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# Safeguarding entrepreneurial mindset of Norwegian technology companies

Intrapreneurship in digital age

Master's thesis in Master of Technology Management (MTM)

Supervisor: Prof. Arild Aspelund

June 2021



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Faculty of Economics and Management  
Dept. of Industrial Economics and Technology Management





## Abstract

The main purpose of this thesis is to examine how established Norwegian technology companies can safeguard the entrepreneurial mindset. The average lifespan of companies has reduced dramatically over the last 50 years, which can be attributed to the disappearance of the entrepreneurial mindset over time and the companies' inability to maintain and develop the entrepreneurial mindset in parallel with the operational efficiency mindset.

Having worked for a Norwegian technology company for several years, I have experienced how difficult it is to bring changes to established structures to explore new business areas. Therefore, there is a real need to study how established Norwegian technology companies can maintain an entrepreneurial mindset and survive in highly competitive markets.

To achieve this thesis's purpose and to optimally utilize the theoretical frameworks, the following question is posed: **Based on the theoretical frameworks of ambidextrous organization, how can entrepreneurial mindsets be safeguarded in established Norwegian technology companies?**

To answer this question, Norwegian technology companies that may have experienced disruption (according to the theoretical framework of disruptive innovation) in their respective industries were selected.

The framework of ambidextrous organization comprises two distinctive types of business units within a company. One unit focuses on leveraging existing business (i.e., exploiting), and the other unit focuses on exploring new opportunities for future growth. The framework also defines two different company-level factors required to succeed with these two different business units. Company-level factors defined for the exploratory business unit are related to the general definition of the entrepreneurial mindset. Based on this relationship, this thesis claims that safeguarding the entrepreneurial mindset of established Norwegian technology companies requires a focus on the company-level factors needed for the exploratory business defined by the framework of ambidextrous organization.

Empirical findings in this thesis show that the entrepreneurial mindset, which is naturally part of the establishment period of the company, tends to disappear during the growth period of the company. Empirical findings in thesis also show that it is hard to suddenly build an entrepreneurial mindset in the mature period without continually practicing the entrepreneurial mindset in the growth period. Empirical findings also show that an ambidextrous organization is specifically relevant if the established Norwegian technology company can benefit from the company's existing assets and operational capabilities.

Finally, the thesis concludes that if an established Norwegian technology company can benefit from the company's existing assets and operational capabilities, the entrepreneurial mindset can be safeguarded by establishing a separate exploratory business unit within the company that focuses on the company-level factors of an exploratory business unit defined by the framework of ambidextrous organization. This thesis also concludes that it is hard to suddenly build an entrepreneurial mindset in a company without continually practicing it during the growth period of the company. The thesis recommends how to build an exploratory business unit within an established Norwegian technology company to safeguard the entrepreneurial mindset. It concludes that the ambidextrous organization helps to preserve counterattacks and be resilient against unexpected disruptions from new entrants according to the theoretical framework of disruptive innovation.

## Table of contents

Abstract.....	1
Introduction .....	1
Research background.....	1
Research purpose and question .....	1
Case selection and delineation of the thesis .....	2
Structure of the thesis .....	2
Theory .....	3
Rationale for choice of theoretical frameworks .....	3
Ambidextrous organization.....	4
Map of innovation.....	5
Organize to innovate.....	6
The scope of the ambidextrous organization .....	7
Disruptive innovation.....	8
Characteristics of descriptive innovation.....	8
Additional theoretical frameworks .....	10
Innovation ambition matrix .....	10
Zone management.....	11
Diffusion of innovations .....	13
Methodology.....	15
Research design .....	15
Choice of research design .....	15
Research methodology—A case study .....	16
Choice of cases.....	16
Research process for the primary case (“Conax”) .....	17
Data collection .....	17
Selection of interviewees.....	18
Selection of the interview period .....	19
Preparation of in-depth interviews.....	19
Conducting in-depth interviews.....	19
Data analysis for the primary case.....	20
Research process for the secondary case (“Finn”) .....	21
Data collection .....	21
Selection of the interviewees .....	21
Selection of the interview period .....	21
Preparation of in-depth interviews.....	21
Conducting in-depth interview .....	22
Quality of the research .....	22

Reliability.....	22
Validity .....	23
Alternative Methods.....	24
Strengths and weaknesses of the research .....	24
The theoretical basis and the results.....	24
Ethical aspects.....	25
Empiricism.....	26
Findings from primary case (Conax AS) .....	26
Establishment period (1990–2000).....	27
Growth period (2000–2009) .....	28
Mature period (2010–2018) .....	31
Findings from secondary case (Finn.no) .....	34
Identity and vision.....	35
Culture and structure.....	35
Main metrics .....	36
Strategy process and actions .....	36
Leadership.....	36
Analysis and discussion.....	37
Ambidextrous organization.....	37
Analysis of Conax .....	38
Analysis of Finn .....	40
Disruptive innovation.....	41
Analysis of Conax .....	41
Analysis of Finn .....	43
Is Conax both exploitative and exploratory business? .....	43
Why was it difficult to move toward an exploratory area for Conax? .....	44
How Finn.no manages to move toward exploratory area? .....	44
When was the best time to be ambidextrous for Conax? .....	45
Was the perspective around ambidextrous organization relevant for Conax?.....	45
How did the Conax map of innovation look?.....	46
How did the Finn map of innovation look?.....	46
How Finn manage to safeguard against disruptive innovation from new entrants? .....	47
Theoretical implications and further research .....	48
Practical implications .....	50
Practical recommendations .....	51
Thesis’s limitations.....	54
Conclusion.....	55
Appendix 1 - Interview guide .....	56

# Introduction

## Research background

Most of the established technology companies start with an entrepreneurial mindset that, over time, tends to change into a more traditional mindset. The dominant culture of these large companies tends to be operational efficiency. This operational efficiency focus, which is necessary to scale up the business, may destroy the mindset needed to establish new business opportunities (beyond existing business).

A recent study (Garelli, 2016) shows that the average lifespan of companies has reduced dramatically over the last 50 years, primarily possibly attributed to the disappearance of the entrepreneurial mindset over time and the organization's inability to maintain and develop the entrepreneurial mindset in parallel to the operation efficiency mindset, i.e., maintaining and exploring new opportunity focus in parallel to exploiting the existing business focus. This ambivalent explore-exploit focus is necessary to build more future-proof companies and to expand the lifespan of the established technology companies to longer than the average (Garelli, 2016).

Another study from Imperial College London (Watson, 2017) shows that the main reason for big companies dying—beyond being consumed by larger or more aggressive companies—is that they fail to anticipate or react to new technology, new customer demands, or competitors with new business models, products, and services, all of which are often linked and can cause considerable disruption. This is the Darwinian evolution applied to capitalism; the only solution is to keep your eyes and ears wide open and continually evolve what you do through constant adaptation.

Concurrently, many promising high-tech start-ups face difficulties in growing and scaling up their businesses. This can be the scaling of their product and service portfolio, business model, or geographic expansion. The great advantage of established technology companies is the economical muscles, geographic expansion, and other factors needed by the start-ups to grow the business, move beyond the start-up phase, and pass the Death Valley (Fernando, 2021).

## Research purpose and question

Having worked for a Norwegian technology company for several years, I have experienced how difficult it is to bring changes to established structures to explore new business areas. In the company I have worked in, there have been much expertise and capital, so the conditions for growth existed. Often, leaders over focused on current business and operational efficiency.

Therefore, there is a real need to study how the established Norwegian technology companies can maintain an entrepreneurial mindset and survive in a highly competitive market in the presence of new innovators/start-ups, who are continuously developing new and improved products and services. This challenges the traditional mindsets implemented in established companies.

To achieve this thesis's aims and to optimally utilize the theoretical frameworks, the following question is posed: **Based on theoretical frameworks of ambidextrous organization, how can entrepreneurial mindsets be safeguarded in established Norwegian technology companies?** To answer this question, some Norwegian technology companies that may have experienced disruption (according to the theoretical framework of disruptive innovation) in their respective industries were analyzed.



## Case selection and delineation of the thesis

For the case studies in this thesis, the following established Norwegian technology companies were selected.

- Conax AS. In media industry. I worked for the R&D part of this company for many years from start-up, an established company with international success, sold out to the Switzerland-based company Kudelski Group, and merged into a sister company (which was also owned by Kudelski Group). This company started to experience disruption by entrants around 2010.
- Finn AS. In media industry. Owned by Schibsted ASA and is part of Schibsted Classified Media, which initially handled the online advertisement market and now handles the digital marketplace in Norway. This company started in 2000 because of the disruption from entrants.

In order not to exclude relevant moments, this study considers case studies starting from 2000. Within this period, this thesis will have an overall perspective and consider strategic decisions over time.

## Structure of the thesis

In the introduction chapter, the background to the problem and why the thesis is relevant today is discussed. The purpose, research question, and case choices of the thesis are also explained in the introduction chapter.

The theoretical framework of the thesis is presented in the theory chapter, which provides a framework for analysis and discussion of the thesis's empirical findings. Furthermore, in the methodology chapter, we will consider the research method of the thesis and elucidate the methodological choices made in this thesis. In the empiricism chapter, the empirical findings will be presented as case description. In the analysis & discussion chapter, companies are analyzed and discussed based on theoretical framework and empirical data to understand how successfully those companies safeguarded the entrepreneurial mindset. This chapter also recommend how established Norwegian technology companies can safeguard the entrepreneurial mindset, protect against disruptive innovation from entrants, and expand the average life span of the company. Furthermore, the theoretical implications, practical implications, and proposals for further research are presented. Conclusion chapter concludes the thesis by answering the research question. The structure of the thesis is summarized in the following figure.



*Figure 1: Structure of the thesis*

## Theory

This chapter presents theoretical frameworks that later form the basis for analysis and discussion in the analysis & discussion chapter that allows the research question to be answered. The theory will help to elucidate and gain insight into the challenges established Norwegian technology companies face to safeguard the entrepreneurial mindset. The choice of theories is made based on both the research question and the empirical data.

The main discussed theories will be **ambidextrous organization and disruptive innovation**. These theoretical perspectives are chosen to analyze (in the analysis & discussion chapter) and answer the research question satisfactorily. Additional theoretical frameworks are described in this theory chapter to strengthen and broaden the perspective of the theoretical framework of ambidextrous organization and used in in the discussion part of the analysis & discussion chapter to better answer the questions discussed.

### Rationale for choice of theoretical frameworks

Ambidextrous organization and disruptive innovation frameworks are chosen together for the following reasons: While the theoretical framework of ambidextrous organization helps to understand how to safeguard the entrepreneurial mindset in established Norwegian technology companies, the theoretical framework of disruptive innovation helps to understand how well companies safeguarded the entrepreneurial mindset to avoid disruption. As described by (Alpan, 2016), ambidextrous organization helps to preserve counterattack against unexpected disruption from new entrants. The disruptive innovation framework also provides insight into disruption within respective industries. New entrants challenge the very basis of an industry and disrupt established companies in an industry. By knowing the characteristics of disruptive innovation, established Norwegian technology companies can choose to act in advance.

Also, I have included the following theoretical frameworks in this theory chapter because they strengthen the perspective of the ambidextrous organization framework in the following way:

- The innovation ambition matrix (Nagji & Tuff, 2012) supports the map of innovation in the ambidextrous organization framework.
- Zone management (Moore, 2015) supports organization proposal of the ambidextrous organization framework and helps to understand in more detail how to manage the explore and exploit part of the organization.
- Diffusion of innovation (Rogers, 2003) describes the lifecycle of an innovation, which helps to understand the timing for change and when an entrepreneurial mindset is mostly needed.

This case study is imperative and interesting for established Norwegian technology companies, and concurrently, there are other relevant theoretical perspectives that could have been included.

There are many elements and variables that influence a company's entrepreneurial mindset, so a focus on just two theories is limited to explain the general question of how to safeguard entrepreneurial mindset in established Norwegian technology companies. In this thesis, there could have been more focus on theories within strategy (blue ocean strategy (Kim & Mauborgne , 2015) and new strategy playbook (McGrath, 2013)) , which could also explain how entrepreneurial mindsets can be safeguarded. However, I chose not to include more theoretical perspectives in the analysis & discussion chapter since my chosen theoretical frameworks satisfactorily answer the research question. When I narrow the discussion to a few theoretical frameworks, I think these two theoretical perspectives—ambidextrous organization and disruptive innovation—will help to clarify the challenges an established Norwegian technology company faces to safeguard its entrepreneurial mindset. These chosen theories considerably contribute to increased insight into the research question.

### Ambidextrous organization

The Roman god Janus had two sets of eyes—one pair focusing on what lay behind and the other on what lay ahead. General managers and corporate executives should be able to relate. They, too, must constantly look backward, attending to the products and processes of the past while also gazing forward, preparing for the innovations that will define the future (O'Reilly & Tushman, 2004).

This mental balancing act can be one of the toughest of all managerial challenges—it requires executives to explore new opportunities even as they work diligently to exploit existing capabilities—and it is no surprise that few companies do it well. Most successful enterprises are adept at refining their current offerings, but they falter regarding pioneering radically new products and services. Kodak and Boeing are two well-known examples of dominant companies that failed to adapt to market changes. Kodak excelled at analog photography but could not make the leap to digital cameras. Boeing, a longtime leader in commercial aircraft, has experienced difficulties in its defense-contracting businesses and has stumbled during competition from Airbus (O'Reilly & Tushman, 2004).

O'Reilly and Tushman (O'Reilly & Tushman, 2004) discovered that some companies have actually been quite successful at both exploiting the present and exploring the future, and they looked more deeply at them and found that they share important characteristics. In particular, they separated their new, exploratory units from their traditional, exploitative ones, allowing for different processes, structures, and cultures; concurrently, they maintained tight links across units at the senior executive level. Alternatively, they managed organizational separation through a tightly integrated senior team. They called these kinds of companies “ambidextrous organizations,” and they believe that they provide a practical and proven model for forward-looking executives seeking to pioneer radical innovation while pursuing incremental gains.

As described by O'Reilly and Tushman (O'Reilly & Tushman, 2016), the theoretical framework of ambidextrous organization is specifically relevant for established company. As illustrated in the following figure, ambidextrous is mostly needed when a new opportunity is strategically important for the company and the company can benefit from the company's existing assets and operational capabilities. Since my target is established Norwegian technology companies, it is right to choose this framework. There is also evidence that ambidexterity may be more important for companies in technology than in manufacturing (O'Reilly & Tushman, 2016).

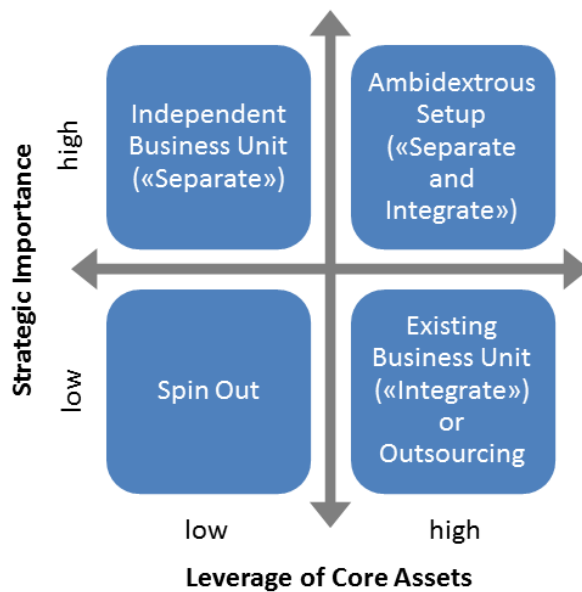


Figure 2: When is ambidexterity needed?

### Map of innovation

O'Reilly and Tushman (O'Reilly & Tushman, 2004) stated that if companies want to succeed in the long run, they should work on innovation on several levels. O'Reilly and Tushman suggested three types of innovations: incremental, architectural, and discontinuous.

- Incremental innovations entail minor improvements in existing products and processes.
- Architectural innovations are about technological or process improvements that fundamentally change a component or element of a business.
- Discontinuous innovation entails radical changes that change the competition in the industry.

	<b>Incremental innovations</b> small improvements in existing products and operations	<b>Architectural innovations</b> technological or process advances to fundamentally change a component or element of the business	<b>Discontinuous innovations</b> radical advances that may profoundly alter the basis for competition in an industry
<b>New customers</b>			
<b>Existing customers</b>			

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Figure 3: Map of Innovation developed by O'Reilly and Tushman

O'Reilly and Tushman (O'Reilly & Tushman, 2004) stated that, to be competitive over time, companies should work on all the three types of innovation mentioned in the table above for new and existing customers. This table helps companies to keep track of their priorities today, and where they might need to strengthen their efforts.

## Organize to innovate

O'Reilly and Tushman (O'Reilly & Tushman, 2004), alongside Wendy Smith, Robert Wood, and George Westerman, studied how businesses organized themselves when they succeeded with innovation. They ended up with 35 different breakthrough innovations (i.e., discontinuous innovations) and studied how they were organized. They found that companies usually organize themselves in four different ways when they work on breakthrough innovations.

