

The individual innovator as a resource within the organization

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Abstract

This thesis is written within the field of innovation management. My topic was chosen based on literature from Gibson and Birkenshaw, and from working eight weeks as an intern in Telenor research department. I wanted to look into the individual innovators in big companies. The goal of this thesis is to identify advantages and disadvantages of giving the individuals freedom to innovate within a large company. I also try to find positive qualities that are useful in individual innovators, and take a look at the structure of a company that uses contextual ambidexterity as a strategy.

The most central theories covered in this thesis are open innovation, exploration, exploitation and ambidexterity, which are balancing exploration and exploitation within a company.

I have used a qualitative research method. The case study is a single case study, where I have interviewed seven employees, including managers, developers and designers, in two big companies in Oslo. The two companies are Telenor and Verdens Gang (VG). I have used my internship in Telenor as an observation study. Then I have read articles related to the topics. All the data was systemized into categories. By employing pattern matching of my empirical data, a conclusion has been reached.

I used my insight gained from the analysis and discussions part to answer my research questions. My main findings to my research questions were: that individual innovator bases his research on interests and motivation for innovating.

He seldom works alone. He tries to collaborate internally or externally with other skilled people, that he has a good chemistry with.

There is a possibility of raising an individual's intelligence by letting the employees explore. This might lead to better innovation performance in the future.

I also looked into the management for handling contextual ambidexterity. Here I identified that they need to show interest in the exploratory work being done, and reward the ones that put effort into exploring. They should be part of the arrangement of exploring as well, to drive the motivation of the employees.

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1 Introduction

1.1 Problem area

A study done by Devan in 2005 showed that only few enterprises survived during a period from 1984-2004. The study showed that lack of adaption to market changes was the main reason for failure or poor performance. Several books and articles talks about this topic, but still companies fail for just this reason. As companies get bigger and older, the complexity of their structure and system will increase and, as a result, they will be resistant to changes (Tushman & O'Reilly, 1996).

In a fast changing market, the adoption to new markets and industries become critical for survival.

To be able to adapt to this market changes, organisations have to exploit and explore new markets.

Two terms that are discussed wildly in the survival of enterprises is open innovation and ambidexterity. Open innovation helps the firm to explore by having other collaborators help them with innovation. Traditionally all the exploring in a company was done in-house in a R&D department. Today information is passed so quickly that information-sharing groups can bypass a secretive group innovating on their own. The costs of innovating is much higher today that for ten years ago. At the same time, customers demand more from the producers of goods. To cope with these high costs, open innovation can create opportunities for cost sharing models of doing expensive exploration work. Employees are shifting jobs at a higher pace than before, this leads to knowledge spreading around at a faster speed and, the individual worker builds up large networks within their field of work.

Open source coding is a good example of the above perceptions. Developers are collaborating across the web on creating better code. This can start from individual pioneers or from a company. Social networks are helping finding collaborators to build upon these codes, and the product can be free for other companies to use. The result can help them build a new business out from the code. By doing so they help growing the community of the code and improve it better in the end. Varnish, an open source code is an example of that. VG developed it, and released as an open source. Today Facebook, twitter, Wikipedia and most of the biggest sites on the web are dependent on that code.

Ambidexterity addresses the firm's ability to both do exploitation and exploration at the same time. According to Tushman, a company that has an ambidextrous structure has a much higher survival chance in a fast moving business world. The average life expectancy of a multinational corporation is 40 years; the average person will outlive these big corporations. Both Kodak and Polaroid had an ambidextrous company. Their R&D used millions of dollars, at the same time they were masters of exploiting their markets. They both had developed state of the art digital cameras at the beginning of the digital camera era. Still they failed. So there is not enough with implementing ambidexterity in a firm, the leaders need to act on it as well. Ambidexterity theory puts the finger of the difficulties of handling both exploration and exploitation. One type of strategy might work for one company, while another fails implementing the same strategy. The hardest part for managers to day is to grasp the importance of exploration, at the same time accepting the cost tied up to exploring. The ones succeeding in this balance has the chance of becoming the company of tomorrow, with a life expectancy above 40 years.

In 2004, Gibson and Birkinshaw introduced the term contextual ambidexterity. Explorations on the individual level, by having the individual in a company innovate on their own initiative for the company. After Google implemented an innovative structure based on contextual ambidexterity, several others have followed their example. Google let their employees have one day a week to work on their own projects.

In Norway, both VG and Telenor are using similar innovation structure. VG is giving their employee a 10% of their working time to use as they please. Telenor give their researchers a 20% part of their working time for more self-defined projects, but they must follow Telenor's strategic structure, and have to deliver results in the end.

In this paper, I am exploring the efficiency of the contextual ambidexterity, by looking into the innovation process on the individual level. Companies tend to follow the big success stories of other companies. Norms and structure of companies are very different, so just copying what others do does not necessary lead to success on its own. Therefore, I think the companies need some structure to handle contextual innovation. I am looking through literature on open innovation, exploration, exploitation, innovation, and different takes on ambidexterity. I have interviewed five employees from VG and two employees from Telenor research department. I worked as an intern for 8 weeks at Telenor in October 2014, which is a foundation for my observation analyse.

1.2 Research question

The purpose of this thesis is to look deeper into the innovation on individual level. In the modern world of business, innovation is a key to success. Some companies has success with one model or strategy and other follows. There are many opinions on how to optimize your company's strategy for innovating. Based on the difficulties with achieving ambidexterity in a firm, I want to take a closer look at the individual doing research in big companies. I have the following research questions:

What are the advantages and disadvantages of giving the employees the freedom to innovate on their own initiative?

Is there any specific quality that makes an employee better to innovate at an individual level?

What sort of company structure needs to be in place to get the most out of contextual ambidexterity?

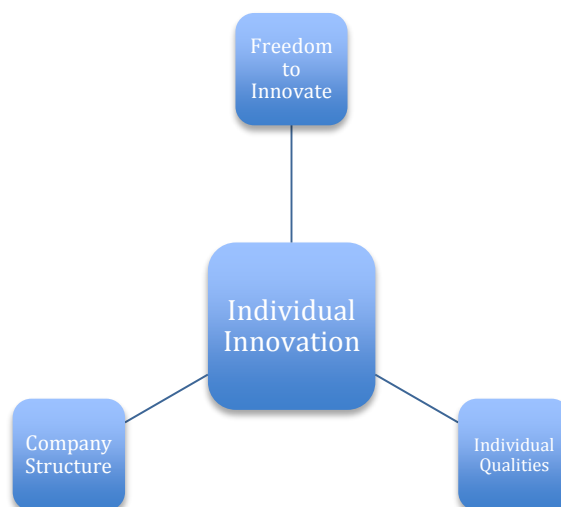


Figure 1 Research question structure

2 Literature review

How can a company achieve innovation? Since the 70 s scientists has tried to come up with the right answer to this. In 1976, Duncan introduced the term ambidexterity and in 1996, O'Reilly and Tushman started their well-known research on the topic. In 2003, Chesboroug introduced the term open innovation. Both ambidexterity and open innovation has grown from little known terms to well-known terms within innovation circles. With the literature review, I want to bring light on the topics related to my research questions.

I have identified several key topics that help me reach a conclusion of my research. I have looked into innovation, exploration, exploitation, open innovation and approaches to achieve ambidexterity.

2.1 Innovation

“Innovation is the successful exploitation of new ideas”

- Innovation unit, UK Department of trade and industry (2004)

Innovation is what drives countries and companies forward. It gives the edge for survival to new businesses. Innovation is a new idea, device, process or service. According to Tidd and Bessant (2013), several aspects of innovation exist.

Incremental innovation; this is the most common form of innovation. This is the classic innovation that happens in most R&D facilities in big companies. Improving what already exists, to be ahead of the competitors.

Disruptive innovation, also called revolutionary or exploratory innovation; sometimes a disruptive innovation hits the market. This type of innovation can change whole industries. A disruptive innovation often comes from another industry than the one it disrupts, with the intention of exploring new market possibilities by inventing new solutions. It is known that several discontinuous innovations comes from serendipity; scientists researching one topic in one domain, but “accidentally” discover something that changes a different industry. One example being Rangaswamy Srinivasan, who was experimenting on what the excimer laser was capable of doing. He found out that it could do clean cuts in flesh, but if it were not for his colleague who had some knowledge in the medical field, they would never have followed

this through and creating the laser that perform eye surgery today. The technology development is shifted from the current industry to a new trajectory. Another notation for this type of innovation is radical innovation, do something different (Tidd & Bessant, 2013). Several radical innovations came out from the digital era. To mention some: Digital cameras took over from analogue. Streaming music made the CD obsolete, post cards substituted by email or Snapchat. Radical innovations may create new market opportunities, but they could also damage customer demands in the existing market, and cannibalize or be in direct competition with existing products (Smith and Tushman, 2005).

Architectural innovation can be seen as innovation in a larger system. On the modular level in a system, incremental innovation is the major force in excelling the system further. Sometimes a change on the modular level changes the whole architecture of the system, hence architectural innovation (Tidd & Bessant, 2013). The touch screen of the smart phones changed the architectural system of the cell phone. The smaller components in the pc, made it possible to create the laptop. It can be difficult to differentiate between architectural and radical innovation, because an architectural innovation can also change a whole industry.

Innovation is not only products. According to Tidd and Bessant there are four dimensions of innovation space; innovation in product/service, process innovation, position innovation and paradigm innovations. Most innovations happen inside the product/service space, but after Internet, many changes have come out on the process and position side of innovation. Some stores have changed their process to sell most of their goods online instead of their physical stores. Positions innovations are companies that change their position within their industry or goes into another industry. This could be serving a high-end customer segment and change to the low-end.

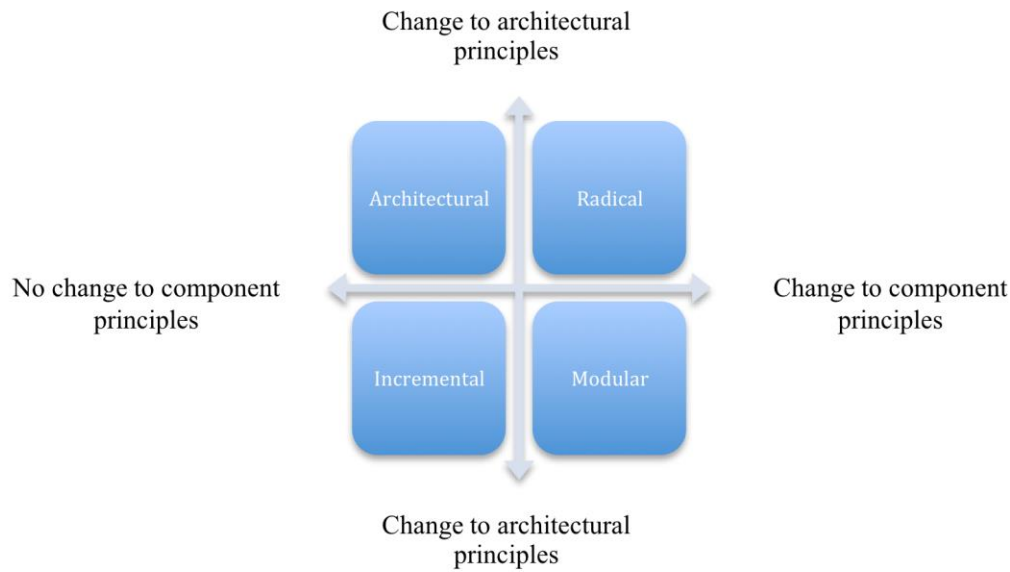


Figure 2 Henderson & Clarke model of innovation.

