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Developing capabilities in market learning, network learning and internal learning: A case study of a Born Global entering the commercialization stage

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Abstract

The purpose of this thesis is to describe and explain how a Norwegian-based Born Global develop their capabilities in market learning, network learning and internal learning around the time of their first commercial product launch.

Most Born Globals disappear within the first years. Previous research shows that being able to utilize your resources effectively and develop the right capabilities at the correct time is essential for survival and growth.

The study was carried out as a longitudinal single case study of a young software company in Norway. I followed one Born Global during the spring of 2018 with conducting interviews prior, during and after their first commercial product launch. During this period, they transformed their business model from offering open-source software consultancy services to provide a commercial software hosting for their product. The product is a software platform they invented to make anyone capable to make, share and re-use interactive content on any platform of choice. I was able to observe over time how the company developed their capabilities in this transition.

The research results suggest that the company studied was a Born Global entering the stage of commercialization. They had many of the hallmarks found on earlier empirical studies on Born Globals. Their current sales effort was conducted around developing their capabilities in how to utilize their existing network to convert the existing network members from being open-source users to paying customers.

I found that the level of capabilities from one operational area to anther was different at the time of entering the commercialization stage, and the same pattern of developing their capabilities continued into the commercialization stage.

Their capabilities in market learning were underdeveloped and learning new capabilities was dependent on the manager. They have challenges from legal issues and contract conditions from institutional buyers on closing contracts.

Towards their network, their capabilities were more developed. They had developed their network learning capabilities by expanding from being an open-source project into becoming a commercial organization by utilizing members of the network and collaboration with other companies in the network.

Internally they were mixed. Their internal capabilities were highly developed on their technical organization and skills and had underdeveloped capabilities as an organization. The company was strongly technically oriented and exercised a dynamic behavior in their internal learning capabilities when demand from external influence changed. Most of their investment in developing their learning capabilities were allocated to the internal technical organization. For their capabilities in their internal organization and development of their organizational skills, this was kept on a minimum purposively.

There was a strong manager presence and an incentive and drive amongst both the manager and the employees to succeed.

The findings can be used as a contribution to assist with strategic choices for other Born Globals in their internationalization efforts, and as an insight for academia in how a Born Global developed their capabilities through the commercialization stage.

1 Introduction

1.1 Background

Most entrepreneurial companies in their early stage don't generate profit for their owners and more than half of these companies disappear within the first years ("Business demography statistics," 2017). There is a significant uncertainty in a company with little or no physical assets, negative cash-flow, only a few employees, unfinished products and unproven market results. However, global companies like Facebook, Amazon, Uber and Google all started as small scalable entrepreneurial companies with all the same uncertainties and succeeded, while thousands of other companies failed. This type of companies' ability to innovate is their key intangible asset, and what they are known for – i.e. their ability to respond to changing consumer needs with organizational capabilities in marketing, networking and internal learning (Ulrich & Smallwood, 2004). A capability is defined as "the ability or power to do something" ("Capability," n.d.). Developing your capabilities means the ability to gain new knowledge by learning.

Organizational capabilities towards the market, network and internally are intangible skills and that is hard to see, measure and put a price tag on (Ulrich & Smallwood, 2004). The dynamic capabilities of the Born Global organization is their ability to develop, reconfigure and adapt their organizational capabilities as challenges and opportunities in the international market arise (Weerawardena, Mort, Liesch, & Knight, 2007). Helfat and Peteraf (2003) highlighted the importance of having the right capability at the right time in your company. Throughout the stages in the life-cycle of a company, your resources and capabilities will have different importance and consequence. The stage from product development to commercialization is often called the "Valley of Death" (Murphy & Edwards, 2003), and is described as the transition period from being dependent on investor funding to being able to stand on your own feet with generated sales income. In this transition phase your capabilities in marketing, networking and internal focused learning will be transparent and dynamically interact with each other, as it is a critical make-or-break stage of the company.

A small international minded company is in the internationalization literature called Born Global. This is a young entrepreneurial company, often in the high-tech sector, that is international minded from the start and they don't hold a long history, traditions or cultural practices on how they capture and develop their capabilities (Hollensen, 2017). This paper

contributes to understand how this type of company develop their capabilities while in the transition state from product development to have a commercial offering. Their efforts in the transition period to gain additional internal skills, how they interact internally and externally with the market and their network, and the importance of the founder or manager during this time.

This paper expands on the three central areas of organizational capabilities; market learning, network learning and internal learning. Further research of capabilities and effects of developing capabilities in these areas were suggested by Weerawardena et al. (2007); Weerawardena, Mort, Salunke, Knight, and Liesch (2015) as the current academia on the topic is non-conclusive. To understand how these Born Globals develop their capabilities when they are in transition from development stage to commercialization stage is intriguing. As a there is a change in the company, we would expect that the capabilities needed to meet this change would also change. The main argument is that Born Globals need to learn from multiple external and internal sources to accelerate their internationalization progress (Weerawardena et al., 2007).

To get a contribution to the understanding of why only some of these global minded companies become a commercial successful company, I have done an in-depth research of capabilities and how these were developed in one Born Global. My study is conducted as a single case study of a small entrepreneurial international minded company in Norway.

1.2 Purpose

In entrepreneurial and internationalization academia there is several studies aiming to reason why some international mind start-ups survive and thrive, and others fail (McCarthy, 2017). As there are many external factors a small start-up can't control or influence, there are still internal factors which they can control. Companies control what they can do with the capabilities they have developed to respond to threats, challenges and opportunities. From an internal standpoint by using the Resource-Based View (Barney & Clark, 2007; Ulrich & Smallwood, 2004), I focus on what capabilities these companies develop between product development to commercialization. Heiss (2017) found that there was a notable gap in the literature on organizational capabilities for smaller companies and stated that this area should be a specific field of interest for future research. Cavusgil and Knight (2015) called for papers to unify research from different perspectives, and by data collection and analysis show how the internal competencies of Born Globals link to organizational learning and above average

market performance. Cavusgil and Knight (2015) called for these papers with a specific interest in how companies capture, develop, share, and optimize their knowledge. Dibrell, Fairclough, and Davis (2015) suggested that further investigation on sources of uncertainty, dynamism, and complexity which have a direct influence on managers' decisions is needed. As I found that dynamic states is only described in general terms in existing literature, more research in when and where dynamic states change, and what variables are most important in the states of change is needed (Levie & Lichtenstein, 2010).

From utilizing your resources to find how these can converted into a set of capabilities to thrive as a company is intriguing. All companies want to create value, be rare and inimitable with the least possible resource input. The internal processes an organization is conducting to improve their knowledge in marketing, networking and internally to reduce uncertainty and adapt your capabilities as you go is one of the key components you can control to make it in the international marketplace (Weerawardena et al., 2007).

From the gaps identified in the literature, understanding and developing what you are capable of in the transition stage from developing a product to commercialization need further research. By unifying entrepreneur and internationalization perspectives and I go into detail on how smaller companies' conduct their internationalization effort. How they increase their knowledge internally, conduct marketing approaches and communicate in their network. I have studied in detail one young international minded high-tech software company's effort over time and compared these with earlier empirical findings and theoretical propositions.

As I found that the managers role is crucial during this period, I have special attention to the impact and influence the manager has in these entrepreneurial companies. From entrepreneur and internationalization literature I have found key capabilities. Through tree interviews on one research object, and by triangulating with observations and internet articles on the company, I have been able to understand their behavior based on theory on organizational capabilities and in the Born Global literature.

1.3 Research question

To achieve in-depth insight in how a young entrepreneurial company dynamically develop their capabilities from being a product developing organization to have a commercial offering, the following research question has been formulated:

> *How do a Born Global develop their capabilities in market learning, network learning and internal learning when entering the commercialization stage?*

The findings can be used as a contribution to conduct strategic choices for other Born Globals in their internationalization efforts, and as an insight for academia in how a Born Global developed their capabilities when entering the commercialization stage.

1.4 "Data Plc."

The name of this company and its products is not disclosed to protect its confidentiality. The company is in this thesis referred to as "Data Plc.". Data Plc. is a young entrepreneurial software company which operate globally and has been around for four years. They operate out from one office in Norway and have one satellite office in Asia. They have less than 10 employees in Norway and have one programmer hired in Asia. They also cooperate with a couple of freelancers in Europe, and many open community programmers worldwide. They identify themselves as a Born Global both from their own perception, and how they act, think and operate.

Their commercial product offering is a software platform they invented to make anyone capable to make, share and re-use interactive content. They founded the technology, and it has been offered to users for free through an unsupported open-source license. The open-source initiative is software that is made available for all to use, re-use and modify for free ("Open Source Initiative," n.d.). Their revenue has been from consultancy on their "free to use - pay to customize" software. They have a steady growing user base worldwide.

During the period of research for this paper, Data Plc. was launching their software platform on a commercial Software as a Service platform (SaaS) supported by Data Plc. Their main customer base is in education technology and their focus is that their product is to be available through Learning Management Systems (LMS).

1.5 Outline of the thesis

This paper consists of eight parts.

Chapter 1 consist of the introduction, purpose, the research question and a presentation of the research object.

Chapter 2 is the relevant theoretical background the research was founded on. It holds internationalization theories around Born Global, the resource-based view and an extensive section on capabilities for market learning, network learning and internal learning. The managers role has a separate sub-chapter. Last, the theoretical background for the data collection and analysis with its variables for performing a capabilities audit.

Chapter 3 is explaining the research method's philosophical and theoretical approach, the research design, and reflections on the method and ethical considerations. It also describes how the data collection was carried and decoded during the research period.

Chapter 4 is the results from the research with the Born Global categorization, the company timing and capabilities. The results are presented, then organized and analyzed and summarized.

Chapter 5 consist of the discussion where the results from the analysis is discussed.

Chapter 6 has the concluding remarks and managerial implications.

Chapter 7 has the references

Appendix hold the interview guide.

2 Theory

This chapter elaborate on the theoretical framework related to capabilities to internationalize.

First, the term Born Global and what characterizes a company that identify itself as Born Global is explained to establish the context of the development of capabilities. Time is of importance, and the different stages of an entrepreneurial company and what necessary capabilities they would need to develop at the different stages is highlighted.

Second, theory on internal learning capabilities and resources in a business from a resource-based view is explained, with use of entrepreneurial and Born Global literature. I have focused on market learning, network learning and internal learning in relation to how to develop and adapt your skills to apply expansion or internationalization of your company. I have conducted special attention on the managers role, as I found that it is one of the main drivers for the building of a sustainable advantage.

Third, the method used for data collection and analysis is elaborated. I have applied a method to measure capabilities called Capabilities Audit, introduced by Ulrich and Smallwood (2004).

2.1 Born Global

Rennie (1993), in a study through McKinsey and Company introduced the term "Born Global", where company can be categorized as Born Global if you export at least 25% of your production within the last two years after founding or decision made to internationalize. This is a type of company that is considered to differentiate from traditional entrepreneurial start-ups as they don't look to their local surroundings for their target market, but instead consider the world as their market (Rennie, 1993). Rennie (1993), further found that small to medium-sized companies could successfully compete on an international stage from the start against large established companies, both on quality and value and satisfying the need for a specific customer group. The term Born Global is also referenced as "International New Ventures" (Oviatt & McDougall, 2005) and "global start-ups" (Knight & Cavusgil, 2004). To avoid any terminological confusion, I will use the term Born Global consistently. Oviatt and McDougall (2005, p. 49) defined this type of companies as "a business organization that, from inception, seeks to derive significant competitive advantage from the use of resources and the sale of outputs in multiple countries."

One of the major drivers for the emergence of Born Globals appear to be the technical advances in communication, which have enabled a rapid globalization of international businesses. The vast advances in information and communication technologies has made internationalization a more viable and cost-effective option which enables you to interact more efficiently with own members and customers (Knight & Cavusgil, 2004). Boundaries between borders evaporate, as companies of any size can extend beyond their borders (Rennie, 1993). The emergence of the Born Global type of company is recognized by a number of distinguishable characteristics, as summarized by Oviatt and McDougall (2005):

Internalization of some transactions. It is not necessary to physically own foreign assets even if you control them. As per Transactions Cost Analysis theory, when the cost of constructing/search and executing/monitoring is at its lowest, the hierarchical authority will govern, thus defined as internalized in a hybrid structure. This finding is supported by Aspelund and Moen (2005), where they found that Born Globals was found to increase turn-over, but not necessarily more employees.

Only need to own a small percentage of essential resources. They often seek licensing, partners and franchising in exchange for resources, as there is a scarcity of financial resources. Born Globals tend to have limited resources, which make them vulnerable to competition from larger players (Aspelund, Madsen, & Moen, 2007; Tanev, 2012). By following this low-control mode strategy they are also subject to "liability of newness and foreignness" as pointed out by Cavusgil and Knight (2015). Your liability is high as you are new and can't control resources if you don't fully own them or have them tightly controlled. This organization also creates a risk that they can face lost competitive advantage, lost opportunities to learn, and become a "hollow" organization (Teece as cited in Oviatt & McDougall, 2005). According to Oviatt and McDougall (2005), they hold a high concentration of limited resources on the primary internal sources as their competitive advantage and use external experts to supply non-essential resources. The companies front operational and financial risks from their internationalization efforts such as the development of new products and services.

Foreign location advantage. International companies take advantage of moving across borders, as you will seek to minimize production and material cost. Knowledge can be reproduced and travel for minimal cost as communication systems enable you to cooperate without being physically present at the foreign location. For example, a software, it can take

years to develop and resources needed to create it can be done globally. Once finished it can be reproduced, sold and distributed globally with virtual no cost, and are geographically unlimited. According to Cavusgil and Knight (2015), foreign entrepreneurship is the creative process of realizing and take advantage of opportunities which exist outside the domestic market to create a competitive advantage. Countries with small domestic markets tend to have a higher incidence of Born Globals (Cavusgil & Knight, 2015).

Unique resources. Born Globals must possess unique resources. These unique resources are often intellectual property such as knowledge and capability. Gabrielsson, Kirpalani, Dimitratos, Solberg, and Zucchella (2008) define unique resources as having products with global market potential. This apply for software and its distribution as it is highly scalable and can be distributed globally. As knowledge can be reproduced and as per transaction cost theory, if you can be exploited – the theory suggest you will. Thus, the Born Global must limit the risk of exploitation of their knowledge, encourage imperfect imitations and offer licensing to prolong the value of their unique resource (Oviatt & McDougall, 2005). Even if you hold patents, copyright or trademarks, other organizations are expected to try overcoming those rights of your proprietary asset.

Opportunistic orientation. Born Globals are present across most industries (Rennie, 1993; Tanev, 2012). Most Born Globals are often technology companies and appear to not limit themselves and actively seek opportunities that arise. By being small, agile and utilizing the rapid internationalization a Born Global can utilize the first mover strategy vis-a-vis larger competitors (Kuivalainen, Sundqvist, & Servais, 2007).

From later empirical studies, there is a few more distinct features of the phenomenon identified:

Network oriented. Smaller Born Global rely on networks to develop their knowledge and gain experience about new markets (Freeman and Cavusgil as cited in Freeman, Hutchings, Lazaris, & Zyngier, 2010). The strategy to build global networks of collaborators, distributors, agents, representatives, and suppliers is also seen as one of the most essential applied strategies (Cavusgil & Knight, 2015). As a Born Global, often you don't have a home market, thus, to be able to scale you must look further than your home market for growth potential. To be able to grow, the you will need to be visible in the marketplace. The capability of expanding by networks and affiliates as distribution channels have been highlighted in the

literature as one of the greatest capabilities Born Globals need to possess. Gabrielsson, Gabrielsson, and Dimitratos (2014) found that Born Globals relied heavily on partners for their distribution into foreign markets. Networks are often critical in providing information that contributes to risk reduction and uncertainty and contribute to development of complementary resources (Weerawardena et al., 2007). By forming strategic partnerships and take advantage of the market learning capabilities and local knowledge of their network partners they can increase their knowledge (Chetty & Campbell-Hunt, 2004). This implies that you have the capability to utilize and develop a network into new markets and distribution channels as well as knowledge by partnering with other companies that have these resources.

Innovative. Their offering is differentiated, and unique, and often these offerings spring from advances in science, technology, or design (Cavusgil & Knight, 2015). They seek to leverage advanced information and communications technology (Tanev, 2012). Aspelund and Moen (2005) argue that Born Globals need a strong technological and market advantage combined with a strategic focus as a key trait. Being capable to innovate products to a focused market create knowledge, which give the company an internal increase in technical capability. This give the company an ability to have a scalable offering, which is one of the key indicators an in search of a sustainable advantage.

Target niche market. Born Globals often pursue specific market niches or by differentiation and by that avoid competition (Knight & Cavusgil, 2004; Madsen & Servais, 1997; Rennie, 1993; Weerawardena et al., 2007). They often seek to concentrate on a specific market to enable their growth potential by being capable of differentiating their product offering by produce innovative and disruptive products targeting niches where competition from larger players is less intense (Aspelund et al., 2007; Cavusgil & Knight, 2016).

Driven by change agents. These companies tend to be driven forward by the owners, managers and key employees, which is reducing the risk of going abroad (Cavusgil & Knight, 2015). The projection of possible growth and size of the company as the driver, and with commitment, skill and passion from the leadership for creating an organization that can capitalize on this potential. Madsen and Servais (1997) also highlight the importance of the founder, where education and experience from living abroad decrease the distance and even sees the international markets as an opportunity instead of a threat. The competence of the founder or manager as the enabler of the entrepreneurial orientation and driving the company forward is thoroughly emphasized throughout the literature (Tanev, 2012).

Dynamic. Born Globals utilize networks and their resource ownership is loosely controlled and vulnerable due to lack of resources to control and monitor these. Despite this, they still pursue a dynamic opportunistic international business model and invest to develop their capabilities in expansion to foreign markets. As this is contradictory as their resources are loosely held and difficult to protect, there must be some characteristics within the companies that make expanding internationally possible to accomplish. The company itself is often small, young, with only a few employees operating in the high-tech industry. The advantage of applying this mindset or core assumption is that you do not enter an international market as a targeted activity, because you *are* international. At the time when an organization is young, the routines, structures, investments, age and size may be the best opportunity to set the internationalization strategy (McDougall, Shane & Oviatt, 1994 as cited in McDougall & Oviatt, 1996). This means you most likely have the flexibility to do drastic changes as you most likely are not institutionalized yet.

2.2 Time

Timing is of importance to determine what capabilities is needed at the different stages of the life-cycle of an entrepreneurial company. In a high-tech start-up the focus and what you need to be good at will be dynamic and change over time. Throughout the stages in the life-cycle and major events of a company, resources and capabilities will have different importance and consequence. Levie and Lichtenstein (2010) found that that younger and smaller companies often survive and thrive by continuously change, whereas a more bureaucratic business often fails when exposed to environmental change. This suggest that being smaller and younger companies have more flexibility in making changes.