Below are the four models that O'Reilly and Tushman defined:

### **Functional designs**

*integrate project teams into the existing organizational and management structure.*



Figure 5: Functional design

### **Cross-functional teams**

*operate within the established organization but outside the existing management hierarchy.*

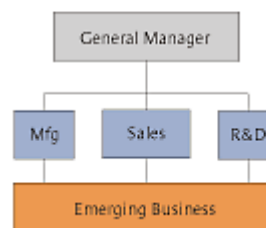


Figure 4: Cross-functional teams

### **Unsupported teams**

*are set up outside the established organization and management hierarchy.*

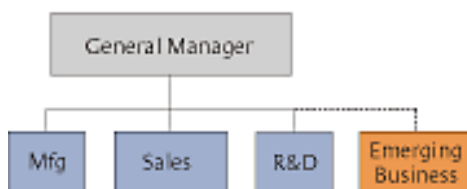


Figure 7: Unsupported teams

### **Ambidextrous organizations**

*establish project teams that are structurally independent units, each having its own processes, structures, and cultures, but are integrated into the existing management hierarchy.*

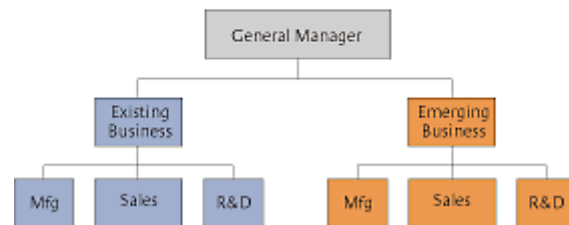


Figure 6: Ambidextrous organizations

O'Reilly and Tushman (O'Reilly & Tushman, 2004) stated that in their surveys among 35 different breakthrough innovations, the companies used different organizational designs/structures to develop new innovations. **More than 90% of those using an ambidextrous organizational structure in the organization succeeded with their breakthrough innovations**, while none of those using the "cross-functional or unsupported teams" succeeded. Only 25% of those who used "functional designs" succeeded in achieving their goals. O'Reilly and Tushman found that ambidextrous organizations outperformed the other three organizational designs. Furthermore, they saw that when using ambidextrous organizations, the existing business kept productivity up or had an increase. The opposite effect had the other three structures—the cross-functional, unsupported teams, and functional designs. Here, the productivity of the existing unit fell. The structure of ambidextrous organization induces inspiration between the units while preventing units from demotivating each other.

Separating the organizations into two different units (i.e., explore and exploit) ensures that the new unit's processes, structures, and cultures are not adversely affected by existing units. Concurrently, the established units are shielded by disruptions of new products and services. Existing units can continue to focus all their attention and energy on improving their processes, improving their products, and serving their customers.

### The scope of the ambidextrous organization

O'Reilly and Tushman (O'Reilly & Tushman, 2004) further stated that an ambidextrous organization comprises two different types of businesses. One unit focuses on leveraging existing profits (i.e., exploit), and the other unit focuses on exploring new opportunities for future growth. O'Reilly and Tushman created the following table showing that two different strategies, structures, processes, and cultures are required to be an ambidextrous organization.

Alignment of:	Exploitative Business	Exploratory Business
<b>Strategic intent</b>	cost, profit	innovation, growth
<b>Critical tasks</b>	operations, efficiency, incremental innovation	adaptability, new products, breakthrough innovation
<b>Competencies</b>	operational	entrepreneurial
<b>Structure</b>	formal, mechanistic	adaptive, loose
<b>Controls, rewards</b>	margins, productivity	milestones, growth
<b>Culture</b>	efficiency, low risk, quality, customers	risk taking, speed, flexibility, experimentation
<b>Leadership role</b>	authoritative, top down	visionary, involved

**Ambidextrous Leadership**  
Different alignments held together through senior-team integration, common vision and values, and common senior-team rewards.

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Figure 8: Company-level alignment factors

To characterize the specific elements of ambidexterity, O'Reilly and Tushman (O'Reilly & Tushman, 2004) offered five propositions necessary for leaders to be successful at managing ambidexterity. These are specific mechanisms that enable companies to successfully manage separately "explore-and-exploit" subunits and to leverage common assets for the company to adapt to new opportunities and threats:

1. A compelling strategic intent that intellectually justifies the importance of both exploration and exploitation.
2. An articulation of a common vision and values that provide for a common identity across the exploitative and exploratory units.
3. A senior team that explicitly owns the unit's strategy of exploration and exploitation, there is a common-fate reward system, and the strategy is communicated relentlessly.
4. Separate but aligned organizational architectures (business models, structure, incentives, metrics, and cultures) for the exploratory and exploitative units and targeted integration at both senior and tactical levels to properly leverage organizational assets.
5. The ability of the senior leadership to tolerate and resolve the tensions arising from separate alignments.

## Disruptive innovation

Disruptive innovation, as described by Clayton Christensen (Christensen, 2015), is a process whereby a smaller company with fewer resources can successfully challenge established incumbent companies. Specifically, as incumbents focus on improving their products and services for their most demanding and profitable customers and they exceed the needs of their customers, disruption from entrants begins by successfully targeting their overlooked segments, gaining a foothold by delivering more suitable functionality at a lower price. Incumbents, chasing higher profitability in more-demanding segments, tend not to respond. Entrants then move up, delivering the performance that the incumbent's mainstream customer requires, as illustrated in following figure. When mainstream customers start adopting the entrant's offerings in volume, disruption has occurred.

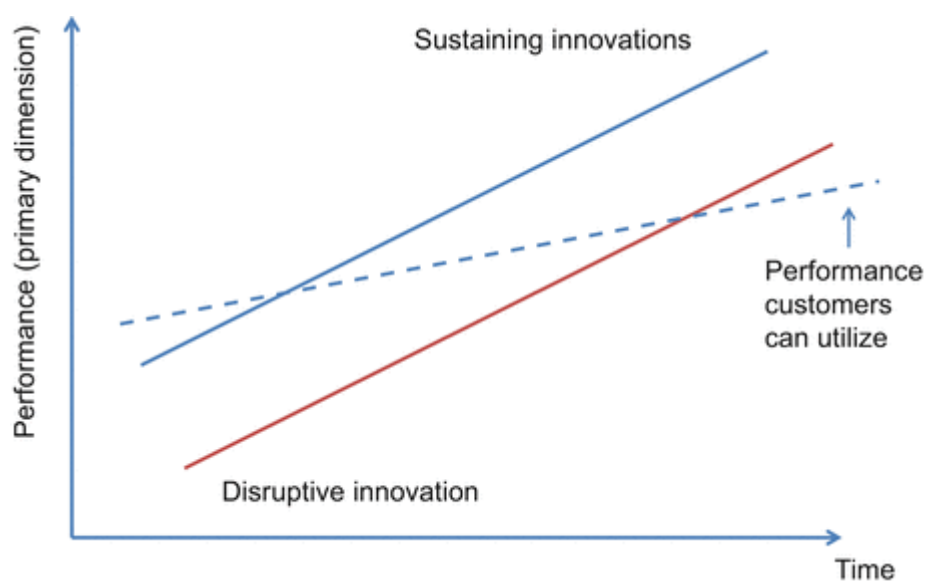


Figure 9: Disruptive innovation

### Characteristics of descriptive innovation

Disruptive innovation originates in low-end or new market footholds. It is made possible because it gets started in two types of markets that incumbents overlook. Low-end footholds exist because incumbents typically try to provide their most profitable and demanding customers with ever-improving products and services, and they pay less attention to less-demanding customers. In fact, incumbent offerings often overshoot the performance requirements of the latter. This opens the door to the disrupter focused (on first) on providing those low-end customers with a “good enough” products. Regarding new-market footholds, disrupters create a market where none existed. Put simply, they find a way to turn non-customers into customers (Christensen, 2015).

Disruptive innovation does not catch on with mainstream customers until quality catches up to their standards: Disruptive theory differentiates disruptive innovations from what are called “sustaining innovations.” The latter make good products better in the eyes of an incumbent’s existing customers. These improvements can be incremental advances or major breakthroughs, but they all enable companies to sell more products to their most profitable customers. Disruptive innovations, however, are initially considered inferior by most of incumbent’s customers (Christensen, 2015).

Typically, customers are not willing to switch to the new offering merely because it is less expensive. Instead, they wait until its quality rises enough to satisfy them. Once that happened, they adopted the new product and happily accepted its lower price. This is how disruption drives prices down in a market (Christensen, 2015).

As described by Clayton Christensen (Christensen, 2015), four important points that get overlooked or misunderstood are related to disruptive innovation:

- Disruption is a process. Disruption cannot refer to a product or service at one fixed point. It is an evolution of a product or service over time that can take a long time.
- Disrupters often build business models that are different from those of incumbents.
- Some disruptive innovations succeed, some do not. Success is not built into the definition of disruption. Not all disruptive paths induce triumphs, and not every triumphant entrant follows disruptive paths.
- The mantra “disrupt or be disrupted” can misguide us. Incumbent companies do need to respond to disruption if it is occurring, but they should not overreact by dismantling a still profitable business. Instead, they should continue to strengthen relationships with core customers by investing in sustaining innovations. Also, they can create a new division focused solely on the growth opportunities that arise from the disruption.

Clayton Christensen’s research suggests, the success of the company against disruptive innovation depends considerably on keeping the new business separate from the core business.

That means that, for some time, incumbents will find themselves managing two different operations. Of course, as the disruptive stand-alone business grows, it may eventually steal customers from the core. However, corporate leaders should not try to solve this problem before it is a problem. **Based on this we can claim that Clayton Christensen’s research supports that ambidextrous organization helps to preserve counterattack against unexpected disruption from new entrants. This supports also the rationale for choosing ambidextrous organization and disruptive innovation frameworks together to analyze and answer the research question.**



## Additional theoretical frameworks

Additional theoretical frameworks are described in this theory chapter to strengthen and broaden the perspective of the theoretical framework of ambidextrous organization.

### Innovation ambition matrix

The innovation ambition matrix (Nagji & Tuff, 2012) supports the perspective of “map of innovation” in the ambidextrous organization framework and takes it a step further.

Nagji and Tuff (Nagji & Tuff, 2012) revealed that companies with the strongest innovation track records can articulate a clear innovation ambition; have struck the right balance of core, adjacent, and transformational initiatives across the enterprise; and have established the tools and capabilities to manage those three types of initiatives as parts of an integrated whole approach. These three types of initiatives can be seen as incremental, architectural, and discontinuous initiatives of map of innovation in the ambidextrous organization framework. One tool they have developed is the following Innovation Ambition Matrix:

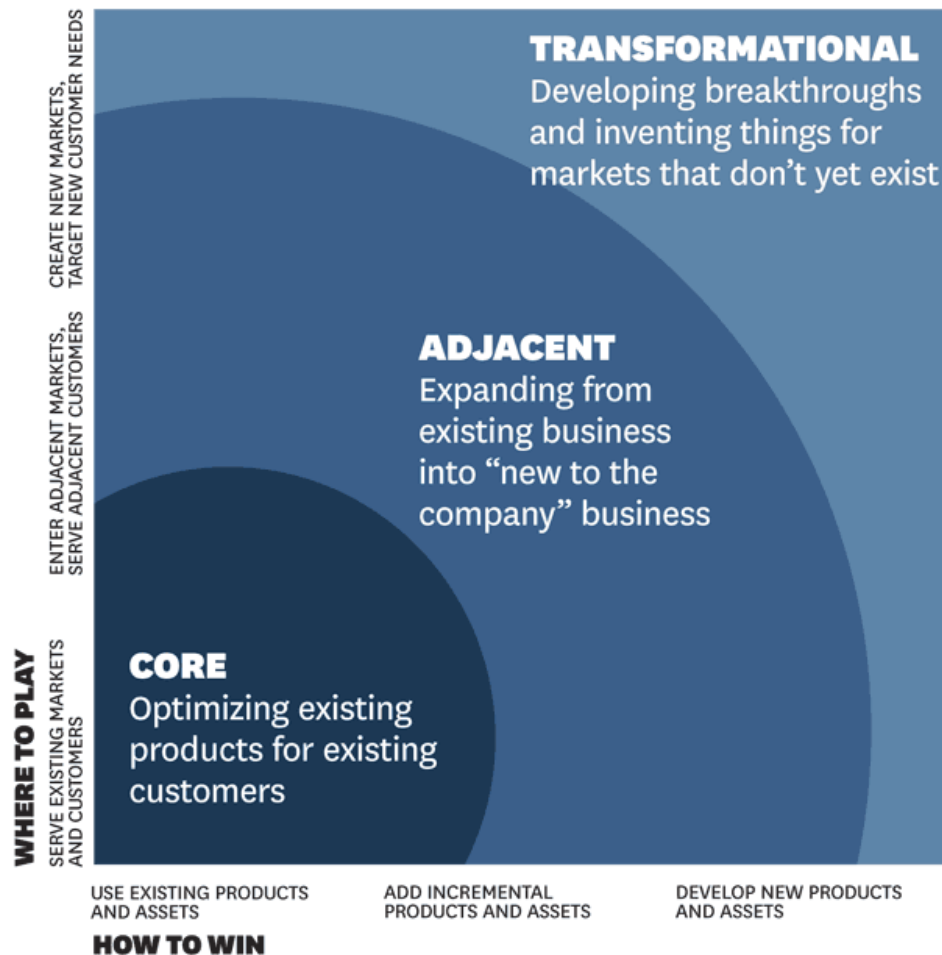


Figure 10: Innovation ambition matrix

The Innovation Ambition Matrix's power lies in the two exercises it facilitates. First, it gives managers a framework for having an overview of all the initiatives, i.e., how much investment is going to each type of innovation. Second, it gives managers a way to discuss the right overall ambition for the company's innovation portfolio.

In a study conducted by Nagji and Tuff (Nagji & Tuff, 2012) of companies in the industrial, technology, and consumer goods sectors, they examined whether any allocation of resources across core, adjacent, and transformational initiatives correlated with significantly better performance as reflected in share price. Indeed, the data revealed a pattern: Companies that allocated about 70% of their innovation activity to core initiatives, 20% to adjacent ones, and 10% to transformational ones outperformed their peers, as given in the following "The Golden Ratio" figure.

A second study, which adds more food for thought, focused on more direct returns on innovation. Of the bottom-line gains companies enjoyed because of their innovation efforts, what proportions are generated by core, adjacent, and transformational initiatives? They found consistently that the return ratio is roughly the inverse of that ideal allocation described above: Core innovation efforts typically contribute 10% of the long-term, cumulative return on innovation investment; adjacent initiatives contribute 20%; and transformational efforts contribute 70%.

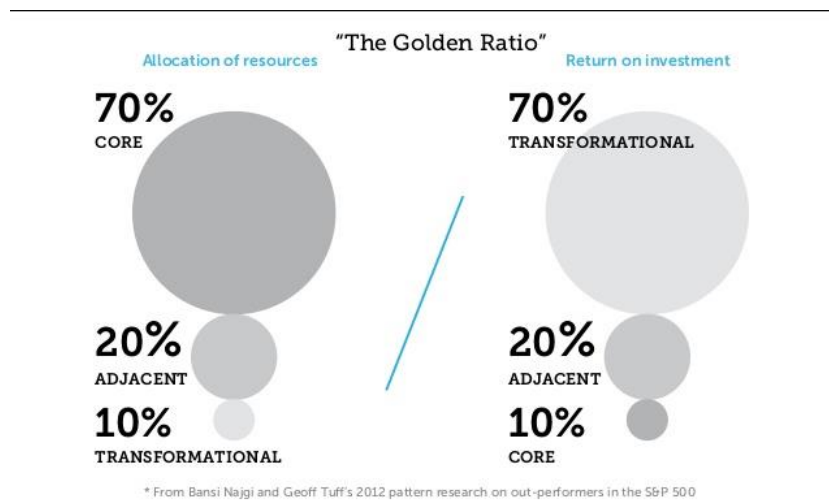


Figure 11: The Golden Ratio

**NB:** Nagji and Tuff (Nagji & Tuff, 2012) are not suggesting that a 70–20–10 breakdown of innovation investment is a magic formula for all companies; it is simply an average allocation based on a cross-industry and cross-geographic analysis.

### Zone management

As described by O'Reilly and Tushman (O'Reilly & Tushman, 2016), the theoretical framework of ambidextrous organization is specifically relevant for established companies, and ambidextrous is most needed when a new opportunity is strategically important for the company and the company can benefit from the company's existing assets and operational capabilities. The advantages established companies have over start-ups far outweigh the disadvantages. Global distribution, worldwide support systems, brand recognition, extensive ecosystems, strong balance sheets, and predictable cash flow—all these can and should be massively impactful assets.

All that is needed is a playbook to focus these assets and leverage them properly (Moore, 2015). Geoffrey A. Moore called this playbook zone management (Moore, 2015). It is based on dividing company into four zones. Each zone has its own distinctive dynamics—one for revenue performance in the current year, one for productivity initiatives to foster and fuel that performance, one for incubating future innovations, and one for taking such innovations to scale. Each zone follows its own local playbook.

Geoffrey A. Moore (Moore, 2015) stated that it is not all that unlike youth soccer when you step back from it. Like our overenthusiastic children, we all tend to run to the ball, and we all hope to score the goal. But business, like soccer, is a team sport, and success depends on understanding formation and playing position. That is what zone offense and zone defense are all about, in business as in sports. The ultimate finish line we are aiming for, regardless of how we get there, is adding a new line of business to your overall portfolio, one that has revenues exceeding 10 percent of total company revenues and is growing at a faster rate. The strategic plan is a good place to start with a specific focus on how best to allocate resources across three investment horizons, as illustrated in following figure. Each horizon is defined regarding when the return on that investment will be realized.