2.2 Exploration and Exploitation

“Exploration is rooted in activities and focuses on learning by doing and trial and error, whereas exploitation is rooted in disciplined problem solving and learning before doing.”

-Smith & Tushman, 2005

One related concept to ambidexterity is exploration vs. exploitation. Surviving in changing environments need adaptation which requires both exploration and exploitation (March, 1991). According to March (1991), exploration is more about activities such as innovation, risk taking, experimentation, flexibility, discovering and variation. Where exploitation includes refinement, choice, production, efficiency, implementation and execution. For the firms it is crucial to consider both sides: exploring new possibilities, knowledge and technologies, and on the other side exploiting the current and existing sources and knowledge (Soosay & Hyland, 2008).

Managing to have both concepts is difficult because these two are associated with fundamentally different organizational architectures, processes, competencies and logic (Smith & Tushman, 2005).

Exploration is rooted in activities and focuses on learning by doing and trial and error,

whereas exploitation is rooted in disciplined problem solving and learning before doing. Where exploitation builds on an organization's past, exploration focuses more on future that maybe quite different from the organization's past (Smith & Tushman, 2005). As a result, managing both exploration and exploitation creates paradoxical challenges and tensions (He & Wong, 2004). In order to overcome the challenges companies need to allocate their resources between exploration and exploitation and see them as complementary not substitutes.

Focusing too much on exploration drives out efficiencies and will not let company learn by doing and gaining economies of scale (He & Wong, 2004). Focusing more in existing procedures drives inertia and makes the companies less aware of targeting new possibilities, trapping them in routines (March, 1991). A good example of this is the article "Gunfire at sea" by E. Morison. The American navy is a long lasting company. In the 1900, Admiral Scott invented a superior invention to aim guns at sea. Together with Lieutenant Sims, they showed this invention to their officers in charge. Their officers did not accept their invention. The reason for this was that the people on the top did not like changes. Sims then sent a letter to the President, and the President forced the navy to implement the changes. This is one of many examples where the routines and norms of a long existing company put them in an unfavourable position. Another example is Polaroid business model of selling expensive film. The focus on their exploitative model of income made them turn down the digital cameras, because they could not follow the same model of income.

The more a company focus on the exploitative activities the harder it is to change. Exploitative activities generate income and better experience on what they do. Therefore, it is easier to defend and it looks better on paper. The result of exploration is often highly uncertain and distant in time, but the benefits if successful, are regarded as highly important for further development of an organization (He and Wong, 2004).

Whereas exploration is a costly process, it is difficult to measure the benefits for the company, unless they come up with something revolutionary, like the iPhone from Apple. Millions of dollars was used in the research phase of the iPhone, and it as well worth it. If that have been a failure Apple would not had such a strong position today.

Both exploitation and exploration are associated with innovation and learning, but have different types (Gupta et al., 2006). Exploitation is related to incremental innovation. The more knowledge a company has of their industry, and the more efficient it is, both in implementation and execution gives the company a strong leeway for incremental innovation.

Look at how computer processors are made today. The producers have massive knowledge, based on their long history in the industry. They are efficient, everything is automated, and they are fast at implementing and executing new processors to the market. Every half to one year a new processor comes out. It is not revolutionary better, only incrementally. Most innovation is incrementally (Tidd & Bessant 2013), and most companies are exploitative. An organization often uses exploration to achieve radical innovation (Andriopoulos and Lewis, 2009). When exploring the companies need a different strategy. They need to know what they are looking for, or they can explore new untried territory.

O'Reilly & Tushman (2004) have proposed a framework for the juxtaposition of exploitation and exploration, as shown in Figure 2.

Alignment of:	Exploitative business	Exploratory business
Strategic intent	Cost, profit	Innovation, growth
Critical task	Operations, efficiency, incremental innovation	Adaptability, new products, breakthrough innovation
Competencies	Operational	Entrepreneurial
Structure	Formal, mechanistic	Adaptive, loose
Controls, rewards	Margins, productivity	Milestones, growth
Culture	Efficiency, low risk, quality, customers	Risk taking, speed, flexibility, experimentation
Leadership role	Authorities, top down	Visionary, involved

Figure 3 Framework for the juxtaposition of exploitation and exploration

2.3 Open innovation

“We define open innovation as a distributed innovation process based on purposively managed knowledge flows across organizational boundaries, using pecuniary and non-pecuniary mechanisms in line with the organization’s business model”

-Chesbrough and Bogers, 2014

Some years back innovation was looked upon as something only the big companies had resources to do. Internal research was a strategic asset and a barrier for competitors to overcome (Chesbrough, 2003). This is looked upon as the closed model of innovation. Everything is done internally in the company, and little or no information of what’s going on is getting out. This was typical for big companies like Xerox, Bell, AT &T, etc. Then during the growth of IT, innovation changed. Smaller companies without any research department of their own grew to become enterprises. They were very innovative, but their technology was based on others discoveries (Chesbrough, 2003). The innovating companies were facing a paradigm shift. This shift is what Chesbrough called the change from closed innovation to open innovation.

Chesbrough (2005) argues that there are eight points that differ from previous theories when managing innovation. He concludes the differences as follows:

1. *Equal importance given to external knowledge, in comparison to internal knowledge.*

Earlier innovation was done in house, and did not pay much consideration to what was going on outside the firm. In open innovation, one should pay as much notice to external knowledge as to internal.

2. *The centrality of the business model in converting R&D into commercial value.*

The old way was to secure the smartest inventors, and have them come up with the next big thing. In open innovation one should pursue this bright people both inside and outside the firm. This should be done through a mixture of channels.

3. *Type I and Type II measurement errors in evaluating R&D projects.*

Earlier the evaluation of Type II errors (false negative) was hard to notice. If a company researched something that did not fit the firms strategy it was discarded or put on the shelf, only for other companies to explore it or an employee quit and pursued it on his own. In open

innovation this verification of an innovation will come from other associates or industries, decreasing the errors of false negatives.

4. *The purposive outbound flows of knowledge and technology.*

Open innovation enables an outward flow of technologies. By doing this, innovations that lack a clear path to the market can find it externally. These externally channels have to be managed as real options.

5. *The abundant underlying knowledge landscape.*

In closed innovation knowledge is difficult to find, and risky to rely on. In open innovation useful knowledge is widely circulated and of high quality. These sources extend to start-ups, small companies, specialists, universities, retired technical staff or graduates.

6. *The proactive and nuanced role of IP management.*

Instead of using IP as a defensive strategy to avoid stalling of innovations. IP in open innovation will flow in and out of an organization on a regular basis. Sometimes it can be given away just to enhance the process of an innovation.

7. *The rise of innovation intermediaries.*

These third parties that specialize in information, access, and financing the transaction of innovation between firms shows a demand for open innovation.

8. *New metrics for assessing innovation capability and performance.*

The approach for measuring the performance of the innovation procedure changed. Instead of looking at money used on R&D, and how much earned from new innovations. One will look at the whole value chain, time to market, percentage of innovation outside the firm, etc.

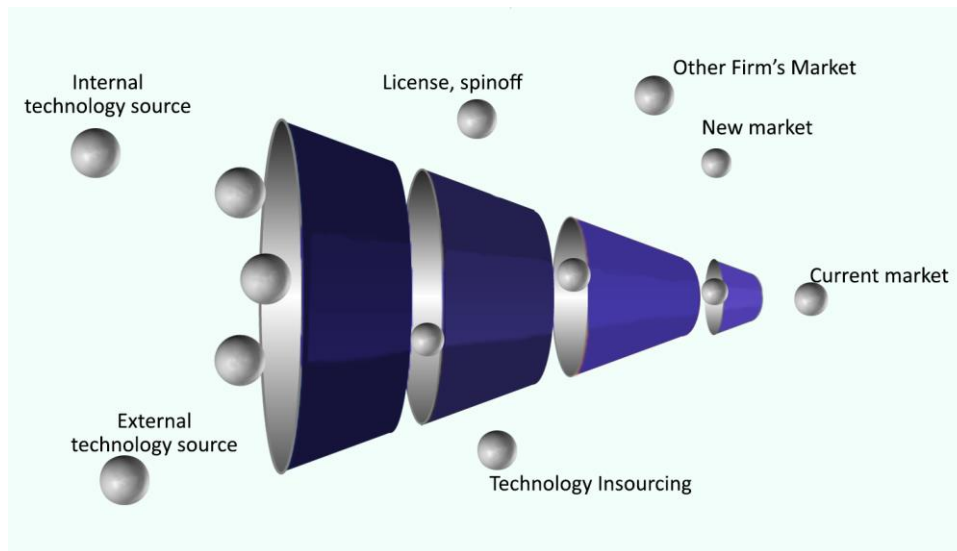


Figure 4 Open innovation funnel, Chesbrough (2003)

Other factors that opens up for open innovation is the number of available skilled workers, the increasing production capabilities of external suppliers, and the growth of venture capital. In 2007, Chesbrough points out another problem concerning closed innovation. Investment in a successful product has risen up more than ten-fold from just a decade earlier, and the expected life cycle of new products has gone down as well. This forces companies to stop innovating (Chesbrough, 2007).

To battle this and make companies innovate more Chesbrough argues that open innovation is the solution. He believes the business model of companies needs to be experimented on. The firms need to develop a process for experiment and assessing their result.

Open innovation offers several advantages to a company. Reduction of cost linked to R&D, bringing in the customers at an early stage, increased marked accuracy, better synergy between internal and external innovations, and better possibility for viral marketing (Marias & Schutte, 2010).

Marias and Schutte (2010) has identified five models for open innovation.