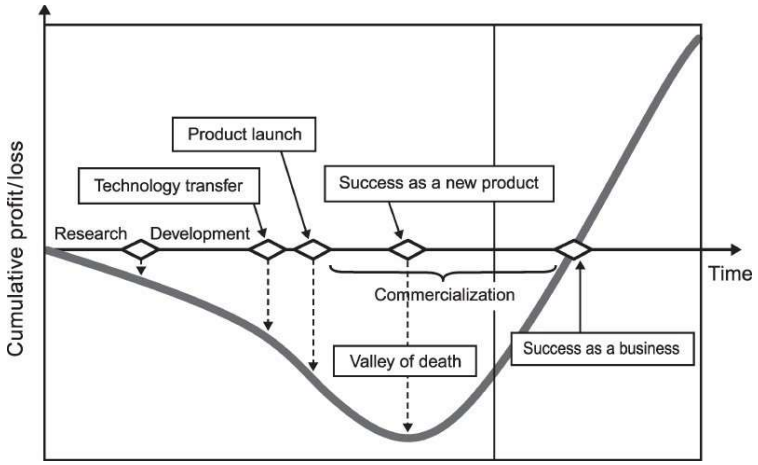

Figure 1 Overall Process from Research to Commercialization (Osawa & Miyazaki, 2006)

For example, you can assume that the product development and network learning capabilities related to development are more important at an early stage than when the product is ready for market. Likewise, it is natural to assume that the market learning capabilities increases its importance the closer you get to a ready for market product. As smaller companies often don't have a separate marketing department, the same people involved in research and development may be set to do marketing and sales. This then requires that the focus for the company in such a stage will drastically change with realigning resources to develop their marketing capability. Helfat and Peteraf (2003) highlighted the importance of having the right capability at the right time in your company and operationalized the capabilities needed to be created during the initial stages of a business founding.

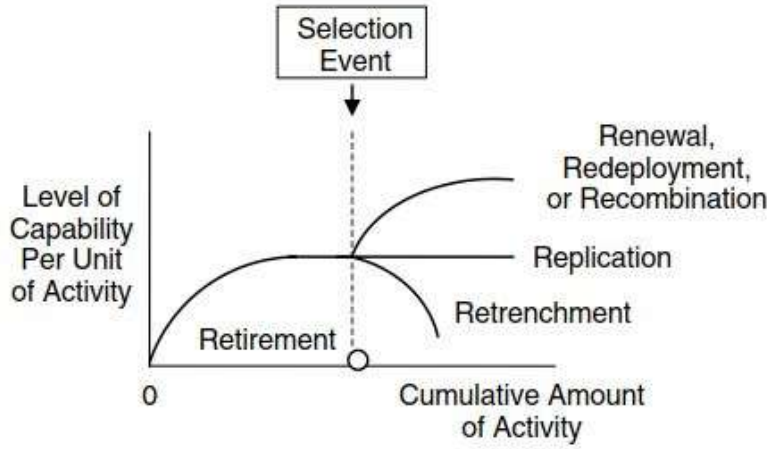

Figure 2 Capability Lifecycle (Helfat & Peteraf, 2003)

According to Helfat and Peteraf (2003) there are three distinct stages of capabilities development. At the founding stage you need a team and have leadership that can together be capable of doing something together, and a central objective that new capabilities must be formed to achieve this. When the company have been formed and objectives set, the development stage forms where you will develop capabilities and accumulate experience to capture it to added capabilities. At some point you will get to a mature state, when the cumulative adding of capabilities starts to dither with the current resources and capabilities you possess, and new needed capabilities will emerge. A capability is not constant, and a constant renewal and readdressing of current capabilities is needed to create and maintain a competitive advantage.

2.3 Capabilities

Resources is an asset a company hold or control. An asset can be such as capital, personnel, offices and patents. Capabilities can be explained as what a company can do with the resources it currently possesses. Ulrich (2015, p. 9) describe it as "organizational capabilities represent what the organization is known for, what it is good at doing and how it allocates resources to win in its market". Being able to execute their strategy is strongly linked to their capabilities of doing so. There is lack of a straightforward framework explaining how companies utilize their capabilities and resources to develop a robust competitive edge (Weerawardena et al., 2007). Organizations need to actively and effectively manage their knowledge and recourses to form and develop capabilities to create a competitive advantage. From the resource-based point of view, ref. chapter 2.5, the business should leverage on developed competencies, skills, expertise, and routines to realize the desired performance (Crossan, Maurer, & White, 2011; Heiss, 2017). For a Born Global it is necessary and essential to be structured in a way to be able to make critical decisions regarding deployment, development, and elimination of certain competencies during changes in external and internal environments. The broad external factors that influence the company is culture, technology, demographics, economical, legal and political. The immediate external factors are the external groups that they can communicate with daily, for example customers, competitors, their social media and external consultants.

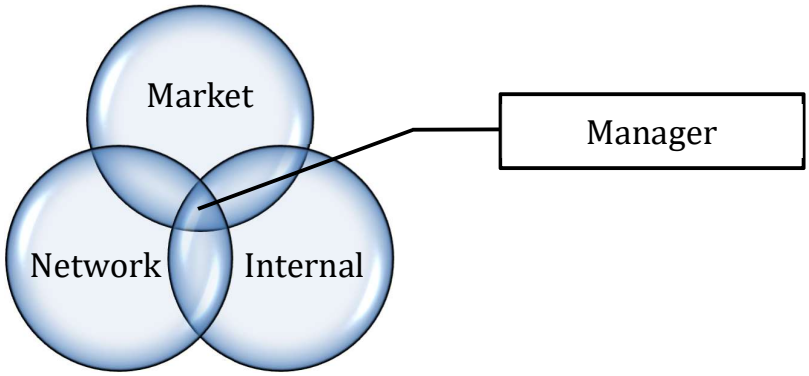

Figure 3 Venn-diagram Capabilities Relations

To develop the capability to address these external relations as well as your internal progress in developing your products, processes and routines, I propose a Venn-diagram to show this relation. For the purpose to capture and being able to develop your capabilities to grow internationally as a Born Global, your network, market and internal skills need to be

developed. All activities interact with each other. For example, a networking activity such as attending a seminar or conference is also a marketing approach for your company. This activity is then used internally as an experience to further develop your company internally, as you may need to adjust your products or design. In the center where all areas intersect in the center is the manager or founder who oversee or are involved in all these activities. The manager has a pivotal role in Born Globals and further discussed in chapter 2.4.

2.3.1 Market learning capabilities

One critical factor for any company survival and expansion is if they are profitable. In order to sell, you will need a market to sell in, and knowledge of the market you sell in. Weerawardena et al. (2007) state that market knowledge is a critical capability for Born Globals. The marketing fitness of Born Globals depends on their combined skills, resources, and knowledge from both internal and external environments (Efrat & Shoham, 2012; Weerawardena et al., 2007). To gain long-term survival and growth, Born Globals needs to use their market knowledge to improve marketing differentiation, efficiency, and effectiveness (Efrat & Shoham, 2012; Kaleka & Morgan, 2017). You will have to learn how to approach the market and how to differentiate yourself and in an effective way. To gain knowledge, you must be capable of getting information, and being able to convert this information into action with adapting and differentiate yourself in a target market. Weerawardena et al. (2015) viewed market learning as an approach where the company utilizes the market information to develop actionable knowledge. Companies create this knowledge through acquiring, advertise, interpreting, and storing internal and external information (Weerawardena et al., 2015).

Knowledge acquisition

Market learning involve collecting information related to customers, institutions, and competitors in the target market. This knowledge is then used to develop a marketing strategy and reduces their risk in their market orientation (Efrat & Shoham, 2012). However, market orientation is not enough to achieve expansion and sales performance (Weerawardena et al., 2015). Acquisition of knowledge and learning should be carried out before executing the internationalization initiative to enhance the development of valuable products and business competencies (Knight & Cavusgil, 2004). Marketing capability advance customer connections which according to Ulrich and Smallwood (2004) lead to creation of lasting relationships based on trust with target customers. This knowledge can be gained from tracking the

customers preferences through performing market surveys, analyzing their technical support track and sales inquiry accounts. The initial stage of expanding in foreign markets is used to gain experience and develop knowledge to be successful in successive markets, as you use your acquired knowledge to know what was working and what was not. Therefore, company market performance depends on how the company adapts the accumulated knowledge and competencies to the dynamic market conditions (Gerschewski et al., 2015).

Speed

International market knowledge and technical knowledge accelerate your speed of internationalization (Oviatt & McDougall, 2005). To be capable to internationalize at a fast pace and acquire a market share the Born Global need to gain knowledge about the market. Zhou and Wu (2014) found a strong correlation between internationalization performance and time, where a fast internationalization created growth, and this rate of growth decreased over time. As your venture is international, you can quickly get access to international market knowledge as your involvement with customers, partners and competitors are international. This is acquired by gaining knowledge on business and institutional matters, such as foreign customers, competitors and distributors, laws, regulatory standards, cultural norms and language (Oviatt & McDougall, 2005). The ability to capture and develop an internationalization strategy based on this knowledge increase their marketing capability.

Positioning

Rennie (1993) was early to propose that the consumer preferences had changed from standardized products to specialized and customized products. A targeted learning experience to position yourself towards a desired target market give a company capacities to obtain, distribute, unlearn, and combine market information to value-adding processes (Efrat & Shoham, 2012). The Born Global emerged to pursue niche markets (Bell, McNaughton, & Young, 2001; Knight & Cavusgil, 2004; Madsen & Servais, 1997; Rennie, 1993; Weerawardena et al., 2007). By operating in a niche, they experience that competition is less intense and opportunities for profits are significant (Aspelund et al., 2005). Weerawardena et al. (2007) found that Born Globals adapted market learning capabilities quickly and to be at the leading edge of their niche. By combining their knowledge in their product and market knowledge, they can focus their niche market approach.

Dynamic Market Adaption

Efrat and Shoham (2012) found that market knowledge decreases over time as Born Globals advance in foreign markets. At this point, the company should shift their focus towards improving marketing effectiveness, differentiation, and efficiency to survive (Gerschewski, Rose, & Lindsay, 2015; Kaleka & Morgan, 2017; Pellegrino & McNaughton, 2015). Contradictory, this may also be a disadvantage as rapid shift in focus may erode key skills, competencies and newly formed networks (Kaleka & Morgan, 2017). Advancement into several foreign markets deteriorate the company's focus as you grow in many directions at once. Marketing differentiation call for a systematic approach of the company to provide an efficient marketing strategy and have efficient distribution channels compared to competitors. As of the nature of Born Globals, where its main markets are overseas, there is a greater dependency for having these distribution channels defined. For long-term performance, the company should use their key customers to promote their current marketing communication, and adjust their existing product offering to match new client and defer rivals (Weerawardena et al., 2015).

Born Globals are exposed to both business market and target country dynamism, and due to their small size and newness, they have little or no influence of the nature of the dynamic market conditions and dynamic target country or region laws or regulations. With both of these two dynamic variables outside the Born Globals control, the company needs to be able to *sense* the threats and *seize* opportunities and *transform* its capabilities and resources fast and effectively (Matysiak, Rugman, & Bausch, 2017). By *sensing,* it stresses on developing efficient overseas operations to being able to sense the expected resource capability given with country specific advantages , and position your company according to non-location bound company specific advantages (Matysiak et al., 2017). *Seizing* follows establishing overseas skills and resources to take advantage of the identified network channels to offer efficient and effective capabilities to seize these company-specific and country-specific opportunities. *Transforming* focus on continuous management of change through actively realigning core and complementary skills and competencies to expand your resources (Matysiak et al., 2017).

2.3.2 Network learning capabilities

In establishing business networks, Born Globals tends to focus on connections who can efficiently complement their expertise and competencies in the export markets (Kaleka & Morgan, 2017). External network connections are an important factor in discovering and learn how to utilize emerging opportunities, testing new ideas, and collecting information necessary to design an organizational structure that fit their size, location and financial resources. Born Globals face uncertainties and risks in the foreign expansion as they are lacking robust resources and experience necessary for internationalization (Efrat & Shoham, 2012). However, Knight and Cavusgil (2004) found that external network relations and connections also serve to lower uncertainty and risks found in international business engagements. They also help to expand the company's knowledge by giving access to complementary assets and resources such as opening doors to markets and giving information about related industry trends and opportunities (Weerawardena et al., 2007). This suggest that Born Global entrepreneurs need to build and maintain a good and relevant network to key external influencers to be successful in the internalization process. Dow, Liesch, and Welch (2017) found that robust networking relationships decreases the perception of risks and uncertainties and stimulated to an awareness of opportunities and information sharing in its effort for foreign expansion. Repeated interactions with partners in target markets over time increases relations related to knowledge, social capital, and confidence (Dow et al., 2017). Hence, the closer interaction and cooperation you have within network, it decreases the risk in your effort in foreign expansion.

Building networks

Relationship learning of Born Globals through their leaders' experience and vision take advantage of the existing connections while developing new ones for successful internationalization (Weerawardena et al., 2015). Personal connections play a critical role in gaining knowledge and improving organizational progress. Information collected from connections enhances essential learning which is used at the pre-internationalization stage (Pellegrino & McNaughton, 2015). Heiss (2017) found that private connections act as the foundation for developing business to business relationships on a global scale. Business founders establish these interactions by attending international business conferences and industry gatherings in target markets (Weerawardena et al., 2015). Further, Gerschewski et al. (2015) found no relationship between personal networks of the founder and the role of the Born Global at a later stage, and that could imply that the network has been assimilated as a

competence inside the organization rather than a personal resource that was brought on to the company.

Maintaining Networks

Market communication on the product offering of the Born Global grow new personal relationships due to this necessary communication. Collaboration is one of the strategic assets of a company which promote their internationalization to improve efficiency and maintain leverage (Ulrich & Smallwood, 2004). The collaboration makes the company benefit from their shared skills and ideas. In the context of high-tech companies this can be developer forums, business portals and entrepreneurial business incubators. From these collaborative arenas, the Born Global can get access to capabilities they don't own or possess to improve themselves. Accordingly, the networks can enable replication, re-deploying, or transfer of competencies from one part of the company or market environment to another (Knight & Cavusgil, 2004). By taking advantage of such collaborative networks, the Born Global can reduce their uncertainties and risks and manage their scarcity of resources and experience. Networking with foreign distributors enables the Born Global to efficiently respond to the fast-changing consumer wants, shifting environmental risks, and competitor actions (Knight & Cavusgil, 2004). By cooperating with distributors that have their network and their customers, you can get new market insights and access to their customer base.

Network channels

Information technologies is platforms that is key to capitalize on knowledge and expertise of the foreign network agents. Gerschewski et al. (2015) found that information technology enhances social exchange and mutual orientation processes, which is an important part of building your network. By utilizing social media and other online communication channels you can position yourself as an innovative and accountable counterpart and build trust as a reliable and talented organization.

2.3.3 Internal learning capabilities

Internal education lead to the rise and distribution of both non-technological and technological information and skills generated from the inside (Weerawardena et al., 2015). By supporting and encourage initiatives by employees, you increase the company capabilities by creating an initiative to learn new technologies to get a highly competitive workforce. Additionally, it extends to include the process of realigning existing routines and the ability to combine the

internal knowledge and abilities to apply to internationalization initiatives (Weerawardena et al., 2007). Realignment and focus on new technologies are necessary as new platforms, new devices and new consumer demands shift relatively rapidly. For example, at the introduction of smartphones, many new software development platforms emerged, while other diminished. However, the software developer did not need to learn how to code again, he just needed to use a new tool to continue to do the same thing.

Acquiring talent and developing internal skills

The initial step of capturing inside knowledge is through attracting, recruiting, motivating, and keeping competent and committed employees. Any company would like to attract the best talent. According to Ulrich and Smallwood (2004), experienced employees possess skills for current and future needs of the company, while dedicated employees use their skills predictably and regularly. The internal skills are strengthened when entrepreneurs hire new talent, develop or build existing ability, borrow or access knowledge from partnerships and alliances, eliminate poor performers, and manage to create a performance-oriented group (Ulrich & Smallwood, 2004). The strategic edge of a company depends on the collective skills of the employees in terms of efficiency, innovation, collaboration, and leadership and speed (change, responsiveness, agility, and flexibility) (Ulrich, 2015).

Organization learning processes

Organizational competencies include the members experiences, skills, and knowledge. In addition, the company's knowledge extends to the routines and processes which come together with the strategic competence into a base a for a well performing company (Barney & Hesterly, 2010). Crossan et al. (2011) noted that organizational learning is led by four fundamental processes, which is intuiting, interpreting, integrating and institutionalizing. The two first factors are personal perceptions, while the last two is at the organizational level. For the organizational level, integrating aims at taking a different approach than in the past for a certain problem, while institutionalizing aims at embedding it the practices of the company (Crossan et al., 2011). This means your experience as an organization from solving a problem give the organization experience to mitigate similar problems in the future. An example if a technical issue is solved by someone, this problem is mitigated by adding the solution to their common knowledge base. If this problem arise again, the information to solve is already available. Weerawardena et al. (2007) commented that with in-house learning by utilizing technology makes the organization better in familiarizing with and expanding in the new

markets. This is customer relation systems, project management systems that is available for all online, independent of physical location.

Innovation

Business innovation needs to be managed in a broader perspective as it is related to all aspects of the company, from product and services, research and development, human resources, network, sales and marketing. The employees need to be united and well communicated in all aspects of the company as "islands" could cause frustration and resistance and would be increasingly noticeable the smaller the organization (Matysiak et al., 2017). To mitigate this, Matysiak et al. (2017) suggest that by facilitating understanding across groups of employees you promote invention. Additionally, Ulrich and Smallwood (2004) pointed out that substantial investment in personnel practices such as staffing, communication, training, development, and motivation is critical in promoting organizational capabilities. Weerawardena et al. (2007) argued that a company needs internal abilities to identify business opportunities and integrate them with the current knowledge and successfully take advantage of them to make it possible to create a permanent positive change of the organization.

To capture and develop encouragement show that your innovative capabilities evolve when groups or individuals are included in wider activities than their core competence. Creating an innovative culture with appropriate complementary knowledge enhances the improvement of products and services and development of new approaches for carrying out business (Knight & Cavusgil, 2004). Creativity enhances continuous change of informal information into the company operations, that create additional value for their customers. Innovativeness of the Born Global occurs when they actively support and participate in creating new ideas, inventive processes, new experiments and techniques, and technological processes (Dibrell et al., 2015). New strategies, customer service, brand identity, administrative processes, and business initiatives should focus on the future performance (Ulrich & Smallwood, 2004). In Born Globals, the process of innovative initiatives is preferably done by minimal bureaucracy and result in increased flexibility and agility (Efrat & Shoham, 2012). With this approach, it can lead to a sharing of specialist competencies and expertise from various individuals and sources for the greater good of the organization as information sharing and ideas don't have to be formalized to be shared. Born Globals are often set up to take advantage of turbulent technological changes and trends to redefine their products and services and create or enter niche markets which do not require substantial tangible resources (Efrat & Shoham, 2012). In

addition, utilizing new technological and organizational strategies creates an advantage, as your product cannot be imitated easily, and competitors can't keep up with your advances. Born Globals achieve this through investing significantly in research and development capabilities that form the basis of designing technological and innovative processes and rare or high-quality products (Weerawardena et al., 2015).