- Horizon 1: In the coming fiscal year
- Horizon 2: In two to three years
- Horizon 3: In three to five years

## The Four Zones Organizing to Compete in an Age of Disruption

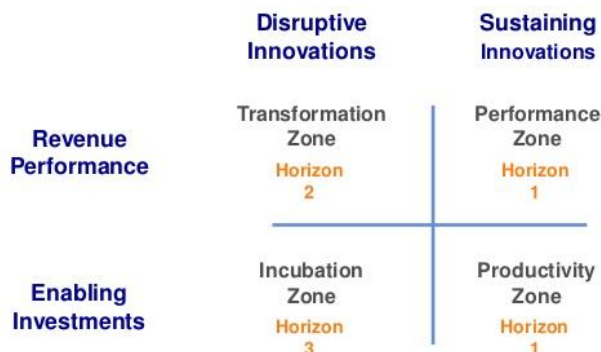


Figure 12: Four zones of zone management

**Performance zone:** Focus is the annual operation plan, and this is the company's revenue engine.

**Productive zone:** Focus is to target efficiency to be gained by improving operations in the performance zone.

**Incubation zone:** Focus is to have several new initiatives always. Frequently, one or more of these efforts is likely to be showing signs that it is ready to transition to full scale.

**Transformation zone:** Focus is scaling the new initiative to pass the tipping point, i.e., cross the chasm, as described by Geoffrey A. Moore (Moore, 2014). According to Geoffrey A. Moore, a company needs only to succeed in one transformative initiative per decade to be world-class. Because transformation is expensive, risky, and exhausting. In most years, the transformation zone is likely to be empty.

A set of management methods creating success in one zone is likely to cause failure in the other three. According to Geoffrey A. Moore, the following three essential steps must be considered to succeed in zone management:

- Install a governance model that segregates the four zones from one another. Do not let the methods, metrics, or culture of the performance zone infiltrate the governance of either the incubation or the transformation zone.
- Establish and implement best practices in each zone independently. This includes establishing which offerings and initiatives are being managed out of which zones and making concomitant adjustments to their goals, objectives, methods, metrics, and governance models.
- Overlay a lightweight corporate system to oversee all four zones in parallel. All the real work is done within each of the four zones, but annual planning, resource allocation, and quarterly business reviews need to be managed across all the four while keeping each distinct from the other three.

Moore's right horizons (i.e., performance and productivity) can be seen as exploit, and left horizons (i.e., incubation and transformation) can be seen as explore part of the organization as described in the theoretical framework of ambidextrous organization. Moore's horizons help us to better understand how to manage the explore and exploit part of the theoretical framework of ambidextrous organization.

#### Diffusion of innovations

In his book Diffusion of Innovations (Rogers, 2003), Everett Rogers describes the cycle through which all successful technologies and ideas progress, as shown in following figure. Overtime, all successful ideas progress from scarce and unevenly distributed to eventually becoming a commodity.

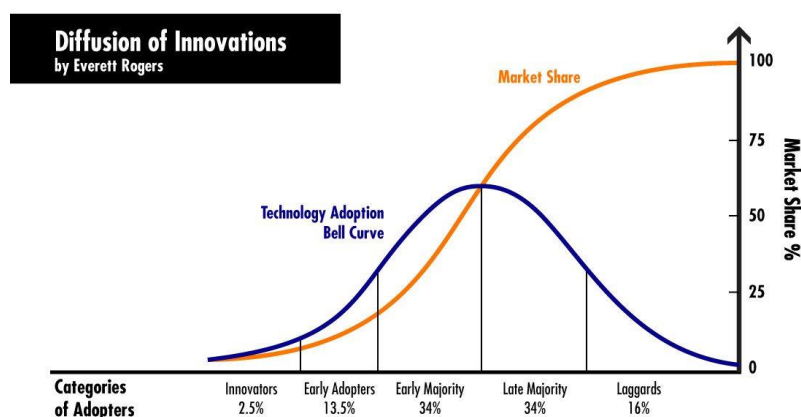


Figure 13: Diffusion of innovations

Roger's ideas were popularized and built upon by Geoffrey A. Moore, who introduced the concept of the "chasm" (Moore, 2014), a logical divide between uptake by early adapters and the early majority, as illustrated in following figure. This chasm was inspired by Moore's observation that many innovations flounder once they are no longer seen as a source of competitive advantages by visionaries but are not yet sufficiently established to be seen as a safe bet or proven practice by the people in the early majority.

## Technology Adoption Life Cycle

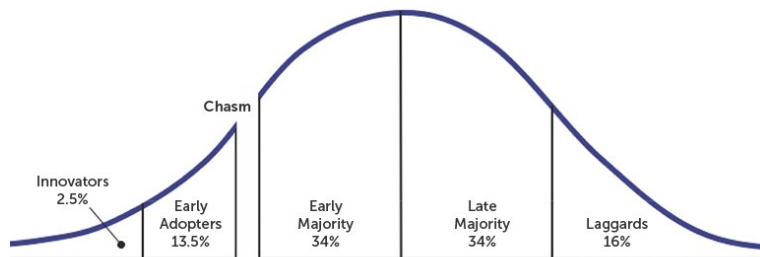


Figure 14: Technology adaption life cycle

A successful product category will initially see high growth ("early majority"), followed by a mature market ("late majority") in which consolidation takes place. Growth in a mature market is typically driven by acquiring competitors and new customers alongside efficiency gains (Humble, Molesky, & O'Reilly, 2015). At any point, a product category can be disrupted by some innovation, as described in the theoretical framework of disruptive innovation (Christensen C. M., 2015)

Moore's "chasm" can be understood as a tipping point between exploring new business vs. exploiting it, as described in the theoretical framework of ambidextrous organization. Best timing to introduce new business is when existing business is getting mature, i.e., move into "late majority," and there are technological possibilities that could reshape your industry (Rogers, 2003).

Start-ups that discover an innovation and cross the chasm often find it hard to transform into the next stage: execution and scaling into the growth market. Meanwhile, established companies that succeed in transforming themselves into engines of execution often lose their ability to explore new business models. If established Norwegian technology companies understand the way to safeguard the entrepreneurial mindset to generate innovations, they will be more empowered to cross the chasm (than start-ups) and do the transition of innovation into the next stage: executing and scaling into the growth market.

We can end this theory chapter with Einstein's famous definition of insanity—doing the same thing over and over again and expecting a different result. We need to think differently and do things differently to achieve ambidexterity in the organization. If the cultural and management barriers are simply too strong for this kind of "ambidextrous" approach, the alternative is to spin off a totally independent unit.

## Methodology

This chapter on methodology will justify the choice of research design and the method used to answer the research question. In addition, the research process, alternative research methodology, and the quality of the research are described.

### Research design

Research design is a logical plan for getting from the research question to conclusion, and it helps to avoid the situation in which the evidence does not address the research question (Yin, 2018).

An important question in scientific studies is whether to use a qualitative or quantitative research method. Both qualitative and quantitative research methods have their strengths and weaknesses, requirements, and optimal use situations. The quantitative research method focuses on counting phenomena and thus identifying the prevalence. When using the qualitative research method, we look for more details and nuances in information (Tjora, 2017). The qualitative research method will say something about the quality or special characteristics of the phenomenon studied. Therefore, the qualitative research method is suitable in situations in which little-known phenomena or phenomena with which a thorough understanding is desired (Tjora, 2017). Qualitative methods emphasize insight, and quantitative methods highlight overview (i.e., explanation vs. understanding).

### Choice of research design

In this study, a qualitative research design is chosen to explore the nuances and context in the studied phenomenon of the cases. A quantitative research design is seen as inappropriate because such a design would reduce the flexibility of the study. Concurrently, the context and nuances could be lost in the method. The rigid structure of the quantitative research methods probably induced information loss, making it more difficult to see the nuances of the phenomenon and answer the research question. Through the qualitative research design, the researcher can discover a pattern that can form a basis for comparison (Johannessen, Tufte, & Christoffersen, 2020) For this case study, a qualitative approach is best suited to answer the research question.

The qualitative research design is also chosen because I was employed in Conax from the start-up phase of the company, the growth phase, and integrated into Kudelski Group (a Switzerland-based technology company). Through my role from Engineer to EVP Engineering, I have in-depth knowledge about the company and have access to top management. Hence, I can dig into the earlier strategic decisions to understand the background of the choices that were made.

With over 20 years of experience in Conax (i.e., almost the whole lifetime of the company) and access to conduct in-depth interviews with former top managers, I gained good insight into the nuances and challenges Conax was facing. This is the second reason for choosing a qualitative research design.

## Research methodology—A case study

A case study is an empirical method that allows you to focus in-depth on a case and to retain a holistic and real-world perspective. It allows the researcher to investigate and develop a deeper understanding of a phenomenon. Case studies are appropriate when it is desired to study a phenomenon in a natural context, especially when seeking answers to questions about "how" and "why" (Yin, 2013). Also, case studies are beneficially used to investigate and understand a phenomenon in depth, providing a broader picture of the situation.

### Choice of cases

As described by (Yin, 2018), multiple-case designs may be preferred over single-case designs. If you do even a "two-case" case study, your chances of doing a good case study will be better than using a single-case design. Single-case designs are vulnerable because you are probably putting "all your eggs in one basket." More importantly, the analytic benefits from having two (or more) cases may be substantial. Even with two cases, direct replication can occur. Analytic conclusions independently arising from two cases will be more powerful than those coming from a single case alone.

The evidence from multiple cases is often considered more compelling (unless the single case is unusual). Simplest multiple case study design would be the selection of two cases believed to be literal replications (Yin, 2018).

As mentioned above, I worked for Conax for over 20 years. Through my career at Conax, I have in-depth knowledge about Conax (throughout the lifetime of the company) and have access to top management. Since I wanted to write specifically about safeguarding entrepreneurial mindsets in established Norwegian technology companies, Conax was a natural choice as the primary case for this study. Hence, I can dig into the earlier strategic decisions to understand the background of choices that were made, i.e., why they were taken, how they were implemented, and with what result.

Also, I selected one more Norwegian technology company, finn.no as secondary case. There should be similarities between the cases chosen for the case studies (Yin, 2018). Similarities between the two companies are: both are Norwegian technology companies, prone to disruption, established around the same period, and almost the same sized companies. Including two cases in the study, primary case and secondary case, will broaden our perspective and better answer the research question. Primary case will be deeply investigated compared to the secondary case, which is reflected when describing the research process. See the research process chapter for how the primary and secondary cases are studied.

## Research process for the primary case (“Conax”)

In this chapter, the research process for the primary case is presented.

### Data collection

One of the most important sources of case study evidence is the interview. You may be surprised by this assertion because of the usual association between interviews and surveys. However, interviews are commonly found in case studies. Interviews can especially help by suggesting explanations of key events, and insights reflecting participants' relativist perspectives. Case study interviews will resemble guided conversations rather than structured queries. Although you will be pursuing a consistent line of inquiry, your actual stream of questions in a case study interview is likely to be fluid rather than rigid. This type of interview has been called an in-depth interview (Yin, 2018).

In this case study, in-depth interviews are used as a method to gain better insight into the strategic choices made in the primary case. Of the qualitative methods, the in-depth interview is by far the most widespread method (Johannessen, Tufte, & Christoffersen, 2020)

In-depth interviews are often used when there are topics that cannot be addressed using surveys (Yin, 2018). In this research, the topic cannot be answered by sending out a questionnaire to top managers. By using both my in-depth knowledge about the company as secondary data and in-depth interviews of top management as primary data source, the database becomes more objective. I have a good understanding of Conax's lifetime, and the in-depth interviews will contribute to a broader and deeper insight into why decisions were made. An advantage of in-depth interviews is that they can provide information that interviewees would not otherwise tell because of the sensitivity. Interviewees can reflect on their experiences and opinions related to the relevant topic of the research. Open questions allow interviewees to go in-depth and allow relevant digressions, which are not part of the interview guide. The quality and the reflection of in-depth interviews depend on trust and the relationship between interviewee and interviewer, which I believe we had for the primary case since I worked for Conax for over 20 years.

According to Yin (Yin, 2018), even though the in-depth interviews are targeted (i.e., can focus directly on case study topics) and insightful (i.e., provides explanations and personal views), the following weaknesses need to be addressed by the interview guideline and interviewer:

- Bias due to poorly articulated questions
- Response bias
- Inaccuracy due to poor recall
- Reflexivity, e.g., interviewees say what interviewer wants to hear

#### *General in-depth interview guide*

- Better with “how” questions than the “why” questions and ask for examples of thoughts and own experiences.
- Interview in a place where participants can feel safer and comfortable (and not be disturbed). Best with an informal situation that can be like a chat over a cup of coffee.
- Interview structure: warm-up question, reflection questions, and ending question.
- Best with pre-formulated questions and keywords for additional points.
- Use recording if possible. It is important to explain and get permission in advance.



### *General researcher qualities required for in-depth interviews*

- Give good explanation of the interview structure and the format
- Ask good questions, be a good “listener”, stay adaptive, have a grasp of the issues being studied, and conduct the interviews ethically
- Requires an inquiring mind during interview, which is mentally and emotionally exhausted
- Focus on not only what might have been said but also what was meant (between lines). Avoid closed mind and selective hearing. Remember that recording is not a substitute for listening.
- Focus on decision: Why they were taken, how they were implemented, and with what result. Concrete data must be elicited in the interview by follow-up questions, which can be used in further analysis.
- Allow interviewees to go in-depth and allow relevant digressions (which are not part of the interview guide). This is the balance between adaptability and rigor. Recall the purpose of the case study, which will help to achieve this balance.
- Do not have an exaggerated expectation of reflection through interview invitation (then you can scare the interviewees).
- Be careful with words and concepts in the interview that the interviewee would not use. Let the interviewee as much as possible describe their thoughts and experiences with their own words.
- Practice silence that the interviewees perceive as embarrassing enough that they automatically elaborate on their answers and come up with additions reflection. This requires ice in the stomach!

### Selection of interviewees

An important part of the data collection is to conduct individual in-depth interviews with individual people who have held various roles in top management. I want to have an interview group that could represent strategic roles related to safeguarding the entrepreneurial mindset of the company. The idea is to get more perspectives from different roles in top management. I want to conduct five in-depth interviews, which represent the strategic functions of Conax from 2000 to 2018. By choosing people from different roles in the top management, we will secure more perspectives on the strategic decisions related to safeguarding the entrepreneurial mindset of the company. With these five interviewees, we will have enough primary data source to verify and compare with the secondary data source (which is my in-depth knowledge about the company).

This follows the general rule for selection of the interviewee. Interviewee can comment on the relevant topic, reflect around the topic, and add different perspectives to the topic.

## Selection of the interview period

After reviewing the entire history of Conax, I saw that the years between 2000 and 2018 were the most important in connection with safeguarding the entrepreneurial mindset. During this period, Conax experienced strong growth and disruption from entrants (according to the theoretical framework of disruptive innovation) in its industry. My findings suggest that, during this period, the most important decisions relevant to the research question were made. I can choose to study the case more deeply over a shorter period. The risk of excluding strategically important decisions in the case discussion led me to focus on the 18-year period from 2000 to 2018.

To put this period in context, I briefly choose to present the history of Conax from the establishment period in 1990 to 2000. Even though the focus of the thesis will be from 2000 to 2018, I choose to present relevant information from the first ten years because there is some background information that is relevant to the discussion. The first ten years form the basis for the culture and tradition of Conax, and thus influence the strategic choices made from 2000 to 2018. Information on the first ten years therefore provides relevant information on the background of what happened. The case description does not reproduce the entire story of Conax, but the most important strategic decisions are given.

## Preparation of in-depth interviews

Prior to the in-depth interviews, based on in-depth knowledge I have about the company, I noted down my critical reflection of the strategic decisions in the selected period and what is missing from the information I have to improve the case history and analysis. In the in-depth interviews, emphasis was placed on interviewees' thoughts about what was behind the decisions made and why. This approach helped in defining sharper and more insightful questions.

General interview guides and interview tips were studied to fully perform the interview professionally. Furthermore, I emphasized how body language and voice use should be. Interview guide is attached as Appendix. Many questions asked were not planned and arose due to a natural conversation with interviewees.

## Conducting in-depth interviews

In advance, I called all the interviewees to explain the topic and that I was working on an executive master thesis. In addition, an email was sent describing the interview's purpose with interview guidelines (with interview questions). All interviewees were unequivocally positive to participate. All the interviewees were positive about recording apart from one interviewee who declined. I could focus on listening to interviewees and avoid continuous notetaking using recording. Some helpful notes were subsequently transcribed, aided by recording. Recording helped me to fully focus on what might have been said and what was meant between lines.

All interviews were conducted for approximately four weeks. All interviews lasted between 1 hour and two hours, depending on the amount of information the interviewee had to provide related to the interview questions. I strategically chose to start with the manager with longer experience from the company, so I got a broader view, which helped to deepen the discussions. The interviewee got an introduction where the purpose, background, and structure of the interview were presented. Due to the COVID-19 restriction, all interviews were conducted online through Microsoft teams. This follows Tjora's (Tjora, 2017) recommendations to interview in their own workplace, and Tjora (Tjora, 2017) also emphasized the importance of choosing a place where the interviewee can feel comfortable. My interview guide followed the usual structured warm-up questions, reflection questions, and rounding questions (Tjora, 2017).

Several times follow-up questions were asked, and this shows the flexibility of the qualitative method. After 2–3 interviews, I got the interview guide “under the skin.” Before the interviews were conducted, a simple definition of the entrepreneurial mindset was communicated to ensure that we had the same understanding.

