Peer feedback can be included at all stages of the case development assignment. Because it may extend the assignment's duration, faculty must carefully structure peer feedback—only a limited number of students are likely to participate if the process is unstructured and voluntary.

## Peer Assessment

One of the challenges of teamwork relates to assessing students' individual contributions (Anson & Goodman, 2014). Peer assessment offers one way of ensuring that students work effectively within their team (Herreid, 2001). In peer assessment (Kane & Lawler, 1978), a student (or group of students) evaluates others' assignments and possibly self-evaluates their own work. Each team member rates their colleagues anonymously at the end of the assignment, providing reasons for their evaluation and indicating what grade they feel they deserve and why (Backx, 2008).

## Writing a Teaching Note

As another possible expansion of the assignment, students might be asked to write a teaching note associated with their developed case. This addition may enhance learning outcomes by allowing students to reflect on their written cases (Kolb & Kolb, 2018), thus facilitating continuous learning. In this way, students could interpret their case from an experiential perspective by reflecting on practice; the assignment then becomes an iterative, design-based process of systematic reflection. This process could help strengthen students' entrepreneurial aspirations and their communication and transformative skills and self-efficacy (Lahn & Erikson, 2016). Writing a teaching note would require further introductory faculty input to clarify its nature. Instructors should also explain how and why the teaching note enhances learning outcomes.

## Teach the Case

As a final element of the assignment, students could be asked to teach their case to a student group, whether younger students in the same programme, a different group at the university, or learners at a local high school. According to the learning pyramid account, teaching others is the most effective form of learning (Treichler, 1967); teaching others is also a form of experiential learning (Dewey, 1963). By teaching a case they have written, students can test it in practice, extending their learning and perhaps inspiring other students by describing their entrepreneurial journey. In addition to gaining confidence by presenting to others, this teaching activity could help students become more aware of how best to communicate entrepreneurial challenges.

# DISCUSSION

## The Act of Reflecting on Entrepreneurial Experience

When using the SWIF method, the only absolute requirement for successful case development is that the students draw upon relevant entrepreneurial experiences. By enabling students to reflect on and develop cases, this approach can efficiently harness the power of reflection for entrepreneurship educators. Developing a case based on personal entrepreneurial experiences facilitates reflection, engages the student, and alleviates the challenges of developing cases for third-party companies.

However, it is essential to mention that some teams may decide to divide tasks between them. Because the student teams often have many tasks and a common interest in succeeding with the start-up and assignments, they adjust the workload where appropriate. When some students do more educational assignments, they might acquire other learning outcomes than those working more on start-up tasks. An example we experienced was that one student spent long hours finishing up a prototype while the rest of the team finalized the case development assignment. Even if we highlight the importance of the team working together on the whole assignment, it is not easy for educators to control—this is a common challenge with group assignments.

The practical example described here is limited to students working in entrepreneurial venture teams. As Hägg (2021) noted, entrepreneurial experiences should include peer interaction and other social contacts, such as experimentation with users, peer idea generation and pitching, and market research and business planning with external stakeholders. Therefore, we believe that developing cases through reflection on a range of entrepreneurial experiences can help translate concrete experiences into learning in entrepreneurship classrooms.

## Student-Directed Pedagogy

The cases were based on students' own entrepreneurial experiences with their start-ups, and the assignment encouraged creative case designs. Therefore, the assignment yielded a diverse range of case topics and designs. In this example of student-directed pedagogy, learning processes emerge directly from the students' individual experiences (Hägg & Gabrielsson, 2019; Robinson et al., 2016). Table 9.1 lists some of the case topics and designs submitted by our students.

Table 9.1 confirms the diversity of case topics and designs. While student-directed pedagogies may enhance motivation and learning opportunities, educators have limited control over what is learned and how it is learned, making the work challenging to assess (Aadland, 2019). It seems likely, for instance, that the students whose video case design involved their experience of setting up an IP strategy will have reflected more on IP strategy while acquiring video development skills. Meanwhile, the students who made a podcast about shares and equity allocation in their company will have reflected more on this topic while acquiring podcast development skills.

**Table 9.1    Case topics and designs**

| Case topic | Case design |
| --- | --- |
| Changing the core founding team | PowerPoint presentation with supporting audio from team members |
| Allocation of shares and equity | Podcast |
| Choosing a revenue model | Cartoon |
| Internationalization strategy | Text, graphs, and figures |
| Pivoting and changing the idea | Video and text |
| Choosing a linear or circular business model | Presentation/slide deck |
| Challenges of remote work | Role play |
| IP strategy | Video |

In short, relinquishing control and handing over responsibility is essential when facilitating experiential and authentic learning processes (Aadland, 2019; Kassean et al., 2015; Robinson et al., 2016). This decreased control was something we accepted because the primary goal of the assignment was to stimulate reflection. Dealing with graduate students, we felt comfortable sharing control and giving them responsibility for their own learning. Educators who seek to include student case development in their entrepreneurship education need to be aware of this requirement and balance control and flexibility based on their contexts.

## Set Aside Time for Reflection

Entrepreneurship focuses on learning fast from failure (Ries, 2011). In support of this mindset, we would like to emphasize the importance of setting aside time to learn about, reflect on, and analyse failure (Fox et al., 2018; Pittaway & Cope, 2007). For example, by reflecting on the mistakes they made when setting up their company's equity and share structure, one group produced a well-developed case and improved the fairness of their equity and share structure. This example demonstrates how setting aside time to reflect through case development can create learning for students and practical value for their ventures.

## Students Contribute to Teaching Material

Student teams can produce strong and creative case narratives, and these can serve as a valuable resource for educators for use in future courses. Educators can even cooperate with students to publish the cases; knowing that their cases may be used in future courses or published may motivate students. As another benefit, students often write in a tone that prospective students can more easily identify with, and educators may even find it helpful to invite graduates to visit in order to make classes more engaging and authentic.

## IMPLICATIONS FOR CASE TEACHING PRACTICE AND REFRAMING THE CASE METHOD FOR ENTREPRENEURSHIP EDUCATION

The material presented here explains how entrepreneurship educators can help students develop cases linked to their own entrepreneurial experiences. While involving students in case development is not a new idea, applying this teaching method in entrepreneurship education represents a novel contribution.

Encouraging students to develop cases based on their own entrepreneurial experiences addresses some of the criticisms of case-based teaching mentioned earlier and can help overcome the known challenges of developing cases for third-party companies. By understanding these issues, educators can devise more active classes that will increase student involvement.

In general, students prefer to work on assignments they perceive as relevant. As entrepreneurship students tend to focus more on their entrepreneurial project or start-up than on their learning, they often remain unaware of what they have learned (Warhuus et al., 2018). The primary purpose of the case development assignment is to ensure that students reflect on their experiences so that their learning becomes explicit, thus adding direct value to their ventures.

Inviting students to develop their cases can also have a motivating effect on educators. When students produce creative cases, evaluation and grading are likely to be more enjoyable. At the same time, student-directed pedagogies involving learning processes that emerge directly from students' individual experiences may limit educators' control over the learning process as a whole. The present chapter contributes to this discussion and highlights the need for educators to be aware of the likely challenges when introducing student case development into the entrepreneurship classroom. While our students reflected on authentic entrepreneurial experiences from their start-ups, the teaching example described is flexible and can be implemented into any entrepreneurship classroom where different entrepreneurship experiences occur. In this sense, educators retain control to align the assignment with their individual contexts and learning objectives.

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# 10
# Student challenges in entrepreneurship education: planning for uncertainty

*Sølvi Solvoll and Dag Håkon Haneberg*

## INTRODUCTION

A student challenge departs from a problem that an external actor (a 'client')—such as a local business—currently faces, which in cooperation with faculty member(s) is formulated and presented to students who work in groups to solve this problem. *Student challenges* are therefore defined as faculty-facilitated short-term processes in which groups of students address problems presented by client(s) where innovation is needed and propose solution(s) to the presented problem as part of a curricular course or extracurricular activity. The students' task during a student challenge is to interact with the client and other external actors to provide a response to the problem that would provide value for the client. As such, student challenges are interesting as a novel alternative to 'traditional' case teaching since they add real-world interaction (Daly, 2013) and value creation for others (Jones et al., 2020; Lackéus, 2018) to case teaching methods. Even though student challenges have similarities to other related approaches such as live cases (McWilliams & Nahavandi, 2006), hackathons (Briscoe & Mulligan, 2014), and consultancy projects (Lycko & Galanakis, 2019), student challenges are distinguished from these in terms of their purpose, how the addressed problem is formulated, and the suggested time frame.

Because of their short time frame, student challenges may be integrated into entrepreneurship education courses and programmes or exist as a standalone initiative to develop students' entrepreneurial skills and mindsets. For entrepreneurship education, a student challenge can represent a particular 'space' for entrepreneurship (Pittaway et al., 2019) where students are exposed to and possibly immersed in the context of the client organization (Bonfanti et al., 2019). Simultaneously, the process is facilitated by faculty, and the focus is the student's learning outcome in being exposed to an early-stage innovation process. Hence, student challenges relate to recent developments in how learning processes are facilitated in entrepreneurship education (Hägg & Gabrielsson, 2019). Accordingly, this chapter is relevant for faculty who

would like to explore student challenges as a fruitful pedagogical intervention in entrepreneurship education and for external actors who would like to involve themselves in student challenges at the university.

Although it offers attractive opportunities in terms of student learning and work–life relevance to education (Mielikäinen, 2022), involving students' work in real-life problems from external actors in curricular courses in higher education has become a very delicate task for educators. This is because faculty must balance three main stakeholders in the process (Daly, 2013): students, faculty, and clients. Whereas the client strives for a close relationship between the student challenge and the client's actual (and perhaps urgent) everyday tasks, university faculty strive to uphold theoretical relevance and sufficient compliance with pre-set learning goals in their course or programme. Students will have additional viewpoints and motivations, and the degree to which the student challenge resonates with the students' preferences will likely influence students' creativity and ownership—both critical factors for the process and outcomes of the student challenge. Therefore, this chapter focuses specifically on the tensions between stakeholders and provides recommendations on how to prepare for and handle them to ensure that students are trained to embrace uncertainty during the student challenge.

Seven recent student challenges at Nord University (Nord) and the Norwegian University of Science and Technology (NTNU) were studied through an analysis of interviews with involved faculty members and clients, as well as written feedback statements received from students who participated in the student challenges. The next section presents in more depth what a student challenge is and how it relates to nearby concepts such as live cases, hackathons, and consultancy projects. We then introduce the practical conditions for the student challenges studied. Thereafter, the findings from the empirical investigation are used to present a set of recommendations for faculty and clients who would like to explore and be involved in student challenges. The chapter ends with a discussion of the practical implications of student challenges for entrepreneurship education development and teaching practice.

## STUDENT CHALLENGES AND THEIR PEDAGOGICAL UNDERPINNINGS

First, we describe the student challenge and its pedagogical underpinnings, as it is a concept new to the existing literature on entrepreneurship education. Even though the student challenge is a short-term process (normally between 2 days and 2 weeks), student challenges require planning and a great deal of preparatory work before the student challenge starts. In this pre-phase, the faculty works with external clients to develop and present general problem(s) to students. The student challenge starts with the client presenting the general problem, after which the students are split into (preferably multidisciplinary) groups of around four. It is also an advantage to have facilitators dedicated to helping the students in the first phase since an open problem description and students' unfamiliarity with the pedagogical method create confusion. Existing tools may be used to facilitate this first stage, such as wayfaring (Steinert & Leifer, 2012) or design thinking principles (Kleinsmann et al., 2017; Sarooghi et al., 2019). The student groups work intensively towards the deadline, after which they will present their

solution to a jury. The jury will then either grade the work (curricular) or present a winning solution (extracurricular).

Student challenges share several similarities with live cases since they involve a current situation (McWilliams & Nahavandi, 2006), which requires close dialogues with clients (Stewart & Dougherty, 1993), and decisions for the problem are yet to be made by the students (LeClair & Stöttinger, 1999; Lincoln, 2006). Furthermore, the live case also focuses on facilitating the process to ensure students' learning. However, student challenges depart from the traditional live case approach because of time constraints and competition elements, where they share several similarities with hackathons instead.

Briscoe and Mulligan (2014, p. 1) define a *hackathon* as an event in which computer programmers and others involved in software development collaborate intensively over a short time frame on software projects. Most research in the field also investigates software projects and digital innovation (e.g. Lara & Lockwood, 2016; Munro, 2015). However, the concept has also been used with a non-technology focus, such as in marketing (Calco & Veeck, 2015), management consulting (Maaravi, 2020), and medical education (Aungst, 2015; Olson et al., 2017; Wang et al., 2018). Three core elements differentiate student challenges from hackathons. First, student challenges are specifically regarded as an approach to learning through early-stage innovation processes with a clear emphasis on the learning aspect for the student and with university faculty actively involved in the process. Second, student challenges do not necessarily relate to digital or even technological innovations. Finally, the time aspect is slightly different, as hackathons often range between 24 and 72 hours (Hmelo-Silver, 2004), and student challenges can be longer to ensure the desired learning outcome. Consultancy projects are a third approach that shares similarities with student challenges as they are an established action learning method that has become an integral part of education in many business schools and universities (Lycko & Galanakis, 2019). These have also been called *commission projects* (Laughton & Ottewill, 1998) and they focus on the live projects coordinated between clients, faculty, and students. They can be implemented as part of a course (Bak, 2011) or as an alternative to the more established dissertation (Ardley & Taylor, 2010), either with for-profit or non-profit clients (Desai & DeArmond, 2021). Research on consultancy projects has been shown to build bridges between higher education and industry, as well as enhancing employability (Koendjbiharie, 2020). Even though student challenges share similarities with consultancy projects, the student challenge is shorter term and is more evolved around the early stages of an innovation process. In addition, the process takes place more on students' premises than the external clients'.

However, there are studies that do match the description of student challenges given here that have been called *live cases* (e.g. Culpin & Scott, 2012) or *hackathons* (e.g. Angarita & Nolte, 2020), and even specific challenges such as the 'business model challenge' (Bolzani & Luppi, 2020) in the literature. Hence, the distinction between these pedagogical approaches is not always clear. Nevertheless, Table 10.1 summarizes the main distinctions between the four approaches, as stated above.

**Table 10.1**  Student challenges compared to live cases, hackathons, and consultancy projects

| Approach | Problem statement | Normal time frame | Core feature |
| --- | --- | --- | --- |
| Student challenge | Vaguely defined; developed in cooperation between faculty and client | 3 days to 2 weeks | Students learn through being leaders of an early-stage innovation process. Developing a solution is a learning vehicle. |
| Live case | Clearly defined by client and faculty in cooperation | 1 semester or less | Students learn actively based on real-life problems from external clients. |
| Hackathon | Clearly defined and mainly on technical innovation; client develops problem statement | 24 hours to 3 days | Students compete to create the best solution for a client. |
| Consultancy project | Vaguely defined; client together with students | 1 semester or less | Students work with clients to develop solutions. Students work primarily *for* the clients. |

Being an approach primarily to promote learning, student challenges combine strengths from live cases, hackathons, and consultancy projects to facilitate several types of student learning. First, student challenges allow students to actively engage with innovation and problem-based learning (Hmelo-Silver, 2004; Wood, 2003), so they include several aspects of *experiential* learning (Kolb & Kolb, 2005). The tasks the students are given are—as mentioned in the introduction—vaguely defined and require skills for students' *self-directed* learning (Garrison, 1997; Morris & König, 2020). The process of student challenges further facilitates learning through *inquiry* (Kienzler & Fontanesi, 2017), as the externally provided challenge is up to students' interpretation, creativity, and judgement. Since students work in groups, there are also aspects of *collaborative* learning (Wang et al., 2018) and team learning (Decuyper et al., 2010). In practice, student challenges position students as leaders in early-stage innovation processes (Salerno et al., 2015). Thus, some foundations for using student challenges as a case teaching approach in entrepreneurship education can be found in how early-stage innovation practices are facilitated.

The first stages of an innovation process have been termed the *fuzzy front end* (Khurana & Rosenthal, 1997; Vestad et al., 2019), where there is considerable ambiguity about what the problem *is* and even *how* the potential solution space looks. Various approaches may guide the early-stage innovation process, such as design thinking principles (Kleinsmann et al., 2017) and wayfaring (Steinert & Leifer, 2012). In the wayfaring approach, Steinert and Leifer (2012) emphasize that it is essential to avoid 'going home prematurely' (p. 252). By that, they mean that the innovators—in our case, students participating in a student challenge—should avoid pursuing the first solution that comes to mind and rather iterate and continuously explore the problem/challenge and solution options for some time. The nature of the early-stage innovation process implies that organizers, such as university faculty, must acknowledge and accept the iterative, ambiguous, and uncertain path of the process. Consequently, organizers must take on several roles during the student challenge (Wraae et al., 2020).

## EMPIRICAL BACKGROUND

Nord and NTNU are partners in Engage, a 10-year government-funded centre for excellence in education through entrepreneurship that was established in 2017. Engage's vision as a centre is 'to increase the number of students in Norway and around the world with entrepreneurial skills and the mindset to become change agents for the better' (Engage, 2021, p. 4). Based on pre-existing practices of each of its five partner organizations at Nord and NTNU, Engage has developed and organized several student challenges as it has been shown to be a proper pedagogical intervention to train students to embrace uncertainty and interact with the world outside the university. An empirical investigation of seven student challenges organized at Nord and NTNU was conducted to explore how a student challenge should be facilitated to balance tensions between stakeholders. The seven student challenges were divided into four types, arranged by Engage in 2018, 2019, and 2020, and lasted from 2 days to 2 weeks. In total, 269 students took part in one of the student challenges, and 27 case descriptions were presented to the students by a diverse group of external clients. For the present chapter, the authors collected written materials and extensive student feedback (N = 93) from the seven student challenges before the authors conducted in-depth interviews with the key faculty organizers of each challenge.

Table 10.2 briefly introduces the student challenges, and the four types of student challenges are described in more detail below.

**Table 10.2**  Descriptive overview of the student challenges studied

|   | Name | Duration | Type | Students | Problem presented |
|---|------|----------|------|----------|-------------------|
| A | Lofoten Sustainable Tourism Challenge | Friday–Sunday | Extracurricular | 25 | 3 (2018) |
| B | Blast-Off Week | Monday–Friday | Curricular | 63<br>51<br>67 | 4 (2018)<br>4 (2019)<br>3 (2020) |
| C | Seafood Industry Transportation Challenge | Monday–Sunday | Extracurricular | 32 | 1 (2018) |
| D | Health-Tech Challenge | 2 weeks | Extracurricular | 18<br>13 | 6 (2018)<br>6 (2019) |

Type A, the 'Lofoten Sustainable Tourism Challenge', was an extracurricular challenge organized by Nord that took place in Lofoten in October 2018. The event was sponsored by the local county, a local bank, and a local power company. Twenty-five students were selected based on their written applications; they came from seven Nordic universities. The background for the challenge related to conflicts between local communities and tourists due to overtourism in Lofoten. Three problems regarding more sustainable tourism were presented by local organizations. Students could prioritize which problems they wanted to work with, while organizers divided students into groups. After two intensive days of work, the group presented their solu-

tions to the jury on the last day. The winning team received a prize as well as the opportunity to qualify for a spot in an accelerated programme.

Type B is a curricular annual student challenge organized as part of the course 'Innovation and Change Processes' at Nord. The challenge, called 'Blast-Off Week', lasts from Monday until Friday. Students are given lectures about innovation processes and teamwork before the student challenge. Problems regarding health, industrial development, and a circular economy from three to four external clients were presented on the first day. Students thereafter prioritized the problems they wanted to work with and were subsequently divided into groups of four to five. The assigned mentors for the groups would either be students who had taken the course previously (Arntzen-Nordqvist & Ramskjell, 2021) or faculty. The students were graded by an external jury, and the grade counted for 40% of their final grade on the course.

Type C, the 'Seafood Industry Transportation Challenge', was an extracurricular challenge co-organized between NTNU and the University of Washington (UW). The contestants were 20 students from NTNU and 12 from UW. The main problem that the students explored was how fish could be transported more efficiently from Norway to fish markets in Asia. Students and organizers travelled to two remote locations to observe the challenges of transporting fish. The student challenge lasted 7 days, and each group had to decide on a focus within the more general problem. Proposed solutions were pitched to a jury, and the winning team won travel to UW.

Type D, the 'Health-Tech Challenge', is an annual extracurricular challenge organized as a cooperative venture between the student organization DRIV NTNU and the research infrastructure group Future Operating Rooms (FOR) at NTNU. FOR went to different surgical clinics at the university hospital at NTNU to collect six real-life problems from practitioners. Students from engineering studies, medicine, and other programmes were divided into groups by the organizers. Each group chose a problem to work on, and several groups chose the same problem. After initial guidance and encouragement, the student groups had 2 weeks to propose a solution that they would present to a jury to potentially win €2,000 for continuing the work on their proposed solution.

## INSIGHTS FROM THE INTERVIEWS

In this section, insights from the interviews with core faculty and organizers, as well as evaluations by students and clients, are presented. This section pinpoints topics that may be particularly important to consider when organizing student challenges rather than elaborating the overall process of student challenges as such. However, the overall structure of a student challenge, as well as the four specific types of student challenges studied here, can be found in the previous sections of this chapter. Each response is, for the sake of clarity, tagged with a specific identifier, such as 'A-S1', where 'A' refers to challenge type A, 'S' refers to student (and thus 'C' for clients and 'F' for faculty), and '1' is a unique number to distinguish each individual.

A central topic throughout the interviews was the degree to which the problems presented to students should be openly or narrowly defined. In very interdisciplinary teams, such as in student challenge type D, there were different opinions about how easy it was to understand

problems presented by clients. Two students at the same student challenge evaluated the problems presented in the following way:

> Quite unspecific. It was not really problems to be solved, but some dreams that the different [research] groups had. It was difficult to understand and less inspiring. (D-S1)
> The descriptions were good, but many difficult words for us that are not students of medicine. (D-S2)

Faculty should therefore consider how they can guide the process of creating problem descriptions. It can be challenging to provide problems so broad the groups use their interdisciplinarity and different skill sets to devise creative and innovative solutions. While the opportunity for new and unexpected solutions increases with more openness in the problem descriptions, the flip side is the amount of time students have to understand what the problem actually *is*, as well as solutions that may end unrealistically. Hence, the benefit of a narrower problem description is that proposed solutions are easier for clients to implement. Simultaneously, students may feel that they are consultants set to conduct a specific task rather than self-motivated innovators. A student who participated in student challenge type A suggested that the problem descriptions should be more open: 'The challenge would be a lot better if the problem were more open, as this would lead to more creative thinking and results. I felt like we were more consultants for other businesses than trying to be innovative' (A-S2).

One way to depart from the problem description and solution value dilemma is to shift the focus from the starting point (problems) and outcomes (solutions) to the *learning* process instead:

> Some students who participated in [the student challenge] did not entirely understand their learning outcomes until their final year [at the university]. (B-F1)
> What I learned the most from was the questions the students approached me with during the second day of the challenge. (A-C1)

The empirical study also revealed two intertwined and uncertain processes during a student challenge. The first was the very explicit process in which students innovated to propose solutions to the client's problem. However, the outcomes may not have been in line with the client's expectations: 'The results are not always what [the clients] think they will get' (C-F1).

The other process was the group work process, where an interdisciplinary group of individuals were to work effectively together. Frameworks for innovation processes, such as wayfaring, were found useful here to guide the problem exploration phase. Experience from the student challenges exemplified how the group work may lead the innovation process to one of two extremes: a participating student may feel they have the best ideas or solution and cannot receive feedback and work collaboratively with the group, or one or several students in the group do not actively participate. A quote from a student challenge exemplified this: 'I did not expect to meet persons not willing to work on a challenge like this, but there was one in my group. The person did not resist working, just kept really quiet and didn't pay attention to what we were discussing and had no comments when asked' (A-S10).

Handling potential upcoming issues in the process became a focus for faculty in several of the student challenges studied, and sufficient resources to handle such issues were stated as important: 'Another way to embrace the uncertainty is to dedicate some resources for training in it, to facilitate the process and handle the unexpected things that will happen during this first phase. I would suggest having a trained facilitator for each group to help challenge and guide the groups' (A-F2).

Thus, the insights from the interviews suggested that preparing what can and should be done before the challenge is an important measure to maximize the resource slack of the faculty during the student challenge. Assessment criteria and accommodations, for instance, can also be thoroughly prepared. Another approach that was found useful to prepare students for group work and to provide guidelines for active participation was establishing a group work contract in advance. Nevertheless, it is important for faculty to remember that the students are to lead the early-stage innovation process. Faculty should ensure that they are not involved too heavily and that they do not control students' process. Being a leader may be new and even frightening for some students. The following quote illustrates how students' expectations may be affected by the type of educational approaches with which they have become familiar during their studies: '[The student challenge] was the only thing I was worried about before I started the master programme but ended up being one of the best learning experiences I have ever had' (B-S40).

Hence, an appropriately designed student challenge may have a transformative effect, not only in terms of student learning but also on students' views of the educational approaches in which they are participating.

## DISCUSSION

In this chapter, we have explained the pedagogical underpinning of student challenges and explored seven student challenges empirically based on insights from students, faculty, and clients. The combined experience from the seven student challenges studied in the present chapter leads to three main recommendations for faculty who want to use student challenges as a pedagogical approach in entrepreneurship education.

First, we suggest that all three types of involved actors—that is, students, faculty, and clients—shift their focus to their learning process rather than specific solutions developed, since the learning of involved actors is the primary value created. Thus, value creation, in terms of proposed solutions from the innovation process, is a means of reaching the overarching learning goal. While perhaps obvious for some, the findings in this chapter suggest that a focus on the learning process as a primary outcome should not be underemphasized.

The second recommendation relates to planning and organizing student challenges. The findings in this chapter advance how student challenges encounter dominant educational norms and routines. While a way to facilitate student learning is to have students embrace uncertainty, faculty must also handle uncertainty to a large degree. Successfully conducting student challenges therefore involves the delicate task of separating what can and should be *prepared* in advance and what must and should result from the *emerging* and uncertain process

that students, faculty, and clients experience during a student challenge. There is likely no either/or option, and faculty should consider how the appropriate balance between preparatory planning and an emerging process should be handled. Ensuring there are extra resources or designated assistants to facilitate, especially the first phase of the student challenge, is one practical implication that should be considered when organizing a student challenge.

The third recommendation highlights the effects and importance of expectation management among actors involved in a student challenge. Clients must accept and leverage the fact that a student challenge is primarily a learning vehicle where students learn through innovation and value creation. Hence, students will probably contribute more through the way they question the client's current assumptions, ideas, and practices than through the development or implementation of narrower and predefined concepts or tasks. Clients should thus ensure that they are open to and leverage the emergent process of a student challenge. This can also be done in the assessment criteria for both curricular and extracurricular activities. In curricular activities, the criteria for grading should include process-based criteria, such as how students handled issues in the team and how they worked with the clients. For extracurricular activities, the criteria on which the jury bases its decision should also include process criteria. This assumes that the jury should follow the process, not only examining the presentation but also ensuring process criteria are emphasized.

## IMPLICATIONS FOR CASE TEACHING PRACTICE AND REFRAMING THE CASE METHOD FOR ENTREPRENEURSHIP EDUCATION

Students will often find that a student challenge fundamentally differs from what they are used to in higher education. For students who have mainly experienced traditional teacher-led, lecture-based, and narrow-focused (entrepreneurship) education, a student challenge will be a new, strange, and perhaps scary experience. Faculty could take measures to make students safer in the new situation, but the core implication for higher education institutions is that they should expose students to student challenges from the first year of their college or university degree programmes. Student challenges may be a fruitful first entry into entrepreneurship education.

The present chapter contributes to reframing the case method by defining student challenges as a fruitful pedagogical approach to teach students to embrace uncertainty, which is an important feature of entrepreneurship education. For faculty and clients, *planning for uncertainty* is a core process in preparing and conducting student challenges. The recommendations provided also suggest how the student challenge can be aligned with the stated learning outcome and the student assessment.

## ACKNOWLEDGEMENTS

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# 11

## Teaching as guiding: live business cases

*Bjørn Willy Åmo*

## INTRODUCTION

Entrepreneurship education (EE) has been criticized for being disconnected from real-life entrepreneurial conduct (Edelman et al., 2008). The current investigation engages in research streams that seek to remedy this discrepancy. Fayolle (2018) suggests that we as EE scholars need to reflect upon our practices and take a more critical stance in order to revitalize the EE research field. Rae and Carswell (2001) argue that it is possible to understand better the ways in which individuals learn to act entrepreneurially by studying the process through which practising entrepreneurs have developed their attitudes, behaviour, and ways of working. Nguen et al. (2014) follow this by arguing that professionals should learn in ways that foster autonomy. Action-based and problem-based learning have been identified as ways to facilitate such reflection in students (Barrows, 1983; Creedy & Hand, 1994; Williams, 2000). Hence, there are calls for EE research that reports investigations in which the researchers/educators have designed and experimented with specific teaching models (Fayolle, 2018; Fayolle & Gailly, 2008).

Case-based educational arrangements are grounded on the assumption that the facilitator/teacher introduces the learner to an authentic situation with learning potential (Lyons & Bandura, 2018). There is a social dimension to teaching as learning takes place in a context, and experience shapes learning (Hines & Thorpe, 1995). Entrepreneurship students need to develop a wide range of practical and conceptual skills to be able to deal with the complexity of the entrepreneurial process (Fayolle, 2010). Tour guides, as well as teachers, are intercultural mediators whose main job is to offer clients or students access to, as well as understanding of, embedded behaviour and new contextual knowledge paradigms (Scherle & Nonnenmann, 2008). Such elements of interaction can, however, facilitate a faster entrance into the entrepreneurial phenomenon. In this respect, the guide's role as a 'mentor' (Cohen, 1985) has also been stressed. Cohen et al. (2002) emphasize the informal educational aspect and the visitors' quest for their own identification with the phenomenon.

The tour-guide role is especially associated with interpretative guiding, which can be understood as an educational activity for revealing the meanings of or relationships to places, and things and activities relative to people (Tilden, 1957). In this approach, the difference between teaching and interpretation is stressed. The latter is frequently associated with the facilitation of the visitors' own discovery of the phenomena by exposure to the theme and by provocative approaches, making visitors aware of and sensitive to what they have come to experience—for example, by active involvement and first-hand experience of the phenomena (Moscardo, 2003).

The described case approach is, then, derived from a decade of teaching entrepreneurship to bachelor's and master's business students. This chapter describes how tour-guiding principles can aid how we as teachers facilitate students' learning when interacting live with real-life entrepreneurs. Even though this chapter discusses how to engage students in entrepreneurship, the underpinning idea may also inspire live, case-based teaching in other subjects. The chapter then addresses teachers interested in linking students and the course subjects to real-life challenges.

## BACKGROUND

I have for many years struggled to engage my students in unfamiliar, static, and non-relevant textbook cases, gradually evolving this idea about how to provide students with relevant issues that interest them personally. As reported by Burns (1978), my students find ordinary textbook cases sterile, impersonal, outdated, unrealistic, and ambiguous. Different didactics are therefore in demand.

This research takes the form of action research, as I report from activities that I myself initiate, direct, and evaluate. I reach my conclusions based upon reflections on students' and entrepreneurs' feedback, as well as on my own experience. Through teaching entrepreneurship courses over a decade, the reported live case approach has evolved into a coherent pedagogical tool. By discussing the benefits and drawbacks of the chosen pedagogical format, this research invites scholars and practitioners to adjust, reinvent, critique, improve, or adopt the displayed educational approach.

Theory directs our interpretations. Human agents make sense of their environments where they interact by constructing cognitive schemas that guide their actions (Piaget, 1967). These prescriptions for actions designed for producing wanted results were dubbed 'action theories' by Argryis and Schön (1974). Similarly, personal theory (Rae & Carswell, 2001) relates to how the meanings derived from new learning episodes are organized and integrated into or replace the individual's existing stock of cognitive schemas (Piaget, 1967). This leads the individual to new ways of enacting and working to achieve desired results (Rae & Carswell, 2001).

Reflection requires some facilitation 'to help learners reframe their knowledge base' (Raelin, 2005, p. 135). Pittaway et al. (2009) emphasize the social element of learning as enabling practitioners to engage in peers' social networks in order to become involved in discursive processes, which again can lead to reflections and enhanced learning. Brockbank and McGill (2007), on the other hand, emphasize the coaching element from the teacher's side in guiding the

student's reflection process. When reflecting, one considers an experience one has taken part in and tries to make sense of it in order to cope better in the future with similar experiences.

Educators who wish to facilitate critical reflections can utilize didactics designed to reveal or highlight discrepancies or disorienting dilemmas (Creedy & Hand, 1994; Williams, 2000). There is consensus that entrepreneurship is learned primarily by experience and discovery (Deakins & Freel, 1998). Entrepreneurial learning is a dynamic process in which entrepreneurial behaviour becomes enacted and internalized within a person's cognitive schemas (ibid). Entrepreneurial learning is a role model for entrepreneurship education; we study what entrepreneurs do when they are entrepreneurial, and then we try to infuse elements of what entrepreneurs do when they are entrepreneurial into our EE.

Still, as mentioned, EE is sometimes criticized for being detached from real-life entrepreneurship. The criticism may be rooted in the fact that action in itself does not lead to higher-order learning; reflecting on the experience is also necessary to gain a more useful 'stock of experience' on which the entrepreneur can draw (Cope, 2005; Jones et al., 2014).

## PEDAGOGICAL DEVELOPMENT APPROACH

Entrepreneurs are self-propelled autonomous professionals that need to take decisions on their own—decisions that can have serious consequences—and they have to do so in situations with conflicting and lacking information. Equipping students with the skills to tackle such situations requires transformed EE. This has led teachers to test active and experimental learning supported by real-life experiences that enhance and stimulate the necessary elements of an entrepreneurial mindset (Neck & Greene, 2011).

As educators, we teach students how to search for business opportunities, write a business plan, carry out product development, and relate to customers. As didactical tools for this, we engage our students in textbook business cases. Such textbook cases are static, poor on context, and often depict heroic stories about how others succeed in making great profits by creating big international companies—far, perhaps, from the aspirations of our students. To link our teaching to the local context, some of us also bring real entrepreneurs into the classroom so that they can inspire our students and ignite their entrepreneurial fire. Sometimes we even arrange for our students to watch the entrepreneurs in their work, by having them write a report or interview them, thus stimulating assimilative learning among our students.

Real-life, real-time live case didactics can take these efforts further. A live case offers interaction between student and entrepreneur, allowing for richer flows of information. It resembles reality as it deals with reality. It is present and pressing. Hence, the students need to define the root problem as well as its causes in a situation with both too much and too little information. There is no single way to perceive the situation, and there is no single best solution. There is no salvation in a ready-written solution; they have to rely on themselves. The students have to unveil the decision issues themselves on site, figuring out the 'critical unknown'. The hallmark of the case method is to present students with ill-structured, decision-based problems akin to 'real-world' problems (Wilson, 2008).

Derived from this, a definition of a live case will, then, be an unclear, open, interactive present case in which the student needs to sort unclear and incomplete information in order to figure out the root problem and its causes, and argue for its solution in real time. This is the task the student is expected to suit after graduation. This is action learning at its best.

Action learning programmes rely on effective facilitators in order to lead discussions and ensure alignment with the utilized learning design (Jones et al., 2014). Critical learning events such as crises or non-routine circumstances are linked to transformative learning (Cope, 2005). Students guided in a supportive learning environment are challenged with complex tasks that build on prior knowledge and require active and strategic learning, facilitated by didactical tools fostering critical reflections. Our live case approach helps students better understand the organization and its entrepreneurial processes as they witness these first-hand, cultivating critical thinking about key issues related to entrepreneurship.

## DESCRIPTION OF THE APPROACH AND TEACHING MOMENTS

Inspired by problem-based learning processes (Williams, 2000) and tour guiding (Moscardo, 2003), we engage business administration students on entrepreneurship courses. Being a Norwegian business school, we recruit domestic and international students, hence the text-books and classroom lessons, and the conversations at the entrepreneurs' sites, are conducted in English. The students report that they find it hard to relate to such international textbook reading cases. These cases are often sparsely detailed and far from the various students' frames of reference. A Norwegian company with 25 employees is considered large, and usually the work is heavily automated with little manual work. The workers are also usually 'self-propelled'. To remedy the discrepancy between textbooks and the Norwegian entrepreneurial landscape, we take our students out of the classroom and visit real entrepreneurs to engage live in their challenges and problems. Class sizes range from 10 to 30 students from year to year.

Before going out in the field, we build a knowledge-based stepping stone that the students can use as a lens for perceiving the story they are exposed to in our field visits. During their BSc or MSc studies, the students have already been exposed to issues such as financing, budgeting, auditing, management, law, strategy, marketing, organizational science, and social economics. We build on this as our entrepreneurship course addresses key theories and issues in entrepreneurship and small business management. On the operative side, we provide classroom lessons regarding strategic management that they can implement for promoting business growth and survival, as well as how to contribute to the identification and commercialization of business ideas. The purpose is to enable students to evaluate a business opportunity and specify the steps one must take to increase the likelihood of its success, even in an unstructured context. As teachers, we allocate the first third of the semester to establishing this as a knowledge platform using such traditional didactical elements.

We then facilitate our live business case visits by discussions in class on the purpose of the visit, the structure of the visit, and how the different didactics are supposed to enhance their learning. The students should also prepare for the field visit by looking up the website of the

firm, preparing issues they would like the firm to address, and investigating the competitive position of the firm. As business cases, we select small emerging firms with international potential. We select them when still small and emerging because firms at this stage typically have challenges that business students can relate to the theoretical issues addressed in class. We select young firms with international aspirations as this links to our international students. Additionally, emerging firms have not yet figured out fully how to run their businesses.

The typical live business case visit lasts 3 to 4 hours. The entrepreneur presents their business, their story, their successes and failures, and their challenges and worries—for about 1 hour. The students then work in small groups for an additional hour preparing a presentation lasting 10 minutes offering comments, advice, concerns, or recommendations to the entrepreneur. The students work in groups of two or three, forcing everybody to expose themselves during the student presentation. There is an element of 'crisis' in this didactical tool as it is embarrassing to reveal oneself as low performing, and the small group size does not allow hiding in the crowd. The students engage eagerly in the business challenges they perceive on behalf of the firm. These inputs may relate to how to bring the entrepreneur's product to the international students' homeland, suggested strategies for gaining competitive advantages, how to build networks, or other issues previously addressed in classroom lessons. We end our visit with a roundtable discussion, synthesizing all inputs, and the entrepreneur provides feedback on the students' comments.

The experienced results from the mid-term and end-term evaluations show that the students report they are able to relate the scholarly theory to real-life experiences, and that they value this learning design. When asked to reflect on their experiences with the course, one former student commented:

> The course introduces topics that are relevant wherever you are to work later on in life. It teaches you to think in new and different ways! The theory adds to the practical work and discussions in class, and the teacher throws us out of our comfort zone in a safe environment. Combining interesting and relevant theory with creative teaching methods makes this course interesting, informative and fun!

This statement is supported by comments from mid-term evaluations prepared by the student representative as feedback on how to improve the course; the statements are supposed to represent the collective opinion of the class. The students find the content relevant for their learning interests: 'This structure is highly relevant for us, it was interesting to see in real life what we have been discussing in class', and 'The lectures, the structure of group work and student presentations are very rewarding.' The students also like the challenge of reflecting and building personal theories: 'We liked the opportunity to discuss and reflect during classroom activities', and 'It is nice to work in groups with relevant problems, everybody participates.' The selected didactical methodology also balances the workload and the progress during the course: 'We experienced good progress in our learning.' The students appreciated the opportunity to meet real-life entrepreneurs and take part in their challenges: 'I liked this, after all these years we finally got to see how all this (theory) relates to real-life.'

## DISCUSSION

Edelman and colleagues (2008) highlighted gaps between what we teach in entrepreneurship and what entrepreneurs do. In addition, there is a lack of research on didactics used in EE (Ratten & Usmanij, 2021). Similarly, more research is required concerning the role of the entrepreneurship educator (Fayolle, 2018). Likewise, the interaction between the entrepreneurship teaching institution and company is understudied (Sommarstöm et al., 2020). Far too few articles explicitly explain and rationalize the content and methods underpinning the exemplified didactical design. Fayolle (2018, p. 696) even claims there is no research examining how to mix practical knowledge with theoretical explanation models. Furthermore, he points to the need to develop new teaching approaches that can demonstrate the usefulness of entrepreneurship theories, tearing down the silos between thinking and acting. He suggests doing so by educating our students about the kinds of problems faced by entrepreneurs in a diversity of situations and contexts. To address these concerns, we take our students out of the classroom to visit local entrepreneurs live.

Educational cases usually consist of static textbook descriptions, suited to an American or international audience where students are supposed to read a page, view a video, or role play a ready-made script. One seldom sees recipes showing how to pull students from the classroom or having a real-life entrepreneur appearing live in class or at their firm. This study fills this gap by providing insights from practice-based pedagogy aimed at building capacity for critical reflection among students by engaging in local, real-life live businesses.

I have tried different approaches and different types of firms to visit. Sometimes we need to see the facilities in order to understand the entrepreneurial process; sometimes not. When the entrepreneur's facilities are an important part of the entrepreneurial process, I prefer to bring my students to the site. When we visited a firm producing handbags from fish skin, we needed to visit the firm in order to take in the entrepreneur's production modes and her lived situation. One of the firms we engaged with was a software firm producing an app for use in elderly care, where the young founder came to the classroom; this worked fine as she and the app represented the firm—we did not need to see her in her office. No firm has so far turned us down, and some we have revisited. We then see that they have implemented some of the suggestions from our students. Student group size and group composition vary from time to time. The group size depends on the time available when presenting the students' concerns and how the actual students perform in group work. My class sizes have ranged from 10 to 30 students, allowing for small groups preparing their concerns to present for 5 to 10 minutes each at the entrepreneur's site.

The guiding element in this is to structure the educational process to fit students' needs and capacities. A deliberate selection of theories explaining entrepreneurial problems provide the students with a stepping stone in order to understand what they see on site. Selecting a firm with problems the students can relate to and providing usable solutions offers value to the entrepreneur. Having the students read up on the competitive situation of the firm prior to the visit allows them to relate to and engage with the firm before we meet them. Having them prepare issues they would like to discuss with the entrepreneur on site makes them more secure and confident during the visit. Then students feel confident speaking as they know

what to speak about, and the entrepreneur perceives the students as genuinely interested in their situation.

The students appreciate a structure whereby they are first introduced to scholarly theories, thus establishing a stepping stone for further learning. The students build personal theory when challenged to reflect critically on how to apply scholarly theories in order to understand complex behaviour in contexts that can be interpreted in various ways. They engage in critical reflections when they have to convince themselves, each other, and the entrepreneur that their interpretation of the context related to a selection of normative scholarly theories offers the best solution to a derived problem. They have to derive the problem and argue that it deserves attention. They have to interpret the context and agglomerate it to cognitive schemas that provide meaning and structure to the problem in hand. The group discussion also facilitates learning in that they have to articulate their thoughts and argue for them. The group presentation also adds security for the student. They are presenting on behalf of the group and do not then see possible criticism as an attack on themselves. By taking them out of their comfort zone, we create a manageable crisis, evoking effort to stand tall in their presentations to the entrepreneur.

Students need a cognitive stepping stone as a departure for their reflections. One of the problems we encounter relates to how much theory we need to discuss in class before we meet the entrepreneur. If we visit a firm early, we can use our impressions from the visit as an example when discussing theory in class. The benefit is that the whole class has a common experience which we as teachers can tap into when discussing a theory or concept in class. The drawback of such an approach is that the students may not have sufficient learning experience in the field. As they still do not feel assured with regard to their knowledge base, the students may not feel confident enough to engage fully in the entrepreneur's challenges during a visit. When we visit a firm later in the semester, the students have gained a stronger theoretical base for their engagement with the firm. This then facilitates more learning during the visit. This means that we can engage the students in defining a challenge and propose remedies for solving the problem in hand.

## IMPLICATIONS FOR CASE TEACHING PRACTICE AND REFRAMING THE CASE METHOD FOR ENTREPRENEURSHIP EDUCATION

The theoretical implications point to the value of exemplifying theoretical abstracts in live practical settings. We experience enhanced learning and a better fit between the curriculum and industry needs. It is vital to use examples relevant to and derived from the context where the students practise their skills in order to be significant for student learning. With our approach, students can better follow the path of Williams (2000): awareness of a discrepancy, situational analysis, and subsequent reorientation of personal theories explaining and prescribing action.

Teaching aims at guiding the student towards learning, while learning strategies are conscious or unconscious choices made by the teacher or students as to how to process the given information and demands of a learning activity (Boström & Lassen, 2006). Our challenge as EE educators is, then, how to create the right conditions to ensure that the knowledge gained from studying live entrepreneurs fits with the objective and the format of our education so that students can cope with the faced challenges.

People interpret new experiences based upon their previous experiences and perceptions: their frame of reference (Mezirow, 1998). Hence, we need to enable our students to 'see the dots' before we can expect them to 'connect the dots' of entrepreneurship. We need to teach our students to think as entrepreneurs, not just perform entrepreneurship-related tasks. Studying how to teach critical reflection and facilitating metacognitive abilities link EE and entrepreneurial learning. If we as EE educators can foster students' metacognitive abilities, we can lift our students to another level. We can then teach our students to learn from their own real-life entrepreneurial experiences. Through reflective practice (Schön, 1983), they can grow self-directed entrepreneurial learning capabilities. The practical implication of such efforts is that our graduates will acquire the ability to adjust to changing environments, while the theoretical implications enable integrating EE and entrepreneurial learning and thus allow improved cross-fertilizing of these research fields.

Bransford et al. (2000) suggest that a learning environment that supports student self-direction and self-regulation builds students' metacognitive abilities. Students in such a context are challenged with complex tasks that build on prior knowledge and require active and strategic learning on the part of the student. Principles from guiding theory provide hints on how teachers can facilitate increased learning, guiding the student on their individual path towards insights and reflections. Here, we suggest didactics allowing students to engage in live entrepreneurs' real-life challenges in a way that stimulates the students' abilities in critical reflection by building knowledge on how to learn to engage in entrepreneurial learning strategies.

This real-life case approach is doable. Our visits are certainly useful for the students. Likewise, our visits are certainly useful for the entrepreneurs as well. The students engage in their reality, challenging their presumptions on how to understand their business problems. This may be problems the firm itself was previously unaware of or potential solutions appearing 'out of the box' for the firm. Hence, we are welcomed.