Organizational change

As an organization develops, you would naturally change, make new and remove some routines. Some routines will be informal and other formal will not be used. The organizational change process involves a systematic approach to modify the existing operational routines (Knight & Cavusgil, 2004). The company would evolve as a dynamic entity. The sense, seize and transformational habits are included in the organization and shape how it reacts and behaves when faced with external or internal influence (Matysiak et al., 2017). The internal customs enable a common approach and internal understanding when offering new products and services to various markets and geographically different regions. With taking advantage of these three habits the opportunity and ability of the company to capture, include, and exploit knowledge from the outside surroundings are essential.

2.3.4 Dynamic learning capabilities

The dynamic capabilities view argue that the company need to develop new capabilities and act on them (Weerawardena et al., 2007). Weerawardena et al. (2015) argued that the speed and extent a company readjusts or aligns its specific resources to seize opportunities and perform well in the market depends on their dynamic capabilities. According to Matysiak et al. (2017), dynamic capabilities of a company are built-in in routines and processes such as the development of new products, strategic investments/divestment of assets, and marketing. Matysiak et al. (2017) proposed three critical sources of dynamically adapt your competitive advantages of global companies: firm-specific advantages not bound to a precise location, firm-specific advantages tied to the specific marketplace, and country-specific advantages. Transformed to Born Global, they can expand due to their combined company advantages to co-exist with resources from the targeted country (Matysiak et al., 2017). The work of the company is to recombine and adapt their skills and assets across the networks to establish new advantage in the target markets. For example, McDonalds adapt their menu offering dependent of the acquired taste of the target country, while they keep their base business model and configuration intact. In a high-tech software offering context this can translate to

offering software in the local language and promote local influencers and support their distribution of their services. The dynamic capabilities is linked to the competitive position and global vision of the managers and enables the organization to exploit international opportunities and utilize their resources, while the resource based view is linked to the take advantage of the resources it currently possess (Covin & Miller, 2014).

According to Matysiak et al. (2017), dynamic capabilities is based on technical and evolutionary fitness. Technical fitness is considered when competency give you the expected outcomes, while evolutionary fitness is held when the company becomes successful in the market. Both these capabilities are part of the company routines, processes, and cognitive and psychological self-perception.

2.4 Leadership

Throughout the Born Global literature, the importance of the leadership is thoroughly highlighted and empirical results points to the leader in these companies as pivotal (Cavusgil & Knight, 2015; Dibrell et al., 2015; Dow et al., 2017; Efrat & Shoham, 2012; Freeman et al., 2010; Kaleka & Morgan, 2017; Matysiak et al., 2017; McDougall & Oviatt, 1996; Rennie, 1993; Weerawardena et al., 2007). The leadership, addressed as manager, founder or leader is in the forefront in all aspects of Born Globals. This is the driving force with, often bringing on their business idea together with technical knowledge and an existing network. The international vision of leaders is connected to a proactive culture which supports exploitation of new business opportunities overseas; committing resources and gather skills and knowledge to reach these goals (Weerawardena et al., 2015). The prior experience of the entrepreneurs in international operations enables positioning of the products in the niche markets, match with the current needs of the economy, communicates the company's offering and its credibility, and establishes appropriate pricing and distribution channels of the goods in overseas markets (Efrat & Shoham, 2012). Weerawardena et al. (2015) argued that visionary leadership is crucial in dealing with complex and risky global situations. This visionary leadership style pushes a shared mentality that encourages continuous learning and promote innovative approaches to reach performance objectives, as well as it promotes collaboration between individuals. At the same time, managers need to demonstrate managerial intentionality which is the ability of leaders to make choices that lead to significant organizational transformation (Dow et al., 2017). For a Born Global, the manager often needs to lead the different functions the employees hold, even if collaboration and cross

department activities is encouraged. The concern is also related to managerial discretion, executive leadership, capacity for action, and managerial oversight and shows the responsiveness of the entrepreneurs when handled faced with a challenging situation (Dow et al., 2017). Thus, a manager for a Born Global should have a high degree of managerial discretion and oversight to be able to oversee and direct a seemingly chaotic, fast-paced and open work environment. The work of the managers is often to identify competent network agents in the target market which hold an existing network within distribution, sales, and preferable hold a customer base. The learning capabilities of a company also include the development of managerial skills and experience of the international markets and drive the conversion of company practices into knowledge (Heiss, 2017). By facilitating and incorporate learning of newly added competencies and procedures, the whole organization, including the manager, could increase their capability to convert business practices to knowledge.

2.5 Capabilities audit

Knowing your competitive advantage is crucial in being better than your competition; to know what are best at, and what you're not that good at. A capability audit can help you get an understanding of where you're at and what to prioritize going forward. A capabilities audit measures the strengths and weaknesses of an organization. It is through these capacities that the organization get to reflect on the staff's collective expertise while also defining whatever the company is doing best (Barney & Hesterly, 2010). It identifies some of the capabilities that the company considers essential in realizing their strategies, recognizing the existing gaps versus the desired and actual performance, and suggest areas for improvements. Therefore, a company may be capable of focusing its resources on building the crucial capabilities that are vital to the success of the business. Through excelling in these kinds of capabilities, the organization is capable of achieving and sustaining superior performance (Barney & Hesterly, 2010).

Competitive advantage

According to Ulrich (2015), the competitive advantage of a company depends on three dimensions; management action, competency, and culture. In his definition of capabilities, Ulrich (2015) emphasized on the ability to serve or respond to customers need, manage change, drive efficiency, access information, establish internal and external collaboration, and develop the right culture in a way that is not easily imitable by competitors. Management

actions include intellectual, behavioral, and process (Ulrich, 2015; Ulrich & Smallwood, 2004). With the intellectual agendas, leaders can create a shared philosophy in the company and ensure that the vision and mission are shared across all employees. Behavioral programs ensure that employees demonstrate consistent norms, while process schedules use the management practices to institutionalize culture (Ulrich, 2015). The idea is that innovation is achieved when there is a common understanding of the company strategy by expressing and issuing strategic ideas at behavioral, intellectual, and procedural levels.

The Resource-Based View

The Resource-Based View is a model that views your internal resources as vital in a company's competitive advantage. The uniqueness of your resources and capabilities is your competitive advantage (Hitt, Ireland, & Hoskisson, 2009). The Resource-Based View center around that organizations need to look within the business to obtain these vital resources of competitive advantage rather than seeking it from the external environment (Barney & Clark, 2007). These resources may be tangible or intangible. The tangible resources can be machinery, equipment, capital, buildings people and patents. These things are easily obtainable in the market and therefore offer only a short-term competitive advantage since rivals may acquire them (Barney & Clark, 2007). The intangible resources such as intellectual property, trademarks, and reputation and the combined skills of the organization. Unlike the tangible ones, the organization cannot easily obtain these elements from the open market, and thus the key sources of competitive advantage. The two important assumptions if the Resource-Based View are that the resources must be heterogeneous and immobile. First, the resources must be heterogeneous in that there must be a different mix of resources. If the resources remain like those of the immediate rivals, the company will find it difficult to use various strategies in competing. Additionally, the resources need to be immobile in the way that these resources only exist within the organization. Because it is immobile, it becomes difficult for rivals to duplicate the resources that the organization possesses.

Capabilities audit model

Ulrich and Smallwood (2004) developed a five-step audit model for doing a capability audit based on the Resource-Based View. In the initial stage, deciding which business unit or department that is subject to audit. In the second step, the company should identify capabilities critical to meeting the set objectives. This phase includes 11 organizational elements: *learning, talent, speed, leadership, customer connectivity, collaboration, shared-*

mind set, innovation, accountability, efficiency and strategic unity (Ulrich & Smallwood, 2004). In the third phase, the company should be object to survey targeting various points, the organization focusses on obtaining substantial information relating to the performance from multiple sources; management, employees and key sources outside the company. The data collected is used in the fourth stage to recognize two or three competencies that are critical to executing the strategic objectives. In this case, the company should focus on capabilities that need to be strengthened (Ulrich, 2015). At last, the managers should formulate an action plan showing how the identified competencies can be enhanced (Ulrich & Smallwood, 2004). These steps show how Born Globals can effectively manage both external and internal knowledge to optimize current and future performance in the overseas markets (Ulrich, 2015).

When assessing the intangible capabilities of a company, 11 organizational capabilities can be surveyed to determine the state or your company (Ulrich & Smallwood, 2004):

1. **Talent** determines the extent to which the staff are competent and committed they have in ensuring they deliver the strategies set. Achieving competence is possible when the leaders acquire and develop talents alliancing with other company, removing bad performers and retaining the best (Ulrich & Smallwood, 2004). Commitment, on the other hand, is achievable through rewarding good performances.

2. **Speed** examines the quick response to make important things occur rapidly. Speed may be vital in exploiting new markets, establishing new contacts, and implementing new procedures.

3. **Shared mindset and coherent brand identity** determines the extent of the company culture and that a positive perception of the company is shared with employees and customers.

4. **Accountability** is a capability aiming to understand the extent that high-performance matter in execution from the employees.

5. **Collaboration** determines the extent that a partnership is necessary for gaining advantage and efficiency.

6. **Learning** is a capability seeking to establish how good the company is at innovating ideas with impact. The generation of ideas may be through benchmarking, continuous improvements, experimentation and competence acquisition.

7. **Leadership** capability tests how far the company has a leadership brand directing the managers on what to deliver. When a company effectively produces leaders, it establishes a leadership brand where leaders know what to do, what to know and are. In small Born Globals this often is one person.

8. **Customer connectivity** examines the degree in which the company forms a relationship that is enduring and trustworthy with the customer.

9. **Strategic unity** determines how the staff shares procedural, behavioral and intellectual agenda in understanding the company strategy and mission. All employees need to understand the strategy and its significance clearly, and this is achievable by sharing and repeating the mission statement.

10. **Innovation** determines the levels of marketing channels, strategies, products, production methods, administration, and services. The examination of the innovation element focuses on the future potential instead of the past accomplishments.

11. Efficiency. It determines the manner that the organization is reducing its costs through close management of its procedures, projects, and people (Ulrich & Smallwood, 2004). In the context of a software company this relate to time spent on development tasks, as man hour directly relate to cost.

3 Method

The methodical choice of research approach, the design and its context are elaborated in this chapter. Further the process of preparing and performing data collection, and how to conduct analysis of the collected data is described. Finally, an evaluation of the quality and ethical implications is discussed.

3.1 Research approach

This is a longitudinal single case-study of how a Born Global develop their capabilities in their internationalization efforts from a resource-based view perspective. The goal for the research was to reveal how a small company from Norway utilize their resources to develop their capabilities to internationalize entering the commercialization stage. How they did this was not known before the study.

3.1.1 Philosophy

I have pursued a subjectivist oriented epistemological viewpoint, called the interpretive paradigm in this thesis with orienting the research towards trying to understand the underlying views and reasoning of the answers the interview objects gave.

The research philosophy considerations you adopt contains important assumptions on the way you view the world (Saunders, Lewis, & Thornhill, 2009). The philosophical views considered in this thesis is based on one of the three overall philosophical issues: Ontological, Epistemological and Axiological (Saunders et al., 2009). The ontology issue concern the nature of social entities, whether they should be considered objective entities that have a reality external to the actors, or to be considered as social construction built on the perception and actions of the actors (Bryman & Bell, 2015). Epistemology issue concern the question of what is regarded as acceptable knowledge in a field of study, whether the social world could be studied based on the same principles as natural sciences. The researchers' view is to critically interpret and understand the knowledge acquired based on own views, interpretation, experience and interaction with the research object (Bryman & Bell, 2015; Saunders et al., 2009). The axiological issue concern argues that our values are the guiding reason of all human action, and making judgements about what research and you are doing (Saunders et al., 2009).

3.1.2 Approach

There are two major approaches to research; deductive and inductive (Bryman & Bell, 2015). In later years a third approach, abductive, has become more popular (Bryman & Bell, 2015). A deductive approach involves development of a theory, or hypotheses, that allow you to operationalize, test and reproduce, and finally generalize the theory in a highly structured methodology (Saunders et al., 2009). It assume that your theoretical position is developed prior to data collection (Saunders et al., 2009). An inductive approach is when the theory is developed after the data have been collected (Saunders et al., 2009). You seek to acquire new knowledge on subjects that there is little existing data. This require an hermeneutic perspective of the research being carried out, and dependent on the researches understanding and perception of the results (Bryman & Bell, 2015). An abductive approach is a combination of deductive and inductive approach (Bryman & Bell, 2015). The researchers continuous dialogue between the data and researchers preunderstanding give an interference to the rational reasoning of the theory or phenomenon found, and from this data select the "best" explanation and interpretation of the data (Bryman & Bell, 2015).

As my study was into a the relatively new topic with little integration of organizational learning and Born Globals in the existing literature, an abductive approach was used. I gathered field data with interviews and supplemented with observations of the employees, web articles and other publicly known information about the company. Later analyzing the collected data and reflecting upon the results about the Born Global theme and entrepreneurial literature. I had to adapt my theoretical position with added focus on the managers role and the dynamic capabilities around the transition stage from product development to commercialization, which was much more apparent than first expected.

3.1.3 Strategy and design

A crucial choice is if the research is to be of a quantitative or of a qualitative. A quantitative research design examine the numerical relationship between variables by using numerical and statistical techniques (Saunders et al., 2009). This is typically a survey over a number or responders from a survey sheet. A qualitative research choice is data collection generates non-numerical data (Saunders et al., 2009). Data collection methods such as interviews and focus groups enable you to go in depth in a narrow field and is not standardized. According to Bryman and Bell (2015), some of the advantages of doing an qualitative research is that you use more senses in data collection as you both observe as well as listening to the verbal

answers. It enables you to see trough "others' eyes". You can understand the native language by being able to comprehend the meanings behind the slang and abbreviations used in the research environment, and you are able observe the non-verbal behavior in their office environment (Bryman & Bell, 2015). Saunders et al. (2009) list three classifications of research methods; exploratory, descriptive and explanatory. An exploratory study is flexible and aim to seek new insight and reveal a new understanding of a subject. An exploratory study is useful if your understanding of the problem is unclear or if you are not sure of the problem (Saunders et al., 2009). There are three main ways to carry out an exploratory research; literature search, interview of experts and focus group interviews. A descriptive study is "to portray an accurate profile of persons, events or situations" (Robson, as cited in Saunders et al. (2009, p. 140). An explanatory study is when you study a relationship between variables and test correlation between then, as you seek to get your data explained.

This study was carried out in as a qualitative exploratory study as I was doing interviews and supplemented with observations over time. I used Born Global and entrepreneurship literature to examine and explain the collected data, as the company I studied is categorized as a Born Global.

Further, the research strategy can be divided into several types of studies, such as via an experiment, a survey, a case study, action research, via a grounded theory, with an ethnographical viewpoint and by archive searches (Saunders et al., 2009). For this study I used a case study strategy as its characteristics imply that the boundaries between what you study and what theories that applies is not clear. It is widely used as design for business research (Bryman & Bell, 2015). A case study focus on an entity with a set purpose and defined goal, and is an intensive study of the details within this entity (Bryman & Bell, 2015). As a case-study can give you answers to "why?", "what?" and "how?" and is often used in conjunction to triangulation to help you to tell if the data you collect are telling what you think they are telling (Saunders et al., 2009). For case studies these have four study strategies based on two distinctive dimensions; single case versus multiple case, and holistic case versus embedded case dimension (Yin, as cited in Saunders et al., 2009). For the first dimension, a single case gives you the chance to go deep into a problem that not many have considered before, while a multiple case study give you the advantage that you can verify or reject findings on the other cases and by that easier be able to generalize the findings (Yin, as cited in Saunders et al., 2009). The second dimension, holistic versus embedded differs between a holistic view of an organization, where you look at one organization as one unit (Yin, as cited

in Saunders et al., 2009). An embedded is when you look at different parts of the organization, sub-units or departments (Yin, as cited in Saunders et al., 2009).

In this study, I have used a single case study with a holistic view, as I tried to understand the dynamics of the whole organization both from their internal viewpoint and by observations from an external viewpoint. I supplemented the external view with available information that was collected outside the organization, such as internet news articles, public financial data and reading blog entries on their online community pages.

Longitudinal Single case study

This research was carried out as a longitudinal single case study, where I collected data from the same organization over time. The same set of variables was used over the period. This study data collection method gave me the opportunity to find the underlying reasons and motivations of why and how the research object focused on their capabilities as they did.

Yin (2014) suggest that the case study is preferred when you study contemporary events. A strength of the case study is that it adds two sources of evidence that can't be manipulated; direct observation and interviews of the persons in the events (Yin, 2014). Data can be collected as cross-sectional i.e. a "snapshot" at a given point in time, or longitudinal, which is a collection over a period of time (Saunders et al., 2009). Longitudinal studies are beneficial when you want to study change and development in the given organization that is subject for your study. Born Globals are subject to rapid change, and from that viewpoint I expected identifiable changes within the period these interviews were taken. In the event of a case study it is important to establish the number or cases to be used. Yin, as cited in Saunders et al. (2009) argument the importance to make the choice between a single case or a multiple case. A multiple case can give you the opportunity to increase the validation of your case, while a single case gives you the opportunity to go deeper and find insights and knowledge not known previously.

Triangulation

Triangulation is a technique to help verify that your data is telling you what you think they are telling you (Saunders et al., 2009). Patton, as cited in Yin (2014) argue for four types of triangulation; of your data sources, from different evaluators, of different perspectives from the same data, and using different methods. To establish convergence between my multiple sources, I have used triangulation of my data sources to strengthen the construct of the study.

This was aimed at the same target, while supporting the findings by using more than one source of evidence.

As a single case study over time with semi-structured interviews with the same person, the validity and reliability of the answers needed to be balanced with a broader holistic approach to find consistency between first hand collected interview data and observations and internet sources.

My primary source of data was from interviews, second from observations and informal discussion with the group of employees, and third from found internet sources regarding the company researched. I have had lunch with the employees a handful of times. Additionally, I used internet news articles, their social media, their community pages, company homepage and public financial data to balance the answers given in the interviews and observations. My impressions of the primary data, the interview answers, were supplemented with the insight in the dynamism and motivation in the group of employees. These lunch discussions also give reasonable insight in their values and motivations in their work and gave me the opportunity to address extra follow-up questions for the next interview and provided me with a notion of the mood in the group. The internet articles from third party sources were used as moderator of the general situation of the company and validated the statements of the general section about the company, its purpose and financial state. The internet articles published from the company itself was used as a progress monitor to compare the progress that was portraited in the interviews.

3.2 Data collection

The data collection was anchored around the method of capabilities audit from a Resource-Based-View suggested by Ulrich and Smallwood (2004). By conducting three separate interviews, I expected to be able to see if there was any noticeable change within this short period. This data was also triangulated towards the two other data sources.

3.2.1 Interview

As my primary source of data for this case study, I used the semi-structured interviews. Saunders et al. (2009) find semi-structured interviews particularly useful when conducting single case studies. This on the basis that you have an open dialogue, while you have a series

of questions related to the predefined themes, where you can get in depth with follow-up questions on especially interesting subjects.

First, I developed an interview guide based on the capabilities audit model, with the Capabilities Audit proposed capabilities. In order to keep a natural flow in the interview, I would have to rephrase the words, still with the aim to fill in the results after transcription of each interview. Supplemented with general question regarding the company for the first interview, and for the subsequent interviews I left this part out. As the three interviews was carried out with about one-month intervals, I would get to know my interview subject more, and caution had to be taken regarding this with rephrasing and reorder the same questions from interview to interview. My interview subject was the general manager and a majority owner in the company.