1. *Platforming*

By developing and introducing a partially completed product, the company can involve other actors to build further on the platform. The purpose of the platform is to provide a framework or tool-kit for contributors to access, customize, and exploit. The goal of the platform creator

is to get the contributors to extend the platform product's functionality and increase the overall value of the product for everyone. Platforming is used widely in the IT sector, where some companies develop a software platform or interface that others can build on. A good example is how Apple gives out the framework, for companies to produce apps they sell through Appstore.

2.Idea competitions

Idea competitions can be offered out to the public or just inside the organization. Rewards can be given based on submission or rewarding the best idea. The structure of the competition can be controlled by the amount of information that is given out, the purpose of the competition and the channels it is distributed.

3.Customer immersion

This can be seen as an extension to focus groups. Usually it is used towards the end of the product creation, but can be implemented at an earlier stage. Customers input to expectations and requirements are brought into the pipeline of creating a product. The company decides on the level of openness. An organization might want to bring in lead-users. Well-known examples are Google Gmail and Nokia Beta-Labs.

4.Collaborative product design and development

The technique of increasing the importance and responsibility of suppliers and customer's role in the product design process and supply chain.

This model differs from platforming in the sense that the products offered in the end to the open-market is finalized and controlled by the organization, whereas platforming let the collaborating companies finalize their own products.

The advantage of this lays in reducing development costs of the product, as certain parts are produced and provided by the collaborators and gives the organization better control of the whole process.

5.Innovation networks

Innovation networks are used to find solutions for more specific technical problems within a product design process. Known commercial examples are Innocentive, Ninesigma, and YourEncore. These web-based communities all provide organizations with a group of solvers.

Open innovation has certain disadvantages and risks. The greatest risk of open innovation is the possibility of giving away intellectual property not intended for sharing, which could

decrease organizations competitive advantage. Other disadvantages are increased complexity of controlling innovations and identify and incorporate external innovations (Marias & Schutte, 2010).

On the other hand specialized organizations that outsource innovation and focus on exploitation can be more competitive than ambidextrous organizations (Ferrary, 2011).

2.4 Approaches to achieve ambidexterity

“Ambidexterity is the ability to simultaneously pursue both incremental and discontinuous innovation and change.”

-Tushman and O'Reilly

2.4.1 Structural Ambidexterity

Structural ambidexterity, also called architectural ambidexterity refers to solutions of how to handle dual organizational structure and strategy to differentiate between exploration and exploitation. In these solutions, the organization creates separate structures, which pursues and focuses on a different activity. For instance, some units are working on alignment and exploitation while others such as R&D and business development are focusing on activities such as adapting to new environmental changes and exploration (Birkinshaw & Gibson, 2004).

According to Gibson and Birkinshaw there are two kinds of such structural ambidexterity; “task partitioning” and “temporal separation”. Other researchers refer to task partitioning as spatial separation or dual structures, and temporal separation as temporal partitioning.

By task partitioning the units are divided between exploitation and exploration related tasks, while by temporal separation whole units are involved some times in exploratory activities and some other times in exploitative tasks. The work units that focus on exploration adopt an organic structure, while the work units that focus on exploitation adopt a mechanic structure (Gibson & Birkinshaw, 2004).

Mechanical structures rely on standardization, centralization, and hierarchy and support efficiency, where organic structures supports flexibility.

The exploratory units are often small and decentralized, while the exploitative units are larger and more centralized with strict company norms and processes (Benner & Tushman, 2003).

The core business of a firm has the responsibilities to exploit existing opportunities and get the most out of today's market. The R&D department and the business development unit will work on exploring new markets, developing new technologies, and following trends.

By studying these units Birkinshaw and Gibson discovered that separation in some cases could lead to isolation of the business developers and R&D unit. When that happens they might struggle to convince the rest of the organization to implement their findings. These separations can lead to silos where little knowledge goes between the different units.

Temporal separation is a structure in which an entire unit focuses on one set of tasks one day, then on a different set of tasks the next day. (Gibson & Birkinshaw, 2004)

Temporal separation allows exploitation and exploration to be worked on by the same business unit.

The management should decide when to work on exploration or exploitation, and separate them by allocating different time. The length of the time is variable depending on what seems fit. According to some research of comparing temporal separation with task partitioning, exploitation and exploration is best managed through task partitioning. The reason for that is due to the organizational unit configuration and specific needs of its task environment (Gibson & Birkinshaw, 2004).

Structural ambidexterity allows the demands for exploitation and exploration to be met within an organization. The only constraint is that the strategy relies on structural solutions, which require managers to divide resources between groups and/or periods to meet the different needs. (Gibson & Birkinshaw, 2004) This is one of the reasons why management's behaviour is so crucial in an ambidextrous company structure.

2.4.2 Sequential and parallel ambidexterity

Ambidexterity may be achieved through sequential attention to exploitation and exploration or simultaneous practice exploration and exploitation (Gupta, et al., 2006). The sequential approach of exploration and exploitation is a useful method in certain situations; it suits best on the assumption that the rate of change in markets and technologies proceeds at a slow pace that permits firms to choose organizational alignments sequentially. (O'Reilly & Tushman, 2008). Tushman and O'Reilly (1997), argued that many organizations today experience a fast pace within their sector. This leads to the need for quick changes of their products, services and processes. To be able to cope with these demands, exploration and exploitation needs to be addressed in parallel, with separate business units, business models, and focused

alignment for each. It also demands different competencies, incentives, processes and cultures. The operation of two separate organizational alignments with different competencies, incentives, and cultures creates a tension between the different units. To battle this tension a set of values, vision and strategy that creates a common identity will significantly determent the success of the organization (O'Reilly & Tushman, 2008). Ambidexterity is complex and difficult to implement into an organization, the sequential approach is by far the easier of the two approaches, but there is no right or wrong. The firm need to see which strategy suits best for their organization and within their industry domain.

2.4.3 Contextual Ambidexterity

An organization needs to encourage discipline and stretch to push individuals towards ambitious goals, but it also needs support and trust to ensure that this happens within a cooperative environment (Ghoshal and Bartlett, 1994).

If an organization emphasizes discipline and stretch, an outcome can be burnout and disillusion among the employees. On the other hand too much focus on support and trust can create a “country club” mentality among the employees, where little work gets done. Discipline, stretch, support, and trust are interdependent, complementary features of organization context. Therefore all four must be present in order for an organization to become ambidextrous. More trust cannot substitute for a lack of discipline.

When a supportive organization context is created, individuals engage in both exploitation-oriented actions and exploration-oriented tasks and this results in contextual ambidexterity (Gibson & Birkinshaw, 2004).

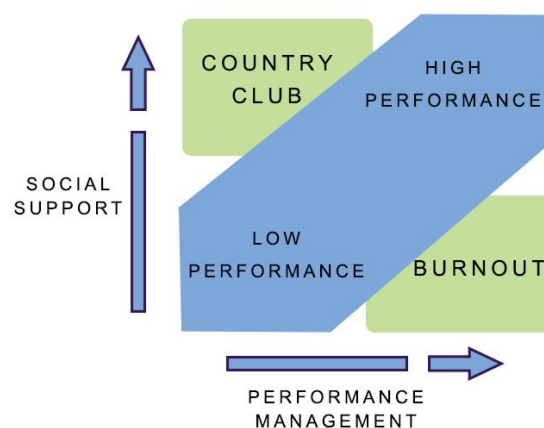


Figure 5 Four types of organizational context, Gibson & Birkinshaw, (2004)

Gibson and Birkinshaw (2004) identified four ambidextrous behaviours in individuals:

1. *Ambidextrous individuals take the initiative and are alert to opportunities beyond the confines of their own jobs.*
2. *Ambidextrous individuals are cooperative and seek out opportunities to combine their efforts with others.*
3. *Ambidextrous individuals are brokers, always looking to build internal linkages.*
4. *Ambidextrous individuals are multitaskers who are comfortable wearing more than one hat.*

These four attributes describe individuals who are motivated and informed to act without asking permission or support from their superiors or other colleagues. These employees encourage actions that involves new opportunities that are aligned with the organizations overall strategy. They look at the bigger picture of the organization, and act outside of their scope of tasks. This describes how dual capacity for alignment and adaptability can be brought into an organization at the individual level (Gibson & Birkinshaw, 2004).

Managers have a direct impact on how ambidexterity benefits the whole firm. To maximize the effect of ambidexterity the knowledge of all the employees must be easily accessible for all the managers, so they can combine the right knowledge within the organization (Gibson & Birkinshaw, 2004).

Contextual ambidexterity requires managers who hold function-specific knowledge to recognize how they can use another employee's knowledge that differs from theirs, and learn how specific knowledge domains can be used across the companies ranks (He & Wong 2004). This implies that managers have the possibility to develop new knowledge when they recognize differences between their own knowledge domain and that of colleagues specializing in other areas (Lane & Lubaktin, 1998). Individual managers in ambidextrous firms tend to refine both their own and others current practices and develop new strategic views in the course of the interactions they have with one another (Dougherty, 2008). An individual's ability to exhibit ambidexterity is constrained by the organizational context in which he or she operates; so contextual ambidexterity can be understood as a higher-order of organizational capability.

As noted by Subramaniam and Youndt (2005), "Unless individual knowledge is networked, shared, and channelled through relationships, it provides little benefit to organizations in terms of innovative capabilities."

2.4.4 External means to achieve ambidexterity

Some scholars point out that handling ambidexterity inside the organization is extremely complex, and easy to fail in the attempt (He & Wong, 2004). Due to differences in cultures and temporalities of exploration and exploitation activities, the two activities inside the same company are difficult to implement (He & Wong, 2004). Even Tushman and O'Reilly (1996) suggest that, in practice, few companies succeed at managing ambidexterity, because exploration and exploitation are fundamentally different logics.

As discussed above, open innovation combines internally and externally innovations. In this subchapter, I will look into the discoveries of using external methods of achieving ambidexterity.

Firms that relied on external technology, and searched actively for cutting-edge knowledge held beyond the boundaries of the organization were more successful in their new product introductions than firms that focused on internal technology sourcing (Eisenhardt, 1997).

The battle between the resources within the organization is one of the strategic decisions a company is facing when trying to achieve ambidexterity (He & Wong, 2004). According to Ferrary (2011) using an A&D strategy can decrease development time, and lowering the risks of innovation. Where R&D is mostly done in house. Acquisition and development is based on nurturing and following start-up companies. In Silicon Valley some of the big companies act as a VC to give seed capital to start-up companies that are interesting for them. They follow up on these start-ups, and if the start-up is successful, the company will acquire them. As part of this strategy, they also collaborate with other venture capitalists, to get a good overview of what's being innovated within their industry (Ferrary, 2011). Contracts, joint ventures and collaboration are devices that can be used by the firm to attach itself in social networks of an innovative cluster, like Silicon Valley.