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# 12
# From Utopia to sustainable entrepreneurship: a novel case methodology

*Karin Wigger, Ingebjørg Vestrum, Fufen Jin, and Sølvi Solvoll*

## INTRODUCTION

Sustainable entrepreneurship education (SEE) is a promising means to teach students to undertake action to move towards sustainability (Rashid, 2019; Strachan, 2018). Thus, there is a need for a portfolio of teaching methods and tools designed for SEE (Hermann & Bossle, 2020). Live case—that is, a case that builds on actual, current, and novel situations for organizations (see Chapters 1 and 3)—has been used in both entrepreneurship (Rauch & Hulsink, 2015) and sustainability education (Hardin et al., 2016) and is regarded as a promising method to teach entrepreneurship for sustainable development at higher education institutions (Hermann & Bossle, 2020; Mindt & Rieckmann, 2017). However, it is not yet understood how live cases can be utilized to teach sustainable entrepreneurship (Hermann & Bossle, 2020).

In this chapter, we present our newly developed utopia-realizing methodology as an example of how to integrate elements from sustainability and entrepreneurship education using the live case method. While traditionally the case owner and the problems/challenges the case builds on are introduced as a first stage of the case activities (see Chapter 1), utopia realizing is designed so that the students first engage in a wishful-thinking scenario of the case context (i.e. utopia)—for example, the industry in a region—before the case is introduced.

The live case method allows us to switch between times and to incorporate future-oriented elements into the past and present through the case narrative and activities. Thus, the live case method is suitable to teach sustainable entrepreneurship since both entrepreneurship and sustainability are future-oriented concepts focusing on changing the future (Dean & McMullen, 2007). Sustainability is about envisioning a better future and provides boundaries and prerequisites for the values to be created through entrepreneurship, and entrepreneurship is about acting on opportunities to create future value for others (i.e. entrepreneurship is a means for change).

# PEDAGOGICAL APPROACHES AND THEORETICAL UNDERPINNINGS OF UTOPIA REALIZING: A LIVE CASE-BASED METHODOLOGY

To act entrepreneurially for a better future, students need to train their foresight thinking and their normative competences, and their entrepreneurial skills and competences (Lans et al., 2014). Therefore, we have designed a live case methodology that incorporates Levitas's (2013) utopia as a method concept, allowing the students to more freely describe their utopia of a sustainable future before they are presented with the narrative of a live case to pursue and realize an opportunity that fits their utopia. Hence, the visionary and normative aspects of sustainability and the craft of entrepreneurial action to pursue and realize opportunities are combined in the utopia-realizing methodology.

Utopia realizing combines elements from entrepreneurship and sustainability teaching methods through the live case method. The live case method is utilized so it accounts for the underpinning ideas of (1) utopia as a method to address the normativity of sustainability (Levitas, 2013), (2) system-thinking principles and the complexity of working with a live case from the real world (Lans et al., 2014), and (3) a design-thinking-inspired process of case activities to increase students' entrepreneurial mindset and skills (Daniel, 2016; Dhliwayo, 2008). In the following, we discuss each of these three underpinnings of the utopia-realizing methodology.

## Utopia as a Method to Address the Normativity of Sustainability

Utopia has been on the political agenda since the environmental awakening in the 1960s and is an established teaching methodology in future studies and sustainability studies (Hedrén, 2009). Utopia has been referred to and is used in many ways, ranging from an impossible and fantastic dream to an alternative and better society (Levitas, 2013). In this chapter, we regard utopia as a method inspired by Levitas (2013), who understands it as an element of many individual and collective creative practices. Utopia entails holistic thinking to connect social, environmental, and economic dimensions in an imaginary sustainable future, which is done before possible actions for realizing the future are identified. To illustrate, the Amsterdam City Doughnut builds on doughnut economics to reshape and remodel social life by establishing novel practices towards an imaginary future (i.e. utopia) (Raworth, 2017). Hence, utopia is about examining the distant future as an ideal with a picture of the present in mind (Gümüsay & Reinecke, 2022). Utopia as a method is used to provide a future perspective on the live case method and to account for normativity competences and foresight thinking as crucial sustainability competences. Using utopia as a method keeps the students' focus on a desired sustainable scenario instead of focusing on problems in today's world.

## System-Thinking Principles and the Complexity of Working with a Live Case

Sustainable entrepreneurship competences share several of the traditional, pure commercial entrepreneurship competences; however, there are differences (Lans et al., 2014). Students need to be trained to address more complex societal problems with environmental, economic, social, and/or ethical dimensions and problems interrelated in a system with a range of stakeholders. Thus, students need to understand the systemic level of society. Second, to develop sustainable solutions, students need to learn to be change agents and develop new business models that combine economic, social, environmental, and ethical dimensions. Thus, we argue that instead of focusing on existing problems, resources, and technology given by case owners, students need to focus on a desired sustainable society and then identify how the case can contribute to this society by developing creative solutions.

Identifying sustainable problems and solutions is becoming more popular among entrepreneurship educators; however, sustainability is currently viewed as just another problem to be solved. Today, most educators add sustainable pedagogical elements to existing entrepreneurship courses, and there are few efforts to combine sustainability and entrepreneurship to achieve more systemic-oriented, interdisciplinary, and foresighted-thinking teaching methods (Hermann & Bossle, 2020; Lourenço et al., 2013). Utopia realizing strives for the student to train in these skills.

## A Design Thinking-Inspired Process of Case Activities

During the last decade, design thinking has been used by entrepreneurship educators (Daniel, 2016; Linton & Clinton, 2019; Sarooghi et al., 2019) and educators using the live case method as teaching methodology (Fiore et al., 2019). Educators use design thinking to guide students through the steps from understanding a problem in a live case to identifying an opportunity, developing a suggestion for a solution, prototyping the solution, and developing a plan for resource mobilization (Daniel, 2016).

Design thinking has traditionally been used by designers to form, style, design, redesign, and construct artefacts (Linton & Clinton, 2019). Nowadays, design thinking is seen as assisting entrepreneurs in developing solutions to existing problems. Students who are guided by design thinking are found to improve their creativity and entrepreneurial mindset (Henriksen et al., 2017). These three pedagogical underpinnings guided us through designing and developing the utopia-realizing methodology and the attributed features of its application. The methodology is designed such that students first work on the utopia before the live case is introduced, including an entrepreneurial decision to be made. The live case method is used to train students in acting entrepreneurially and introduces the 'real world' with current and actual situation(s) that require entrepreneurial action to come a step closer to their utopia.

# DESCRIPTION OF UTOPIA-REALIZING METHODOLOGY

Utopia realizing is designed as a process along four phases, which are visualized in Figure 12.1. In Phase 1, the students—organized in groups—develop a utopia scenario of a sustainable society. In Phase 2, the students are presented with the case and visit the case owners. Phase 3 is about opportunity development to move closer to the utopia defined in Phase 1. In Phase 4, students try to develop a plan for how to mobilize resources and for stakeholders to realize the opportunity identified in Phase 2. In the next sections, the stages are explained in more detail.
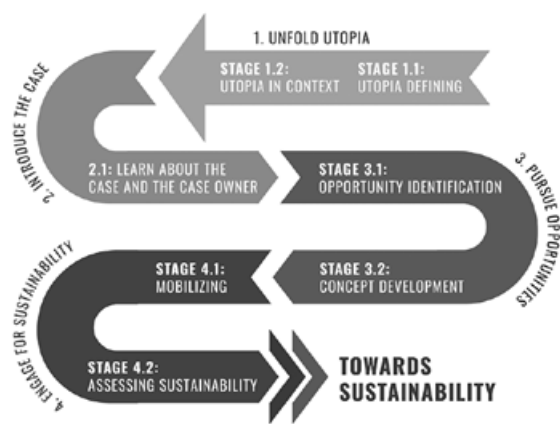


*Source:* Author's illustration. Designed by Iris Ørnhaug, Nord University Business School.

**Figure 12.1**    Utopia realizing

## Unfold Utopia

The unfold utopia phase is inspired by Levitas's (2013) utopia as a method. Discussion, storytelling, scenario-building, imagination, and decision-making take place during this phase.

Stage 1.1 in Phase 1 of the utopia-realizing methodology, utopia defining, is devoted to the utopia concept. The student first defines what sustainability is in the case context (i.e. a geographical location, such as the county of Nordland for our pilot case) as the basis for creating the utopia. Examples of aspects to be discussed and agreed upon by the student groups are interaction with nature, characteristics, and form of living, including values and sustainability stance (i.e. deep ecology versus shallow ecology or strong versus weak sustainability) and the economy of the geographical location. This is a creative stage, and students should not be concerned with problems such as 'This is not possible' and 'How can we reach this?'. Spaced-out ideas and alternative forms of living are welcomed in this phase (Neck et al., 2014). Offering the students a template in a utopian canvas consisting of several boxes to fill in will facilitate this process. The utopia created in this stage will guide the students through the next stage of Phase 1.

In Stage 1.2, the students describe how a marine hub (i.e. the case context) can fit into and contribute to the transition towards utopia. An example of a question the students answered in our pilot is 'What are the functions of the marine hub and what functions shall buildings in your scenario have?' More concretely, it is about designing what kind of functions and qualities a marine hub should have to contribute to the sustainable utopia scenario developed in Stage 1.1. By completing Phase 1, the students went from a broad sustainability utopia for Nordland to a concrete case. In doing so, the students reflected upon a marine hub in their utopia before the case was introduced and boundaries were set.

## Introduce the Case

In Phase 2, the narrative and owners of the live case are introduced. The live case is ideally local and can be from the industrial or public sectors. The students should have the chance to visit the case owners to become familiar and engage with the case. During our pilot round, the students visited both the case owners and several stakeholders. We were explicit with the case owners that the focus should not be on their ideas for the marine hub but instead the resources and external conditions relevant for the marine hub. Given that this methodology starts with utopia, we were careful not to focus on the problems of the case owners. After the introduction to the live case, the process continues with pursuing opportunities within the utopia and the feasibility of the case.

## Pursue Opportunities

Phase 3 is about action to move towards the utopia through pursuing entrepreneurial opportunities for the case owners. Phase 3 is divided into two stages: 3.1, opportunity identification and 3.2, concept development. In this phase, we suggest utilizing the triple-layered business model canvas (Joyce & Paquin, 2016) and prototyping (Noyes, 2018) to guide the case activities.

Stage 3.1 is concerned with opportunity identification. It starts with identifying opportunities within the utopia scenario. Opportunities are defined as new means–ends relationships. The end is the utopia created in Phase 1, and the means are the resources of the case owners and their networks. In the end, the opportunity the students identified becomes a combination of what was desired in the utopian state and what was doable given the resources and external conditions of the company.

Stage 3.2 concerns concept development. Here, the students develop the identified opportunity into a concrete concept. The functionalities, qualities, and values of the concept are to be defined as inputs for developing a prototype. Through prototyping, ideas become more visual and concrete. The protype can easily be set up by using materials at hand and can be performed in a short time (Noyes, 2018). We encourage the educators to prepare a materials box for each student group with a variety of materials and equipment to build a prototype. At the end of Phase 3, the students will have a concrete sustainability concept. Because implementing sustainability concepts comes with many challenges (Garcia et al., 2019), the utopia-realizing methodology includes parts of the implementation stage, which is our Phase 4.

## Engage for Sustainability

The last phase of the utopia-realizing method is called engage for sustainability. This phase includes Stages 4.1, mobilizing and 4.2, assessing sustainability. Mobilizing and assessment are crucial when implementing a sustainability concept. For example, resources have to be assigned to the concept, stakeholders need to be engaged, and the sustainability impact of the concept must be assessed and documented for both internal and external use.

In Stage 4.1, mobilizing, students develop two matrixes: one for the resources that need to be allocated for the project and the other for the stakeholders who would have an interest in the

project. These two matrixes will then help the students to identify a strategy for resource mobilization to implement the concept. At the end of this stage, the students formalize a strategy for how to allocate and assign the needed resources and how to engage stakeholders.

The final stage of the utopia-realizing methodology, 4.2, concerns assessment of the sustainability impact of the concept. The students assess the sustainability of their concept by referring to the utopia they have developed in Phase 1. The aim of this stage is to define what aspects of the project are sustainable and contribute to sustainable development—in particular, to the UN Sustainable Development Goals—and which aspects hinder sustainable development and/or are unsustainable.

Hence, after completing all stages of the utopia-realizing methodology, the students will have developed a sustainable concept within the boundaries of the live case and their utopia and evaluated it in ways that contribute to the transition towards sustainability.

## DISCUSSION

In this section, we discuss the learning outcomes reported by the students who participated in the pilot course using the utopia-realizing methodology and the reflections of authors who either developed and conducted the course or collected the data.

The methodology has been tested in a course called Sustainability in Practice, where data were collected to study the impact of the methodology using semi-structured interviews, observations, and reflection notes written by the students. Sustainability in Practice is a cross-faculty course at the bachelor level, where biology and business students work together in interdisciplinary teams. All 12 course participants were studied.

The students emphasized that the teaching methods and tools used in the course influenced their learning process. For example, working with the live case encouraged the students to place a higher value on the importance of sustainability when working with entrepreneurship, while empowering them for actions to realize their sustainable ideal. A student explained, 'It was exciting to design the marine hub. I believe it gives some extra kick when there is an actual customer' (student's reflection note). This illustrates that using a student-centred approach, such as a live case, facilitates learning by increasing inner motivation and meaningfulness (Vallera, 2014). A student stressed, 'It gave me a sense of importance and proved to me how important sustainability is and how much power I do have to change it' (student's reflection note), while another student noted, 'It's a pleasant way to learn a bit about how to actually take some action' (student interview). Hence, ownership, empowerment, and engagement are further important aspects of the learning process, resulting in various outcomes.

The students stated that participating in the course increased their entrepreneurial mindset and skills (i.e. creativity, dealing with uncertainty, and opportunity development skills) and their understanding and competences for sustainability, such as systemic and foresight thinking and collaboration skills, which we turn to now.

Our study shows that the students developed their *entrepreneurial mindset*, as they reported they became more aware that they could be change agents towards a more sustainable society. One student explained: 'I did not think before that I could actually do anything with

any company or anyone to improve anything, but now I saw it's actually possible' (student interview), while another reflected: 'There are a lot of small steps I can take to play my role in creating a sustainable society' (student's reflection note).

Further, the students reported that they had increased their *creativity and skills to deal with uncertainty*. A student reflected that the methodology facilitated their creative skills by working with an uncertain situation:

> The course challenged our technical and creative skills, which felt a bit sudden, and there was much chaos and uncertainty as a result. The outcome, though, made everything seem worth it, and it definitely tied in with the central theme of using what we already have to create something of value. (Student's reflection note)

Systemic thinking is regarded as a typical competence of sustainability. One student explained the change in her view of sustainability to a more systemic perspective: 'I think I actually learned a lot, to think a bit broader and how the systems can be improved so that more people can live a more sustainable life, basically, and not just individual people' (student interview). The student reported that working on their utopia increased their foresight thinking skills, while stressing that working on the utopia was challenging.

Further, discussion and decision-making are central aspects of the utopia-realizing methodology, which was also noticed by the students. One student stressed the usefulness of dialogue in teamwork:

> But, it's a dialogue. And just realizing that you and a person can have different opinions on something. … And there are ways to get people to see things from your perspective by properly addressing them. And to be able to see something, and to turn it around in many ways to get the full scope of it rather than just like take it at face value. (Student interview)

Moreover, the group work taught the students to learn about their own competences and to apply their own knowledge. One student found it interesting to acknowledge the usefulness of their own knowledge: 'It was interesting to use the knowledge that I have acquired through the years at university and to see the intertwining of information' (student's reflection note). Finally, the case owner also benefited from the relationship; they were open to hearing a new perspective, and they eventually gained insights from students' sustainability solutions.

The pilot study indicates that the utopia-realizing methodology has the potential to develop key skills for sustainable entrepreneurship. Since we tested the methodology on both business students and biology students, we suggest that it is suitable for both business and non-business students.

However, using utopia realizing is not without its difficulties. For those interviewed, utopia as a method and the live case study differed a lot from the teaching approaches they were more familiar with. Using utopia realizing created uncertainty, confusion, and even anxiety for some students. Because the activities integrated in the utopia-realizing methodology are open-ended and demand several decisions from students along the way, mentoring and feedback from educators is crucial. Ideally, educators will provide frequent mentoring for each activity.

Further group and in-class reflections can help to identify and address challenges and issues the students face along the four phases of the utopia-realizing methodology.

In the pilot, we tested the new methodology on a small group of students. Thus, the methodology might need adjustment to be generalized to larger classes in entrepreneurship education. Since it might be difficult for a larger class to visit the case company if they have space limits, the educator can add more cases, enabling the students to visit different companies in smaller groups. If visiting the case company is impossible, a digital presentation of the company in class is also an option.

## IMPLICATIONS FOR CASE TEACHING PRACTICE AND REFRAMING THE CASE METHOD FOR ENTREPRENEURSHIP EDUCATION

This chapter has illustrated that the novel teaching methodology utopia realizing increases students' entrepreneurial skills and mindset while they learn to think in systems. The utopia-realizing methodology reframes parts of the live case method by introducing a novel order of case activities and engaging the students in defining a sustainable, desired future (i.e. utopia) before they are presented with the live case narrative. While existing methodologies teaching sustainable entrepreneurship most commonly present the narrative of the live case early in the learning process, utopia realizing seems to improve the foresight, systems thinking, and normative skills of the students, since they do not limit their solutions for a better future to problems. The students found that starting by creating a utopia broadened the set of identified opportunities. Even though authenticity is often highlighted as important in entrepreneurship education (Aadland & Aaboen, 2020), the reality can limit the opportunities and sustainability the students can envision from an early stage. Thus, when working with sustainable entrepreneurship, it is advisable not to introduce the real world too early as it can limit the sustainable opportunities the students can grasp.

Throughout the education system, students are well trained in understanding what needs to be done to get a good grade and are seldom challenged with what they want the world to look like. By working on a utopia, the hidden assumptions, norms, and values of the students are brought forward. When working in groups, the students have to agree on their utopia—a utopia all team members feel comfortable with and that could reflect their own perceptions of a sustainable society. Hence, we suggest that a case need not include challenges or issues but can be formed around a self-defined ideal situation, such as the sustainable future, which requires entrepreneurial action to make utopia real.

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# PART III
## TEACHING CASES FROM THE NORDICS

# The journey of becoming and being an entrepreneur

# 13

# Arts student applying effectual principles and various value perspectives

*Vegar Lein Ausrød and Helle Meibom Færgemann*

## SETTING THE SCENE

Anne, a university student from the arts faculty, was about to finish her bachelor's degree when she considered joining the university incubator with a start-up idea. Her first idea revolved around designing new stairs. As it required a lot of capital and was not exactly a good match with her competencies, Anne abandoned the idea. However, she did not abandon the idea of becoming an entrepreneur. At the time, she was also playing with a concept that would help newly arrived students to learn about and 'blend in' to their new city environment. In contrast to her first idea, this new idea was far more feasible. Anne had writing and communication skills that she considered central to her concept, and the 'only' thing it required in addition was time spent on the project. She had both time and motivation.

Anne attended an innovation and entrepreneurship course in the final semester of her bachelor's degree. Part of the curriculum was to work with an innovative concept. Anne was eager to put her new idea into play during the course. So she did, and the first seeds of 'Aarhus Blend in' were sown. Anne established the fundamental components of Aarhus Blend in fairly quickly. Being native to Aarhus city, the second largest city in Denmark, she had intrinsic knowledge of the narrow and charming streets, the intimate and hidden coffee shops, and the small niche boutiques. Being a trained linguist, she was adept at writing engaging insider tips about her favourite places. She posted them on her web page (aarhusblendin.dk) and her Instagram account, deftly targeting new students who were seeking to 'blend in' to their new city of Aarhus. She also recruited 'tippers', or people who, like herself, provided exclusive tips about interesting places throughout the city. A short introduction and picture of the tipper increased the credibility and trustworthiness of the reviews. Underneath the introduction to the tippers, the tipped locations were presented.

Even though Anne had some early and strong engagement from the followers of Aarhus Blend in, she had difficulty seeing how she could establish a profitable business model. She

truly had no idea whether the project could generate money in the future. At the time, she found the economic potential to be less relevant. In fact, she did not really care about the money. Her primary motives were to learn how to set up a web page and to gain skills and experience with entrepreneurship, project management, and leadership.

To acquire these essential skills and examine the possibility of turning her promising concept into a profitable business, Anne reached out to her university's incubator. She emailed the staff, asking if it was possible to arrange an initial meeting with someone to hear more about the incubator and what to expect. The staff were helpful and scheduled a physical meeting. On the day of the meeting, Anne put on her comfortable sneakers and walked from her apartment to the incubator. Packed in her backpack were a pair of stylish professional shoes that she changed into on the steps of the incubator. Anne expected the incubator to be full of business vibes, and she sought to blend in. Her meeting went well, and she was told to join the mandatory introduction course Lead-In if she wanted to join the incubator and use its resources. Feeling relieved, Anne left the incubator, changed back to comfortable shoes, and signed up for Lead-In when she got home.

She was happy about the way the incubator staff had encouraged her to sign up to the introductory course. Still, a nagging feeling bothered Anne. The incubator seemed to host several promising start-ups, and she knew that her project was not primarily about generating money, at least not for the time being. On the one hand, Anne felt comfortable proceeding without revenue in sight. On the other hand, was it worth pursuing an entrepreneurial project without a clear plan for how to create an economically viable business?

## BECOMING PART OF AN INCUBATOR

Anne started with 15 other students on the incubator's introductory course, Lead-In. The course took place every Tuesday afternoon over a period of 5 weeks. It lasted for 3 hours each time, and the participants worked in between each session to discuss progress, successes, and struggles with fellow peers. The course was mandatory to anyone who sought to become part of the incubator and use its resources, such as access to advisers, work desks, lawyers, accountants, and so on. The only prerequisite to attend the course was having an idea or concept to develop throughout the programme. There was no judgement with regard to the perceived quality of the idea.

The course was designed with lean start-up principles in mind. Participants developed hypotheses that they either confirmed or disconfirmed by talking to potential customers, users, and stakeholders. Preferably, they also developed a prototype, which served as a basis for the dialogue with potential users and customers. Based on the feedback they received, they iterated and changed their concepts accordingly. In addition, the curricula involved the business model canvas, effectuation versus causation, and sales. Throughout the course, participants pitched their idea almost every time they met. The content of this introductory course may at first glance look very 'start-up' and 'business' focused. However, the two facilitators' ambition was to introduce a broader perspective of entrepreneurship, which included debunking the myth of the hero entrepreneur and highlighting that everyone can behave in

an entrepreneurial manner. In other words, the course was intended for people like Anne, who were seeking to advance their entrepreneurial toolbox but were not necessarily settled on a solid business concept.

The facilitators' take on entrepreneurship played out in various ways throughout the course. There was a great emphasis on the five principles of effectuation and the need to 'define success in your own way'. This allowed participants to take a reflective stance on what success meant to them. It could be to build the next unicorn, but it could also be to learn specific skills and gain experience, as was the case with Anne. A solid focus on the 'bird-in-hand' principle, which extended to a talk and an exercise about the entrepreneur's values and expectations for the project, was applied. The intention was to view these values as resources for the potential future start-up rather than a 'You've got to do what it takes' attitude towards creating a profitable start-up. The goal was to introduce entrepreneurship as an activity in which anyone can engage, regardless of the goal.

On the last day of Lead-In, in an informal setting, Anne presented Aarhus Blend in to an audience of approximately 40 people, consisting of her peers from the course, external advisers to the incubator, the incubator staff, and entrepreneurs already enrolled in the incubator. She did well and received positive and encouraging feedback from the audience. However, despite the facilitators' best intentions of giving a soft start to the entrepreneurial mindset for all, Anne felt that she had to forcefully fit her concept into the structure of the course. For instance, when asked to fill in the business model canvas, she struggled to complete the revenue stream—as there was currently no revenue in sight. Nor were there any costs apart from her time spent. Anne also found the intensive focus on pitching every time stressful. She felt that the pitches throughout the course ought to show progress towards a paying customer, but Aarhus Blend in was far from offering a service that customers would pay for. By and large, Anne was grateful for the opportunity to attend the course as she had learned a lot about entrepreneurship, and she appreciated the two facilitators' professionalism; however, she still felt a bit out of place in the incubator space.

## DEVELOPING AARHUS BLEND IN (WHILE STRIVING TO BLEND IN)

Anne enjoyed the progress and the daily work of exposing the hidden secrets of Aarhus to an increasingly broad population. To expand her activities in Aarhus Blend in, she recruited additional tippers from the growing group of people who followed Aarhus Blend in. They would tip Anne by writing and submitting a short text about a place. Anne, with her advanced writing skills, would improve the language and flow while maintaining the authenticity of the original text. She would also hire a photographer to take professional photographs of the tipped locations.

By autumn 2019, Aarhus Blend in had 1,800 followers on Instagram, and numerous shops had beautiful photos of their location accompanied by a short description of their uniqueness at Aarhus Blend in's platform. The shops enjoyed the attention they received when being

tipped by Aarhus Blend in, and users explored the hidden treasures of their new city. She had clearly created an engaging platform, but it was not straightforward how to monetize it.

From Lead-In, Anne had learned to contact potential users and customers early on to (dis)confirm her hypothesis regarding the value she offered. Four options seemed plausible in terms of which customer segment to target first; however, none stood out as the obvious business model:

(1)    She could ask shops to pay a fee for being tipped. However, this could compromise her credibility as an 'authentic' tipper. From the very beginning of the project, Anne strived to retain the authenticity and credibility of her posts. She never received payment (neither in cash nor in free goods) from the places she wrote about, preferring not to associate herself with the ideals of the typical influencer.

(2)    Another possibility for monetizing her product was to partner with a tourist agency that sought to attract more tourists to the city. Upon arrival, the agency could support the tourist, guiding them to the less-trafficked spots, giving the visitors a better experience while distributing tourist traffic more broadly throughout the city. Tourist agencies responded positively to this proposition. However, while they applauded the project, they were not willing to pay for the service.

(3)    A third option was to partner with cruise ships, helping them to offer a value-added activity to their customers when they disembarked for some hours from the ship, strolling the new and unfamiliar city.

(4)    A fourth suggestion was to partner with banks and insurance agencies and the like who sought to brand themselves to the young people in the city. Anne reached out to two banks to explore any interest in a potential partnership. Both were somewhat interested but mostly hesitant. Anne was not able to close a deal, and the potential customers could not articulate what it would take to pay for a partnership. A profitable business model was still very far from sight.

At the same time, some of the insecurities of not blending in to the incubator still troubled Anne. She felt that she was not taken seriously by her fellow student entrepreneurs in the incubator, and in contrast to other start-ups in the incubator, the start-up staff never invited her to present on scenes where entrepreneurs from the incubator were showcased.

Despite feeling somewhat frustrated by the lack of progress on her business model and excluded from the incubator space, Anne did not quit. Instead, as with most of the things Anne started in her life, she felt even more driven to succeed. There were three levels within the incubator, and naturally Anne strived to reach the next level at which she could get more feedback from external mentors in an advisory board-like structure. However, access to the next level required her to complete an application form, which among several elements included presenting revenue and expected revenue over the next 6 months. Without a viable business model, she had a slim chance of qualifying for the next level in the incubator. She was again left with the fraudulent feeling of not being a real entrepreneur and not having a real start-up. In addition, Anne was pregnant with her first child, adding another layer of complexity and leaving less time to develop the start-up towards a financially viable business model.

## CREATING A PROFITABLE BUSINESS

Despite the current lack of a solid business model for monetizing her start-up, Anne persevered and applied for the next level of the incubator. Based on her application and an interview, she was accepted into the acceleration programme, which would give her access to the external mentors associated with the incubator. Since the birth of her child and subsequent maternity leave were on the horizon, she was not able to start the programme immediately. However, by qualifying, she had achieved another milestone for herself and Aarhus Blend in.

Anne was the single founder of Aarhus Blend in. Consequently, she was not in a position to transfer all her obligations to a co-founder during her leave. As Anne prepared for the upcoming birth and personal life changes, she equipped Aarhus Blend in with a set-up that could run without her checking in daily. She had two volunteers. One person took photos of the places tipped about, and another functioned as the social media manager. In addition, a group of dedicated volunteer tippers steadily offered new tips about cool places around the city. Anne planned to keep Aarhus Blend in up and running with minimum time investment during her leave, meaning that she expected to spend approximately half a day per week on it. The plan was that she would receive tips from tippers and update those on the web page. The social media manager's job was to increase the crowd of followers and their engagement with the site. A large crowd seemed to be central in order for potential customers to find it attractive to partner with Aarhus Blend in and pay for exposure. Potential customers indicated so.

Anne's 9-month leave passed, and she returned in the spring of 2020. With her daughter starting in childcare, she was excited to return full time to her studies as well as to Aarhus Blend in. Her expectations to run Aarhus Blend in with minimum time investment had been a success as the number of followers steadily increased during that time. Meanwhile, her decreased time and energy spent on the project left room for focusing on motherhood and enjoying her family.

## EXPANDING THE TEAM

When Anne first joined the incubator, she was aware that it would be difficult to make Aarhus Blend in a profitable business; however, at the time, that was not her priority. Her main motivations were to gain experience and develop skills and competencies, which she did. Having considered it throughout her leave, and expecting to spend numerous hours on Aarhus Blend in over the coming months, she was now determined to see whether there was a chance for it to become a profitable business. However, she realized that she could not do it on her own. She needed a partner.

Emil had been part of the same group of friends as Anne and her family. The group met regularly to eat dinner together. As they shared stories and listened to the successes and sorrows of everyday life, they got to know each other well. Anne would frequently talk about Aarhus Blend in at these dinners. As Emil was enrolled in Media Studies at the time, he had both a personal and professional interest in the project. He asked questions and provided suggestions on various issues that Anne brought up over the dinner table. He also soon became a tipper. Anne

immediately saw that he had a flair for it. In addition, she trusted Emil and could see herself working with him. Anne invited Emil to a meeting where she asked whether he would be interested in becoming a co-founder in Aarhus Blend in. He was both surprised and flattered by the offer, and he joined Aarhus Blend in during the spring of 2020. In contrast to the early phases of Aarhus Blend in, this time the outspoken ambition was to create a profitable business.

At the time, Covid-19 was slowly increasing its grip on society and the tourist industry in particular. Suddenly, both the cruise industry and the tourist agency seemed to be dead ends. Two of the four options that Anne had considered to pursue in the search for an economically viable business model were effectively out of consideration, at least in the short term. The first option—to operate as a traditional influencer—was still not an option for Anne, nor was it for Emil. The most reasonable strategy, they considered, was to partner with banks, insurance agencies, and the like who sought to brand themselves to the young people in the city. They developed a plan to sell exposure to firms and organizations who would be interested in co-branding themselves with Aarhus Blend in.

## THE FIRST CUSTOMER

Over the course of building Aarhus Blend in, Anne had been in contact with several potential customers. With her partnership with Emil now breathing new life and motivation into the business, she reintroduced herself to several of them. Suddenly, one union seemed to be interested in partnering with Aarhus Blend in. Already in their first meeting, a sale seemed to be within range. Anne and Emil were astonished by the positive response. Could this really be true? Were they in fact about to acquire their first customer? They could hardly believe what was happening. They prepared well for the next meeting. As they walked out of that meeting, they could hardly contain their feelings of jubilation. They had entered into an agreement with the union. For approximately 10,000 Danish kroner, the union would get prime exposure on their web page over the next 6 months. This was almost too good to be true, they thought.

A couple of days later, they met their start-up adviser. He was sincerely impressed by their efforts, but he was disappointed by the seemingly low price they had charged for their service. He sought to find the right balance of applauding what they had just achieved while strongly indicating that they needed to charge a higher premium for their service if their ambition was to create a profitable start-up. Later that day, Anne and her start-up adviser were coincidently having lunch together when the new vice president (VP) of industry relations and innovation at the university entered the room. Being confident that Anne would be up for a challenge, the start-up adviser asked the VP if she had 5 minutes to spare. He wanted to indicate to Anne that there was a risk of pricing the service according to her own known world: being a student living on a student budget, there was a risk of pricing the service accordingly, not according to the true value of the service or the customers' budgets. The start-up adviser asked Anne to quickly present her offering to the VP. Following that, the start-up adviser asked the VP if she would suggest a price—in rough numbers—for the service Anne had just presented to her. 'Oh, it is hard to say, it depends of course on the terms, but in the ball park of 500,000 Danish kroner seems reasonable', she said as she left the room with her coffee. Anne sat behind, jaw agape. In

fact, she was so dumbfounded by the VP's assessment that she had problems taking seriously what she had just heard.

At the time, Anne and Emil were also reaching out to banks as potential customers. They had received several declines; however, one bank seemed to be interested. Prior to the meeting, they had asked Anne and Emil to send an offer that described the terms and a price. Anne and Emil were excited about the fact that a second customer seemed to be within range, but they were lost in terms of pricing, having experienced that a union easily accepted a price of approximately 10,000 kroner, which indicated that the price was too low. On the other hand, the 500,000 kroner that the VP suggested seemed to be astronomically high. Slowly they realized they had to recalibrate their thinking with regard to pricing.

They worked on an offer to the bank, describing the terms including a six-digit price—a price that was considerably higher than the 10,000 kroner they had charged the union. Being both nervous and confident, they sent the offer to the bank. 'If they accept this offer, there is no reason to consider Aarhus Blend in a hobby project any more. This could be the first strong indication of Aarhus Blend in becoming an economically profitable start-up,' Anne and Emil thought to themselves.

The bank replied that they wanted to meet and discuss further. On the day of the meeting, Anne once again put on her business shoes, and she smiled as she thought back to the day when she had changed from comfortable sneakers to these shoes in front of the incubator almost 2 years earlier. She met Emil in front of the bank, and they entered the stylish building together.

After the first polite greetings took place, a slight shift in tone by the representative from the bank indicated that they now wanted to talk business. They walked through the terms, the description of the service, and what Aarhus Blend in would commit to. Finally, they reached the point of the price. Anne and Emil could hardly sit still as they did their very best to hide their nervousness. Even if they had a solid argument for the suggested price, they still thought it was mind-blowingly high. This was nothing like their student jobs. 'We have taken a look at the suggested price …' the representative said, and left it hanging for a couple of seconds. Anne's heart was about to explode out of her chest. She had to almost physically stop herself from blurting out, 'Yes, we know it is too high'. She managed to stick to the plan and sit still, letting the representative talk. 'We would like to discuss the price. Is there a chance that we could get a price reduction?' the representative asked.

Anne had prepared for this scenario, and she found herself surprisingly confident as she replied, 'If we are to reduce the price, it is impossible for us to deliver the value you are looking for. So, unfortunately, we cannot reduce the price.' A moment of silence followed. Again, Anne forced herself to wait for the response. 'Okay, fine. We are still interested,' the representative said. The bank and Aarhus Blend in entered into a partnership agreement. Part of the agreement included expanding the service to Aalborg and Odense, two other large Danish university cities. The bank had a presence in these cities as well, and saw great potential in being able to offer customized services to new students in these cities too. Aarhus Blend in did not have any activity in those cities at the time, which meant that there were no places being tipped about and there were no tippers. This all had to be built from scratch. Anne and Emil found it necessary to expand the team as they needed more power to expand quickly. They

on-boarded four interns to increase awareness in Aarhus as well as to launch the new websites for Aalborg and Odense.

## THE STAKES BECOME HIGHER

At the time they closed the deal with the bank, Danish society was in lockdown due to Covid-19. It was apparent that such a situation would severely limit the value of the cooperation because Aarhus Blend in tipped about shops, stores, and cafés, all places that were closed at the time. Anne and Emil convinced the bank that, given the lockdown situation, it was even more important to have an online presence. This made sense, and few dared to think that the next year would be riddled with even more lockdowns.

During the summer and autumn of 2020, Danish society opened up for a while. Anne, Emil, and the rest of the team took advantage of this, and they recruited tippers, took photos, and wrote text about small shops and cafés in Aalborg and Odense. They sought to gather a good bunch of tips and launch the Aalborg and Odense sites on a specific date in order to kick-start their presence in the two new cities. However, in November 2020, the second Covid-19 wave hit Denmark, and society was once more locked down. Anne and Emil needed to show the bank that they had built up Odense and Aalborg, but it did not make any sense to launch a website containing tips about shops and cafés in the city as both cities were practically ghost towns because of the lockdown. Things started to get tight.

Anne's frustrations increased. The lockdown in itself, and the limits it put on Aarhus Blend in, contributed to the frustration. She also found herself working a lot. Working long hours until late at night suddenly became the new norm for her. Where did the freedom, the joy, the creativity go? She sought the flexible life, being able to deliver and pick up her daughter whenever she wanted to and prioritize studies when she found that necessary. At that moment, none of this was present. As problems mounted and there was no indication of opening up society, she also turned some of the frustration towards Emil. Some of the tasks that she considered to be Emil's landed on her desk. Instead of confronting him with the issues at hand, she continued to do the work herself. Despite the need and desire to talk to Emil about her frustrations, she kept quiet.

At the same time, Anne approached the end of her studies. The final thesis was due about 4 months down the line. Whenever faced with a heavy workload and tough decisions, Anne had typically remained positive and would take a 'Yes I can' attitude. Emil had inclinations towards the same approach. While Anne previously would find good energy in such an attitude, she now got increasingly frustrated with it. They had a well-paying customer, and in that sense a profitable business model could be within reach. But emotionally, Anne felt as if her dream had never been further away. The pressure increased on Anne. The Covid-19 lockdown suspended the launch of Odense and Aalborg to an unknown future. She could not see the road ahead.

To add to all this, Anne was pregnant again. Instead of thinking—as Anne usually would do—'Yes, come on. Sure, we can fix this,' she asked herself, 'How, really—how is this really

going to work out, and at what cost?' She considered this question for about 5 weeks before she approached Emil.

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### CASE ACTIVITIES

In the learning activities associated with this case, the authors invite you to apply effectual logic and its associated effectual principles (Sarasvathy, 2001), as well as to reflect on different types of value creation (Lackéus, 2018). As preparation to start working with the case, we encourage you to familiarize yourself with Sarasvathy's effectual logic and Lackéus's value perspectives. Your teacher might also ask you to analyse Anne's background for initiating her project. During class, the teaching activities allow you to present, discuss, and reflect upon the above-mentioned concepts in relation to the case. After class, we invite you to reflect upon how you would apply the affordable loss principle to the case, and what you would be willing to lose, if you were involved in a similar student start-up.

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# 14

# Fishing for sustainability: a case about recreational fishing, tourism, and sustainable entrepreneurship

*Ulrika Persson-Fischier, Göran Lindström, Magnus Larsson, and Patrik Rönnbäck*

## INTRODUCTION

Sustainability is in focus for many companies these days, by force due to tightening government regulations, because of customer and public pressure, or because the entrepreneurs themselves simply want to contribute to a more sustainable world. But what is sustainable entrepreneurship? In this case, we will explore many of the challenges involved when an entrepreneur wants to create a sustainable business. It will revolve around two different views on sustainability: strong sustainability, in which concerns for the environment and society come before financial concerns, and weak sustainability, where financial concerns override environmental and societal concerns in cases of conflicts of interest. This case illustrates how the entrepreneur may be torn between strong and weak sustainability—that is, how hard it is to create a strong sustainable business.

The United Nations World Tourism Organization (UNWTO) recognizes that the tourism industry is one of the largest and fastest-growing (at least before the pandemic) industries in the world. The tourism industry shows a complex web of both positive and negative effects on societies. It contributes to developing destinations by creating job opportunities, stimulating infrastructure investments, providing opportunities for cultural exchange, and bringing foreign currencies to a country through investments and visitors.[1] But it also contributes to unsustainability in a number of ways: disruption of social and cultural systems, (over)use of natural resources, land occupation, emissions (not least $CO_2$ emissions as almost all tourism incudes travel) and pollution, social, and economic stratification, conflicts with Indigenous people and non-Indigenous locals, and many more. There are different ways of thinking about how to solve these issues. Some might be solved through emerging new technologies, some might require legislation and regulations, and others might need creative thinking, collaboration, and inventiveness. Maybe some are unsolvable? This case offers students and

teachers opportunities to problematize, analyse, and challenge the effects of entrepreneurship characterized by ambitions for sustainability.

The fact that there are both positive and negative aspects of tourism creates a lot of so-called wicked problems often related to sustainability (Rittel & Webber, 1973). Wicked problems are problems that are difficult or impossible to solve because of incomplete, contradictory, and changing requirements that are often difficult to recognize, often caused by an attempt to solve another problem, and they cannot be solved with traditional methods which caused them in the first place. As wicked problems are impossible to solve, what we can do is to find a way to deal with them or live with them, rather than trying to find a solution.

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**Box 14.1    Basic facts about recreational fishing**

Recreational fishing is fishing where the primary motivation is neither financial nor subsistence (Food and Agriculture Organization [FAO], 2012). This means that recreational fishers are not fishing with the intention of selling what they catch, and they are not fishing to provide a primary source of nutrition or to meet another basic need. Although income and basic nutrition are not the primary motivations to catch fish in a recreational fishery, recreational fishing is a multibillion-dollar industry and the consumption of recreationally caught fish can be very important (Cooke et al., 2018).

People most commonly associate recreational fishing with various forms of angling (fishing with a hook and line), and this is representative of how most people engage in these activities (FAO, 2012). Angling, also referred to as sport fishing, is the type of recreational fishing that constitutes fishing tourism. Recreational fishing is not limited to any particular species, group of species, or ecosystem. The targets and locations of these activities are highly diverse, with examples ranging from ice fishing for Arctic char in frozen mountain lakes and angling for carp in a city park or canal in a major city, to pursuing species found in undisturbed watersheds deep in the rainforest (FAO, 2012).

Participation in the activity of recreational fishing varies greatly globally. In wealthier countries, more people have the opportunity to fish for reasons other than the need to catch food or earn a living, and a greater proportion of the fishing population fish for recreation (Arlinghaus et al., 2015). However, even in parts of the world where a large number of people participate in subsistence or commercial fishing, recreational fisheries and fishing tourism can provide opportunities to increase the values generated by fisheries resources and opportunities to improve the sustainability of fisheries management.

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To be able to deal with a wicked problem, the entrepreneur sometimes has to take an ethical standpoint and often has to choose between different alternatives. Dealing with these problems takes knowledge, time, and financial muscle—resources that are hard for many small companies to obtain.

We hope that the case of Fish Your Dream will contribute to the understanding of challenges and the many decisions that have to be made to start and develop a new company, and provide students with insights and understanding regarding the possibilities and limitations that ambitions for sustainability entail. Many questions and decision points simply have no 'right answers'. The choices made by the founder and CEO Per Jobs and his company Fish Your Dream illustrate one way to try to deal with complex and wicked problems.

Fish Your Dream started in 2006 as a small, one-person business and has today grown to a company group with a total turnover of approximately EUR1.25 million (2019). It employs five people on a year-round basis and an additional 15 to 20 people during the fishing seasons.

# THE CASE STORY

## Part 1: Background

Fish Your Dream (FYD) is a company that has been in the recreational fishing business since 2006. It was started by Per Jobs, a professional musician and enthusiastic recreational fisher. From starting on a small scale on the Swedish island of Gotland in the Baltic Sea, it has grown and now manages three sites. Besides the original site on Gotland, the company now also runs two sites in the north of Sweden and is a well-known and established actor in the community of recreational fishing. The start and development of the company illustrates not only the common struggles and decision points that face all companies, but also the many sustainability issues and decision points in all fields of sustainability—ecological, social, and economic. An important factor is the determination of the company's founder to develop FYD as a company devoted to sustainable operations by making sustainability a natural and inseparable component in the company culture and strategy.

### Growing up

Per Jobs was born and raised in the county of Dalarna in the mid-west of Sweden. Dalarna is a rural area where outdoor activities play an important role in everyday life. At the age of 3 years, Per was already a keen recreational fisher, introduced to the sport by his father and grandfather. The interest grew into a hobby, and Per's passion for fishing became an important part of his life. His interest in nature and wildlife gradually grew into a strong concern for the environment and sustainability issues in general. Per became increasingly troubled by what he saw happening to nature in general and to the Baltic Sea in particular.

Per spent a lot of his leisure time fishing and visited Gotland,[2] a Swedish island in the middle of the Baltic Sea, several times to take advantage of the excellent fishing conditions around the island. His interest in fishing also led to Per becoming a member of the national reference group for strategic development of recreational fishing in Sweden. His engagement in the reference group made him a rather well-known person in the Swedish recreational fishing community.

### Becoming an entrepreneur

Another interest for young Per was music, and music eventually became his profession. He has academic degrees both as an instrumentalist and as a composer. In 2001, a job opportunity opened which made it possible to combine fishing possibilities with a couple of jobs in the music sector. Per became the maestro at the local theatre in Visby on Gotland and was also employed at a music production company, a position he held for almost 5 years. When this production company was later bought by a major media company, it eventually led to a loss of

creative freedom. As a result, Per's job became gradually more unsatisfying, and when he was on paternity leave in 2006, he had both good reason and plenty of time to think about his life and future career. This was the first time he started to consider the possibility of becoming an entrepreneur and to start a fishing tourism company on Gotland.

Once this option popped up in Per's mind, he soon became convinced that starting a company of his own was the right way ahead for him. Determined to move forward, he started to investigate different possible paths available to realize his dreams.

## Part 2: Starting Fish Your Dream

### The business idea and the first concepts

When elaborating the business idea, Per saw a lot of advantages in choosing Gotland as a destination for a sports fishing company:

- Gotland has 800 km of coastline.
- Sea fishing is free in Sweden—no need for fishing permits.
- The waters could sustain a higher pressure from fishing.
- The main recreational fishing season is before and after the tourist peak season, meaning cheaper accommodation options.

The idea was to provide a high-quality service and individually designed fishing trips for smaller groups. On his fishing travels, Per had encountered companies that offered similar services, especially in the Americas. Given these opportunities, Per decided to quit his job and start Fish Your Dream AB (a limited company), and the company was registered in the autumn of 2006. As a backup for lost income, he kept up part-time project employment with his former employer for the first year. Right from the beginning, he had sustainability ambitions. One was to use the principle of catch and release, meaning that all fish that were not going to be consumed as food were returned to the water as soon as possible after the catch. The reasons for this choice were several, but the most important was that in many locations (like smaller lakes), you had to be careful not to overfish and thus damage not only nature but also your future business opportunities. This fact also calls for cooperation among competitors to make sure no one violates the limits of nature but instead works together for the best for everyone.