3.2.1.1 Interview guide

The interview guide was set up after completing the theory part on how to conduct a capabilities audit, see Appendix 1. A series of questions related to how the company perceive themselves in relation to their capabilities in market learning, network learning and internal learning. There were three objectives with the interviews. First, a series of questions to establish their own perception of being a Born Global and at what stage in their life cycle they were at. Secondly the capabilities audit, with the variables learning, talent, speed, leadership, customer connectivity, collaboration, shared-mind set, innovation, accountability, efficiency and strategic unity and quality. Third, for investigating dynamism, I could at the point of data analysis compare if the same answers changed over time.

In formulating the questions there are several considerations to be taken. Saunders et al. (2009) stresses that irrelevant questions not related to your research questions should be omitted. However, some questions may seem ambiguous, as they can part of an essential follow-up question. For example, “How many employees do you have?”. This question may be seemed as a closed question, but the natural follow-up is on what kind of function do the different employees have, location, nationality or age. Other considerations I had was to keep the question relatively short, avoid too general questions and avoid being leading, as suggested by Saunders et al. (2009).

From my draft, I tested the questions related to capabilities on a friend who is working in the entrepreneur business. From this test, some of the questions was combined into one, and

others omitted. For example, I removed some questions surrounding the employee's perception of the manager and added a section on the perception of quality. I was curious on how Data Plc. reflected on what they believed quality meant internally and from externally, as it could tell me something about their desired reputation. I also added a general section around the company which was not part of the capabilities audit itself.

As for discretion and being allowed to record the interviews for later reference in completing this paper, I obtained a legal consent from the government and the interview object prior to the interviews.

3.2.1.2 Conducting Interviews

Many considerations need to be taken when conducting the interviews. Bryman and Bell (2015) suggest that you pay attention to location, time schedule, introduction, your presence, tempo, how do you record answers during the interview, questions order, probing and prompting.

Location for the interviews was set to a silent meeting room in their office complex. It was important that I could let the interview object talk freely and not having the employees listening in. Time keeping is of essence as in any business meeting or appointment, you are the guest and must be appreciative and respectful that your interview object has found time for your research. Being on time, prepared and representative make a good first impression makes it easier moving forward. Anther issues is how to record answers during the interviews. I used a laptop, with my interview guide open in an Excel sheet, so I could record short notes with as little interruptions as possible. As I was flexible on the order of the questions, the interview guide made me cover all the topics. Another consideration that could be hard to comply with is to avoid probing and prompting. To "put words in the mouth" to guide the interview object and correcting the answer with anchoring it to your desired answer will discredit the interview. A particularly effective method is silence. I found that deliberately using closed questions and letting the "Yes" or "No" answer without any response from me as the interviewer would open a series of arguments on why or how the questions was either a "Yes" or a "No".

Each of the three interviews lasted about one hour each time and was recorded for later transcription.

3.2.1.3 Transcription

After each interview I transcribed the interviews word by word exactly as the words were spoken. Heritage, as cited in Bryman and Bell (2015) find that the several advantages to record and transcribe the interviews: Recording of my memories and visualization of any probing and prompting can be highlighted and the interviewers influence over the interview object; It allows me to go through was said which can be contradictory towards to my understanding and my notes; I am able to revisit the same answer in all three interviews. It opens for validation and credibility for my findings.

The major disadvantage of doing a transcription is that is time consuming, but I found the time invested to be very useful as the recordings are the most accurate data.

As my research object want to be anonymous, my transcripts all company names, exact locations and personal names have been omitted. The recordings were deleted after before submitting this paper, as per contract with the Norwegian Center of Research Data.

3.2.2 Observation

The second data collection method was by observations. I have conducted two different types of observations. First, of the interview object in the interviews. Secondly, of the employees while working, at lunchbreaks and in social settings. The observations are a supplement to the interviews and could tell you something about the formality, cultural norms and how their values were expressed in the workplace.

As my field observation, as per philosophy, is from the subjectivist oriented epistemological viewpoint with interacting and attending workplace lunches prior to my interviews. I also attended one social gathering on a Friday afternoon. Bryman and Bell (2015) suggest that conducting the research at the location where my key informant work is beneficiary as I then have access to the organization and already had a formed relationship with the research object. One concern I had was if I was going to the overt or covert as a researcher when attending at the table with the employees for lunch. An overt approach is when you reveal your presence and purpose, while a covert approach is when you don't tell why you are there (Bryman & Bell, 2015). My approach was more semi-overt as I introduced myself as doing a paper on their company. I did not reveal what I studied about the company. I did not have any symbols or artifacts that could interfere with the informal lunch discussions. My observations from

when the team was working was not comprehensive, but I could sense the culture by looking at how the desks were arranged and the general feel of the workplace.

As for my observations of the interview object during the interviews, they served to enhance the answer, where you can detect the enthusiasm while answering.

3.2.3 Publicly available information

As a third source of information I used internet. Public business records, news articles, company website, their technology forums and social media where the company was mentioned. The public information served as a pre-study, mediator and a triangulation towards the responses in the interviews and from my observations. Due to the discretion contract these references are not listed.

Using internet as a source for information must be done with great caution. The first is that the amount of information may be overwhelming, the second is validation of the information found, while a third argument is that any postings on forums and social media cannot be used as any credible reference (Yin, 2014). All but official records have been used moderately and more of a reference for the public opinion of the work and profile of the company. Internet information helped me develop additional questions for the interview guide, such as questions on what your customers and contributors perceive as your key qualities.

From the public business records, I found that the company results were getting worse for the last years. This was one item that I brought up in the interview, where I had to ask if it was deliberate or if there was any strategic decision that could answer that.

3.2.4 Decoding of data

After collecting data from the sources, I needed to organize the data to obtain the chain of argumentation on how Born Globals develop their capabilities.

The decoding follows a pattern matching logic process from the initial theoretical proposition of capabilities development of Born Globals. According to Yin (2014), the pattern matching logically compare the empirical collected data with a predicted pattern as corroborating.

The capabilities the company currently hold and striving to develop is my dependent variables towards the three areas of market, network and internally. The independent variables are the stage the company is at, and if there is dynamism exercised throughout the period of data

collection. A moderator for the pattern is the research object match with the Born Global definition, where validity for the research subject is emphasized.

From the research question **"*How do a Born Global develop their capabilities in market learning, network learning and internal learning when entering the commercialization stage?*"**, follows a series of decoding steps needed to establish a dataset for the analysis.

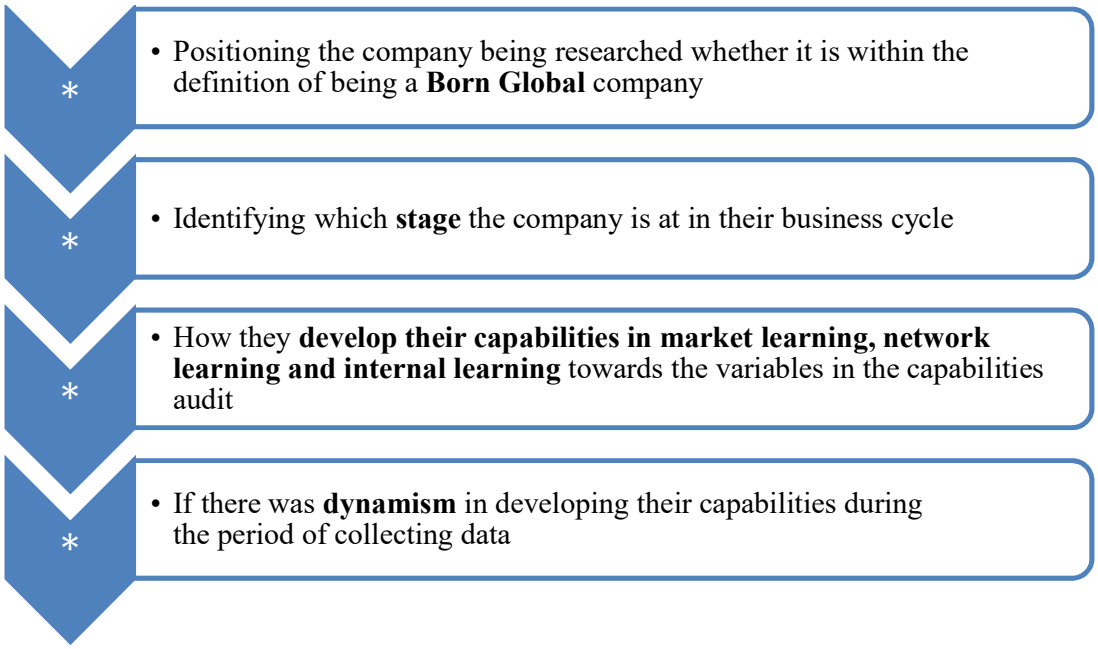

Figure 4 Sequence of decoding

The decoding process start with establishing if the company hold the distinguishable identifiers for being a Born Global. From the collected data I follow a logic of pattern recognition to place the company.

To determine where in the lifecycle the company is by it can be discussed if the company's own perception versus the theoretical stage theory match. This is to find if the expected challenges and the capabilities needed at the point prior to product launch is with what the company experience today.

The progress the company is doing with market learning, network learning and internal learning in developing their capabilities is further categorized from decoding the interviews and supplemented with the observations and complemented with internet sources. This was

then operationalized in the 11 categories, or variables, as suggested by Ulrich and Smallwood (2004), my added quality perception questions as variable number 12. As the data collection was done over time in a series of interviews, I would have a pattern to verify is their focus and commitment was consistent and reveal if I could detect any dynamism in the capabilities in the company.

3.3 Credibility

According to Bryman and Bell (2015), qualitative research is subjective, and findings cannot be generalized as there is lack of transparency in the research process. Further, Bryman and Bell (2015) argue that a single case study should focus on the unique case and the complexity and a thorough understanding of it, rather than attempting to generalize based on one single case. On the contrary, Yin (2014) claims that a single case can be generalized assuming that you follow an analytic approach with determining the construct validity, the internal and external validity followed by the process of obtaining reliability of the data collection and reporting. By following this analytical approach, you can mitigate the issues with lack of support for the generalization and transparency of qualitative research. To reduce the margin for error and bias, I have spent a lot of time to structure the study from what theory to focus on and finding an appropriate methodological approach to collect and decode and present the relevant data and omit the irrelevant. As I had no expectations on finding any revolutionary or strong deviation from earlier empirical results, I find one credibility factor to be that I have no interest or ambition to bias any finding in any desired direction.

3.4 Validity

Validity concerns about if the findings are about what they appear to be about (Saunders et al., 2009). In obtaining a valid study, there are several threats that need to be addressed. According to Robson, as cited in Saunders et al. (2009), threats to validity are history, testing, instrumentation, mortality, maturation and ambiguity. For history, the timing of the study has an impact. For example, if the study was undertaken at an especially critical period that could drastically change the respondent's response. Method of testing and instrumentation, that is how the interviews and observations are conducted. If at any stage the respondent feels uncomfortable or offended by the method, it would impact the collection of data. Mortality refer to if the case is no longer representable for the respondent, and thus would cause the case to be invalid. Ambiguity, which concerns the chicken and the egg problem. For example, if a company is in financial distress it can affect the employees negatively, or the distress can be a

result of negativity from the employees. In this case, false assumptions and wrongful interpretation may result in the wrong conclusions.

In order to mitigate the validity concern, actions need to be taken all through the process of preparing, collecting and analyzing data.

Construct validity

"Construct validity: identifying correct operational measures for the concepts being studied" (Yin, 2014, p. 46). In order to reduce the risk of a biased selection of the data to collect and construct a subjective judgement of it, a special attention is needed to the construct validity. According to Yin (2014), to increase the construct validity there are three tactics you should follow.

First, at the stage of data collection to use of multiple sources of evidence to verify that the data has a bond of unity between them (Yin, 2014). By using three different sources, the dependent and the independent variables had clear lines of concurrence, as the behavior of the employees clearly matched the notion of answers from the interviews on unity and on internal learning for technical matters. Further, from the third source, the forum post from the different members showed a clear direction and unity in how the company interacts with users.
The second method of increasing the construct validity by using a chain of evidence for the data collection (Yin, 2014). By following a series data needed which then was used for the sequence of decoding (Figure 4 Sequence of decoding). I got a clear chain of evidence which could be discussed. Lastly, having the study being reviewed by the key informant (Yin, 2014). The paper has been read and commented by my interview object, as there was concern that anonymity as per agreement was fulfilled. There was also an interest from the company to see if their own impression was in line with my findings and the discussion around the findings.

A shortcoming of the construct validity may be that observations have limited confirmability as I am not an expert in human behavior and trained to draw conclusions when doing an observation. For the third source, a shortcoming is that I am not aware of the nature of the relationship between the employees and the users having discussions on online forums.

Internal validity

Internal validity concerns around if you are measuring what you intend to measure (Saunders et al., 2009). Further from the construct validity, the internal validity attention focus on the

process of the collection and review on the collected data. By allowing the interview object to reflect on beforehand, you can increase the validity of your study (Saunders et al., 2009). In a meeting prior to the first interview, I explained the study and the theme capabilities where I was looking to concentrate on traits within marketing, networking and internally. I also ran a couple of questions as an example. This approach is then one of the mitigation items to ensure that the interview object was prepared for the coming first interview.

During the interview it is important that the question is understood by the respondent the same way as intendent for the researcher (Saunders et al., 2009). Validity during the interviews was achieved by adding follow-up questions when I felt the answer answered something else than the question was intendent for. If the answer was long and involving many different items, I added a confirmation question, often closed, to ensure we had the same understanding. To some extent some questions were very open, such as "Are you innovative?" … how?". Even though it is very broad it gives the respondent opportunity to give a reflective answer. An advantage with broad questions is that you can gather information that is supplemental for other questions. A long answer like you could get from the above was then decoded and sorted onto each of the categories. Another way to ensure internal validity was that this was a longitudinal study, and the same questions was asked for each interview. I experienced that the most questions were answered the same way during the three interviews, which confirmed that the understanding of the question from the respondent was consistent.

A weakness found was that by adding a confirmation question to the answers that were broad and open you also introduce an interference factor by "guiding" the respondent to the direction desired. I adjusted this from the second interview to be less intrusive, where I used silence as the tool to let the respondent speak more freely and would eventually get to what the question was about without interference.

External validity

External validity is often referred to as generalizability (Saunders et al., 2009). The question is if the research is transferable to other organizations and if the findings would be similar. A concern is the analytic generalization as the nature of a single case study only have one set of questions to one respondent at one point in time and you will not that any reliable statistical data. As an analytic generalization is difficult, the initial research question and the design of the questions from appropriate theory or theoretical propositions in one way to address the external validity issue (Yin, 2014). From using a capabilities audit from an established

framework (Ulrich & Smallwood, 2004), I have used an established audit theory to assess to one type of company. The method could be used for similar companies, knowing that no single case studies would fully be generalized as each single case would have its uniqueness. For capabilities itself, the method should be transferable, however the analysis of what the result means would be somewhat dependent on the actual case. As my case revolve a certain time at a life cycle in a Born Global, there would be many other companies in the same situation.

One concern is that there is not any single method of interpreting the collected data, and my interpretation is dependent on the anchored theories used.

Another concern for external validity is the validity of the triangulation. As my third source is internet sources, the anonymity contract calls for these not being listed and referenced. This means that any reference to these sources are only based on my perception and any unintended bias from my side cannot be credited or discredited.

3.5 Reliability

Reliability concerns if a researches carry out the same research and follow the same procedures, the researcher would find the same findings and conclusions (Yin, 2014).

From the concerns mentioned in the construct validity, internal validity and the external validity, there is an overall concern that those shortcomings may have contributed to answers and conclusions that may not be fully replicable. However, having known the issues of doing single case studies and the common sources of contamination of the results on beforehand have helped increase the reliability.

3.6 Ethical considerations

I have spent hours reflecting on the ethical considerations for myself as the writer and my research object. I have considered issues of conflicting interests that could be ethically problematic, such as my role as a student writing a thesis and my role as an angel investor in start-ups. I have access to the history of the company through my network. I have been fully open to my research object that I have this common connection to them, as I had a concern that this was going to be a problem in the research.

For the research, the confidentiality and anonymity contract were enforced after a concern that any paper with an insight behind the scenes would cause problems for them. To be able to

proceed, a full confidentiality contract with the Norwegian Centre for Research Data was made, with a promise that all personalized information would be kept anonymous and safe.

For the research design, I was concerned that utilizing already developed methods to collect capabilities and reflect on them from there. I believe that this standardized method, expanded to a control section and further looking for dynamism is quite extensive and can be ambitious to attempt to fully being able to reflect fully on each item. However, I assessed that if I omitted any of the parts, I would deliberately keep out important information with situational impact. For me it makes sense to know at what place and time the company is, and if there were any empirical patterns that the desired capabilities would be different of the company for example was mature.

I wrote this paper over a period of almost one year, and it had been put on the shelf for a few months in the middle, as I have full time work. I rewrote the decoding part as all the data collected seemed overwhelming and all equally important. However, with an extensive organizing and re-assessment of this data hopefully it is presented more clearly. At least it is much clearer for me as the researcher.

The discussion was completed a few months after the data was collected. There is no recent data on how the company is doing now half a year after collecting the data. This is deliberately left out. The only thing I can say is that the company is doing well today, six months down the road.

4 Results and analysis

In this chapter I present the data collected, and later in the chapter I analyze the findings towards the theory on Born Global and capabilities. I followed the steps of the sequence of decoding and each section is presented in separate subchapters. First related to positioning the research object towards the definition on being a Born Global at what stage the company is in. This is important in relation to the capabilities audit, as I found from the theory that which capabilities Born Globals possess and should aim to develop is related to the life-cycle stage of the company, ref. chapter 2.2. Further, the results on the capabilities audit is listed, and if there was any dynamism in the collected data during the period it is described in the answer sections.

Lastly, in the analysis section I expand the answers with analyzing the results towards theory and further validating the findings of the 12 capabilities assessed towards their efforts on how they develop these towards the three main categories market learning, network learning and internal learning capabilities.

4.1 Results

4.1.1 Born Global

In search of if the company being studied was a Born Global, in the first interview I had a general section where I was asking questions about the company. The results in this section is further supplemented with information from the later interviews. To position the company if is consistent with the traits of Born Globals, there are several identifiers, as summarized by Oviatt and McDougall (2005), and Data Plc.:

Internalization of some transactions

Most of Data Plc.'s customers are from overseas, and their product is used in all developed countries in the world. The company is most active towards Australia, USA, Canada, Denmark, England, Germany, Belgium, Switzerland and Finland. About 80% of the customers are foreign, mounting up about 50% of the revenue. The Norwegian customers usually buy more when they buy, so the revenue from local customers mount to about half.

Only need to own a small percentage of essential resources

For physical assets, they only own a few PC's and some office equipment. I observed only a small multifunction printer in their office and there are no bookshelves. For the essential

resources in form of their technology, they own it and partially control it. They only partially control it as most of it is available as open-source. When they publish new software, they still own the direction and what functions to be included.