According to Tjora (Tjora, 2017), a one-hour in-depth interview requires approximately one day of processing work. It matches quite well with the time I have spent on processing work after the interviews were conducted.

### Data analysis for the primary case

My in-depth knowledge as a secondary data source was listed according to the historical periods (establishment, growth, and mature periods). All strategically important decisions were listed in chronological order within the relevant period.

During the interviews, I used the interview template, where I had space under each question for notes. In this way, I could systematize and compare all perspectives around each topic in a historical/chronological manner from each interviewee. Using the same template during the interviews will make it easier to see what the interviewees were talking about and to compare similarities and differences in their responses.

It also became easier to see where there was consensus and how they expressed the same topic. Furthermore, the interview template was arranged chronologically with periods where the interview questions were repeated for each period.

Using a chronological order with periods, it will be easier to compare the primary and secondary data sources. Here, you can consider a strategically important decision in the secondary data source and then consider what the primary data source informed about the same. Both the secondary and the primary data sources were arranged in chronological periods, enabling comparison between sources.

Interpreting the data is an individual process that can be the source of interpretations and inaccuracies. Qualitative studies tend to relate to an interpretive paradigm and what kind of consequences opinions have (Tjora, 2017). In this case study, I tried my best to be neutral and to reproduce the sources as accurately as possible. However, my background and understanding is the basis of the interviews and the interpretation process of the data material, and this may probably influence the process. Although I tried to be aware that my assumptions can influence the interviews and the interpretation process, it may be difficult to exclude my interpretation.

Normally, no interviewee wanted to be quoted directly, so the premise of the interviews is that they could speak freely and be anonymous. To fulfill the wishes of the interviewees, I presented a comprehensive summary of the interviewees' perspectives in the empiricism chapter.

## Research process for the secondary case (“Finn”)

In this chapter, the research process for the secondary case is presented.

### Data collection

As the primary case, in this case study, in-depth interviews were used as a method to gain better insight into the strategic choices made in the secondary case. Use of in-depth interviews as a qualitative method has been described in the data collection section of the primary case and not repeated in this data collection section of the secondary case.

### Selection of the interviewees

An important part of the data collection is to conduct individual in-depth interviews with individual people who have held various management roles related to safeguarding the entrepreneurial mindset of the company. The idea is to get perspectives from company establishment to now (2000–2020). I conducted three in-depth interviews, which represented the management functions of Finn.no from 2000 to 2020. By choosing people from different periods to cover the whole period, I secured more perspectives on the strategic decisions related to safeguarding the entrepreneurial mindset of the company.

This follows the general rule for selection of the interviewee. Interviewee can comment on the relevant topic, reflect around the topic, and add different perspectives to the topic.

### Selection of the interview period

Schibsted reports (Schibsted, 2020) indicate that Finn.no has managed to maintain growth from the beginning to now. Although Finn.no is a mature company now, it is still managing to grow, and managing to find new business to grow from establishment. Now, Finn.no is the largest digital marketplace in Norway. Since Finn.no is still growing, I observed that the whole period from establishment in 2000 until now is important regarding safeguarding the entrepreneurial mindset. During this period, Finn.no experienced competition and managed strong growth, and is now having largest market share within the digital marketplace in Norway. I can choose to study the case more deeply over a shorter period. The risk of excluding strategically important decisions in the case discussion led me to consider fully 2000 to 2020. This case study will therefore consider the overall strategic decisions between 2000 and 2020. The case description does not reproduce the entire story of Finn, but the most important strategic decisions are given.

### Preparation of in-depth interviews

Prior to the in-depth interviews, based on the desktop study I made, I noted my critical reflection of the strategic decisions in the selected period and what was missing from the information I must improve related to the case history and analysis. In the in-depth interviews, emphasis will be placed on interviewee's thoughts about what was behind the decisions that were made and why.

## Conducting in-depth interview

See the conducting in-depth interview section of the primary case.

## Quality of the research

An important part of all studies is to discuss the research quality. Within the social sciences, the research quality is usually discussed with criteria reliability, validity, and generalizability (Kvale & Brinkmann, 2015). Over time, there has been a discussion between qualitative and quantitative studies on whether the criteria reliability, validity, and generalizability are relevant in qualitative research. Tjora (Tjora, 2017) discussed that it is more problematic to discuss the concepts' reliability, validity, and generalizability within an interpretive tradition but that one should still try to be critical of the data quality.

### Reliability

The reliability of this study is about the quality and level of detail in the methodology, and in the degree to which it is possible to repeat and obtain the same results (Yin, 2013). Furthermore, it is an important focus on whether those conducting the study can influence the results of the study. According to Bryman (Bryman, 2016), it should be clarified that researchers have no personal incentives or theoretical preferences to influence the results or the research. Furthermore, the interviewees can withhold information due to confidentiality, which can induce misunderstandings and misinterpretations.

The primary case study uses both primary and secondary data sources. The secondary data source is my in-depth knowledge about the company, which is based on several years of knowledge from different management roles, so the reliability is high. It is a relatively long time since the start of the interview period (i.e., 2000), so the memory between the interviewees may vary. Other interviewees can also emphasize other factors. That the interviewees describe events about 20 years ago reduces the reliability. The choice of relevant interviewees was based on the roles they had and not on my personal relations. The result of this is that the approach to this research is neutral and not biased. The in-depth interview form largely gives the interviewees room to decide the direction and thus the contents of the data. This is difficult to measure and therefore difficult to compare with other research. Furthermore, my background and the interpretation process of the data material may have affected the process. Although I have tried to be aware that my assumptions can color the interviews and the interpretation process, it may be difficult to rule out influence. This reduces reliability. The reflections of the interviewees were relatively consistent. There were no direct conflicts between statements from the interviewees. New researchers can, in all probability, get the same perspectives from other interviewees in the organization. The reliability of the answers from the interviewees can be characterized as satisfactorily high.

Information to interviewees about anonymizing the data from in-depth interview and trust/relationship between interviewee and interviewer made interviewees reflect freely around interview question. This increases the reliability.

## Validity

Grønmo (Grønmo, 2016) stated that the validity will be high if the process and the data collection provide data that is relevant to the problem. This also called face validity or logical validity which refers to the extent a test appears to measure what it is intended to measure (statisticshowto, 2015).

According to Yin (Yin, 2013), validity can be divided into two categories:

- (1) Internal validity
- (2) External validity

A strong internal validity means that the reflections of the interviewees are meaningful and can be linked to context (Miles & Huberman, 1994). The external validity (transferability) entails whether the study's findings are transferable to other cases and that it can generalize (Yin, 2013).

### *Internal validity*

Kvale and Brinkmann (Kvale & Brinkmann, 2015) explored internal validity when the phenomenon is described correctly, and the results are perceived as correct. It can be difficult to measure the validity since it is difficult to know whether the interviewees have given me a real picture of their reality. There can be many factors that affect the context and the interviews. I lack experience in case studies, and no similar study has been conducted for Conax and Finn. However, I have had a supervisor with a research background. Furthermore, we have gone through what the research should contain and how to proceed. This case study is independent, and concurrently, I have had several discussions with my supervisor. Kvale and Brinkmann (Kvale & Brinkmann, 2015) stated that assessment of validity entails whether one method is suitable for examining what it is to examine.

### *External validity*

Yin (Yin, 2013) revealed that it is more difficult for a study to come to an analytical generalization if the case lacks any specific "how" or "why" questions. How formulating the problem can thus affect the possibilities for further generalization. In my case study, there are many elements and factors that may make other case different. Still, there are learnings in this case study that can be transferred to other companies that come up in similar challenges. This case study does not provide a recipe for "how" or "why." However, by learning from the mistakes or experiences of others, one can use learning from this case in similar situations in the future. We find support in this in (Dubois & Gadde, 2002): "Learning from a particular case (conditioned by the environmental context) should be considered a strength rather than a weakness. The interaction between a phenomenon and its context is best understood through in-depth case studies." I have a desire to contribute positively to new insights about how established Norwegian technology companies can safeguard entrepreneurial mindset. Tjora (Tjora, 2017) stated that "it can be argued so that even limited case studies, which do not explicitly discuss a generalization potential, can have research benefits for other researchers in their reading to test the validity of the study."

## Alternative Methods

To get a better insight into why it went as it went for companies' part of this case study, one can also compare with competitors. One could consider what competitors did of measures in the same period and how that went with them. My focus has been to follow Conax and Finn, respectively, for 18 years and 20 years to gain enough insight for the research question. I did not want to shorten the case study for a few years since this could induce important information not included as explanatory options. In the aftermath of the case study, one can go even more in-depth and consider the shorten time interval. Then you can study each decision even closer. However, to get good enough insight and overview to answer the research question sufficiently, in this case study, Conax was studied for an 18-year period and Finn for a 20-year period.

## Strengths and weaknesses of the research

In the primary case, as primary data source, five in-depth interviews were conducted to better understand the background of the strategic choices in Conax from 2000 to 2018. Some may argue that five in-depth interviews are not enough to reflect the background information, and that 10–15 interviewees had been better. But after conducting the five in-depth interviews (as primary data source), from my viewpoint, it is sufficient to understand the perspectives related to the research question. Increase in the number of interviewees could improve the information base in the case study. From my viewpoint, I do not see the need to interview more interviewees as a primary data source since my in-depth knowledge of the company is used as secondary data source. These five interviews gave enough basis for discussing the research question. If I used in-depth interviews alone as a data source, I would have needed more interviewees as a data source.

In the secondary case, as primary data source, three in-depth interviews were conducted to better understand the background of the strategic choices made by Finn from 2000 to 2020. The secondary case purpose is to broaden the perspective and to better answer the research question. That is why the primary case was studied more deeply compared to the secondary case. From my viewpoint, three in-depth interviews were enough to fulfill the secondary case purpose.

## The theoretical basis and the results

In this research, the data sources are analyzed using the theoretical framework of ambidextrous organization and disruptive innovation to answer the research question adequately. Concurrently, the world is more complex than what this case study describes. I think this case study answers the research question well; also, there are other factors that also influence a company's choice. Even though I recommend how established Norwegian technology companies could safeguard the entrepreneurial mindset, this is not a black-and-white recipe that others can follow. There may be other perspectives that are not addressed through this research. This research contains the perspectives and recommendations based on the cases studied in this research.

## Ethical aspects

Kvale and Brinkmann (Kvale & Brinkmann, 2015) stated that research interviews are permeated by ethics problems, and I was aware of this at all stages of the case study. I contacted all interviewees and explained my purpose and my expectation to the interview. In the introduction of the interviews, I went through again what the purpose was and my expectation to the interview. I made it clear that I was going to anonymize all interviewees in the thesis so that they could feel safe. It was important to me that the interviewees felt comfortable with me so that they could speak freely around all topics. This was also desirable for all interviewees. Tjora (Tjora, 2017) stated it is important that the interviewee does not get hurt, especially in cases where sensitive topics emerge during the interview. I therefore specified in the introduction to the interviewee their anonymous role.



## Empiricism

This chapter presents the empirical study in the case study. Findings from both cases, primary case Conax AS and secondary case Finn AS, are presented in this chapter.

As defined by the research question, this case study aims to measure how well Conax and Finn safeguarded the entrepreneurial mindset. Safeguarding the entrepreneurial mindset using the ambidextrous organization framework is mainly about continuously focusing on exploring business area. This focus is made visible based on the following company-level attributes derived from the alignment factor of ambidextrous organization framework given in the figure 15. This case study therefore considered these company-level attributes through in-depth interviews.

- Identity and vision
- Culture and structure
- Main metrics
- Strategic process and actions
- Leadership

### Findings from primary case (Conax AS)

After reviewing the entire history of Conax, I observed that the years between 2000 and 2018 (until integration with sister company Nagra) were the most important period related to safeguarding the entrepreneurial mindset. During this period, Conax experienced strong growth and disruption from entrants (according to the theoretical framework of disruptive innovation) in its industry. This case study therefore considered the company-level attributes related to safeguarding the entrepreneurial mindset between 2000 and 2018.

To contextualize this period, I choose to present the history of Conax from its establishment in 1990 to 2000. Even though the focus of the thesis will be from 2000 to 2018, I choose to present relevant information from the first 10 years because there is some background information that is relevant for the discussion. The first 10 years formed the basis for the culture and mindset of Conax, and thus influenced the company-level attributes in 2000–2018. The case description does not reproduce the entire story of Conax in the establishment period, but the most important strategic decisions are given.

I do not present everything in detail from each interviewee, as this would be many repetitions. The findings are given as a summary according to the company-level attributes needed to safeguard the entrepreneurial mindset in established Norwegian technology companies. The findings are divided into three periods: establishment period, growth period, and mature period.

**NB:** Normally, no interviewee wanted to be quoted directly, so the premise of the interviews is that they could speak freely and be anonymous. To fulfill the wishes of the interviewees, a comprehensive summary of all interviewee's perspectives is presented, and no interviewee is quoted directly.

## Establishment period (1990–2000)

There was no proven thought about establishing Conax. What was wanted by Telenor Research lab was to build service around satellite. At that time (late 80's), most of the service was business-to-business (B2B) satellite services. Around 1990, direct to home (DTH) was invented. Telenor wanted to move into DTH. Telenor Research understood that DTH was imperative to Norway and the oil business. In that context, access control technology is needed to restrict access to what is transmitted from satellite to a certain area. At that time, there was no access control technology for DTH available. Then the companies in Europe that operated within DTH simultaneously invested in developing their own access control technology. No one wanted to depend on others. American company solutions were expensive and not commercially off-the-shelf. It was then forced that the company must invest in making its own solution (because there was no off-the-shelf solution available). There was no strategic thought about Conax in the beginning. Telenor was a large mobile/telephony company wanted to enter DTH. Conax was established to enter DTH because access control was needed (i.e., necessary evil to operate within satellite TV business).

In 1989, Telenor bought satellite Thor 1 (Televerket, 1989) and offered analog satellite TV services to the Nordic region in 1992. Digital TV started to be introduced that would win over analog TV. Canal + (owned by French Telecom) wished to introduce services to the Nordic countries (as they did with many other countries in Europe). Then, it became Canal Digital, a joint venture between French Telecom and Telenor established in 1995. In that regard, there was discussion about which access control technology should be chosen for Canal Digital. France Telecom had STB (i.e., set-top box) middleware with Media Guard access control technology. French Telecom wanted control over the access control technology, and the same goes to Telenor. Telenor will not put all the eggs in the French basket. The agreement then was that French Telecom would supply STB middleware and Conax would supply access control technology (if Conax managed to show that they had state-of-the-art technology). It was a tough year to prove to French Telecom (who had their access control technology) that Conax technology was state-of-the-art. It was Farncombe (a security evaluation company) who did the security review in 1997, and Conax had to convince Farncombe that it had a state-of-the-art access control technology for digital TV. Conax managed to prove that and that was clearly stated in a security evaluation report from Farncombe. Based on that report, Canal Digital selected Conax as an access control technology provider. After that, it took around 2–3 years to convince the Conax board to move outside the Nordic region. Internationalization should have started in 1997 right after the Canal Digital deal. Finally, Conax board decided to use McKinsey consultants to consider and make suggestions regarding Conax's future. In 1999, the McKinsey report was submitted to the board. The McKinsey suggestions were internationalization and winning as many customers as possible (regardless of size), integration with as many ecosystem partners as possible (without royalty payment to become partner with Conax), shareholder program for employees, and finding external shareholders (i.e., other than Telenor). It has been difficult for a technology company like Conax to get the right level of attention from a large service company like Telenor as an owner. External owners came in eventually who owned all together 20%. There were no more external owners and no shareholder program for employees implemented.

Conax's solution did not need much middleware integration. The solution was simple, easy to integrate, and easy to set up. Lightweight solution without any royalty for ecosystem partners. In early 2000, TV operators wanted to take as little risk as possible (after Dot-com bubble). What most of the TV operators needed was a solution for digital TV transition. A simple solution needed for the digital TV transition, pre-integration with technology partners without any royalty, attracted the digital TV market internationally and brought significant growth for Conax.

Worldwide digital TV transition ([https://en.wikipedia.org/wiki/Digital\\_television\\_transition](https://en.wikipedia.org/wiki/Digital_television_transition)) also called the digital switchover (DSO), combined with successful internationalization and partner strategy, brought the growth to Conax.

In this period, Conax had much smartcard and hardware-based access control technology knowledge. During the establishment period, Conax tried different solutions, such as secure document sharing, smart card-based secure electronic cash systems (digi.no, 2000), authentication solutions for internet-based services (digi.no, 2000), etc., to explore the market opportunities. Digital TV transition induced enormous growth that made Conax settle and focus within the digital TV domain.

### Growth period (2000–2009)

Digital TV transition from analog TV brought major growth in this period. Conax was prepared for the digital TV transition wave to come. In Norway, it happened in the 90s. Digitization was saturated, which caused the curve to flatten out in the mature period (after the year 2009). Most countries were digitized during the growth period. Only low-cost countries remained that were not profitable for a Norwegian company to operate in.

The period began with huge internationalization focus with good product quality, good price, solid owner, and pre-integrated with many ecosystem partners, which brought sales for Conax. Conax had the most pre-integrated STB partners. Conax made it easy to become a partner and integrate with. During this period, the focus was to sell to as many TV operators as possible (regardless of the size of the operators). The market was growing tremendously.

There were two phases during the growth period. One was the digital TV transition phase and the other was the multiscreen (“internet TV”) phase.