### Developing the value propositions and marketing strategy

Adding and adjusting some details, Per developed a business model that was basically a copy of some well-known North American concepts. Already from the start, Per wanted to go for the international 'high-end' market. This was based on most people being more willing to pay more money for personalized services and professional guiding when abroad than when going on fishing trips in their home country. The reason is that they want the experience to be better, and since they have already paid a lot of money for the trip, they also want it to be successful. Per also knew a lot about this high-end part of the market, consisting of, as he phrased it, 'a couple of thousand individuals in the world, willing to pay a hell of a lot of money for unique, high-quality fishing experiences'. This was also demonstrated in a recent research study on Gotland, which found that the average expenditure for recreational fishers was

EUR1,800 per each landed and kept sea trout, which is the prime target species for recreational fishing and fishing tourism on Gotland (Blicharska & Rönnbäck, 2018).

One important step was to develop an elegant and inspiring, highly informative, and well-designed website. Per's idea was to make the website the cornerstone of the company's marketing process. The philosophy behind this was that with an efficient website in place, the company had no need for paper-based brochures or expensive online marketing. Sustainability factors also affected the decision not to use fancy, printed brochures that had to be translated into several languages and needed shipping around the world. So from the very start, Per considered the website to be a crucial success factor, and he happened to know a couple of professionals that could help him at a low cost in these efforts. The result was impressive, and the idea worked from the start. All Per had to do was spread the website link, using word of mouth in his marketing process. The website was also designed to send the message that the company was well organized and more substantial than the one-person company it actually was at that point.

## The first marketing campaign

Having set the initial business concepts and being able to show a professional website, the next issue was to find customers. By reading a lot of fishing magazines from different countries, Per identified travel agents selling similar types of international travel concepts in their respective domestic markets. He then contacted them and offered his products. Some were interested; some were not. More or less everyone charged a 20% commission when mediating travel arrangements from other suppliers abroad, which made the price calculations simple. As well as getting a sales force in a lot of countries, the agents provided a lot of information about their markets—what categories the customers were, their buying patterns, their preferences, their normal price ranges, and so on.

On Gotland, he also made deals with different suppliers, such as for accommodation and transportation, to put together offers without having to ask his supplier for every new product.

Per was now ready to launch his company's products and services on the market. To get the international market going in the spring of 2007, Per invited some of his agents to come to Gotland for a free trial of his offers (value propositions). The agents were in general very satisfied with their experiences during their stay, and they immediately started to recommend FYD to their customers. The first international guest groups arrived in the season of 2008 from Russia, Poland, Finland, and France. From then on, the international guests came in increasing numbers every year for the coming years.

So far, the sustainability dimension had not been a focus of the company's marketing activities, although it had been present in all its activities and operations. Over time, the sustainability aspect became increasingly obvious in the offers and concepts FYD sold to its clients. Gradually, sustainability was raised as an important sales argument in its own right.

## Part 3: The First 5 Years

### Managing growth: failing and learning

As the turnover grew, Per could not guide all groups by himself, so he had to hire external guides to help. In terms of quality, this worked out quite well, but FYD had problems keeping the guides from season to season as the company could only offer seasonal employment. Every year, a lot of time and effort had to be put into finding, hiring, and educating fishing guides.

In one of the first efforts to expand his business, Per attempted to get the passengers from the cruise ships visiting Visby to go on a 1-day fishing excursion. This attempt failed as the marketing (from the cruise lines) did not emphasize enough that the excursions included walking on rough terrain and wading in water. The cruise passengers were simply too unfit to cope with the conditions. It also became evident that this new market segment did not match the old one. A lesson here was that the 'old' customers of the company both had a positive attitude towards sustainability and were willing to spend more money on environmentally friendly activities as compared to the cruise-ship customers.

Another attempt to expand the business of FYD was the consequence of poor profitability. FYD had been a profitable company almost from the start, but the profit was very modest. When analysing the finances and money flow in the company, it became obvious that only a small portion of the total revenue ended up in the wallet of FYD. Most of the revenue was transferred to accommodation suppliers, transport companies, caterers, and so on. Therefore, in 2011, Per started his own hostel in Visby to get a larger share of the total business. This step was successful but also exposed the company to greater financial risk, which became very evident during the pandemic several years later.

### Nature as a limit to growth

Around 2010, it was obvious to Per that the expansion on Gotland could not continue at the same rate for much longer. The problem of being able to offer only seasonal employment to fishing guides accelerated, and the attractive fishing spots on Gotland became progressively crowded. The reason for this development was mainly fishing magazine articles and word of mouth that spread the attractive locations, and especially Finns and Swedes (who knew that coastal sports fishing was free to everybody) occupied these spots.

This development became a problem to Per and his company since it materialized into an important limitation of business growth. Per started to look for alternative sites and other locations where he could establish his company. At this time, he had also become a close friend with one of his early customers from Switzerland. The two had been talking more about the business expansion problem for the company, and it became evident to Per that his friend was interested in investing in FYD.

## Part 4: Expanding to New Locations

### Tjuonajokk: in the middle of Sápmi

After some attempts to find a new location option, Per came into contact with the owners of a small fishing resort in Tjuonajokk in the very north of Sweden. Tjuonajokk is situated in

roadless Sámi-land (Sápmi, Figure 14.1), where the nearest road is 30 km away. There is no electricity and no mobile phone reception. Tjuonajokk had been started and run by the same couple for 32 years, and the founders had become aware of Per and his company from articles in the press and through personal contacts in the recreational fishing community. The option to expand operations to Tjuonajokk offered a lot of opportunities, challenges, and special problems. On the plus side was, of course, the closeness to nature and the beautiful surroundings, and the nearby river and lake with amazing fishing opportunities. The challenges were the state of the site, needing a lot of renovating and face-lifting, and the remote location, meaning that customers had to be flown in by helicopter along with all supplies and equipment and material for construction and renovation. This meant a lot of challenges for the sustainability profile of FYD, now increasingly becoming an important business argument.



*Source:* Authors' own work.

**Figure 14.1**    Sápmi

Eventually, and after several discussions and some negotiations, a deal was made with one of Per's relatives who financed half the money needed, thus making the acquisition possible. Per started to view Tjuonajokk mostly through a positive lens. The fishing conditions and the scenery in Tjuonajokk were exceptional, and the potential for development was greater than the problems at hand.

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**Box 14.2    Basic facts about the Sámi people**

The Sámi is an Indigenous population, occupying a vast area in the north of Norway, Sweden, Finland, and Russia called Sápmi. Historically, they are associated with a nomadic reindeer-herding lifestyle, a culture in which shamanism, jojk-singing, and bone handicraft are important parts, as well as their own language. Most Sámi today live modern lives in urban centres, but some maintain a more traditional lifestyle. In Sweden, Sámi organized in economic associations called 'samebyar' have exclusive rights to reindeer herding and sometimes also exclusive fishing and hunting rights in attractive areas. Conflicts revolving around land and hunting and fishing rights with other non-Sámi locals are common. Quite a few Sámi are involved in touristic activities, and some claim that this forms an inappropriate appropriation of Sámi culture, while others maintain that this forms a way to maintain a living heritage.

However, there were some 'inherited' issues that had to be dealt with:

- The venue and the buildings were generally in bad shape.
- Most guests were self-catering, meaning that only a few used the restaurant or cleaning and linen services.
- All sales were made through a few agents; the site did not have any direct sales.
- The relations with the neighbouring Sámi population were strained.

Every year since the takeover, new investments have been made, and today Tjuonajokk has become an updated high-service resort with renovated cottages, a new restaurant and bar, a fishing shop, and guided tour offers, both fishing tours and other. There is a summer and a winter season. Most guests are international and pay quite high prices, both to travel to Tjuonajokk and to stay there. Most packages offered include board, and only a few guests are self-catering. The relations to the Sámi population have improved considerably thanks to Per's efforts to build good relations with the nearby Sámi village, and there are now regular dialogue meetings to discuss current issues and cooperation. Today, Tjuonajokk makes a good profit. Now the company can also employ fishing guides on a year-round basis.

From the start, Per planned to engage the Sámi people as both fishing guides and suppliers of raw materials for both the restaurant and the tourist shop. It soon became clear that using Sámi people as fishing guides was impossible. The main reason for this was a need for the Sámi to be on constant standby to take care of their reindeer cattle if anything happened. Consequently, it was impossible for them to make promises to work for FYD at a particular time. FYD still buys a lot of Sámi supplies, such as meat and other ingredients for the restaurant, and Sámi handicrafts are for sale in the local souvenir shop.



*Source:* Authors' own work.

**Figure 14.2**  Map of business locations

### The third location: Ammarnäs

A couple of years after taking over Tjuonajokk, FYD was approached by the owners of another resort in Ammarnäs, which is also located in the north of Sweden (see Figure 14.2). The resort was a hotel/hostel with a restaurant which had been run by a local family for 16 years, and now they wanted FYD to buy their business. Again, the good reputation FYD had built into its brand and image, mainly thanks to its focus on all aspects of sustainability, put Per in a good position when starting negotiations; it soon became evident that all the work Per had put into involving locals and building good relations with local communities was an important reason for the owners of the resort in Ammarnäs to reach out to FYD.

Ammarnäs is a small village of about 100 inhabitants, and their main occupation is in tourism. The 400-km hiking

track Kungsleden (the Royal Trail) runs through Ammarnäs. This location was like a destination in itself, with a history, local population, and visitors that came back year after year. Compared to Gotland and Tjuonajokk, Ammarnäs fell in between, resembling both the other two in some aspects and being very different in others. Although he had some doubts over whether Ammarnäs would fit the image and profile of FYD, Per started negotiations with the owners of Ammarnäs hostel.

In 2013, the deal was settled, and FYD bought the venue on a 50/50 basis, where the co-owner was a company that was already a business partner to FYD on Gotland. One of the main reasons to buy Ammarnäs was that the company was in control of some very good fishing waters in the nearby Vindel River.

After taking over Ammarnäs, discussions on how to develop the venture started. One of the main things was to improve profitability. The former owner had put in a lot of hours and had run an all-year open hostel, whereas FYD had to employ people or hire contractors for everything. The niche of Ammarnäs on the sports fishing market was a bit different from that of Tjuonajokk. Ammarnäs is reachable by car and is thereby not as exclusive as Tjuonajokk. The price range is significantly lower, and the guests are not exclusively recreational fishers as is the case in Tjuonajokk and on Gotland. The fact that the business partner that controlled the fishing waters decided to leave the partnership only a couple of years after the takeover was a setback that took away one of the main selling points of Ammarnäs. Now they had to make deals with other external owners of fishing rights. The company also had some issues with locals, especially when they decided to change to a one-season-only venue.

## Part 5: New Challenges

### New company structure: new partners

In the autumn of 2020, Per initiated a reconstruction of the company group, where he wanted to build a hierarchic structure with a personal holding company that owned shares in FYD which, in its turn, would own the shares in the operating companies. Per bought the shares from the 50% co-owner of Ammarnäs as that person was approaching retirement and wanted to ease their workload. In the autumn of 2020, despite a tough year due to Covid-19, Per was also able to buy out the relative from Tjuonajokk.

An important step in that process was to include three minority owners in Fish Your Dream AB. The three are a Swedish venture capitalist, a Swiss banker, and the head guide, bringing both capital and knowledge into the company.

In the last couple of years, it has become increasingly obvious that the venues have or could have other target groups than just recreational fishers. The brand of FYD, though, should still be a brand connected to sports fishing. As a result, a new brand for 'non-fishing' customers and activities has started, where the venues are marketed under a different company and brand name—Björk Experience.

Apart from the structural issues, FYD is looking for more venues to expand their business. The search has been ongoing for a couple of years, but so far no venue has met the criteria set up by the management team. The possibility to turn the venue into a profitable endeavour is of course crucial, but other requirements are that they should have control over attractive fishing

waters, there is accommodation (or access to accommodation), and it is accessible by public transport. The strategy is to expand into Sweden, at least over the coming years.

Some of the challenges are:

- getting the new company structure with new owners to work in a structured and smooth way
- finding new venues for future expansion that meet the demands of FYD.

## Consequences of sustainability: adapting services

Parallel to all this, FYD is striving to continuously improve sustainability in their locations. During the last few years, they have done a lot of different things at their resorts. In Tjuonajokk, for example, they have installed solar panels and only have to use the diesel generator when using major kitchen appliances. They have improved the sewage system. More and more of the menus are using local and ecological produce. And then, of course, there is transportation— to and from the destinations and in Tjuonajokk, where you have to go by helicopter in the summer and snow scooter in the winter. One way to decrease $CO_2$ emissions is to only fly the helicopter with a full load of passengers. Another problem might be the increasing discussions about catch and release. Catch-and-release fishing practices significantly reduce the pressure on fish stocks, and from a natural resources management perspective, this practice is much better than catch-and-kill practices. There is, however, an ongoing debate regarding the animal ethics of catch-and-release practices, especially concerning the stress put on the fish when caught. If the guests were only allowed to catch one or two fish a day for ethical reasons, the fishing experience would not be the same.

During the heatwave in Sweden in the summer of 2018, the company simply had to stop all fishing activities because of the high temperature in the lake. Catching fish in such conditions with low oxygen levels in the water would cause too much stress to the fish, and after release, the fish would not survive anyway. This was of course a great problem for FYD and had to be solved in various ways. Some trip arrangements had to be cancelled, and other activities were introduced to replace fishing activities.

As Per sees it, the main challenges facing the company to improve sustainability are:

- the travelling, both to and from Sweden but also helicopters and other transfers, in general limiting fossil fuel and $CO_2$ emissions
- the menus—how to move to less meat without losing clients
- how to create more cooperation and benefits for local communities
- getting the right fishing rules and/or control over waters to secure fish populations— pressure will increase
- the ethical aspects of recreational fishing.

## Change of control of fishing rights

Recently, a new situation appeared after the verdict in the Swedish High Court in January 2020, where the court ruled in favour of the Sámi village Girjas in an 11-year dispute about the rights to fish and hunt in the land belonging to the Girjas Sámi village. This implied conse- quences for FYD since Tjuonajokk is located in the land of Girjas village, and the fishing rights are of course crucial for FYD business activities in Tjuonajokk.

Thanks to Per's efforts to establish good relations with the local Sámi population, FYD had a favourable position in the negotiations with the Sámi group about the new situation. Eventually, a deal was made with Girjas.

What Per and his companies are facing for the coming years is further development in all three locations by increasing the customer value and sustainability content. At the same time, he is building the new company structure, with new partners aiming to expand with more venues and to develop the non-fishing side of the business.

## THEORETICAL INSIGHTS

The case of FYD can be used in different ways in teaching entrepreneurship, and especially sustainable entrepreneurship. Some very obvious dimensions in the case are that it shows the principles of effectuation in practice and how the effectuation principles of 'bird in hand', 'affordable loss', and 'co-creation' work in reality. Per did not have a clue about effectuation principles when he started his company, yet we can see how he was acting very much in line with these principles. Here the teacher can relate to the theory initiated by Saras Sarasvathy and colleagues, as well as other scholars in the field of effectuation theory (Read et al., 2017).

Effectuation theory should also be contrasted with causation models of entrepreneurship, where new ventures are described and analysed as traditional investment ventures. Such theoretical models are built on the assumption that a new entrepreneurial venture can be analysed as any type of investment project in an industrial setting, by forecasting and planning methods that predict and set out the road to success before starting (Read et al., 2017). Accordingly, the logic of these analyses is that at a future point in time, we can calculate the investment's profitability in terms of return on investment.

The effectuation models have the extreme opposite position, focusing on the present and asking questions such as 'Who are we?', 'What do we know?', and 'Whom do we know?'. The logic behind these models is that we begin the analysis by understanding the start of an entrepreneurial venture and the resource structures present at the point in time when the venture was born (Read et al., 2017).

One interesting angle of theoretical insights, using this case, might be to initiate a discussion about the difference in these theoretical stances and their origin, and why we still, today, see new editions of old textbooks about entrepreneurship being introduced, which are based on the causation assumption.

Other dimensions of theoretical insights from this case are of course related to aspects regarding sustainable entrepreneurship (weak and strong), since this is a focus point for FYD. It could be used as an introduction to a discussion about the nature of sustainable entrepreneurship and how we can distinguish it from 'traditional' entrepreneurship. Most 'new' models of entrepreneurship that focus on the sustainable dimension fail because they are simply putting the sustainability aspect of entrepreneurship as a 'cherry on the top', and do not make it an implicit dimension of the entrepreneurial process, whereas others fail because they are driven too much by ideological sustainability thinking and forget the business aspect of the company.

Finally, it is important to use the case to point out significant aspects of sustainable development in general, such as asking questions about how entrepreneurs can contribute to the development of our societies and our world to be a better place to live in. Concepts such as 'strong sustainability' versus 'weak sustainability', 'wicked problems', 'co-creation', and 'lean development' are important here. So is the problem of the relation between the positive effects of a company like FYD and the negative effects on both society and environment. The consequences of the company's business operations may end in a discussion about the sheer existence of the company.

The observant reader might also have noticed the implicit, unquestioned ambition and drive for 'growth' in the case narrative. Now established, Per is constantly looking for opportunities to expand the business in terms of both economic growth and new destinations. This unquestioned drive, illustrated in this case, is very interesting to problematize using the case as a point of departure, asking questions such as '(Why) do businesses have to grow?', 'What is the rationality behind (economic) growth?', 'How can we understand the "tension" between economic growth and sustainable development?', and 'Are economic growth and sustainable development extremes on one single dimension, or are they dichotomies, impossible to combine?'.

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### CASE ACTIVITIES

We suggest three sequenced activities. The aim is for the students to be able to imagine and strategically plan a sustainable future for FYD from economic, social, and environmental perspectives. The starting activity is a discussion of what has actually happened in the company. The second is a role play to start imagining what might be happening today, and the third is a workshop to imagine and strategically plan a sustainable future.

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## NOTES

1. UNWTO (see https://www.unwto.org/why-tourism).
2. Gotland is Sweden's biggest island, located in the Baltic Sea. It has a population of about 60,000 people and an area of almost 3,200 km² (including lakes). The biggest city is Visby, with around 25,000 inhabitants. Around 1 million tourists visit Gotland every year.

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# 15

# From university research to student-driven spin-off: the case of Biodata

*Katja Lahikainen, Markku Ikävalko, Noora Heino, and Terhi Virkki-Hatakka*

## INTRODUCTION

This is a story about the start-up process of a university-based spin-off called Biodata. The case follows how graduate student Emil and his peer students established a company and developed it further. This case is based on a true story, but the names have been changed.

Biodata is a spin-off that was established at a technological university in Finland. Sustainable renewal of business and industry is one of the strategic goals of the university. To support societal interaction and research commercialization, the university offers various support services to its faculty and students. The technology transfer office (TTO) of the university helps researchers in the commercialization of research outcomes—for example, in patenting. In addition, the university has its own prototyping laboratory, accelerator, and investment company to promote the commercialization of research. Further, the university has an active student-driven entrepreneurship society (ES) that aims to stimulate student entrepreneurship.

The technological invention developed by Biodata is based on long-term research on sensors that was started at the university 10 years ago, and the university owns several patents related to this technology. The research team who invented the sensor technology applied for funding that aimed at commercialization and the identification of different business models in addition to technical development. As a result, a research-to-business (RtB) project was started to test the applicability of the invented technology and to identify different conditions for a possible spin-off company. After the project, Emil, the hero of the story, decided to establish a company together with his peer students. They based their decision on their own enthusiasm, encouraging research results, and support from the university. This case presents incidents that led them to learn more about their product and its commercial potentiality, about themselves, and about the skills and competences that are needed to launch a successful business.

This case shows that even if the university has formal structures to take business ideas forward, the most important thing is the entrepreneur's desire and ability to find solutions and resources, and to develop the idea into a viable company.

## THE CASE STORY

### Where It All Started

The hero of this story is Emil, the founder of a company called Biodata. The business idea originated when Emil was a bachelor's student at the university.

Emil had always liked mathematics and science and had done well at them at school. After high school, he searched for some years for his own thing and studied different fields, such as programming, physics, and mathematics, until he finally found his own discipline in electrical engineering. In his bachelor's thesis, he studied how muscle electrical curve measurements could be transferred into a wearable device that could be used to control home automation. He was very excited about creating something new and useful. The professor of the laboratory noticed Emil's great enthusiasm and offered him the opportunity to get involved in a research project on the commercialization of specific sensor technology. So Emil became a research assistant shortly before graduating with a Bachelor of Engineering.

The RtB project in which he was involved was a collaborative project between two universities and a national research centre. The aim of the project was to develop a wearable device and a sensor to monitor health and wellness. The research group from the university consisted of the professor, who was also a supervisor of Emil's thesis work, one senior researcher, who had researched sensor technology for several years, and two other graduate students: Anton and Emma.

Emil was very dedicated and motivated to study sensor technology, and thus his professor gave him an opportunity to take the lead in the development of the technology. Originally, the plan was to obtain the sensors for the tests from another, foreign, research team, but because of some unexpected difficulties, this did not happen. Consequently, the research group was advised to buy a set of very expensive sensors from abroad. As this was not a sustainable option in economic terms, the research group decided to buy half-made sensor technology and develop it further by themselves. Emil explains that this decision proved to be a success: 'The price to build a sensor had traditionally been high—up to 400 euro—but now we were able to manufacture special sensors at a unit price of approximately one euro. Our research team immediately applied patents for this novel and promising technology.'

### Developing a Business Idea and Establishing a Company

The research group was thrilled about their technical invention, and they were sure that it would also have commercial value. A big challenge was that they all had a technical background, and they did not have any business expertise. RtB funding offered them an excellent

opportunity to test the applicability of the invented technology and to identify different business models for a possible spin-off company.

The fact that they needed to carry out basic research in the frame of the RtB project somewhat delayed the further development of the sensor-based application. In addition, the unexpected cost for paying for the half-made sensors decreased the budget that could have been used for further testing and customer validation. However, they managed to build the first version of the device during the RtB project.

One of the aims of the RtB project was to identify different commercialization paths for the device. A group of experts from the business school of the university were hired for the RtB project to conduct a commercialization plan. The business school experts saw the potential of this new type of sensor that was significantly more accurate in energy measurement than the competing applications. Together with encouraging test results and the patents that were applied for, they saw that a competitive advantage could be achieved. Experts from the business school ended up concluding that, with the help of this competitive advantage and the existing intellectual property rights (IPR), partnership with a large established company that manufactures gadgets for monitoring health and well-being would be the most attractive commercialization path. As another option, the commercialization study identified that beyond the health monitoring segment, there was demand for technologically improved and cheaper sensors in industrial markets—for example, in combustion engine measurements or in measurements of power plants, battery operations, and in various condition monitoring. What supported this option was the fact that the university held two previous patents, which could be used, if necessary, for these types of industrial applications.

As the finalizing of the first version of the device was delayed, the business school experts needed to conduct the commercialization study with incomplete research data. In addition, the research group and the business experts had slightly different opinions about how to develop the business idea further. Emil explains the situation from his point of view:

> It was a pity that [the business experts] had not been involved with the development of the invention beforehand. Probably for these reasons, the results of the commercialization study finally steered us in a slightly different direction than we, the technical research team, saw to be potential of the innovation.

However, the concluding remarks of the RtB project and the business study were that the technical know-how that they had, together with the accumulated IPR, would enable them to apply for a few different business models in case the manufacturing of sensors or devices did not turn out to be a sensible option.

While working on the RtB project, Emil, Anton, and Emma finished their master's studies. As they had gained a lot of new knowledge during their studies and from working on the project, they thought that the technology was advanced enough, and they were fully ready to do business. In addition, as good test results were obtained during the project, Emil, Anton, and Emma formed the initial founding team and decided to establish Biodata.

As the project was over, and the business school experts, the professor, and senior researcher from the laboratory had moved on to continue their academic work, the founding team of

Biodata was a little lost: what to do next? No new funding was sought at this stage. Instead, the team decided to develop the technology further alongside complementary research projects that were running in the research laboratory during that time.

## Help from the University

Emil, Anton, and Emma started to practise the skills that they felt were important in the start-up process—for instance, pitching and preparing presentation materials. During the whole start-up process, the university was very supportive and encouraged them to establish their own business. All of them were still working at the university on research projects. Emil shows gratitude to their supervisor, who gave them permission to spend their working hours developing the technology and business idea. 'Of course, only if we took care of our other research duties, too,' Emil adds.

In addition, the university supported the start-up journey of these enthusiastic students in various ways. For example, a 4-week intensive prototype-building challenge organized by the prototyping laboratory of the university coincidentally started at an appropriate time for them and offered the team the possibility to develop an improved version of the sensor application. The founding team could build and test different components and versions there and discuss the technology with other students and faculty staff. In addition to developing the technology, they learned the importance of trial and error. Emil describes this experience: 'We discovered our weaknesses, and most importantly our resources and skills that help us to move forward and on which we can build. These experiences made the meaning of the idea of "fail fast, fail often" very clear to us.'

Further, the support that the founding team received from the students' ES was of vital importance. The team participated in a 7-week accelerator programme organized by the ES. The programme consisted of weekly workshops in which professional coaches offered the team personal mentoring and opportunities to pitch their business idea to potential investors. The programme also covered small business expenses such as components, marketing, and travelling. Through mentoring, the team was also introduced to an experienced entrepreneur, Tomas, who had close ties with the university as he was a graduate of the university. In addition, he had previously worked as a chief executive officer (CEO) of a university-based spin-off company.

The programme organized by the ES was an eye-opening experience for the founding team. During the programme, they learned the technical skills and conceptual side of pitching and eventually understood the importance of networking and finding the most suitable candidates for new partners or future employees. Emil describes the effect that the programme had on him:

> Among other things, I learned that valuing one's own skills should not lead to underestimating other people's skills in other areas. For example, at first, I underestimated the value that businesspeople bring—it is not only about commercial slogans, but you need to understand the customer needs and where the money comes from.

Emil thinks that it is important to get over these stereotypes when building a business. Building a business is not just about gathering information but also about looking critically at one's own prejudices and ways of thinking. Entrepreneurship requires a wide range of skills, and people create something new together.

The university's support services were a great help in the start-up endeavour, too. Experts at the TTO helped Biodata with filing the patent applications, and professionals at the university's accelerator helped them to tie contacts with potential investors and external advisers. As the patent holder, the university covered all the costs related to patenting. By contacting the investors suggested by the accelerator, they also received a few invitations to pitching sessions. Further, the accelerator made contacts with potential external advisers through the Boardio network,[1] a global pool of candidates with skills and availability for advisory and board positions. The Biodata team had preliminary discussions with the experts from the Boardio network, but they felt that there was a kind of mismatch in personal chemistries and a lack of common interests. For these reasons, the cooperation did not take off.

Although all the assistance and encouragement that the founding team received from the university was extremely important, they understood that there were several systems and processes in the university to support entrepreneurs going forward, and no one could do things on their behalf. As Emil puts it:

> I must say that this venturing process requires a lot of volunteer work and bootstrapping. We must go to events ourselves, get to know new people, develop the technology and the business ideas forward. If you don't push yourself forward, then development stops right away. It is up to the entrepreneurs to find the right things and put together a successful business. One must look at what is around and reachable.

## Switching Focus from Technology to Business

Since the establishment of Biodata, Emil, Anton, and Emma had participated in various events targeted at technology-based start-ups, at which they could pitch their business idea to mentors and potential investors. These events offered them the possibility to discuss with the representatives of companies who manufactured gadgets for activity measurements. Unfortunately, these discussions did not lead to further collaboration. 'Maybe because we were somehow insecure and hesitant to initiate collaboration with established companies,' Emil thinks. The team felt that they did not know how to run the actual cooperation with companies that were well established and operated in the same field as them. Neither did all the pitches held for various private equity investors yield any results. According to Emil, the visit to the main start-up event in Finland, Slush, was like a slap in the face. Contrary to all their expectations, at Slush they did not receive encouraging feedback, and neither did their unique technology raise interest among the investors, potential customers, or collaborative partners. Emil reflects on this disappointing event in the following way: 'This was a wake-up call and a clear message to our team that although our technology had great potential, we did not have the skills to commercialize and sell it. We really had to widen the focus from technology to customers.'

As a result, the team realized that they needed to learn and search for new skills. They found that even though they had tried their best, the development of a real business idea had fallen short. The direction had to be revised, and a new kind of expertise had to be brought in.

Along the way, many different people had been involved in developing Biodata in various roles. Emil had kind of a champion role, and he also took responsibility for technical development together with Emma, while Anton focused on data analytics. In addition, they had a few students doing their theses for them. Now it was clear to them that changes had to be made, and know-how on those areas that the team did not yet have had to be obtained. Emil negotiated on ownership shares and division of labour with Anton, Emma, and everyone else who had been involved in developing the technology. It was sometimes quite hard, but there were no arguments; it was clear to everyone involved that at this point they had to make a choice: whether they were in or out—'hang-around' members were not needed. Especially Anton had strong feelings of ownership towards Biodata, but at the same time he acknowledged that if he wanted to concentrate fully on his PhD studies related to a quite different topic, it would be better to let Biodata go. After further consideration, only Emil and Emma remained on the team.

After that, Emil and Emma searched for new active team members. Consequently, Otto and Tomas, who both came from outside the university, joined the team. They both had skills that complemented Emil's and Emma's technological backgrounds. Otto was a senior software developer with strong experience in data analytics focusing on customer value creation. Tomas was already familiar to Emil and Emma from the time of the ES accelerator programme. He had prior experience in establishing a university-based spin-off that was sold, shortly after its establishment, to a large international company. So currently, Emil, Emma, Tomas, and Otto make up Biodata. Tomas acts as a part-time CEO, and Emil shares some of the tasks with Thomas.

## A New Start

Until now, the idea had been to commercialize a special sensor that could be used in many different applications and sell this technology for equipment manufacturers. When Otto came on board, he analysed some data and explained to the team what added value the product would bring—not in technical terms, but for the final user/customer of the product. Thanks to him and Tomas, business development took a slightly different direction and stepped up to a new level. The goal was to stand out. Instead of testing small sensors attached to the clothes or a wristwatch and making measurements to provide information on a person's physical vibe (eating, sleeping, moving) among regular consumers, the team saw that elderly care would be a potential area of application and decided to pilot among them.

With the unique technology that they had developed, they could monitor all the important factors related to physical well-being—for example, health status, fever, inflammations, and calorie consumption. Now, instead of just the technological issues, they started to think more of the importance of the user-friendliness of the device and creating a simple user interface. Customer experience is certainly crucial in business. Perhaps fully understanding this would help them shift their focus from technology development more to value creation for customers.

## Current Situation and Next Steps

Biodata is now starting a pilot project with the local central hospital to test how the sensor works in the field of elderly care. This project is complemented with a collaborative research project with another Finnish university that aims at monitoring the lifestyle improvement of people with obesity. Even if elderly care is now the primary target market for Biodata, this parallel research project offers Biodata complementary data on how the application works in measuring the impact of lifestyle changes among other customer segments.

Although the commercialization of the technology started 4 years ago, it is only now becoming available for piloting with first customers. 'If we had the right people and skills already in the beginning, the company might have been able to move forward at least a year faster,' Emil says. Anyhow, if the manufacturing of the sensor starts, the development of both sensor and production technologies is estimated to be a 5-year project worth €10 million.

Biodata does not have any investors yet. According to Emil, the most important thing to be solved is IPR. Biodata has many patents that the university holds. Emil hopes that they will be able to make a deal with the university to get ownership for the patents they need. However, Emil is a bit worried about the situation: 'While the university is sympathetic to us, it may be that in the eyes of an investor patents owned by someone else are a risk.'

Currently, the Biodata team has a clear idea of what they are aiming for next, even though they have not written a complete business plan. 'Currently our business plan is written in PowerPoint slides highlighting the critical incidents and unclear issues,' Emil admits. He explains that they all believe in trying and failing fast, and learning from it. Therefore, they do not want to spend too much time on polishing the business plan. Emil summarizes his entrepreneurial journey:

> What have I learned during the years of developing the business idea? The most important developments have taken place in my own thinking and acting. It is important to keep learning continuously. Only that way could I understand and master new kinds of roles and new points of view which are essential.

Emil is not sure what keeps them driving forward. Maybe an interest in seeing how the technology works in the pilots and how things end up eventually. 'Along the way there have been several stages where the business idea could have been abandoned, but the idea has survived, and we still have it—alive and kicking,' Emil says and smiles.

Everyone involved in the company's operations wanted to see the company get off to a good start, succeed, and generate profit for the participants. Emil has started his PhD studies, and he hopes that this does not limit what he is going to do in the future. Emil thinks that he must make decisions about himself and the company:

> Will I pursue a scientific career, or will I work as the chief technology officer of Biodata in the future? Or will I eventually become the company's CEO and replace Tomas? And how should company ownership be divided; do we need new owners to finance growth already at this point?

Plenty of open questions to think about, and Emil does not have clear answers yet.

## CASE ACTIVITIES

This case presented the entrepreneurial journey of Emil, a university student, who became an entrepreneur while studying at university. In addition, this case demonstrated the start-up process of a university-based spin-off called Biodata. The university context, and also coincidences, had a significant influence on the start-up process of Biodata.

First, please imagine that you are asked to join the further development of Biodata as an external consultant. What would your advice to Emil and the start-up team be? How should they continue to develop Biodata?

After your first reflections, please analyze the start-up process from the viewpoint of entrepreneurial decision-making through the theoretical concepts of causation and effectuation. Read the articles by Sarasvathy (2001) and Fisher (2012) and reflect on the theoretical insights of the case. Please answer the following questions:

1. Which elements of causation are visible?
2. Which elements of effectuation can be identified?

Second, please read two articles on the university context and university-based spin-offs. The article by Rasmussen and Borsch (2010) investigates how universities facilitate the process of spin-off venture formation based on academic research. The article by Boh et al. (2016) brings out the specific features of the technology commercialization process in university spin-offs, focusing on student involvement in the spin-off process and on the impact of the university context on the spin-off development. Please reflect on the literature and answer the following questions:

1. What kind of influence did the university context have on the entrepreneurial decisions made by Emil?
2. In your opinion, what kind of support would be the most effective for universities to provide for student entrepreneurs like Emil?

Finally, after reading the literature and answering the questions above, please go back to your initial reflections and advice that you would have given to Emil and his team. Would you give any different advice now? What would you do in Emil's situation now?

# NOTE

1.    For more information, see https://www.boardio.com.

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# 16

# 'Cultivating and fighting at the same time': an immigrant's innovative entrepreneurial journey in the agricultural scene in Norway[1]

*Norma Wong and Marte C. W. Solheim*

## SETTING THE SCENE

This case can be considered within the wider context of increasing migration and urban population, as well as the trend among Nordic countries to shift away from the oil and gas industry towards an emphasis on creating sustainable solutions in everyday life.

Using the latest statistics at the time of writing, 14% of the Norwegian population have immigrant backgrounds and make up over 25% of all entrepreneurs in the country (Statistics Norway [SSB], 2020).[2] Against this backdrop, this case sheds light on the entrepreneurial journey of an immigrant who has navigated the start-up context in his municipality and achieved considerable success. It is also a case that demonstrates an alternative to the typical 'immigrant businesses' such as food stores or restaurants.

With the expectation that more than 6 billion inhabitants will reside in cities by 2050, and more than half of today's population will live in urban areas, the production and logistics of food need to adapt in the future within the frame of cities and the use of new technologies. Moreover, given the Covid-19 pandemic that has exposed the vulnerability of the globalized food distribution system, there is an increasing emphasis on, and resources being invested in, the in-sourcing of value chains and the ability of urban regions to provide food for their inhabitants in a sustainable manner. These social and environmental megatrends form the background for start-ups in the local food production industry, such as the one in our case.

Tugushan Alp has been passionate about agriculture since he was a young boy in his hometown of Istanbul, Turkey. Short of land to farm, he experimented with growing vegetables in public spaces, such as on pavements and roundabouts. Bringing this passion with him, Tugushan moved to Norway at the age of 19 and settled in Molde municipality on the west coast (see Figure 16.1). Molde has approximately 32,000 inhabitants, of which about 6% have

an immigrant background (SSB, 2021),[3] a temperate coastal climate, and an economy mainly within the service industries.



*Source:* Norgeskart.no., Kartverket (the Norwegian Mapping Authority)

**Figure 16.1**    The municipality of Molde in Norway

Prior to Tugushan's entrepreneurial journey, and despite his strong work ethic, his career in Norway had been met with repeated disruptions from external events over the previous decade. Like many other immigrants, Tugushan started working in restaurants and hotels when he first settled in Molde. With hard work and determination, he quickly built a career and gained insights into the local hospitality and food industry. However, things did not work out smoothly. As he was being promoted up the management ladder in a restaurant, he unfor-

tunately had to leave his job because of an unexpected health issue. Instead of depending on government subsidies, he decided to take up a work placement at the Molde Adult Learning Centre (Molde voksenopplæringssenter), where many immigrants attend Norwegian-language courses. Although the position was made redundant after only 2 years because of a funding shortage, Tugushan was able to learn about the administration of municipalities, as well as the situations of other immigrants. After that, he spent a short time working as a kitchen manager in an oil and gas company, which ended when the oil crisis hit in 2015. Nevertheless, all was not lost. While still in his last job, Tugushan had started a small gardening business in the basement of his house. This was when his entrepreneurial journey began.

## THE CASE NARRATIVE

### Launching a High-Skilled, High-Growth-Potential, and Risky Venture[4]

One thing that Tugushan could not help but notice in the many years that he worked in the hospitality and catering sector was the disappointing quality of rucola leaves and lettuces in the supply chain. In his words, 'I saw what could be much better' (Alp, personal interview, 2020). Based on his knowledge and agricultural experiences in Istanbul, he firmly believed that the quality of lettuces provided in Norway could be much improved. Holding on to this belief, Tugushan embarked on a long journey to develop methods to grow lettuces on his own.

   In the same spirit of curiosity and perseverance that he had as a young boy in Istanbul, Tugushan took it upon himself to research the ideal conditions for lettuces to grow in Norway and landed on the idea of *hydroponics*, a commercial agricultural method that uses nutritionally enriched water to grow vegetables in a controlled environment (see Box 16.1). The method has proven to be energy efficient, requiring low water consumption as well as being pesticide free. Hydroponics started to become popular in the United States and Japan about a decade ago and is now practised in many countries, but it is still new to Norway, where agriculture is traditionally undertaken in soil outdoors or in greenhouses.

| Box 16.1    Hydroponics |
| :--- |
| 'Hydroponics is a technology for growing plants in nutrient solutions (water containing fertilizers) with or without the use of an artificial medium (sand, gravel, rockwool, perlite, peatmoss, coir, or sawdust) to provide mechanical support. … In combination with greenhouses, it is high-technology and capital-intensive. It is also highly productive, conservative of water and land, and protective of the environment. … Since regulating the aerial and root environment is a major concern in such agricultural systems, production takes place inside enclosures designed to control air and root temperature, light, water, plant nutrition, and adverse climate.' <br> *Source:* Jensen (1997, pp. 1018–1021). |

Tugushan's decision to find new ways to grow lettuce led him to launch an innovative, technologically demanding agricultural method in a high-growth-potential market. As hydro-

ponics is a totally new technology in Norway, Tugushan emphasizes that he did not receive much help from universities and research centres (Alp, personal interview, 2020). Instead, he learned through books and the vast amount of information and resources available online, and through connecting to a network of hydroponic growers. He successfully applied for permission to set up a laboratory in his basement at the beginning of his entrepreneurial journey, where he tirelessly experimented with the method.

Tugushan's hydroponics venture addressed some newly arisen societal needs and showed high potential for growth. Hydroponic agriculture consumes less water and power, uses no harmful chemicals, and supplies to local consumers. It is arguably superior to traditionally grown and imported produce in terms of minimizing the carbon footprint in production and delivery, reducing food waste, and promoting health. These additional social and environmental values are in line with the societal goals of Norway and the global United Nations Sustainable Development Goals, and they are being taken increasingly seriously by consumers, policymakers, and other relevant stakeholders in society.

Nevertheless, hydroponics is a risky venture with immense challenges, not least because of its novelty in the Norwegian system. As Tugushan was ready to go into production in a larger location, he came across the opportunity to rent an enclosed space at a low cost—a former bomb shelter of 117 square metres in Molde that was a relic from the Second World War and had been used only for privately owned storage. Tugushan's move into these premises was not without its barriers. In order to set up his business in this space, he had to exert tremendous effort to renovate and repurpose it to fulfil the requirements of the food safety authority, which also involved rounds of negotiations over several years. The process was long and arduous as it was difficult for the authority to decide what type of premise Tugushan was working on; it was not a typical agricultural field, nor was it an office space for business. According to Tugushan, multiple laws and regulations had to be changed to allow for this new kind of agriculture to take place and for his operation to start (Alp, personal interview, 2020).

## Building local, national, and international networks and acquiring resources

On the path to developing his business, Tugushan had a great advantage in having broad local, national, and international networks that he had built and maintained over the years. They held a valuable mix of resources and social capital that he could tap into.[5]

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**Box 16.2    Protomore**

Protomore opened in 2016 as the first industrial innovation lab in Norway that offers services nationally. It offers counselling and incubation to aspiring entrepreneurs in both new and established industries utilizing regional connections, and close collaboration with the Møre and Romsdal County, and relevant innovation environments. Protomore actively hosts events and workshops to promote innovation and entrepreneurship in the region. Its services target small, medium, and large companies, as well as the public sector, in their innovation processes.

*Source:* https://www.protomore.no/om-protomore.

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Early in the development of Urban Gartneren AS, Tugushan's registered business for his hydroponic production, he received mentorship from Protomore (see Box 16.2) in business incubation and development and network building, which was a turning point in his venture. A concomitant occurrence took place when Tugushan first contacted Protomore. This was at the peak of the oil crisis in Norway, which led to a sudden drop in oil prices and affected the country's oil-dependent economy to a large extent, in particular the west coast (see Figure 16.1) where there is a cluster of natural-resource-based industries. This became apparent with an increase in redundancies and a wave of people losing their jobs. In the face of increased interest during the economic downturn, Protomore had undergone some changes in its business model to offer more agglomerated services to start-ups (Finn Amundsen, manager at Protomore, personal interview, 2021). As a result, more resources were offered to kick-start projects to move them into the incubation stage. Tugushan and his business entered at this moment and benefited from this change. Despite the high risk in his venture, Tugushan had impressed the manager at Protomore with his determination and hard work, as well as having achieved early results from the hydroponic laboratory in his basement (Alp, personal interview, 2020).

Protomore set up a board for Tugushan's business with the intention of complementing his drive, knowledge, and skills. Protomore's key strategy to help Tugushan was to ensure the board covered a wide range of competence necessary to facilitate a successful launch of his venture. Protomore found an accountant, a sales expert, and a farmer to join the board. Network building was emphasized to help reach out to various stakeholders, such as potential collaborating actors, customers, and the Ministry of Agriculture. Local competence, with knowledge about targeting specific potential customers and locating investors, was also included in Tugushan's incubation programme. As a result, Tugushan was able to access Protomore's networks and had fruitful and constructive discussions with them in which intersecting ideas and opinions were exchanged (Amundsen, personal interview, 2021). The multiplicity of ideas presented to Tugushan worked well with the culture of 'trial and error' at Protomore, and this helped Tugushan greatly in establishing his business in the community.

Soon, Tugushan received his first grant from Innovation Norway (see Box 16.3) for further studies and basic market research, which was followed by another grant paired with mentorship. After the incubation programme, Tugushan partnered with the Norwegian Institute of Bioeconomy Research (NIBIO) in an indoor cultivation project with LED lighting, where he grew, harvested, and sent products to NIBIO for testing. At the same time, Tugushan also sought and received more funding from the Molde Municipality Industry Fund (Næringfond), banks, and private sources. Finally, he received a development grant from Innovation Norway, which was a relatively large sum for production upscaling.

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**Box 16.3    Innovation Norway**

Innovation Norway is a government agency for innovation and the development of Norwegian enterprises and industry. It offers advisory and financial services to start-ups, consultation in intellectual property rights, business mentorship, grants for market research, commercialization, and various types of loans for start-up capital and innovation. It also offers opportunities to establish networks and clusters with enterprises and knowledge communities, and assistance to connect to international partners and markets. It is the Norwegian Government's official trade representative abroad.
*Source:* http://www.innovasjonnorge.no.

Exposure in the national media (e.g. Hagen, 2019; Korsnes, 2018; Norwegian Broadcasting Corporation [NRK], 2018) and local media (Romsdals Budstikke, 2018a, 2018b) helped raise Tugushan's profile and overall visibility (see Figure 16.2), which he believes has helped his business in some ways. One example is that when he phoned someone, they already knew who he was. Tugushan's outgoing personality aided him in actively reaching out and connecting to others, in addition to the board with diverse competences offered to him by Protomore. For instance, it was his strategy to intentionally take advantage of opportunities to introduce himself to potential partners at events that included meals, where he could start the conversation about food (Alp, personal interview, 2020).



*Source:* Remi Sagen/NRK. 'Bonden i bomberommet', NRK, 14 January 2018.

**Figure 16.2**    Tugushan in the bomb shelter where he grows lettuce using the hydroponic method

Apart from funding agencies and incubators, Tugushan was also connected with the local market through his years of working in the hotel and restaurant sector in the area. It had given him insider knowledge on the opportunities in this market, as well as potential customers. Besides, as a person with a foreign background, Tugushan also easily established a connection

to transnational networks of suppliers to meet the needs around technical supplies for his venture, such as the LED lighting in the indoor growing environment for the lettuces. This gave his business an advantage as he thought that the local suppliers were unable to meet the standards his venture requires.

## Developing the Social Aspect

Before he started the laboratory for hydroponics, Tugushan had worked on a project at the municipal Adult Learning Centre, where many immigrants receive education on the Norwegian language and social studies. From there, Tugushan built up connections with the immigrant community and the Learning Centre, which he used to fulfil the important objective he had had in mind since he started his business: to create jobs for immigrants who needed them. Having the experience of an immigrant in Norway in his earlier years, Tugushan saw that his venture had the potential to deliver not just lettuce but also valuable work opportunities. As such, he used his network to find immigrants who needed job experiences and language practice to work for him. With this arrangement, Urban Gartneren AS operates with an additional social element. The value of his business is not only the eco-friendly lettuces and micro-greens, but also opportunities for immigrants to integrate into the job market and build their lives. In Tugushan's words, 'So when their kids ask what their mama and papa do, they can say they work here, and not sitting in the house' (Alp, personal interview, 2020).