Foreign location advantage

As internal communication tool they use software collaboration tools and social media. Their project follow-up tools are also fully online. English is their working language. They must be present in all time zones and have hired a consultant in Asia which is integrated in the same office communication tool and actively participating on the online support forums when it is night-time in Norway. They aim to have an office in every time zone, so the whole world is covered as they have no coverage of North America for the moment. They tried to mitigate the current location disadvantage of only have a permanent office location in Norway, but as found in the interviews this 24-hr online support was abandoned due to Norwegian labour laws. Now they have support available on call available in Norway on urgent matters, if the first-line support in Asia can't solve an issue. From the online support forums and social accounts, the representative in Asia is very active and fast to reply when it is night in Europe. They try not to be location dependent on purpose and did not target customer in Norway due to the complicated institutional buying process.

> *"Locally we don't do anything. In Norway, it has to go through a lengthy tender process right away, so it is of no use for us. We end up burning a lot for pennies we don't have.*

Unique resources

The product has the same vision as the company. It is a software platform they invented to make anyone capable to make, share and re-use interactive content. The software is available on a webserver, and anyone using that server can use it. The content that each user makes, for example an interactive survey, is then available on all platforms and devices. The transition is that they are putting new versions of their software on their SaaS-platform that will be available for a fee, so that this software is controlled and maintained from their company.

Opportunistic orientation

Their opportunistic orientation is to fill the gap with their version of the open-source technology that could replace Adobe Flash and work on all platforms and devices.

Network oriented

The network that the founder and manager brought to the company is the network they have expanded on. The network has primarily been from academia as users and programmers and the open-source contributors. Later as the userbase for the technology have been growing, they have often contacted them through the open source solution. The first contact is often a request from users for new functions or want to use the tools in a new way.

Innovative

As the technology is developed by the company, they are expanding on the opportunity of offering a new technology with the diminish of Adobe Flash. For their marketing effort and network expansion there is no clear innovative findings.

Target niche market

Their target technology is broad, with the vision that all interactive content on internet is in the future going to use technology developed by the company. The target customers today are LMS systems for academia. Today, they especially target users at the prestigious institutions to be converted to paying customers, as many of the open-source software user today are affiliated to these. The prospect is as these institutions convert, other institutions will follow.

Driven by change agents

Roadmaps and the vision of where they are going was clearly stated and communicated by the manager. I found a drive among the employees that they believed it's a need in the market for their product, and that the technology is the preferred solutions for an interactive web experience. The manager encourage change for the sake of change. According to the manager they change how they do stuff constantly, and not afraid to try new things. At the time for collecting data for the thesis they were having an overhaul of the development process.

Dynamic

As from above, their dynamism is in embraced by the manager and it is a strategy to build a change prone organization. I found that couple of the programmers have been converted to do sales support tasks for short term and awaiting if they find it necessary to employ full time sales promoters. The team was also split into two for short-term, as one team was supporting the launch, while the others kept maintaining their current open-source offering.

4.1.2 Time

The time period of collecting data was in the spring of 2018. The company was almost four years old, and they were ready for launch of their first commercial product after being developing their open-source software since the start. The interviews were taken one month before launch, around the time of launch and one month after launch. The current time period was said to be the most critical time for the company going forward.

> *"Everything is decided the next weeks. We've had a few sessions on it, to get all on what is happening now. Do the sales take off we go to heaven, if it doesn't in the worst case, we can go bankrupt."*

4.1.3 Capabilities audit results

The main part of the data collection was on their capabilities. With the feedback on type of company and at what time in their life-cycle they are in, the responses on the variables regarding capabilities in the questionnaire have their own section below. From the theoretical framework and my addition to the framework, I have 12 capabilities (talent, speed, shared mind-set and coherent brand identity, accountability, collaboration, learning, leadership, customer connectivity, strategic unity, innovation, efficiency and quality). I summarize my data from the three interviews and add complementary comments on observations and from internet-based sources where I found them valuable for the study.

4.1.3.1 Talent

On if Data Plc. had the talent available to follow through with their strategy, I was told that in general they have a lack of people in all areas. Their people are committed, and they study on their own time and are eager to learn more. For operating and maintaining the server for their service platform they had hired external assistance from USA, from the world's largest online servicing platform provider. This company was now daily cooperating with the programmers in Data Plc. This outsourcing to let the programmers focus on the product on the platform, rather than auxiliary services that is not part of the core product. For marketing and sales, they had very limited capacity, and further recruiting in sales was going to be done if sales ramped up.

> *"We don't want to hire a sales person before the income is coming."*

Next to get employed was going to be a sales and marketing person, as they had realized that their community page, webpage and media contact hadn't been nurtured enough the last year as they have been working on the product development. To my surprise, in the last interview

they were in the process of hiring a quality assurance person for testing their software, and still not looking to hire a sales person.

It was especially mentioned that their current skills in legal terms for contracts was an issue. This was due to the new GDPR (General Data Protection Regulation) regulations enforced in Europe late May 2018 and their potential buyers own legal terms. Contract proposals was often rebounded with a legal compliance document from the buyer, and these documents were not standardized and were often more than 100 pages or legal terms. This was further being complicated as all countries have different laws to comply to, and if you get legal assistance from a lawyer in one country it can't be transferred directly in another country. Throughout the interviews this was still an issue, and this part of the contracts was handled by the manager alone, as he did not want to expose the programmers to this issue as they already had their hands full with working on the product. He was still undecided on how to solve this problem, if try to manage by himself, or go the lawyer route.

On their recruitment process, they used traditional channels, with job-ads through their online community and traditional job-ad sites. Their last employee was found through their online communities, and this position was a mix of programmer and platform promoter as he also spread the word and make articles about the technology. They have also done some headhunting for persons that they desired to have in their team. After they put out job-ads, they do an internal analysis on what they need, and emphasize skills testing as the final decider on if they hire or not. They said they don't focus much on the job interview, as maybe many other companies tend to do. For new programmers, they give them programming tasks which is the same as they would have done if they were working here, and then we measure how much time, how many errors and what the code look like. If it is marketers or such, then they present something that looks like real work tasks – answer emails, presenting and develop sales strategies. For example, they had one that they were looking to hire full time as a community manager, and they ended up having him for only a week in trial before cancelling the contract, as they did not get him into their way of doing things as they were not ready for disruptions in that area.

In keeping their talent in the company, it was mentioned that several have an economic interest as they have stocks in the company. Also, it was this sense that the group of employees was on a mission as they are going somewhere with their technology, that they believe in the project. The manager also believed his contribution was by treating the

employees well, and that the programmers knew that they necessarily didn't it better elsewhere.

If the manager had to let someone go, they usually left the company without any problem and easily got a new job as there is a lack of programmers locally. They had through their history of four years only had one person that they had to fire, while a couple of others left to a new job. In the later interviews when I asked the same question, the manager said that question was irrelevant as of now as he need every hand he has, and more.

4.1.3.2 Speed

The manager perceives themselves as fast very fast at what they are doing. It was further said that visitors are impressed with what is being produced, and the ones that is observing them from outside think they are a much bigger team than they are.

During the interview period they changed their internal software development process. They have removed a review step, and instead put in an improvement step. Before, when you had done something the manager looked through it thoroughly and sent it back. The developer then fixes it and resend to the manager, and the task went back and forth like that, until it was approved by the lead designer. The process now is that it is sent to the manager, he looks at it and if there is have any input, the manager does it himself and its completed. This way is much faster, according to the manager. The reason it is much faster, is that the developer doesn't need to stop what they are doing to go back and fix the task the manager sent back to you. In that way they save 15 min on every iteration. This number from the manager was not from any studies or research, but they found it was working fine. On the last interview a new time-consuming item had arisen as they had launched their platform; stuff that they must do right away. That meant that they had to prioritize ad-hoc jobs prior to planned tasks. This was also a been communicated in a separate meeting with the group, where it was to get everybody to understand that when a potential customer experience that something is missing or not working, they just have to fix it right away. Then their planned projection sheet just has to go down the drain.

> *"We are good at changing stuff constantly. We change how we to things, and often try new things. Now we are changing big parts of our development process."*

For their agility the question if they perceive themselves as fast to turn around when a problem arises, they said that they believed they were very good at that as they have

experienced that several times already. The manager also experienced some frustration, especially from those who are most into reaching the deadlines. They get somewhat frustrated when they get interrupted, so he had to communicate well that the deadlines do not matter that much anymore now. The same thing about interruption was repeated, that in general stuff goes slower when you are working on one thing and suddenly must fix something somewhere else, and then you had forgot what you were working on and have to start over. The manager did see this disruption and was looking changing the team into having one team handling customer requests, support and one pure developer team as the product launch commenced. But as they did not have the manpower right now do roll that plan out fully.

They also tried 24-hour support from Norway for a while, but labor laws and rules created so many challenges for them that they abandoned it. The need for 24-hour technical support is there, and that is an issue coming. The support today is from Norway and Asia, meaning North America is not covered. As they have users from all over the world, it is necessary to have someone at support at any given time of the day. They had one in US that was in line for doing support from there, but they gave that up, as they found out that this person was not focused and a lot of back and forth. To reduce the support load, they have started with making for step-by-step documentation and how-to videos. Their online community is also included in this effort by contributing to their user documentation. For the remote employee they had tried to extend his scope but found that it was limited success because he could not find obvious errors when trying to give support, so he was returned to do general support.

When they experience a dead end, their small size was said to be a strength. They did not get stuck in the old tracks, and fast to let go of stuff that they felt lead nowhere. Over the years they have experienced that they kept developing stuff that lead nowhere but are now much faster to drop if they see that it could eat resources with little benefit. There was also communicated that it was a good thing to question the benefit of the task that was taken on.

"It is almost a point to change all the time to get a change prone organization."

From my observations it was always busy in the office and they had tight deadlines and very technical. For sales and all other functions, the manager handled everything on that side, as well as being involved technically. The online forums were also very busy, and many tasks came from the online community and from new customers. Online, I found mostly technical discussions.

4.1.3.3 Shared mind-set and coherent brand identity

On question if their identity or culture reflected what they stand for and how they work. It was clear that they were in a make-or break period of the company and the group was said to be united and work closely together. As the manager also had earlier said that they were more split into two teams, one for the launch and one for the servicing of existing users and customers their unity was for the moment a bit "stretched", as he said.

The customers mostly see the manager. It was highlighted as a problem when the programmers forward questions from the customers to me, even if I tell them to talk to as many customers as possible so they can see the product from the customer side. Then the customers feel they hit to high, as they communicate with the manager, where they would be most comfortable talking to support to get help. So, the problem was that the manager was doing a lot of support also.

I felt a sense of excitement in their office as their product was due to launch, and possibly on the brink of a large expansion of the company. According to the manager, a non-successful launch would be a hard hit on the motivation that can lead to someone rethink over where they are, like "Now have we been doing this for a long time and this is not leading anywhere". Further, he said that most likely a positive motivation boost if they are very successful, that the employees they know they are involved in something big, both economically and in the fact that it would be a much bigger company with many locations and so on.

> *"What is special about us, even if we don't economically succeed, we still have a success with the open source tool, that we have the best tool in the world."*

At the second meeting their most famous programmer had just received a prize at a conference in Holland. At this event he was treated like a celebrity. Everybody wanted to talk to him and greet him at that conference. He got so tired that he had to get out of there and get in front of his computer in a corner "to come down", as he said.

Data Plc.'s customers think they are a bit special, according to the manager. Their existing paying customers are the customers on consultancy services, while they say that they do not act like consultants at all. They say they solve stuff the way we think it should be solved and are not that eager to come back to them to sell new stuff. This was said it was because they want to have full control their roadmap.

"We are not interested in new assignments from them, but they can come to us if they have an assignment that they are willing to pay for."

They often experience that when a customer is satisfied, they internally continue to polish, fix and test the same software until themselves are happy. And then deliver the product. Most customers are not used to experience that. Though, they do think is better in the end for their reputation, as the customer are very happy. They also experience that most of the older customers on consultancy tasks are happy and are returning customers.

They said that they had never experienced unhappy customers. They had, however experienced that expectations and delivered product did not match. This was often picked up before the delivery as they discovered during implementation that they were talking about different things. Then they took a step back and made more detailed specification, and always moved forward with specified premises of the delivery in line with the customers expectation. From other customers there was a couple of negative feedback that their software was first released on the open-source platform before released on the serviced SaaS platform. There have been some minor bugs, but overall positive feedback on the SaaS platform. The pricing has also not been a problem, so they doubled it, and nobody has questioned that. They were looking into if they are going to double it again.

"*It all boils down to yes or no regarding a contract in the end."*

On contract closure, customers were much more comfortable answering emails than signing the contract. It was said that doing sales over email was an issue, as it would be much easier if you have a meeting as you can more see what they are thinking have a dialogue. The drawback with email was said that the customers are holding back a little as an email during contract negotiation is official as it is on email.

On question of what the manager believed the employees thought of him, the first response was that he'd never thought about that. It turned out that he believed in giving the same and fair treatment to all, and make sure that you don't favor anyone. It had been some tendencies of frustration with too many work tasks given out, but he said as it was around product launch it was expected to be busy.

The manager believes their competition that try to fill the same need as they feel threatened as the competition charge money for everything they do, whilst Data Plc. give it away for free on

the open-source platform or paid on the serviced platform. They think that the competition thought it was just another other open-source project with low quality, but now they see that the customers choose Data Plc, even if they charge for some functionality. The manager thinks that some of their competitors feel existentially threatened. They have experienced during that contract negotiations with a foreign distributor with over 100 employees wanted to get a cooperation, which Data Plc. found out was a very disadvantageous contract for Data Plc., This was in fact a competitor that wanted cooperation and have exclusive distribution rights for Data Plc.'s software. This by getting the distributors customers to pay a fee for using Data Plc.'s software, and by that block their progress and get control of their product portfolio. They would then be able to park their products and lock it out from distribution.

4.1.3.4 Accountability

On question that high performance matter in executing their strategy, the answer was clear on this is very much so, and they see even more than before how important that is. For Data Plc. it was important that the product deliver what they promise. As the product is there and starting to get widely used, the manager believed their starting point towards customers had a lot of trust in that sense.

The manager believes he is a demanding leader in some areas. The expectation for the employees is set high, and all progress in being closely monitored as their project work flow tool will reveal all data on progress and time consumption. The manager thinks the employees are fine with high demand as they like technical challenges.

Observations added to this perception that the manager has a central role in managing the progress and creating a sense of urgency. During lunch they talked about things that was first to be done after lunch, and in their publicly available project management tool, all tasks as prioritized and with deadline and assigned developer. This all users of the technology can see as thus their work and progress is transparent.

4.1.3.5 Collaboration

On questions about collaboration, regarding efficiency and leverage I found that a big part of the collaborative work is controlled by the project control tool, where cases on technical matters go between the different roles. You have a developer, a designer, a reviewer and an approver. And most of the communication is with chat in the project tool. When text is not working, they walk over and do oral. Or to ask the manager. And they do it all the time. For

the remote employees and community contributors, they also use the project chat tool, as well as social media such as Facebook. For the remote employee and software contributors from their community they also hold a daily video conference internally.

I asked the manager if they work as one team the answer was “absolutely”. During the period they now split the team, where one team was working on our SaaS, while the other team work on the other “older” items. And in the team, this was noticeable. The plan was to merge back to one team sometime after launch.

As their product primarily integrates with LMS platforms, their integration to the LMS suppliers are critical. According to the manager, they have a good relationship with top management on the biggest LMS suppliers which have a vast majority of the market. The manager said that by supporting and promoting the LMS platforms in conjunction with their product, they see that it made good relations, and it was easier to get two-way support back. They have experienced that some of the smaller suppliers are fighting to get Data Plc. to pay to be able to let their product be used through their LMS platform. On other occasions they even experienced that some even choose LMS on basis on how good they support Data Plc’s product.

4.1.3.6 Learning

I wondered where their ideas that came from, and the manager said it was from two main sources; internally from a programmer that have an idea, or externally from a community member or user. Ideas internally come a developer that have an idea make a case in the project management tool, and the manager review and give it a priority and what criteria to be met if taken on. Many internal ideas also come from Monday morning meetings, where someone raise an idea, and this idea will be given a priority and will be implemented at some point.

The ideas from users is often from someone that notify them a certain functionality they don’t have that competition have, or in the forum there somebody found a problem that haven’t been addressed. It can be that someone come with a support request, and then they see that it would have been easier if they have done this or that way, and then take the idea on and the manager give it a priority and criteria to be met.

From the community they are now add a voting system, where the most voted for will be implemented. This is then done through a supporter program, where anyone can give likes,

and give paid supporter votes, where it will be implemented when supporters have donated enough to get a certain functionality to be implemented. This to finance the development. If you are a platinum supporter, you have 100 votes. And then you vote for the cases you want the most. The functionality that are available to vote for is 50/50 raised from internally and externally.

At the last interview they had stopped raising new ideas for the time being as they had their hands full with the launch and support on that. They were looking forward to the day they can endorse ideas again as that meant that their release is stable and not taking all resources.

Another interesting point was that the manager said that the organization need to learn that they have paying customers, and the programmers needed to do some readjustment internally to that fact. The manager is now actively doing sales the customer relation and sales work presentation in the Monday morning meeting, so the whole team see what is happening on the sales side. In that meeting important emails regarding sales cases are discussed and sometimes shared in email. However, it was said that it had to be balanced, as some just look at it with interest, while others study it and are distracted by it for their work.

As they have developed the SaaS platform, it has been busy day and night to be able to manage and it has been a lot of new things to learn. To meet this new learning challenges, a big portion of their knowledge acquisition has been done at night, for free, and mainly driven by self-interest.

In knowledge sharing, there is a lot that is shared through the project review process as it is well documented in the project tool. They have tried to run presentation of interesting ways to do stuff like programming techniques. This initiative was discontinued as it had limited use for all. Instead it was endorsed to let people learn more themselves by reading up on the subject.

4.1.3.7 Leadership

It was clear that the manager was the decision maker. It was said that in the Monday morning meeting strategic issues sometimes was risen, but the last word was always the manager. As they have a flat structure, with the manager and one programmer lead and one designer. They all report directly to the manager.

Regarding the board, they were letting the company carry on the company strategies as stated from the company roadmap, and with little or no interference from the board as the manager said the board trusted him.

The owner structure is the manager, employees, public funds and private investors. The manager has a substantial ownership stake, however not majority.

4.1.3.8 Customer Connectivity

On question on how they get enduring relationships with potential customers they desire, the manager said most get to know Data Plc. from their open-source products. These potential customers then contact them as they need new functions or want to use the tools in a new way.

> *"They contact us. We do little active marketing and sales of now. And as they contact us, it is about treating the customer well, to build trust."*

Daily contact with customers is through e-post, open-source community, video, and mail ads with links and social media like Facebook and Twitter. An interesting comment was that video tutorials was less popular than the manager expected. There is no physical contact with potential customers or the network. When they meet potential customers and users in their network face-to-face is when they attend conferences, and then mostly Data Plc. are there as lecturers or presenters of their technology. However, they had experienced a decrease in invites from conferences the last year. They did not see any sales effect from attending these conferences, but as now they have a ready product and not consultancy services, the change here is expected. The manager expected that when they get bigger and have something to sell off-the-shelf it will be a different story. Their network consists of decision makers, open-source founders and IT celebrities.