In the digital TV transition phase, the focus TV operators had was to secure their income using high security access control technology. Product quality and reliability were most important. Access control technology was the center of the ecosystem in broadcast TV. Access control technology had a significant share of total digital TV ecosystem value and played a strategically important role in the digital TV ecosystem. Relatively expensive hardware-based access control technology was widely accepted and required.

In the multiscreen phase, the importance of security has become significantly lower (compared to the digital TV transition phase), huge price pressure on access control technology, and marked changes from hardware-based to software-based access control technology. It was a push in that direction to achieve efficient logistics and lower price. Conax wanted to keep the hardware-based access control technology, due to the high profit, until there was willingness to pay for higher security. Even though the growth period ended around 2009, revenue continued to grow and Conax had the best year ever in 2016. After that, the revenue started to decline.

In the multiscreen phase, several players entered to offer Internet-based TV streaming services. Conax chose not to jump on to the latest technology trends. No first mover focus existed and was later than competitors. Conax has been good at understanding the market trends but waited until the last minute. Conax was risk averse to leveraging new technology opportunities (mostly because of the high profit from existing technology).

### *Identity and vision*

Important company identities in the growth period was simplicity, quality and reliability. Conax wanted to be a reliable and credible Trusted partner. Conax was never commercially hacked during the whole growth period.

Identities reflected in the Conax products are standardized solution that covered the world market, simple and scalable easy-to-deploy solution, no over-engineering, and developed only what is needed to meet the customer needs (and not more than that).

The company's vision in the growth period was to become one of three major providers (regarding market share) of access control technology for digital TV in the world (apart from the US). In addition, best security technology company in Norway to attract talent in Norway to Conax R&D.

### *Culture and structure*

Lean and efficiency focus during the entire growth period. Conax won many new customers from 2000 (because of digital TV transition) and achieved much with less people. Winning culture was prominent, and every employee was proud of what Conax has achieved.

Conax was seen as easy to collaborate and flexible regarding customer needs, very customer oriented, and easy to work with at all levels in the company to win as many customers as possible.

During the first part of the growth period, Conax had a more risk-taking culture to achieve growth and new opportunities. This culture was changed gradually more toward a low risk-taking culture.

Structure was informal at the beginning of the period and changed to more formal gradually toward the end of this period. ISO certification (toward the end of the period) contributed to focus on structure and aligned way of work.

### *Main metrics*

In the early phase of the growth period, the following were the prominent metrics:

- Market share (minimum 10% of the total market)
- One of the three major access control technology providers
- Leading supplies to medium and small TV operators.
- Number of new contracts won

Later in the growth period, more focus was placed on number and financial metrics. Profitable growth and high focus on EBITA (Earnings before interests, taxes and amortisation). Those metrics are expected and required by the owner of the company.

### *Strategy process and actions*

Strategy process and discussion occurred at the management level (top controlled). At the beginning of the period, the intention was to go outside of the Nordic countries with a high focus on internationalization and to place salespeople in different places in the world.

Experimented with different markets in the world. Succeeded in Asia and Africa (because they were more greenfield). That learning-by-doing approach contributed to Conax's success.

Within technology, mostly incremental improvements/innovations after settling within access control technology for Digital TV. Developing a new access control platform (named Contego) was a key decision. Contego was a modern platform that was easy to deploy—a platform designed for the future.

Mostly streamlining and efficiency focus. Deliver to as many customers as possible with minimum resources. Main domain was broadcast TV. Main customer group was a TV operator who needed an STB with a smart card (i.e., hardware-based access control technology).

Multiscreen (i.e. internet TV) and software-based access control technology were seen as niche by Conax. Watching TV other than STB was not a priority for Conax. Conax believed mostly on STB-based TV. Innovation was within process to make Conax more efficient. Process innovation was more appreciated. Not so much focus on finding new business areas (after settling within digital TV). Growth came to Conax. What was needed was to fully handle many customers efficiently. Instead of hiring many people to handle a high number of customers, Conax found innovative ways to handle many customers (e.g., through innovative partner strategy).

The aim was to maintain the growth that came through digital TV transitions by incrementally improving the solution, from on-prem solution to as-a-service, from card-based to card-less, channel partner program to resell the Conax solution, etc. Focus on scaling and efficiency. Partner integration platform to easily integrate with Conax solution. Every strategic action was mostly linked to support the growth that came through the digital TV transition. Guidance from the owner of Conax was to grow each year without increasing the cost base, which forced the process innovation and operational efficiency to be increasingly efficient.

### *Leadership*

Leadership focus was on growth (through digital TV transition) during the early part of the growth period. End of the growth period focused mostly on profitability (i.e., EBITA) and delivered high profit to the owner. The owner took more control over the operation toward the end of the period, leadership focus was more on the streamlining, and changed from technology company to product company with process, quality, and cost optimization focus.

During the first part of the growth period, leadership was visionary in term of growth and international expansion. Leadership was change gradually towards less visionary towards end of the growth period.

## Mature period (2010–2018)

2010 was the start of digital TV disruption and maturity period for Conax. During this period, streaming and Internet-based TV services became available. Digital TV transition was almost accomplished in Western countries, i.e., the most profitable part of the world was digitalized around 2010.

During this period, the Internet and TV world started to merge. TV was delivered to all types of devices using IP technology. This shift required another type of expertise. Conax customers began to look for new ways of delivering TV to their customers and found cheaper access control technology. That was the disruption to traditional access control technology providers like Conax.

In this period, much price pressure occurred, and this was the right time for investment for the future. Competitor Verimatrix took some market before Conax because of their IP-based solution. Many new players born in the Internet world started to enter this merged (TV + internet) industry. Price pressures for Conax solution started to grow. More competition from the Internet world and many low-cost companies started to enter the market. Customers were willing to lower the security for cheaper access control technology. The Western world was almost fully digitalized, and price mechanisms were different in emerging markets. Conax was a high-quality and high-price company that could not afford to deliver to those countries in emerging markets profitably.

In the mature period, there were only a few new customers compare to growth period. Good business from existing customers until 2016, which was the best year in mature period. Year after 2016, business started to fall, and the owner decided to fully integrate Conax with sister company (Nagra) to achieve synergy with two technology company integrations (which was the end of Conax as a Norwegian technology company).

### *Identity and vision*

At the beginning of this period was the same identity and vision as in the growth period. Conax did the same thing. Used the same sales methodology and tried to convince the customer that hardware-based access control technology was the right choice. Eventually, customers began to realize that new, more affordable technology was good enough. Conax was not ready to disrupt and cannibalize its own market.

Eventually, Conax began to realize the need for change. New management established around 2012 rebranded the entire company and defined a new vision that was future-oriented (sustaining magic) and embraced more than just access control technology. The idea of the new vision was to be a valuable actor in the digital content industry. Protecting the content also protects the entire value chain. Story behind the vision is that if you do not protect the content and secure the revenue stream, you do not get the necessary funding to produce new content. Conax wanted to be part of a wider value chain, its vision became broader (i.e., larger context) and more motivating and covered more of the value chain (than just the access control part of the value chain).

“Sustaining magic” as a vision helped to broaden the product portfolio. Thus, Conax had some new projects outside of the core market, i.e., to the adjacent market (like multiscreen and Digital Right Management).

In 2014, Conax was sold from Telenor to the Kudelski group (Telenor Group, 2014). Vision and identity became blurred about the parent company's vision and identity. Even though Conax was driven standalone, innovation was supposed to happen at the group level and not within Conax. Conax was meant to be the Lean and Mean machine that gave good revenue to the owner. Conax was not seen as an innovation engine.

#### *Culture and structure*

As it started at the end of the growth period, Conax became more professional and structured. This gave Conax efficiency and a high degree of alignment.

From 2012, the focus was on the professionalization of the entire organization and on operational efficiency, technology driven to product driven, technology focus to commercial product focus, and service unit got prioritized, i.e., more service orientation.

Organization (after 2012) was based on a good structure at the bottom, and it was a prerequisite for achieving the company goals. It was an informal organization with some formal process from the owner (for example, the budget process), otherwise, flat structure (short distance from bottom to top).

Transparency (through communication), open, and inclusive. Everyone could be open about their opinions. Very result oriented, structured, flexible, and aligned. Conax has never been a formal organization. In general, Conax was agile.

Furthermore, Conax had one company/team focus and flat structure, became more risk taking, and invested in some new technology products. Although the management was willing to invest in new technology products, the investment in new technology was not wholeheartedly from the company perspective. Salespersons were unwilling to sell the new technology products. Conax positioned the market carefully. Many more players entered the market when Conax started to invest in new technology products, Thus, Conax were unable to attain the same position as Conax had in the old market. If Conax had invested wholeheartedly at the end of the growth period, it would have positively impacted revenue in 2020. But then the revenue in 2015 would have looked much worse.

After Conax was sold to the Kudelski group, there was more uncertainty regarding the product strategy for the future. Conax was intended to deliver the basic product, and Nagra was intended to deliver the advanced product. This created tension between sister companies Conax and Nagra.

Overall low risk and efficiency focused culture. There were some new initiatives and Conax started to focus on innovation because it understood that something was needed for the future.

#### *Main metrics*

Had the same metrics as in the end of growth period. Higher focus on the profitability during the mature period, i.e., to get most out of the income.

### *Strategy process and actions*

Had strategy sessions on the management team (annually) based on the market info. Extended management was involved. Defined high-level strategy pillars on company level. Much effort to communicate the strategy to the rest of the organization. Strategy was a topic at all hand meetings.

Conax focused more on innovation (toward the end of the period), and established roles and processes related to innovation. Conax was from the TV industry, which had the TV industry way of working that did not fit well in the Internet world. Brand in the TV industry was of no benefit (as Conax thought it would be). Conax was seen as a more traditional company in the Internet world.

Although there was increasing focus on innovation toward the period, Conax innovation remained within the digital TV domain and the rest to be handled by the parent company (after the Kudelski group acquired Conax). It meant that Conax would not operate within transformational innovation. New initiative discussed in the early phase of the mature period (like Digital Right Management and Lightweight Content Management System) was still within the digital TV industry. Never discussed any other industry, such as securing self-driving cars. The reason was that Conax had a brand name (and expertise) within Pay TV. The owner's focus was on getting maximum profit from the company.

Had the same strategy/focus areas for the almost whole mature period (i.e., from rebranding period). After being acquired by the Kudelski group, Conax was given a new pillar/focus area which was technology synergy. The biggest strategic move after the acquisition was to consider synergy and overlap in technology between sister companies (Conax and Nagra) and to decide which markets Conax would operate in. A go-to-market strategy was developed to provide the compromise needed.

### *Leadership*

As long as Conax was owned by Telenor, the leadership had mostly profitability focus and delivered high profit from Conax to Telenor, making Conax to be lean and mean.

Conax had more focus on innovation (toward the end) and not managed to dedicate enough time into new business. However, the company had realized that investing in new business was imperative for its survival.

The focus on operational efficiency of the leadership was more visible. Leadership also focused on transparency, and everyone should feel included. It also focused on storytelling, i.e., communicating the success stories. People worked hard and were motivated and dedicated to delivering good results.

People- and organization-focused leadership. Good to communicate to create engagement. Agility, Curiosity, and Integrity as values. Trust-based leadership creates loyalty among employees.



## Findings from secondary case (Finn.no)

In 1996, the regional newspapers experienced that some Internet players took over some of the classified ads market. This affected the regional newspapers' revenue. The regional newspapers therefore formed an alliance and established a website for the classified ads market. With a focus on the paper-based regional ad, however, it was difficult for the regional newspapers to succeed with the Internet-based classified ads market. They therefore decided to establish a separate company for Internet-based classified ads. The company has existed since 1996 but was launched as Finn.no from 2000.

In the establishment period of Finn.no, many companies tried to do the same as Finn.no. Finn's continuous effort to establish a digital marketplace in Norway gave result. Many companies who tried concurrently realized the value of being gathered in the same digital marketplace instead of different marketplaces. Although Finn.no is a mature company now, as shown in the following table, financial numbers from 2020 (Schibsted, 2020) indicate that Finn.no has managed to maintain growth from the beginning to around 2 billion NOK in revenue in 2019. It has managed to find new opportunities to grow from the beginning to largest digital marketplace in Norway.

This case study therefore considered the company-level attributes related to safeguarding the entrepreneurial mindset during the entire lifespan of the Finn.no from 2000 and 2020 to understand how Finn.no managed to maintain steady growth for around 20 years.

<b>Digital Marketplace—Norway</b>	<b>2019</b>	<b>2018</b>	<b>2017</b>
Operating revenues	2 012	1 826	1 628
YOY revenue growth	10%	12%	12%
Operating expenses	(1 030)	(1 013)	(940)
EBITDA	981	813	688
EBITDA-margin	49%	45%	42%

Since the IT bubble burst could not invest hard on Internet-based service. Schibsted realized at that time it was right to gain first mover advantage. Schibsted at that time tried to create a business that did not exist in Norway. Many tried concurrently, which eventually disappeared. Although Finn.no is a mature company, it has managed to maintain the growth until now and became the largest digital marketplace in Norway.

2019 revenue was 2 billion NOK. Company ambition is 50% growth within the next five years. Focus areas are Core, Adjacent, and New. 70% of resources working on Core, 20% with Adjacent, and 10% with New. For example, Adjacent resources works with digital property viewing (due to the COVID-19 restriction). New (established in 2019) resources working with transformational innovation: new ideas based on where people will spend money in the future: EdTech, Mobility, Wellness service, mental health service, etc.

Over the last five years, major international players (google, Facebook) have entered the market, including international vertical players like LinkedIn for jobs and Airbnb for travel.

## Identity and vision

The mission of the company has been that "Finn helps people make smart choices for themselves and society." Vision is "Together we create the best digital marketplace."

Finn has been a value-driven company from the start, and identity is reflected through the values of the company: curiosity (sult), precision (presjon), job security (takhøyde), and fun (humør). Same values and mindset from the beginning to now.

## Culture and structure

Finn's culture has been pretty much the same from start to now.

Its culture is defined by values. Working in Finn.no should be always fun. Culture sits in the company walls. Finn introduced agile software development process for the whole company very early.

Organizational structure is traditional (as an organization chart) with flat experience. Previously, it was structured by marketplaces (real estate, automobile, and job). All the three were subsidiaries of Finn.no. The management team comprised business areas and major structural changes in the organization. Management team now comprises functional areas. Business area New (transformational innovation) has its own manager. Core and Adjacent are handled by Chief Product Officer.

Every four months, each business area (Core, adjacent, and New) comes up with proposals for projects to work on. It is presented to the management team, and the management team determines the allocation of resources and how much Finn should invest in each area. Suggestions for the projects come from the business areas. Management team decides how much to invest. There is flexibility regarding resource allocation. Neither is the fixed team working with Core, adjacent, or New. It can be changed every four months. No mix between business areas within the same team. No change in team structure until new period starts every four months. Everyone in the company is allowed to work with different business areas. Finn wants to offer this opportunity to all employees. There is 70/20/10 allocation guiding exists. Important with discussion about which projects are most important to work with at a given time. Sometimes it is right to invest more in the Core, and sometimes it is right to invest more on New. The owner (Schibsted) also wants Finn to enter new business areas (i.e., transformational innovation).

The overall structure is between formal and adaptive. The structure depends on the business area. New business is much more adaptive and looser than Core business.

## Main metrics

Core/Adjacent metrics: Growth with high profitability. In the early stages, the number of visitors to the marketplace. Later the number of visitors became the number of logged in/engaged users. From number of ads to revenue generated. There are also some process metrics. Examples of process metric is number of likes.

New metrics: Number of experiments performed (i.e., validated learning), number of innovative ideas generated, number of new ideas being pitched to the management and discussed with potential customers, etc.

## Strategy process and actions

The innovation portfolio of Finn.no comprises Core, Adjacent, and New product and services. 70% of the resources were allocated for Core, 20% for Adjacent, and 10% for New. Intention of New is to work with transformational innovation. New business areas are defined based on where people spend most money. Common for all business areas is digital marketplace, i.e., Finn.no provides Core, Adjacent, and New products and services from the Finn digital marketplace.

Finn.no wants to be a growth company growing every year. Buy technology, partner with others, or build your own to get to the market fastest. Focus on company values and collaboration across Schibsted companies. Strategy is reviewed every year. Every four months Finn discusses how much to invest in each business area for the coming period. Focus area discussion every four months is an extension of the Finn strategy framework. Strategy is discussed in the department and extended management meetings. Based on this bottom-up approach, management decides what the strategy and investment should be in each business area for the coming period.

All managers go to their department and fill out a template on what strategy means to their department. Purpose of this session is to achieve ownership of strategy at the department level.

Annual strategy process involves wider than management team. Anyone who had anything to contribute could contribute. Strategy was presented to the Board for approval before being presented to the organization.

Strategic actions: Data driven and set value on collected data. Focus on growth and creating next generation digital marketplace. Innovation limit is that it should be related to the digital marketplace with provider and consumer (to be two-sided). Finn.no will ensure a well-functioning digital marketplace.

## Leadership

Mostly focus on building culture and ensuring a good understanding of the vision and goals of the company. Help to remove the obstacles. Sets direction and addresses issues that arise. Focus on servant-leadership. Leadership in Finn makes company-level decisions and prioritizations, works with culture, and ensures that the company does not lose the drive. Finn leadership is visionary and involved.