For this type of strategy it seems that the location plays a big role. According to Ferrary, the time before acquiring a company is faster if the start-up and the buyer of the start-up are within the same geographical area. Of the total number of acquired start-ups, the amount of start-ups acquired within the same region is higher. Ferrary points out that for this strategy to work, the company has to have a structure that is tailored for implementing new companies into the existing one. The importance of incubators plays an essential role for organizations that uses A&D as a model to achieve ambidexterity.

2.4.5 Management and ambidexterity

Another issue that brings ambidexterity into the organizations is the behaviour of the managers. Their behaviour in the company is significant as they have great impact on organizational outcomes. Managers have to be involved in right decision making to overcome the challenges resulted from ambidexterity. Senior managers in an organization that strive to achieve ambidexterity have a big role to play. They are responsible for facilitating teams ability to perform and shape individuals behaviour (He & Wong, 2004). Managers should overcome the tension such as how to allocate resources between exploitation and exploration, and how to manage conflicts between employees.

According to Jansen (2008) three senior management factors would achieve a better ambidextrous organization; Shared vision, social integration, and group contingency rewards. In 2008 O'Reilly & Tushman presented five propositions that was aimed towards the senior managers. They proposed five aspects that would increase the likelihood of achieving ambidexterity.

- 1. The presence of a compelling strategic intent that justifies the importance of both exploitation and exploration increases the likelihood of ambidexterity.*
- 2. The articulation of a common vision and values that provide for a common identity increase the likelihood of ambidexterity.*
- 3. A clear consensus among the senior team about the unit's strategy, relentless communication of this strategy, and a common-fate incentive system increases the likelihood of ambidexterity.*
- 4. Separate aligned organizational architectures (business models, competencies, incentives, metrics, and cultures) for explore and exploit subunits and targeted integration increase the likelihood of successful ambidexterity.*
- 5. Senior leadership that tolerates the contradictions of multiple alignments and is able to resolve the tensions that ensue increases the likelihood of ambidexterity.*

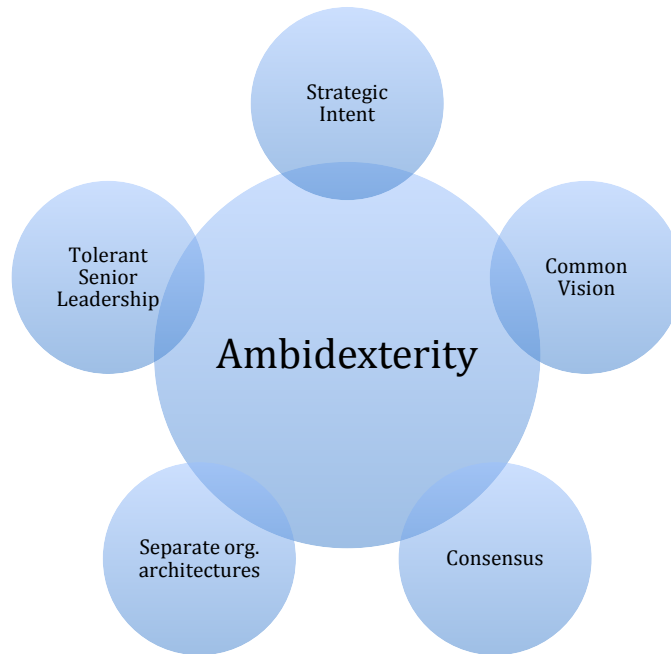


Figure 6 Five aspects that would increase the likelihood of achieving ambidexterity, O'Reilly & Tushman (2008)

In short they are saying that the senior management need a strategic intent, a common vision, agreement of the strategy, integration between the sub units, and the ability to resolve tension.

In the absence of an explicit strategy that justifies the experimentation of exploring, the default option is to focus on short-term profitability. Unless there is a clear and compelling explanation for the importance of both exploration and exploitation, the short-term pressures will almost always move attention and resources away from exploration towards the more secure exploitation (O'Reilly & Tushman, 2008).

A shared vision between the senior managers becomes a primary mechanism for handling conflicts that arise from senior team members occupying multiple roles with potentially incompatible expectations. Shared values and collective goals are associated with integrative and synergetic behaviours through which senior teams balance requirements for resource allocation to both exploratory and exploitative efforts (Jansen, et al., 2008). Sharing value and vision provides a common identity and adopts the long-term mind-set, which is important for exploration. So, business units within a company are more likely to collaborate instead of competition (O'Reilly & Tushman, 2008).

Neither exploration nor exploitation can be seen as more important. There has to be an agreement between the management that they are equally important. Without this agreement

of the vision and strategy, there will be more conflicts and less information exchange. Which will lead to a weak respond to external changes (O'Reilly & Tushman, 2008).

Socially integrated senior teams have related abilities as increased negotiation, compromise, and collaboration across organizational units. Members of socially integrated senior teams are expected to work harder to recognize opportunities for combining exploratory and exploitative activities (Jansen, et al., 2008). Tushman and O'Reilly points out that integration between the units of exploration and exploitation will make less tension between management when distributing resources.

Jansen points out the use of a senior team contingency reward. By giving the senior teams a reward based on how well the organization is doing as a whole instead of individual rewards. This way the different units has a better incentive to work together

De Clercq, Thongpapanl and Dimov (2013) argued the effect external and internal rivalry had on the effect of contextual ambidexterity. According to their research a high internal rivalry would hamper the flow of contextual ambidexterity in a firm. Where a high external rivalry would boost the contextual ambidexterity. In conditions of strong internal rivalry, managers may hold back knowledge with competing functional areas, like the tension between exploration and exploitation units, which prevents them from gaining access to new knowledge or integrating their own knowledge with that of others. Individual managers might hesitate to share their own function-specific knowledge with others, for fear that competing colleagues could benefit from their knowledge, but they may also reject the use of others knowledge, because by using their knowledge could increase the value of that knowledge in the eyes of the organizations key decision makers (Gupta & Govindarajan 2000).

On the other hand, high external rivalry may bring managers together, from different units. The external threats motivate them to share knowledge with each other, hoping to defend the company from the outside threats (De Clercq, et al.,2013).

3 Method

In this chapter, I will present the methodology I have used, and explain why I chose a qualitative research strategy, and a case study research design.

I will also explain what I have done to examine key points of analysis.

My case is a single case study, with focus on the individual employee working with innovation in a big company.

3.1 Unit of analysis

According to Yin (2009) the case study method requires the researcher to identify a unit of analysis connected to the central problem of defining the case itself and the environment in which the research is conducted. My unit of analysis is the individual innovator in big companies. I have built my case around two big Norwegian companies and their employees. Both of the companies let their employees participate in the innovation in their company, based on the individual interests. By choosing two companies instead of one gave me a better overview of the individual innovator, and it gave me answers not necessarily biased by company culture.

3.2 Data collection

When collecting data for a case study one should use multiple sources of evidence to create a case study database, and maintain a chain of evidence (Yin, 2009). Using more than one source of data is called triangulation. By using triangulation a better results in more convincing discussions and conclusions is achieved (Stake, 1995). My main source of empirical data is the interviews, but to a more in-depth understanding of the individual contribution to the companies through contextual ambidexterity, I deduct relevant theory as a secondary source of theory.

I have created a database of relevant articles that addresses the topic I am researching. This is done by having a file structure of articles divided into folders based on the topic. I will also use my observation from working 8 weeks in Telenor as an intern as a valid source of evidence.

3.2.1 Sampling

Random selections are neither necessary nor even preferable in studies targeting to build theory from cases. The cases in such studies should be selected on foundation of their theoretical usefulness. The goal of theoretical sampling is to select cases that are likely to extend the emergent theory (Eisenhardt, 1989). One of the strengths of case study is the likelihood of generating a novel theory. As seen in my conclusion, I have touched upon an unexplored territory of contextual ambidexterity that is deducted from a case study. The criteria's in this thesis for deciding on company and employees to interview was based on the following: Availability, innovation level, and contextual ambidexterity. To be able to conduct my interviews within the timeframe of my thesis, I needed to be able to access the employees of companies that matched my criteria's. That meant I was looking for companies within the Oslo region in Norway. I identified innovative companies with a contextual ambidexterity build into their strategy, by checking the web and talk to people. I had a list of five possible companies; Telenor, Finn, VG, Cisco and Opera. I was looking for two companies to participate in interviews. Both Telenor and VG agreed to do interviews, so my thesis are using the interviews from those companies as my data collection for further analyse.

Both VG and Telenor have a certain percentage dedicated for individual research. VG gives their employees the opportunity to work on self-made projects every second Friday, which amounts to 10 % of their work time. In Telenor the employee can apply for 20 % of their work time for working on innovative projects with ties to the organization's annual strategy report. Both companies are working with innovation, where Telenor having their own research lab are innovating more.

3.2.2 Interviews

The interviews were carried out in the offices of VG and Telenor in small meeting rooms. The interviews were semi-structured. I had a list of open questions I went through. Semi-structured interviews refer to a context where an interviewer uses an interview guide, but can vary the sequence of questions and ask further questions (Bryman, 2008). I decided on this technique, because I wanted the employee to talk as much as possible, and get them to feel relaxed about their answers. I found this technique rewarding in the sense that the employees know more than me of their company structure and work environment, and the semi-structured approach gave me some extra information I had not thought of. I did all the

interviews of the VG employees in one day. I used the snowballing technique to get all my interviews. I had one key employee that did the first interview, and then he recommended other employees. After each interview I got a recommendation for the next one to talk to. The interviews lasted on average 30 minutes. I transcribed all the interviews the next day, so that all the information would be fresh in mind. The downside of letting the employees speak freely is that they sometimes start talking about unrelated topics. This takes extra time, but I let them continue, because I felt that it was more important to keep the flow of the interview, and bring them back to the topics when suitable. The transcripts were rewritten into summaries, which can be found in section 4.2.

I believe I have obtained a representative sample, due to the wide range of responsibility and seniority, and by having middle management, senior management and regular employees among the interviews. The employees also include both developers and designers.

Although my sample includes more people with a developer background, since the Telnor research unit consists of mainly developers. Ideally I would have a better spread among the work tasks of the employees, to be able to identify differences in individual innovation contribution based on their field of expertise. I also have fewer interviews from Telenor, but since I worked 8 weeks in the Telenor research department prior to this case study, I feel that the insight I got during that period is equally valuable to this thesis.

3.2.3 Interview ethics

All the interviews were done in full confidentiality. I wanted the subject to talk freely about their company, without being afraid that what they said could be used against them. All the subjects that wanted to review the interview summary that is part of this thesis, received it by e-mail for agreeing on it for publication. I recorded all the interviews, and reassured that the recordings would be deleted after finalizing my work.

