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HydroSafe: Emma's investment issues

Torgeir Aadland and Roger Sørheim

INTRODUCTION

'How far will you get with half a million NOK?' The chief executive officer (CEO) Emma Andersen did not know how to respond; NOK500,000 would not last very long. The inventory they had now cost nearly NOK150,000, and they would probably need much more equipment for the rest of the prototype development, not to mention all the labour they would need. She looked at her chief financial officer (CFO), Eirik Hansen, who stared right back at her. The angel investors, Tommy Solstad and Johnny Kolhaug, were obviously interested in the idea. The proof of concept, which the chief marketing officer (CMO) Steffen Høyberg had managed to get to work, sparked the angels' enthusiasm. The technology they had at this point was a simple set-up and was far from the readiness level it needed to be in terms of implementation in a product, but the theoretical and simulation work, performed by their chief technology officer (CTO) Per Liland, did show promising results. However, as Per was in a full-time job in addition to the work he conducted in Emma's company, HydroSafe AS,¹ they needed the money to be able to hire technical developers for full-time positions. All the work conducted in HydroSafe, a start-up focusing on waste control from fish farms, was currently done during the team members' spare time.

'We will probably not last more than 9 months,' Eirik responded to the angels' question, 'and that will be a minimum; we might not reach our goals.' Prior to the meeting, Eirik had presented the numbers for Emma, and HydroSafe would need at least the half million offered now, which would be matched by public funding, but that would not, as Eirik said, last more than 9 months, perhaps 12 if they were able to get some additional money from other sources. Per had explained that his competence would not be enough for the company to reach the next level of technology development, and at least one computer scientist would be needed to implement the algorithm in the complex hydro-system. In addition, they would need a product developer sometime in the future, but that would depend on how fast the system developed into a functioning prototype. The best thing would probably be to hire all the needed human

resources and build a full-size prototype, but Emma knew that this would not be an option. No one would invest nearly NOK6 million in HydroSafe at this time.

‘Find the burn rate that you will have for the next year and send us a thorough budget and a plan, and I think we might be able to help you,’ Tommy Solstad said as he put on his blazer and left with Johnny Kolhaug. ‘I do not think this is a good deal,’ Steffen said after the angels had left. ‘They do not have the knowledge about our markets and come from an industry selling to consumers; we will be selling to other businesses.’ Emma knew this, but she also knew that Eirik would pursue other paths in life if they did not manage to raise some capital by the summer, and it was almost the end of March now. So would Steffen, but he had more belief in the company’s fund-acquiring skills—skills that so far had managed to raise NOK200,000, all of which was used on different equipment and travels. The money from the angels was sorely needed if they were going to be able to develop the company further.

At the end of the day, Emma shut down her computer and left the office for the weekend. She knew that this was probably the closest they would get to private funding before the summer, but she also knew that Steffen would not be happy if they took the deal. Eirik would live with it, but he was not so fond of the angels either. She could probably convince the two if she wanted the deal, and luckily the three constituted the board of directors, so she did not need to take a fight there.

Right after Emma left the office, she received a phone call from Mikkel Strøm, the chair and CEO of AquaFarms AS, one of the biggest suppliers of products for fish farmers in Norway. He told her that he had heard about HydroSafe when Emma pitched the company at an open mic night in February and had done some research about the team and technology. He was interested in meeting HydroSafe’s team to discuss how AquaFarms could help HydroSafe and said that he wanted to meet them next Friday. Emma said that she would get back to him with an answer after the weekend.

Things were suddenly much brighter for Emma and HydroSafe, but there was still something bothering her. Although Mikkel Strøm did not say it directly, it seemed that AquaFarms could invest before the summer, and that they could reach their goal of obtaining enough money to produce the first full-size prototype. However, Emma knew that AquaFarms had been involved in some controversial investments in the past—investments that were not beneficial for the new ventures and entrepreneurs. Although this happened several years ago, and the CEO was replaced after those deals, AquaFarms’ board still consisted of the same people, rotating the chair position between them. She knew Eirik would be sceptical and probably vote no in a board meeting regarding investment from AquaFarms, but she would win the majority vote from Steffen.

Emma now had two potential options for investments from external parties, one small and one big in terms of capital. In addition, HydroSafe could always apply for public funds and soft funding, but while the other investment options were insecure in terms of power positions, the public and soft funding were insecure in terms of whether HydroSafe would be granted the funding. Emma sat down at home and worried about the future of the company in terms of the team and its existence. The weekend would probably be long for Emma.