## Analysis and discussion

In this chapter, we will first analyze the findings of the empirical data given in the empiricism chapter using selected theories to lay the foundation for the correct answer to thesis's research question. Based on the analysis, the theoretical and practical implications are discussed, which will help to understand what measures could have been implemented based on the theoretical framework of ambidextrous organization to safeguard the entrepreneurial mindset in established Norwegian technology companies.

### Ambidextrous organization

As described in the theory chapter, O'Reilly and Tushman (O'Reilly & Tushman, 2004) stated that an ambidextrous organization comprises two distinctive types of businesses. One unit focuses on leveraging existing business (i.e., exploit), and the other unit focuses on exploring new opportunities for future growth. O'Reilly and Tushman created the following table showing two different company-level alignment factors needed to succeed with those two different business units.

Alignment of:	Exploitative Business	Exploratory Business
<b>Strategic intent</b>	cost, profit	innovation, growth
<b>Critical tasks</b>	operations, efficiency, incremental innovation	adaptability, new products, breakthrough innovation
<b>Competencies</b>	operational	entrepreneurial
<b>Structure</b>	formal, mechanistic	adaptive, loose
<b>Controls, rewards</b>	margins, productivity	milestones, growth
<b>Culture</b>	efficiency, low risk, quality, customers	risk taking, speed, flexibility, experimentation
<b>Leadership role</b>	authoritative, top down	visionary, involved

  
**Ambidextrous Leadership**  
 Different alignments held together through senior-team integration, common vision and values, and common senior-team rewards.

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Figure 15: Company-level alignment factors

In the following, we will analyze whether Conax and Finn were ambidextrous organizations focusing on "exploitative business" and "exploratory business" using the company-level alignment factors given in the above table. **Safeguarding the entrepreneurial mindset using an ambidextrous organization framework requires focus on exploratory business and using the alignment factors as the basis for the analysis will make the focus on safeguarding the entrepreneurial mindset visible.**

## Analysis of Conax

### *Strategic intent and critical tasks*

If we consider the findings in the empirical data for the establishment period, Conax had much smartcard and hardware-based access control technology knowledge. During the establishment period, Conax tried different solutions, such as secure document sharing, smart card-based secure electronic cash systems, and authentication solutions for Internet-based services, to explore market opportunities within the security domain. During the establishment period, Conax had both exploitative and explorative focuses.

In the growth period, during the digital TV transition (from analog TV), which brought major growth, Conax focused on access control technology for the digital TV domain. During this period, the focus was to sell to as many digital TV operators as possible (regardless of the size of the operators). The market was growing tremendously, so the intention was to utilize the tailwind brought by the digital TV transitions to its full potential.

Until the growth period ended around 2010, Conax focused on achieving as much growth as possible through the digital TV transition and hardware-based access control technology. When the market started to change toward software-based access control technology, no clear strategic intent existed to shift toward software-based access control solutions or explore new business areas.

Critical actions in the growth period clarified that the focus for Conax in the growth period is related to the digital TV transition. Develop hardware-based access control system (for broadcast TV) that can be used internationally. The focus was reflected in Conax products, standardized products that covered the world market, and simple and scalable products that are easy to deploy and easy to use. Products are purposely developed and targeted for the digital TV transition. Company was streamlined to deliver to as many customers as possible with minimum resources. Innovation was within process to make Conax more efficient, i.e., operational efficiency. No actions were exerted during the growth period to find new business areas. Growth came through Digital TV transition. What was needed was to effectively handle as many customers as possible.

If we consider the findings in the empirical data, we can see that the strategic intent and the critical actions of Conax in the growth period are within the exploitative area, i.e., focus on high profitability, operational efficiency, and incremental innovation. When Conax gradually struggles with profitability at the end of the growth period, Conax does not change the strategic intent and the critical action away from the exploitative focus. Strategic intents and critical actions changed toward explorative areas (i.e., new products to the adjacent market) in the mature period by the new management established at the beginning of the mature period.

### *Culture, structure, and competences*

As described, the digital TV transition from analog TV brought major growth to Conax. This made Conax focus purely on the digital TV domain and utilize the digital TV transition tailwind to the full potential. The performance of the Conax is mainly measured by profitability (by the owner of the company). This made the company lean and mean to achieve high profitability during the entire growth period. Conax was seen by the customers as easy to collaborate and flexible regarding customer needs alongside very customer-oriented and easy to work with at all levels in the company to win as many customers as possible to achieve as much as possible growth toward Digital TV transition. During the first part of the growth period, Conax had more risk-taking and experimental culture related to expansion and opening new operations in new countries.

This culture was changed gradually more toward low risk-taking and efficiency toward the mature period because the market started to mature. Structure was adaptive at the beginning of the period and became more formal toward the end of this period.

From the beginning of the mature period, Conax became more professional and structured. This has given Conax even more efficiency and a high degree of alignment. The focus was on professionalization of the entire organization and on operational efficiency alongside very result-oriented, structured, and aligned. In general, Conax was adaptive both in the growth and the mature period. Although the structure is adaptive, the overall culture was low-risk taking and efficient.

Although the strategic intents and critical actions changed toward explorative areas in the mature period, culture remained in the exploitative area. This was also reflected in the overall competence of the company, which was clearly in the operational area rather than the entrepreneurial area.

#### *Leadership role, control and rewards*

If we consider the findings in the empirical data, leadership in Conax has never been authoritative or top down. Always had a flat structure with Scandinavian management philosophy. This is valid both in the growth period and mature period. In the beginning of the growth period, leadership was ambitious and visionary. After the company is settled to utilize digital TV transitions to its full potential, leadership ambition changed toward profitable growth within digital TV transition and not into other areas. This is driven by the strategic intent of the company, i.e., leadership reflects the strategic intent of the company.

The main metrics in the growth period are a combination of growth (within digital TV transition) and profitability. At the end of the growth period, the focus was mostly on profitability, which continued toward the mature period, delivering optimal profit to the owner. The focus on operational efficiency was more visible. The leadership focus is reflected in the metrics used.

Findings in the empirical data for both periods show that leadership is not visionary enough to be in the exploratory area even though the company had a strong people foundation. Leadership ambition and metrics (i.e., how to lead and how to measure) are connected to the strategic intent. Changing toward an exploratory area should start from the strategic intents of the company.

## Analysis of Finn

### *Strategic intent and critical actions*

Financial numbers from empirical data indicate that Finn.no has managed to maintain growth from the beginning to now. Findings in the empirical data also show that Finn.no wanted to be a growth company. Strategic intent is to grow 50% within the coming five years. This will require innovation and force to find new business areas.

The overarching vision of Finn is "Together we create the best digital marketplace." This common vision purposely embraces both exploitative and explorative areas. The only limitation to this vision is that the service offered should be suitable for the digital marketplace. Digital marketplace can provide anything that is needed by the consumer.

Strategic intent and critical actions in the empirical data show a focus on growth through innovation and new digital marketplace services and not only incremental innovation of existing services and operation efficiency. Based on these findings, we can conclude that Finn.no managed to have a balanced focus between explorative and exploitative areas. Growth is reflected in the financial numbers in the empirical data. Even though Finn.no is a mature company, it has managed to grow from beginning (year 2000) to year 2020. It has managed to introduce new services on the platform even though it had largest digital marketplace in Norway. It managed to maintain the dominance of the digital marketplace and continually provide value to consumers to keep them on the platform.

### *Culture, structure, and competences*

Findings in the empirical data show that culture has been pretty much the same from company established in 2000. Culture of the Finn.no is reflected in the values that emphasize Finn.no should focus both on explorative (i.e., curiosity) and exploitative (i.e., precision). As described above, three business areas Core, adjacent, and New in Finn.no, reflects the simultaneous focus on exploitative and explorative areas. Anyone can come up with ideas related to those business areas. Allocation of resources to each business area is collectively decided. Neither is the fixed team working with Core, Adjacent, or New. Allocation can be changed after fixed period. Everyone is allowed to work with exploitative and explorative areas. The overall structure is both formal and adaptive. The structure depends on the business area. Core part of the business needs to have a more formal structure than the new business (which is looser). Culture in the New business is experimental and more flexible, and culture in the Core is more efficiency and quality focused.

### *Leadership role, control and rewards*

Findings in the empirical data indicates that the focus of the leadership is on building the culture and ensuring a good understanding of the vision, mission, and values of the company. Sets direction and addresses issues that arise along the way. Set direction means defining the high-level goals and clarifying the intention of the goals. How to achieve the goals is decided by the teams. This gives a high degree of aligned autonomy among teams and ownership to decision and engagement to achieve the goals. Based on this finding, we can conclude that leadership is visionary and focuses on involvement.

Findings in the empirical data show that metrics used differed based on the maturity of the business. In the early stages, metrics like the number of visitors to the digital marketplace were used and moved to more financial metrics after the business became more mature. Finn.no used both process metric and performance metric. Example of process metrics used are “number of new ideas,” “number of experiments performed,” or “number of new ideas being pitched to management team,” which are more suitable for New business. Performance metrics are financial, such as revenue and profitability, which are more suitable for Core and Adjacent businesses. Based on this, we can conclude that Finn.no metrics varied based on business unit. Overall focus was on growth independent of business unit. Explorative area used experiment and milestone-based metrics, and exploitative areas used financial metrics like revenue and profitability.

## Disruptive innovation

In the following, we will analyze whether Conax and Finn was affected by disruptive innovation using the characteristics of disruptive innovation and points that were overlooked, which are described in the theory chapter (Christensen, 2015)

### Analysis of Conax

We will first discuss whether Conax was affected by the disruptive innovation based on characters of the disruptive innovation.

#### Character 1: Disruptive innovation originates in low-end or new marked footholds:

By considering the findings in the empirical data of later part of the growth period and the early part of the mature period, the Internet and TV world started to merge. TV is delivered to all types of devices using IP technology (which is two-way communication), not only through broadcast technology (which is 1-way communication). Many new players born in the Internet world started to enter this merged (TV + Internet) industry.

These new players from the Internet have been developing software-based access control technology for Internet TV (based on IP technology) for several years. This Internet TV market was seen as niche and non-profitable by Conax, who developed and delivered hardware-based access control technology mainly for the broadcast TV market. The main reason for this market, which was overlooked by Conax, was the content available for the Internet TV markets at that time, which was less attractive. Content owners demanded hardware-based access control technology for their high-value content at that time. Level of security demand depended on the value of the content. So, the Internet TV markets at that time did not require hardware-based access control technology from Conax.

Based on this character, the disruptive innovation by software-based access control technology that originated at a low end was overlooked by Conax. Low-end footholds exist because incumbents typically try to provide their most profitable and demanding customers with ever-improving products and services, and they pay less attention to less demanding customers (Christensen, 2015). Conax was focused on the hardware-based access control technology for broadcast TV used by most profitable and demanding customer (TV operators). This opened the door for the software-based access control technology providers focused (first) on providing those low-end customers with a "good enough" technology.

Eventually, Conax mainstream customers (TV operators) began to look for new ways of delivering TV to their customers, i.e., TV delivered to all types of devices using IP technology (which is 2-way communication) and not only through broadcast technology (which is 1-way communication).



They started to use software-based access control technology from internet TV industry. That was the disruption to hardware-based access control technology providers like Conax. The TV operators were also willing to use software-based access control technology to reduce the logistic complexity (related to the smartcard part of the hardware-based access control technology), and eventually the content owner decreased their requirements related to access control technology and high-value content made available for the Internet TV market.

Character 2: Disruptive innovation does not catch on with mainstream customers until quality catches up to their standards:

Disruptive innovation by software-based security was initially considered inferior by most Conax customers (TV operators). Mainstream customers were not willing to switch to the new offering merely because it is less expensive. Security level of the solution was not good enough for the high-value content available (as required by the content owners). The TV operators waited until its security level rose enough to satisfy them. Once the software-based access control technology was good enough and embraced by the content owners, they adopted the new technology. This disruption also drove the price of the access control technology for the TV industry down in the market.

We will now discuss the four points that were overlooked related disruptive innovation.

Disruption is a process: Disruption by software-based access control technology cannot refer to a specific product or service at one fixed point. It was the evolution of software-based access control technology since the growth of piracy in the film and music industry. According to (Smith, 2017), it existed for years prior to piracy in the film and music industry.

Disrupters often build business models different from those of incumbents. Main different was selling a service vs. selling a product. Hardware-based access control technology providers like Conax were focused on product business by selling physical, tangible products. Software-based access control technology providers focused on service business by providing access control as service (i.e., software-as-service model).

Some disruptive innovations succeed, some do not. Not all disruptive paths induce triumphs, and not every triumphant entrant follows a disruptive path (Christensen, 2015). In the Conax case, the new entrant, software-based access control technology provider, followed the disruptive path, as illustrated in Figure 9. Content owners decreased also their requirements related to hardware-based access control technology and high-value content made available for the Internet TV market i.e. the performance the TV operator can accept regarding security was also reduced.

The mantra “disrupt or be disrupted” can misguide us: Incumbent companies do need to respond to disruption if it is occurring, but they should not overreact by dismantling a still profitable business. Instead, they should continue to strengthen relationships with core customers by investing in sustaining innovations. In addition, they can create a new division focused solely on the growth opportunities that arise from the disruption (Christensen, 2015). Conax has always been a customer-centric company. Had a large customer base. Strengthening the relationships with core customers was not an issue for Conax. Issues were not managed to create a separate unit that solely focused on the growth opportunities. As Clayton Christensen’s research suggests, the success of the company against disruptive innovation depends considerably on keeping the new business separate from the core business.

**Based on the above analysis using the characters and overlooked points of disruptive innovation, we can conclude that Conax was affected by disruptive innovation.**

## Analysis of Finn

As shown by findings in the empirical data, in 1996, the regional newspapers experienced that some Internet players overtook some of the classified ads market. This affected the regional newspapers' revenue. The regional newspapers therefore formed an alliance and established a website for the classified ads market. With a focus on paper-based regional ads, however, it was difficult for the regional newspapers to succeed with the internet-based classified ad market. Schibsted therefore decided to establish a separate company for internet-based classified ads. The company has existed since 1996 but was launched as Finn.no from 2000. In Finn.no case, Schibsted decided to establish a separate company for the internet-based classified ads business, which disrupted the paper-based regional ad business of Schibsted. Schibsted deliberately cannibalized its own paper-based ad business with an internet-based classified ads business before Internet players disrupted and overtook the classified ad market from Schibsted. **No empirical findings have indicated that Finn.no was affected by disruptive innovation after its establishment as a separate company in 2000.**

### Is Conax both exploitative and exploratory business?

Summarizing the analysis, we see that Conax is located in the exploitative area in the growth period (i.e., after settling within digital TV transition), and has limited factors from the exploratory area, and we can easily conclude that Conax is not an ambidextrous organization since it lacks the exploratory focus in the growth period. This also corresponds much with the strategic intent of Conax in the growth period. Findings in the empirical data show that the growth of Conax was supported by the digital TV transition. Conax products, processes, and organizations were designed to support growth effectively. This made Conax focus purely on innovative ways of selling, delivering, and operating. On the product side, innovation is incremental to support the growth. The overweighed focus on achieving maximum growth driven by the digital TV transition took the focus away from new products and new business areas in the growth period. New management established at the beginning of the mature period realized the need for change. This management rebranded the company and defined a future-oriented vision ("sustaining magic") that embraced more than just access control technology. This helped to broaden the product portfolio. Consequently, Conax has had some new product initiatives for the adjacent market. As summarized in the analysis, even though the strategic intents and critical actions changed toward the explorative areas in the mature period, culture remained in the exploitative area. This was also reflected in the overall competence of the company, which was clearly in the exploitative area rather than the explorative area.

Findings in the empirical data also show that during the establishment period, Conax explored different business areas before it settled into the hardware-based access control technology for the digital TV transition. During the establishment period, Conax was both in exploitative and explorative areas.

**Based on the above description, we can conclude that Conax was in both exploitative and explorative areas in the establishment period. Changed toward exploitative area in the growth period (to focus purely on digital TV transitions to the full potential), realized to focus on explorative area in the mature period but was unable to manage the transition toward the explorative area.**

## Why was it difficult to move toward an exploratory area for Conax?

When Conax realized it needed to focus on software-based access control technology for Internet TV in the mature period, it was almost too late because competitors like Verimatrix started much earlier with software-based access control technology and took market share before Conax. Also, many new players born in the Internet world started to enter this internet TV industry. If we look into the findings in the empirical data of the establishment period of Conax, we can see that Conax was established by Telenor to enter the satellite TV market because access control technology was needed. Conax was born in the broadcast TV industry and not in the Internet industry. So, one of the reasons was it was not obvious for a company from the TV industry to act and think like companies born in the Internet world that are used to the Internet way of working.

Empirical data shows that Conax was in both exploitative and explorative areas in the establishment period. This ambidextrous focus in the establishment period was not continued in the growth period of the company. As described in (O'Reilly & Tushman, 2016), it is hard to suddenly become ambidextrous in the mature period without practicing being ambidextrous in the growth period.

## How Finn.no manages to move toward exploratory area?

Summarizing the analysis, we can see that Finn is in both exploitative and explorative areas from the beginning.

Although Finn is a mature company now, it has managed to grow until now (year 2020). It has managed to introduce new services in the digital marketplace even though it has the largest digital marketplace in Norway. As described in (O'Reilly & Tushman, 2016), ambidextrous requires practice, and Finn manages to maintain ambidexterity, continuously focus on innovation, and introduce new services in the digital marketplace.