From the open-source community's pages on internet there was a lot of praise to the team besides the technical discussion and support going on. Many voluntarily also wanted to contribute to their technology for the open-source part of the platform. For example, posts like this was quite common on the online communities:

> *"I'm brand new to the platform, but I love it and think it's a revolutionary, game-changing project. I would love to contribute my expertise with IMS LTI integration development and would love to know if I might be helpful in developing that functionality. I'm not sure if this is the best place to ask these questions, so feel free to*

direct me elsewhere. In the meantime, thank you for developing such an amazing open-source project!"

For already satisfied customers they try to treat the just as well as before. On communication with customers, 90% was said to be email, and for users it was said it was 50/50 with email and video conferences. There was a customer satisfaction survey under preparation as they aim to be more proactive in existing customer communication.

In the event of dissatisfied customers, in the first interview the feedback was that they did not know of any dissatisfied customers. The manager further elaborated that in general, it is a negotiation situation, where they must find out why they are dissatisfied. To find the reason behind it and if it is anything you can do about it, you have to get the customers to feel like they are compensated. If there is a cheap way to get them to feel compensated, then they will do that. If the expectations and the product don't match it could be that the contract is written on false premises. In the detailed specification stage of the contract they would find out if the customers expectation and what they deliver match. They have never experienced that we have passed this point and not being aligned with their expectation.

On one occasion, they had one customer who reported nothing was working, and they found out that the customer had set up their software completely wrong. The manager replied that this was of course partially their fault as the customer was able to set it up wrong. Since then, they have then updated the documentation with easier step-by-step guides. And the feedback was that many customers did not read the installations manual anyway and went straight to support without looking at the manuals available. This give Data Plc. some urgent support calls and online assistance as this is a critical point for their customers. Often, they find that there are software bugs is in the systems they integrate with, but as the manager said, it is anyway our problem in the end and we are responsible for getting their product to work on all the platforms they promise the product is working on.

In how they organize their customer contact the reply is that they don't have the customers they want yet. For the moment, potential customer typically contacts them first, and the first reply is from the manager. They have a long backlog in their lead list. He is in contact with potential customers until a contract is signed. After a contract is signed, a project manager for that client is assigned. For the moment the manager is himself the project manager on the most projects right now, to let the programmers can focus on the product.

As part of their pre-launch, they had invited 10 previous open-source user organizations as beta-testers, and this was said done to build trust for the product. In the last interview these beta testers were still testing, and one of testers was in late discussion on becoming a buying customer. Two of the other beta-tester organizations, which was famous universities, had teamed up and made common list of functionalities needed to be able to use the SaaS platform. This discussion was ongoing and my impression that this was important customers for Data Plc. as the manager also initiated common video conference with them, which in fact going to take place right after our last interview.

As their product primarily integrates with LMS platforms, their relationship with the LMS suppliers are critical. According to the manager, they have a good relationship with top management in the biggest LMS suppliers which have a vast majority of the market. The manager said that by supporting and promoting the LMS platforms in conjunction with their product, they see that it made good relations, and it was easier to get two-way support back. They have experienced that some of the smaller suppliers are fighting to get Data Plc. to pay to be able to let their product be used through their LMS platform. On other occasions they even experienced that some even choose LMS on basis on how well the LMS support Data Plc.'s product.

4.1.3.9 Strategic Unity

The manager believed that the strategy was well understood. He said the understanding of course varied a bit, and there were details in the strategy that some disagreed on in the technical direction. As the employees are mostly programmers, the manager said that they were very united in that sense. Some employees are very into what they are doing, and very good at it, and not so concerned about the strategy itself. Where the manager believed they didn't care too much about the big picture. It was also said that that is something you can't do too much about. Not everyone thinks strategy is that exciting, as it won't change their workday. It was more about the mission they were on. They were more concerned about their daily work, then they think about what they are going to do that day. The manager also thinks it's a good thing if they don't sit and think about the strategy all day.

There was an interesting comment from the manager in the last interview, where he said the unity was strong, but now the company and its members must be more visible to external parties.

On question if the manager promotes the strategy it was said both internally and externally, and the response was consistent on this matter throughout the three interviews.

> *"I do what I can so all know where we are going, and how we are doing to get there. How the big lines are connected to the small ones."*

My observations from the lunches and discussions with the employees, it was a mix of different cultures and a very united "techie" group. I got an impression that the people were good at what they were doing and a sense of pride in what they were doing. The employees are from different parts of the world and half of them from Norway, they still held their lunch discussion in English as this was the natural way for them to talk and everybody was involved in the discussion that was going on. For the remote employee located in Asia, my impression was that it was not being done much effort to include this person in the company unity. All contact was strictly regarding this person's job tasks in technical support.

4.1.3.10 Innovation

In the interviews the manager is claiming that he feels they are innovative, especially with the product itself, as they are changing most in what has to do with interactive content. Further on how they make it, how users are using it, and how it is distributed to the users. Their impression is that if they succeed it is not much that remains of competition in that space.

> *"We are not afraid to change things, so we involve processes too"*

In the later interviews on why they try to change for the purpose of changing, the manager said it was to increase motivation and to be better at innovation which again made their production better. A way to get most of the resources that is put in. At the last interview the manager said that for the product promotion platform it was said that they tried to follow a standard SaaS offering, while the innovation was strong on the product itself and how they did software programming.

On question for the sales promotion, they don't think they have been innovative there. As they tried to follow a traditional sales platform. The manager said that they haven't been working with it, and not looking to experiment on that side, too.

> *"On sales service we are walking on paved paths, as of now. First, we have to see if it works, if customers will sign up."*

However, on the distribution it was said to be totally different, as that they only update the software the users are using on the SaaS platform, and suddenly the company have a market place. They consider the marketplace as the sales channel, with sale of content and technology. And the software is the product in the store. For sales they were targeting the low hanging fruit first. That is the leads list which is the institutions that had been following their open-source initiative.

4.1.3.11 Efficiency

To get an understanding of their development progress and they measure efficiency there, I asked about how they controlled development progress. The answer was that they use a standardized software project progress tool with work packages. A programmer's work package it typically two weeks work containing 20 items. My impression was this was closely monitored by the manager and measured by the managers expected time to complete.

On organizational tasks, it was said that they spend as little time as possible.

> *"As fast as possible and as little as possible."*

The manager tries to cover all organizational tasks. The reason being stated was that when you program, you are into your own world, and should not go in and out and not be disturbed. Thy also try to don't spend time on travel expenses and other administrative cost. What can be automated is to be automated. They try to save time as much as possible in administration.

For other HR tasks, the one team will leader have personnel responsibility. For the moment the manager handle that, as well as recruiting. He believes they don't need any HR function as such until we are much bigger than today and said that maybe they are 40 persons until that is relevant, maybe even bigger.

Regarding the service arrangement they had with one programmer on duty around the clock, they stopped that due to Norwegian labor law rules. Every 7th hour on call watch count as one-hour work, and for one weekend it was giving the employee half a day off for the workweek. Instead, if there is a call, everybody that has access to the server will get a call if something is down. The first who answer will take it. They will anyway in not too distant future projected to have locations all over the world and assigned people in the right time zone. Everybody is involved and eager to support the service– and they company don't pay anything extra for it as of now.

4.1.3.12 Quality

I asked the manager about what quality was to him, and the response was that he believed it was to satisfy the user needs the way they expect or better.

On what he believed quality was for the employees, it was said that it could well be that the absence of bugs, or to fulfill the specification. Until the first interview, they hadn't had any discussion about what quality is in that sense. But he pointed out that he believed that all have the understanding that it is good design, no errors, fast, secure, and so on. And that each and one even had pinned it more detailed. On the last interview it was more apparent that the user's standpoint of quality was more important that the employees understood.

On what the manager thought quality was to their customers, he referred to his perception of quality which is to satisfy the users' needs the way they expect or better. He followed with that you can get as long versions of the answer as you want here, as you have technical quality, to use, design, scalability, security and so on. I asked him on which of the above he thought was the most important for the customer, he pointed out that they can't live without safety, and cannot live without universal design. He also believed the reason they chose them in the first place was because of its design. By what it looks like, how it is perceived, how it excites, and it is easy to use. He even thought that the users could forgive some quality flaws if the above is in place.

4.2 Analysis

In this section the findings are analyzed towards the theory. First, the Born Global definition, time, and the capabilities survey towards developing capabilities in market learning, network learning and internal learning. I finalize the chapter with a summary of findings.

4.2.1 Born Global

One of the objectives was to find if Data Plc. is a Born Global. By determining if their characteristics are consistent with a Born Global, it would give me some expectations on how they develop their capabilities and what challenges they face.

Internalization of some transactions

Most customers of Data Plc. are from overseas, and with a worldwide usage of their product their transactions are highly internationalized. Local potential customers were not targeted on purpose as they had experienced that the tender process with potential customers was tedious and costed a lot of time and money. Internationalization of transactions is in line with the older studies from Rennie (1993) that has been later supported by others throughout the history of Born Global academia, as discussed in chapter 2.1. Interestingly, I also found that half of their current revenue was from long-term local clients providing consultant services even though they actively did not endorse such clients.

Only need to own a small percentage of essential resources

Their technology is their essential resource, as they are the inventor and control the development of it. Non-essential assets such as server storage and maintenance of these were outsourced to a professional company, as well as production of non-essential documentation and presentations that was produced by contributors in their community network. By only owning a small part of their essential resources was found in the empirical studies from Oviatt and McDougall (2005). Data Plc. still hadn't sought external help on contract support for legal matters on the sales process to larger institutions, even though this proved essential during contract stage. The introduction of the new GDPR directive around the launch had also slowed down progress, as potential buyers require compliance and assurance from Data Plc. that they are compliant. This inability to move forward to on contract negotiations towards institutional clients which constitute to "liability to newness and foreignness" that was found by Cavusgil and Knight (2015).

Foreign location advantage

They see it as an advantage to not be heavily invested in Norway. As a business, the company also encouraged themselves not to be location bound, as they seek outside Norway to attract new customers and their expectation is that their main office will not be in Norway in five years as mentioned in the first interview. As their product is software in a server available for all, they have no location dependency. They make use of services worldwide du support foreign location when this is challenging from home. This geographically independency behavior was supported by the studies of Cavusgil and Knight (2015); (Rennie, 1993). However, they have experienced that market penetration was slower by not being face-to-face with larger institutional clients.

Unique resources

Their capability to develop their product and the result of it is their most unique resource, as they invented it and control the future of it. Previous studies found that a unique resource is often intellectual property, knowledge and capability (Knight & Cavusgil, 2004; Madsen & Servais, 1997; Rennie, 1993; Weerawardena et al., 2007). Their software is of a global market potential. Their key network learning capability is to utilize their open-source network and transfer it to a profitable business. For their marketing capability I could not find anything that suggest that they are unique or trying to be unique. At the time of the writing of this paper, their unique resource had not materialized much after launch, however the last interview was just a couple of weeks after the launch. Their software, which is their unique resource, they still own and control, which means the capability to continue developing it and control its future is an immobile capability. As they have valuable resource, as I found in the capabilities audit that they were subject to a hostile attempt to block the distribution of their products, which was avoided. Oviatt and McDougall (2005) also found that other organizations will try to exploit your unique resources.

Opportunistic orientation

Interactive content on internet have been around from the mid-90s. The most commonly used tool for enabling interactive content was Adobe Flash. This tool require that all users install Adobe Flash in on the user side. Users have been less and less accepting to install software on the user side as virus threats and the device or platforms you are online with is not only a PC. Apples new iPhones was released in 2007 and Apple never offered flash to be installed and supported as a part of their system. In 2010, Steve Jobs announced that they would officially state that flash is not to be part of their system, and instead promote an open-source initiative

(Jobs, 2010). This caused the use of Adobe Flash for an interactive web experience was losing its importance, and finally Adobe announced that they will abandon Flash and stop supporting it from 2020 (Adobe Corporate Communications, 2017). Considering these events. Data Plc. exercised an opportunistic orientation by actively develop the next generation of interactive web experience as they were aware that Adobe Flash would diminish as the preferred tool for an interactive web experience.

Network oriented

The manager and founder brought his existing network, and during the years since founding the network have expanded to be much bigger than the original network. Being aware of the network has been a strategic choice as their open-source contributors and the learning institutional userbase is growing they make sure to collaborate with these networks and use this growth as one of the major routes for expansion. As Cavusgil and Knight (2015) noted, this was one of the most essential applied strategies observed exercised by Born Globals. By making alliance with distributors by having a complementary product for LMS platforms and they have expanded their network because of that. Gabrielsson et al. (2014); Weerawardena et al. (2007) found the same partner alliance expansion as an important network learning capability.

Innovative

As the technology is innovative and developed by the company, they are expanding on the opportunity of a new way to enable users to make interactive content. The users don't need to be technically skilled. While being innovative in their network expansion, using the open-source user base and the springboard to a commercial expansion can be seen as an strategic innovative approach. Aspelund and Moen (2005) point that leveraging on a strong technological advantage is one of the key traits of being a Born Global. For their marketing effort, strategic alliances and internal organization capability I found no clear innovative traits.

Target niche market

The target customers today are users in the biggest LMS systems. This is a huge market, with an expected annual growth of 7.5% to $275.1 billion by 2022 ("Global E-Learning Market to Boom", 2017). Inside this market they expressed that they target "low hanging fruit", with going after renowned institutions that from their network that has been using their software from the open-source initiative. As Born Globals tend to avoid competition and target niches

as discussed in chapter 2.1, Data Plc. do not exercise this niche market approach. They target LMS users broadly, and their growth in the LMS market is now by converting their open-source users to paying customers.

Driven by change agents

The path forward was set by the manager. Going from an open-source software development project to offer the software commercially on a SaaS platform was his idea for a valuable interactive web experience. I found that he had control over all aspects, from resources to capabilities and drive the company forward. Tanev (2012) argue that having a competent enabler for entrepreneurial orientation is one of the most important aspect of being a Born Global. He did the marketing, orchestrated the network in the company from his network, and handled all internal organizational tasks. Also, his awareness that increasing the organizations capabilities was essential for future growth. The manager enforces changes in how they do marketing, project execution and alliances with other companies.

> *"I believe it is a strength when we are this small that we don't get stuck in the old tracks. It is almost a point to change all the time to get a change prone organization."*
>
> *"Who take the big strategic decisions? That is us, and I have the last word."*

Dynamic

The manager actively promoted a change prone organization. With your limited resources you must adapt to where the need is there and then. Their capabilities changed when converting their tasks and skills to serve their network rather than only increase your capabilities in developing software. This dynamism exercised among Born Global was early identified in the Born Global literature, as when your organization is young and not institutionalized is the best time to expand internationally (McDougall, Shane & Oviatt, 1994 as cited in McDougall & Oviatt, 1996).

Data Plc. exercised all the above, except target niche market. From the categorization for being a Born Global, I conclude the following from the analysis above:

> ***Data Plc. is a Born Global.***

4.2.2 Time

One of the objectives was to find at what time of the life-cycle of the company is at. As the capabilities needed will change at different stages at time, as some will fade while others need to be renewed over time (Helfat & Peteraf, 2003). Being capable of building a development team and organize the mission goal is critical at the start. While later when a product has been developed and ready for market, market capabilities is needed. To be able to realign with limited resources an awareness of where the company is at and what lies ahead is important.

As the product launch was a significant change of the organizational environment, this suggest they move from one state to another. The daily tasks of the manager were transformed to being much more in contact with their external network as a sales person rather being a technology partner. As found by Helfat and Peteraf (2003), the capabilities needed towards the market and their network at transition stages for companies change rapidly.

From the interviews, there was an increase in their lead backlog, ad-hoc urgent jobs and, the number of general service requests and the traffic on their forum increased. From my observations there was also a general excitement in the office and it was always busy when I was attending the interviews. There was a change of tempo in the company, which suggest that they are in the transforming stage. The sense of urgency was further enhanced as the manager said in the second interview that everything is decided the next weeks.

At this stage the increase in activity require that you can handle the change. Their required capability to organize themselves to handle this increase in activity, and where their traditional learning processes, customer connectivity and collaboration changed.

The change of capabilities needed is supported by the empirical findings of Helfat and Peteraf (2003) and Levie and Lichtenstein (2010).

From the analysis of the findings and the changes identified around the product launch, I conclude the following:

Data Plc. is entering the commercialization stage.

4.2.3 Market learning capabilities

Talent

Their market learning capabilities towards talent was affected by limited resources. Their backlog list increased rapidly, as closing of contracts was affected by their limited skills to address legal terms in the proposed contracts. It was clear that they did not have the capability to exploit their market position at that time.

To develop their capability in this area, they were not looking to recruit, but considering getting legal assistance from professional law firms. In the meantime, contract handling and the inquiry backlog was handled by the manager. They had actively tried to increase the marketing capacity by hiring a person to be their community manager that would handle marketing, promotion and sales lead colleting, but l was let go after a week of trial. The marketing talent acquisition process stopped after that and now awaiting to see if the manager still can manage the promotion and sales lead.

I found that they were trying to develop their market learning capabilities by adding talent as this was identified as an issue. However, they had pulled back from this initiative and back to let the manager handle marketing. They even changed focus to invite a quality assurer instead of a marketer at the last interview. According to Knight and Cavusgil (2004), the market knowledge and talent should be in place before initializing the internationalization initiative. Data Plc. had not recruited talent as a capability in their market learning before approaching the market, and that can explain why they met capacity challenges and new-found knowledge on contract issues.

Speed

Their market learning efforts was found to slow, their speed of expansion and growth was slow. As Zhou and Wu (2014) found that there was correlation to market learning capabilities and growth. The growth Data Plc. had after their launch was much slower than expected. Their underdeveloped market learning capabilities found could explain that slower than expected sales just after launch.

Shared mind-set and a coherent brand identity

For their shared mind-set and a coherent brand identity, their perception of their brand was that they had a strong brand that already had a position in the market, and online community pages confirm that. They were first focusing on targeting the customers they wanted from

their network rather than trying to get new customers they don't know from before. They were not aiming for the moment to do any marketing other than to nurture the contacts in the current network, as the "low hanging fruit" was their priority.

This finding indicates that Data Plc. own perception of their product and further development of a brand identity to develop market learning capabilities was not urgent. This contradicts to the findings of Efrat and Shoham (2012), where it was suggested that a targeted offering to reduce their risk in the market.

They had learned that giving extra value to customers by providing more than the contract conditions was giving them very good feedback and building trust. Also, they learned that their pricing point was not deciding a sale or not. They tried to double their product pricing, and no potential customers had given any negative feedback on that, so far.

The gained knowledge of the strength of their brand have developed their marketing capability, as earlier they were uncertain on the value of providing extra service and price point.

Accountability

Regarding accountability there was no answers from the interviews that was related to developing their market learning capabilities.

Collaboration

For collaboration they communicated with existing customers and potential customers for the most part via email and video calls from the manager. They have learned that it was difficult to close contracts without being physically present, as you can't discuss and negotiate as fluently when physically present at the same location as the potential customer. There was no clear finding on how the collaborated to develop their market learning capabilities.