BACKGROUND

HydroSafe

Emma, Eirik, and Steffen founded HydroSafe AS while they were studying. In one of the management classes they were in together, Emma realized during a company visit to a fish farm the issue with waste from fish farming destroying the sea bottom beneath fish farms' cages. The environment is an important issue for Emma. She grew up in the northern part of Norway, where the sea is the biggest industry in terms of fishing, tourism, and transport of people and goods; thus, Emma always sought to protect and take care of the oceans. She talked about the issue with Eirik and Steffen, and Eirik came up with an idea after talking to one of his professors in hydrodynamics. Eirik took the course in hydrodynamics as a part of his study profile in mechanical engineering, but he also had a profile in economics. He could illustrate the idea and present the concept but was not knowledgeable enough in hydrodynamics to design the different parts and simulate whether the technology would work. They needed an additional member with extensive knowledge in hydrodynamics. Steffen, studying information and communications technology, wrote a project description that the team handed over to Eirik's professor. The professor told the team that this was theoretically possible, but it would probably be impossible to implement it and make it work. They published the project description, and Per, a very dedicated and proficient student, decided to write his master's thesis about the team's solution.

In the last year of the team's studies at the university, the four started the company HydroSafe, developing an advanced hydro-pump to be installed below fish farm cages. Their product would register the current in the water under the cages and send streams of water to push the waste from the cages into a large funnel that sucked the waste into a cleaning system, avoiding the waste reaching the sea bottom and damaging the life living there. However, to be able to let the system's nozzles send the correct amount of water at the right speed, the system also needed to correctly register the currents below sea level around the cages. Thus, the complexity of the system forced the team to seek more resources in terms of computer scientists, mathematicians, and mechanical product developers. In addition, the team would need to collaborate with a fish farm, a producer of fish farm equipment, or a supplier of fish farm equipment. The latter was the best option for HydroSafe as this could give them the right channels from production to implementation.

Through his study work, Per had created an algorithm for analysing the current and making the system send the right amount of water with the correct speed to direct the waste particles into the funnel. However, as the work he did in his master's thesis was only theoretical and with simulations, the team used the autumn and winter after graduation to create a proof of concept of the system. They received NOK100,000 from Innovation Norway to test the proof of concept and investigate the market's interest, and an additional NOK100,000 of soft funding from other sources to buy the necessary tools and equipment for their work. The feasibility study showed that the market wanted their product, and different fish farmers and environmental organizations saw significant value in their solution. Now, 2 years after the founding of the company, and almost 1 year after graduation, the team had managed to illustrate the

possibility of their system and needed additional resources to be able to develop the system further with sensors, pumps, nozzles, and cleaning systems.

At this time, Eirik had estimated (with input from Per on the different technological steps) the resources that were needed to be able to develop the product further. In total, the team would need a minimum of NOK1 million, such that Emma could start part time in the company, in addition to a full-time computer scientist who could implement the algorithm with the different components in the system, such that a first prototype could be developed. After the first prototype, a second full-scale prototype would be developed, which could be tested in a live environment such as a small stream or near the harbour in the city of Trondheim. This would require some additional people in the team: a product developer, and Per, who would need to develop the algorithm further according to the test results from the first prototype. This would be costlier as much equipment for this test needed to be purchased and as Emma would be hired for a full-time position at this stage, in addition to part-time positions for Eirik and Steffen. This second stage, lasting a year and a half, was estimated to cost NOK4.5 million. Including overheads, Eirik estimated a total of NOK6 million to fulfil both development stages, making HydroSafe ready for early-stage venture capital.

Angel Investor Interest

After an entrepreneurship event early in January, HydroSafe obtained some PR through an interview with an entrepreneurship magazine, and the angel investors Tommy Solstad and Johnny Kolhaug contacted Steffen shortly after. Tommy and Johnny were two young entrepreneurs who had had huge success with their company that they had recently sold, which focused on gathering different services for consumers in one platform, and were now looking for different cases to invest in. The company they founded and sold used a web platform to reach their customers, and they succeeded because of their huge customer base. Now they had invested in a few similar ventures that used web platforms to reach their customers with their services or goods.

In the meeting between HydroSafe and the angels, Tommy and Johnny were focusing on a detailed budget and wanted more insights into what the burn rate would be during the development and how far they could reach with different amounts of capital. Both angels had limited understanding of the technological aspects of HydroSafe's technology and were unable to fully understand it as they had backgrounds in economics and web application development. However, they both had extensive experience from negotiations with investors as they had taken their own company through several investment rounds before they sold it.

The two angels were interested in putting in a small amount of money to help HydroSafe to reach the next level and wanted to invest NOK500,000 in the company. There were no discussions about shares or influence in the company after such an investment, but this would probably be a subject in a second meeting.