The difference between Conax and Finn is that Finn.no created the digital marketplace (in competition with others in the beginning) and developed strongest digital marketplace in Norway by introducing innovative services. Unlike Conax, it strategically decided to utilize the digital TV transitions to the full potential, which was considerably driven by regulation ([https://en.wikipedia.org/wiki/Digital\\_television\\_transition](https://en.wikipedia.org/wiki/Digital_television_transition)).

There is no such thing as maturity in the digital marketplace as the digital TV transition, which became mature after the transition is completed. No regulation is supporting the growth. Companies need to build the market. Companies need to continuously innovate with new services to the digital marketplace to keep consumers in the marketplace and keep competitor away. This continuous innovation to maintain the growth focus is well embedded in Finn.no.

Changing toward an exploratory area and keeping ambidexterity should start with the strategic intents of the company. Concurrently, the leadership of the company should be aligned with the strategic intent of the company. However, without having the culture, structure, and competence for innovation in the company, it will be difficult to achieve the strategic intents. Finn.no had the culture, structure, and competence that went hand-in-hand with the strategic intents of the company.

If we look into the findings in the empirical data of the establishment period of Finn.no, the regional newspapers (owned by Schibsted) experienced that some Internet players took over some of the classified ads market. They therefore decided to establish a separate company for Internet-based classified ads, which became Finn.no in 2000.

Schibsted established Finn.no to cannibalize its own paper-based classified ads business. If Schibsted did not establish Finn.no, other internet players would have dominated the classified ad market from Schibsted. This could have given Finn.no necessary resilience and innovate-to-survive focus, which is still in the company.

### When was the best time to be ambidextrous for Conax?

As shown by the technology adaption lifecycle (Rogers, 2003), a successful technology product in the market will initially see high growth (“early majority”), followed by a mature market (“late majority”). Growth in the mature market is typically driven by acquiring competitors and new customers alongside efficiency gains (Humble, Molesky, & O’Reilly, 2015). Findings in the empirical data show that Conax experienced high growth (“early majority”) until around 2009 and entered into a mature market (“late majority”) after 2009. Moore’s “chasm” described in the theory chapter (Moore, 2014) can be seen as a tipping point between exploring new business vs. exploiting it. Assumed best timing for introducing new business to the market is when the existing business is getting mature, i.e., move into “late majority,” and there are technological possibilities that could reshape your industry (Rogers, 2003). Based on this, Conax should have introduced software-based access control technology for Internet TV before 2010. Hardware-based access control technology for digital TV began to mature, and software-based technological possibilities existed.

Even though companies need to continuously practice ambidextrous in the growth period to be resilient and to maintain growth, assumed timing to start to be ambidextrous is the beginning of the early majority as given in the technology adaption lifecycle (Rogers, 2003), i.e., around 16% market penetration of the addressable market for the hardware-based access control technology for Digital TV. This would have enabled Conax to introduce, software-based access control technology for Internet TV, or other new business, before the mature period.

### Was the perspective around ambidextrous organization relevant for Conax?

If we summarize this analysis, one can ask whether it is relevant to have a focus on ambidextrous organization. In a stable world with few changes in the business environment and no radical innovations from competitors, no disruptive innovation from the new entrants, a strategy focusing on core business and operational efficiency is a possible strategy.

In the growth period, Conax had purposely defined and developed the organization, process, and product to support the digital TV transition. Had the digital TV transition and broadcast TV continued for several years without Internet TV, Conax would have had its success likeliest for many more years. Conax, during the growth period, was the customer-winning company in the world among the hardware-based access control technology providers for the digital TV industry.

During the great success in hardware-based access control technology for broadcast TV (and rapid growth through the digital TV transition), software-based access control technology, which was more suitable for Internet TV, began to be launched around the world. Conax continued to focus on hardware-based access control technology and believed less in software-based access control technology. So Conax initiated limited alternatives to operational efficiency, and the organization was rigged for hardware-based access control technology for the broadcast TV and digital TV transition.

The room for maneuver and opportunities of Conax were limited, and that made it difficult in the mature period within a short time to redefine parts of the organization to work within explorative area. It is unlikely that a company can suddenly become an ambidextrous organization in a short time and reap results. Becoming an ambidextrous organization is something that requires time. An ambidextrous organization requires simultaneous focus on both future business and profitability in the current business. By focusing on both exploitative business and exploratory business, one will be more prepared for the possible disruption in the market. With ambidextrous organization, Conax might have had the immune to take actions. When the market sank, it was too late to become ambidextrous. Being ambidextrous needs practice. It is difficult to change a non-ambidextrous organization to an ambidextrous organization during the mature period or when the market sunk.

As described in the theory chapter, "Rationale for choice of theoretical frameworks," ambidextrous organization is specifically relevant for an established company and when a new opportunity is strategically important for the company and the company can benefit from the company's existing assets and operational capabilities. Conax had a significant customer base that needed software-based access control technology. Conax had a customer base as existing assets and operational capabilities to deliver new business to the existing customer base. From that viewpoint, perspectives around an ambidextrous organization are imperative for Conax.

### How did the Conax map of innovation look?

Using O'Reilly and Tushman's map of innovation (O'Reilly & Tushman, 2004), or Nagji and Tuff's (Nagji & Tuff, 2012) innovation ambition matrix, we can map the center of gravity where Conax innovation activities are located.

By considering the findings in the empirical data of the growth period and using O'Reilly and Tushman's map of innovation (O'Reilly & Tushman, 2004), we see that most initiatives lie in incremental innovations for both new and existing customers. The same impression with Nagji and Tuff's innovation ambition matrix (Nagji & Tuff, 2012), most projects and initiatives are in the core area where uncertainty is low.

By examining the findings in the empirical data of the mature period and using O'Reilly and Tushman's map of innovation (O'Reilly & Tushman, 2004), we see those initiatives lie in incremental and architecture innovations for both new and existing customers. The same impression with Nagji and Tuff innovation ambition matrix (Nagji & Tuff, 2012), initiatives in Core and Adjacent area. Findings in the empirical data show that Conax has no transformational innovation (according to innovation ambition matrix) or discontinuous innovation (according to map of innovation) to new or existing markets.

### How did the Finn map of innovation look?

Using O'Reilly and Tushman's map of innovation (O'Reilly & Tushman, 2004), or Nagji and Tuff's (Nagji & Tuff, 2012) innovation ambition matrix, we can map the center of gravity where Finn innovation activities are located.

By considering the findings in the empirical data using O'Reilly and Tushman's map of innovation (O'Reilly & Tushman, 2004), we see that initiatives lie in all 3 type of innovations for both new and existing customers. The same impression with Nagji and Tuff's innovation ambition matrix (Nagji & Tuff, 2012), initiatives in all 3 type of innovation.

## How Finn manage to safeguard against disruptive innovation from new entrants?

As described in (Christensen, 2015), one of the overlooked points, "the mantra disrupts or be disrupted can misguide us," is that "incumbent companies do need to respond to disruption if it is occurring, but they should not overreact by dismantling a still profitable business. Instead, they should continue to strengthen relationships with core customers by investing in sustaining innovations. In addition, they should create a new division focused solely on the growth opportunities that arise from the disruption".

Findings in the empirical data show that Finn.no has always been a customer-centric company. Timing, strong owners, and a focus on user-friendliness have contributed to Finn's growth. The company has existed since people started using the Internet actively when there were few similar players in the market. The largest digital marketplace in Norway now. As shown in the empirical data, it managed to create a separate business that solely focused on growth opportunities.

**As Clayton Christensen's research suggests, resilience against disruptive innovation from entrants and the success of the company depends considerably on keeping it separate from the core business i.e. ambidextrous organization. As summarized in the analysis, Finn is in both exploitative and explorative areas from the beginning i.e. ambidextrous organization. Based on this we can conclude that the ambidextrous organization of Finn helped to preserve counterattack against unexpected disruption from new entrants.**

## Theoretical implications and further research

Ambidextrous organization and disruptive innovation frameworks are chosen together for the following reasons: While the theoretical framework of ambidextrous organization helps to understand how to safeguard the entrepreneurial mindset in established Norwegian technology companies, the theoretical framework of disruptive innovation helps to understand how well those companies safeguarded the entrepreneurial mindset to avoid disruption.

**Safeguarding the entrepreneurial mindset using the ambidextrous organization framework requires a focus on the exploratory business area.** The ambidextrous organization framework describes how to focus on exploring business in parallel to exploiting business. Focus on exploitative areas naturally will be in the organizations to run the business. The hardest part is to explore concurrently as running the daily business (i.e., practicing ambidextrous). As shown in the empirical data of Conax, in the establishment period, Conax explored different business areas. In the growth period, after settling into hardware-based access control technology for the digital TV business, exploration into different business areas eventually disappeared. While Conax did not manage to devise another wave of innovation to expand the lifespan of the company, Finn.no managed to maintain the ability to continually practice ambidextrous and still managed to devise new waves of innovation to expand the lifespan of the company.

This thesis reveals how Conax could have safeguarded entrepreneurial mindsets and why it was difficult to move toward exploratory areas after settling into hardware-based access control technology for the digital TV business. This thesis also specifies how Finn.no manages to safeguard the entrepreneurial mindset and continually expand the lifespan of the company.

Although companies need to continually practice ambidextrous to be resilient and to maintain growth, this thesis also indicates the assumed timing to start to be ambidextrous using the technology adaption lifecycle (Rogers, 2003). Similar to the technology adaption lifecycle, as it applies to technology, the same principle applies to organizational changes needed to safeguard the entrepreneurial mindset. If Conax had started to explore new business areas accordingly i.e. according to technology adaption lifecycle of the hardware-based access control technology, this could have increased the chance of expanding the lifespan of Conax.

The findings in this study form the basis for research to a greater extent on how established Norwegian technology companies can continually maintain an entrepreneurial mindset at a time when the changes are happening faster and faster. The case study exemplifies how established Norwegian technology companies can face challenges and how companies can work to sustain competitiveness by maintaining the entrepreneurial mindset. The findings in this study form the basis for further research in following areas:

- Using the theoretical framework of the technology adaption lifecycle (Rogers, 2003) to understand when an established Norwegian technology company really needs to be ambidextrous (i.e., how timing of the ambidexterity is connected to the technology adaption lifecycle of the technology the company strategy is based on)
- Using the theoretical framework of zone management (Moore, 2015) to understand how to specifically structure the exploratory part of the organization of the established Norwegian technology companies

The findings of this study, in my view, largely confirm both ambidexterity and disruption. The disruption part of this study is about how well companies in this study safeguarded the entrepreneurial mindset. The analysis of Conax empirical data shows that Conax experienced disruption from software-based access control technology providers. We can also understand how Conax handled this disruption and how established Norwegian technology companies can identify and handle the disruption in the market.

This thesis clarify also how ambidexterity helps to preserve counterattack against unexpected disruption from new entrants and how theoretical framework of ambidextrous organization is related to theoretical framework of disruptive innovation.

My view is that we can explain considerably the case study using the selected theoretical framework. The empirical data reveal that the top management teams were unaware of the software-based access control technology as disruptive innovation and lack of ambidexterity, which mostly disappeared in the growth period of the company. From the empirical data of Conax, during the mature period, the top management of Conax became aware of it, but, at that point, it was too late to build an ambidextrous organization. If Conax had been an ambidextrous organization through the growth period and had knowledge of disruptive innovation, Conax would have invested in software-based access control technology at the right time and explored new business areas.

The disruptive innovation framework also provides insight into disruption within respective industries. Technology transitions and the associated organizational punctuated change are often driven from outside the industry. New entrants challenge the very basis of an industry and disrupt established companies in an industry. By knowing the characteristics and overlooked points of disruptive innovation, established Norwegian technology companies can choose to act in advance. This also explains the question about why it took so long to recognize the software-based access control technology as a disruptive innovation.

Based on the empirical findings and my in-depth knowledge about Conax, I would argue that had Conax had knowledge of disruptive innovation at the right time, Conax would have responded differently. I would also argue that, if Conax had been an ambidextrous organization through the growth period, Conax would have been resilient to the disruption from the market. The way Conax responded to disruption from the software-based access control technology indicates how well Conax safeguarded the entrepreneurial mindset.

As described in the theory chapter, "Rationale for choice of theoretical frameworks," ambidextrous organization is specifically relevant for an established company and when a new opportunity is strategically important for the company and the company can benefit from the company's existing assets and operational capabilities. Conax had a significant customer base that needed software-based access control technology. Conax had a customer base as existing assets and operational capabilities to deliver new business to the existing customer base. From that viewpoint, the theoretical framework of ambidextrous organization is imperative for Conax. Same with the theoretical framework for disruption innovation, i.e., new entrants challenge the very basis of an industry and disrupt established companies in an industry. As described (O'Reilly & Tushman, 2016), ambidexterity is more important for technology companies. Capability from an exploitative part is a competitive advantage for the established Norwegian technology companies. This is all about building a bridge to the future without burning bridges from past. Using the existing customers to introduce the new business areas.



As study (Garelli, 2016) shows, the average lifespan of companies has reduced dramatically over the last 50 years, possibly mainly caused by the disappearance of the entrepreneurial mindset over time alongside the organization's inability to continually practice ambidextrous to be resilient and to maintain growth.

## Practical implications

First, the findings in this study are relevant for top management to understand how to safeguard the entrepreneurial mindset in established Norwegian technology companies and how new entrants challenge the very basis of an industry and disrupt established companies in an industry. By knowing the characteristics of disruptive innovation, established Norwegian technology companies can choose to act in advance.

Ambidextrous organization describes how top management can build exploratory business in parallel to exploitative business. Safeguarding entrepreneurial mindsets requires a continuous focus on exploratory business area. The hardest and demanding part is to build an exploratory unit (for the future business) in parallel to the exploitative unit (for the current business) in the growth period with the technology used (in the current business), which is still improving in performance.

Companies that do not work with exploratory areas and maintain entrepreneurial mindsets will at some point experience challenges when disruptive innovation or sustainable innovation hit the industry. It is natural to focus on the revenue generation part of the organization, which is the current core business. There are many examples of companies that are good at operational efficiency and exploit the current business; however, they focus too little on exploring new business. Conax is an example that was excellent on operational efficiency but failed to adjust the focus toward exploring new business. By focusing on both the current business and the future business, and working with both exploitative and exploratory areas, the company can increase the chance of expanding the lifespan of the company. Having an ongoing innovation portfolio with initiatives that are incremental, architectural, and discontinuous innovations will induce companies to be better placed to handle market fluctuations. The most common focus in most companies is on exploiting the current business and operational efficiency. If daily operations steal everything from the focus of top management, the company will eventually experience challenges as Conax. It is important that top management sets aside time and resources to work with innovations that are outside of the core business area. The key is building the ability to master the change before it is too late.

Although companies need to continually practice ambidextrous in the growth period to be resilient and to maintain growth, assumed timing to start to be ambidextrous is the beginning of the early majority phase, i.e., around 16% market penetration of the addressable market for the technology the company strategy is based on. This will make it possible to introduce new business before the mature period of the technology the current business is based on.

## Practical recommendations

There are many other variables and factors that affect a company's choice. Many factors are considered regarding competition in a market. This is a recommendation for the top management based on this case study to build an exploratory business unit in an established Norwegian technology company to safeguard the entrepreneurial mindset.

First, the company needs to understand the urgency of the establishment of the exploratory unit. This depends on the market adaption of the technology the company strategy/business is based on. Even though the best timing to become ambidextrous and focus on new business is assumed in this thesis, the company needs to continually practice ambidexterity in the growth period to be resilient and to maintain the growth. If the company starts with ambidexterity when existing technology is mature and there are technological possibilities that could reshape your industry, it can be too late. Ambidextrous renewal is not an event. This renewal needs to be part of day-to-day work and takes time.

Then top management needs to define the current map of innovation (O'Reilly & Tushman, 2004) of the company, i.e., three types of innovation for the new and existing customers. This overview helps companies to keep track of their current priorities. See the example map of innovation (see figure 16). All innovation initiatives should then be put into the innovation ambition matrix (Nagji & Tuff, 2012). As given in the example (see figure 17), the size of the investment compared to the total should be indicated. Based on the overview, the company should decide the innovation ambition. Golden ratio (see figure 11) can be a good start for an established Norwegian technology company. In this example, there is no transformation or discontinuous innovation initiatives in the company. This example indicates that the company should consider discontinuous or transformation innovation.

Establish an exploratory business unit to handle transformation or discontinuous innovation. In all successful cases (O'Reilly & Tushman, 2004), the exploratory units were initially physically separated from the exploitative parts of the business. Similarly, for three of the four firms that learned how to be ambidextrous, there was a switch in organizational design from an integrated approach (e.g., project teams) to the establishment of separate units for exploratory and exploitative businesses. Establishment of an exploratory unit within the company should start with a top management senior position who is responsible for discontinuous or transformational innovation in the company. That person should get ownership to establish the exploratory organization of the company.

Moore's zone management (Moore, 2015) helps to understand in more detail how to manage the exploratory and exploitative part of the organization. Moore's right horizons (i.e., performance and productivity) can be seen as exploitative, and left horizons (i.e., incubation and transformation) can be seen as exploratory parts of the organization. In incubation zone, the focus is to have several new initiatives at any time. More specifically, discontinuous or transformation innovation initiatives are in the incubation zone. At any time, one or more of these efforts tend to show signs of readiness to transition to full scale. In the transformation zone, the focus is scaling the new initiative to pass the tipping point, i.e., cross the chasm (Moore, 2014). According to Geoffrey A. Moore, a company needs only to succeed in one transformative initiative per decade to be world-class because transformation is expensive, risky, and exhausting. In most years, the transformation zone is likely to be empty.