Learning

On their capability on learning, they had seen the value of getting feedback from users. They also have reactively learned about the contract issues. For their market position and the employees, the manager actively trained the organization to understand that they have paying customers and the progress on the market on a weekly basis. In that meeting important emails regarding sales cases are discussed and sometimes shared in email. This was not the case before.

I see this action as a method sharing of knowledge as developing their marketing capability and it made other employees capable of being involved in the marketing process over time This finding support the finding of Weerawardena et al. (2015) where developing an actionable knowledge towards the market was seen as an important marketing capability.

The contract issue was known, and mitigation actions were still not in place to overcome this marketing capability issue.

Leadership

The manager was clearly taking leadership and had a strong presence as the person handling the marketing, as seen in the customer connectivity. Typically, the first contact is from the manager. He is in contact with potential customers until a contract is signed. After a contract is signed, a project manager for that client is assigned. For the moment the manager is the project manager on the most projects to let the programmers focus on the product development. This indicate that the manager has a strong presence in line with earlier findings discussed in chapter 2.4, and the company is still strongly dependent on the manager for developing their market learning capabilities.

Customer connectivity

From the interviews it was clear that they felt that they built their customer trust by believing they are having a superior product. As they are in Norway, they have no physical contact within their market. They also learned that they had no sales effect from attending conferences. They claim that they don't have the customers they want yet, as they want some early famous clients that can they hope will speed up sales to lesser famous customers. They have met resistance smaller LMS suppliers are probing to get Data Plc. to pay to be able to let their product be used through their LMS platform. On other occasions they experienced that some even choose LMS platform on basis on how good they support Data Plc's product.

Data Plc. had met challenges in their market penetration and were going to develop their collaboration effort to make surveys in order to understand their customer needs better. Ulrich and Smallwood (2004) suggest that customer connection by conducting surveys to track customer preferences lead to market knowledge that enable to build trust and will result in long lasting customer relationships. By developing their collaborative market learning capabilities, they believe they can make a better user experience.

As they are expanding on their network by collaborating with LMS suppliers, they are actively developing their market learning capabilities with these alliances and grow their market and network substantially. This finding is supported by Dow et al. (2017), where he found that tight relations with partners increase your market knowledge.

For sales they were targeting the low hanging fruit first, which was mainly by utilizing their open-source network. That is the leads list which is the institutions that had been following their open-source initiative. This is how they developed their market learning capabilities by utilizing their existing network, and this finding is also found in many studies on Born Global, ref. chapter 2.3.1.

Strategic Unity

On strategic unity there was no answers from the interviews that was related to developing their market learning capabilities.

Innovation

They clearly stated that for innovation in marketing they have not been innovative. They tried to follow a traditional sales and marketing platform. However, on distribution have an innovative solution as they distribute through their online marketplace and it is very effective to maintain as a software update is globally distributed immediately. An effective distribution system is found to be essential to be able to compete in the global marketplace, according to Kaleka and Morgan (2017). At the time of the interview I did not find any special innovate efforts on their development of market learning capabilities, as all software companies distribute through their website.

Efficiency

There was no noticeable action from the interviews on efficiency on development of their market learning capabilities.

Quality

The manager believed quality meant for them to satisfy the users' needs the way they expect or better. He also believed the reason they chose them in the first place was because of its design. By what it looks like, how it is perceived, how it excites, and it is easy to use. He even thought that the users could forgive some quality flaws if the above is in place. A quality product strategy can help the company to sell more over time.

Summary on how Data Plc. develop their market learning capabilities

Despite as market knowledge being a critical capability as found by Weerawardena et al. (2007), I found from the audit that they only were active in 3 of 12 capabilities audited. The market knowledge was not used to try to differentiate yourself, which was found to be important to gain market knowledge by Kaleka and Morgan (2017). As Data Plc. stated that they did not do any active capability development efforts towards marketing or sales, and for the approach they had at the moment was on "paved paths", and contradicts to Efrat and Shoham (2012) findings of for reducing their risk as a company. This meant that the development of their market capability was relying from their product and looking to increase their capability by learning more about the market by surveys, that they can utilize for generating sales. This building of trust and listening to customers is then leading to lasting relationships (Ulrich & Smallwood, 2004).

Positioning

Their positioning was found to be broad in the sense that they target to be a part of the LMS market. The market cap for LMS is more than $165 billion ("Global E-Learning Market to Boom", 2017), and projected to grow fast. As Born Globals tend to focus on a niche approach as discussed in the theory, I did not find that Data Plc. was pursuing this approach. The market capability was largely relying on the existing positioning of the product and the utilization of this position towards organizations in their network.

Dynamism

I could not find any expressed dynamism in their developing their market learning capabilities. As the Born Global literature highlight that to survive they are dependent on improving their marketing effectiveness, differentiation and efficiency, ref. chapter 2.3.1, Data Plc. did not exercise this dynamism, as they were relying on the knowledge and work of the manager as the only marketing capability. The However, they had done an effort in trying to improve by hiring a community manager – that was let go after a week. They were capable of detecting a distribution opportunity that they found would be harmful for their business. I found they sensed these threats, but not able to seize opportunities and transforming their market learning capabilities. Matysiak et al. (2017) found that for a Born Global to be able to grow they would need to sense, seize and transform when threats and opportunities arise.

Manager

As their current market capabilities was found to be underdeveloped and relying on the manager and not much development ongoing in this area, they are very dependent on the manager now for their future development of their market learning capabilities. As their time of launch where acquiring market knowledge and to position yourself in the market, I found that Data Plc. is quite exposed on their market learning capabilities.

Based on the findings and the analysis of the capabilities audit for market learning capabilities I propose:

> ***Data Plc.'s market learning capabilities at time of entering the commercialization stage is underdeveloped and dependent on the manager.***
>
> ***Data Plc. develop their market learning capabilities by effective distribution, extending on their network of users and integrating with other distributors.***

4.2.4 Network learning capabilities

Talent

Talent for developing their network learning capabilities they get from their open-source communit. They also get access to contributors to their product and for finding people to recruit. From their community they get technical assistance, people making presentations, making documentation and by helping Data Plc. spread the word about them. This again increase their reputation and user base. An interesting note was the programmer that won a prize for the company at a conference, where the conference attendants treated him as a celebrity. This means in their user network Data Plc. must be reputable. There was also a lot of praise on the open-source community for their product. To service their product platform, they had some issues on being capable of serving their customers as at any time of day they need to be available. By recruiting one programmer found among their open-source platform users in Asia, they now have covered Asia region support. From this recruitment from their network they have then in turn recruited talent who is now contributing back by being a programmer and technical support to other users in their network. By building on expertise and competence from their network that can help develop their market support the finding of Kaleka and Morgan (2017).

I found that Data Plc. acquired talent that added to their network learning capabilities.

Speed

On extending their network learning capabilities, I did not find that they were in a hurry, as they seemed quite confident that their network was expanding without much effort in terms of speed.

Shared mind-set and coherent brand identity

I could not find shared mind-set developed their network learning capabilities. The team in Norway is united, while the one employee in Asia is not integrated in the internal network, as he's not included in their informal communication. Their employees have a good reputation throughout their external network and on their online forums the company and the employees receive a lot of praise. This observation was also found by Dow et al. (2017) where repeated interaction with partners increase their confidence.

Accountability

Data Plc. it was important that the product deliver what they promise. As the product is there and starting to get widely used, the manager believed their starting point towards customers had a lot of trust in that sense. I did not find any actions on the questions related to accountability in developing their network learning capabilities.

Collaboration

Data Plc. is working close with LMS suppliers. Some customers of the LMS request compatibility for Data Plc.'s products, and opposite, some customers of Data Plc. choose LMS system based on if the Data Plc. products they use is supported. This business to business cooperation was then beneficial for both parties and opened a much larger market for Data Plc. Ulrich and Smallwood (2004) highlighted that collaboration in their network to is one of the strategic assets of a Born Global.

Learning

From their network, they received many feature ideas for their product. Some of these feature ideas, documentation and support requests end in new functionality, which add value to their product. For added engagement from their community to contribute with these ideas, they had introduced a function request voting system. However, the manager decides if any of the ideas is taken onboard. This external idea generation suggest that Data Plc. actively develop their network learning capabilities by learning from external sources. This finding correlate to the

finding of Weerawardena et al. (2007) where he found that by giving access to external influence expand the company knowledge.

Leadership

I did not find that the manager was the single central person of the network. Their company's network has expanded vastly since the start, and the company is less dependent on the network the manager brought in. This finding was also found by Gerschewski et al. (2015), where as time goes by, the initial network of the founder is less and less important for the company.

Customer Connectivity

Their customer connectivity was through social media, in their open-source community, video presentations, social media and mail. They also had some articles on the LMS providers news pages. Their interactions towards the network showed that they had gained respect and were building on the momentum in their community network, by making sure they were actively participating on the forums, publishing software and working on getting their message out. However, I found that most of the contributions from the company was technical oriented. They were focused on avoiding dissatisfied customers and feel they have a responsibility for clarifying or helping the customer, as they said its anyway their problem in the end. They had invited 10 potential famous organization to be beta-testers on their pre-launch. By interacting with the potential customer and having these be heard gave them promising feedback on possible converting them to paying customers. These efforts, by being active in their network give them a reputation and adding to potential customers. Data Plc. had developed their network learning capabilities by being much more active and visible in their network, which support the finding of Gerschewski et al. (2015) where social exchange is an important part of building your network.

Strategic Unity

I did not find any mention of strategic unity in relation to network learning capabilities.

Innovation

Their work toward innovation in the network learning capabilities was not mentioned or observed in my study.

Efficiency

There was no noticeable action for the development of their market learning capabilities regarding efficiency.

Quality

There was no noticeable action for the development of their market learning capabilities regarding efficiency other than the perception of quality for the Data Plc. is to have satisfied users and customers.

Summary of developing network learning capabilities

Data Plc.'s network learning capabilities are developed by adding complementary resources by getting doors open from LMS providers, which Weerawardena et al. (2007) earlier have found as one way to increase a company's knowledge. By having good and robust network relations to users and other companies in their community, they complement to the same findings of Dow et al. (2017) and Kaleka and Morgan (2017). I found from the audit that they were active in 6 of the 12 capabilities audited. They engaged their network to the market actively with their product and experienced that outside influence have a positive effect on the company by adding to their network learning capabilities.

Building networks

In their initial stage for the company, their network connections was from the network that the manager brought in, and many of them from personal connections from school and his earlier business that the business take advantage of to build their networks, which also Weerawardena et al. (2007) found in this research. As Gerschewski et al. (2015) found that the as network capabilities develop and the company matures, they get less dependent on the initial network the manager brought in. I found the case to be same with Data Plc. However, I did not find that business to business relations was based on private connections, as Heiss (2017) had found in his work.

Maintaining networks

To maintain their position, and being able to grow, collaboration with other businesses was important for Data Plc. This finding is supported by the work of Ulrich and Smallwood (2004). In realigning their network learning capabilities, they could respond to customer changing wants and actions for their competition, as found by Knight and Cavusgil (2004).

Network channels

Data Plc. use means of communication that does not require you to be physically present. As their network is located all over the world, and none of their partners are located where Data Plc.'s office is, they are dependent on utilizing the technology that is available to communicate effectively and present themselves as reliable in their network. Gerschewski et al. (2015) also found that using these channels of communication is effective as a Born Global, and support my findings in Data Plc.

Dynamism

They were able to dynamically change with adding new contributors, new business to business relations and actively participate in the network. The behavior for expanding your network through getting complementary assets was also found by Weerawardena et al. (2007). On the opposite, they also removed non-effective network interaction by not participating in conferences. This show that they showed a dynamism and evolved their network learning capabilities, albeit I found that they were not too fast and efficient in doing these changes.

Manager

The managers role was less dominant towards their network as found for marketing. As the manager brought the network in the first place, the network is now much bigger now and less dependent on the managers role. This suggest that the network learning capabilities are evolving and being developed as the collective capabilities increase and the managers initial network dependency decrease, as found by Gerschewski et al. (2015).

Based on the analysis on how Data Plc. develop their network learning capabilities I propose:

> ***Data Plc.'s network learning capabilities at time of entering the commercialization stage is developed.***
>
> ***Data Plc. develop their network learning capabilities by recruiting talent, having a quality brand identity, collaboration and learning from their network.***

4.2.5 Internal learning capabilities

Talent

It was apparent that most of their resources were allocated to increasing their internal learning capabilities on developing their product. The talent acquisition toward their internal learning capabilities on the technical side was further enhanced when considering hiring a quality

assurance person instead of a sales person, even the need for market orientation was known. Their recruitment process was highly technical by extensive testing on programming skills. They were able to retain talent in the company by the job tasks as programmers, as well as an economic incentive as the programmers also had smaller ownership stakes in the company. They did spend as little as possible on organizational tasks, and the manager did not see the need for any investment on those areas at this point, and follow the theory of

As a highly performance oriented group, it support the talent acquisition finding of Ulrich and Smallwood (2004) and contradicts to the need for collective skills needed for a strategic edge (Ulrich, 2015). I was surprised that their talent acquisition continued to be added to the project team, even though resources to develop market learning capabilities and their internal organization was identified as an issue. I found that they were developing their internal learning capabilities by adding talent into an already highly dedicated and skilled software developing environment.

Speed

They believed they completed technical tasks fast, and their performance was measured by quality of their work and speed. By having the capability of working fast on their product, their production rate was high. Their internal learning capabilities were developing by changing their project execution model to a faster and more effective one, and they were able to change direction quickly. As the product launch was about to commence, the employees had to be ready to jump on ad-hoc urgent tasks and adjust to a workday that was unfamiliar to them. One example is additional urgent necessary GDPR compliance additions in their software that came based on a feedback from a customer.

The manager believed that changing constantly made the whole organization prone to changes and was an advantage. For all other internal organizational tasks, this was for the most part done by the manager and done as fast as possible in order to spend as less time as possible on that. They had a challenge on local administrated technical 24-hour support that was hindered by local laws, and this was compensated by utilizing their satellite worker in Asia for urgent tasks outside working hours in Norway.

I consider their speed and agility in their internal learning capabilities development was highly developed and they are very effective as a development team. They are less developed as an

organization, and at the time of their commercialization they did not focus on HR and office related administrative tasks.

Shared mind-set and coherent brand identity

Their programmers were a uniform group, all working on the same product intensively. They were united internally when they all were focused on working on the same thing - making a premium product stay in control of their roadmap. As found for talent, the employees had an economic incentive to succeed and at the time around the launch it was a sense of excitement of what was happening at that time. They kept refining and adding functionality to their product and stated that they wanted to have satisfied customers. Having a strong technological advantage and a strategic focus is a key trait for Born Globals (Aspelund & Moen, 2005).

However, among the team, there was some frustration as there was some reluctance internally to be involved in servicing their customers and open-source users, instead as being a dedicated programmer. This making of "islands" also found by Matysiak et al. (2017), where he found that it could cause frustration and resistance, and would be more noticeable the smaller the organization.

The manager had been clear on that the time was here for them to stand out and be visible towards the network and to customers, especially at the time of launch. The motivation from the manager on this was two-folded. First, as an organization to show presence and represent their brand, and second to not only depend on the manager.

I found them to be carrying a strong brand identity developing their internal capabilities on the technical side. However, I cannot conclude on the motivation for this brand identity, as it was excitement on the product, and frustration on supporting the product.

Accountability

High performance on execution was highlighted as very important. The employees had high expectations on themselves, as well as the manager expectations. The manager thought the employees was fine with that if it was related to technical challenges. Their work progress was closely monitored in their project tools, and they kept their sense of urgency. When I was in their office, I also found them to be hard working and very devoted to technical tasks. Data Plc. benefited on dedicated employees use their skills predictably and regularly (Ulrich, 2015).

The employees were accountable, and by accepting this high performance at the critical time or the company, their internal learning capabilities on accountability had increased.

Collaboration

It turned out that in their project execution on internal projects, they were collaborating tight, and communication was effective. Their remote employee was also attending a video conference daily, where they went through ongoing cases related to ongoing support tasks. As their team was at the launch stretched, and almost split into two teams due to the ongoing software production and the other case on support. The manager noticed some strain on the organization and a re-merge into one team after launch was likely. Such a reconfiguration is constantly needed as Born Global need to adapt to continuous changing conditions (Dow et al., 2017).

They collaborate well throughout and areas exposed to changes in their daily routines, though they experience some stress on their organization. They have developed their collaborative internal learning capabilities, however not without some reluctance to change.

Learning

They employees were eager to increase their technical knowledge and were able to take on board impulses from external to develop their internal learning. The employees were studying on their own time, especially as new required skills for their SaaS arisen. They shared knowledge in the Monday morning meeting and through their project tool. Previously they had programmers running separate presentations on their new acquired knowledge, but this was discontinued as the manager believe a book was a better tool. The remote employee was participating on some video meetings, but mostly only got access to their local internal knowledge by looking at the project management tool where all ideas, completed tasks could be accessed.

They kept adding to their internal capability in their product development and servicing of the product. On the organizational learning side, the manager purposely tried to not expose the team with non-essential information, other that his orientations from marketing and sales. This finding is supported by Efrat and Shoham (2012), where they found that innovation initiatives is preferably done with minimal bureaucracy and will result in increased flexibility and agility.

Data Plc. has a strong product innovative culture, where the members continuously develop their internal capabilities by adding knowledge on the technical side. On organizational side they keep non-essential tasks minimal.

Leadership

The manager was also for internally in charge of what the employees should work on and in which order. The manager also has support from the board of directors to continue as before with their roadmap.

The leadership in internal learning capabilities is strong. However, I did not find any development in the capabilities of the leadership. The manager is himself also a former programmer with a business degree. I found that as a Born Global, Data Plc. managerial style is visionary towards the product potential with limitations in organizational delegation of tasks at the time of commercialization. The manager was clear that any organizational tasks was essential to be as fast as possible and as little as possible. My observation of the leadership of the mission the company is supported by (Weerawardena et al., 2015).

Customer Connectivity

Customer connectivity towards internal learning capabilities was based on delivering the product they have promised. This then required using their network to get access to assistance, and for user feedback. Their support system har extensive contact with customers and even there was some reluctance on doing support, this gave them new ideas to improve their product.

Strategic unity

As a homogenic group of programmers all working on the same product and the same mission, their unity was good in the sense of being programmers.

The manager had stressed that the programmers had to be more visible to external from the launch time, and not all were too comfortable with that. Their unity was strong at point of launch but had risk for deteriorating as time went by and the daily routines in the company transform to a more sales prone organization, or failure of the product launch. They are aware that the company most likely will change drastically in either way, but I could not see anything that could tell me that they did not believe in what they were doing. However, there was no separate internal actions to promote unity that could benefit their internal learning capabilities as an organization.

Innovation

They believe they are very innovative and have organized their software project and the product they are providing in the end. This by being innovative in the technical solution and promoted by the manager. The manager also had change initiatives purposely to "get a change prone organization". According to Dibrell et al. (2015) innovation in Born Globals spur when employees actively participate in new ideas, new processes and technological advances. However further development of ideas and initiatives were decided by the manager. At the time of launch no new ideas were accepted as they had their hands full.