Mikkel Strøm and AquaFarms

Mikkel Strøm, the board chair of AquaFarms, a multimillion fish farm equipment supplier, became CEO 4 years ago, after the previous CEO resigned following several controversial investments and collaborations with new ventures. In these investments and collaborations, the entrepreneurs in the smaller ventures were often forced out and received the minimum in return for their effort, while AquaFarms exploited these ventures' work and technology in AquaFarms' products. With Mikkel Strøm as the CEO, AquaFarms reduced the number of investments in new ventures but had in the last year invested in two cases where it seemed the power balance between AquaFarms and the entrepreneurs was stable. However, based on the history of bad investment approaches in combination with the same board for the last 5 years, AquaFarms' reputation in the entrepreneurial environment was not good.

AquaFarms shared the market equally with Fish Supplies AS and had many research projects in Norwegian fish farms, which could therefore be a valuable door opener for HydroSafe. One issue was to reach the second prototype for HydroSafe; another was to enter the market. If none of the suppliers of fish farming equipment would collaborate with HydroSafe, the way would be long and hard to introduce the product to the market. The supply chain control of AquaFarms and Fish Supplies had to be exploited to be able to enter the market. If not, the series from venture capitalists would probably be near NOK40 to 50 million, something that would never happen given their return-on-investment goal. Emma had previously been in contact with Fish Supplies, but they did not at that time show any interest in HydroSafe.

Public Funding, Soft Funding, and Loan

One last option to obtain the necessary capital was public funding—for example, through Innovation Norway, a governmental organization supporting new ventures with funding. HydroSafe could receive up to NOK500,000 from Innovation Norway, but to be able to use this on salaries, which HydroSafe needed, the team had to match and pay for 50% of the salary costs. Thus, the team had to obtain money from other sources—through either investments or grants. The latter would be the best, but gathering half a million in grants would be time- and resource-consuming and would probably postpone any hiring for several months or even a year.

Another option would be to apply for any Horizon2020 project or the FORNY programme under the Research Council of Norway, aimed at increasing the commercial utilization of results from publicly funded R&D in Norway. Emma knew that the Research Council would soon start a project for students and recent graduates, but she did not know when this would occur, how much this would give if granted, or whether HydroSafe had to match the funding with their own capital. In addition, the Norwegian Research Council's other projects often required the new ventures to collaborate with established companies and would only cover 40% of the total costs in these projects. These projects also needed a lot of time in application writing and had application deadlines in the autumn with feedback late in January or early February, meaning the future of the company would be uncertain for several months.

For Emma and HydroSafe, the grant from Innovation Norway was something they had to apply for, and something they would probably receive, but how the team was going to match it was the question bothering Emma. They could apply for a loan, but few banks would help a business without revenue; their network could probably help them with private loans. However, this was a possibility and strategy Emma did not feel comfortable with and that she knew too little about.

Monday Morning Meeting

After the weekend, the team met for their weekly meeting, and Emma was waiting for Steffen and Eirik to get ready. Emma had called both Eirik and Steffen Sunday afternoon and told them about the call from Mikkel Strøm, and asked them to prepare for discussions regarding the two options of potential private investment, in addition to the third option to seek funding only through grants and public funding. Both the two angels and Mikkel Strøm expected feedback by Monday, and Emma feared that the team would not agree and end up with a bad mood between the team members, not only in terms of which option to pursue but also in terms of ownership in the company. Emma could give away many shares to get the company moving forward, but she knew that Steffen wanted to minimize his loss of shares to investors.

The day had not started well as Eirik had received an invoice of NOK20,000 from HydroSafe's accountant—twice the size they expected—and now their bank account approached negative numbers. Emma now knew that this meeting would end with either controlled liquidation or a plan to continue the development of the company. Before the weekend, she felt confident, but now she did not know the better option for HydroSafe. Eirik and Steffen looked at her, and they started the meeting.

CASE ACTIVITIES

This case introduces several options that Emma and her team need to consider in terms of funding. For start-ups, these options and issues occur frequently in the phases of capital raising, forcing the founders to make decisions which in few cases give optimal outcomes in the eyes of all stakeholders. The five options (angel investors, corporate investment/collaboration, public funding, soft/informal funding, and loans) influence the new venture in different ways—for instance, in terms of stakeholder power, strategic choices, future investments, and access in the market. These different outcomes will have various implications in different contexts, markets, or industries, and (potential) entrepreneurs should therefore reflect upon different options to be prepared for future entrepreneurial activities. The questions below are designed such that Emma's issues are in focus, but these will also be valuable as a starting point for evaluations of potential investment in other start-ups.

- In general, how would you describe the main characteristics of the five different options that are presented in the case?
- How would you assess the different options that HydroSafe has? What are the pros and cons of the different options?

- If you were in Emma's position, given the stage and future activities for the start-up, what would you do and why?
- How do you think the different decisions could affect the various stakeholders and the development of the start-up?

NOTE

1. The case is based on real situations, but the companies, technology, and individuals in this case have been anonymized.