3.2.4 Archival Data

Background data was collected of both the companies before conducting the interviews. I analysed their web pages, and looked into the company structure. I read other relevant web pages about the companies, like Wikipedia. I talked to the head of the development department, and got him to send me some information about VG. This information was useful when designing the interview guide. I also had a PowerPoint presentation from Telenor research, which explained the hierarchy of Telenor group.

3.2.5 Observations

All the interviews were done in the headquarters of both of the companies. In VG I got a small tour to see how the employees were sitting. Previous to this paper, I had an internship at Telenor for eight weeks. This gave me good observations of their working place, and how they managed the daily tasks at the research unit in Oslo. During this period I talked to several of their researchers about the company structure and observed how they conducted research.

3.2.6 Academic Literature

The theoretical part of this thesis is primarily based on several articles from O’riley and Tushman, and Gibson and Brinkshaw. I used their reference list as a base to find articles relevant for this thesis. This method made me quickly create a solid database of relevant articles. By using well-known researchers, I found that their reference list contained good quality articles.

This way, the new information may in most cases be viewed as credible, by being cited in an article written by an author already considered trustworthy (Streton et al., 2004).

I also used the search engine Oria to find articles related to: Exploitation, exploration, innovation, ambidexterity, ambidextrous organizations, contextual ambidexterity, structural ambidexterity and open innovation. All the articles were put into folders in my database. The folders were systemized based on relevance. By organizing the folders this way, I had an easy time finding solid information on a topic.

3.3 Analysis

A lot of data is generated when doing qualitative research. This can be quite challenging. I divided the articles into groups based on importance. The interviews were systemized, by breaking the transcriptions into 15 categories.

3.3.1 Categories

1. Background
2. Innovation
3. Motivation
4. Focus
5. Interests
6. Choice of topic
7. Time
8. Organization
9. Management
10. Team
11. Ambidexterity
12. Open innovation
13. Explore
14. Exploit
15. Contextual innovation

First, case study researchers should formulate a clear research framework. Second, through pattern matching, researchers should compare empirically observed patterns with patterns established in previous studies and in different contexts (Eisenhardt, 1989). I started off by mapping the different categories on side notes in the transcript. Whenever the subject said something that was relevant to the category, I added that category to that section. This gave me a good overview of the whole interview, and it made me find the relevant topics when I started analysing all the interviews. I made a table, where I had my categories one side, and then I added relevant answers from the interview into the table. I created a document from my observation period in Telenor, where I used the same categories to arrange the information. This information was added to the table with my categories.

I used pattern matching when I analysed the different categories. I looked up categories that matched several answers, then I could find similarities between the subject's answers and

from my observation, and draw my conclusions. My further analyse was done by combining the information from this document with the articles of high relevance from my database of articles. This method created a triangulation between the data I extracted from the articles, interviews and observation.

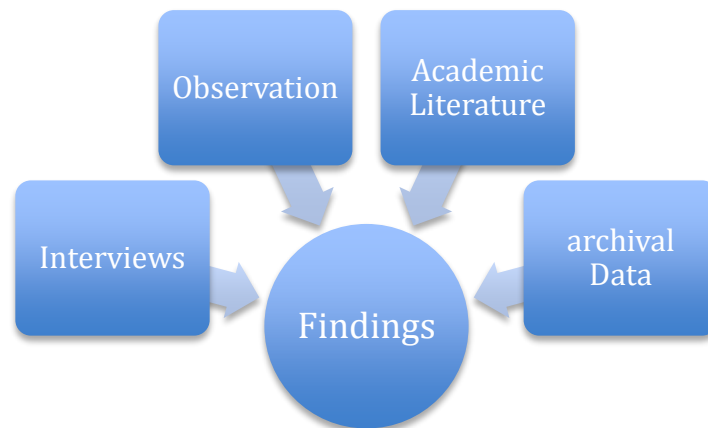


Figure 7 Pattern Matching

3.4 Critique of methodology

When creating a case study, there will always be a risk of having limitations in the design. To lessen limitations that might render the case study flawed is to be aware of which parts of the design that can be criticized. I will go through the limitations of my data collection in this subchapter.

The interview guide was created before I was done with the literature review, and half of the interviews were done before the literature review. The consequences of that were that I found some questions I should have asked. During the literature review I identified that there was very little research on teamwork in the context of contextual ambidexterity. Since my questions were of the open type, several had touched the topic, but I would have preferred it to be in the interview guide. The consequences of this can be a weakness in my conclusions drawn from the interviews.

When doing the literature review, I took it for granted that certain researchers are trust worthier than others. It is difficult for me to verify the integrity of researchers. To day the information available is so huge, that getting hold of it all is impossible. I have to make choices. My choices were based on the researchers with a history within the topics I looked

into. The weakness of this might be that I miss out on new and important science, since the newest research have less citations and has been referenced fewer times.

Choice of companies. My highest priority was to get access to employees to interview. So when VG and Telenor agreed on the interviews I had to say yes. It might be that some of the other companies I had shortlisted would be better for my case study.

The selection of my interview subjects was based on who agreed to be interviewed. This might have given me the employees who were most eager to talk about their projects. I might have gotten the wrong impression of how they innovate at the individual level. This could be avoided by having more interviews, but based on the time available for this thesis, that was not an option.

The open questions are good to create a comfortable atmosphere between the interviewer and the subject. The subject gets to talk freely and therefore more information comes out. The downside is the difference in how subjects communicate. When I interpret their answers later, enthusiastic people might influence the research more, compared to the quiet ones.

Translating the interviews from Norwegian to English. My interviews were done in both English and Norwegian, due to the subjects. Since the thesis is written in English, a translation was necessary. All the transcripts were written in English. The result of this might skew the information slightly, due to the minor differences in meaning when one translates a document.

I have no prior experience with conducting a case study. My inexperience might make me jump to conclusions, or ask the wrong questions, or use the wrong methodology. There are many pitfalls when doing research. Being inexperienced gives a higher chance of doing something wrong.

Working alone. When working alone, there is no one to question you on decisions. All the choices I have made have been my own. This can lead to less reflection on my methods. Also an extra person brings in extra knowledge. The lack of discussion gives a higher chance of errors.

I believe all of the critiques are relevant to my thesis, but does not necessarily weaken my conclusions.

4 Empirical Part

I want to introduce some of the data I collected for my research. First I will give a short introduction to the two companies I have used for my case study, then a short summary of each interview, and finally a summary from my observation when working in Telenor.

4.1 Brief Introduction to the companies.

Verdens Gang

Also known as VG, is a newspaper that covers whole Norway. It is published both in paper and electronically. It was founded in 1945 and printed the first paper 23. July. From 1981 until 2010 it was the biggest newspaper in Norway. VG is owned by a big media enterprise, Schibsted ASA, who bought VG in 1966. From mid 2000 VG had a huge fall in sales numbers on the printed-paper. As many newspaper, they had to innovate on their web based version. They have today a tablet version, their own TV channel on the web, and VG nettdebatt; a site for discussions of news. The Internet paper is read by 1,5 mill readers daily.

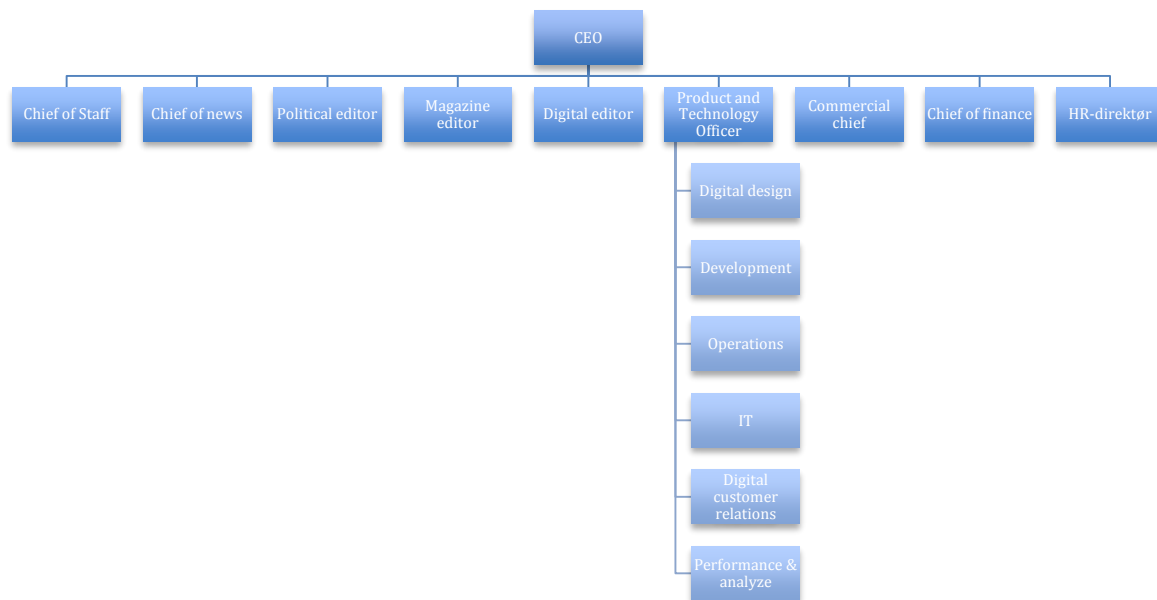


Figure 8 A simplified version of the organization of VG

Telenor research

Telenor research is a department under Telenor Group. Telenor group is present in 13 countries. It is one of the world's leading mobile telecommunications companies. Telenor has a strong presence in Europe as well as Asia. They are a leading company in mobile and broadband in the Nordic. They have 33 000 employees worldwide, and a revenue of 104 billion NOK (2013).

In addition, they have a broadband and TV operations in the Nordic countries. They are also in the front of developing machine-to-machine technology.

Recently Telenor research has been under a lot of downsizing. Now they have three departments in Norway; Oslo, Tromsø and Trondheim with a total of 50 employees. Four years ago they had a research department of over 200 employees.

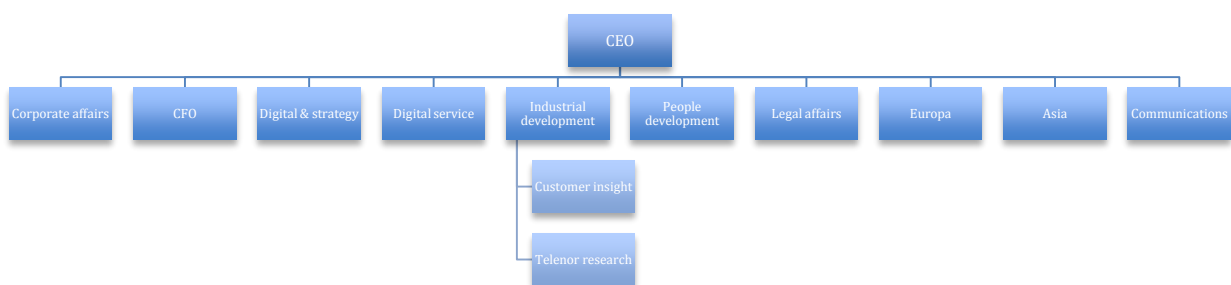


Figure 9 A simplified version of the organization of Telenor

4.1.1 Innovation in VG and Telenor

I have looked into two big companies in Norway that are both doing innovation. I will elaborate on the different approaches they use.