## Entering the Market and Going Forward

Tugushan has worked hard to overcome the many barriers and taken advantage of the opportunities along the way to reach this point in his entrepreneurial journey, but more challenges await him. The market that Urban Gartneren AS operates within is difficult to enter, and especially so with an innovation previously unknown and with which the regulator had no previous experience. Perhaps more importantly, the industry is dominated by a few large actors. Tugushan has experienced the market's reluctance to switch from well-known corporates to smaller local players. This means he has struggled to get new contracts and to expand. In the process of getting the permission to operate, and in carving out a space in the market for his business, Tugushan is 'fighting and cultivating at the same time' (Alp, personal interview, 2020). As he introduced the novel way of growing lettuces and micro-greens in the bomb shelter in Molde, he faced rejection because 'it does not work this way in Norway', and the traditional way 'is how we do it'. Tugushan spoke of this as a 'trait of the industry' and a systemic challenge for smaller businesses entering the market, in addition to the fact that he has brought in techniques that the Norwegian system is unfamiliar with (Alp, personal interview, 2020).

   In the face of all these challenges, Tugushan has come a long way and is currently a pioneer, expert, and leader in the field of hydroponics[6] in Norway. His business, Urban Gartneren AS, known in the local and national media as 'the farm in the bomb shelter' (Korsnes, 2018), now runs commercially, supplying high-quality lettuces regularly to the large supermarket chain Rema 1000, as well as local canteens, hotels, and restaurants. It also offers one full-time and several part-time jobs to newly arrived immigrants in Molde who need work training. At

this critical stage of his business, Tugushan has just received the last round of funding from Innovation Norway, and he is ready to further establish his business in the market. For this, he needs a strategy to secure contracts with more retailers to sell his produce and expand his operation.

If you were a member of the board of directors for Urban Gartneren AS, what advice would you offer Tugushan in his next step?

## THEORETICAL INSIGHTS

### The Opportunity Space

Tugushan's entrepreneurial achievement can be understood through the lens of the opportunities that he has taken advantage of along the way. The concept of opportunity, however, has been rather ill-defined in the entrepreneurship literature, and it does not have a uniform definition among researchers, despite being a critical element in venture creation. According to Davidsson (2015), who conducted a systematic literature review of 210 journal articles since the year 2000 on the topic of entrepreneurial opportunities, the concept of 'opportunities' can be more precisely defined by three different constructs. These are (1) external enabler, (2) the new venture idea, and (3) opportunity confidence. It is thus at the nexus of these constructs that ventures are realized from ideas to businesses. While the relationship between these constructs is yet to be theorized, we can visualize the three constructs to form an Opportunity Space (see Figure 16.3). We can apply the framework to cases such as Tugushan's to analyse the role and interplay of these constructs. In looking forward, one way to develop businesses further would be to consider where we could find each of these elements to be favourable and complementary.

*External enabler* refers to the different changes in the environment and circumstances such as regulations, technological breakthroughs, demographic shifts, and cultural change that would affect 'supply, demand, costs, prices or payoff structures' (Davidsson, 2015, p. 684) and are potentially essential for entrepreneurs to develop their venture ideas. These favourable external factors in this context are an important construct of opportunity but not sufficient for entrepreneurship on their own. These factors need to be subjectively considered as favourable by the entrepreneur and acted upon.

*New venture idea* is defined as 'imagined future venture'—that is, 'imaginary combinations of product/service offerings, markets and means of bringing these into existence' (Davidsson, 2015, p. 684). It refers to the intention to introduce new initiatives that customers were not offered previously. It is not necessarily highly innovative, but a new venture idea is one that would 'aim at introducing to potential users something not previously offered by the same actor, rather than optimizing an on-going activity' (ibid). It could be shaped by how the individual interprets the external enabler and could be communicated, developed with other stakeholders, and evolve over time, but eventually it is subjected to the evaluation of entrepreneurs as to whether it will be actualized as a venture creation (ibid).

*Opportunity confidence* refers to the 'evaluation—from negative to positive—of a stimulus' (Davidsson, 2015, p. 685). It pertains to whether the entrepreneur considers both the new venture idea and the external enablers as favourable, in which case it is seen as a real opportunity on which to build a business. It is entirely subjective, dependent on the knowledge and judgement of the entrepreneur (ibid).



*Source:* Authors' own work.

**Figure 16.3**    The Opportunity Space, visualization created by authors, based on Davidsson's (2015) three constructs of opportunities. According to Davidsson, it is at the nexus of these constructs that new economic activities are likely created

## THE ROLE OF DIVERSITY

Further analysis of the role of diversity highlights the potential value brought by immigrants, a group that is to a large extent neglected in the field of entrepreneurship in Norway, but nonetheless contributes considerably. Several concepts relating to diversity may be useful for understanding its role in Tugushan's journey. Here are some examples.

### Knowledge Arbitrage

Studies of immigrants and entrepreneurship have pointed out the common global pattern of immigrants with a higher tendency to start and run their own businesses. Researchers have proposed different theories to explain this. One of the suggestions is by Vandor and Franke (2016), who carried out a quasi-experiment on students who came back from an exchange programme abroad by comparing their opportunity recognition capabilities to those who stayed. They propose that cross-cultural experience is advantageous for individuals to generate more profitable business ideas in two ways; namely, 'Kirznerian arbitrage' and 'Schumpetarian creative recombination' (p. 391). In knowledge arbitrage, entrepreneurs who have learned solutions and insights from abroad can apply them to customers' problems locally, which creates profitable business ideas. In creative recombination, entrepreneurs invent new products by recombining resources and solutions they have acquired from foreign experiences (ibid).

## Heterogeneous Social Capital

Research on immigrant entrepreneurship proposes that social capital, present in one's network, is a form of resource that immigrant entrepreneurs commonly tap into in their businesses. For instance, Kloosterman (2010) suggests the concept of 'heterogeneous social capital' among highly skilled migrants to differentiate those who are well connected to wider social communities from those who are confined to 'homogeneous ethnic networks' (p. 36). He proposes that entrepreneurs who can embed themselves in multiple, transnational networks have access to resources that give them unique advantages, such as suppliers and customers.

## Diversity in Competency

While the literature on entrepreneurship often stresses the benefits of having higher proportions of domain experts on the board, it has been questioned whether this is always the most helpful. In a study that interviewed the board members and CEOs of local banks in the United States, Almandoz and Tilcsik (2016) argue that in circumstances of high uncertainty, such experts on the board may be an obstacle to making good decisions and contribute to the failing of the organization. The authors particularly point out three elements that spur this, namely cognitive entrenchment, group overconfidence, and limited task conflict. In other words, variety in perspectives and ideas is particularly important in uncertain situations.

### CASE ACTIVITIES

In this case activity, small groups of three to four students play the role of the board for Tugushan. In the upcoming meeting with Tugushan to discuss the next step for his business, what would you suggest as a board for Tugushan as his priorities moving forward? The following sub-questions may help you to come up with some good ideas:

1. Making use of the Opportunity Space framework and the constructs of opportunities explained above, try to identify and analyse the favourable factors and opportunities that exist around Tugushan's business. For instance, what are the external enablers in the context of his business? Could you articulate how his new venture idea came about and elaborate how Tugushan has arrived at a positive evaluation (the opportunity confidence) of his new idea and the external enablers?
2. With consideration of the theory on diversity, could you describe how Tugushan's background led to diversity in knowledge, social capital, and competence? What role do these diversities have in his entrepreneurship journey?
3. Based on the answer explored in the previous two questions, could you further suggest how his business can be developed at the intersection of the opportunity constructs? What elements could be utilized in the next step of his business? Putting yourself in Tugushan's position, could you come up with new venture ideas to capitalize on these enablers? What actions should be prioritized? What insights or analysis would Tugushan need to raise his confidence in this new venture idea?
4. Last, reflect on the diversity of your own group; how does it shape your world views and the actions you suggest?

## NOTES

1.  The authors of this case conducted an interview with Tugushan Alp on 14 September 2020 about his entrepreneurship story in Norway. Quotes from Tugushan in the case are taken from this interview. The authors also conducted an interview with Finn Amundsen, manager at Protomore, on 23 February 2021. Both Tugushan Alp and Finn Amundsen have read and approved the final version of the chapter prior to publication.

2.  Statistics Norway Datasets 07358 and 09038 accessed from https://www.ssb.no/virksomheter-foretak-og -regnskap/statistikker/etablerere on 12 March 2021.

3.  Statistics calculated from data on Molde Municipality page, Statistics Norway (accessed from https://www .ssb.no/kommunefakta/molde on 12 March 2021). Population
    with immigration background includes those who have migrated themselves and children of two immigrant parents.

4.  Based on Kloosterman's (2010) typology for immigrant entrepreneurship, Urban Gartneren AS, with its hydroponic agricultural method, would be considered a high-skilled, high-growth type of business. This type of business contrasts with the more typical, popular type, such as restaurants and grocery shops, which requires lower skills but also has less growth potential.

5.  Based on Kloosterman's (2010) mixed embeddedness analysis, we can see that the variety of networks that Tugushan built has given him a big advantage through the presence of heterogeneous social capital.

6.  Hydroponics in a highly controlled, LED-lit indoor environment.

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# 17
## ZU4R bicycle-wear: from pain to world leadership

*Bjørn Willy Åmo*

## INTRODUCTION

ZU4R is a case concerning a man with a passion and burning energy. Christen likes sports and competing, mostly to win over himself. He took part in a bicycle race, and at that moment he felt an urgent need to improve clothing for cycling. He and a friend prepared some fabrics that became popular with local cyclists. This case outlines the story of Christen and his firm.

The case is intentionally both rich and poor in information; it details the information the founder has, but as in real life, much relevant information is lacking. The student faces the challenge of sorting the relevant from the non-relevant information presented in the case. As the case offers the real name of the founder and the firm, it invites the student to look up the firm, its products, its competitors, and its market and make a considered decision regarding what the critical unknown is and what the real issue is for the firm.

The case itself is a static description of an entrepreneurial journey, but the identification of the firm allows for dynamism and a variety of interpretations of what actually happened, the main problem, and its possible solutions.

The case describes Christen's actions, and his reasons for these actions, in striving to conquer the world market for cycling clothes. This rich case offers ample opportunities to engage students in theoretical as well as practical reflections.

The case description ends at a point of decision. Customers are satisfied, the entrepreneurial team is eager, they constantly improve their products, they have a good relationship with their producer, local investors offer them funding, and they were *this* close to reeling in a deal with the main distributor in Spain, the core world market for cycling. But the world leader in cycling wear forced the Spanish distributor to squeeze them out. What to do now?

The case offers a comprehensive description of the background and history of the entrepreneur, allowing for discussions of the role of the entrepreneur, his resources, his learning path, his intentions, and his motivation. As this is a longitudinal, real-life case, it is possible to look up the firm on social media to see how the case has changed from the time of recording

(January 2020) up to the present day. This allows further issues to be discussed as well as attempts to reason out the change that has occurred.

# THE CASE STORY: ZU4R (PRONOUNCED 'SUFFER')

This is a case of a cycling-wear company, its history and development, and its current situation as told by the main founder.

## His History

Christen Hermansen played football in his youth, trained in fitness at the age of 20, and is generally interested in training; he loves cycling, still, without the need to win. He is 194 cm tall and slightly too heavy to win a bike race. He likes being well dressed and looking good. He was headhunted as the general manager of a bicycle race and became acquainted with Kenneth. Here, he really fell in love with cycling. He rides a lot and wants to keep in shape but does not keep track of the results of his training sessions. As a young man, he was active in sports teams, sat on the board of sports teams, was a coach, and was passionate about sports. He is concerned with details and likes things to be in order.

Christen loves challenges and wants to disprove the impossible. He started his career working at the inn at Oppeid in the municipality of Hamarøy. Hamarøy is a municipality with 3,500 inhabitants in Northern Norway, and Oppeid has a high school. He is a trained plumber, but plumbing was not for Christen; he preferred working as an operations manager at the local sports hall, Hamarøyhallen, while still working at the local inn. In Hamarøyhallen, he was both caretaker and sports leader. He quickly had three children, and the family then moved further north to Gratangen, the place where he was born. There he worked for a while in a home for disadvantaged youths and youths with challenging behaviour. He then took a course in aggressive replacement training. He liked the challenge of helping these young people. Among other things, he was hired by the school system to take care of young people. He then started his own company. He contracted himself out for courses and follow-up of such young people. He achieved good results and managed to help young people back into society. The police noticed that, after his involvement, these young people with long criminal records became less active as so-called 'acquaintances' of the police. He then became associated with the police resource team. Eventually, he became tired of seeing so many problems and wanted a change.

He changed course when he was asked to take a sales job in Stavanger, Norway's fourth-largest city, located in the south-west of Norway. This was back in 2000. He was to develop, sell, and maintain a booklet on 'What to do in the city!'. The booklet was available in hotel rooms and was meant to help guests find out what they could spend money on in the city. This all went smoothly, and Christen then became responsible for getting this up and running in other large cities in Norway, such as in Tromsø, Trondheim, and Oslo. He believes that success lies in doing a thorough job. Eventually, this all became a bit too routine for him, and Christen was ready for new challenges.

## Starting Biking

The challenge came when he was headhunted for a bike race at home in Gratangen. The bike race is called Border Crossing Challenge (BCC). BCC wanted to lift the bike race up a level, and they thought Christen could help with that. As one of the preparations for the planned bike race, the management team for BCC would cycle a route they considered suitable as a trail for the competition. The trail was Kiruna to Gratangen, a distance of about 200 km. Kenneth is a member of the BCC management team. He owns and operates an advertising agency. He does this at the same time as working at the ambulance station in Gratangen. Kenneth is not particularly well trained and has asthma—but at the same time, he has a strong competitive instinct. He went on to win this test race. After a few hours of racing, he got chafing and had to stand on the bike for the rest of the race, and in a steep climb just before the finish, he needed his asthma medicine. The medicine was in the pocket at the back of the suit, but the pocket was placed so high up on his back that he could not reach it. He won the race but needed medical assistance at the finishing line. When Christen went to congratulate Kenneth on the victory as he was lying in the ambulance with a breathing mask on, Kenneth said, 'It must be possible to design clothes that work!'

## Starting the Entrepreneurial Venture

Christen really liked this idea. Using their own money, the two of them made a set of cycling clothes: cycling shorts and a sweater, a wind vest, and a wind jacket with sleeves. The wind vest and wind jacket could be taken off and put on at speed. They immediately noticed improvements. People in the local cycling community thought this was cool. The two of them wanted to make more. They produced 10 sets which they gave to cycling friends who were competent to provide real feedback on their product. They received good feedback and thought they had cracked the code. They were now at a crossroads. Should they bet, or should they stop?

They went on. Innovation Norway thought they did not have enough potential and said no to a request for some seed funding. Gratangen was classified as a restructuring municipality, and it was then easy to gain some financial support from the municipality. They received NOK50,000 and produced 50 more sets. This then became their first collection. It was now April 2016, and the collection was well received. They established a limited company (AS). Christen owned 25%, Kenneth 25%, Kenneth's advertising agency 20%, BCC 10%, and two other investors contributed 10% and 10%, respectively, of a total share capital of NOK100,000. To get customers and attention, they started selling Teamwear—that is, bicycling club uniforms. Then Kenneth's advertising agency designed colours and logos for club uniforms. They sold these items to some local clubs. The first collection sold well and the cycling season was ending; it was now August and a long time until the next cycling season. What now?

## Trying to Diversify

It is hard cycling in Northern Norway during wintertime. There is snow and ice on the road, heavy wind, and total darkness. They needed something to do during the winter. Kenneth's

advertising company had an assignment with a ski race in Ski Classic, a long-distance ski race for the world elite. This is a cross-country race over 40 to 70 km and is one of the major cross-country races in the world. There they provided clothes for the organizers, and there were discussions and negotiations about developing and adapting ski clothes for sale to the athletes as well. Then the big capita firm hit them hard. Swix provided NOK300,000 as sponsorship funds and some Swix equipment, and ZU4R was squeezed out of the deal. ZU4R still managed to become supplier to Madagascar's national ski team. ZU4R then considered the possibility of delivering ski clothing if someone asked for a larger order. They deliver at 50% of the price of the major suppliers. Swix is owned by a US fund that also owns four to five of Swix's competitors. Swix charged NOK3,500 for a ski jacket; ZU4R charged NOK1,500.

This did not prove to be a success. They chose to continue investing in cycling clothing. Their supplier in China wanted them to order 1,000 sets at a time, but as they believed that ZU4R could become a growth company, they accepted orders for 20 sets at a time. They paid EUR30 per set to their supplier. They needed more sales channels to be able to sell so much that they could order the wanted 1,000 sets per order. They started selling and advertising online as well.

ZU4R did not really want to deliver custom design, which is time-consuming per order and implies a high probability that the factory in China would not quite get the design or logo right. ZU4R (or Kenneth's advertising agency) also had to design the clubs' logos and designs, usually without much input from the clubs. This also took a lot of time and did not pay much. Although the factory prioritized orders from ZU4R, it often took over 2 weeks to have such sets produced and delivered to Gratangen. ZU4R felt that they must still accept such requests to build a market and get some sales.

## Improving Their Quality

ZU4R kept striving to be innovative and deliver quality. The cycling jacket from ZU4R is a better fit than many competitors' jackets. It gives less fluttering from the wind at high speeds, less discomfort, and greater speed. The cycling shorts give less gnawing in the seat because the padding is better placed, the special fabric dissipates moisture faster, they provide better muscle cooling and better breathing comfort, and they keep the wearer warmer and drier in rainy weather. The fabric is cut and sewn to provide better compression for the muscles and provides support without impeding blood circulation.



*Source:* Christen Hermansen.

**Figure 17.1**     ZU4R's bicycling shorts

ZU4R ran comparative tests. They put a pair of cycling shorts in a bucket of water for 5 minutes, hung the shorts on a string to drip dry for 20 minutes, and then weighed the cycling shorts. The cycling shorts from ZU4R were the shorts that weighed the least. This matters to a cyclist in rainy weather. Wet shorts mean more weight to pull on, and it requires a lot of energy to evaporate the water in shorts. Wet shorts also mean more gnawing than dry ones. Figure 17.1 shows the bicycling shorts developed by ZU4R.

Table 17.1 shows a comparison of some quality indicators between the bicycling clothes of ZU4R and some of those ZU4R perceives as their main competitors. The test was conducted by ZU4R themselves.

**Table 17.1** Price and quality: ZU4R versus some competitors

| Supplier | Sales price in NOK | Dry weight (g) | Wet weight (g) |
| --- | --- | --- | --- |
| ZU4R | 1,700 | 170 | 330 |
| ASOS | 3,500 | 160 | 755 |
| Trimtex | 2,200 | 201 | 961 |

ZU4R set out to deliver quality suitable for professional cyclists. A local professional cyclist, August Jensen from Bodø, has been involved in the development of the ZU4R 3.0 collection, ZU4R Endurance. He is a regular tester of the product. However, he cannot use ZU4R during running and team training. Professional cyclists are bound by the team's agreements with regard to what clothes they can use during organized training and races.

## Their Long-Term Goal

When Christen is asked why he does what he does, he says that he wants to succeed, and he wants to show the world that he can do it even though many people think it is impossible. He has inner motivation to prove for himself that he can succeed. Moreover, he thrives in a bubble: he wants speed, he wants resistance, and he wants drive.

ZU4R envisages that over time the firm may become an acquisition candidate. Another bicycle clothing company, Rafa, was sold for EUR260 million. Rafa was started in 2005 and became world-famous. It was the strongest brand on the market. Rafa focused on design, colour, and appearance, not quality, according to Christen. ZU4R believes they have better quality and design than Rafa. ZU4R uses computer-modelled seams, fabric direction, and other parameters to provide optimal stretch, compression, and fit, and water, sweat, and heat transport, as well as padding.

ZU4R thinks big but will not borrow money to finance growth. In this story, we have now arrived in January 2018. Innovation Norway gets in touch and says that they have been following them for some time. They would like to give Norwegian companies the opportunity to take bigger steps; the model is the firm Moods of Norway. They are invited to give a 5-minute pitch in Italy in front of a panel. ZU4R was one of the eight that went further and was chosen. Christen and Kenneth were admitted to a course run by the Bocconi School of Management in Italy. The course was based on eight week-long sessions over 8 months. The session theme was what it takes to succeed, focusing on the practical use of social media.

They worked in groups with the other course participants: FOGG, Run & Relax, Aurland shoes, Wabi Sabi, and others. They all worked on their businesses and developed them further. They received input that they should not forget where they came from. They were told that they have good potential, but they must be more than just good, and they must 'live the brand'—the high end of the market. They need to find a way to convey the facts so that this hits home for the recipient. When they started the course, ZU4R had 500 followers on Instagram; after the course, they had 70,000. Christen still spends a lot of time posting new bike-related stories, such as customers' positive comments and 'live the brand'.

ZU4R redesigned their online store. Shortly after the course, they had 15 corporate customers and 300 retail customers on their customer list. They now sell to 28 different countries. They have shipping agreements that allow their products to be delivered throughout Europe within 2 days and to the rest of the world shortly afterwards. They offer 24-hour online ordering; they have express shipping and free shipping. They now pay EUR30 for a cycling jacket and sell it for EUR69 or EUR120, depending on its edition. The later editions have better quality but cost roughly the same as the older editions to produce. The latest cycling shorts cost a little more to produce. A bicycle set lasts 3 to 5 years. Those who train a lot need several sets to train in as the sets need washing after each workout. Many have one to two sets, but others have five to 10 sets. In addition, they must have cycling clothing from the supplier with whom the cycling club has an agreement in order to be covered by the club's insurance during cycling races.

## Gaining Momentum

In 2019, they made a private capital raise and received NOK2,250,000. Innovation Norway invested NOK500,000, a local salmon farmer invested NOK250,000, a local transport company invested NOK250,000, other passive owners, including a local venture capital fund, invested another NOK1,250,000 in total. These outsiders want them to succeed, but they do not interfere in the operation and the business choices Kenneth and Christen make. The investors have long-term goals, and in the short term they are more concerned with what positive impact this has for the local community than the profit opportunity. The original owners sold 22% of the company in exchange for this capital injection.

The two entrepreneurs withdrew salary from the firm for the first time in 2019. Christen still works 50% for BCC, where he now receives an annual salary of about NOK300,000. Kenneth still works in the ambulance service and runs his advertising agency.

Capital is needed to take ZU4R to the next level. They think of investing in Spain. Spain is the main cycling country. It accounts for 50% of the cycling clothing market, amounting to NOK2.4 billion. Albir in Spain is the Mecca for cycling and training. Cyclists then arrange their own journeys and stays, alone or in small groups.

ZU4R then establishes a pop-up shop in Tollbugata, Oslo, a high-end fashion street in the capital of Norway. For the opening of the store, they invite buyers, cycling clubs, and other important contacts. They receive good publicity in the press and are happy with the feedback they receive. Still, they spend NOK500,000 in only 2 months. They learn that most actors are already in contracts for 3 years with suppliers of cycling clothing, and that the relationships are

long term at club level. The pop-up store does not generate enough sales. Christen reflects that they would probably have done this differently if they could go back in time.

In June 2019, they consider a shop-in-shop concept for their Spain venture and would like to start in Barcelona. Through acquaintances, they meet a major family-run supplier of sports equipment to the Spanish market. This supplier delivers sports equipment to 140 stores; he delivers cycling clothing from POC, a main sports equipment producer. POC sells clothes and helmets. POC have a high-end focus but have now chosen to move more towards the wider market with clothes of poorer quality and cheaper prices. ZU4R grabs this opportunity and starts building up an inventory to be able to respond quickly to a request to fill 140 stores with its goods. In the end, it turns out that POC causes the distributor to withdraw from the discussions with ZU4R. Table 17.2 shows the development in turnover and inventory from start-up to the end of 2019.

**Table 17.2**  Development in turnover and inventory for ZU4R from 2015 to 2019

| Year | Turnover (NOK) | Stock (NOK) |
| --- | --- | --- |
| 2015 | 0 | 0 |
| 2016 | 200,000 | 0 |
| 2017 | 700,000 | 0 |
| 2018 | 950,000 | 350,000 |
| 2019 | 1,000,000 | 1,000,000 |

## The Brand They Would Like to Live

The name 'ZU4R' was chosen because it has associations with suffering. The number 4 refers to zone 4 in the pulse; this is when the blood taste emerges, and zone 4 is what really builds strength, endurance, and stand-out mentality. Those who really want to do this are looking for zone 4 experiences. They changed the online store domain from ZU4R.no to ZU4R.com in 2018 when they realized that they wanted to go worldwide. In 2020, ZU4R is ready for take-off; they have good-quality products, they have contacts, they have an inventory, and they have capital. The local bank says that if they get an order and need capital to deliver, they will get what they need.

The status now in January 2020 is that they can focus on another contact in Albir. A Norwegian owns five sports stores there. This may increase sales a bit, but they are hungry for more.

## Their Urge

ZU4R feel they have tried many different strategies and have put a lot of energy into the enterprise, but have not achieved the desired lift-off.

They want lift-off!
What to do next?

## CASE ACTIVITIES

Theories are useful mental maps for understanding, explaining, and predicting human behaviour. As in all maps, theories provide a simplification focusing on the main elements, omitting much of interest and some important factors. All maps are designed for a purpose; so also are theories. This implies that different theories focus on different aspects of human behaviour. There might not be a theory aiming at just the behaviour one wants to study. Then one needs to be able to find out which theories can help establish these wanted insights. In deciding this, one needs to be able to evaluate the strengths and weaknesses of the available theories, building on the strengths and compensating for the weaknesses.

The case invites you as a student to sort out the root problem in a complex and conflicting situation, just as you will be expected to master later as a graduate earning wages or running your own business. A prerequisite for establishing such conclusions to the root problem is that you select one or more suitable theories as your starting point in this mental sorting process.

For instance, if the entrepreneur complains that they lack financing, the root problem is often not that there is a lack of money in the world. Sometimes the business idea is not good enough, or the entrepreneur is not willing to share information on the business idea, or is not willing to share control and ownership regarding the future direction of the firm. Maybe the entrepreneur has not yet spoken to the right people. If the root problem is that the entrepreneur has not yet spoken to the right people, the problem can be understood as a networking issue. The suitable theory to start exploring this is Granovetter's (1973) network theory. If you perceive there to be a resource problem, then Barney (1991) or Penrose (1959) offer a helpful starting point. Barney explains competitive advantage as caused by access to unique, specific, and non-imitable resources, while Penrose claims that competitive advantage stems from versatile resources. If the root problem is information sharing, theories regarding information asymmetry (Balakrishnan & Koza, 1993), adverse selection, and moral hazard linked to agency theories (Haubrich, 1994) can explain why the entrepreneur is unwilling to share information that the investor needs in order to invest. If the business idea is not yet mature enough, then maybe issues such as risk and uncertainty should be discussed further.

Hence, the case is open to multiple interpretations. The chosen interpretation asks for a set of theories explaining and predicting the studied human behaviour, allowing you as a student to explore the usefulness of the theories that claim to be able to shed light on the situation. The theoretical insight gained by you, the student, is then twofold: the usefulness of the selected theory, as well as the insight that theories need to be critiqued and adjusted in order to better serve as guidance for actual and practical problem-solving.

As such, you will be better prepared for solving real problems in a dynamic and often confusing reality.

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# Early-phase Venture Creation

# 18
# DataBoard ApS: start-ups and downs

*Thomas J. Howard, Carina Lomberg, Rasmus Bushøj, and Jesper Hart-Hansen*

## SETTING THE SCENE

It is a sunny Friday afternoon in Copenhagen in late October 2016, and Rasmus is ecstatic. His colleague Kasper has just shown him the alpha version for Rasmus's new business idea: DataBoard ApS, a user-friendly solution to configure info screens. Kasper had programmed it over some evenings and weekends, and it looks great! Rasmus knew it! Kasper is exactly the kind of guy needed for this early-stage start-up—a front-end developer who can make the technology look like it should for the final product. Kasper, too, is convinced by Rasmus's vision for DataBoard: 'The world's easiest and most flexible info-screen solution—like an app store for info screens.' With this alpha version in front of him, Rasmus hopes to finally get an investor for their newly founded IT start-up. Rasmus knows that the seed-stage investment is a critical stage for DataBoard but has high hopes for a meeting he has scheduled with Jesper from Capnova early next week.

With its digital technology as a core, DataBoard ApS is a typical start-up in the audio visual (AV) industry. In this industry, venture capital investments require relatively low levels of investment for potentially high levels of return because of the scalability of digital technology. Since the levels of intellectual property (IP) protection are often not as robust (often not even possible for software), the emphasis is all about speed, traction, and execution. Venture capitalists (VCs) invest if they believe a start-up can get to market quicker than the competition and generate revenue quickly to validate the investment. Within the due diligence process, the investor will review the company documentation in terms of its financials, team, contracts (supply, sales, and employment), IP, and technology to verify whether an investment prospect is good or whether there are any skeletons in the closet.

However, investments are rarely made from a static viewpoint; it is more often dynamic, following a team over a period of time to see whether they are able to identify and solve problems, make and capitalize on new opportunities, and execute their go-to-market strategy. It is therefore common that investments are based on a decision about the team first and

idea second. This is particularly true for Jesper, an experienced investor who likes to invest in founders that know their industry. Knowing that Rasmus has quite some years of experience in the AV industry, Jesper is looking forward to meeting Rasmus and hearing about his DataBoard start-up.

# PART 1: THE PRE-INVESTMENT

This part describes the pre-investment situation in terms of the DataBoard founding team, Capnova, the VC undertaking the due diligence, the status of DataBoard both technically and commercially, and finally the mindsets and viewpoints of both the investor and the entrepreneurs when it comes to the investment prospect.

## The Founding Team

Rasmus Bushøj is a business school graduate from Denmark. For the first 4 years of his career, Rasmus worked in sales before becoming a business manager at Atea ASA, a large business-to-business (B2B) AV/IT solutions supplier. He then moved on to a company in the same industry, ALSO Holding AG, where he was a sales and product specialist related to AV displays for 3 years. In 2015, he left the company to start his first venture, AV-Nerds.dk, focusing on AV solutions/support. During this period, Rasmus came up with the idea and recognizes the demand for DataBoard. While Rasmus has experience in the AV industry, his entrepreneurial experience is relatively limited, as is his experience in dealing with VCs and negotiating term sheets.

Joining Rasmus (the chief executive officer, CEO) is a hard-working front-end developer called Kasper (the chief technology officer, CTO), with around 12 years of experience in web and digital media. Kasper and Rasmus are of similar ages with complementary profiles. Kasper is a talented front-end developer and convinced by Rasmus's vision for DataBoard.

The third co-founder, Sten (the chief financial officer, CFO), is a hardware engineer with significant business and start-up experience. Sten has a lot of experience in AV, particularly in audio space and manufacturing. He also works as a co-founder and business consultant in several different ventures and lines of business. Rasmus knows Sten from the time he was running AV-Nerds, where he had employed Sten as an external consultant. Sten's main role is in creating the investor materials and going out to find business angels and VCs to make the early investment.

At the time of the fundraising round with Capnova, the founding team and staff were composed of the members shown in Table 18.1. Note that John, June, and Phil do not feature in this case study.

**Table 18.1  Founding team of DataBoard at the time of seed funding round**

| Name | Role | Time | Expected equity | Details |
|---|---|---|---|---|
| Rasmus | CEO | FT | 60 | Founder, employee |
| Sten | Commercial developer (CFO) | HR | 15 | Founder, external consultant |
| Kasper | Programmer (CTO) | FT | 20 | Founder, employee |
| John | Graphic and Scala support | PT | | Employee |
| June | Marketing and sales | PT | | Employee |
| Magnus | Board member | HR | 5 | Executive in digital signage, investor |
| Phil | Board member | HR | | Experienced in start-up board work |

*Note:* FT = Full time, PT = Part time, HR = Hourly.

## The Investor

At the time of DataBoard's first investment round, Capnova A/S is one of the four so-called 'innovation environments' in Denmark—a venture capital firm that invests in both public and private funds. In May 2018, the Danish government decides to discontinue the innovation environment set-up. This means that Capnova will manage the portfolio of investments but no longer invest in either public or private funds.

At the time of investment, due diligence in Quarter 4, 2016, Capnova has a portfolio of four investment areas, one being digital technology. A typical investment range for Capnova is DKK500,000 to DKK6 million (EUR70,000 to EUR800,000).

The investor appointed to review the DataBoard case is Jesper Hart-Hansen, investment manager at Capnova, an experienced angel investor in his own right and former co-founder of a successful telecom operator, GlobalConnect A/S.

While there is a lot of commonality in the traits that investors look for to make their investment decisions, Jesper describes his critical success criteria in the following way:

1. Team: The initial idea is most likely wrong! Does the team have a mutual vision and are they strong enough to adapt along the way and figure things out?
2. Skills: Does the team possess knowledge in business development and technology? Do they have social skills, execution skills, and planning/administration competence?
3. Industry experience: Does the core team have industry experience from day one (not just as board members)?
4. Customer dialogue: Do they know about their customer dreams, needs, demands, and payment abilities?
5. Investor dialogue: Are they keeping an ongoing dialogue with (the right) investors?
6. Adaptability: Do they keep their overall vision but adapt their assumptions about the market if necessary? Do they validate with real customers? Are customer financing, feedback, and fast product iterations high on their agenda and already part of the start-up's culture?
7. Realistic budgets: No hockey sticks! Do they provide a business case per one customer? It takes time to get it right and, since the founders likely underestimate time and money, should I give them the benefit of the doubt?

Jesper has significant experience in the digital area as an entrepreneur and has had his own ups and downs, including a large failure from a start-up that was launching and scaling too early based on an unstable software architecture. In addition to the above criteria, Jesper has a key rule for start-up scaling: 'Don't scale your start-up too fast!' According to Jesper, founders must be mature individuals who listen, reflect, and react in time, also often quoting the following from the Startup Genome project: 'Premature scaling is the most common reason for start-ups to perform worse. They tend to lose the battle early on by getting ahead of themselves.'

## The DataBoard Prospect

When walking into the reception of a company—whether an aircraft manufacturer, software coding house, public library, or university—chances are high you will see an info screen, like the one shown in Figure 18.1. The problem DataBoard solves is to make these company displays easy to configure and customize in a professional manner, allowing the user to easily insert apps/widgets, images, and video and resize them to fit within the display. Normally this process needs to be done by someone who can write code, but DataBoard makes it possible for the project manager, marketing team, or secretary to update the display.



| Hardware Cost: | 500 | New licences sold: | 2000 |
| LTV month time: | 36 | CAC: | 1.303 DKK |
| Churn: | 10% | | |

| PER LICENCE | EXPENSES | INCOME | P/L |
| --- | --- | --- | --- |
| 1-12 month | -1.803 DKK | 2.400 DKK | 598 DKK |
| 13-24 month | - DKK | 2.400 DKK | 2.400 DKK |
| 25-36 month | - DKK | 2.400 DKK | 2.400 DKK |
| Total | -1.803 DKK | 7.200 DKK | 5.398 DKK |
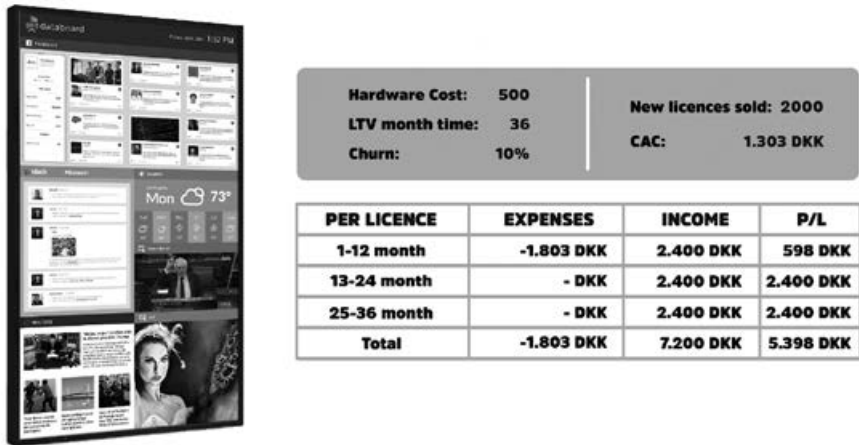
**Figure 18.1**      The DataBoard demo plus key statistics

DataBoard is a B2B company and has customer acquisition central to its investor pitch. Despite this being a typical challenge for B2B companies, Rasmus is very knowledgeable about the sales process and knows this large and growing market segment well. As can be seen from Figure 18.1, the digital licence-based element of the business model allows for a good-rate customer lifetime value (CLV), with the first-year licence fee covering all costs of the sale; the subsequent years and customer retention are therefore paramount to turning profit.

Although mainly relying on bootstrapping until this point, the company traction is strong for a start-up, with seven sales, five demos, and a pipeline of larger customers-in-waiting

and in-pipeline. The financials submitted for the investment round credibly project that the company will turn profitable in 2018, despite a small negative result in 2017.

This early traction is to a large extent fundamentally due to the exceptional persuasive quality of Rasmus, managing to recruit a CTO to build the alpha version product in his spare time as well as convincing early customers to pay for early prototype versions of the product. These early versions were not configurable by the customer. Instead, DataBoard developed and built their info screens for them and updated them. However, they served as good customer referees and gave examples of the product in the hands of the customer and appearing in a finished state.

## PRE-INVESTMENT CONSIDERATIONS

As a further testament to Rasmus's persuasive qualities, he is told by Capnova that before they could invest, DataBoard would have to bring in a senior board member with relevant industry experience. Rasmus manages to convince Magnus (the perfect candidate) to become the board chair as well as invest some of his own cash into the company!

Capnova viewed the team now to be complete with:

- a CEO who is a great salesman, knowledgeable of the industry
- a committed CTO who manages to hack together good-quality proof of concepts in a short time and close to no budget
- a CFO good with financials, marketing, and investment who would be Rasmus's right-hand person to help keep him on track, follow up with customers, and manage the orders.

The equity split between the founders is done without any apparent friction. Rasmus was keen to close an investment fast to get the company moving. From the Capnova side, this was seen as eagerness and a bullish determination to get the company running at speed.

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### QUESTIONS

Please answer the questions for yourself before you discuss in your team.

1. How would you assess DataBoard ApS in terms of Jesper's critical success criteria? If you were Jesper, would you invest? Explain your decision.
2. Regarding the equity split in the founding team:
    a. How would you distribute equity (%) between Rasmus, Kasper, and Sten?
    b. What could you do to ensure commitment and engagement of the founders?
3. What valuation would you place on DataBoard ApS at the time before a potential investment from Capnova?
4. What terms would you want to include in the term sheet if you were a VC investing in DataBoard?

# PART 2: THE INVESTMENT

The negotiation process goes smoothly. Rasmus has a great eagerness to reach an investment and is very flexible in the process, hoping to get moving quickly. On 27 March 2017, an investment contract is struck between DataBoard and Capnova for a DKK2 million investment. In this part, the terms of the investment agreement are described, followed by information regarding how DataBoard progresses towards the first milestone after the first tranche investment.

## The Term Sheet Agreement

On review of the contract, the terms seem to be very favourable to the investor, Capnova. The term sheet is constructed in such a way that a low pre-money valuation is given to the company, but only a small equity investment is made by Capnova, securing them a stake of ~26% of DataBoard; the rest is in the form of a loan, giving Capnova a greater chance to recover its money.

From an investment point of view, this seems to be a very good investment strategy. As with most equity investments, the hope is that DataBoard scales well, becoming a dominant market player and eventually exiting at a much higher valuation. Unlike many early-stage start-ups, DataBoard is not pre-revenue, already securing sales with quite a well-developed pipeline. There is good reason to believe that even if the company does not scale at the hoped and intended rate, linear growth in sales will allow a steady revenue and enable the kind of cash flow required to pay back the loan.

To further de-risk the investment, the payments are in tranches based on meeting a milestone. The first tranche of DKK1 million is paid out on signing the agreement. The second tranche is to be paid out on meeting the first milestone defined by Clause 2.2 (see Figure 18.2).

> 2.2     Terms for the loans granted by the Investors and one of the Entrepreneurs are defined in separate Loan Agreements. Upon meeting the following milestone no later than 6 months after entering into this Shareholders' Agreement, the creditors shall pay the applicable tranches of the loans indicated in the Loan Agreements to the Company:
>
>         (a) New customers of the Company shall be able to implement their own solution online within 15 minutes, and
>
>         (b) The Company shall have established an international sales setup with online demos and remote support.

**Figure 18.2**     Clause 2.2 of investment contract relating to the milestone for the second investment tranche

There are differing viewpoints on the importance of the above milestone definition, but as the old saying goes, what gets measured gets done. Jesper believes the above milestone definition to be unimportant, stating he likes to set milestones that are relatively easy to obtain but can be subjectively interpreted, essentially making it up to the investor on whether they wish to invest

in the next tranche or not. Rasmus has the milestones very much in his mind and is aiming for them.

Other notable items of the investment agreement are related to the key persons listed as Rasmus, Kasper, and Sten. While the obligations of the key persons are quite standard, the employment agreement is not. Rather than a standard employment agreement, DataBoard has a consulting contract with Sten at a flat rate of DKK18,500 per month. The terms of the contract are otherwise quite loose, requiring Sten 'to be available' for activities such as sparring on business, financial, and marketing tasks and can be conducted at the DataBoard office or at another location.

## Progress Towards the Milestone

After the investment agreement is signed, Rasmus is fired up and ready to work all hours to bring DataBoard to market. Yet problems with the team dynamics come into play almost immediately after the investment agreement is signed, with Sten wanting to be paid for work he has already done. As time passes, it becomes clear that the team is not as strong as had been hoped. Sten is almost never in the office and only does well-defined tasks, rarely taking the initiative—he is working as a consultant with higher-priority contracts and in no way acts as a co-founder or entrepreneur investing himself in the company. Even when scheduled to come to the office, there is a regular occurrence of Sten calling in sick on behalf of himself or his children. Jesper comments that Sten, the guy who is supposed to balance and support Rasmus, is just not there doing his job.

Kasper is also struggling with the orders coming in. The software that is already out in the demo is unstable, and the bug-fixing is becoming an all-consuming task for him. Kasper was ideal in the initial stages to make the 'looks like' prototypes where he managed to develop a product that the customer could potentially customize and implement for themselves in 15 minutes (a core product promise). However, he is not a back-end or full-stack developer. The software coded is not just unstable but built on an unsuitable base scaling. The bug-fixing becomes a whack-a-mole process; with every bug fixed, several new ones arise. Inexperience often shows when estimating development or implementation time, and while Kasper's guess is the best guess the team has, everything is substantially delayed beyond estimates.

The funding for the first DKK1 million investment soon runs out. Despite feeling that DataBoard has not met the milestone criteria, Jesper believes that execution always takes longer than the entrepreneurs expect, and the 6-month deadline for achieving the milestone was too short and based on founder optimism. Jesper takes the case to the board at Capnova and agrees for the second DKK1 million investment tranche to be paid out, completing the investment agreement.

## Completion of Investment Round

Following the second tranche investment, Rasmus is out hitting the sales hard, spending money on marketing, product launch, and scaling up. The commercial traction he achieves is truly impressive, but the product is not yet fit for the market. As a result, there is no launch

of the actual product, and instead a series of deliveries, patching, and updating. According to Jesper, the process is a mess. DataBoard has the product in the hands of the customers, which is not working, while selling more. They implement a bug fix Friday afternoon before leaving for the weekend to find out the following week that there are new and often worse bugs as a result of the fix. Capnova has implemented DataBoard in their office, and it is frustrating to arrive on a Monday to see that their display simply is not working at all after the recent bug fix.

Despite these issues, Rasmus is an unstoppable train on the sales side, learning where the bugs are in the system so he can perform the live demos without hitting a glitch. All entrepreneurs might experience this process at some stage, but DataBoard is now commercially maturing and scaling, yet without having the actual product ready. They still sell an early-stage software and scale based on Kasper's estimations of the time to have the product ready. DataBoard is also international now, selling the product in Chile to a TV station, to a school in Pakistan, and to some prestigious co-branding on the NEC stand at a major AV conference.

Rasmus is increasingly feeling alone in the process. While it is possible to receive support and advice from Magnus, the board chair, even Magnus is not fully committed, refusing to activate his network until the product is closer to being ready for market.

Financially, DataBoard's burn rate is too high. They are constantly reporting their actual financial figures as exceeding their budgeted ones. Despite having an unstable product, a large proportion of the budget is being spent on marketing, building momentum for launch, and scale-up. DataBoard is running out of money fast and needs to raise another funding round!

## QUESTIONS

### PART 2A

1. What are your thoughts on the investment agreement?
   a. Was it good from both sides?
   b. What were the main risk factors involved?
   c. What were the potential issues related to the agreement?

### PART 2B

1. Looking back over Part 2, how do you evaluate the ups and downs of the investment case and the causes?
2. What would you have done differently if you were acting on the board of DataBoard during this time?
3. What do you think will happen next? What will we read in Part 3?

# PART 3: NEW INVESTMENT ROUND

Coming close to bankruptcy, Rasmus approaches Jesper, asking for additional investment. Jesper agrees but adds a requirement that before investing in any future tranches outside the original investment agreement, Rasmus will have to persuade another private investor to

co-finance with Capnova. True to form, Rasmus manages to bring on board a new investor—Lars, the DataBoard accountant—and seals an investment of DKK300,000 each from both parties. However, with the high burn rate and unstable product, the additional funding does not last long.

Rasmus genuinely believes that DataBoard has executed very well, the business is full of scaling potential, and the issues will be solved down the road. Having seen other start-ups in the ecosystem that have launched products with software issue and are still thriving, Rasmus sees no reason not to maintain belief in the business, and keeps marching forward.

Jesper, on the other hand, has a different viewpoint. He has experienced a similar situation in the past that showed very similar issues. He concludes that continuing to develop and roll out the product built on code that is structurally unsound is futile. He also believes that in such a situation, the company could be saved by a great, well-functioning team, but this is unfortunately not in place, with the CTO and CFO both being out of their depth in regard to the challenge ahead.

Rasmus manages to convince Lars to make a further DKK300,000 investment on the same terms, but this time Lars has to approach Jesper to ask for the match funding. After a Saturday morning phone call, Jesper says that he will consider the match investment. Lars understands from the phone call that Jesper is committed to the match investment and with that understanding makes the DKK300,000 investment into DataBoard without any formal agreement being in place.