I found technical a project execution to be a strength in developing their internal learning capabilities, while for internal organizational matters there were purposely no activity at the time of the interviews.

Efficiency

They believe their software development progress I very efficient and is controlled in their project management tool. The work tasks are distributed by the manager, and the programmers get to work. For maintaining their service, they have now changed from having a formal service arrangement to everybody on call if urgent support matters arise.

As also found on learning, other internal organizational matters, the manager purposely tried to avoid exposing the employees as he believes that will take away focus on what they are doing today and will lead to a less efficient organization. They are also not looking to do anything here in the near future, as they feel it works well with the manager handling this.

In their efficiency on internal learning capabilities, they are well developed on their technical execution, while underdeveloped on organization on purpose.

Quality

On quality towards internal learning capabilities it was quality of their product. Later I found that the users' perception on having a quality product was getting more important. This indicate that they have realized that external influence and feedback is important. Their quality focus is built in in their product focus and speed.

Summary of developing internal learning capabilities

From the capabilities audit I found that they were actively developing 10 out of 12 capabilities. Their internal learning capabilities are highly developed on their technical side

and underdeveloped on their organizational side. I found the organization project execution to be innovative, high performing and the group shared the same mind-set with a consistent leadership. According to Ulrich (2015), combined skills in efficiency, innovation, collaboration, and leadership and speed give Born Global a strategic edge, while Matysiak et al. (2017) call these capabilities technical fitness.

As an organization, I found their internal capabilities to be underdeveloped, as there were no initiatives to develop these soon. Interestingly, this was found to be positive by Efrat and Shoham (2012), where he states that of flexibility and agility from innovative initiatives is preferably done by minimal bureaucracy (Efrat & Shoham, 2012).

Acquiring Talent

Data Plc. were actively adding talent to an already highly skilled software development team and were able to retain the talent they have. Their speed of production was increasing as they modified their software development constantly by tweaking their execution model, which has resulted in a change prone organization.

At the time of launch the organization experienced some stress, as there was some frustration on having to convert their workday to other tasks than programming, such as support and interacting in their network. The members had an economic incentive to succeed as most of the employees has ownership stake in the company.

Dynamism

They exercise dynamism is their internal capabilities for software development, as they continuously change how they conduct projects, and the manager initiate changes in this process often.

Manager

On their internal organizational capabilities, they are dependent on the manager, as he controls and manage all internal tasks. The capabilities of the programmers indicate that they are not dependent on the manager, even he controls the prioritizing of the work tasks. As for capabilities for market learning, I found that Data Plc. is exposed on their internal learning capabilities as there are no other allocated resources in the company to secure redundancy for the company in this area.

Based on the analysis of the internal learning capabilities, I propose the following:

Data Plc.'s internal technical capabilities at time of entering the commercialization stage is highly developed.

Data Plc.'s internal organizational capabilities at time of entering the commercialization stage is underdeveloped and dependent on the manager.

Data Plc. develop their internal learning technical capabilities by adding talent, high performance, shared brand identity, innovation, collaboration and share knowledge from internally and from their network with minimal bureaucracy.

4.3 Summary of results and analysis

My research question consists of several parts. As there is no straightforward framework to analyze the results, I break it down to comment each part separately. As capabilities interact with each other some capabilities will be visible in more than one place. The capability audit assessed their current capabilities, capabilities needed, and their capabilities development started or planned.

From the analysis, I summarize the findings to be able to answer my research problem, following the sequence of decoding, ref. Figure 4 Sequence of decoding:

> ***How do a Born Global develop their capabilities in market learning, network learning and internal learning when entering the commercialization stage?***

I found that Data Plc. matched nine out of ten characteristics that define a Born Global, as discussed in chapter 2.1. Thus, based on the analysis in chapter 4.2.1, I can conclude that

> ***Data Plc. is a born Global***.

They clearly were going into a new era for the company with their product launch, and activities inside the company suggest that there was a change, as new capabilities needed for the new era emerged, as discussed in chapter 4.2.2. Based on the analysis, I conclude that

> ***Data Plc. is entering the commercialization stage***.

How they develop their capabilities:

> ***Data Plc. develop their market learning capabilities by effective distribution, extending on their network of users and integrating with other distributors.***
>
> ***Data Plc. develop their network learning capabilities by recruiting talent, having a quality brand identity, collaboration and learning from their network.***
>
> ***Data Plc. develop their internal learning technical capabilities by adding talent, high performance, shared brand identity, innovation, collaboration and share knowledge from internally and from their network with minimal bureaucracy.***

Having established that Data Plc. is a Born Global entering the commercialization stage, the question remaining on what they do to learn and increase their skills within the market, their network and internally inside the company when required capabilities needed change.

Developing market learning capabilities

For their market learning capabilities, the findings were that this was the underdeveloped, and the area with the least ongoing and planned development. Their contact towards the market was through their current network of users and by collaborating with LMS suppliers that helped their distribution. As they are at the stage from development to have a commercial offering, they were much less capable of advancing towards an offensive sales force and was very much in testing response on sales on the existing network. This also showed that the marketing and sales was less developed and thus more dependent on the manager in this early stage of moving into commercialization.

Developing network learning capabilities

Data Plc.'s network learning capabilities are developed by adding skilled people that contribute to their product by doing technical assistance and extending their network. They position themselves as being accountable with being available for support and active on their online forums answering requests and interacting in their community. Before their product launch, the were proactive by using beta-testers from their network to get feedback on software bugs, and most importantly the feedback on the user experience. As the network extended, their dependency on the manager decreased and their dynamism increased, as new formed connections from team members were not dependent on the manager. The capabilities audit found that they are developed, and actively developing their network learning capabilities.

Developing internal learning capabilities

On their internal learning, I found a distinctive split on what internal is. First internal meant for the company their programmers, and for me it meant the organization. I found the internal learning capabilities in technical execution to be highly developed, as they had added, reconfigured and rejected capabilities over the years and now into the critical stage of their launch and entering the commercialization stage. Interestingly, as they were developed, changes caused some frustration. The development of their internal capabilities was incremental, as they already possessed most of the capabilities audited and new adding of capabilities was controlled by the manager.

Capabilities at start

To learn about the maturity of their capabilities, the status audit at the first interview gave me a good picture of where they are at, and what expected capabilities needed when entering the commercialization stage. New capabilities needed moving forward as their environment change is also revealed in the discussion.

The capabilities at start:

CAPABILITIES AUDIT	MARKET LEARNING	NETWORK LEARNING	INTERNAL LEARNING
TALENT		✓	✓
SPEED			✓
SHARED MIND-SET AND COHERENT BRAND IDENTITY		✓	✓
ACCOUNTABILITY			✓
COLLABORATION		✓	✓
LEARNING	✓	✓	✓
LEADERSHIP			✓
CUSTOMER CONNECTIVITY	✓	✓	✓
STRATEGIC UNITY			
INNOVATION	✓		✓
EFFICIENCY			✓
QUALITY		✓	
	3 / 12	6 / 12	10 / 12

Table 1 Capabilities Audit Result

Their market learning capabilities were underdeveloped when entering the commercialization stage. They did not have any dedicated resources and did not have the capability to be actively marketing their product outside their network.

> ***Data Plc.'s market learning capabilities at time of entering the commercialization stage is underdeveloped and dependent on the manager.***

The network learning capabilities were developed, and still had areas of possible improvement where they had not invested in their capabilities, such as speed and innovation in their networking capabilities. They experienced that where they were at a developed level, and still developing their capabilities.

Data Plc.'s network learning capabilities at time of entering the commercialization stage is developed.

On internal learning capabilities they were mixed. As a group of software programmers, they were highly developed, and internally as an organization they were underdeveloped. This finding caused me to split the analysis for internal capabilities, as there was a huge gap in the capabilities on their work and organization in what I had defined as internally.

Data Plc.'s internal technical learning capabilities at time of entering the commercialization stage is highly developed.

Data Plc.'s internal organizational capabilities at time of entering the commercialization stage is underdeveloped and dependent on the manager.

As an organization, the bureaucracy was kept at a low profile purposively by the manage I order to not interfere with the programmer team. As also found for their market and network capabilities, Data Plc. kept organizational bureaucracy at a minimum in all areas. This approach is supported by Efrat and Shoham (2012); Levie and Lichtenstein (2010), where they found that that younger and smaller companies often survive and thrive by continuously change, whereas a more bureaucratic business often fails when exposed to environmental change.

Dynamism

I found that Data Plc. had attempted dynamism in their market learning approach as they had sensed and attempted to seize, but not been able to transform, ref. chapter 4.2.3.

Data Plc. showed dynamism and evolved their network learning capabilities, albeit I found that they were not too fast and efficient in doing these changes, ref chapter 4.2.4.

Data Plc. showed dynamism and continuously evolving their internal technical learning capabilities, ref. chapter 4.2.5.

5 Discussion

The purpose of this paper was to how a Born Global develop their capabilities in market learning, network learning and internal learning. As the research question was a combination of establishing and discuss the type of company, what time in their life-cycle they operate in and what actions that lead to increased capabilities. Data Plc. was transforming their business from being an open-source software project, to commercialize their software on a SaaS-platform. From my data collection and results, I was able to identify their current capabilities and found where increased or new capabilities was emerged. From the summary in previous chapter there were some interesting findings discussed in this chapter.

The research question:

> ***How do a Born Global develop their capabilities in market learning, network learning and internal learning when entering the commercialization stage?***

I found that ***Data Plc. is a Born Global entering the commercialization stage.*** Being a Born Global, I found that they had a striking match with the definition of a Born Global. They exercised very the same challenges and behavior as studies on Born Global have found, as discussed in chapter 4.2.1.

For development of their capabilities:

> ***Data Plc. develop their market learning capabilities by effective distribution, extending on their network of users and integrating with other distributors.***
>
> ***Data Plc. develop their network learning capabilities by recruiting talent, having a quality brand identity, collaboration and learning from their network.***
>
> ***Data Plc. develop their internal learning technical capabilities by adding talent, high performance, shared brand identity, innovation, collaboration and share knowledge from internally and from their network with minimal bureaucracy.***

As discussed in chapter 0, their development of their market learning capabilities was limited, but functional as were active in their network. The development of market capabilities was further limited with the decision of revoke the hiring of a community manager, and instead hire a technical quality assurer. This led me to speculate that if may be more comfortable and familiar to hire a technical person, as Data Plc. is highly developed in this area and know well

what they should look for. They also stated that we don't need marketing, but we need sales, as the manager is confident that he knows the market well. I find this approach contradictory, as we get into a "chicken or the egg" situation. That may be more comfortable building on your current skills, than develop a skill in something new and unknown.

The development of their network capabilities was moderate as utilization of the network by users, consultants and extension of their network by integrating with other complementary suppliers. Dow et al. (2017) found that marking robust network relations reduce risk. I found that the dependency of the manager decreased, and their dynamism increased, as new formed connections from team members were not dependent on the manager. This finding is expected, as Gerschewski et al. (2015) also found this relation in his research.

The development of their internal capabilities was high and incremental on their technical side, as they already possessed most of the capabilities audited and they kept investing in capabilities. As discussed in chapter 2.3.3, Weerawardena et al. (2015) argue that significant investments in research and development form the basis of rare and high-quality products that result in an product advantage as your product cannot be copied easily by competitors.

The development on their internal organizational side was on purpose non-existent, following their strategy of keeping the bureaucracy at a minimum. This approach is also supported by Efrat and Shoham (2012).

In the life-cycle of the company, I concluded that they are entering the commercialization stage, and according to Osawa and Miyazaki (2006) they entering the "Valley of Death", where your expenses rise as your funding dry up as you ramp up your expenses in your commercialization. It is expected as you expose the organization to change, here as your mature to commercialize a product, your will develop and accumulate experience and capture it to added capabilities (Helfat & Peteraf, 2003). Some capabilities will retrench while others will need renewal or recombination, and even new ones will emerge. I found Data Plc. to experience that the developed capabilities, such as software production, was in a stage of renewal and recombination, while others were new, such as commercial collaboration with LMS suppliers.

Dynamism pattern

From the above findings I found an interesting pattern. From my findings, it indicates that there is a correlation between current capabilities level and capabilities in the progress of being developed.

Highly developed capabilities	->	High/Incremental development of capabilities.
Developed capabilities	->	Moderate development of capabilities.
Underdeveloped capabilities	->	Low development of capabilities.

As market and internal organization learning capabilities and market learning capabilities were underdeveloped before entering commercialization, there development of these continued low going forward. For network learning capabilities that was developed at commercialization, the further development of the network learning capabilities there is a moderate rate. For the highly developed capabilities internal technical learning capability, the growth of development was high and incremental.

This indicate that the lower capabilities development level you have, the slower your capabilities growth is. At a moderate capabilities level, your capabilities grow steadily. At a very high capabilities level, your growth is high, but incremental.

I suggest that when your capability level is low, and a low amount of resources is allocated, your capabilities development will remain low. At a moderate capabilities level, you are actively adding new capabilities you don't have and build on the ones you have, your capabilities will grow. At a high capability level, you are mature, and continued development of capabilities will be incremental, as you already are developed. This pattern can be explained with that you are more comfortable continue doing what you are good at and stay away from the unknown. This strategy of enhancing your core competences and unique resources is one of the traits of Born Globals (Hitt et al., 2009).

In Data Plc.'s case they deliberately stay away from organizational bureaucracy, as they don't see it as a good investment at this point. There is more concern on the market learning capabilities, where capabilities were not developed even it was identified a need, both in contract matters, legal matters and an increasing lead backlog. According to Data Plc. this was not needed at that stage, as their statement was that "we don't need marketing, but sales", as they were busy working the network first.

I found that capabilities intersect with each other, and I found it difficult to distinguish borders between the capabilities. One developed capability can be utilized as a complementary capability in another. Customer connectivity in your network is also a learning experience for your market capability, as you learn about your potential customer by being active in the network. Also, collaborating with their LMS suppliers, where Data Plc. can distribute their software, they gain technical knowledge to learn the technology the LMS supplier use.

Results on time of entering the commercialization stage and the development of learning capabilities indicates that the transition from development to commercialization is a period of transition rather than a clear stage change. Even you release a commercial software platform, the capabilities audit results on capability development level indicate that you necessarily haven't moved the company to the commercialization stage at that same moment. This is supported by the fact that their sales after launch did not explode overnight as they hoped for. Instead there was a steady inflow of contracts from their network, while the bigger ones stalled. The last interview was still early after launch, so it won't give any definite answer, but it can give an indication that their capabilities were not prepared for commercialization when moving into the commercial stage.

6 Conclusion and limitations

Less than half of Born Globals survive their first years. While there are many external factors a Born Global can't control or influence, there are still internal factors which they can control. You can control which capabilities to develop to respond to threats, challenges and opportunities.

This paper expands on how a Born Global develop their capabilities in market learning, network learning and internal learning around the time of the launch of their first commercial product.

The research consists of a capabilities audit to find if their capabilities developed as the skills needed changed around the period they launched their product. First, I conducted a starting point to find the current status of their capabilities, and then followed their transition from product development stage to commercialization stage.

I found that the current development level of capabilities from one organizational area to anther was different at the time of entering the commercialization stage. The same pattern of capability development continued into the commercialization stage.

This indicate that the lower capabilities development level you have, the slower your capabilities growth is. At a moderate capabilities level, your capabilities grow steadily. At a very high capabilities level, your growth is high, but incremental.

The results on capability development indicate that your capabilities necessarily are not aligned to be ready to be a commercial company at the same time as you start a commercial offering.

6.1 Limitations

Limitations in this study exist, as discussed in chapter 3.4. This is a longitudinal single-case study where interviews were conducted with only the manager of the company, and further with observations and internet articles about the company.

For the construct validity, my perception of the behavior in the observations can't be validated, as I am no expert on human behavior.

For internal validity, the interference I had as the researcher cannot be excluded as I am no expert in conducting interviews.

For external validity, the method of analysis of qualitative data with a capability audit is based on my interpretation on the answers towards the theories used. The research had an anonymity contract, my sources regarding the company har a further limitation that these sources can't be credited or discredited.

6.2 Managerial implications

To predict what capabilities a Born Global should focus to develop at a given time in their life-cycle is complicated, as there are many sources to consider. Your external interests, which market you operate in and what resources you have available. Internally you must find what resources and capabilities you have before you can address where you should allocate resources to increase your desired capabilities.

For further research, I suggest that the found correlation between current capabilities level and capabilities in the progress of being developed is further investigated in a qualitative study.

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Appendix

Interview guide

Interview general section – only asked in the first interview.

	General questions	
	What is Data Plc.?	
	Age of company?	
	Industry sector?	
	Key product?	
	Where is your location?	
	How many employees?	
	How are your financial resources?	
	Locations?	
	Physical assets?	
	What is your technology?	
	How are you organized internally? (org. chart)	
	How did Data Plc. start - the idea behind?	
	Export sales/domestic sales?	
	Which countries are you involved in today?	
	What is your market entry strategy, and why?	
	How do you identify partners?	

	Did you know your market at the start of the company?	
	Would you describe yourself as a Born Global?	
	Manager	
	What is your position?	
	Did you start the company?	
	Your education/background?	
	Age?	
	Do you have an ownership stake in the company?	

Interview capabilities audit – asked for every interview

	Organizational	**Questions**
1	Talent	Do the employees you have today the talent that is required to follow through your strategy?
		How do you recruit people?
		How do you motivate people?
		How do you keep employees in the company?
		How to you get rid of people?
2	Speed	Can you move quickly to make important things happen fast? - How?
		How do you turn around when a problem arises?
		What do you do when you experience a dead end?
3	Shared mind-set and coherent brand identity	Do you have a culture or identity that reflects what you stand for and how you work?
		What does your customers think about the company?
		What does your employees think about you?
		What does your competitors think about you?
4	Accountability	Does high performance matter to the extent that we can ensure execution of your strategy?
		Are you demanding to your employees?
		Do the employees see you as demanding?

5	Collaboration	How well do you collaborate to gain both efficiency and leverage?
		Do you feel you all work as a one team?
		How do you exchange information between yourself internally?
		How to you communicate with remotely located employees?
		How to you communicate with your customers and users?
		Conferences?
6	Learning	Are you good at generating new ideas?
		How do you train your employees?
		How do you share ideas?
		How do you share knowledge?
		How do the employees increase their knowledge?
		How do you incorporate ideas into the company?
7	Leadership	Who makes strategic decisions?
		Who decides what?
		How is your relationship with the board of directors?
8	Customer/Network	Do you form enduring relationships of trust with targeted customers?
		How do you nurture satisfied customers?
		Do do you handle unsatisfied customers?
		How do you manage your customer contact? Who? How?

9	Strategic Unity	Do our employees share the strategy on how they behave, conduct themselves intellectually and by procedure?
		Are your employees aware of the company strategy?
		Do you feel that the employee work with the strategy in mind?
		Do you promote the strategy?
10	Innovation	Are you innovative? If yes, how?
		Are you innovative is your product offering?
		Are you innovative in your sales promotions?
11	Efficiency	How to you control development progress?
		How do you control organizational tasks?
		How do you conduct HR tasks?
12	Quality	What is quality for you?
		What is quality for your employees?
		What is quality for your customers?