VG has not the same history for doing innovation as Telenor. Telenor being a telecom company, where innovation has been part of the telecom industry from the start. Newspapers have not the same history when it comes to innovation, but with the massive growth of online publishing, most newspapers around the world had to think new. Due to that, many innovative solutions have hit the market. This has forced the newspaper to be more

innovative. VG have one technology and developer department in Norway and a developer department in Poland. They have had two approaches to innovation. One is arranging so called hack days. Here the developers are working together on new concepts through a set number of days. There is no schedule for doing this. These hack days are done both in Norway and in Poland. The other approach is having every individual working on innovative tasks every second Friday. VG calls this 10%, because it is 10 % of your monthly working hours. It is only the technology and developer department in Norway that is part of this. In the beginning, the 10% had to be used on projects directly connected to VG daily work. Recently this has changed. Now the workers can use the 10% on whatever they want within their field.

Telenor has another structure to their innovation process. Telenor have an internally R&D unit. Through their history, this unit has been under a lot of change. Just the last 10 years they have had several big changes. They had a stronger focus on innovating and filing for patents 10 years ago. Then they had a change where they got rid of their patents, and changed the structure of innovating. In 2014, they downsized the research department from 200 to 50 people. This research unit is divided into several smaller research units. It is also divided demographically into three cities; Oslo, Tromsø, and Trondheim. From the management in Telenor a strategy called Blue-sky is available for the researchers. The point of Blue-sky is to put 20% of the work done by workers into the exploratory field. To qualify for a Blue-sky project, the researcher needs to follow the strategic report of Telenor. Then create a team, and apply to his managers for approval. They also have to deliver something in the end.

4.2 Summary of the interviews

Espen Hovlandsdal, 28 years old, developer in VG for 4.5 years.

He finds the arrangement of having every second Friday free to use, as he wants to be very useful. He uses this opportunity all the time. He gets to play around with new technology and evolve as a developer. He finds that it build the team spirit by letting employees work together on their own things, with others they might not work with normally, and that it raises the motivation level for performing in VG. He thinks that it is useful even if the effect is not directly measurable.

He believes it gives a higher effect among the more creative employees. Time is often the big issue. He thinks they have too little time devoted to innovation. Every second Friday, can make the workers lose motivation on one project. This also makes it difficult to plan for

working on bigger projects. He sees a difference in how developers and designers use their time. Designers tend to use it on catching up on their skills, where the developers might have more innovative projects. Espen is one of the more creative ones. He would like the arrangement to be organized better, so the less creative ones get to be more part of this arrangement. Creating a forum for exchanging ideas can do this. He has worked on many ideas, on an average time of 3 days. When deciding on what to work on he follows his interest, and gets ideas by talking to other employees.

Kristoffer Bratland, 26 years old, developer in VG for 2.5 years

Kristoffer finds the arrangement to work fine for him most of the time. His result varies based on how interesting he finds the project. He thinks that several of his colleagues find it hard to find good projects, and therefore choose to work on normal work tasks. For him this arrangement is better than the previous, where they had to work on topics related to VG. He looks upon this arrangement as a longer process, where something you work on might not be useful now, but can change later with more insight. His idea process starts outside work on his spare time. He prefers to collaborate with other colleagues when working on these self-made projects. He finds this arrangement to give him more motivation for his work. What needs to improve is the way it is organized. The supervisors lack an overview of what's going on. It is a bit random how they choose projects to work on. If you by chance get to talk to a supervisor about your project, that alone can be the reason for the project being lifted up. Also a good reward system is lacking. If you create something it is expected that you will do the maintenance of updates, and make sure everything works, as it should. This way developer might find it less rewarding doing big scale projects. Kristoffer also points out the time issue. He uses on average 4-5 Fridays on a project and some of his spare time on top of that.

Audun Nittedal, 39 years old, Head of operation in VG for 7 years.

Audun is one of the middle management team. He has previous experience in this type of arrangement before he joined VG. He believes this is a very good solution, especially for developers. It suits the creative ones better. They are more self-motivated with a solution like this. The others need to be pushed more. He sees that there is weakness in working alone, and thinks the best approach is to push employees to work in teams. Management has to be seen as a part of the process. They need to be part of the arrangement as much as the employees. Having more presentations, even on project that does not finish, can do this. It is about

creating a culture that everyone is part of. Here we can do better. Also the regular work gets first priority, so individual project often dies because the time is needed on regular tasks.

It is not only about innovating, but also about motivating the employees. An arrangement like this gives the employees a token of gratitude. Most programmers use a lot of their spare time on updating and exploring; this arrangement pays off some of that effort. The structural way of innovating would not be as good for us. The key to innovate is to motivate. It must be a genuine interest. Audun also strongly points out the importance of teamwork. He has seen “magic” happen when the right people are brought together. He is not worried that this time is misused. His experience tells him that people adjust themselves. If they are on the wrong track, they manage to figure that out by themselves.

Hilde Kjølberg, 38 years, Interaction designer in VG for 15 years.

Hilde likes the opportunity given to them by using 10% of their time on own projects. She has been in VG for a long time, so this is relatively new to her. She feels that she have not explored the opportunity fully yet. She mostly uses it to update her skills or clean up graphics in other projects. She finds it difficult to innovate on her own. She needs a team to work with. She believes most designers feel that they need to team up with a developer to be able to innovate. Even if she does not use it as effective, she finds the arrangement to give here motivation. Just by knowing that she can use it gives her extra energy when working hard on finishing a longer project. Her ideas of making it better involves better organization. Some have a lot of ideas that needs to be shared with the ones less creative. She also believes in a forum for ideas. More time would also make a difference. The arrangement of every second week makes you lose focus on the week off. It would be better with two days in a row to get going, but she likes that it is on Fridays, so you can continue in the weekend if inspired. She believes in teamwork, but not forced. If you want to work alone that should be ok.

Aksel Haugan, 39 years, Head of interaction design in VG for 3 years.

Aksel likes the idea more than the execution. He feels that it has gone astray. The leaders should show by example how to use it. He thinks people are using it, but not so much toward innovation as we want. There should be more cross teams between design and developers, and it demands more resources to work as intended. It is hard to get the big changes by saying do what you want every second Friday. To succeed VG have to change the norms in our environment to get the most out of it. It works fine as a motivation factor for the employees, and for corporate branding.

As a manager, he says that he is not using it as it is meant. He mostly uses the time to update blog posts and updating himself. He points out that in general the management needs to be more involved. Also he thinks that they should get their Polish team to be part of this arrangement. They have a different corporate culture, and have showed good result when they have been innovating in short innovation arrangements.

Tomas Couronne, 35 years, senior researcher in Telenor research department for 3 years.

Tomas has been a researcher in telecom for over 8 years. He sees this industry as fast moving. Based on that he believes that Telenor should put more resources on exploratory business. By sharing innovative thinking he says that the explorative mind set grows. Exploration must be nourished through sharing and collaboration. Telenor needs to be able to see the weak signals in the market that can be the next disruptive technology. He bases his choice of research topics on interests and experience. As an expert he needs to find what needs to be researched on. He looks for intersections in experience between people to collaborate with. When finding collaborators externally the personal interaction is most important, and then the person's experience level. He is satisfied with the way Telenor is doing it now, based on the small size of the research unit. He points out a couple of thoughts. That telecom the way it is now will disappear. To address new exploitative areas, more collaboration between business units and research is advisable. The business units should have a better understanding of what's going on in the research department. Telenor is a global organization; this should be taken advantage of, by having more collaboration across country borders.

Geoffrey Canright, 65 years, vice president in Telenor research for 14 years

As a vice president of Telenor research, Geoffrey has deep insight on the topic of innovation, and on how Telenor have been doing R&D for the past decade. He gives a broad overview of the innovation in Telenor. As a researcher he believes in the idea of total freedom to the researched, but now as a manager he thinks there should be some guidelines. The way Telenor are innovating today is medium good. They are too small in his opinion, but they account for that by bringing in a lot of external research partners. There are a lot of externals that want to collaborate with Telenor, and right now there are more good projects coming Telenor's way, than they have capacity to handle. In his experience, he prefers the project that are not based on payment, because he thinks money can make researchers find solutions

that pleases the one who pays for the research. His best experiences are research for the sake of researching.

He also points out that Telenor lacks a good patent strategy.

When it comes to the individual researcher, he thinks the Blue-sky project is an excellent idea. It gives the researchers a more loose way of doing research.

He thinks Telenor lacks a good reward system for the more senior researchers. When a researcher advance in his position, there is no higher rank than senior researcher, and this can be achieved at the age of 35. After that there is no real incentive for advancement as a researcher. Some sort of further rewards for being a top researcher would be good.

He addresses the concept of doing time consuming research as being hard in the perspective of the managers. The finance is based on annual budgets, and when doing a long-term project, the costs can look menacing in the eyes of the decision makers. This makes it easier to get one-year projects easier approved than 2-3 years projects.

4.3 Observation

During my 8 weeks of internship in Telenor research, I got first hand information through talking to my co-workers. I asked several questions related to the organization. I read related webpages about the company, to get a better understanding. I worked on three research projects, where I got an understanding on how the projects were running. I got to observe the office space, and most of the common rooms available. A short summary of my findings:

The researchers had a fairly loose work environment. The office existed of several meeting rooms and free desk spaces. The researchers could choose freely where to sit when arriving in the morning. They worked under flexi time, arriving in the morning between 07.00 and 10.00. And left from 15.00 to 18.00. They also had an opportunity to go to the gym during the day. Each researcher was part of several projects. They choose freely what to work on, but tended to work on the project that had a presentation coming up. There were regular meetings for each project they were part of. During my stay, there were some researchers from Pakistan visiting, and two of the Norwegian researchers left for Thailand, on a collaborating project. They told me that for any project to work they have to sit several days with the other collaborators of a project. This leads to a lot of travelling. Sometimes it is also about security of data. That the country they are working together with do not want to give away data, so the Norwegian researchers has to work with the data in the country of charge of the project. This is the case even when they are collaborating with other subsidiary

companies of the Telenor group. I got the impression that even if the researchers had a lot of freedom, they seemed very motivated for working on their projects. Several times during this time I got emails in the evening about the projects, and information about new data and methods. This told me that the employees use some of their spare time on these projects. The group I was in had good trusting relationship among each other. They ate lunch together every day, and the manager gave the company visa card when they had visitors from abroad. This shows that the managers trust the employees, and they bought coffee to each other when having short breaks.