Now, just 1 year (approximately) after the initial investment agreement and with roughly DKK3 million total investment (DKK2.3 million from Capnova), Jesper decides that Capnova will make no further investment into DataBoard.

Lars is extremely unhappy with the situation after making his investment on a misunderstood premise. Capnova's decision to not invest more money changes the company outlook entirely. Almost immediately, Rasmus takes the decision to let six members of staff go, and the company is left running on the fumes of Lars's investment and Rasmus's own money.

After trying to find a new CTO, Rasmus finds himself being sued by the old CTO, Kasper. The company now has to survive without a CTO and no suitable replacement. New investment is sought but has not yet been obtained. Roughly 1 year after Capnova declines the additional investment round, DataBoard ApS goes into bankruptcy in mid-2019 and is finally dissolved on 3 August 2020.

Jesper now works as an investor for Vækstfonden, the sovereign fund of Denmark, investing in early-stage venture companies and looking for entrepreneurs like Rasmus. Since closing down DataBoard, Rasmus has gone back to study business administration and management (based on Jesper's advice) and now works for a new company (Atea ASA) selling AV solutions, where he receives regular requests from customers for a DataBoard-like solution.

Jesper and Rasmus remain friends with mutual respect and appreciation for each other and the relatively short but exciting journey they took together.

# 19

## Fabricomp AB: developing a collaboration strategy for a newly started university spin-off company in Sweden[1]

*Jens Laage-Hellman and Frida Lind*

## INTRODUCTION

This case deals with a young university spin-off company, here called Fabricomp. It is commercializing a radically new technology for making carbon fibre composites (CFCs). This is an advanced and versatile material that is typically used when there are simultaneously high demands on mechanical strength, stiffness, low weight, and thinness. CFCs have applications in many different industries, where they are used as a substitute for more conventional materials such as steel, aluminium, plastics, wood, and concrete.

CFCs emerged as an important category of materials during the second half of the 20th century. They consist of a reinforcement fabric made of carbon fibre which is embedded in a polymer-based resin. The shape of the composite is determined by the design of the final product; for example, it can be a golf club shaft or an entire tennis racket frame. CFCs can also be used for making various types of automotive components, such as engine and body parts. Appendix 19.1 explains how CFCs are manufactured and what types of companies make up the supply chain. Important abbreviations and some special terms and names used in this case are explained in Appendix 19.2.

The case describes the company's prehistory, how it was founded and started up, and some basic facts about the composite industry. The task is to propose, 1 year after the foundation, a strategy for the company's external collaborations during the product development.

## SETTING THE SCENE

It was a cold and gloomy day mid-January 2004 when the board of directors for Fabricomp AB gathered in a small meeting room belonging to a business incubator linked to the Technical University of Western Sweden ('Western'). The company had been founded 1 year earlier for the purpose of commercializing a unique weaving technology for making a reinforcement fabric to be used in the manufacture of composites mainly based on carbon fibre. The inventor, Neil Cooke, had developed the technology as part of his doctoral thesis at Western's Department of Textiles and had founded Fabricomp in 2003, together with two students from Western's School of Entrepreneurship and an experienced businessperson. These four persons constitute the board of directors.

The company was renting some premises at the incubator and had, immediately after the founding, embarked on the challenging work of developing a full-scale manufacturing process, a commercial product, and customer applications. The board meeting began by dealing with some formal and organizational matters. This was followed by an intensive discussion on Fabricomp's need to involve external actors in the upcoming development activities. The board members understood that this was crucial for Fabricomp's chances to reach the market and become a high-growth company. The two student founders, who had become responsible for managing the company, had learned during their studies that in business-to-business (B2B) markets, the interplay among firms and other types of industrial actors is a central element in technological innovation. In particular, collaborative business relationships between sellers and buyers constitute a valuable resource for innovating companies. This holds true for established firms as well as for young start-ups, including university spin-offs such as Fabricomp. But how should this be done?

The board members came to the conclusion that Fabricomp needed a collaboration strategy. It had to be sustainable and guide the company's acting. The invention was radical, and effective use of the fabric would require significant changes in the composite manufacturing. It was therefore expected that developing the product and establishing it in the market would take quite a long time, maybe 10 years or more, and it would require substantial research and development (R&D) efforts. It was decided to give Anders Mattsson, one of the student founders and vice president for marketing and sales, the task of coming up with a proposal for a collaboration strategy. It should be presented and discussed at the next board meeting to be held 3 months later.

Anders Mattsson was excited about the task and back in his office he immediately began to reflect on how to work out an appropriate collaboration strategy. He thought that Fabricomp was already on the right track and had made several promising contacts with potential customers. But there were, at the same time, important questions to be addressed. For example, what kind of partners should Fabricomp establish collaboration with? This included the type of counterpart as well as the selection of individual partners. Furthermore, what were the benefits to be gained? And what should the collaborative relationships look like? Another question was at which point in time different partners should be involved. Anders also wondered what demands the strategy would put on Fabricomp's capabilities and organization. He realized that before answering these questions, he needed to reflect upon what he and his co-founders had

learned about the composite industry through previous studies and research at Western and from the contacts that Fabricomp had had with various companies and organizations during the first year. These insights would help him to better understand what kind of industries and application areas Fabricomp should focus on. He would also get ideas about how to get potential customers interested in collaboration and helping Fabricomp in the development work. He decided to put the collaboration strategy aside for the moment, but the next day he would already start putting together and analysing the available knowledge.

## THE INVENTION

Neil Cooke presented his PhD thesis in 1997 after several years of research carried out at Western's Department of Textiles. It combined traditional textile technology with new concepts for the purpose of developing new fabric-forming techniques. These were intended to be used for making composites rather than conventional textile products. The dissertation resulted in seven inventions building on different technical solutions intended for different types of composites. For the purpose of commercializing all these inventions, Neil, together with his businessperson friend, founded a company.

The contact with Western had faded since Neil had left the university after having received his PhD degree and since no one else continued the research. In fact, in 1997 Western decided to close the whole department because of the decline of the Swedish textile industry.

One of the inventions was a novel weaving technology for making reinforcement fabric sheets to be used in the manufacture of polymer composites based on, for example, carbon fibre. This invention was radical since the fabric was based on tape instead of yarn, which was the traditional raw material. The invented fabric was more expensive to make and use. However, it had unique and promising properties that could enable the manufacture of thinner composites with lower weight, higher strength, and a smoother surface. It was expected that the demand for such composites would increase in the future.

## A BUSINESS DEVELOPMENT PROJECT AT WESTERN

After a few years' work on the seven inventions, Neil spoke about the above-mentioned product idea to a Western professor engaged in commercializing academic research. This meeting resulted in a decision to take the idea together with an existing demo unit as a starting point for a business development project at the Western School of Entrepreneurship. The project was run by a group of four MSc students who collaborated closely with Neil and the businessperson. The students carried out a market investigation, leading to the identification of suitable products. The students participated in a regional business idea competition, which they won.

Based on the result of the student project, the idea to start a separate company for commercializing the invention and turning it into an innovation was born. For cost reasons, the main focus would be on a new class of high-performing CFCs that were beginning to emerge. The

size of the potential market was big—some USD2 billion globally only for CFCs. If other types of composites were included, the potential market was at least twice as large.

To verify the conclusions, a leading Swedish composite researcher, Lennart Ahlquist, was asked to evaluate the invention and the proposed products and applications. He was research manager at the Swedish Institute for Research on Composites (SIRC) and adjunct professor at one of the Swedish technical universities. Lennart said that he was cautiously optimistic about the idea and believed that the unique properties of Fabricomp's tape-based fabric had a good chance of bringing value to composite manufacturers—especially thanks to its favourable strength–weight ratio compared to existing CFCs. The benefits would vary among individual applications. To find out whether the cost–benefit ratio was good enough, further studies had to be conducted, preferably in collaboration with composite manufacturers.

## THE FOUNDING OF THE COMPANY

In early 2003, given the promising result of the business development project and the positive evaluation of Lennart Ahlquist, it was decided to spin out the invention from the existing company and start a separate firm named Fabricomp. There were four founders: Neil Cooke, the businessperson, and two of the students. The latter, Hans Bohlin and Anders Mattsson, became responsible for managing the company, acting as chief executive officer and vice president for marketing and sales, respectively. Neil took up the position of R&D manager. In parallel, he continued to work on the commercialization of the other six inventions.

Besides the investments made by the four founders, the initial funding came from Western Invest, a venture capital (VC) firm linked to the incubator, and a group of business angels. They realized that more money would be needed in the near future, and the plan was to invite other VC firms to invest. In connection to the founding, the ownership of the technology and the patents were transferred to the new company.

Initially, Fabricomp operated from the business incubator. To start up production, a proto-type weaving machine was built and placed there. However, it soon became apparent that this location was not ideal since it was difficult to expand production. Fabricomp therefore began to look for a better solution.

To support future brand-building activities, Fabricomp registered the trademark Hipercom® for its fabric. Inspired by Gore-Tex, one idea was to offer end customers the opportunity to put the logotype Hipercom on their product. As Anders Mattsson explains, 'We hoped that this could be seen as a quality mark and add value to our customers.'

## EARLY DEVELOPMENT ACTIVITIES AT FABRICOMP

Immediately after the foundation, intensive work to develop the manufacturing process, the product, and the applications began. When developing and scaling up the manufacturing process, it was soon discovered that the purchased carbon fibre tape was not good enough. This led Fabricomp to start developing its own proprietary technology and machines (step

1 in the supply chain; see Appendix 19.1). The process development work also motivated Fabricomp to seek contact with potential equipment suppliers that could be involved.

Other development activities were more directly related to the product and its applications. For example, how should the new tape-based weaving technology be used to make fabrics with the right properties? The goal was to develop a wide range of composite solutions optimized for different end products. Initially, much of this development work was done by students from two different universities who carried out their MSc theses on behalf of Fabricomp. These students, supervised by experienced composite researchers, thus became a valuable resource before Fabricomp had built up its own in-house R&D organization. One of the first students was recruited as product development manager (working in parallel with Neil Cooke, who focused on the process development). It became apparent that applications development would be important since there was a demand in many industries for tailor-made solutions. This necessitated a high degree of flexibility with regard to product properties and how to use the fabric in the manufacturing of customized composites. Another goal was to get a 'proof of concept'—that is, a collection of data showing that Hipercom delivered the expected benefits and had commercial viability.

The managers realized that as an input to the product development, it was imperative to learn more about the potential customers' needs and wishes and how these could possibly be met by using Hipercom. For this purpose, Hans Bohlin and Anders Mattsson travelled extensively during the first year and visited a large number of potential buyers in Europe, North America, and Asia. At this point, Fabricomp did not yet have a final product to show but could supply specimens made in its prototype machine. Nonetheless, the discussions were fruitful and showed that there was a high level of interest in Hipercom among composite manufacturers. One of the car makers even placed an order. However, Fabricomp could not yet deliver.

Racing cars were identified as an interesting application area, since many parts are made of CFCs. Manufacturers of such cars—for example, the Formula 1 teams—are constantly searching for new materials and solutions that lead to higher strength and lower weight. The Formula 1 teams were perceived to be very innovative but also demanding and secretive.

All these visits made during the first year led to a deepening of Fabricomp's market knowledge, adding to what had been learned previously. There were new insights, not only about the technical issues—the two managers also got a better understanding of how the composite industry worked. For example, they saw that business relationships could differ between industries and among individual manufacturers—in terms of, for instance, willingness to share information and to engage in joint R&D activities. This meant that the nature of Fabricomp's future customer relationships would vary depending on the application area.

## Research Contacts

The previous contact with Lennart Ahlquist had been rewarding. He was research manager at SIRC, a state-owned trade research institute. It had three sites, one of which was located near Fabricomp. The contact had also been appreciated by SIRC. Lennart says:

> Hans and Anders were openminded and receptive to new knowledge and new ideas. Fabricomp was an interesting company from our point of view. They had a unique and promising technology that seemed to be useful in the development of the new ultralight and high-performing composites that were under way in many parts of the world.

Fabricomp's managers thought that SIRC could become a valuable resource. It had good laboratory facilities and skilled engineers. Being a trade research institute, it conducted contract research for industrial companies. SIRC also participated in publicly funded national and international cooperative research projects.

It was concluded that SIRC could support Fabricomp's product development by carrying out advanced materials testing and by helping Fabricomp to become part of cooperative research projects. Besides financial support, this would give Fabricomp access to new scientific knowledge and provide opportunities to establish new contacts and collaborations with universities and firms.

## Business Model

Another important conclusion concerned the choice of business model. Although being a weaver of fabrics, Fabricomp decided not to operate at the converter level (i.e. step 2 in the supply chain; see Appendix 19.1). The world market was dominated by 10 to 15 converters. Instead of competing directly with them, Fabricomp's plan was to operate on the next level (prepreg) where the fabric is pre-impregnated. That would bring Fabricomp closer to the composite manufacturers and make it easier to influence them. As explained by Anders Mattsson, 'It was crucial for us to get in direct contact with the end users and make them interested in testing Hipercom and prepared to make modifications to their own products—so that the superior properties of Hipercom could be taken advantage of.' This choice did not mean that Fabricomp would start up impregnating operations. These should instead be outsourced. It could be either to a prepregger selected by the customer or a prepregger with whom Fabricomp had established a long-term partnership.

It turned out that all prepreggers were not happy about Fabricomp's intention to go all the way to the end customer. One of them, in an attempt to prevent Fabricomp from contacting its customers in the racing car industry, offered these buyers exclusivity deals.

# THE CFC INDUSTRY AND ITS APPLICATIONS

As mentioned, Fabricomp's founders had learned a great deal about the CFC industry through their previous research and studies and their experiences during the first year. Here follows in a condensed form some information that was available to Anders Mattsson when he started to develop the collaboration strategy.

## The Automotive Industry

The automotive industry had been an early adopter of CFCs. Already in 1971, a rally car had been equipped with CFC wheels. In the following decades, CFC components became increasingly used in the manufacture of high-performance racing vehicles, especially Formula 1 cars. There were approximately 10 teams participating in the Formula 1 World Championship series. This included firms such as Mercedes, Ferrari, and McLaren. The extreme demands on high strength, rigidity, and low weight mitigated the high cost. CFCs have, over the years, been used to make an increasing number of components in the chassis, body, and engine. The competition was extremely fierce and to a large extent driven by the technological development. The teams invested large resources in R&D and were quick to adopt technical improvements. Copying of new solutions introduced by competitors was common. To keep their rivals behind, the teams were very restrictive in disseminating information about their development activities. This behaviour affected not only the degree of openness between the teams but also the nature of supplier relationships.

CFC-based components have also been developed by manufacturers of passenger cars, trucks, and buses—for example, in Germany, where several pioneering companies have their home.

## The Aerospace Industry

Manufacturers of aerospace products adopted CFCs early. These were used, for example, in the aircraft industry to make structural components in wings and fuselages. These were applications where high strength and low weight were desirable properties. CFCs were also used in seats and other interior components.

The aircraft industry was dominated by two giant original equipment manufacturers (OEMs)—Airbus and Boeing. But there were also other manufacturers specializing in small-size or special-purpose aircrafts and many small and large component suppliers using CFCs. The development and implementation of a new structural component was always—not least for safety reasons—a complex undertaking that tended to be costly and time-consuming. The material suppliers often had to be involved. The testing of a new component could take 1 to 2 years to complete.

Besides using CFCs in product development projects (e.g. a new airliner), the large OEMs carried out research projects aiming to develop new basic technologies. External actors from industry and/or academia were often involved. Both OEMs and component suppliers some-

times participated in cooperative research projects, co-funded, for example, by the European Union.

Another characteristic of the aircraft industry was that the product life cycle was long in general. New aircraft models were often used over many years, and changing the material in structural parts was difficult and seldom occurred. Consequently, the supplier relationships were often characterized by high-order sums and long-lasting contracts. These traits were different from how it worked, for example, in the racing car industry, where the life of a certain component could be quite short.

These characteristics of the industry made it particularly difficult for small and young companies to become suppliers to the big players. The latter were often suspicious about new companies that had scarce resources and lacked a track record. Many of them preferred to do business with larger and more established suppliers. Furthermore, if given a chance to qualify as a supplier, the company must be prepared to participate in long-lasting projects and invest its own resources in joint R&D activities. Then, if it succeeds in becoming a certified supplier, it has to make commitments to deliver the required volumes over a long period of time.

## The Construction Industry

In civil engineering, CFCs have been used primarily for retrofitting purposes. Despite high cost, using CFCs to repair existing structures (e.g. a bridge) made of other materials could sometimes be economical.

CFCs were also sometimes used in new projects as a means to strengthen other reinforced materials. However, the high price of CFCs could be a barrier to usage in such cases.

## The Sporting Goods Industry

The favourable strength-to-weight properties made CFCs attractive to producers of sports equipment—especially in high-end products. Thus, CFCs were used in a broad range of sporting goods, including rackets for tennis, squash, and badminton, golf club shafts, surfboards, skis, canoes, and bicycle frames. For many of these products, CFCs offered superior properties compared to alternative materials such as steel and aluminium. The product life cycle was often relatively short, and material changes frequently took place.

The actual manufacturing of the composite was often outsourced by the OEM/brand owner to a sub-contractor typically located in Asia. These companies usually had deep knowledge about how to design and make different types of composites.

The sporting goods industry was fragmented in the sense that it comprised many different product categories with differing demands on the material. The optimization of properties meant that the technical solutions had to be adapted to the application. However, many products belonging to the same category (e.g. tennis rackets) were similar. To distinguish themselves and build their brand, the OEMs therefore tried to differentiate their products through their choices of material, shape, and appearance. This was an important means to strengthen competitiveness and increase sales.

For the fabric (or prepreg) suppliers, organizing the composite manufacturing meant that besides the OEMs (the actual buyers), the suppliers in many cases had to interact directly with the sub-contractors. These firms had detailed knowledge about how to make the CFC product. They could have strong opinions on the properties of the fabric. To make an optimal solution, there could be a need for the supplier to provide specific information on the fabric and carry out calculations and simulations in support of the design process.

### Other Industries and Applications

CFCs are to varying degrees used in many other industries where certain products could benefit from CFC properties. Typical examples are pleasure boats, musical instruments, firearms, fishing rods, train bogies, and laptop shells.

## THE SWEDISH ENVIRONMENT

Sweden was relatively weak in CFC manufacturing. There were several technologically advanced companies in the automotive and aerospace industries such as AB Volvo, Scania, Volvo Cars, Saab Automobile, Saab AB, and Volvo Aero. These firms were not at the forefront of CFC development from a global perspective. But some of them were important end users. Since 1994, there has been one small producer of advanced sports cars—namely, Koenigsegg Automotive.

The production of sporting goods was very limited. In the past, Sweden had several producers of, for instance, ice-hockey equipment and skis, but these firms had been outperformed by foreign rivals. One exception was STIGA Sports, which was a world-leading manufacturer of table tennis blades. To support its brand, it was important for STIGA to be able to supply professional players with high-performing blades that helped them to win medals in championships.

There were several exporting manufacturers of sailboats and motorboats. However, none of them focused on boats specifically intended for racing. This is despite the fact that Sweden has historically been a successful sailing nation. Swedish teams have participated in prestigious competitions such as the America's Cup and Volvo Around the Ocean Race.

As to research, SIRC was a key player with considerable human and physical resources. It also had a vast international contact network both in industry and academia. There were a couple of technical universities (not including Western) that conducted CFC research.

## DEVELOPING THE COLLABORATION STRATEGY: SOME THEORETICAL INSIGHTS

When Anders Mattsson started to think about the collaboration strategy, he recalled certain things he had learned during his studies at Western. Academic research shows that, especially in B2B markets, technological development tends to take place as an interplay among different actors who interact with each other. In particular, business relationships between

selling and buying firms are often important as a locus of collaborative R&D activities. Inter-organizational networking in the context of technological innovation is a multifaceted phenomenon, though, and the character of the interaction varies depending on the context. In some situations, the R&D-related interaction is intensive and leads to co-development. In other situations, it can be rather superficial and limited in time and scope but still be beneficial. The division of power, responsibility, and work tasks may also differ. The same goes for the amount and form of communication and the degree of formalization—both organizationally and legally. While some collaborations are dyadic, other projects involve multiple actors who perform different roles. The kind of interaction required and that leads to success for an individual firm depends on external and internal factors.

For a selling firm, the development of a new product usually requires interaction with and involvement of customers (users)—existing or new ones. There are several good reasons for doing so. One is to gain a deeper understanding of customer needs, whether or not the aim is to develop a customized solution or a more standardized product. Normally, this kind of knowledge is difficult to obtain at arm's length and requires the establishment of collaborative relationships that allow open and fruitful communication. Correspondingly, the customer gains a better understanding of what the seller can offer.

Another reason for involving customers relates to sharing and combining tangible and intangible resources. This takes place through joint R&D activities where both parties contribute and benefit. It is, for example, common that customers carry out tests in a real-use setting. It can be a concept, a prototype, an almost-finished product, or a new application.

Another possible advantage is that some customers—so-called 'lead users'—may be useful as a source of novel ideas and solutions. They are ahead of their competitors and actively develop their own technical solutions before these are available in the market. Identifying and interacting with such firms can help to speed up the development and save costs.

In addition to these benefits, customer involvement can lead to early sales (i.e. revenues), customer loyalty, references, and legitimacy (e.g. in relation to financiers and potential partners). In many situations, customer collaboration is a necessary precondition for commercial success.

As to the timing, it is particularly important to involve future buyers and users in the early phase of an innovation process—that is, when the needs are mapped and the product is specified. While the detailed designing can often be carried out internally without involving customers, the subsequent testing usually requires interaction with potential customers for validation and fine-tuning of the design. An exception from this common pattern is when developing highly customized products. Here, it can be suitable to have the customer involved throughout the entire process. Another timing issue concerns which application areas (market segments) should be targeted and prioritized during different periods. This choice is affected by the market (network) characteristics and the innovating company's own needs.

Firms interact with customers in different ways. There are a multitude of methods used such as special needs-mapping techniques, surveys, workshops, and user testing. Depending on the situation, different types of collaborative relationships are required or desirable—for example, in terms of communication, resource sharing, and duration.

Needless to say, the selection of partner is important. It depends, among other things, on what the innovating company wants to gain from the collaboration and availability of suitable partners. As to the type of partner, it is often natural to work with the immediate customer (the buyer). However, sometimes there can be other actors who are more important from a development point of view, such as end users or other suppliers to the customer. While lead users can make valuable contributions at an early stage, it may be preferable to work with more ordinary and representative customers in the validation phase. Furthermore, what features should the ideal partner have? Given the mutuality of collaborative relationships, the partner choice is never unilateral but builds upon both partners' goals and wishes.

Anders Mattsson had also learned that joint development of radically new products often takes place in collaboration between companies from the same country. For the innovating company, it is easier and less costly to work with domestic partners since the distance is shorter—geographically, culturally, and language-wise. Having domestic partners is particularly valuable to small and young companies. Unlike large and internationally operating corporations, it is more difficult for such firms to collaborate with foreign partners. At the same time, Sweden, like the other Nordic nations, is a small country. This means that firms commercializing new products for niche markets often have to enter foreign markets early. There are many Swedish firms that have succeeded in doing so, and this includes several high-tech start-ups. Some of them have become 'born globals'. The smallness of the domestic market also means that it can sometimes be difficult to find suitable partners in the home country. Then, the only chance is to seek collaboration with potential customers located abroad.

Anders understood that all these lessons had relevance for Fabricomp and was something that he had to take into consideration. He had to suggest with whom Fabricomp should collaborate. And he had to clarify the purpose of the collaborations, when these should take place, and what kinds of relationships Fabricomp should have with its partners.

## BOARD MEETING 3 MONTHS LATER

The development of a collaboration strategy for the product development was the key issue on the agenda, and all board members were curious to hear about the proposal. During the past 3 months Anders had spent a great deal of time thinking about the strategy. He had compiled and systematized knowledge residing within the company and collected some new information.

Anders felt that he had a good picture of what the strategy should look like. But even if he was pretty sure that his ideas and propositions would be well received, he realized that there was a need for a critical discussion—for example, regarding key assumptions and the possibilities of successfully implementing different parts of the proposed strategy.

One thing he had decided to leave outside the agenda was the involvement of equipment suppliers in the process development. This was an important issue, but it would be better to deal with that in a later meeting.

Anders's presentation had the following headings:

1.  Need for a collaboration strategy
2.  Content of the collaboration strategy and expected results
3.  Internal prerequisites for a successful implementation of the strategy.

After the presentation, the board was expected to discuss the proposal and make decisions on how to proceed.

**TASK**

Prepare Anders Mattsson's presentation in the form of PowerPoint slides. Be prepared to discuss the strategy in the following board meeting.

# NOTE

1.  The names of the company, other organizational units, and persons have been disguised. The descriptions of certain events have been modified for educational purposes.

# APPENDIX 19A.1 MANUFACTURE OF CFCS

There are a multitude of alternative techniques and raw materials used in the manufacture of CFCs. The choice of production method depends on, for example, the shape of the end product, the number of units to be produced, and not least the material properties aimed at. Figure 19A.1 illustrates a commonly used manufacturing process that consists of four main steps representing different levels in the supply chain.

The first three steps are normally carried out by specialized firms. The carbon fibre commonly consists of yarn, and it is used in the second step to make a woven fabric, which can have varying properties depending on its intended use. The firms manufacturing the fabric are called converters. In many cases, in the next step the fabric is pre-impregnated with a polymer resin. This intermediary product, called 'prepreg', is then used to make the final composite by curing it in a mould or tool.

The finished composite is made by either an OEM—for example, an automotive company or a producer of sporting goods—or a component supplier. However, the actual manufacturing operation is often outsourced to a sub-contractor.

**Figure 19A.1**   Manufacture of CFCs

## APPENDIX 19A.2 ABBREVIATIONS, NAMES, AND SPECIAL TERMS

| | |
|---|---|
| **B2B market:** | business-to-business market (a market where a firm sells its product or service to an organizational buyer) |
| **CFC:** | carbon fibre composite |
| **composite:** | a material that is produced by merging two or more constituent materials with distinctly dissimilar properties |
| **composite industry:** | the companies involved in the composite manufacturing supply chain |
| **composite manufacturer:** | the company (e.g. an automaker or its supplier) that manufactures the finished composite |
| **converter:** | the company that makes the woven reinforcement fabric |
| **fabric:** | the reinforcement textile in polymer composites |
| **Hipercom·:** | the registered trademark for Fabricomp's fabric |
| **intellectual property rights:** | immaterial assets such as patents and trademarks |
| **logotype:** | a graphic mark, emblem, or symbol used by firms in their marketing |
| **OEM:** | original equipment manufacturer (brand owner) |
| **prepreg:** | fabric pre-impregnated before the manufacture of the finished composite |
| **prepregger:** | the company that makes the prepreg |
| **SIRC:** | The Swedish Institute for Research on Composites |
| **VC:** | venture capital |
| **Western:** | The Technical University of Western Sweden |

# 20

# Sustainable entrepreneurship: firm growth and the balance between saving the planet, people, and profits

*Martin Senderovitz, Simon Jebsen, and Hannah Suder*

## INTRODUCTION

Malte Suder is a young guy with a big dream of running his own sustainable business. Malte wants to run his business in a way that reflects his personal values of caring for the environment, the climate, and the social impact of his endeavours. Malte's business, Steruper Strohschweine, is in pig farming—an industry that traditionally has not been positively connected with sustainability. He wants to run his business and take care of the environment and climate at the same time. However, even though he has had some initial success in starting the business, he faces some serious issues and hard choices.

Steruper Strohschweine is a small producer of premium-quality pork based on ecological, social, and environmental considerations and values. The concept is to produce meat in a more animal welfare-friendly, social, and environmentally friendly way, as well as to promote a more conscious consumption of meat. The company was founded in 2019 by the young entrepreneur Malte, the son of a farmer in the Anglia region in the border region between Denmark and Germany. Steruper Strohschweine is located in the small village Sterup, and the meat products are sold in a supermarket in the village where approximately 7,000 households from Sterup and the surrounding municipalities buy their products for daily use.

### Challenges and Decision-Making

On a general level, this case story is about an entrepreneur who tries to balance the visions and ideals of social considerations, improved animal welfare, and environmental and climate change concerns—but at the same time struggles with how to make the business financially more profitable.

The case story presents the entrepreneur's sustainable ideals and vision, the present internal and external situation, the issues and challenges he faces, and his dilemmas and options for improving the business.

The entrepreneur faces some complex issues and needs to make some future-oriented decisions and hard choices regarding how to develop his business in an uncertain situation and without full knowledge of his potential options and their likely future consequences. Here are some of the questions he is thinking about: how to develop and grow the business? How to keep ideals in a competitive commercial market? How to deal with financing? Moreover, how to make the venture with environmentally friendly 'straw pigs' (Strohschweine) financially sustainable?

Welcome to an exciting story about entrepreneurship and how to maintain a sustainable balance between saving the planet, people, profits, and pigs!

## A MAN ON A MISSION!

Steruper Strohschweine looks from the outside the same as many other similar smaller farms. It is a traditional countryside farm, with a small farmhouse as living quarters and a separate pigsty for the pigs. The facilities are relatively small compared to more modern and industrialized farms. The place is nice, quiet, and very 'hyggeligt',[1] as they would say just north of the border. However, moving inside and taking a closer look at the facilities and the ways of production, things start to change. The vision, goal, and business ideas of Malte Suder and his farm are not business-as-usual and mainstream.

The origins of Malte's business idea can be traced back to two experiences the entrepreneur had. First, his father is a farmer, so the entrepreneur experienced conventional pig farming from the beginning of his early childhood. He saw how the pigs were held and how little space they had during their short life. Second, from the consumer side, he observed that people were stressing the importance of animal welfare but were still buying mass-produced meat. When this topic was raised among friends and family, people often said that if they were able to buy meat from pigs nearby that had 'a good life' until they got slaughtered, they would, of course, buy it. The entrepreneur saw this as an opportunity, and the idea to start the project was born.

Most of the resources to start the business stemmed from his father, and he plays a key role regarding resource mobilization: he was able to use one of his father's stables without paying rent and paying for water, heating, or electricity. During the start-up process, the swill for the pigs also came from the entrepreneur's father. With the little resources the entrepreneur had available, he bought at the beginning of his business three pigs from his father for EUR70 each.

### Goals and Visions for the Venture

The entrepreneur's personal goal is to keep the animals and market the meat products in a way he can vouch for. The entrepreneur explains, 'My goal is to keep the pigs with good conscience and to market them and stay there in such a way that I can vouch for how I hold the pigs.' The entrepreneur wants to wake people up and encourage them to eat meat more consciously—

and even to eat less meat overall. In the stable, there are 5 m² per pig and straw on the ground, hence the name 'Strohschweine', meaning 'straw pigs'. There are rubber and plastic balls that the pigs play with, and they can even listen to classical music through a loudspeaker during the day in the stable. The pigs can move freely inside and outside in the mud and are given organic and natural forage. The pigs are taken to a local slaughterhouse and sold only in the nearby supermarket to minimize transportation throughout the production and value chain.

The meat from Steruper Strohschweine is more costly than the regular pork from the counter in the supermarket. The entrepreneur aims to convince consumers on a long-term basis to be willing to spend more money to achieve greater animal welfare and to foster a more conscious consumption of meat and the abdication of meat consumption on an everyday basis.

The motivation of the entrepreneur is not primarily based on the financial and commercial aspects of running the business, but also to offer the pigs a more valuable life, to educate consumers, and to lessen the negative environmental impact of meat consumption. The mission of Steruper Strohschweine can be defined as follows: the rise of awareness for conscious consumption of meat with regard to increased animal welfare.

The entrepreneur thus pursues a social and environmentally friendly mission but generates revenue by selling meat on the regular commercial market. The start-up can be defined as a sustainable venture with a market-based approach, and he aims for a triple mission of achieving social, environmental, and financial sustainability. It should be mentioned that the 'social dimension' of the business may be seen as somewhat unclear or underdeveloped. In his view, the social dimension means that people should shop locally and buy locally produced food. Furthermore, people—when they buy meat—should do so with a socially and environmentally good conscience. Social impact and social entrepreneurship often refer to benefiting people (socially) in a slightly different way. This could be in terms of, for example, employment for vulnerable groups, helping the less fortunate, and increasing solidarity and/or other social activities. This type of thinking does not (yet) appear to be a focus area at Steruper Strohschweine.

However, another and really important issue exists. Even though their pork from local, environmentally friendly straw pigs is sold at higher prices than regular pork in the supermarkets, the production is not financially sustainable.

## Challenges of the Venture

According to the entrepreneur, the business's profit is not sufficient for a decent standard of living, and the predictions for future earnings do not seem to improve significantly with the present course of action.

The start-up suffers from higher costs, and the small size is seemingly below the minimum efficient production scale in pig farming. Presently, the entrepreneur does not have enough capital to increase the production facilities himself. He is considering expanding the size of the stable, but that will require financing from a bank or elsewhere. However, based on his personal goals, the entrepreneur does not want to use a huge investment. If a new stable for pigs is going to be built, he wants to spend as few resources as possible, ask family and friends for help, and recycle old building materials.

All in all, the entrepreneur needs to take action to stay in business, and he needs to decide how to change or expand the business. However, how can he do that without compromising his own values? How can he keep the triple mission of social, environmental, and financial sustainability? The entrepreneur is facing several challenges.

The priority is to maintain Steruper Strohschweine and its sustainable mission and values. When the entrepreneur talks to some of the local retailers, and they become overwhelmed by the meat's price, he already knows that these retailers will not buy any meat from him. For many retailers, the meat is perceived to be too expensive, and they believe that they will not be able to sell it to their customers. Moreover, independent of whether the retailer decides to buy the pork or not, for them it is only a small part of their total business.

With Steruper Strohschweine, the entrepreneur is trying to design and run as much as possible so that the environment is not harmed. Therefore, among other things, he only wishes to collaborate with regional stakeholders. The pigs are fed with regional, more sustainable, organic food, which is good for the environment and saves transport costs. The pigs are slaughtered at the local slaughterhouse to save stressful and environmentally harmful transportation. However, this and other environmental externalities lead to a higher cost structure and, in the end, necessitate higher prices for the meat. In addition, Steruper Strohschweine sells their pigs as a whole because the entrepreneur wants to raise awareness that consumers are often only interested in purchasing the premium products of a pig. It is a challenge to sell the rest of the single parts of a pig, and he believes that all parts of the pig should be valued. However, he hopes that through this and a higher price, the consumer will develop more responsible and sustainable meat consumption.

To sell the meat from the pigs, different opportunities were taken into consideration. Because the entrepreneur values regionality, it was clear that the products of Steruper Strohschweine should be sold near to the stable and slaughterhouse. The local supermarket is the only grocery store in the small village of Sterup where the farm is located. Therefore, in the start-up process it was already a main priority to collaborate with the supermarket to get the products sold. The local supermarket sells a lot of regional products (e.g. eggs, potatoes), and a farmer, a friend of the entrepreneur's family, also markets their regional milk in the supermarket. Regional meat was not part of their offering, yet a collaboration seemed like a perfect fit. In addition, the owner of the local supermarket is well known in the small village, and he is always open to supporting small regional businesses. Nevertheless, a major challenge for Steruper Strohschweine is the preferences and perceptions of the supermarkets and consumers.

While many local and regional consumers know the Steruper Strohschweine business and its products, they do not all buy them. The entrepreneur has the experience of meeting people who tell him that they like and support the concept and values of his business, but when he asks them if they have already bought and tasted the meat products, they have not. In general, it is not clear whether there is a difference in taste and texture between organic and conventional (non-organic) meat. Studies have shown that differences may exist because of different feed, slower growth, and less stress for the animals. However, for the average consumer, these differences may not be noticeable. Some consumers who have tasted the meat from Steruper Strohschweine claim that there is a clear positive difference in taste and tenderness compared to cheaper conventional meat. However, other consumers claim that they cannot detect any

difference. For some consumers, therefore, the question arises of what additional value the products have as they are more expensive. It should be mentioned, though, that much of the consumers' 'knowledge' regarding taste and texture stems from conceptions and beliefs rather than scientific data and actual comparison.

In addition, the local demand around Sterup for pork is slightly conservative and not overly favourably disposed towards organic and 'value-based' foodstuff in general. Steruper Strohschweine has tried to convince local consumers through a few ad hoc in-store tastes and some features about the farm in local small-town media, but so far with limited success. The stories focused on the plastic balls and the classical music in the stable, but this did not seem to increase the sales.

The entrepreneur states that the local customers in the rural border region like the concept and idea of Steruper Strohschweine as such, but many of them do not buy the local product when they spot the price difference in the refrigerated counter in the supermarket. The demand for higher-priced organic food seems to be focused around the larger cities. In the countryside—that is, in the local area around Sterup—people's attitudes towards ecology and organic food may be influenced by the fact that they already are close to 'nature' and the farmlands, contrary to the larger cities in Nordic countries where some consumers buy the organic and value-based foodstuff as part of their urban/city lifestyle which, somewhat paradoxically, includes returning to more natural, local, and authentic foodstuffs.

As mentioned, Steruper Strohschweine started in 2019, and during the first 12 months of their existence, they have been (more than) fully occupied with all the tasks and hardships that a start-up usually faces: raising capital, getting organized, getting their website up and running, getting their first customer deals, and so on. Besides telling their story about themselves and their values and production processes, until now they have not paid much attention to marketing, branding, promotion, storytelling, or otherwise trying to attract customers to their business idea and products.

In its current stage, Steruper Strohschweine does not think that they lack any human capital. The entrepreneur's family—especially his father—is mentoring his son and developing the business; the regional retailer is supporting by marketing the meat. So in the entrepreneur's view, they are doing fine right now in terms of resources and competencies. However, the entrepreneur perceives that in case the business expands, a new and more formal business concept may be needed to get access to financial resources. In this case, more staff, including sales and marketing expertise, may be needed. It may be necessary to increase regional market share and market scope beyond the supermarket in the village. However, as previously mentioned, it is important that Steruper Strohschweine maintains its identity authenticity—its regionality and sustainable values.

Currently, an important concern for the entrepreneur is not to make a financial deficit, which—at least in the longer run—might close down his business completely. However, on the one hand, he is aware that he needs to grow or change the business somehow in order to continue and have a decent standard of living. On the other hand, he stresses that Steruper Strohschweine is mainly about the social and environmental mission. He is very passionate, and he vouches personally for the values of his business. It is essential that the pigs have a good life and are kept in a species-appropriate manner from day one until the day they are slaugh-

tered. Only if this is ensured will it be reasonable and meaningful for him to market the meat. He concludes, 'And this will remain this way as long as I am in business.'

## Potential Solutions to the Challenges

To overcome the various growth barriers and dilemmas, the company needs to act. The owner is considering various options, but he is unsure what the right decisions and course of action should be. One of the initial ideas he has been pondering to achieve growth and improve the profitability of the business is the straightforward choice to change the base conditions for the pigs by decreasing the space per pig from, for example, 5 m² to 2.5 m². This would double the meat production but disregard the start-up's animal welfare values—which is exactly what the owner would like to avoid. Should he really abandon or downplay the social/value-based side of the business and go into more regular commercial farming? What would be the consequences of this?

Another potential solution would be to expand his business by using another stable owned by his family to double pork production. Any further expansion without disregarding the entrepreneur's values would make it necessary to build an additional stable. To do so would require investors who believe in the growth potential of the business to finance the establishment of another stable.

Would it be possible to change the demand in terms of the size of the market, customer preferences, and willingness to pay a premium price? Should he try to work with and change the market in his own neighbourhood and region in line with his thoughts about proximity and less transportation, or should he try to market his products in the larger cities, where the attitude and willingness towards paying for organic foodstuff might be more profound? Could it be possible that this way of promoting sustainable products would be favourable financially? Will it be possible to change the apparent 'trade-off' and negative relationship between social/environment versus financial sustainability into a 'trade-up' situation, where the social and environmental focus becomes a competitive advantage? Some consumer segments may be willing to pay (even) more for sustainable products, thus increasing profits. At the same time, sustainable farmers such as Steruper Strohschweine may have lower costs as they do not use herbicides and fertilizers. Searching for potential new markets may also be possible, either geographically or by more proactively targeting other consumer segments, or perhaps Steruper Strohschweine should consider gourmet and/or organic restaurants as interesting opportunities to pursue?

The owner is not sure if there might be other options or other ways to move forward. And he is not sure about how to proceed and make the next small or large decisions. Should he, for example, proceed with a planning approach and first analyse the situation before making any strategic decisions—that is, make analyses both internally in terms of resources, competencies, finances, and so on, and externally in terms of market potential, consumer preferences, diversification opportunities, and so forth? Or should he instead try to find his way forward with small, incremental steps through a trial-and-error approach and see what works and what does not?

These are some of the questions and issues that keep the entrepreneur awake at night! He wonders whether somebody can come up with some substantiated advice about what to do and how to proceed.

# THEORETICAL INSIGHTS

## Sustainable Entrepreneurship and the Triple Bottom Line

In general, sustainable entrepreneurship can be described as discovering, creating, and exploiting entrepreneurial opportunities that contribute to sustainability by generating environmental and social gains for others in society (Hockerts & Wüstenhagen, 2010; Pacheco et al., 2010; Shepherd & Patzelt, 2011). It is indeed a new field of research and 'is needed to explore the role of entrepreneurial action as a mechanism for sustaining nature and ecosystems while providing economic and non-economic gains for investors, entrepreneurs and societies' (Shepherd & Patzelt, 2011, p. 138).

To operationalize and work with sustainable entrepreneurship, entrepreneurs—such as the founder of Steruper Strohschweine—may consider the 'triple-bottom-line' approach when trying to develop their business in a 'green' and profitable way at the same time.

The triple-bottom-line approach is prevalent in large parts of the sustainable entrepreneurship discourse and literature (Greco & De Jong, 2017). It refers to considerations to simultaneously achieve ecological/environmental, social, and economic/financial sustainability. In short, the triple bottom line may be referred to as considering the 'planet, people and profit', sometimes referred to as the '3Ps' in sustainability.

While social and environmental sustainability are inextricably intertwined, they are often at odds with one another. Thus, forms of sustainable entrepreneurship that attempt to utilize market mechanisms to benefit social and/or environmental welfare may encounter difficulty in pursuing all three aspects of the triple bottom line at the same time or in equal importance (Shepherd & Patzelt, 2011). Thus, the entrepreneur should consider whether they can find synergies between the various considerations (the 3Ps) or whether prioritization in terms of importance and time span is needed.

## Potential Growth Barriers and Growth Dilemmas

The issue of *business growth* might be an important consideration as a way out of the present situation. However, a number of specific internal and external growth barriers and growth dilemmas exist. These barriers are common for sustainable enterprises compared to purer for-profit enterprises. Sustainable enterprises will, in comparison to for-profit enterprises, often encounter a more complex array of barriers to growth because of the value-driven missions they follow (Davies et al., 2019). To better understand the tensions of sustainable entrepreneurs and their growth decisions, it is necessary to take a closer look at both growth barriers and growth strategies.

As sustainable entrepreneurs follow a dual mission (Doherty et al., 2014), they face growth barriers, which are more intricate than those of commercial enterprises (Davies et al., 2019). Unlike commercial enterprises, sustainable entrepreneurs have to include their social goals in the growth strategy process, eliminating growth options (Tykkyläinen et al., 2016).

### The sustainable mission

For the sustainable entrepreneur, it is crucial to generate revenue and to be financially sustainable *without* conflicting with the social mission of the enterprise. This has two implications: first, sustainable entrepreneurs would refuse funding or cooperation with stakeholders whose social and environmental performance does not align with their own values (Vickers & Lyon, 2014). Second, the sustainable entrepreneur might encounter a so-called 'mission drift' when prioritizing the generation of profit over the social mission. Thus, the owner is reluctant to grow the business or might increase prices to expand their target market towards 'wealthier and more profitable market segments' (Battilana et al., 2012, p. 54).

Sustainable entrepreneurs do not base their decisions on cost and profits alone but on social and environmental fairness—for example, for their supplies (Davies et al., 2019). Following their *ethical principles*, they pay a higher price for certain raw materials, and therefore they gain less profit than they otherwise would.

### Funding and access to finance and human capital

Business norms may be an institutional barrier as sustainable entrepreneurs are still a new business form compared to traditional commercial businesses. There might be relatively low investor awareness of sustainable entrepreneurs, and banks may display norms of conservatism and risk aversion, which might make it more challenging to gain access to investment capital (Davies et al., 2019). Hoogendoorn and colleagues (2019) showed in their analysis across 33 countries that sustainable entrepreneurs 'indeed perceive more institutional barriers' (lack of informational, administrative, and financial support) than regular start-ups (p. 1133).

Sustainable enterprises often find human capital among 'networks of friends and associates' (Davies et al., 2019, p. 1625) because social relationships are already in place. The requisite skill set could be purposefully recruited. However, the recruitment of an existing network can create a growth barrier if the skills of the network of the enterprise are not sufficient. Moreover, sustainable enterprises may face a lack of financial resources to pay competitive wages to employees (Davies et al., 2019; Hynes, 2009) and thus depend on the non-financial motivation of employees (Austin et al., 2006).

### Identity authenticity

Sustainable entrepreneurs encounter the barrier of maintaining their *identity authenticity* (Davies et al., 2019). They rely, for example, on their contracts with suppliers but are in a constant battle with other competitors as suppliers appear to be more interested in profits than bearing ethical values in mind when deciding for their customers. Therefore, sustainable entrepreneurs must 'maintain identity authenticity with little control over their suppliers or ethical alternatives' (Davies et al., 2019, p. 1626).

## Consumer culture

The sustainable business may encounter low customer awareness of the sustainability issues and potential values offered. Along the same line is the issue of 'customer inertia', which describes the phenomenon whereby people know about the product and its advantages but do not purchase it. For premium organic food products, which have higher production costs, attractiveness decreases, especially for lower-income groups because of the high pricing (Vickers & Lyon, 2014).

## Possible Growth Strategies

Depending on the growth strategy, the sustainable entrepreneur can have complete control over their actions or limited power (Lyon & Fernandez, 2012). They can act on a national or international basis or remain locally based businesses operating in niche markets, meeting local needs (Doherty et al., 2009). There are two fundamental decisions a sustainable entrepreneur has to make: how to scale the increase in social impact and where the impact should be spread (Dees & Anderson, 2004). André and Pache (2016) and Bauwens et al. (2020) differentiate between four growth strategies:

1.  diversification or scaling out: expanding the range of products and services to satisfy new types of needs, building on the entrepreneur's expertise
2.  scaling across: advancing impact by mobilizing other actors (e.g. partners, networks) replicating or adapting the business concept
3.  scaling deep: improving and enriching current processes to generate more social impact in the local community where the business is already operating and, thus, increasing the structural embeddedness (Smith & Stevens, 2010)
4.  scaling up: designing operations to reach out to new stakeholders in geographical areas not yet served by the business, thus decreasing structural embeddedness (Smith & Stevens, 2010).