The ultimate finish line companies should aim for, regardless of how we get there is adding a new line of business to the company's overall portfolio, one that has revenues exceeding 10% of total company revenues and is growing at a faster rate. The strategic plan is a good place to start with a specific focus on how best to allocate resources across three investment horizons, as illustrated in figure 12. Each horizon is defined regarding when the return on that investment will be realized. Investments for initiatives in the incubation zone (i.e., discontinuous or transformation innovation) should be realized in three to five years. Based the golden ratio (see figure 11) as a starting point, I would suggest that a company should invest a minimum of 10% of the total investment in discontinuous or transformation innovation initiatives that can benefit from the company's existing assets and operational capabilities.

Customer	Incremental	Architectural	Discontinuous
Existing	Product A (Pa)	Product X (Px)	
Existing	Product B (Pb)	Product Y (Py)	
Existing	Product C (Pc)		
Existing	Product D (Pd)		

Figure 16: Example map of innovation

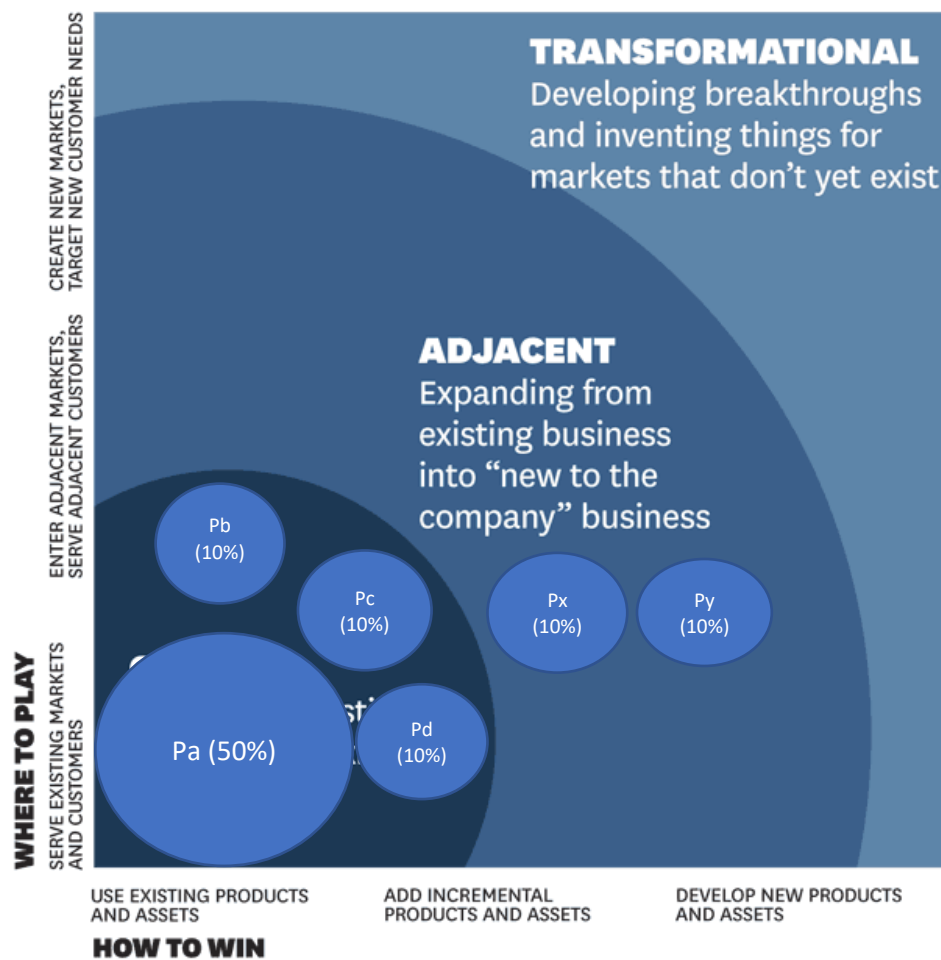


Figure 17: Example innovation ambition matrix

According to (O'Reilly & Tushman, 2004), there are four ingredients needed to achieve successful ambidexterity. In the following, we will go through each of the ingredients:

- A **clear strategic intent** that justifies the need for exploitation and exploration, including the explicit identification of those organization assets and capabilities that can be used for competitive advantage by the exploratory unit. Existing assets and capabilities from the exploitative part should be a competitive advantage for the exploratory part. If not, ambidextrous organization is less relevant for the company. The strategic intent should articulate a compelling intellectual rationale for their exploratory efforts for the whole organization. Without an intellectually compelling strategic intent to justify the ambidextrous form, there will be no rationale for why profitable exploitative units, especially those under pressure, should give up resources to fund small and uncertain exploratory efforts.
- An articulation of a **common vision** and values that provide for a common identity across the exploitative and exploratory units that helps all involved see that they are on the same team. This common vision needs to be owned by the entire senior team. Senior team need to enunciate that the vision statement is meaningful to all parts of the business. Senior team need to ensure that the emotionally engaging aspiration is connected to the company's vision. Vision also needs to revamp its incentive system, rewarding managers primarily for overall company performance rather than for the results of their units.
- A **senior team** that explicitly owns the unit's strategy of exploration and exploitation; there is a common-fate reward system; and the strategy is communicated relentlessly. The ability of the senior leadership to tolerate and resolve the tensions arising from separate alignments. They should share the fundamental beliefs that exploratory and exploitative are important to ensure that both are loved. Ambidexterity needs a strong senior sponsor and practice "consistently inconsistent" leadership behaviors. Ambidextrous leaders need the ability to resolve the inevitable conflicts and resource allocation decisions that this organization design entails. Ambidexterity means being a good manager and good leader. Ambidexterity is about greater separation and greater integration. Ambidexterity requires both personal and organization renewal overtime. It is like a social movement within the companies.
- Separate but aligned **organizational architectures** (structure, methodology, metrics, and cultures) for the exploratory and exploitative units and targeted integration at senior level to properly leverage organizational assets. Evidence-based metrics are imperative for the exploration part of the organization. Question of what metrics are suitable for exploiting and exploring part of the organization: For core or adjacent initiatives, traditional financial metrics are entirely appropriate. However, using such metrics too early in transformational efforts can kill potentially great ideas. Milestones, number of experiments, and evidence market traction are more suitable metrics for the transformational initiatives. Exploratory business needs to develop its own culture, i.e., risk taking, faster decision making, flexibility, experimentation, tolerance of imperfection in product design, etc. Growing transformational ideas will also grow the people part of the exploratory business toward the exploration. Regarding methodology for exploratory business, the lean start-up methodology by Eric Ries (Ries, 2011) details a method for working in conditions of extreme uncertainty in the exploratory phase of an innovation. The lean start-up methodology applies within the established company context just as it does in the world of start-ups. An important characteristic of the lean-startup method is that experiments are cheap and quick to run compared to building a complete product. With a lean start-up, companies can experiment with transformational innovation and attempt to create a product/market fit that can scale into a growth market, i.e., move into the transformation zone.

## Thesis's limitations

The limitations of this case study are several. Long periods of 18 years for the primary case and 20 years for the secondary case have been chosen, which makes it demanding to find specific empirical data relevant to the research question. Furthermore, it is demanding for the interviewees to remember about the strategic decisions and outcomes in 2000s. Methodologically, it is also challenging to find a direct relationship between actions and outcomes when there are many variables and factors that may play in.

In this thesis, only two cases (primary and secondary) were selected to limit the scope of the thesis. It could be relevant to compare with more cases in the same period. Finn was used only as a secondary case to build broader empirical data for the research question. As a continuation of this study, it is highly relevant to conduct a deeper study of Finn to gain a deeper understanding of how Finn's success is related to the research question. By using only two cases (primary and secondary), the findings in these cases will only induce discussion and conclusion. Other cases could have triggered other discussions and other conclusions. Established Norwegian technology company element logic (Element Logic | Optimizing warehouse performance), which I am working as Technology Director now would be imperative to study to strengthen the empirical data of the research question. Element logic is experiencing extreme growth now, and according to analysis in this case study, it is the assumed right time to introduce ambidexterity to the organization.

Only two theoretical frameworks were used to analyze the empirical findings. Having a narrow theoretical basis for the discussion risks excluding other important factors and perspectives.

No empirical data related to the additional theoretical frameworks (given in the theory chapter) were collected. This would have helped to achieve a broader and deeper understanding of the research question of this study.

My own opinion and in-depth knowledge (throughout the lifetime of the company) about Conax as the primary case for the case study will also affect the discussion in this thesis. Even though you try to be objective, your own opinions may color the choices in this case study.

Another limitation is that this case study includes only established Norwegian companies with around 200–400 employees. It is relevant and interesting to conduct a similar case study for larger established Norwegian technology companies.

Only in-depth interviews were used as a qualitative method to collect data. This is often used when there are topics that cannot be addressed using surveys. After collecting data through the in-depth interviews, the survey could have been considered as quantitative method to gain a deeper understanding of the company-level alignment factors needed to safeguard the entrepreneurial mindset of established Norwegian companies.

## Conclusion

In this chapter, we conclude the answer to the following research question of this thesis:

**Based on theoretical frameworks of ambidextrous organizations, how can entrepreneurial mindsets be safeguarded in established Norwegian technology companies?**

First, we address how the entrepreneurial mindset is related to the theoretical framework of ambidextrous organization. The framework of ambidextrous organization comprises two distinctive types of business units within a company. One unit focuses on leveraging existing business (i.e., exploiting), and the other unit focuses on exploring new opportunities for future growth. The framework also defines two different company-level factors required to succeed with these two different business units. Company-level factors defined for the exploratory business unit are related to the general definition of the entrepreneurial mindset (Bosman & Fernhaber, 2018). Based on this relationship, we can conclude that safeguarding the entrepreneurial mindset of established Norwegian technology companies requires focus on the company-level factors needed for the exploratory business defined by the framework of ambidextrous organization.

The discussion and empirical findings show that the entrepreneurial mindset, which is naturally part of the establishment period of the company, tends to disappear during the growth period of the company. Discussion and empirical findings also show that it is hard to suddenly build an entrepreneurial mindset in the mature period without continually practicing the entrepreneurial mindset in the growth period. Discussion and empirical findings also show that an ambidextrous organization is specifically relevant if the established Norwegian technology company can benefit from the company's existing assets and operational capabilities.

This thesis concludes that the entrepreneurial mindset can be safeguarded by establishing a separate exploratory business unit within the company to focus on all the company-level factors of an exploratory business unit, defined by the framework of ambidextrous organization. This thesis also concludes that it is hard to suddenly build the entrepreneurial mindset in a company without continually practicing it during the growth period of the company. Recommendations on how to build an exploratory business unit within an established Norwegian technology company to safeguard the entrepreneurial mindset are given in the analysis and discussion chapter. This thesis also concludes that the ambidextrous organization helps to preserve counterattacks and be resilient against unexpected disruptions from new entrants according to the theoretical framework of disruptive innovation.

## Appendix 1 - Interview guide

<b>Warm-up question</b>	<b>NOTES</b>
Why and when entrepreneurial mindset is needed?	
<b>Reflection questions for growth period</b>	
When was the «growth period» and how was the market changed in this period?	
Can you describe the overarching identity and vision in this period?	
How was the culture and structure in this period? What was valued most and main metrics (i.e. KPIs) in this period?	
How was strategy renewal process in this period and concrete strategic actions implemented in this period?	
How do you define the leadership role (. i.e. focus and tasks) in this period?	
<b>Reflection questions for mature/disruption period</b>	
When was the «mature period» and how was the market changed in this period?	
Can you describe the overarching identity and vision in this period?	
How was the culture and structure in this period? What was valued most and main metrics (i.e. KPIs) in this period?	
How was strategy renewal process in this period and concrete strategic actions implemented in this period?	
How do you define the leadership role (. i.e. focus and tasks) in this period?	
<b>Final question</b>	
Your view on how entrepreneurial mindset should be safeguarded in established Norwegian technology companies?	

## Figures

Figure 1: Structure of the thesis .....	2
Figure 2: When is ambidexterity needed? .....	5
Figure 3: Map of Innovation developed by O'Reilly and Tushman .....	5
Figure 4: Cross-functional teams .....	6
Figure 5: Functional design .....	6
Figure 6: Ambidextrous organizations .....	6
Figure 7: Unsupported teams .....	6
Figure 8: Company-level alignment factors .....	7
Figure 9: Disruptive innovation.....	8
Figure 10: Innovation ambition matrix .....	10
Figure 11: The Golden Ratio.....	11
Figure 12: Four zones of zone management .....	12
Figure 13: Diffusion of innovations.....	13
Figure 14: Technology adaption life cycle.....	14
Figure 15: Company-level alignment factors .....	37
Figure 16: Example map of innovation .....	52
Figure 17: Example innovation ambition matrix.....	52



## Bibliography

- Alpkan, L. (2016). [https://www.researchgate.net/publication/311361300\\_Disruption\\_and\\_Ambidexterity\\_How\\_Innovation\\_Strategies\\_Evolve](https://www.researchgate.net/publication/311361300_Disruption_and_Ambidexterity_How_Innovation_Strategies_Evolve).
- Bosman, L., & Fernhaber, S. (2018). Teaching the Entrepreneurial Mindset to Engineers 1st ed. 2018 Edition.
- Bryman, A. (2016). Social Research Methods.
- Christensen, C. M. (2015). <https://hbr.org/2015/12/what-is-disruptive-innovation>.
- Christensen, C. M. (2015). The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail.
- digi.no. (2000). <https://www.digi.no/artikler/smartkortsikkerhet-uten-tiltrodd-tredjepart/328211>.
- digi.no. (2000). <https://www.digi.no/artikler/to-allianser-vil-gi-deg-smapengekort/314152>.
- Dubois, A., & Gadde, L.-E. (2002). [https://www.researchgate.net/publication/222563830\\_Systematic\\_Combining\\_An\\_Abductive\\_Approach\\_to\\_Case\\_Research](https://www.researchgate.net/publication/222563830_Systematic_Combining_An_Abductive_Approach_to_Case_Research).
- Fernando, J. (2021). <https://www.investopedia.com/terms/d/death-valley-curve.asp>.
- Garelli, S. (2016). <https://www.imd.org/research-knowledge/articles/why-you-will-probably-live-longer-than-most-big-companies>.
- Grønmo, S. (2016). Samfunnsvitenskapelige metoder.
- Humble, J., Molesky, J., & O'Reilly, B. (2015). Lean Enterprise: How High Performance Organizations Innovate at Scale (Lean (O'Reilly)) 1st Edition.
- Johannessen, A., Tufte, P., & Christoffersen, L. (2020). Forskningsmetode for økonomisk-administrative fag.
- Kim, C., & Mauborgne, R. (2015). Blue Ocean Strategy, Expanded Edition: How to Create Uncontested Market Space and Make the Competition Irrelevant.
- Kvale, S., & Brinkmann, S. (2015). Det kvalitative forskningsintervju.
- McGrath, R. G. (2013). End of Competitive Advantage: How to Keep Your Strategy Moving as Fast as Your Business.
- Miles, M. B., & Huberman, A. M. (1994). Qualitative Data Analysis: An Expanded Sourcebook, 2nd Edition 2nd Edition.
- Moore, G. A. (2014). Crossing the Chasm, 3rd Edition: Marketing and Selling Disruptive Products to Mainstream Customers.
- Moore, G. A. (2015). Zone to Win: Organizing to Compete in an Age of Disruption.
- Nagji, B., & Tuff, G. (2012). <https://hbr.org/2012/05/managing-your-innovation-portfolio>.
- O'Reilly, C. A., & Tushman, M. (2004). <https://hbr.org/2004/04/the-ambidextrous-organization>.
- O'Reilly, C. A., & Tushman, M. (2016). Lead and Disrupt: How to Solve the Innovator's Dilemma.
- O'Reilly, C. A., & Tushman, M. (2004). [https://www.researchgate.net/publication/8625712\\_The\\_Ambidextrous\\_Organization](https://www.researchgate.net/publication/8625712_The_Ambidextrous_Organization).
- Ries, E. (2011). The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses.
- Rogers, E. M. (2003). Diffusion of Innovations, 5th Edition.
- Schibsted. (2020). <https://schibsted.com/ir/reports-presentations-calendar>.
- Smith, E. (2017). <https://www.vice.com/en/article/evbgkn/the-incredibly-technical-history-of-digital-rights-management>.
- statisticshowto. (2015). <https://www.statisticshowto.com/face-validity>.
- Telenor Group. (2014). <https://www.telenor.com/media/press-release/telenor-broadcast-divests-conax-to-kudelski-group-for-nok-1-5-billion>.
- Televerket. (1989). <https://www.romsenter.no/Laer-om-rommet/Rommet-i-tid-Tidslinje/Televerket-kjoeper-satellitten-Thor-1>.
- Tjora, A. (2017). Kvalitative forskningsmetoder i praksis.

Watson, R. (2017). <https://www.imperial.ac.uk/business-school/blogs/executive-education/why-companies-die/>.

wikipedia. (u.d.). [[https://en.wikipedia.org/wiki/Digital\\_television\\_transition](https://en.wikipedia.org/wiki/Digital_television_transition) .

Yin, R. K. (2013). Case Study Research: Design and Methods (Applied Social Research Methods) .

Yin, R. K. (2018). Case Study Research and Applications: Design and Methods.