5 Analyse and Discussions

5.1 The individual innovator

Telenor are using both task partitioning and temporal separation to achieve ambidexterity. They have divided their organization into different groups, where one group is research and development. Then they have created the blue-sky project, where the organization opens up for individual research parallel to normal tasks. VG is only using temporal separation to achieve ambidexterity. Researchers have concluded that task partitioning is the best way to achieve ambidexterity. I want to address some advantages to temporal separation versus task partitioning. From the interviews and observation of Telenor. I found out that they have very little cooperation with their R&D units outside Oslo. All R&D units live their own life. This is a typical silo mentality that Cilliers and Greyvenstein (2011) address. That one unit in an organization has no clue of what another unit is doing, even when they are working on similar goals. The interesting part is that when Thomas in Telenor is starting up a Blue Skye project, he looks toward his fellow researchers in Oslo, and then he looks externally. So the chances for him working with Tromsø or Trondheim are smaller than him working with Harvard or MIT, which he has worked with before. So when he starts a research project, he bases his chosen team on people he know. Similarities can be seen in VG. Espen said that he usually worked with a known set of people. The advantages of this way, is that the people who are to work together know to a certain degree that they can collaborate. When an organization puts together a group of researcher there is no guarantee that they will have good work chemistry, but when the individual get the freedom to choose, they will seek out individuals that they work well with. Another interesting finding is the amount of preparation the individual employee is preparing for getting his project accepted. This goes for both Telenor and VG. In Telenor the researcher needs to be able to convince first the managers that this is a needed research, and then the team to work with. In VG they have to convince the other team members, if they want to work with a team. I believe there is an advantage to this. This way the innovator has to think thoroughly through his concept, before “selling” it. The chances of finding weakness in his suggested innovation would most likely be higher, than if he just had a team at his disposal.

The biggest disadvantage of using temporal separation to achieve ambidexterity is the loss of focus on individual level. This is much clearer from the interviews with VG than in Telenor.

This can be seen in the light of temporal separation. In VG, the employees are hired to do a work. The innovation part is something extra. Their mind set is mainly focused at exploitation. When using the 10% for exploring, they do it on their own initiative, and there are no consequences for failing a project, or any reward for creating something of value. So when the exploitative tasks need extra time, it will be taken from the exploratory projects. This was very clear from Hilde and Kristoffer. When the normal work tasks demanded extra time, they pointed out that then the result could be loss of motivation on the 10% project, and often meant that the project would be closed down, and another 10% project would start. This could also relate to one team member having to work less on a 10% project, because of having to work on normal tasks. In Telenor, this was not a problem. Since they are hired for doing research, they see it differently. Tomas felt that all his work was in a way individually chosen by him, so there were no external tasks that demanded his focus away from his projects. Also there is a big different in time management in VG and Telenor. A typical project in Telenor lasts for one year, where in VG the last for 3-4 weeks.

5.2 Teams within contextual ambidexterity

When reading about contextual ambidexterity, I found no information about team structure within contextual ambidexterity. From my interviews it was obvious that few worked alone. They could have the idea individually, but for execution all preferred to collaborate, and also worked in team most of the time. All of the subjects I interviewed had an opinion about teamwork. The middle managers of VG wanted to force upon the employee's teamwork if they wanted to use the 10%. They were taking steps to create a better culture for teamwork. Audun said that he had only seen "magic" been performed when the right people meet each other. Hilde pointed out the importance for designers to be able to work with developers to be able to innovate, and both Espen and Kristoffer rarely did projects on their own. Tomas never worked alone, and looked for collaborators both internally and externally. Little research was found when it comes to the contextual ambidexterity and choice of collaborating partners. Little innovation is done alone. We live in a time where information is flowing in and out of a company. According to Chesborough open innovation is the best way to innovate, and that means more collaboration. So how do these individuals chose their working partners to innovate together with? The once I interviewed made their choice based on personal interactions. In VG they had strong connections through working together over a long time. In Telenor they collaborated with other researchers they only met once, or other they knew

for a long time, but everyone based their collaboration on having met the person face to face before. This selection process could be interesting to look deeper into. Also how the managers could nurture this process of bringing the right people together.

5.3 Motivation

Out of the interviews conducted, the biggest gain for giving the employees the freedom to innovate on their own initiative seems to be higher motivation. All of the employees in VG said that it gave them higher motivation for working in general. The supervisor in both Telenor and VG, said that motivation for innovating has to come from the individual. They need to like what they are working with, and needs to be self-driven. Both of the managers did not believe in innovation forced upon the individuals from the leaders.

After interviewing my subject, I found it was strange that Gibson and Birkenshaw did not address the factor of motivation. When talking about contextual innovation Gibson and Birkenshaw emphasizes the importance of the four features, Discipline, stretch, support, and trust. All these features need to be present in a company to achieve ambidexterity. Based on my interviews, I would argue that the organization should equally motivate their employees to achieve ambidexterity. When looking at two of the four behaviours that Birkinshaw and Gibson presents as the behaviour of an ambidextrous individual, I would say that they are explaining a highly motivated employee.

Ambidextrous individuals take the initiative and are alert to opportunities beyond the confines of their own jobs.

When one takes initiative and goes beyond their boundaries of their own jobs, they are highly motivated. Espen, Kristoffer and Tomas had initiative to see beyond the confines of their job. They also brought their projects home and continued to work with it in the weekends.

2. Ambidextrous individuals are cooperative and seek out opportunities to combine their efforts with others.

This also refers to motivated people. When one seeks out others to combine efforts, I would say that person has high motivation for finishing a project. Espen, Kristoffer and Thomas, did exactly that. According to them, they most of the time collaborated with others. Thomas bases what he knows of other employee's experience, and tries to convince them to join his projects. He also looks outside Telenor towards other partners for skills needed to accomplish his projects in mind. Espen and Kristoffer often collaborate with each other, but also bring in other co-workers, especially a designer. They all look upon themselves as having high

motivation for their job.

Audun pointed out that, when he hired people for the development department, he was mostly interested in if the developers were having programming and computers as a hobby as well as work. If they did, he knew that they were motivated for driving the company forward. The motivation for finishing off a project was another issue that came out of the interviews. All of the employees in VG addressed the problems of keeping the motivation up, over a longer period of time, when only be able to work on a project occasionally. This observation makes sense with the literature. When looking at the difference approaches of managing ambidexterity, Gibsen and Birkenshaw talks about “task partitioning” and “temporal separation”. VG are leaning toward a weak “temporal separation” model. Where the employees are working on exploitative tasks, and at the same time occasionally working on exploratory tasks. I call it weak, because they use so little time on exploratory actions, and the employees do not have to explore at all. Researchers have identified the “task separation” as the weakest model for having an ambidextrous company. Motivation for working non-continuously might be a reason for that.

5.4 Individual intelligence vs. innovation.

Squalli and Wilson (2014) conclude that there is a correlation between innovation and intelligence and creativity. By looking at the average IQ of the different states in US and checking the amount of patents coming out and the economic growth of the state, they found that there is a correlation between the two. They argue that since intelligence can be learned, the society will earn back the money put into education and higher learning, by getting more innovation back.

40 to 70% of observable difference in intelligence is of non-genetic origin (Plomin et al. 2013). Investing in innovation may not give a satisfactory return without also investing in intelligence (Squalli & Wilson, 2014). I would like to put this into an organizational structure. By letting the company represent a small part of the society I would say that by letting the employees learn and enhance their intelligence at an early stage, the company would get more innovation later in time. This also fits well with some of the subject observations from VG. Both Kristoffer and Audun mentioned that learning something now might be useful at a later stage. They looked at the arrangement in a long perspective. Gaining knowledge by exploring would sooner or later lead to innovation useful for the company.

Several psychologists have defined intelligence. Linda Gottfredson defined it this way:

“A very general mental capability that, among other things, involves the ability to reason, plan, solve problems, think abstractly, comprehend complex ideas, learn quickly and learn from experience. It is not merely book learning, a narrow academic skill, or test-taking smarts. Rather, it reflects a broader and deeper capability for comprehending our surroundings—“catching on,” “making sense” of things, or “figuring out” what to do.” By looking at two of Birkinshaw and Gibsons statement about attributes that are crucial for contextual ambidexterity, I would argue that it is very much related to intelligence.

Ambidextrous individuals take the initiative and are alert to opportunities beyond the confines of their own jobs.

Being alert to opportunities has much to do with comprehending their surroundings. An intelligent person will have a higher understanding of the surroundings and therefore be able to address more opportunities.

Ambidextrous individuals are multitaskers who are comfortable wearing more than one hat.

To be able to multitask one need to be able to have knowledge and understand several arenas.

To be able to learn several tasks in a company one should be a fast learner.

A short thought experiment: If one person is only doing one task in a company, he will incrementally be better, until he reaches a point where the improvement will be insignificant. At the same time he will most likely having problems seeing other ways of doing his job, because he is so focused at his way of doing it. Another person doing several tasks will find it much easier to use something he learns from one task into another. It is always hard to define and measure intelligence, especially inside a company. Not only because it is complex to do, but can also be looked upon as morally wrong, but intelligence is an important factor for raising the innovation level in a company, so making the employees smarter will benefit the firm in the long run. Therefore I would say that giving the employees the opportunity to explore new tasks and skills would heighten the company’s ability to innovate in the long run.

Creativity can be seen upon as a type of intelligence. It is also known that creativity can be learned. Several of the subjects I interviewed pointed out the difference between the creative ones and the non-creative ones. They all observed that the creative ones, tried to push their ideas, and that they used the 10 % in a more “right” way. It is not only about being creative, but also to dare to present your ideas. I did not manage to identify any culture or individuals that did not want to present their ideas. So I can only speculate that there are people in both organizations who prefer not to present their ideas. To be able to battle this, the management

needs to create a culture for ideas to be spread. Hilde and Espen in VG addressed this. They wanted a forum for spreading and discussing new ideas. Kristoffer pointed out the randomness of choosing projects to work on from the managers. By random selection, the employees do not feel that they are acknowledged for bringing up good ideas.

VG is on the right track of enhancing their employee's knowledge and intelligence to be able to reach an ambidextrous company, where the individuals can contribute on the innovation inside the company. The employees are using the 10% to update and learn new skills, which can be of good use in the future.