No matter which of these growth strategies the sustainable entrepreneur chooses, they all have one common goal: to increase social impact (Lyon & Fernandez, 2012).

### CASE ACTIVITIES

This case shows some of the issues, tensions, and dilemmas that sustainable entrepreneurs may face. Based on the case and your knowledge and reflections, please consider the following questions.

### SUGGESTED QUESTIONS FOR REFLECTION AND DISCUSSION

1.  First and foremost: please read the case before class and reflect upon it while reading!
2.  As a general introduction to the issue of sustainable businesses, please think about if or when *you* bought a product or service from a business (shop or facility) that you considered to be a 'sustainable business' or 'sustainable product/ service'. Please consider your purchase experience and your personal values that (might have) influenced your buying decision at that particular incident.

Potential sub-tasks for this issue:
- Describe when and where *you* personally purchased a product or service offered by a sustainable (social, green, environmental) business/organization (e.g. a fair-trade coffee, ecologically grown vegetables or fruits, $CO_2$ neutral electricity).
- Describe why *you* bought this or these product(s) and what values you hold that guided your purchase decision. You should not make up a fictional example.

3. Please identify and discuss the entrepreneur's personal values related to the business.
4. Please identify and discuss the entrepreneur's and start-up's tensions and dilemmas.
5. Please identify and discuss the growth barriers of the venture.
6. Please consider and suggest possible growth strategies for Steruper Strohschweine. Consider the pros and cons of each potential growth strategy. Relate the discussions to concepts like the triple bottom line and to the entrepreneur's personal values and the business concept/model of Steruper Strohschweine.

## OPTIONAL QUESTIONS AND USAGE OF THE CASE

This case can also be seen from a *marketing* point of view.

1. Please identify and discuss potential marketing concepts and issues relating to this case.
2. Please discuss the pros and cons of Steruper Strohschweine's current market approach and the current sales and marketing set-up.
3. How would you suggest they approach consumers to improve sales and/or consumers' attitudes and support?
4. Please suggest a strategic marketing plan for Steruper Strohschweine.

## NOTE

1.  'Hyggeligt' is a Danish term meaning a nice, cosy, homely style.

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# 21
# Entrepreneurship on a deadline: the role of time constraints in student ventures

*Jørgen Veisdal*

## SETTING THE SCENE

The start-up company Candario was founded in 2017 by three fourth-year engineering students at the Norwegian University of Science and Technology (NTNU), the largest university in Norway. Through summer jobs, they grew interested in how small and medium-sized enterprises (SMEs) recruit new employees from universities and the software systems they used to keep track of and communicate with potential new candidates. Following a period of market research and coding, they began approaching business customers with a new software tool, Candario, which aimed to make it easier for companies to manage their recruiting process. The start-up company had paying customers within a few months, before having a wake-up call: they would be graduating in less than a year, and the start-up was not gaining sufficient traction for the founders to be confident that they would be able to cover their living expenses after graduation. As a consequence, through a period of exploration and exploitation of various opportunities, they ended up rewriting their software and pivoting their service from a software solution sold to SMEs to a platform for on-campus recruiting. Their pivot succeeded, and within a year the students had raised NOK3 million from soft funding and investors. Their software was, at that point, being used by 93 SMEs to recruit among some 12,000 students who had signed up for their nascent platform.

## THE CASE STORY

### Market Research (Autumn 2017)

Co-founders Petter and Jon began working on the project that would later evolve into Candario in the autumn of 2017. Their future co-founder Daniel was spending a semester

abroad in Australia and joined when he returned in January 2018. In the period from August to September 2017, the (then) two-person team were engaging in market research about the software needs of companies with substantial recruiting activities. As Petter later explained,

> I sat down with people I knew and made a list of questions about what systems they use, how their process of recruitment is organized internally and so on. At the end of every interview they talked openly about what the problems were with existing solutions. The main thing they said was: We don't have all the information [about prospective candidates] in one place and so you can't easily share access with other employees. This means that if an HR-department has access, they are typically the only department that has access.

The solution Candario first designed addressed this issue specifically, by allowing companies to collect, organize, and easily share information about candidates across their organization. Petter later stated about Candario's value proposition at the time,

> Our solution is a tool that focuses on this, or these problems. It gives [companies] shared access which makes it very easy for them to follow up with candidates, which was one of the problems they were having. In addition, we have features which make their days more efficient, for instance making it easier for them to extract the GPA [grade point average] of a candidate and so on.

All three founders of Candario entered the project with practical experience, having interned in the Norwegian management consultant and IT industries. In addition, all three founders had experience from working with a student organization called Bindeleddet (The Connector), which arranged on-campus recruiting events for students and companies looking to hire. Having spent semesters abroad, all three founders at Candario were also early to notice a European initiative led by the Erasmus+ student exchange programme, which aimed to make it easier for foreign exchange students to have their academic credits and associated grades transferred between European universities. The Norwegian initiative to join the network, Vitnemålsportalen, had been commissioned in 2011 but only launched in January 2017, 6 months before Candario began their market research period. Using Vitnemålsportalen's application programming interface (API), Candario designed an import tool which made it easy for companies to request and review students' grades. The tool helped companies sort through and parse candidates via quantitative measures such as how long they had been studying, what their grade point average was, and which courses they had excelled in. Regarding the problems this tool was addressing, Petter later stated, 'Recruiting is a very time-consuming process which often comes in addition to an already long day of work, so it often doesn't get prioritized. In addition, there isn't enough attention paid to following up with candidates.' In an interview in February 2018, Daniel reiterated this view, stating, 'From my perspective, it's the following up of candidates that is the most important; the direction recruiting will have to go in the future.'

## The First Customers (January 2018)

Candario secured the first pilot customer for their candidate management software in January 2018. Following three sales meetings over the course of a few weeks in the autumn of 2017, they sold the first licence to a division of Swedbank, one of the largest banks in Scandinavia. The introductory price for the licence was NOK3,500 per month. They had made the sale by first approaching a former student from their graduate programme (who worked at Swedbank) while he was attending a career fair on the company's behalf in the autumn of 2017. As they pitched the value proposition of their product, he echoed their belief that it filled a need Swedbank had, stating, 'McKinsey does it this way; so should we.' At the time, Candario's value proposition was stated by Petter as 'being able to acquire, organize and track the evolution of a candidate throughout their time as a student and keep in touch'.

Around the same time, in January 2018, Daniel returned from his semester abroad and joined the team. In February, Petter and Daniel were interviewed together about the progress of their start-up and their current plans for further expansion. Confident following their success in reaching an agreement with Swedbank, Petter stated, 'We have a goal of securing two [more] companies in February, in addition to the one we already have. By June, we hope to have 10 paying customers.' Regarding customer segmentation, at the time, the founders stated that they were focused on 'high-end talent recruiting, primarily within management consultancies and finance' because they themselves and much of their social network knew how recruiting worked in these industries. Although they had early on considered including companies recruiting within law and IT, they decided to focus on management consultancies and financial institutions because such companies often employed alumni from their own graduate programme. The firm's customer acquisition strategy at the time involved 'sales meetings and cold-calls. … Then 3 to 4 weeks after on-boarding we call again, if they haven't gotten in touch with us before that,' according to Daniel.

Candario met their goal of signing two new clients in February. By April, they had six paying customers, from all the industries they were targeting, paying anywhere between NOK18,000 and NOK78,000 per year for use of their software. Replying to the question 'What is the response among them?', Petter at the end of April replied, 'Finance is very hard. They work a lot and so never find the time. … It's not that they're uninterested; it's just that they don't focus on it all year long, only during recruiting season in the autumn.' Regarding pricing, Petter later stated, 'We've experimented with pricing, since we don't know exactly where the market is.' To improve and expand the functionality of their product, the founders later conducted user interviews with existing customers, typically the head of human resources, while also stating that 'these often turned out fairly boring, as we often knew in advance what their problems were'.

## The Wake-Up Call (March 2018)

Although they were progressing in accordance with their own milestones, Candario in the period from March to April 2018 decided to pivot away from their existing value proposition ('being able to acquire, organize and track the evolution of a candidate throughout their time

as a student and keep in touch'). The founders highlight two events as especially important to them in reaching this decision.

The first was a strategy session with alumni from their graduate programme at NTNU in early March 2018. During the session, as Petter later attested,

> A lot of the feedback made us begin to gradually shift our focus. We realized that we had been thinking a little bit too big and wide. … We realized that we had to narrow in, and were given some guidance and good advice which we later deliberated on internally and agreed would be a good strategy.

Given that the three founders were also still students themselves, they decided that focusing on candidates who were still students might be the 'narrowing' they needed. As Petter described, 'We chose on-campus recruiting as a more targeted market. … It was very convenient for us to focus more on campus events and career fairs.' Adding to Petter's reply, Daniel stated, 'I think we needed [a wake-up call] in order to confirm intuitions we already had. Although we had spent a lot of time talking about various tools for recruiting, including of more experienced candidates, the conversations always came back to students and campus events.'

The second event that helped convince the student entrepreneurs that narrowing in on 'on-campus' recruiting might be a good strategy was an interview they had for the world-renowned start-up accelerator programme Y Combinator, which occurred in April 2018. Later replying to the question, 'How did you arrive at the decision to focus on creating more value for students?', Petter at the end of April replied, 'By applying to Y Combinator. Writing that application, a lot of the questions asked us what our unique value is. … When you're facing people who are considering investing a million NOK, you have to be honest.' Y Combinator is a seed money start-up accelerator used by over 2,000 companies including Airbnb, Stripe, Dropbox, Coinbase, and Instacart, whose combined valuation was over USD155 billion at the time of the study. Daniel added, 'We were still in the process of figuring that out. Although we offer a lot of functionality in one place, many other competitors and services offer similar things that we do.' He continued, 'We drilled each other on figuring out exactly what our unique edge should be. It was a fairly long process, some weeks of writing the [Y Combinator] application and banging our heads into the wall. Late nights.' Although the team ultimately did not get accepted to Y Combinator, they decided to stick with the vision they had outlined in their application and interview and build a platform for on-campus recruiting.

> So that's the plan, we're going to work on it this summer, so that we're ready for the career fairs this autumn and can start capturing unique data from both companies and students. (Daniel)

> It will be a platform by this August. (Petter)

## Rewriting Software (Summer 2018)

When Petter and Jon first launched their project in the autumn of 2017, Jon was the technical lead for the project. Later, Petter referred to the product at that point as 'a cross between a recruiting tool and CRM [customer relationship management]' whose incumbent substitute solutions (for smaller companies) included 'Excel or HR solutions which they try to adapt to their own needs'. By summer 2018, the team was committed to the idea that to generate more value for companies, they would need to expand their offering by generating more value for students. However, to do that, their technical solution would need to be largely rebuilt. As Daniel stated in February 2019, 'For all intents and purposes, it would have been impossible to turn our existing product into a platform. It was built using unique databases for each company.' This technical limitation made it impossible to provide additional value to students, as information about each candidate was exclusive to the companies they had applied to. 'So, we had to build up a new back-end structure. … We didn't just "end up" becoming a platform, we deliberately chose to become one, which entailed investing in *it* instead of our former solution.'

The rewrite of their software (using much of the functionality they already had) took 7 to 8 weeks, 'perhaps even less, but we did do a fair bit of planning'. Rather than having individual databases for each company, Candario's new back-end structure stored companies' data about students in a shared database. To accomplish this, Candario had to ensure that the privacy and security of students' data was maintained, and that each company only had access to the specific information each student had agreed to share with them in addition to the company's own data about the students (such as notes, emails, and additional information). 'We added mechanisms to ensure that, when logged in as one company, a user would never be able to retrieve data points from other companies', Daniel stated. Replying to the question 'Did customers notice the change [to the platform]?', he responded, 'Mostly no, they didn't. What they did perhaps notice is that there is now a common login, where before they all had their own domain-specific logins.' He added, 'Without doing anything they now [also] have access to some additional, common data across the platform which they didn't have before, such as information about events and career fairs. That's information everyone wants to see.' Looking back, Daniel estimated that 90% of the code written for their candidate management system had to be rewritten for the platform, adding, 'It's of course always easier to build a new system when you've already made it before. We knew we had the same classes, each candidate still had a first name and so on. The issues were more at the level of linking between the various objects in the database.'

Having successfully rebuilt their database and relaunched their service, now as a platform, Candario was—as Petter had promised—by August ready to begin matching companies and students. However, as they were aware, creating value for both sides of a two-sided market is not necessarily a trivial pursuit. As Daniel later attested,

> We are suddenly relying on the fact that we have a bunch of companies that students want to work for, if we want students to be actively using the platform. To have students think that Candario is the 'natural tool to go to as a student looking for a job', well that requires

that most companies who are recruiting are also using Candario. That's the challenge we had to overcome.

## Recruiting Students (Autumn 2018)

Returning to their university in the autumn of 2018 with a new, two-sided platform in hand, the founders of Candario set to work on overcoming the circular challenge of attracting companies and students to their new solution. At that point, from the perspective of existing customers, their service was still a candidate management software. With less than 2 months to go before the first career fairs were starting, they believed they had come up with a strategy that would change that. Replying somewhat vaguely to the question, 'How will you attract students?', Petter answered, 'The companies will do that, at career fairs.' Jon later described their strategy in more detail:

> We reached out to career fairs and presented a kind of value proposition, that offered value [both] to their [participating] companies and students. This led to 10–12 fairs agreeing to partner with us. The partnership agreement involved … when they send out questionnaires to the participating business, they ask how many chairs and tables they want for their stand. We asked them to include a yes/no question that asks something like 'Would you like to know more about the candidates you meet at the fair?' (Jon)

That is, rather than approach companies with their former value proposition (described by Petter as 'a cross between a recruiting tool and CRM'), Candario's founders instead devised a new value proposition, later described as 'a tool that makes it easy for companies to register information about students at career fairs'. In addition, critically, they devised a new sales strategy for on-boarding companies, through partnerships with career fairs: 'It's a win for everyone. Career fairs are able to offer more value to companies, companies receive more information about potential candidates and students can more easily share their résumés and grades' (Petter).

The team hired their first employee to help execute the strategy, another early-20s male from Jon and Petter's graduate programme named Morten. He later described how 'Petter called me and said that they needed another person to help with business development and sales. I obviously accepted.' As he explained,

> At that time, they had just rebuilt their service from scratch and were about to launch a new strategy of partnering with career fairs. Through these partnerships, we received lists of companies who would be attending and so might be interested in our 'sign-up tool'. The first 2 months consisted of calling each of these companies and convincing them to use Candario at their next career fair.

Jon later concurred that 'We leveraged our partnership with each career fair to offer companies Candario free of use for the autumn term. About 70–80 companies agreed to this.' In addition, Jon estimated, 'I think we had about 200 additional companies in the pipeline by that point;

although we didn't get them all, we did get a fair share.' Morten later described doing '100 demos of the service in that period alone'.

By participating, companies were promised an easy way for them to retrieve much richer data about potential candidates than they would ever be able to capture themselves with their typical system of Excel sheets: 'They get richer data about the students in a very simple way, including name and contact information, work experience, a photo from LinkedIn, information about their graduate programme, their year of graduation and so on. In addition, students can choose to share their grades with them.' Business developer Morten later described the problem they were solving for companies as follows:

> A company attending a career fair typically meet somewhere between 2–300 students in a day, which is 2–300 potential new hires. However, all they leave the fair with is an impression of 'we had decent traffic today'. They have no idea who these students are or whether or not they are attractive candidates. They also have no way to reach them. Despite the fact that they might spend tens of thousands to attend, they really don't know what they are gaining from it.

Replying to the question, 'How is Candario changing this for them?', he added, 'They can leave and go back to the office knowing that they have 100 potential leads, who they are, which year they graduate and which 30 might be potential candidates for internships in the coming year.'

> This led to about 30–40 companies using Candario during the career fair here at NTNU. Meaning, each company had a contact form on an iPad or a laptop where interested students could enter their name and email address. Students would later be sent an email where they could import their LinkedIn information and/or share their grades. (Jon)

Candario's solution, in other words, allowed companies to review each student's résumé and grades (from Candario's API integration with Vitnemålsportalen) and easily send out personalized emails to candidates they considered interesting. 'Some companies used this functionality to invite candidates to an early morning informal mingling session. When 20 students showed up, they [later] said they would never have managed to do this without our system.' Jon added, however, that 'I don't know if they [actually] used our tools to filter through the students that had shown interest, or whether they just sent them out to everyone, but at least it enabled them to more easily follow up each student from that point on.' Morten reiterated that if their customers had used their old systems, most of the companies would have had chaotic Excel documents full of emails but no easy way to request or organize résumés and grades. For the mass-email feature, he stated, 'They could use the mail-merger functionality in Outlook, but it's a pain. Some poor HR employees have to do it, but it takes a lot of time. That's one of the things we solve for them.'

## Outcomes (June 2019)

By the end of the recruiting season of 2018, a year into the company's founding in November, Candario had processed close to 10,000 students' applications to companies via their career fair strategy, all over Norway. They spent the remainder of the year approaching companies who were not yet paying for their software to begin doing so for the coming calendar year of 2019. By January 2019, Petter was describing Candario's value proposition as a 'marketplace for businesses and students/new graduates', stating that 'Companies use Candario to collect information about candidates, parse through applications and do follow-up. Students use Candario to find new career opportunities, share their profile with companies and apply for jobs.' Following a successful autumn semester of marketing their service towards companies through partnerships with career fairs, their service was now being used by 93 companies, with a 7-day retention rate of approximately 50% among companies. By June 2019, the student entrepreneurs were in the process of signing term sheets for venture funding totalling NOK3,000,000. At that point, Candario's platform was being used by approximately 12,000 students. Since the autumn of 2018, an average of 10 students per week had secured job offers through Candario's new platform for on-campus recruiting.

### CASE ACTIVITIES

The assignment for the Candario case study is on the topics of *exploration versus exploitation* and *ambidexterity* in student ventures. The assignment may be summarized as 'Identifying the key activities and points of entrepreneurial decision-making for the student venture Candario in the period 2017–2019'.

The goal of the case assignment is to identify critical *entrepreneurial events* and *activities* and as a result better understand the entrepreneurial process, including the causal relationship between intentions, actions, and effectuation.

### CASE QUESTIONS

Suggested questions which may help stimulate the students' group discussions and facilitate fruitful classroom debates are:

1. What were critical events for the founders of Candario in the period covered by the case study? Identify at least five events.
   - The purpose of this task is for students to get a sense of the temporal dimension of new ventures, as well as critical points in the entrepreneurial process.

2. What were the activities in which the founders of Candario engaged in the period covered by the case study? Identify at least six activities.
   - The purpose of this task is to help students identify causal links between entrepreneurial activities, events, and their outcomes, as well as the multidisciplinary nature of new ventures.

3. Why did the founders of Candario choose to pursue the strategies they did? Reflect on their choices by analysing the founders' situations as both students and entrepreneurs.
   - The purpose of this task is to challenge students to identify the time- and

resource-constrained nature of student ventures and, through cognitive empathy, to try to understand the dilemma the student entrepreneurs at Candario were experiencing.

In the period 2018 to 2019, Candario engaged in various product- and business-related activities which may regarded as either *exploratory* or *exploitative*. Exploratory activities are often described by terms such as *search*, *variation*, *risk-taking*, *experimentation,* and *discovery*, whereas exploitative activities are often described as *refinement*, *choice*, *production*, *implementation*, and *execution*.

4.  Categorize the entrepreneurs' entrepreneurial activities in terms of their nature as either 'exploration' or 'exploitation'.
    *   The purpose of this task is for students to observe that the entrepreneurial process is cyclical and that in order to exploit opportunities, entrepreneurs must engage in periods of exploration to establish which opportunities to pursue and which to abandon.



**Figure 21.1**    Activity timeline template

5.  Map the activities the student entrepreneurs at Candario engaged in. Use a timeline such as that in Figure 21.1. Be sure to indicate whether an activity should be categorized as either exploitative or exploratory by placing the activity closer to (or further from) the horizontal timeline. Also, be sure to place each activity in the correct domain (business or product related).
    *   The purpose of this task is to help students visualize how entrepreneurial activities in multiple domains (business, product, etc.) differ in their nature (exploration and exploitation) and purpose (cause or effect of/from critical event).

6.  Add the critical events identified in the first task to the timeline. Which domain did the events occur in? How did the team at Candario respond in terms of adjusting the emphasis of their activities?

# 22
# HydroSafe: Emma's investment issues

*Torgeir Aadland and Roger Sørheim*

## INTRODUCTION

'How far will you get with half a million NOK?' The chief executive officer (CEO) Emma Andersen did not know how to respond; NOK500,000 would not last very long. The inventory they had now cost nearly NOK150,000, and they would probably need much more equipment for the rest of the prototype development, not to mention all the labour they would need. She looked at her chief financial officer (CFO), Eirik Hansen, who stared right back at her. The angel investors, Tommy Solstad and Johnny Kolhaug, were obviously interested in the idea. The proof of concept, which the chief marketing officer (CMO) Steffen Høyberg had managed to get to work, sparked the angels' enthusiasm. The technology they had at this point was a simple set-up and was far from the readiness level it needed to be in terms of implementation in a product, but the theoretical and simulation work, performed by their chief technology officer (CTO) Per Liland, did show promising results. However, as Per was in a full-time job in addition to the work he conducted in Emma's company, HydroSafe AS,[1] they needed the money to be able to hire technical developers for full-time positions. All the work conducted in HydroSafe, a start-up focusing on waste control from fish farms, was currently done during the team members' spare time.

'We will probably not last more than 9 months,' Eirik responded to the angels' question, 'and that will be a minimum; we might not reach our goals.' Prior to the meeting, Eirik had presented the numbers for Emma, and HydroSafe would need at least the half million offered now, which would be matched by public funding, but that would not, as Eirik said, last more than 9 months, perhaps 12 if they were able to get some additional money from other sources. Per had explained that his competence would not be enough for the company to reach the next level of technology development, and at least one computer scientist would be needed to implement the algorithm in the complex hydro-system. In addition, they would need a product developer sometime in the future, but that would depend on how fast the system developed into a functioning prototype. The best thing would probably be to hire all the needed human

resources and build a full-size prototype, but Emma knew that this would not be an option. No one would invest nearly NOK6 million in HydroSafe at this time.

'Find the burn rate that you will have for the next year and send us a thorough budget and a plan, and I think we might be able to help you,' Tommy Solstad said as he put on his blazer and left with Johnny Kolhaug. 'I do not think this is a good deal,' Steffen said after the angels had left. 'They do not have the knowledge about our markets and come from an industry selling to consumers; we will be selling to other businesses.' Emma knew this, but she also knew that Eirik would pursue other paths in life if they did not manage to raise some capital by the summer, and it was almost the end of March now. So would Steffen, but he had more belief in the company's fund-acquiring skills—skills that so far had managed to raise NOK200,000, all of which was used on different equipment and travels. The money from the angels was sorely needed if they were going to be able to develop the company further.

At the end of the day, Emma shut down her computer and left the office for the weekend. She knew that this was probably the closest they would get to private funding before the summer, but she also knew that Steffen would not be happy if they took the deal. Eirik would live with it, but he was not so fond of the angels either. She could probably convince the two if she wanted the deal, and luckily the three constituted the board of directors, so she did not need to take a fight there.

Right after Emma left the office, she received a phone call from Mikkel Strøm, the chair and CEO of AquaFarms AS, one of the biggest suppliers of products for fish farmers in Norway. He told her that he had heard about HydroSafe when Emma pitched the company at an open mic night in February and had done some research about the team and technology. He was interested in meeting HydroSafe's team to discuss how AquaFarms could help HydroSafe and said that he wanted to meet them next Friday. Emma said that she would get back to him with an answer after the weekend.

Things were suddenly much brighter for Emma and HydroSafe, but there was still something bothering her. Although Mikkel Strøm did not say it directly, it seemed that AquaFarms could invest before the summer, and that they could reach their goal of obtaining enough money to produce the first full-size prototype. However, Emma knew that AquaFarms had been involved in some controversial investments in the past—investments that were not beneficial for the new ventures and entrepreneurs. Although this happened several years ago, and the CEO was replaced after those deals, AquaFarms' board still consisted of the same people, rotating the chair position between them. She knew Eirik would be sceptical and probably vote no in a board meeting regarding investment from AquaFarms, but she would win the majority vote from Steffen.

Emma now had two potential options for investments from external parties, one small and one big in terms of capital. In addition, HydroSafe could always apply for public funds and soft funding, but while the other investment options were insecure in terms of power positions, the public and soft funding were insecure in terms of whether HydroSafe would be granted the funding. Emma sat down at home and worried about the future of the company in terms of the team and its existence. The weekend would probably be long for Emma.

# BACKGROUND

## HydroSafe

Emma, Eirik, and Steffen founded HydroSafe AS while they were studying. In one of the management classes they were in together, Emma realized during a company visit to a fish farm the issue with waste from fish farming destroying the sea bottom beneath fish farms' cages. The environment is an important issue for Emma. She grew up in the northern part of Norway, where the sea is the biggest industry in terms of fishing, tourism, and transport of people and goods; thus, Emma always sought to protect and take care of the oceans. She talked about the issue with Eirik and Steffen, and Eirik came up with an idea after talking to one of his professors in hydrodynamics. Eirik took the course in hydrodynamics as a part of his study profile in mechanical engineering, but he also had a profile in economics. He could illustrate the idea and present the concept but was not knowledgeable enough in hydrodynamics to design the different parts and simulate whether the technology would work. They needed an additional member with extensive knowledge in hydrodynamics. Steffen, studying information and communications technology, wrote a project description that the team handed over to Eirik's professor. The professor told the team that this was theoretically possible, but it would probably be impossible to implement it and make it work. They published the project description, and Per, a very dedicated and proficient student, decided to write his master's thesis about the team's solution.

In the last year of the team's studies at the university, the four started the company HydroSafe, developing an advanced hydro-pump to be installed below fish farm cages. Their product would register the current in the water under the cages and send streams of water to push the waste from the cages into a large funnel that sucked the waste into a cleaning system, avoiding the waste reaching the sea bottom and damaging the life living there. However, to be able to let the system's nozzles send the correct amount of water at the right speed, the system also needed to correctly register the currents below sea level around the cages. Thus, the complexity of the system forced the team to seek more resources in terms of computer scientists, mathematicians, and mechanical product developers. In addition, the team would need to collaborate with a fish farm, a producer of fish farm equipment, or a supplier of fish farm equipment. The latter was the best option for HydroSafe as this could give them the right channels from production to implementation.

Through his study work, Per had created an algorithm for analysing the current and making the system send the right amount of water with the correct speed to direct the waste particles into the funnel. However, as the work he did in his master's thesis was only theoretical and with simulations, the team used the autumn and winter after graduation to create a proof of concept of the system. They received NOK100,000 from Innovation Norway to test the proof of concept and investigate the market's interest, and an additional NOK100,000 of soft funding from other sources to buy the necessary tools and equipment for their work. The feasibility study showed that the market wanted their product, and different fish farmers and environmental organizations saw significant value in their solution. Now, 2 years after the founding of the company, and almost 1 year after graduation, the team had managed to illustrate the

possibility of their system and needed additional resources to be able to develop the system further with sensors, pumps, nozzles, and cleaning systems.

At this time, Eirik had estimated (with input from Per on the different technological steps) the resources that were needed to be able to develop the product further. In total, the team would need a minimum of NOK1 million, such that Emma could start part time in the company, in addition to a full-time computer scientist who could implement the algorithm with the different components in the system, such that a first prototype could be developed. After the first prototype, a second full-scale prototype would be developed, which could be tested in a live environment such as a small stream or near the harbour in the city of Trondheim. This would require some additional people in the team: a product developer, and Per, who would need to develop the algorithm further according to the test results from the first prototype. This would be costlier as much equipment for this test needed to be purchased and as Emma would be hired for a full-time position at this stage, in addition to part-time positions for Eirik and Steffen. This second stage, lasting a year and a half, was estimated to cost NOK4.5 million. Including overheads, Eirik estimated a total of NOK6 million to fulfil both development stages, making HydroSafe ready for early-stage venture capital.

## Angel Investor Interest

After an entrepreneurship event early in January, HydroSafe obtained some PR through an interview with an entrepreneurship magazine, and the angel investors Tommy Solstad and Johnny Kolhaug contacted Steffen shortly after. Tommy and Johnny were two young entre-preneurs who had had huge success with their company that they had recently sold, which focused on gathering different services for consumers in one platform, and were now looking for different cases to invest in. The company they founded and sold used a web platform to reach their customers, and they succeeded because of their huge customer base. Now they had invested in a few similar ventures that used web platforms to reach their customers with their services or goods.

In the meeting between HydroSafe and the angels, Tommy and Johnny were focusing on a detailed budget and wanted more insights into what the burn rate would be during the development and how far they could reach with different amounts of capital. Both angels had limited understanding of the technological aspects of HydroSafe's technology and were unable to fully understand it as they had backgrounds in economics and web application develop-ment. However, they both had extensive experience from negotiations with investors as they had taken their own company through several investment rounds before they sold it.

The two angels were interested in putting in a small amount of money to help HydroSafe to reach the next level and wanted to invest NOK500,000 in the company. There were no discussions about shares or influence in the company after such an investment, but this would probably be a subject in a second meeting.

## Mikkel Strøm and AquaFarms

Mikkel Strøm, the board chair of AquaFarms, a multimillion fish farm equipment supplier, became CEO 4 years ago, after the previous CEO resigned following several controversial investments and collaborations with new ventures. In these investments and collaborations, the entrepreneurs in the smaller ventures were often forced out and received the minimum in return for their effort, while AquaFarms exploited these ventures' work and technology in AquaFarms' products. With Mikkel Strøm as the CEO, AquaFarms reduced the number of investments in new ventures but had in the last year invested in two cases where it seemed the power balance between AquaFarms and the entrepreneurs was stable. However, based on the history of bad investment approaches in combination with the same board for the last 5 years, AquaFarms' reputation in the entrepreneurial environment was not good.

AquaFarms shared the market equally with Fish Supplies AS and had many research projects in Norwegian fish farms, which could therefore be a valuable door opener for HydroSafe. One issue was to reach the second prototype for HydroSafe; another was to enter the market. If none of the suppliers of fish farming equipment would collaborate with HydroSafe, the way would be long and hard to introduce the product to the market. The supply chain control of AquaFarms and Fish Supplies had to be exploited to be able to enter the market. If not, the series from venture capitalists would probably be near NOK40 to 50 million, something that would never happen given their return-on-investment goal. Emma had previously been in contact with Fish Supplies, but they did not at that time show any interest in HydroSafe.

## Public Funding, Soft Funding, and Loan

One last option to obtain the necessary capital was public funding—for example, through Innovation Norway, a governmental organization supporting new ventures with funding. HydroSafe could receive up to NOK500,000 from Innovation Norway, but to be able to use this on salaries, which HydroSafe needed, the team had to match and pay for 50% of the salary costs. Thus, the team had to obtain money from other sources—through either investments or grants. The latter would be the best, but gathering half a million in grants would be time- and resource-consuming and would probably postpone any hiring for several months or even a year.

Another option would be to apply for any Horizon2020 project or the FORNY programme under the Research Council of Norway, aimed at increasing the commercial utilization of results from publicly funded R&D in Norway. Emma knew that the Research Council would soon start a project for students and recent graduates, but she did not know when this would occur, how much this would give if granted, or whether HydroSafe had to match the funding with their own capital. In addition, the Norwegian Research Council's other projects often required the new ventures to collaborate with established companies and would only cover 40% of the total costs in these projects. These projects also needed a lot of time in application writing and had application deadlines in the autumn with feedback late in January or early February, meaning the future of the company would be uncertain for several months.

For Emma and HydroSafe, the grant from Innovation Norway was something they had to apply for, and something they would probably receive, but how the team was going to match it was the question bothering Emma. They could apply for a loan, but few banks would help a business without revenue; their network could probably help them with private loans. However, this was a possibility and strategy Emma did not feel comfortable with and that she knew too little about.

## Monday Morning Meeting

After the weekend, the team met for their weekly meeting, and Emma was waiting for Steffen and Eirik to get ready. Emma had called both Eirik and Steffen Sunday afternoon and told them about the call from Mikkel Strøm, and asked them to prepare for discussions regarding the two options of potential private investment, in addition to the third option to seek funding only through grants and public funding. Both the two angels and Mikkel Strøm expected feedback by Monday, and Emma feared that the team would not agree and end up with a bad mood between the team members, not only in terms of which option to pursue but also in terms of ownership in the company. Emma could give away many shares to get the company moving forward, but she knew that Steffen wanted to minimize his loss of shares to investors.

The day had not started well as Eirik had received an invoice of NOK20,000 from HydroSafe's accountant—twice the size they expected—and now their bank account approached negative numbers. Emma now knew that this meeting would end with either controlled liquidation or a plan to continue the development of the company. Before the weekend, she felt confident, but now she did not know the better option for HydroSafe. Eirik and Steffen looked at her, and they started the meeting.

### CASE ACTIVITIES

This case introduces several options that Emma and her team need to consider in terms of funding. For start-ups, these options and issues occur frequently in the phases of capital raising, forcing the founders to make decisions which in few cases give optimal outcomes in the eyes of all stakeholders. The five options (angel investors, corporate investment/ collaboration, public funding, soft/informal funding, and loans) influence the new venture in different ways—for instance, in terms of stakeholder power, strategic choices, future investments, and access in the market. These different outcomes will have various implications in different contexts, markets, or industries, and (potential) entrepreneurs should therefore reflect upon different options to be prepared for future entrepreneurial activities. The questions below are designed such that Emma's issues are in focus, but these will also be valuable as a starting point for evaluations of potential investment in other start-ups.

- In general, how would you describe the main characteristics of the five different options that are presented in the case?
- How would you assess the different options that HydroSafe has? What are the pros and cons of the different options?

- If you were in Emma's position, given the stage and future activities for the start-up, what would you do and why?
- How do you think the different decisions could affect the various stakeholders and the development of the start-up?

## NOTE

1. The case is based on real situations, but the companies, technology, and individuals in this case have been anonymized.

# Acting Entrepreneurially in Established Organizations

# 23

# 'I cannot give up now!': the story of a Norwegian public sector entrepreneur's endeavours to revolutionize communication between two healthcare organizations

*Petter Gullmark and Ingebjørg Vestrum*

## SETTING THE SCENE

2013 was a year of big changes for Anna.[1] Throughout much of her career, Anna had worked as an ordinary public health nurse at the maternity and childcare centre in Bodø—a beautifully located and quickly developing city north of the Arctic Circle in Norway. In addition to being an experienced public health nurse, Anna was also proficient at using computer software—she, among others, completed a course in information technology (IT) in the early 2000s. Anna liked working as a public health nurse with pupils in schools in Bodø. However, deep inside, she longed for something new. Seeking new opportunities, she decided to use her IT skills to more actively contribute to the process of digital transformation of public health nursing. To this end, Anna needed to secure external funding. In 2013, she applied for funds from the county governor and received an amount that covered 50% of her public health nurse position for the following 3 years. From that point on, Anna evenly split her time working as an information and communication technology (ICT) adviser at the maternity and childcare centre in Bodø.

Anna's first task as an ICT adviser was to develop and implement a digital vaccination record and electronic communication system. It was a crucial project for Anna. Successful implementation of this project proved that sending electronic messages between two public healthcare organizations was possible.

In 2014, Anna became aware of the new national professional guidelines for postnatal care that were enforced by the Norwegian Directorate of Health. The guidelines aimed at ensuring better care for a mother and her newborn child during the first (most important) days after the birth and required midwives to visit the family 1 to 2 days after the mother and baby's hospital discharge. At that point in time, the maternity and childcare centre in Bodø communicated with the maternity ward at the local hospital through the traditional postal service. Because of frequent delays in the postal service, the maternity and childcare centre struggled even with following the prior national guidelines (that is, a home visit 7 to 10 days after discharge). There was no doubt among the midwives that without a revolutionary solution, they would never be able to follow the new guidelines.

The early 2010s were a period of extensive digitalization of public healthcare services in Norway. By 2013, the municipality of Bodø managed to implement electronic communication between physicians and the hospital. Anna was aware of the frustration in the maternity and childcare centre; midwives could not understand why physicians could electronically communicate with the hospital while they could not. At the same time, Anna also knew how challenging the process of digitalization in the public sector would be. She decided to act. Her entrepreneurial idea was simple: to create a tailor-made electronic message system that could immediately notify the maternity and childcare centre about a birth at the hospital's maternity ward.

## THE CASE STORY/NARRATIVE

### Stretch Goal or Utopia?

Anna's idea—to create a tailor-made electronic message system that could immediately notify the maternity and childcare centre about a birth at the hospital's maternity ward—seemed more like a stretch goal; however, it certainly was not a utopia. She knew that her idea was novel and difficult to pursue; neither professional nursing journals nor her Norwegian and international network offered examples of similar innovations. However, based on her own experiences from previous projects in the municipality of Bodø and the experiences of her colleagues in different Norwegian municipalities, Anna strongly believed that such a system could be developed. In her view, the key to exploiting this opportunity resided in following the 'small steps approach', securing knowledge and resources, and ensuring political support.

After her immediate superiors gave her the 'green light', Anna decided to launch a new project in the organization she was employed by—the municipality of Bodø. From the beginning, she ruled out the possibility of implementing the new national maternity care guidelines by improving the existing routines and practices. The first phase of Anna's project concentrated on developing a temporary solution for the maternity and childcare centre. The temporary solution was relatively simple; one of the secretaries in a child and family unit in the municipality of Bodø called the maternity ward twice a week—on Mondays and Thursdays between 8:30 am and 9:00 am—to receive an overview of mothers who had given birth since the last call. Given the overview, the secretary informed each unit in the maternity and child-

care centre in Bodø about the recent births. Subsequently, in each unit, the information about the birth was further conveyed to the relevant midwife. Only then did the focal midwife start planning the home visit.

Although the new practice was relatively effective, several challenges gradually arose. First, employees at the maternity ward were frequently too busy to answer the phone at the scheduled times. Moreover, occasionally, the information relayed about a mother and her newborn child through the telephone conversation was inaccurate (most frequently, the mother's name was misspelled). Last, the information—which was sent through the internal mail in the municipality—between the secretary in a child and family unit and the maternity and childcare centre was sensitive, and there was some risk that it could be delivered to the wrong address or lost.

Anna knew that there existed another, more secure, faster way to convey the sensitive information about a birth—namely, through an electronic message system. In 2013, Anna became a part of a national association of public health nurses who worked to digitalize the healthcare systems. Digitalizing the communication between maternity and childcare centres and hospitals was high on the agenda in these meetings. Many participants reported that several nursing homes in Norwegian municipalities started to electronically communicate with local hospitals. However, that was not enough for Anna. She did not just want to electronically communicate with other public healthcare organizations; her goal was to develop an electronic message system that could immediately notify the maternity and childcare centre about a birth at the hospital's maternity ward.

However, to seize this opportunity, Anna needed first to secure the support and legitimacy for her entrepreneurial idea among the key local stakeholders.

## Mobilizing Support and Legitimacy

Although the national guidelines briefly mentioned that the '1 to 2 days requirement' could only be met if the maternity ward at the hospitals and the municipal maternity and childcare centres started to communicate electronically, the need to develop such communication was not high on the agenda in the national plans. Anna was really frustrated.

> All the time, I had thought that we would make [the digitalization of communication] happen much faster and that the national guidelines would help us to make it happen. I did not expect that we would have to be so engaged and so active [to make the digitalization possible]. To hear, to know that it is possible technically, but also that we could not go further because we were not prioritized in the national plans [for digitalization] was frustrating. We were the fourth priority, and [everything] was about enabling nursing homes to electronically communicate.

Anna did not abandon her entrepreneurial idea because of the lack of support at the national level. On the contrary, in 2015 she started to intensively mobilize support for her idea of developing an electronic message system that could immediately notify the maternity and childcare centre about a birth at the hospital's maternity ward among the two most critical local stake-

holders: the municipality of Bodø, which managed the maternity and childcare centre, and the Northern Norway Regional Health Authority (NNRHA) (see Box 23.1), which managed the local hospital in Bodø.

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**Box 23.1    Northern Norway Regional Health Authority (NNRHA) (Norwegian: Helse Nord)**

The NNRHA is one of the four regional health authorities that the Norwegian state owns and controls. The NNRHA has a board appointed by the Ministry of Health and Care Services. The board has a mandate to ensure that the public health goals are achieved and national guidelines are followed in all four hospitals in Northern Norway, including the Nordland Hospital in Bodø. The NNRHA also owns an ICT company that is responsible for the operation, management, and development of common ICT systems for all the hospitals it covers. The NNRHA appoints the boards of the hospitals and the ICT company and develops guidelines for these boards.

*Source:* NNRHA (2021).

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Since Anna worked in the municipality of Bodø, she decided to first mobilize the support from top managers in her own organization. To her surprise, it turned out to be an easy task. One meeting was sufficient to convince top managers about the importance of developing the electronic message system for the maternity and childcare centre and the hospital's maternity ward. Moreover, the municipality declared that it would support her efforts to further pursue the entrepreneurial idea.

Encouraged by such a positive response from the top management in the municipality of Bodø, Anna turned her attention towards the other key stakeholders for her entrepreneurial idea: the NNRHA. From the beginning, she knew that it would be much more challenging to convince the NNRHA to support her idea. After all, the NNRHA is responsible for monitoring the provision of specialist healthcare services in all Northern Norway, not just the municipality of Bodø. Furthermore, since the national healthcare priorities are to be followed at the regional level, developing any electronic communication between an individual maternity and childcare centre and a local hospital had been relatively low on the NNRHA's agenda. Additionally, Northern Norwegian hospitals and maternity and childcare centres used different electronic health record systems. Therefore, the development of an electronic message system that would be compatible with the systems of all actors in the region appeared to be the only solution to which the NNRHA could agree.

Full of hope, Anna arranged a meeting with the NNRHA. Anna knew that she had to be well prepared for the meeting with the NNRHA's representatives. Since late 2014, Anna had worked with CompuGroup Medical (CGM) (see Box 23.2) on developing a prototype of the technological solution that would enable immediate electronic communication between the maternity and childcare centre and the hospital's maternity ward. CGM had made great progress in developing electronic communication systems that worked between different public healthcare organizations. Notably, in early 2015, CGM had developed a prototype that enabled electronic communication between both the municipality's and the hospital's electronic health

record systems. Anna was thus convinced that CGM could also quickly develop a technological solution that would fit the needs of her entrepreneurial idea.

| Box 23.2 CompuGroup Medical (CGM) |
|---|
| CGM is a digital electronic health record system used primarily by healthcare organizations. CGM Norway is a supplier of electronic health record systems. CGM's electronic health record systems are divided into specialized segment versions, such as CGM General, CGM Specialist, CGM Emergency Room, and CGM Health Center. Notably, the maternity and childcare centre in the municipality of Bodø used CGM Health Center as an electronic health record system. *Source:* CGM (n.d.). |

Anna truly started to believe that her entrepreneurial idea could be realized. She put together a convincing presentation that demonstrated how an electronic message system that would immediately notify the maternity and childcare centre about a birth would look. She wanted to first implement her idea in Bodø and then spread the innovation to all municipalities in Northern Norway. Anna knew that having a regional perspective and a prototype of a system would be critical for convincing the NNRHA to support her project. To further increase her chances of success, she decided to also invite CGM to the meeting with the NNRHA.

Regretfully, it was a disappointing meeting. Although Anna expected initial resistance towards her idea, she was amazed at how 'unprepared' the NNRHA and Northern Norwegian hospitals were for such an innovation. She was also surprised by the negative attitude that she experienced during the meeting:

> I actually arranged a meeting with the NNRHA and CGM—the supplier—in 2015. We [in the municipality] and the supplier were clear that now we will implement the project. The NNRHA, which owns the hospital, was by no means there. They were busy with developing the electronic communication between nursing homes and hospitals. Regarding the electronic communication between maternity and childcare centres and hospitals, they were way behind. During the meeting with the NNRHA, it became quite obvious that they were not ready for it at all. It has not been tested out; there has been no development in this area at the hospital at all. We had talked about [the digitalization] in our health service unit for 2 years. We knew that it is possible to electronically communicate with the maternity ward.

Anna was devastated by what she learned. The NNRHA did not have plans to cooperate with her on developing the electronic message system at that moment—neither at the local (Bodø) nor the regional (Northern Norway) level. It was clear that the NNRHA wanted to put everything on hold.

## Mobilizing Knowledge and Resources

To advance her entrepreneurial project through this unstable time, Anna needed to pursue activities that could strengthen her idea and better prepare her project for future implementation. Therefore, in 2016, she first established a single mail address to which all correspondence

from the maternity ward would be sent. Her goal was to limit the risks of misdelivered or undelivered mail. In addition, she introduced a new internal routine, whereby the maternity and childcare centre digitized every incoming letter from the hospital's maternity ward. By scanning the traditional mail, Anna theorized, the time required for internal correspondence between the units in the maternity and childcare would be considerably reduced. That was indeed the case. Anna was satisfied with the obtained results and perceived the new routine as an important step towards developing the electronic message system that would immediately notify about a birth.

In 2016, Anna also mobilized funds to create a new job position—a secretary, who became almost exclusively responsible for communication with the local hospital's maternity ward. Furthermore, she engaged in dialogue with the maternity ward at the local hospital. Through frequent meetings with the leaders and employees in the maternity ward, Anna wanted to increase their knowledge and prepare them for future implementation of the electronic message system.

Late in 2016, Anna applied for additional ICT resources from the healthcare department in the municipality of Bodø. Her application was successful; an employee from a team working with ICT in the municipality was assigned to Anna's project as a part-time system administrator. From that moment on, the system administrator monitored the technical and security-related aspects of the project. The system administrator was also vital when it came to communication with the IT department in the municipality, the municipal IT services provider, and CGM.

Notably, by 2016, Anna had learned that the local hospital and the municipality of Bodø had several service agreements that specified how these two parties would cooperate when it came to the provision of healthcare services. Some of these agreements specified the cooperation on pregnancy, birth, and maternity care services, as well as cooperation on IT solutions at the local level. In her view, 'Service agreement 8' was particularly essential for her project:

> 'Service agreement 8' says something on the cooperation on pregnancy, birth, and maternity care services. I copied the most relevant part from this agreement for me. Under parties—that is, the hospital and the municipality of Bodø—it says that both parties have common responsibility and tasks to facilitate electronic communication. It also says that the hospital has a responsibility for informing about the birth and discharging. It is written in our cooperation agreement. The hospital has a responsibility to notify us about the birth and discharging.

It was a critical event for Anna. She knew that sooner or later, the NNRHA would have to start cooperating with her. The question was, did she have enough patience and strength to continue working on this project?

## Why Can the Others Have an Electronic System But Not Us?

At the start of 2017, Anna's project slowly progressed. She was actually glad that all the small improvements that she had made recently—calling the maternity ward twice a week, sending

basic information (i.e. the mother's name, date of birth, and whether it was her first child, as well as the child's birth time, sex, birthweight, length, and head diameter) to relevant maternity and childcare centre units and midwives, and scanning all the correspondence from the hospital—worked sufficiently well. At the same time, the pace of this progress did frustrate her. She could not understand why the NNRHA was not keen on joining her entrepreneurial project. After all, she had support from the municipality of Bodø, as well as a prototype of an electronic message system that could revolutionize the communication between these two public sector organizations. She also knew that the NNRHA was legally obliged to develop such an electronic communication system.

Anna continually learned about how other maternity and childcare centres worked on developing an electronic communication system with the maternity wards at the local hospitals through participating in KomUT—a competence network in the Norwegian Association of Local and Regional Authorities (NALRA). (For more information about NALRA and KomUT, see Box 23.3.) She also read journals for public health nurses.

| Box 23.3     NALRA (Norwegian Association of Local and Regional Authorities) (Norwegian: KS) |
|---|
| NALRA is the interest and employer organization for the municipalities in Norway. All municipalities and county municipalities in Norway are members of NALRA. NALRA has a mandate to negotiate and make agreements with the employee organizations on wages and other conditions. NALRA represents the municipalities' interests during negotiations with the state and suppliers. In 2012, NALRA developed a municipal competence network called KomUT that aims to assist the municipal sector in the digitalization processes. *Source:* KS (2019, n.d.). |

During one of the cold winter days of early 2017, Anna looked through a journal for public health nurses. Suddenly, she spotted a bittersweet article. The article described how the Western Norway Regional Health Authority had developed a technological solution that enabled electronic communication between the maternity ward at the local hospitals and the maternity and childcare centre in Western Norway.

> They came up first with a solution because they worked hard in the pre-implementation phase and had the right persons who engaged in [the project]. However, they did not manage to develop the electronic message system that immediately notifies the maternity and childcare centre about a childbirth. It is, in a way, the most important thing for me. But they developed a system that sent a discharging summary when [a] mother and her child are discharged from the hospital. This is way faster than through traditional mail and telephone. Well, back then, I thought, 'Yes, someone managed to do it, it is possible'. But we were dependent on the NNRHA. We gave them a clear signal that we are ready here in Bodø. But the NNRHA has to join us. Otherwise, we cannot go forward. Well, the NNRHA has to put it on their agenda.

From the meetings in KomUT, Anna learned that in Western Norway, the maternity and childcare centre in the municipality of Ålesund had made attempts to electronically communicate with the local hospital's maternity ward. Although Ålesund is located around 990 km south of Bodø, Anna thought that these two municipalities had a lot in common; indeed, they shared the same organizational structure, about the same number of births per year, and about the same number of residents (around 50,000). Therefore, she came up with the idea to travel to Ålesund and learn from their experiences. To this end, she applied for her municipality's travel funds. Her application was granted, and she, together with the other project members (that is, the secretary and the ICT system administrator), visited the municipality of Ålesund. The visit increased Anna's understanding of the benefits and challenges related to the implementation process of such a project and allowed her to develop a closer connection with the municipality of Ålesund, which she could capitalize on while she was further working on the implementation of her own project.

In early 2018, Anna read about another success story, this time from Eastern Norway, which described how the maternity and childcare centre in the municipality of Gjøvik started to electronically communicate with the maternity ward in the local hospital. Her idea was actually happening. Many questions emerged in Anna's head. She could not understand why other municipalities and regional health organizations could cooperate while Bodø and the NNRHA could not. Was it because of her? Was she persuasive enough? So many exciting things were happening in other parts of the country, but it was still dead silent in Bodø.

## Should I Stay or Should I Go?

It has been more than 4 years since Anna started pursuing her entrepreneurial opportunity (Figure 23.1 summarizes critical events in her entrepreneurial journey). The opportunity itself has been greatly developed, and Anna was confident that the proposed technological solution would work. However, when it comes to the implementation, the project was virtually at the same stage as in 2015. The development of a tailor-made electronic message system that could immediately notify the maternity and childcare centre about a birth in the local hospital in Bodø has been downgraded by the NNRHA. To make matters worse, Anna started to hear during informal conversations with politicians and middle managers, as well as in formal meetings with the top management in the municipality, that all the incremental improvements, which had been used for a couple of years, were perhaps good enough. Anna was both disappointed and frustrated:

> Electronic communication and the electronic message system that immediately notifies about a childbirth have been totally downgraded by the NNRHA. They perhaps do not understand how important this electronic message is to trigger the first healthcare help, which the municipality is obliged to provide. What is challenging in relation to birth-discharging summary is that in a birth-discharging summary, there is some information that should be placed in the mother's medical history and some information that should be in the child's medical history. Not all information about the mother should be placed in the child's medical history, as it is done now. But the work on developing the

**2013**

➤ Anna first receives external project funds. She is 50% employed as an ICT adviser and becomes a project manager for the maternity and childcare centre in the municipality of Bodø.

➤ Anna leads a project on developing a digital vaccination record and electronic communication system.

➤ Anna becomes a part of a national association of public health nurses.

**2014**

➤ New national guidelines are implemented that require a home visit 1 to 2 days after a mother and her newborn child are discharged from the hospital.

➤ Anna develops new routines for communication with the hospital (e.g. calling the hospital's maternity ward twice a week).

➤ Anna works with CGM to develop software that could immediately send birth messages from the hospital to the maternity and childcare centre and enable mutual communication between these two organizations.

**2015**

➤ CGM Health Center develops a prototype that enables electronic communication between the maternity and childcare centre and the maternity ward.

➤ Anna has a meeting with the NNRHA and CGM. The NNRHA is not ready to work on developing and implementing the electronic message system with the maternity and childcare centre.

➤ Anna applies for funds and becomes 100% employed as an ICT adviser at the maternity and childcare centre in the municipality of Bodø.

**2016**

➤ Anna engages a secretary at the maternity and childcare centre in Bodø.

➤ Anna establishes a single mail address for the maternity and childcare centre and starts scanning (i.e. digitizing) all mail received from the hospital.

➤ Anna engages a person who is responsible for ICT issues at the maternity and childcare centre.

**2017**

➤ Anna learns that the NNRHA is legally obliged to develop an electronic communication system with the maternity and childcare centre.

➤ Anna reads in a journal for public health nurses that the Western Norway Regional Health Authority has developed a technological solution that allows for electronic communication (but not for sending electronic messages that immediately notify about a birth).

➤ Anna visits the municipality of Ålesund and learns about its attempt to connect the maternity and childcare centre with the hospital's maternity ward.

➤ Anna reads in a journal for public health nurses about the first successful implementation of electronic communication between a maternity and childcare centre and a local hospital in Eastern Norway.

**Figure 23.1**  Timeline of Anna's entrepreneurial project

electronic message-solution has been little prioritized at the national level. And we have to develop local solutions. The Norwegian Directorate of Health has predicted that in the worst-case scenario, nothing will be done [with this matter] until 2022. There is a risk that nothing will happen during the next 4 years. We cannot wait 4 years. We do not have 4 more years to wait.

At this point, Anna started to feel that she had had enough. Perhaps, Anna thought, it was time to move on and hand this project over to someone else who might be more effective and charismatic to convince the NNRHA to cooperate with the municipality of Bodø on her project.

At the same time, there was some hope. During one of her meetings at the administration building in the municipality of Bodø, she learned that the unit responsible for digitalizing the municipal sector in NALRA was interested in her entrepreneurial project. If NALRA were to become involved, it would be a turning point for her project. Indeed, with NALRA involved in the project, the NNRHA would no longer be able to delay the project. Anna wants her project to succeed so much. If she succeeds, the healthcare provided by the maternity and childcare centre would be greatly improved. Consequently, mothers and newborn babies would receive much better care in the crucial first days after being discharged from the hospital. The municipality would also save a lot of resources.

Anna is at a crossroads now. It is a Friday afternoon. She is sitting in her office. Soon, she will go home. Dozens of thoughts cross her mind. Something inside her says that she cannot give up now. At the same time, she is so tired of continuously pushing on. She decides to use the weekend to make the final decision about her role in the project. The start of a new week is a good opportunity to make a new start—to either make a comeback as a fully motivated leader of her project or leave it and ask the top management to find someone else to continue her mission.

## THEORETICAL INSIGHTS

Theoretical insights from two research fields—literature on public sector innovation and entrepreneurship (Chen et al., 2020) and the dynamic capabilities perspective (Schilke et al., 2018; Teece, 2016)—can be of great help to solve the case.

Public sector entrepreneurship is often defined as 'any attempt at creating new opportunities with resulting improvement in government performance characterized by risk-taking, innovativeness, and proactiveness' (Kim, 2010, p. 784). Notably, public sector entrepreneurship very rarely leads to new organization creation—most frequently, it involves the development and implementation of innovative services, technologies, or management methods within the established public sector organizations (Demircioglu & Chowdhury, 2021). The extant literature argues that public sector organizations engage in innovation processes to create public value (i.e. increased efficiency and effectiveness of the organization and enhanced welfare and human rights for citizens) (Chen et al., 2020). Furthermore, entrepreneurial projects in the public sector tend to be co-created by various actors in a public sector organization's ecosystem (Torfing, 2019). Last, research shows that public sector entrepreneurial projects lead to

the development of mission, policy, management, partner, service, and citizens' innovations (Chen et al., 2020; Gullmark, 2021).

The literature on public sector entrepreneurship and innovation tends to attribute the success of most public sector entrepreneurial projects to the entrepreneurial and pro-innovation attitude of public sector employees and managers (Swann, 2017). Recent research notes that the existence of dynamic (managerial) capabilities in public sector organizations explains how and why public sector entrepreneurs can pursue innovations (Gullmark, 2021; Trivellato et al., 2021). Dynamic managerial capabilities are built on three groups of underlying factors. These building blocks are (1) cognitive capabilities (i.e. knowledge structures, cognitive capabilities, and emotion regulation), (2) managerial social capital (i.e. social networks and relationships), and (3) managerial human capital (i.e. education and work experience) (Helfat & Martin, 2015; Huy & Zott, 2019). Dynamic managerial capabilities enable managers to sense and seize entrepreneurial opportunities, transform their organizations, and thereby direct strategic change (Teece, 2016). In other words, the interaction between cognitive, social capital, and human capital capabilities enables (public sector) entrepreneurs not only to sense entrepreneurial opportunities, but also to mobilize support, legitimacy, knowledge, and resources, which are required to seize the focal opportunity and reconfigure the organization where the focal opportunity is being implemented.

## CASE ACTIVITIES

After reading the case, complete the following assignments.

1. Individual work. Write an individual reflection about:
   - Anna's entrepreneurial journey. Imagine that you are Anna and that you are at a similar crossroads. Focus on her dilemma. List the pros and cons of continuing the work of the project. Then, based on your analysis, decide whether you would continue the project or abandon it. Justify your choice.

2. Group work. Take your notes and share your reflections with other members of your group. Before discussing the case in the group, each group member should present their reflections. Use the group work to:
   - Discuss Anna's dilemma. Assess the progress and future predictions for the project. The group needs to jointly make the final decision on Anna's behalf. Make a short presentation that explains why she should continue to work on her project or why she should abandon it.
   - Write a short narrative that continues the story of Anna and her entrepreneurial project.
     - If the group decided that Anna should continue leading her entrepreneurial project, what do you think could have happened in the following months/years with her project?
     - If the group decided that Anna should abandon her project and move on, what do you think Anna could have focused on after abandoning the project?

- Based on Anna's story, reflect on entrepreneurial processes in the public sector. The group should build the discussion around the following four questions:
  - What characterizes entrepreneurial processes in public sector organizations?
  - How can the co-creation perspective increase our understanding of entrepreneurial processes in the public sector?
  - How can the dynamic capabilities perspective help us to better understand entrepreneurial processes in public sector organizations?
  - How do the entrepreneurial activities of public sector entrepreneurs affect strategic change in public sector organizations?

During the discussion, build your arguments on the suggested theoretical insights (see the section above).

## ACKNOWLEDGEMENTS

## NOTE

1. The case narrative is based on the story of a real entrepreneur and an existing project. However, we anonymized the main character in the story using a fictive name—Anna—and made some adjustments in the story to increase the learning outcome.

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# 24
# Running the firm and the island: social, economic, and environmental sustainability at Kvarøy Fish Farm

*Thomas Lauvås, Siri Jakobsen, Karin Wigger, and Morten Dahle Selfors*

## INTRODUCTION

Kvarøy (pronounced 'Kwa-ray') is a postcard-pretty island located in Northern Norway by the Arctic Circle. You can reach it by flying into Oslo … and then a 20-hour journey by train, bus, and boat.

On the boat ride from the mainland, you can see, far out in the sea, the island of Indre Kvarøy, where Kvarøy Fish Farm is located. Indre Kvarøy with its 80 inhabitants is a part of the Lurøy island municipality in Nordland county. The few colourful houses and the dramatic mountain in the background round up the peaceful atmosphere created by the singing birds and a slight smell of fish in the air.

We arrive here on a brisk March day in 2021 to discuss Kvarøy Fish Farm with Alf-Gøran Knutsen and Håvard and Gjermund Olsen at 'Oleas kjøkken' (Olea's kitchen) restaurant. Alf-Gøran is the chief executive officer (CEO) and Håvard the production manager, while Gjermund is the project manager of the family-owned company. While introducing themselves, Alf-Gøran laughs as he says, 'I am the CEO, these two are owners and work for me, and I am married to their sister … it shouldn't really work in this way that the son-in-law comes in to manage the family company, but it does.' The three young men are the management team (Figure 24.1). Together they operate six salmon concessions on the coast of Helgeland, and under their management Kvarøy Fish Farm has excelled in sustainable salmon production, which has led them to export most of their salmon to the high-end market in the United States. While Kvarøy Fish Farm only has around 26 employees, the last year's annual turnover was about 900 million Norwegian kroner (NOK).

Kvarøy Fish Farm was established in 1976, and Alf-Gøran states, 'I am third generation, meaning that my wife's grandfather is the one who started it, then his son took over and then I took over after him in 2008 as manager, when he retired at the age of 48.' Curious, we could not help asking, 'What is your father-in-law doing now?', to which Alf-Gøran responded, 'He is still on the island. He doesn't contribute to the operation today, but he still has a lot on his plate. He runs this restaurant, among other things.'

Hence, the family is running not only the salmon farming firm but also a restaurant, a pub, a general store, and rental cabins on an island with around 80 inhabitants. Alf-Gøran summarizes,

> We are a family firm who have focused on sustainable production of salmon, while at the same time striving for a sustainable society as well … Without the company, there would be no society out here on the island, and without the island, there would be no company. So, the interdependence is very high, and we truly want to develop both the company and the island in a sustainable way.



*Source:* Marius Fiskum.

**Figure 24.1**    Håvard, Gjermund, and Alf-Gøran at one of their locations

## FISH FARMING ON KVARØY SINCE 1976

What now appears to be a salmon adventure was not always as lucrative as it is today. For example, during the first attempts at salmon farming in Norway in the early 1970s, it was a challenge to ensure that the salmon would survive in the ocean, not least because there was a lack of suitable tools and technology that could facilitate good production. Not surprisingly, many doubted that salmon farming could one day become lucrative. However, over time, salmon farming continued to develop through trial and error. The sharing of experiences and knowledge between fish farmers was common in the early phases, which led to fish farming being spread around the Norwegian coast to interested individuals, who saw this new practice as a potential source of extra income. This was also the case for Kvarøy Fish Farm, which was established in 1976 by fisher Alf Olsen and his son Geir, who at the time had 2 weeks left in middle school.

The first decades continued to be challenging for those who ventured into fish farming, with biological challenges and volatile prices for salmon, and thus there were several rounds of bankruptcy, especially in the 1990s and early 2000s, which reduced the number of fish farmers. This led to a consolidation in the fish farming industry, by which a few large companies consisted of about half the turnover in the industry. Kvarøy Fish Farm, however, survived these periods of bankruptcy, thus making it one of the oldest fish farming firms in Nordland county.

Geir took over the company in 1988, and he had always wished to run a sustainable farm, cultivating healthy and good salmon. Geir therefore took some operating decisions that few did: he used lumpfishes (lumpfishes are fish that eat salmon lice) rather than delousing chemicals and he had fewer salmon in each net cage, which also had no copper ingraining. Geir's salmon was therefore preferred by many customers. However, this did not result in the ability to charge a higher price from these customers, who often considered 'Norwegian salmon' to be a high-quality but homogenous product, although the Norwegian coastline is long and consisted of 1,270 production localities in 2006 (Laksefakta.no, n.d.-b). A reason for this is the generic way that Norwegian salmon was marketed by the Norwegian Seafood Council around the world (Intrafish Media, 2009), on which NOK134 million was spent in 2010 (Norges sjømatråd, 2010).

With this foundation, Kvarøy Fish Farm (Figure 24.2) gradually expanded to include two concessions and had a revenue of NOK50 million in 2008. That year, Geir unexpectedly sent an email to his son-in-law Alf-Gøran and his own two sons Gjermund and Håvard that would change both the operation and management of the company: 'I am going to retire, and Alf-Gøran will take over as CEO, and Håvard and Gjermund will both be on the management team.' For Alf-Gøran, this was a shocking revelation. Alf-Gøran, who is educated as a teacher, knew the company well after having worked in several positions over the years, but he had no formal education regarding aquaculture, and Håvard and Gjermund were at that time studying aquaculture at the local university. However, Alf-Gøran knew that his brothers-in-law could handle the production and biological aspects of the business after their graduation.



*Source:* Kartdata @2022 Google.

**Figure 24.2**    Kvarøy, Norway

| Box 24.1    Salmon farming |
| --- |

**SALMON FARMING**

Fish farming/aquaculture involves raising fish in captivity. Norway's aquaculture industry has a yearly revenue of more than NOK65 billion. Salmon constitutes most of the fish farming in Norway (97.5%), which makes Norway the world's largest producer of farmed salmon (Store Norske Leksikon, n.d.). To manage a fish farm in Norway, companies

require permission (concessions) from the government, which regulates where they can locate their fish farms and the capacity of production (the quantity of fish in tons) (Store Norske Leksikon, n.d.).

The production of salmon begins by making broodstock through the insemination of roe. After hatching, the fish enter the next phase as smolt. The smolt are then cultivated in fresh water on land before the adult salmon are fed in net cages, often in the ocean, but salmon are also increasingly being raised in cages on land. When the salmon are ready for slaughter, they are often sent to a slaughterhouse that collects salmon from a range of producers. Then the salmon is often exported by a salmon-exporting firm. The fish farmers often have limited insight into this part of the supply chain (Figure 24.3).



**Figure 24.3**  Supply chain of farmed salmon

## THE SEA ROUTE TO SUSTAINABILITY

After this surprising email, the new management of Alf-Gøran and his brothers-in-law began a strategy process to determine what the company should be doing and what the company should stand for. The new management team had a process for identifying the strengths of the company as an area to further build on. The new CEO, Alf-Gøran, stated, 'Kvarøy Fish Farm did already produce salmon that stood out regarding our production' and added that 'I have always believed that it is the small businesses that has the largest opportunity to stand out in terms of how we do things, to build our identity and brand around a sustainable salmon.'

Hence, the three of them decided to continue developing Kvarøy based on the core concept established by their forefathers: 'Offering salmon of very high quality, without compromising either our environment or the welfare of our fish.' However, they were unsure of how to proceed: 'We told ourselves that we would be the most sustainable aquaculture company in the world. However, it is an unclear path towards that goal, to put it lightly' (Gjermund).

As Alf-Gøran was about to proceed with the sustainable positioning, he saw that there could be a market that was willing to pay a higher price for sustainable salmon. The first development project aimed at becoming the most sustainable aquaculture company was therefore a marketing project to develop a unique salmon and brand. In this process, they encountered a customer who was willing to pay extra for their sustainable product, Whole Foods, in the United States. Nevertheless, many were sceptical about their desire to stand out and export directly to the United States, including their former boss and father(-in-law), who expressed his feelings by saying, 'Well okay, you can try, and it will probably be dead in the water, but at least you have had the possibility to try.' Kvarøy also sensed a certain scepticism from others in the industry because Kvarøy deviated from the traditional ways of producing, delivering,

and branding the salmon by which the homogenous 'Norwegian salmon' was synonymous with high-quality products (Figure 24.4).

To develop an even more sustainable salmon, Whole Foods and Kvarøy considered developing innovative salmon feed. The feed is the most important input in salmon farming and, therefore, the biggest expense. At the same time, feed and the leftovers that the salmon have not eaten can become an environmental issue, as well as the production of the feed. However, because feed is the biggest expense, many fish farmers choose to buy the cheapest feed available or continue with what they have always



*Source:* Siri Jakobsen.

**Figure 24.4** 'Fiskebua', in Mo i Rana, is one of a few places where one can buy Kvarøy salmon in Norway

used. Kvarøy chose to work together with a feed vendor. They wanted to make a new and innovative feed that would rinse off environmental toxins. Furthermore, they use Arctic krill, European soya (many competitors use South American soya, which contributes to deforestation), and algae oil produced on the residual raw material from sugar production in South America:

> We have gone further than anyone else when it comes to the development of feed … the key to getting the best salmon is, of course, the feed you use, and there is no one that beats us on that. It is totally free of PCBs [(polychlorinated biphenyls)], dioxins, etc. It uses only cuttings from North Atlantic production of fish, fish that is not supposed to be eaten by humans … Today, we are ranked as the best in the world for our methods of producing salmon. We were the first company to get Seafood Watch certification on open salmon cages in the ocean, and to this date, we are the most certified fish farmer in the world. (Alf-Gøran)

As a result, Kvarøy's feed is about 20% more expensive than that of its competitors, which leads to a very noticeable increase in the budget because Kvarøy buys almost 10,000 tonnes of feed per year. When Kvarøy buys feed for NOK130 million, a few extra pennies per kilogram amount to several million NOK. It makes one wonder why Kvarøy chooses to pay the extra charge, but Alf-Gøran stands firm on the issue:

> There are many who wish to use our method, but … the feed comes with a steep price, for which you need to have a customer at the other end who is willing to pay that extra price for the salmon … but you cannot claim that you are not willing to pay it to make your production better, considering how much money we [in the fish farming industry] make. And

when you consider that it is a better product, worth more money, it is not clear why others are not following our example. (Alf-Gøran)

Based on these first market and feed projects, Kvarøy has continued the sustainable development. The management team also wishes to be at the forefront of farm operations in relation to both technology and biology:

> We are now further developing our operations through digitalization and use of blockchain technology. In these projects, we have collaborated with different innovative suppliers. Furthermore, we are monitoring our localities with the newest technology, and we are testing robot fishes in our locations; the robot fishes monitor the well-being of the salmon and swim with them in the cages, without disturbing them. On the biological side of things, we have used a lot of time and resources on getting the lumpfish to thrive in the cages (instead of medications for delousing). Although we have come far on this aspect, we recognise that we will not solve the challenges regarding mortality of the lumpfishes. We are therefore moving on into using laser as a delousing method. (Alf-Gøran)

Even though Kvarøy has several development projects today, the management team has not considered whether they are actually being innovative: 'It is just in later years we have realized that we are engaging in innovations … We have also become better at referring to it as that' (Alf-Gøran). Many of the projects also began as more or less 'accidental' opportunities due to their network or the fact that someone had heard about Kvarøy and contacted the management team. This was the case with the robot fish: 'It was an American company that got in touch with us, and we have helped them in testing out their technology in our localities' (Alf-Gøran).

Over time, Kvarøy Fish Farm has therefore become engaged in many other projects because they have become known for having a positive attitude for new innovations: 'We are approached one or two times a week on average by someone who has a good idea' (Alf-Gøran). Gjermund jokingly says that Norwegian coastal communities are notoriously broke, lacking capital and venture capital especially. Although Kvarøy rejects most of the project proposals they get, they have said yes to a fair share of projects that function in addition to Kvarøy's core business. The projects might be good, but Gjermund questions whether it is smart to have ownership of businesses such as a shrimp manufacturer, lutefisk (dried codfish), fish carriers, and lumpfish producers. Kvarøy could have managed without all of these. Gjermund states that he thinks these companies are fun to work with, but he admits that they also might be perceived as a distraction from the core business of fish farming. On the other hand, these companies could never have been started without Kvarøy's investments. Some of the companies also contribute to the fish farming as suppliers of products and services.

One of the larger projects Kvarøy has engaged in is a strategic partnership with Arctic Seafarm, which is working towards establishing a land-based salmon farm. According to the plans, the first of Arctic Seafarm's localities will be located on Nesna on Helgeland, and in March 2020 they obtained a licence to produce 15,000 tonnes of salmon and trout per year. However, the licence was revoked in November of the same year after the Norwegian Directorate of Fisheries decided that the localities were not located far enough from the sea to

be approved as a land-based fish farm (Ilaks.no, 2020). As such, Kvarøy and Arctic Seafarm are now working on moving the tubs to a higher elevation and thus having the farm reapproved as a land-based fish farm (Figure 24.5) (Ilaks.no, 2021).

Fish farming on land eliminates some of the problems of sea-based fish farms, such as fish escaping their cages and salmon lice. Some fish farmers view land-based tubs and cages as a direct threat to sea-based



*Source:* Total Betong.

**Figure 24.5**    New sketch for Arctic Seafarm

industry. The cost of salmon production on land is higher than it is at sea, but Kvarøy expect that, in the future, salmon will be produced both on land and in the sea and that the cost of land-based salmon farming will decrease as more firms choose to develop such farms.

## A MILLION-DOLLAR INDUSTRY ON THE LITTLE ISLAND OF KVARØY

On the little island of Indre Kvarøy, there is a kindergarten, a middle school, and a high school, as well as a general store, a pub, a restaurant, and summer houses and boats for rent to tourists and visitors (Figure 24.6). In the fish farming industry, it is normal that employees work shifts for longer periods, meaning that they can live anywhere they want and work for a few weeks in a row at the fish farms. This solution is not of interest for Kvarøy. Their job advertisements clearly state that the job of salmon farming is not a shift rotation job, and that the job requires moving to Kvarøy. Alf-Gøran explains that, without Kvarøy Fish Farm, the island would not endure. There would not be enough people to run a kindergarten and a general store. Kvarøy might go as far as employing an extra person because then that person would move to the island with their family and children. One challenge that is arising these days is the lack of housing. Kvarøy has therefore taken



*Source:* Kvarøy Fiskeoppdrett.

**Figure 24.6**    When sailing into Kvarøy harbour, you can see Olea's kitchen to the left, the general store in the middle (partly hidden behind the boathouse), and the pub to the right

the initiative to build apartments and buy available houses so that they can become rentals for their employees rather than holiday houses. They are now considering building more rentals, but that demands a great deal of capital.

Alf-Gøran and Gjermund agree that they have a responsibility for the society around them because Kvarøy has become such a large company: 'While building our company, we also need to build our island.' They chuckle and say that they almost resemble a mafia organization. They own the store, pub, rentals, and restaurant, and they say that if someone tries to shut down the school, it will still be there. They not only own all these companies but have, at times, also worked in several of them. Alf-Gøran says that it is not unusual for him to order pastry for the store in the morning, make deals worth millions with Whole Foods before lunch, and book tourists in the rental cabins in the afternoon.

Luckily, they have managed to hire more employees so that he can concentrate more on the fish farm, which, in the end, is the business that makes everything else possible. Nevertheless, it can be difficult to balance consideration for the company with consideration for the society around them:

> For me, it is one of the hardest things to do on an everyday basis, having to consider [the well-being of the island] while also running the business. When you decide on investments, things that need to be done, then you also have to take into consideration that [social] perspective as well. (Alf-Gøran)

He goes on to report that not many years ago, minor salmon slaughterhouses were located close to most of the fish farmers along the coast. However, over time, the slaughterhouses needed larger quantities of salmon to be financially sustainable. This development led to consolidations and closures of minor slaughterhouses. This was also the case on Kvarøy, who shut down the entity on the island, which had four to five employees:

> When we did it, we got called up and yelled at by everyone on the island, how stupid it was to remove these workplaces. Now, it should be mentioned that they had a new job in 6 months, including 1 year of salary. But in that moment, you could really feel the significance it had for the island. (Alf-Gøran)

Because Kvarøy Fish Farm operates in open sea cages, they are dependent on the conditions of the ocean, especially regarding salmon lice, both in their production locations and in their closest fish farm 'neighbours' that are located on nearby islands. If another salmon farm in proximity becomes too infested with sea lice, Kvarøy risks these lice infecting their own locations, and if this situation worsens, the government might impose restrictions on their salmon production. Hence, the mutual dependence and the openness that characterized the industry in the early days prevails today. As Gjermund states,

> The first thing you do when you get a good idea is to tell your 'neighbour', especially regarding fighting sea lice on the salmon and such. So, if you come up with a clever way of getting rid of the sea lice, it is rarely a competitive advantage if you keep these insights to yourself.

You have to get the 'neighbour' to implement the idea as well, so that you are both doing the right things and getting the lice pressure down in the area.

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**Box 24.2    High operating profit margins but biological challenges**

While the Norwegian salmon farming industry experienced a wave of bankruptcies from 2001 to 2003, the operating profit margins have been high the last 5 to 10 years, with numbers as high as 65% (Njåstad, 2020). Kvarøy's operating profit margin has been around 10% over the last years. However, biological challenges in the salmon farming industry, such as sea lice, cost a lot. Hence, many farmers are now experiencing lower operating net margins, averaging 15% to 20% in Nordland and Trøndelag county, and down to 5% in Vestland county (Skulbru, 2021). Three biological challenges are as follows.

### LICE

Parasites such as the salmon louse live naturally in the ocean, and farming salmon in open cages in the sea contributes to their spread from farmed salmon to wild salmon. The large increase in the number of available hosts (farmed salmon) along the coast has led to an increase in salmon lice on wild salmon. The salmon louse is therefore a challenge to the further development of sustainable growth in the fish farming industry. To reduce the number of lice on wild fish, limits on salmon lice in farmed salmon have been introduced (Havforskningsinstituttet, 2018), and growth in the industry is regulated through a traffic light system. The system is controlled by the government, which has divided the coast into 13 production locations. Every other year, the locations get red, yellow, or green lights according to the salmon louse infection rate in wild salmon. Areas that have been given a green light can reach 6% growth in production, yellow means a freeze in the production, and red means that all actors in the area must reduce their production by 6% (Myksvoll, 2021). Kvarøy, which is grouped together with Helgeland and Bodø, was given a green light in 2020.

### ALGAE OUTBREAK

In May 2019, the microscopic algae Chrysochromulina killed several million salmon in Norwegian fish farms. This came as a surprise to the industry and led to large losses for many farms (Kvarøy was not affected) (Havforskningsinstituttet, 2020).

### SALMON ESCAPES

Escaped farm salmon are a threat to wild salmon because farmed fish may travel upriver and spawn with the wild salmon. This can also lead to large financial losses for fish farmers if they lose a significant part of their production. There are several reasons for salmon escapes. There may be technical failures, an incorrect use of equipment, or vessels with propellers that damage the closing nets in the cages. Extreme weather conditions can also do damage, allowing the fish to escape (Laksefakta.no, n.d.-a).

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# CLOSURE

Before returning to the mainland, Alf-Gøran concludes with some thoughts about Kvarøy's status, future opportunities, and challenges:

> Now, in 2021, we have six concessions and 900 million NOK in revenue. However, it is still unsure what the future will bring. Ahead lie both opportunities and challenges, such as an unstable salmon price, fish farming on land and biological challenges, such as salmon lice. However, we do take strategic actions continually; we recently chose to cease our collaboration with our distributor in the US. We figured out that we could do it ourselves. We have also established our own brand, Kvarøy Arctic. So, today, we have six employees in the US and had a turnover of 72 million USD in our first year (2020), where Whole Foods is still an important customer. Not bad for a year with Covid-19 and other challenges … and another thing, we now wish to focus and sell more of our salmon in Norway. We have therefore hired the former cross-country skier Odd-Bjørn Hjelmeset as our marketing director. Thus, you can say that we, here at Kvarøy, are now standing on our own feet in America and working toward getting a stronger foothold here in Norway as well.

When we got back to the boat, ready to leave the island, Alf-Gøran noted that after gaining insights into Kvarøy's story, perhaps students could point to some opportunities that could advance Kvarøy Fish Farm in their pursuit of further (economic, social, and environmental) sustainability?

## CASE ACTIVITIES

Entrepreneurship requires action, and the case narrative illustrates how Kvarøy Fish Farm has taken entrepreneurial actions towards sustainability. The case activities build on game-based learning to develop skills and a mindset to act entrepreneurially for a sustainable future with the following main task:

> To develop a game that involves Kvarøy Fish Farm and focuses on sustainability.

Students are advised to work in groups of three to five. The case activities move from designing to playing the game and are organized in a six-stage process:

0.  (Preparation by reading the case before class.)
1.  Mapping the game elements based on the case narrative
    - The first step is to identify the key elements of the case, which will be the elements of the game: (1) entrepreneurial activities and processes, (2) resources, (3) key actors and their interests, (4) opportunities, (5) challenges, and (6) sustainability.
    - Group and list these elements in the case analysis canvas (to be handed out in class).

2.  Ideation of the game based on the case narrative
    - Next, create the game idea based on the elements identified in Stage 1 and address sustainability as the aim of the game. The group members themselves decide what

the exact aim of the game is, what type of game it should be, how to win the game, what the rules of the game are, how to play the game, and how the six elements from Stage 1 are to be integrated into the game.
- Describe the individual learning outcomes integrated into the game.
- The game canvas (handed out in class) will guide this process.

3. Idea testing
   - Prepare a short presentation
     a. Prepare a 1–3-minute presentation of the game idea.
   - Present your game idea and receive feedback
     b. When presenting, the game canvas may be used.
     c. The groups give feedback to one another.

4. Create your game through prototyping
   - Make a prototype of the game idea using materials from the prototype box (provided in the classroom).

5. Play and try the game (optional). Alternatively, showcase the game
   - If the game is ready to be tested: play.
   - Alternatively, showcase the game, explaining the most important iterations since Step 3.

6. Reflection (questions and presentation with theoretical inputs)
   - The educator and students reflect on the entrepreneurial process they went through.

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# 25
# Steering the global value chain of an SME under uncertainty: the case of GlobeNet

*Taina Eriksson and Niina Nummela*

## INTRODUCTION: A NEW DIRECTOR IN THE HOUSE

Mr Kim Lindholm had recently taken up his new position as managing director at GlobeNet Corporation. He expressed excitement about the job and the challenges it offered him. The company has a long history and has established itself as a market leader in its niche. The management team takes pride in the technological capabilities of the firm and the global partner network they have built. However, some changes are inevitable as the market continues to transform.

Mr Lindholm had accumulated experience in various organizations in technology-intensive sectors; thus, he knew the type of business GlobeNet was in. He would be able to utilize his know-how from the IT sector and his extensive experience working with marketing and sales channels, although he had previously worked in large companies. For this reason, working in a small- and medium-sized enterprise (SME) was a personal challenge for him, and he knew he would need to learn how to run the operations of a global yet relatively smaller firm.

## THE COMPANY AND ITS PRODUCTS

GlobeNet Corporation is an SME that operates in the technology-intensive sector of education. The company, which is headquartered in Finland, employs fewer than 100 people, but it serves customers in over 100 countries throughout the world. Its first product was manufactured in the 1960s when it was still part of a larger organization. In fact, the company was established as a result of a series of mergers and acquisitions. Thus, the GlobeNet brand is actually built on a number of strong brand names. Shortly after the turn of the millennium, the company became an independent SME through a management buy-out.

The company offers a combination of hardware and software products, although its hardware production has been completely outsourced to a trusted partner. During its long history, the company has undergone several major technological transformations, and the current product range utilizes multiple different technologies. One of GlobeNet's major achievements is that it is the first in the world to introduce a virtual product that can operate on normal computers without any special hardware. Characteristic of many Finnish companies, the company takes pride in its strong technological competence. In fact, the company has a very competent in-house technology team. Nevertheless, it also collaborates with multiple partners in technology development.

## MANAGERIAL CHALLENGES

During his first weeks at GlobeNet, Mr Lindholm had many detailed discussions with his new colleagues and learned a great deal about the market and the ways in which operations had been run. Rapid technological changes have typically been associated with parallel changes in the market. However, he soon learned that changes in the market are not as fast as in many similar ones because the introduction of new technology tends to be rather slow in educational institutions. Therefore, the end users rely on relatively old technologies.

Moreover, some educators are reluctant to incorporate new technologies into their teaching, mainly because they are afraid of technological failure during lessons. In contrast, the other group of end users (i.e. students) are young, eager to utilize new technologies, and not afraid to try new things. Nonetheless, it is the teacher who decides on the methods to be used in the classroom, and their decisions are limited by the available equipment. Mr Lindholm was somewhat puzzled by this combination.

He also learned more about how GlobeNet products are sold from his colleagues. First and foremost, GlobeNet sells its products through a global network consisting of around 200 partners around the world. The sales channel partners are quite a heterogeneous group, including firms ranging from very small installers of hardware to multinationals offering extensive solutions for learning. Moreover, the headquarters also sells directly to customers who acquire large installations. For example, education ministries in some countries may decide to equip all their schools in certain regions or in the whole country with GlobeNet products. In such large projects, GlobeNet is directly involved in bringing together partners that will contribute to final delivery and completion. The third and final sales channel is through its own international offices, the number of which has been slowly rising during the past few years, although it is still relatively low. For example, in the United Kingdom, GlobeNet sells exclusively through its own sales office.

Mr Lindholm understood that GlobeNet's roots run through the company's sales channels and that their operations—carried out through international sales partners—are essential for maintaining the company's global reach. He discovered that the GlobeNet team had developed important skills for managing its internationally expanding partner network. Nonetheless, based on his colleagues' comments, he also knew that some of the existing partners would not be up to the challenge of selling advanced software-based products.

Hardware-based products have played a very strong role in the GlobeNet portfolio. They continue to generate considerable income, but their share is inevitably declining. In comparison, software-based products are more complex, thus requiring a different kind of know-how from the sales partners. For example, partners need to be able to advise customers on the required hardware. The problem seemed to be that many of the relationships with existing partners were long-standing and had been productive in the past. However, they are unlikely to make the necessary adjustments to cope with the ongoing changes in software-based products. However, it is clear that GlobeNet has been doing well so far as it has been able to build an extensive sales partner network and make global operations a reality despite its size. In addition, Mr Lindholm discovered that the share of large project sales had been slowly rising and that the trend is likely to continue in the future.

Meanwhile, Mr Lindholm had already familiarized himself fairly well with the other members of the top management team, many of whom had been working at GlobeNet for quite a long time. Thus, they knew the company and the market inside out. The top management team comprises five other members aside from the managing director: chief financial officer Mr Henrik Holm, chief technology officer Ms Jenny Hansen, vice president (VP) for business development Ms Paula Hall, VP for sales and marketing Mr Harry Mattsson, and VP for global partner network development Ms Mia Jensen.

The chief financial officer is in charge of finance administration and served temporarily as the managing director before Mr Lindholm was appointed. Hence, the former has a deep understanding of the whole company. He perceives the size of the company as a challenge in renewing partnerships. The chief technology officer not only heads the technology development team and oversees collaborations with technology partners, but is also actively involved in the customer interface when novel customer needs are being discussed. She perceives that in terms of technology development, the company has some partners with which the collaborations function well. However, when there appears a need to develop something novel, the company faces a problem in searching for a suitable partner, and getting started with the development takes too much time. The VP for business development is the newest member of the top management team and could potentially introduce new ideas. Despite being new to the company, she is well aware of the challenges related to renewing the existing partner network that has served the international operations of the company well in the past. The VP for sales and marketing heads the sales and marketing crew. He emphasizes that the daily operations are functioning very well with the partner network. However, he also recognizes that some of the partners lack perspective on developments beyond their own narrow market. Finally, the VP for global partner network development is responsible for managing the global partner network. She stresses the significance of strategic partnerships for the company since the company gains market insight but also access to bigger deals.

Most of the top management team members had accumulated years of experience in the firm, and Mr Lindholm noted that they seemed to have a good understanding of how GlobeNet products are being used in classrooms. On the one hand, he expressed pleasure at being surrounded by this competent group of managers. On the other hand, he seemed slightly worried about how they would react if he introduced reforms to the company.

Moreover, he is quite content with the organizational structure of the company. The size of the technology team is relatively small compared to that of the sales and marketing team. He knows that the product development engineers are highly competent and that the team could expertly handle the development work in collaboration with the global partners. Nevertheless, running a sales partner network of over 200 partners requires many hands, so he is quite happy that the sales team is large enough relative to the size of the firm. From his earlier experiences with sales channels, he has also learned the importance of having frequent contact with partners.

Mr Lindholm also recognizes the fact that maintaining partners' motivation is crucial to the success of any partnership. In sales partnerships, it is especially important that, in addition to product-related know-how, each partner has sufficient incentive to sell the products in question. However, the challenge is how to apply this knowledge to the partnerships of an SME. As a small operator, GlobeNet does not always have much leverage in its relationships, and the sales team personnel have to find innovative ways to motivate the partners to work in ways that are beneficial to GlobeNet. Thus, Mr Lindholm thought that the sales and marketing capabilities of the firm might need increasing attention in the future.

## THEORETICAL INSIGHTS

Despite its small size, GlobeNet operates across the globe, and its value chain is dispersed world-wide. As the company's offering comprises both hardware and software products, it is involved in actual physical production and in a great deal of coding and other knowledge work. In addition, sales partners are a vital part of the company's operating model as they enable reaching and serving customers on all continents (except Antarctica). This kind of organizational structure can be labelled a *global factory*, a concept introduced in the early 2000s by Buckley and Ghauri (2004) based on their analysis of corporate ownership and location strategies. Although their conceptualization focused on large multinational corporations, more recently scholars have identified SMEs with similar organizational structures and global outreach (Eriksson et al., 2014). However, despite organizational similarities, there are also clear differences.

First, for globally operating SMEs, the role of a partner network is significant. Building and maintaining a wide network of partners enables an SME to grow; however, this process is also accompanied by many challenges. In particular, the management of the global factory structure poses problems because the network comprises independent organizations, and GlobeNet does not have the hierarchical power to impose demands on the partners (on the role of trust and control; see Eriksson et al., 2014). Thus, SMEs with a global factory structure must develop novel managerial and organizational capabilities to steer their organizations.

Second, small global factories like GlobeNet operate almost inevitably in a business environment that is volatile, uncertain, complex, and ambiguous (VUCA). This implies that the company has to be able to adapt to changes in the market and in the wider environment. Operating on multiple continents and within a technology-intensive sector means that there are constant changes, and mere ad hoc problem-solving is insufficient for survival and sustained success. In addition, the firm has to strike a balance between different sales models

while engaged in the development of its channel and partner portfolio to serve future needs. Therefore, it can be argued that GlobeNet needs dynamic capabilities to sustain its competitive position in the market.

Dynamic capabilities theory aims to explain how companies develop and sustain competitive advantages in changing environments (Teece et al., 1997). According to Teece (2007), dynamic capabilities consist of three different but necessary capabilities: sensing opportunities, seizing them (i.e. preparing to leverage the opportunities), and transforming the firm (i.e. reconfiguring the organization and its resources). A firm with dynamic capabilities is argued to be more capable of adapting to changes while also proactively engaging in creating change.

## CASE ACTIVITIES

Mr Lindholm, the new managing director, wanted to ensure that he understood the current situation of the company. At the same time, he wanted to discuss his views of the company's future. The company had a long tradition, which he saw as both a strength and a weakness. In particular, the strategies that had worked well in the past and made the company a global leader were beginning to become outdated, and renewal was necessary to grow and maintain GlobeNet's leading position. At the next top management team meeting, he plans to engage the team in a discussion of what made the company successful in managing its internationally expanding value chain and what would be required in the future as the market slowly changes amid a VUCA environment.

Each of the top management team members should have the opportunity to analyse how to steer the value chain of the company from the perspective of their own role. For example, how should GlobeNet organize its global value chains? Is its current global factory structure appropriate for its future operations? What capabilities would GlobeNet need to steer and manage its global value chains in the future? How would you ensure that the company possesses them? And if the company encountered a severe and unexpected external shock (e.g. the emergence of a global pandemic), how would that affect the company's global value chains? What capabilities would the firm need to maintain its functionality as a global factory in the case of such an external shock?

Mr Lindholm hopes for a lively discussion but also understands the importance of reaching a joint conclusion on the course taken by the firm in organizing its global value chain. Furthermore, the management team must ensure that they have the capabilities needed for the future.

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# 26
# Mobilizing resources for developing a community enterprise in a rural community: the case of a jazz music festival

*Ingebjørg Vestrum*

## SETTING THE SCENE

This case is about an entrepreneur who mobilized resources to develop a jazz music festival, The Groove Valley Jazzcamp (TGV), in Beiarn. Beiarn is a remote community located in Northern Norway, about 2 hours' drive from the nearest town, Bodø. Beiarn had about 1,200 inhabitants in 2004 and faced challenges related to both lack of attractiveness to young people and depopulation.

The main focus of the case is how the entrepreneur mobilized resources by building legitimacy and increasing embeddedness among resource stakeholders of TGV. This was a challenging task since the entrepreneur had to balance demands and requirements from diverse stakeholders both within the rural community and in the external jazz music milieu.

TGV was launched in 2005 and became an annual jazz music festival which took place over 5 days in August. The aim of the music festival was to strengthen the rural community's cultural life and increase its attractiveness to the younger generation. TGV provided workshops in which amateur musicians were instructed by, and played with, professional jazz musicians. There were also lectures by the jazz musicians about improvisation, vocalization, wind instruments, percussion and scene techniques, and Sámi music (joik). The lectures were open for both festival participants and visitors. During the festival, the visitors could also attend jam sessions in a local pub and concerts outdoors, in a concert hall, and in an art gallery. In addition, nature-based activities such as sightseeing, caving, sea rafting, and fishing in the river were offered.

TGV developed values for both villagers and actors in the external jazz milieu. The meeting between professional and up-and-coming musicians surrounded by mountains, valleys, and fishing rivers developed a relaxing and creative atmosphere for improvising and playing jazz

music. Moreover, because of TGV, the rural community attracted positive attention from both regional and national media. For example, one national newspaper had a two-page article with the headline 'The Jazz Camp in Beiarn: Jazz Success in a Green Valley'. This attention also produced a more positive view of the rural community among the villagers and beyond. The municipality paid the teachers at the municipal music school to participate in TGV, and some of the teachers and students at the junior high school also participated in the technical course provided by the festival. Consequently, TGV sparked new cultural activities within the rural community and the region, such as jazz music groups and more concerts year-round. Businesses, such as shops, a pub, a local art gallery, and owners of the fishing river, generated income from the new visitors and activities at TGV. This illustrates that the entrepreneur succeeded in legitimating TGV and increasing embeddedness among resource stakeholders in the rural community and in the external environment, thereby mobilizing the resources needed. However, the resource mobilization process was not without challenges, and the case story illustrates drivers and barriers in the process.

## THE CASE STORY

The case story is about the entrepreneur Rune. It begins with the moment he discovered the idea of developing TGV, discusses how he went through different phases of resource mobilization, and ends in a narrative peak when Rune has to decide if he should continue developing TGV or remove himself from it.

### Discovering the TGV Idea

Early one summer day in August 2004, Rune was driving through a long valley in Beiarn municipality (see Figure 26.1). He was on his way to work and felt the 'groove' from the valley while driving past mountains, caves, forests, and rivers. Suddenly, he got the idea that these dramatic natural backdrops could be perfect scenery for a 'jazz and rhythm' music festival: TGV. When Rune arrived at work, he ran to the chief municipal executive and told him about his idea. The chief municipal executive saw that the festival could contribute positively to the rural community, which had struggled with depopulation and low attractiveness to local young people for several decades; the population had decreased by nearly half since 1960.

Rune was a very creative person and had been employed by the municipality a few months earlier on



*Source:* Rune.

**Figure 26.1**     Beiarn Valley

a 3-year contract to develop new cultural activities. The municipality thought that Rune was the right person to bring new life to a rather stagnant rural community. Since Rune was from outside the community, he could bring new knowledge and external ties. Rune had studied music and drama and had experience conducting a choir and big band. He had been a music school teacher and had led and managed several cultural projects. He also had experience working in other municipalities. Rune had high ambitions, and his biggest dream was to start his own firm and work as a cultural producer for a bigger part of the region. He was eager to develop something that would impact the whole region.

The idea of TGV came into Rune's mind while he was working on his first task in Beiarn municipality: to rehabilitate the local stage at the primary school. The municipality had granted NOK1.5 million for the stage, and with his expertise and networking competence, Rune managed to develop a stage with top-quality, modern technical equipment (i.e. sound and lighting) that enabled concerts, theatre shows, and dance performances at an international professional level. Rune also bought a mobile sound and lighting system which enabled performances at different outdoor locations. Rune got the best offer on the technical equipment from a firm in Bodø and received training to use the equipment as part of the offer. Rune mobilized about 20 villagers to participate in the training, and about 200 villagers participated in the opening performance of the stage on 22 January 2005. Rune saw that the new stage enabled jazz music concerts of high quality and at different locations in the rural community.

To implement his big vision of developing a jazz music festival in the rural community, Rune saw that he needed to mobilize a range of resources, both from the external artist milieu and among the villagers. However, he faced a question: how could he mobilize international jazz music artists without any artistic track record? Moreover, jazz music was not popular in the rural community, so how could Rune get villagers to participate as volunteers and supply accommodation and food for the festival?

Rune thought that promoting nature-based activities would facilitate mobilization of both jazz musicians and villagers. Thus, he designed the TGV idea to build on a base camp for youth that had been organized in Beiarn since 1998. The original base camp was action-packed, with paintball, mountain climbing, and so on. Rune envisaged rhythmic music as being at the centre of TGV. Figure 26.2 shows the first vision he came up with when he arrived at his office on a very nice day in August 2004.

## Mobilizing External Resources to Launch TGV

Rune started to mobilize artists from the external jazz milieu before he engaged villagers. He tried to engage jazz musicians who were interested in nature-based activities, such as fishing and caving, by asking their music agents. The first artist he engaged in TGV was a well-known international professional jazz musician living in Bodø. This person became the music manager at TGV, and this engagement made it easier for Rune to hire international artists as they believed the quality would be at a high international level. When Rune had engaged most of the artists with the festival, he started to apply for external funds. Rune sent his first application for funds to the Northern Norway Jazz Centre and told them about his engagement of the music manager and all the well-known international artists he had attracted to the festival.
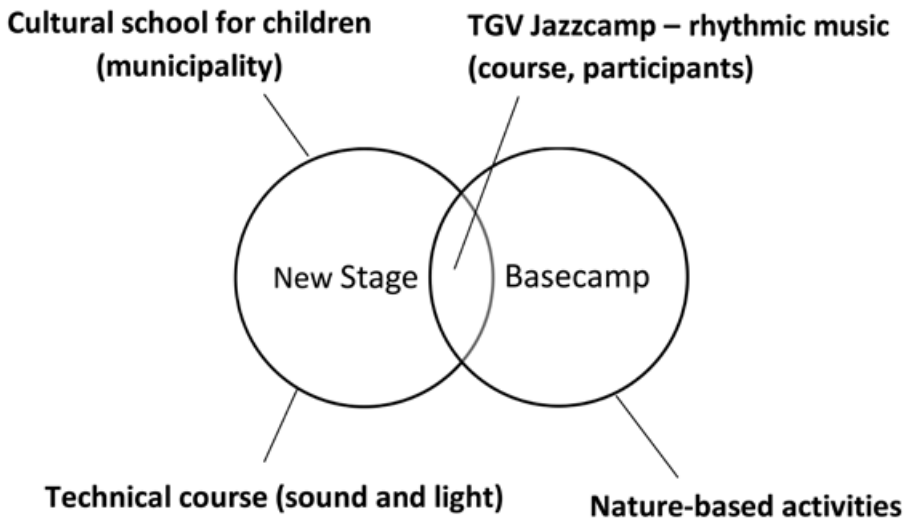
*Source:* Frank Øvrewall, Saltenposten.

**Figure 26.2**    TGV idea

Rune received very positive written feedback related to the TGV idea from the Jazz Centre, which he used actively when he applied for funds from the Norwegian Jazz Forum and Arts Council Norway. Rune also called on the man who had trained the villagers to use the technological equipment of the stage to be technologically responsible for TGV. This person was also from Bodø and had extensive experience in organizing sound and light at concerts at high international standards.

## Mobilizing Local Resources to Launch TGV

After developing his plan in more detail and mobilizing jazz artists, technicians, and external funds, Rune started to do the same with local resources, such as volunteers, business actors, sponsors, and municipal funds. To create interest in the rural community, Rune built local culture and tradition into the festival concept and planned to have a salmon concert (Norwegian: 'Lakshalj-konsert') and a campfire-coffee concert (Norwegian: 'Svartkjelkonsert').

Rune asked individuals he thought would be interested in TGV to join. One of the most critical volunteers Rune engaged had previously had a similar position to Rune in the municipality and became a good discussion partner for him to find out what was possible to accomplish in the rural community and how. This person explained how he had been engaged in TGV: '[The first time Rune described the festival] he talked about a hulder [female seductive forest creature found in Scandinavian folklore] who he had seen and gave him the idea. … He said to me that he had met a hulder.'

Rune also organized a public meeting for villagers in February 2005 to tell them about the idea. He invited representatives from voluntary organizations, and about 20 people came to the meeting. When Rune asked how many liked jazz, only two raised their hands. At the

meeting, Rune told attendees about the positive external feedback he had received, the financial resources he had mobilized, and the engagement of the music manager for the festival. That person had relatives and a cabin in Beiarn and was well known to the villagers. Rune also said that he wanted to build on local, nature-based activities and that he planned to have a salmon concert and a campfire-coffee concert at the festival. During the meeting, the villagers came with some ideas about different activities that could be offered at the festival, such as open farms with activities, a night open fishing river, and other nature-based activities. During the meeting, Rune engaged some of the villagers as volunteers at the festival.

Simultaneously, many of the villagers felt it was a very ambitious idea and not possible to implement. One of them, who was originally from outside Beiarn, explained about the meeting:

> The only thing I reacted to was why not more people took the chance and said yes to join. … I thought that when there were many questions that they should rather join than being so sceptical. … It was the way Rune talked that made them wonder if it was serious. … The agricultural culture. It is like this: you plant the seed and wait until it grows. It grows. Slowly. Rune talked very fast and very hefty. And talked about how it should be and about changes. … It goes too fast. He is a bit too busy. (Volunteer)

Rune also engaged municipal employees to get help in organizing the festival. He worked especially hard to engage his immediate manager since she controlled the use of money and labour at the culture department, and her support was critical to accessing financial and administrative resources. This municipal culture manager thought the idea was very good and gave Rune free rein to develop it:

> He presented it to me before I took a stand on the financials, and before he went to the chief municipal executive to ask for approval to do it. It would affect my budget, but nevertheless I would get some of the effects. I thought the idea was very good; it was manageable and it was customizable. (Municipal culture manager)

The municipal culture manager became critical for Rune to assemble resources within the rural community since she had knowledge about, and networks among, local businesses and voluntary organizations. Moreover, she knew the routines and formal requirements within the municipality and had economic and organizational competences. This person assisted Rune to acquire sponsorships from businesses. However, searching for sponsors was a new situation for the municipality as it used to give money to support local business. Rune also got help from municipal employees to mobilize the landowners and organizers of nature-based activities, such as caving tours and salmon fishing: 'It was the leisure activities. … We built on caving, fishing in the fjord and river, guided tours, mushroom tours. It was what we were good at doing' (municipal cultural manager). Finally, Rune got the owners of the local guesthouse to agree to rent out rooms for the artists and to serve food to the participants and artists. The guesthouse became an important part of TGV, and several of the concerts were organized in its pub. The new stage at the primary school also became an important concert arena.

Rune successfully mobilized external and local resources to develop TGV for the first time in 2005. The municipality became the owner and entity responsible for the economics of the festival and gave Rune a great deal of freedom to develop the idea the first year. They saw the opportunities TGV could develop in the rural community through more positive media attention and business involvement. However, the municipality also saw that the narrow music genre of jazz made it challenging to engage locals. So how could Rune continue developing his idea related to jazz music and simultaneously increase the engagement of the villagers in TGV?

## Increased Engagement in the Rural Community

The municipality wanted to use the festival to promote rural development and encourage more engagement from the local community, such as local businesses, voluntary organizations, and other villagers, for the second year. The municipality felt it had to legitimate the use of public money for the festival by developing something the villagers wanted to take part in. To get the rural community more involved in the second year of TGV, Rune and the municipal culture manager invited voluntary organizations to a meeting. However, Rune had already planned much of the festival before the meeting, and the villagers did not understand what role they could have: 'I was there. And I [had an] understanding of the meeting, that he oriented [the participants at the meeting], and that he had made the conditions more than we were allowed to [develop them]. And they experienced it more like an orientation, and not as an invitation to join' (municipal culture manager).

Rune was very ambitious and worked all the time to extend the artistic portion of the event and develop new activities. He engaged world-famous jazz artist Mike Stern in the second festival in 2006. To increase the local interest, he organized a concert where Mike Stern played with some young people from the rural community. This increased the local engagement for TGV and was a big motivation for the local young people. Rune also brought in a professional painter living in Beiarn to make posters for TGV and organized a concert in the painter's gallery, which further increased the villagers' interest in TGV (see Figure 26.3).

Rune still had his dream of making a positive impact for the whole region. Thus, for the second festival, Rune started to engage firms from the surrounding communities that supplied nature-based activities. However, the municipality felt this



*Source:* Frank Øvrewall, Saltenposten.

**Figure 26.3**    A professional painter living in Beiarn, Kurt Edvin Blix Hansen, with a TGV poster he had made

would be more expensive and difficult to accomplish, and that it would be easier to build on existing activities in Beiarn:

> We discussed the motorized part on the sea. It was a good idea. … [It was] the rafting boats … on Tvervik. … I am not sure if it is this type of activity we should have. Because it was a pretty expensive activity, and it increases the course fee or it increases the expenses on the camp. And we did not have any local industry to take it. … We may not bet on this. But canoeing, there we have everything, and we have volunteers. Maybe it is nearer and easier to achieve. The big work to join the businesses outside. It is a discussion we need to have with Rune as project managers. (Municipal culture manager)

Although more local resources were mobilized for the second year in 2006, the municipality wanted even more local engagement. Moreover, the municipality felt that the villagers needed to be more involved in planning and making decisions for TGV. The political evaluation of the TGV also said that the municipality wanted to have a board to control further development and to get the villagers to feel more ownership of the festival:

> Now I wish to get the professional part, to get some insight into what [the music manager responsible] and Rune work with. Because with my lack of knowledge about this music genre, I feel left out. And I do not have the knowledge to put my foot down. But if we had a council or a board, I would have more opportunities for that. (Municipal culture manager)

Rune was sceptical about having a board. However, since TGV was organized as a 3-year project, the municipality encouraged Rune to establish a board in 2007 to continue developing the festival:

> I have set a requirement that there needs to be a board … and I should be there as economic manager, Rune as a project manager, [the music manager] as a music manager, and there will be one representative from the volunteers … and also we should develop some decisions that will govern the project manager. (Municipal culture manager)

To attract the villagers, the board persuaded Rune to invite a more well-known artist who was not a jazz musician for the fifth year of organizing the festival, in 2009. The municipality felt everything went better after they got a board and included more well-known artists:

> Last year we had a board that took a stronger grip on it. … Last year it went like clockwork, it was fantastic. We were ahead every day with rigging, in relation to what we should do. We had contacts. Then we had a camp host who planned from the smallest thing what we should do. And we had an arena manager who took care of everything that should happen outside, fencing, security. (Municipal culture manager)

However, Rune was afraid that the increased involvement of the villagers would destroy the artistic development of the festival, since the demands from villagers did not always fit the

professional expectations in the international jazz music milieu. So how could Rune continue to develop the professional part of the festival and simultaneously engage the villagers?

## Mobilizing New External Resource Stakeholders for the Artistic Development of TGV

The first 5 years of organizing TGV had been a huge success. With the cool festival, villagers were proud of being from the rural community and were happy that something was happening. The professional jazz artists who were managing the courses wanted to come back every year and started to make good friends with the villagers who worked as volunteers at TGV. Many of the activities started to be routinized.

But Rune was not satisfied with TGV yet. He had so many ideas, and he still wanted to develop TGV to impact a bigger part of the region. However, he felt the increased involvement from the villagers, and the newly created board, placed too many boundaries on his innovative ideas and the artistic development of TGV:

> My goal has been to develop an independent organization. … [There are] many who want to have an opinion and something to say on the team. And when it comes to the artistic [side], it can kill. … I always need to explain why I do it, what it is. And retrospectively: now you see why I did it. Why I meant it, why it turned out to be the way it did. They may understand why. But along the way, it is certainly frustrating during the process and there have been some tough fights. (Rune)

At that time, TGV also lost its most important source of financing, since Nordland county stopped providing funds to festivals. Thus, in autumn 2009, the municipality decided to end the project and transfer TGV to the Beiarn Volunteer Centre, which coordinated volunteer organizations. A new board was developed, with the managers of the Beiarn Volunteer Centre as board manager of TGV. The Beiarn Volunteer Centre could not employ Rune; however, it was dependent on his expertise and networks to continue TGV. Thus, Rune started his own firm, sold his services to the centre, and continued as a manager of TGV. The music manager withdrew from TGV, and one of the jazz musicians who had been engaged in TGV for several years became the new music manager. The involvement of Beiarn Volunteer Centre made it easier to engage volunteers and voluntary organizations in the rural community; however, Rune felt that the connection to the volunteer centre also made it more difficult to mobilize external resources:

> And there you have the connection to the volunteer centre. And I think we have lost some money and a good part of goodwill by using the volunteer centre. They think it is something voluntary and not professional. So therefore I have needed to write that it is the volunteer centre that is the organizer, but the professional apparatus around it is there. It is clear that we have got less sponsoring, but simultaneously we have got a good deal of project support that has offset that. (Rune)

The board wanted Rune to delegate more of the artistic portion of the festival; however, Rune felt he and the music manager had to control this part to be able to develop a holistic concept at a high international standard:

> I am the manager of the Jazzcamp, I am manager and producer. Then you have a strong word in the team, and there are a lot of people pushing the commercial part, and you should have bones in your nose to resist those suggestions and say why we cannot do things. One thing is that you want, yes, you want to have that artist, we should do that and that. Then I say, well, then you need to be prepared that we would lose 40,000 [NOK] in support. How many visitors does that make up? … It is many on the board who think it is possible to delegate things that need to be professional. It is a pity that it is like this. It is someone who has not understood it. (Rune)

Rune wanted to extend TGV by involving new external actors and developed a music exchange with Russia that gave TGV funds from the Barents secretary. He also wanted to include dance as a part of the festival. He had presented this idea to the board several times over the previous 3 years; however, the board was sceptical about including this in the programme. In 2010, Rune worked to develop a performance with impro dance that he called 'Menneskejerven' (the human wolverine). He saw that he could use this to further extend the festival to include a course in impro dance. However, the board was not so happy with this addition to the festival:

> This year we experienced some of the same with Menneskejerven [the human wolverine]. We said no. It is too big an arrangement. We cannot. It will be too expensive. … And then he had applied for funding through some other channels. And in the end, he [mobilized enough] financial resources by setting up his own company to guarantee. And then we said that we would not organize it before it was fully funded. And then when he said he had got it fully funded, we had to organize it. (Municipal culture manager)

The 2010 festival was also successful. During the 6 years of organizing TGV, newspapers had developed a very enthusiastic view of Beiarn, and the rural community experienced an optimistic wave. Although the identification of any causal relationship would be speculative, the number of inhabitants in Beiarn actually increased during the years TGV was organized. Simultaneously, the municipality felt it had given much economic support to TGV and signalled that it would reduce, and even remove, such support. Rune still had big ambitions and saw that to continue, he had to search for new funding. He wanted to apply for European Union funds, which would give TGV an opportunity to become an internationally acknowledged course location. However, all the boundaries made it difficult for him to mobilize resources for further development of TGV, and he was very frustrated. He saw that he used all his leisure time to organize the festival. He felt tired and considered withdrawing from TGV. At the same time, he had had so much success in mobilizing resources for TGV so far and wanted to continue developing it to realize his dream of making an impact on the whole region. He really struggled with deciding what to do: whether he should continue as a manager for TGV or withdraw.

## THEORETICAL INSIGHTS

The case illustrates how a creative entrepreneur mobilized resources for implementing a rather innovative idea of developing a jazz music festival, TGV, by building legitimacy and increasing embeddedness among resource stakeholders. The case illustrates drivers and barriers that can be involved in the resource mobilization process of a community entrepreneur who develops a community enterprise. The case also shows that the resource mobilization processes of these types of enterprises are often collective, with many actors from the local and external milieu involved.

To facilitate understanding of the resource mobilization process of community entrepreneurs, I suggest you build on one or more of the following theoretical approaches.

### Literature to Understand the Resource Mobilization Process

Like other entrepreneurs, community entrepreneurs need access to resources—physical, financial, human, and social—to develop their activities. To understand how the entrepreneur in the case mobilized resources, you can build on insights on resource mobilization that exist within the entrepreneurship literature (Clough et al., 2019; Villanueva et al., 2012). This literature will help you to categorize which resources are critical for community entrepreneurs, describe the resource mobilization phases the community entrepreneurs may go through, and identify drivers and barriers to mobilizing resources.

### Literature to Understand the Mechanisms That Influenced the Resource Mobilization Process

To understand which mechanisms influence the resource mobilization process and how, you can build your analysis of the case on literature using the legitimacy approach (Fisher et al., 2017; Lounsbury & Glynn, 2001; Tornikoski & Newbert, 2007; Zimmerman & Zeitz, 2002) and the social embeddedness approach (Jack & Anderson, 2002). These approaches can also be useful to identify drivers and barriers in the resource mobilization processes of community entrepreneurs.

- *Legitimacy approach:* The legitimacy approach explains that TGV needs to be viewed as appropriate according to the existing norms, rules, and culture that guide the activities of the different resource stakeholders (Fisher et al., 2017; Lounsbury & Glynn, 2001; Tornikoski & Newbert, 2007; Zimmerman & Zeitz, 2002). The literature on legitimacy explains different legitimating strategies. Thus, building on a legitimacy approach can help you identify strategies for developing legitimacy to mobilize resources for TGV. You can also get more understanding of the different norms, rules, and culture of resource stakeholders that are likely to influence the resource mobilization process.
- *Social embeddedness approach:* The social embeddedness approach is about how networks and relations between individuals and organizations are formed and influence the activities of resource stakeholders. Building on the social embeddedness approach

can help you to understand how entrepreneurs develop networks, trust, and a common understanding among diverse resource stakeholders to mobilize resources (Jack & Anderson, 2002). This approach helps you to understand how increased embeddedness in local structures enhances TGV's opportunities to meet local needs and develop social wealth (Akemu et al., 2016).

## Literature to understand the context

The main focus of the case is how an entrepreneur mobilizes resources on both a broader and a rural community level to develop a non-profit community enterprise (Peredo & Chrisman, 2017; Pierre et al., 2014; Vestrum & Rasmussen, 2013). Thus, the literature on community entrepreneurship will help you to understand how the spatial context of the local community influences the resource mobilization process. The resource mobilization of community entrepreneurs can be similar to and different from the processes described in the mainstream entrepreneurship literature, which focuses on for-profit entrepreneurs developing their independent enterprises. For instance, one of the most critical resources for community entrepreneurs to mobilize is volunteers, while for-profit entrepreneurs most commonly acquire employees.

Moreover, the case can also enable an increased understanding of the public sector as an organizational context and the cultural sector as an industrial context. Thus, to understand how a specific context (organizational, spatial, or industrial) can influence resource mobilization processes, you can combine the theoretical approaches above with some of the phenomenon-based literature below. You can choose one or more of the contexts to focus on the following:

*Community entrepreneurship* (Peredo & Chrisman, 2017; Pierre et al., 2014; Vestrum & Rasmussen, 2013)
*Public entrepreneurship/innovation* (Crosby et al., 2017)
*Social entrepreneurship/innovation* (Janssen et al., 2018; McDermott et al., 2018; McNamara et al., 2018)
*Collaborative innovation* (Sørensen & Torfing, 2012; Torfing, 2019)
*Cultural entrepreneurship* (Toghraee & Monjezi, 2017)
*Rural entrepreneurship* (Gaddefors & Anderson, 2019; Müller & Korsgaard, 2018).

### CASE ACTIVITIES

As a case activity, you will work in groups with four to five other students to develop a role play of the resource mobilization process of a community entrepreneur. To conduct the role play, follow these steps:

1. Each group member rereads the case and writes notes while they describe the critical resources, resource stakeholders, goals, drivers, and barriers involved in the resource mobilization process of the entrepreneur developing the community enterprise, TGV.
2. The group discusses the case to develop a common understanding of it. Thereafter, the group clarifies the roles and goals of resource stakeholders that are involved in the resource mobilization process of an entrepreneur developing a community enterprise.
3. The group develops a role play where they highlight the different roles and goals of resource stakeholders in the resource mobilization process of an entrepreneur devel-

oping a community enterprise. The group can use the case as inspiration or they can develop a role play for their own real or invented community enterprise. Each student should take different roles in the process and have different goals for the enterprise. For instance, one student can act as the entrepreneur who tries to convince the resource stakeholders to engage, one student can be an artist with creative requirements, another can be a municipal employee with rural community development goals, one student can be a volunteer who wants to take part in the decisions about the concerts and other activities, and one student can be a commercial actor who wants to earn money from the festival. The group can either try to find a solution that balances all goals or facilitate the diversity and illustrate the challenges and conflicts that can be a part of this type of collective process.

4.  The group prepares a presentation of the role play for the rest of the class. Some of the groups or all groups in the class will be asked to present the role play.
5.  Finally, the class discusses the different solutions in plenum.

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# 27

# Going sustainable in a traditional industry?: seizing opportunities in the furniture industry

*Thomas Lauvås and Siri Jakobsen*

## INTRODUCTION

In January 2019, chief executive officer (CEO) Svein-Erik Hjerpbakk and Chairperson Stig Frammarsvik of Nordic Comfort Products (NCP) were very pleased, watching the final prototype of their innovative and environmentally friendly chair, the S-1500 (see Figure 27.1). The '1500' represents the number of grams of recycled plastic waste from the aquaculture industry used in the chair, and Svein-Erik and Stig hope that the environmental aspect of the chair will be well received in the contract market to which NCP traditionally delivers (e.g. hotels, various companies, and schools). NCP, with its 21 employees, competes in this market from its head office in Hemnesberget, a small village with 1,250 inhabitants located in Northern Norway.

From this remote part of Norway, NCP initiated a strategic process to become known for both its design and work on sustainability, of which the S-1500 was their first tangible outcome. When asked about



*Source:* Bjørnar Øvrebø and Hilde Sletten.

**Figure 27.1**     The S-1500

the motivation for the project, Stig said, 'In the strategic process we had, we recognized that sustainability will be a key driver for our business sector in the future', to which Svein-Erik added, 'but we don't have that many quantified objectives in terms of turnover and jobs, but it is very much about achieving investment profitability and also ensuring sustainability regarding the jobs we have here'.

Although NCP did not have extensive experience with external collaboration, the firm needed external knowledge to develop the chair. Thus, NCP established a range of collaborations and projects with external organizations during the summer months of 2018: research and development (R&D) collaboration with the research institute SINTEF Raufoss; design collaboration with the highly regarded Snøhetta design agency; and supply of plastic waste from two major fish farming companies, Nova Sea AS and Kvarøy Fish Farm AS, which were used in the production of the S-1500 chair. In addition, NCP invested NOK13 million in a new, fully automated plastic injection moulding machine that can produce the S-1500 chair and other plastic products.

Taken together, these investments and collaborations provided NCP with the opportunity for increased production and secure new market shares through the S-1500 chair and additional products. Svein-Erik believes they have a bright future ahead of them, but there are still uncertainties and decisions that have to be made: 'How will the market respond to the S-1500 chair? Further, we have other development possibilities, but how are we going to utilize them in the best possible manner to strengthen our competitiveness?'



*Source:* NCP.

**Figure 27.2**   Bendt Winge with the Nordic plastic shell

## NCP'S HISTORY

NCP has a long history that Svein-Erik carries with him. The company was founded in Oslo in 1932 under the name Romo Factories, and during the first years they actually received payment in soup from a restaurant in return for delivering furniture. However, the company soon grew into a leading supplier of steel pipe furniture to schools and for bus, aircraft, and car seats. From the very beginning, the focus has been on product development, smart solutions, and practical design in the form of easily stackable tables and chairs. Plastic eventually made its way into the furniture industry, and after 2 years of work in collaboration with doctors and the 'sit-right' specialist Dr Seiffarts, the new Nordic plastic shell designed by Bendt Winge was launched in 1970 (see Figure 27.2). This chair became known all around the world, and you have probably sat

on one of these chairs. The chair is still produced today and was the inspiration for Snøhetta's design of the S-1500 chair.

   Throughout the 1980s, the turnover continued to increase, and the 1987 annual report states that 'our models are up-to-date, they sell well and meet public and general requirements'. It was at this time that discussions began between NCP, Hemnes Municipality, and Hemnes Sparebank (the local bank) regarding the purchase of Nordic Products AS. At the time, Hemnes Municipality was in a good financial position and was looking to create new jobs in the municipality, and in 1989 NCP moved to Hemnesberget (see Box 27.1). In 1991, NCP entered a collaboration with the rehabilitation and growth company HASVO AS, and seven employees from NCP took charge of NCP AS. The current ownership still consists of 10 local owners, five of whom work for NCP while the rest are retirees or externals.

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**Box 27.1    Hemnesberget, Norway**

Hemnesberget is a village in Hemnes municipality in Nordland county in Norway (see Figure 27.3). You can reach Hemnesberget by train and bus (approx. 15 hours' travel from Oslo) or by aeroplane. The municipality has approximately 4,500 inhabitants, and 1,260 of them live in Hemnesberget. NCP puts Hemnesberget on the map with its international and environmental products, and the locals are proud of the firm.
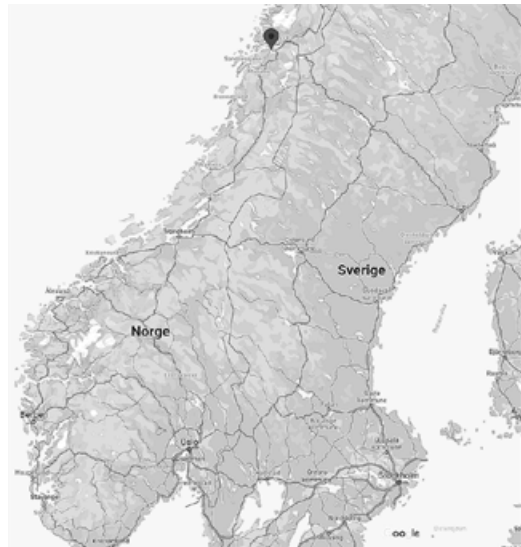
*Source:* Kartdata @2022 Google.

**Figure 27.3**    Map of Scandinavia, indicating the location of Hemnesberget

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The company grew steadily through the 1990s and early 2000s and achieved a record turnover of NOK39.6 million in 2007, after which an 800-m² assembly hall was built in connection with the warehouse at Hemnesberget. Collaboration with HASVO became closer over time, and they were co-located in 2012. Currently, HASVO mainly conducts manual tasks for NCP, such as some upholstery work, milling waste, and various maintenance tasks such as mowing lawns.

   During and after the financial crisis in 2009, several competitors went bankrupt. However, competition also became tougher because of several buy-outs and mergers (e.g. Ekornes had new Chinese owners). The fact that the Norwegian finished goods industry is being bought up

by foreign owners is a general trend observed by NCP. Margins are also under pressure in an industry where more and more actors are focusing on NCP's main market: the school sector. At the same time, many of the companies are both competitors and customers. For example, Rom for Flere AS is a relatively new competitor that is doing well in the market, while also being a good and important customer for NCP. Considering this, NCP faces several strategic choices in terms of ensuring growth and the company's continued competitiveness.

## THE CONTRACT FURNITURE MARKET, NCP'S PRODUCTION, AND ENVIRONMENTAL FOCUS

As of 2019, NCP is Northern Norway's only manufacturer of contract furniture and offers products of their own design and goods for resale (finished products). In terms of their own design, there are certain components that the company produces itself, while other components are purchased from external actors. All assembly is carried out by NCP at Hemnesberget.

NCP's products are mainly sold to Norwegian customers. Exports account for approximately 12% to 13% of the turnover, of which Sweden accounts for approximately 70% and Denmark 30%. They want to increase their sales abroad and have made some changes in Sweden to make that happen. Stig explains, 'A new sales manager has recently been appointed in Sweden, and the office has moved south from Lycksele in the north of Sweden, to Karlstad further south, where the biggest market is. We hope this can increase sales in Sweden.'

In Norway, NCP sells products through its network of distributors, who in turn focus on private companies and public sector end users. Distributors may work for several furniture suppliers at the same time: 'We might be just one of 100 suppliers to a distributor. Therefore, we are very dependent on making ourselves known, that we are where the action is taking place and that we can deliver, etc.' (Svein-Erik). A strategy to make themselves known to the distributors is to take part in different trade fairs, and the Nordic Stockholm Furniture and Light Fair is especially important for NCP. They have not yet exhibited their products at the major European fairs, such as in Cologne, Milan, and so on, as they find them too costly. However, they visit these trade fairs to be updated on what is happening in the market.

NCP's products are designed to fit into a variety of environments such as offices, hotels, canteens, cafés, and meeting halls. Of these, Svein-Erik highlights schools and education as the most important sector: 'There is a lot of activity in the school sector, especially in Norway. Refurbishing new buildings, developments, renovations, refurnishing—all this has created a lot of activity for us.' In terms of geographical sales distribution, most of the market is from Trondheim and further south, and as Svein-Erik says, 'The highest activity occurs in places with the highest populations.' According to Svein-Erik, the market for contract furniture in Norway is somewhat difficult to follow. This is because fewer statistics are available compared to other industries. The total market in Norway is estimated to be around NOK2–2.5 billion, and Stig states, 'We think we have around 2.5% of the market share in Norway, but it could be anywhere from 1 to 4%.'

Over the last few years, NCP has taken steps to move their production and imports from Asia to Norway. In addition, parts of production have been brought back to Norway, especially

regarding the steel frames of tables and chairs that were previously imported from China. Svein-Erik highlights the low exchange rate in recent years as important for this decision as it has made it profitable to manufacture the frames in Norway. This, in turn, has yielded a flexibility in producing on a small scale with the possibility to customize deliveries in desired colours and so on. According to Svein-Erik, being able to deliver relatively large volumes of customized furniture relatively fast is one of their main competitive advantages and one important reason customers choose NCP. Price is also a competitive advantage, in addition to the environmental focus that has been gaining increased importance for competitiveness over the last couple of years. Svein-Erik explains how this is communicated: 'We can provide environmental documentation, describe the origin and the $CO_2$ footprint from cradle to grave regarding a specific product.'

As part of their environmental focus, NCP has chosen to document their efforts in different certifications. They were ISO certified regarding quality and the environment in 2012 (ISO 9001 and 14001), and Svein-Erik says that the choice of becoming ISO certified was an easy decision as they had already implemented most of the requirements in the certifications. Moreover, they wanted to take further steps by eco-labelling their products to communicate the environmental aspects more clearly in the market. However, Svein-Erik expresses doubt over environmental labelling because he does not feel that they are rewarded in public procurement processes as the tenderers are not good at specifying environmental requirements. He compares Norway to Sweden and Denmark where the processes are much more predictable:

> We see very big differences between the tender descriptions, the Norwegian ones in particular. If you take Sweden and Denmark, for example, they have a completely different arrangement. It is much more standardized and uniform in terms of how they emphasize price, quality, and the environment. A Norwegian tender can be very variable.

When asked how they deal with this, Svein-Erik replies, 'We just have to try to meet the requirements in each case as best we can. Sometimes it goes well, and sometimes it is very difficult.' According to Svein-Erik, many of the challenges facing NCP are largely because no agreement exists within the industry regarding environmental labelling. He expresses doubt about the Swan eco-label that he feels has gained an unwarranted emphasis in the furniture industry:

> The Swan eco-label is a bit out of step with the furniture industry. A governmental foundation is behind the label, and Swan is really doing everything they can to get both Norwegian and Nordic manufacturers to give their furniture the Swan eco-label. Other eco-label schemes are not emphasized as much. This is something we clearly see in connection with public sector procurement—you have a real advantage if you possess the Swan eco-label. If you have other environmental labels, such as an environmental declaration in the form of an EPD [Environmental Product Declaration], or from Europe, Sweden, Germany or wherever it might be, it is not as good compared to the Swan eco-label. The Federation of Norwegian Industries is working on this right now. Hopefully, there will be some clarifi-

cation on this in the not-too-distant future. It is very difficult, not least for our distributors who must satisfy documentation requirements that vary greatly. It is a challenge.

Furthermore, Svein-Erik expresses uncertainty about which environmental labelling will apply in the future and therefore which one to focus on. Today, NCP uses EPD to certify their products because it is an international standard based on an ISO standard. This certification means that when you buy a piece of furniture from NCP, you will know its constituent parts, the degree of recycled material that has been used, and a conclusion regarding the number of kilograms of $CO_2$ that the product produces from cradle to grave. Svein-Erik compares this to the Swan label and argues that an EPD is much more valuable for making environmental choices than the Swan: 'You do not get this with a Swan eco-label—you get a classification stating whether the product has been accepted by Swan, but you do not get the specific kilograms of $CO_2$.'

Furthermore, NCP regards an increased focus on environmentally friendly products from purchasers to be a source of competitiveness, but making the environmental focus a pronounced competitive advantage is perceived as challenging because they do not know whether they are the most environmental in their classification or not. However, Svein-Erik is proud to say that 'According to an article by The Federation of Norwegian Industries, our R-48 model is Norway's most environmentally friendly chair.' Moreover, it is not easy to be sure about this as competitors use other measurements and certifications. He mentions that Kinnarps, one of their main competitors, has their own system for environmentally declaring their products: 'They do not follow any standard, so it is not comparable.'

Another competitor to NCP's environmentally friendly chairs is IKEA's composite chair called Odger, which was launched in 2017. This chair is made of renewable wood and recycled plastic, but according to Svein-Erik there are challenges associated with the mixture of wood and plastic that makes NCP's chairs a more environmental choice as the chairs themselves are recycled. Blending plastic and wood, as IKEA has done, makes it very difficult to recirculate: 'Therefore, the circular chain ends, because you are unable to recycle a material that has been mixed with something else. It is, at least at the present, a challenge in that particular area.'

However, NCP's focus is to use pure materials that can be reused and recycled. They have a genuine appreciation towards plastic, and one of their ambitions is to change people's attitudes towards used plastic. Today, only 9% of the world's plastic waste is recycled, and NCP is determined to contribute to increased use of recycled plastic. Svein-Erik says, 'The S-1500 chair[1] is probably the first on the contract market [excluding home furniture] that is 100% based on reused plastic from the aquaculture industry, recycled and manufactured in Norway.' This makes Stig wonder: 'Perhaps we are the most environmentally friendly company in the industry, but we don't know enough about what our competitors are doing.'

## Major Investment in Machinery: Increased Competency Requirements

A factor that affected NCP's production and possibilities for expansion was their ageing machinery from 1992. According to Svein-Erik, the choice was between buying new machinery or outsourcing via rental production conducted by external actors:

> We were at a strategic crossroads in 2016—should we continue focusing on injection moulding, or not? Of course, we could outsource everything associated with injection moulding. However, a margin exists that will increase our profitability in the long term, not least concerning small-scale production and building up stock—having as much control as possible over the value chain. Then, we also have control over building up our stocks. We decided to go for it.

In 2016, NCP's board decided to invest NOK13 million in a fully automated injection moulding machine to produce chairs and chair components in a thermoplastic called polypropylene. In this process, NCP received help from a knowledge broker at Kunnskapsparken Helgeland (an innovation company that acts as an intermediary organization) in writing an application to Innovation Norway. The application was successful, and as a result NCP received a grant of NOK3.5 billion from Innovation Norway to realize their investment. The new machine provides an increased production capacity of 50% to 100%, depending on which products are being moulded. Production is also possible outside ordinary working hours and without the operator having to be present. According to Svein-Erik, this enables NCP to backsource production in the form of injection moulding that NCP currently pays others to do.

In addition, the plan is for NCP Plast to be able to utilize the overcapacity of the machine to produce for other companies: 'We currently have an external customer called Gigtrigger in Bodø who produces the Gigseat festival seat.' Svein-Erik says that it is important to work on the market development of NCP Plast to acquire more external customers: 'This does not necessarily have to be within the furniture sector; there are other things that can be injection moulded … These might include anything from berry pickers to system components.'

Changing the production process has been demanding and has taken time: 'Going from almost a 100% manual workday to robotization is demanding … We are now getting back to a normal situation, one year after we received the equipment.' Parts of the production process are still based and dependent on manual work, but the new machine has created a great need for skills development: 'There is a lot of programming. We never had this type of expertise, so developing skills in this area will be important going forward.' NCP has focused on training its own employees instead of employing new people:

> We have brought in an apprentice who has studied automation. This is something we will continue doing; these are very relevant operational skills … and in the long term, we would like to recruit more employees with higher education, but it is often a challenge attracting applicants with formal qualifications to Hemnesberget.

## Strategic Alliances, Marketing, and Innovation

Over several years, NCP has received assistance from and worked with Kunnskapsparken Helgeland in relation to contact with university colleges and university environments, students, and especially funding schemes such as SkatteFUNN (tax incentive scheme designed to stimulate R&D) and Innovation Norway. Based on this collaboration and with assistance from Kunnskapsparken Helgeland, NCP conducted a feasibility study during the spring of 2017 to map technological possibilities regarding recycled raw materials in injection moulding, possible raw material sources, and the demand and requirements for products with environmental labelling.

In this feasibility study, Kunnskapsparken Helgeland assisted NCP in finding an R&D partner. On the raw material side, the research institute, SINTEF Raufoss Manufacturing, studied and tested how different types of plastic waste from the aquaculture industry can be reused and utilized in ordinary production. The study showed positive results, and it was revealed that recycled ropes from the aquaculture industry may be suitable for use in NCP's production, but other sources of waste may also be relevant, such as feed/net bags, fish crates, and nets.

Based on this feasibility study, Svein-Erik contacted Nova Sea and Kvarøy Fish Farm, two fish farming companies located in geographical proximity. From the dialogue, it became clear that there were no issues in getting enough raw material. Nova Sea, for instance, produced approximately 80 to 100 tonnes of plastic waste each year. According to Svein-Erik, this will be very beneficial in terms of their environmental footprint:

> Having a value chain that is as local as possible, or at least regional, is very beneficial $CO_2$-wise. We could buy plastic granules from Asia or Germany, which have been something else in their previous lives—but you can't get away from the fact that it has been transported to Germany, regranulated and then transported to us. We try to avoid that type of transportation if we can collaborate with regional actors instead.

However, one challenge is that there are very few Norwegian actors offering recycled plastic granules. Today, NCP collaborates with Norwegian Plastic Recycling AS located 370 km from NCP, in Rørvik, which operates both the waste disposal and reprocessing of plastic waste.

### The development of the S-1500 chair

After running these R&D projects, Svein-Erik was reading the *Plastforum* journal (journal for the plastic industry) and noticed an article about Snøhetta receiving a grant from Innovation Norway to run tests on plastic recycling: 'I called the guy [Stian Alessandro Ekkernes Rossi] at Snøhetta, and he was over the moon when he heard what we were doing. It was perfect in relation to our plans for reusing plastic and utilizing it for something positive.' NCP and Snøhetta's design team took part in several meetings and workshops; the project was defined as an internal product development project, led by Svein-Erik, including the marketing manager and technical manager (see Figure 27.4). The aim of the collaboration with Snøhetta was to end up with a chair for the school market, and after several prototypes were designed, one of them

ended up being the S-1500 production model. During the development process, Snøhetta and NCP conducted tests on the R-48, the original chair shell from the 1970s, and the result of moulding with recycled plastic created a very special play of colours:

> Imagine a picture of a beach and the sea washing in over the seaweed. Visually, you get the same formations [in the chair]. The people at Snøhetta absolutely loved it. Traditionally, we have preferred homogeneous colour; there shouldn't be any defects of any kind; and it should match what the architect has envisioned in terms of colours. Snøhetta's team had a more liberal view of things: 'Why not make a unique chair, then number two won't be the same as number one?'

This is a new way of thinking for NCP, and there was a great deal of excitement and anticipation regarding the S-1500 chair presented at the Stockholm Furniture and Light Fair in February 2019.

Up until now, NCP has largely communicated the company name as the brand, rather than building the brand around individual products. After collaborating with Snøhetta, Svein-Erik feels that this might change: 'We may need to rethink a few things. Is it perhaps now time to build a brand at product level?' As a part of NCP's market development, they are involved in Innovation Norway's Strategic Positioning programme, which deals with NCP's position in the market. This work is led by architect Anita Valrygg, who is an NCP board member. Svein-Erik explains the purpose of this work:



*Source:* Bjørnar Øvrebø.

**Figure 27.4**    From left to right: architect Stian Alessandro Ekkernes Rossi, Snøhetta; marketing manager Ragnhild Johannessen; architect Todd Ebeltoft, Snøhetta; technical manager Håkon Edvardsen; and CEO Svein-Erik Hjerpbakk, NCP

> It involves working on who we want to communicate to and how we are going to do it. Traditionally, we have focused on the distributors as customers. It is all about helping the distributors to be as good as possible, and they should receive available information in a suitable manner. In recent years, the architects have become the ones who set the premises, and we must ensure that we provide information and support to them in an interesting and convenient manner. It also applies to everything from websites to Facebook and Instagram—we also have an app that is specially designed for distributors. We need to think through what we need to do with the profile,

the communication, how we should use Instagram and Facebook to support the websites or interest in the NCP brand.

Over the last few years, NCP has started to look for relevant arenas regarding collaboration and skills development, and various activities have led to other things: 'A lot of what we do is related to product development. Through product development, we meet different design communities and expertise communities, which in turn generate other activities.' In 2016, they joined the Norwegian Rooms cluster, which mainly includes actors from Western Norway. Svein-Erik has attended a couple of gatherings since joining:

> The whole purpose of joining Norwegian Rooms is to take part in, when we can, everything from expertise activities, markets and to market Norwegian brands worldwide. It can be advantageous for everything from the Norwegian market to the countries we are currently involved with, i.e. Norway, Sweden and Denmark. Meeting other people in the industry is very useful. We are pretty much alone up here, and we must travel south if we want to meet someone who is involved in the same things as we are. It is very informative.

## STRATEGIC CROSSROADS

NCP has made major strategic investments but still faces several alternative choices. Chairperson Stig and CEO Svein-Erik agree that NCP is a diamond in the rough that has a good and growing reputation, but the chairperson asks, 'What steps should NCP take to ensure and increase competitiveness for the future? In what direction should we increase our use of resources, and is there anything that we should focus less on? Should we grow, invest in technology and robotize more?' Svein-Erik adds,

> The strategic choice to focus on sustainability has been made, but what about skills development within the company, the collaboration with Snøhetta and the cluster initiative? How can we develop the organization and the value chain in a positive direction to make the most of it? … At least, it will certainly be very exciting to see how the market reacts to the S-1500 chair.

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### CASE ACTIVITIES

After reading the case, each group should attempt and reflect on the following assignments:

1. Map NCP's resources according to Sarasvathy's (2008) bird-in-hand principle—who I am, what I know, and whom I know—prior to the development of the S-1500 chair and after.
2. Based on the mapping in Assignment 1, discuss how NCP has used and developed its resources to pursue the sustainable opportunity: the S-1500 chair.
3. Apply the 9R framework (Kirchherr et al., 2017) and suggest some next steps NCP should take to become even more circular.

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## NOTE

1. More information about the S-1500 chair can be found in the section 'Strategic Alliances, Marketing, and Innovation'. https://ncp.no/en/

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