5.5 The management and contextual ambidexterity

What sort of company structure needs to be in place to get the most out of contextual ambidexterity?

O'Reilly and Tushman points out that the senior management need a strategic intent, a common vision, agreement of the strategy, integration between the sub units, and the ability to resolve tension. If I analyse this statement up against what I got from the interviews at VG, I would say that VG has a long way to go, if they want to become an innovative company. Both the middle managers agreed that they lacked a clear strategy. This can be seen in the light of a lacking vision from the top managers. They are working on integrating the sub units. Audun said that they are changing toward more collaboration between the designers and developers, and Aksel wants to bring the Polish team into the 10% concept. At the moment there are no tension between the exploitation and exploration tasks. This has much to do with everyone puts the exploitation as first priority. As O'Reilly & Tushman puts it: in the absence of an explicit strategy that justifies the experimentation of exploring, the default option is to focus on short-term profitability, unless there is a clear and compelling explanation for the importance of both exploration and exploitation, the short-term pressures will almost always move attention and resources away from exploration towards the more secure exploitation. This is clear in VG. The interview subjects gave several examples were they stopped exploring because of too many deadlines in the daily tasks. O'Reilly & Tushman points out the importance of shared values across the organization. VG have weekly meetings with the whole staff. This is a good arena for sharing visions and values across different departments.

Newspapers today are struggling. The printed-paper is slowly disappearing, and new actors from all over the world are giving the customers new substitutes. It is the managers role to

see this change and think of tomorrow. To be able to survive in this fast passed industry, one needs to explore. I believe VG has both the people and the ability to build upon what they have and get much more out their explorative structure. Based on Birkinshaw and Gibsons four ambidextrous behaviours in individuals, I would say that Audun, Kristoffer and Espen possesses all four behaviours, but it is the managers reasonability to get the most out of their strengths. Both Audun and Aksel, believes in the idea of contextual innovation, but points out that the 10% does not work as intended. There is a lack of structure from their managers, and from themselves, so right now the exploration is floating astray. As Audun put it; It goes up and down, sometimes there is a lot of innovating projects going on then there will be a period with very little. I would say that is a sign of weak company culture for innovating. They want to explore but there is no guidelines for exploring.

Telenor has a stronger culture for innovating. That has also gone up and down during their history according to Geoffrey. Their researchers have to follow the company guidelines, and there is an approval process that goes through several decision makers. Telenor wants to be an innovating company, but they are also struggling with the balance between exploration and exploitation. They had a survey in 2010, which showed that the innovation part was doing the worst. It shocked the managers. This shows that managing to have both concepts is difficult because these two are associated with fundamentally different organizational architectures, processes, competencies and logic (Smith & Tushman, 2005).

When looking at the company structure for the individual researcher, they have a well working structure. The managers have a good control of what's going on. They have a common vision based on their annual reports, and are agreeing on the strategy of handling innovation. The integration between the sub units could be stronger. Thomas wished that the business units were more involved with the research unit. He also wanted more integration between the Telenor subsidiary companies in other countries. Through my interviews and observation with Telenor, I could not recognize any tension between the exploration and exploitation tasks. The only sign was that both Tomas and Geoffrey thought the research unit was too small, but they both said that it worked well.

Another strength I found was the opportunity for the individual to work with external collaborators. They are very much encouraged to do so. When starting a project the researchers have to find the collaborator themselves. From my observation when having my internship there, I noticed that there were meetings with other researchers abroad every month at least, and researchers from other countries came to Telenor in Oslo. Telenor are following an open innovation model to some extent. Chesbrough argues that open innovation

is the solution to battle high costs for innovation. Based on my interviews and observation, I think that Telenor are implementing the open innovation model in a good way. Telenor research consists of diversified researchers from all over the globe. This gives them a personal network that crosses many boundaries, both cultural and demographic. The research department is small, but their connection network is big.

From Chesbroughs point of view they are addressing several of his points for nurturing open innovation. I want to discuss some of the concepts of open innovation that the individual researchers are using to innovate. From my observations and interviews I observed a very strong open innovation culture among the researchers, but at the same time they had strict rules for who and how to share data. As a telecom company a lot of regulations and laws must be considered, which sometimes even closes down the possibility for further research in a topic.

Geoffrey told me that he recently went to Boston, to a congress for broadening his horizon for innovation. There he talked to some top researchers. He also gave a long list of external collaborators, from different sectors. They are constantly building their network of researchers from outside their organization. They are collaborating with several big universities, transport companies, public sectors, and other governmental sectors. This is one of the ways they share their knowledge with externals.

As Ghoshal and Bartlett puts it: An organization needs to encourage discipline and stretch to push individuals towards ambitious goals, but it also needs support and trust to ensure that this happens within a cooperative environment. This acknowledgment fits very well with my observations of Telenor research. Telenor gives their researchers freedom to operate. They have to deliver, but they come and go as they want, and can work from home if needed. They get the right support from their colleagues and their boss. This makes Telenor a comfortable place to work. From my observations the employees were very satisfied with their working environment.

Gibson and Birkenshaw say that too much trust and support creates a country club mentality, and that is countered by discipline and stretch. In Telenor's case I would argue that the discipline comes from the individuals themselves. I did not get any feeling of management enforcing strict discipline, but I got the feeling of the individuals had responsibilities for their own project, and therefore showed strong discipline towards their research. The same goes for stretch. Tomas explained that he looks for talented people in a field beyond his expertise to collaborate with. That he looks for weak signals that can bring the next disruptive

innovation in telecom. Tomas is already a senior researcher and there is no reward system implemented for the researchers, so I would reason that his stretching comes from inner motivation. From my observation and interviews of both Telenor and Vg, it seems to me that the motivation at the individual level plays a big part in several factors for a company to have a solid company structure around contextual ambidexterity.

5.6 Answering the research questions

Three research questions at the beginning of this thesis have been reviewed. I will generalize my research findings by answering the questions as follows:

What are the advantages and disadvantages of giving the employees the freedom to innovate on their own initiative?

One of the reasons for choosing this research question was that I did not find much literature on this topic. Most of the literature was pointing out the advantages a company would have of having an ambidextrous organization, and the contextual ambidexterity was one solution to achieve that. From my observation of Telenor and through my interviews, I came up with a series of answers to this question. The analysis pointed out motivation for doing work as a key factor to this question. All the employees I talked to mentioned motivation as a beneficial value that was directly related to the freedom they had over their time, and the freedom to choose what to look into. Also the managers saw this as an important factor, when analysing the arrangement.

From the analyse part addressing the intelligence and creativity; I will imply that individual exploration can enhance the intelligence and creativity of a person by letting the employees innovate. Even though Intelligence and creativity is difficult to measure, especially the improvement within a company. This is an advantage that is both good for the individuals as well as the company.

The third advantage I suggest is relevant is the networking effect. The employees seem to bring external and internal into their projects. This effect will bring in new knowledge into the company, and new collaborators.

If a company wants to have an ambidextrous structure, there are few disadvantages to letting the employees innovate on their own initiative. As long as it is clear in the strategy of the company, so that there will be no tension between the exploration and exploitation part. One

disadvantage that came out from the analysis was the people who did not want to innovate should not be forced to use their time on it. This might give unproductive results.

Is there any specific quality that makes an employee better to innovate at an individual level?

Through the analysis, I wanted to see if there were any personal traits that stuck out, when doing innovation on your own initiative. Based on my research of contextual ambidexterity, Gibson and Birkenshaw identified four behaviours in ambidextrous individuals. I analysed these behaviours and referenced it with my findings from the interviews. My first conclusion was that the creative employees were most useful in a contextual ambidextrous environment, but a company need to bring exploration into the culture to make the culture for exploration grow. This has much to do with bringing the right people together. The creative ones seems to be the drive for starting new projects, but they pull people with them, and next time the idea might come from another. This relates to the part about creativity in the analysis. Also I could not find any proof that creative people have better ideas, so one good idea from a person that is not considered creative can be more valuable than a hundred ideas from a creative employee, but I would conclude that the creative ones are starting up more projects, and are more motivated on innovating. This was backed up by the non-creative subjects, which gave credits to their creative co-workers, for starting innovative projects.

From my analysis of my interviews, I found that several of the employees emphasised the teamwork, when innovating. The importance of being able to work well together, and learning from each other. From my studies, it seems that when employees have the freedom to innovate on their own, they prefer to work in teams. Based on this I would say that being a good team player is a good quality even when giving employees individual freedom to innovate.

What sort of company structure should be in place to get the most out of individual innovation?

From the literature I found the four complementary features discipline, stretch, support, and trust, that should be equally present in the organization for strengthening ambidextrous behaviour. One of my findings from my observation and interviews was the importance of motivation as well. When the support and trust was present, inner motivation seemed to work as discipline and stretch. I could not find any behaviour from the management that showed any disciplinary actions, or any company culture that pushed it on the employees. The same

goes for stretch. I would argue that if the company manages to create motivated employees working with exploration, there would be no need for a disciplinary culture with stretching goals. The individuals will manage that by themselves. They will even use their spare time on innovative projects. The next issue I identified, was the teamwork. Even when employees are free to innovate by themselves, they tend to look for collaborators internally or externally. They base this on chemistry between the team members and the skills of the members. This is something managers could help developing within a company, by having an open culture for exploring together internally or with external collaborators.

Acknowledgement from the managers, that the employee is doing good job by exploring. This can be done in several ways. Giving the innovating employees some sort of reward can stimulate the process. Showing that the management appreciate the work being done. The management should try to see the individuals, and know what sort of projects they are working on, basically show interests in the exploratory actions of their co-workers. I found that it was little credits to gain doing exploratory work, compared to doing exploitative work. This might be because of the easy way to measure exploitative work, where exploratory work only gets credits when something of use comes out.

Managers should also be role models for doing exploration; this creates a comfortable environment for exploring, and shows a shared vision in the organization.



Figure 10 Findings from analyse and discussion

5.7 Further research

As part of my research, I found several interesting areas that could be looked deeper into.

Context of contextual ambidexterity seems to be driven by motivation for innovating. This factor is something that needs more research. Some questions that could lead to interesting findings might be: What is it that creates the inner motivation for working on own projects, that is beneficial for the company? Can motivation substitute discipline and stretch in a company? Look into how the management can help create motivation doing the exploratory actions.

The part about raising intelligence of the individuals for gaining more innovation at a later stage is a topic I briefly touched upon. I believe there is much to look into related to this. The same goes for raising the level of creativity to get more exploratory behaviour into the organizations. This is a topic I think can give good insight for organizational strategy when working with exploration.

I found that most innovators worked in teams, both internally and with externally collaborators. When companies gives the individual opportunities for doing research on their own, teams are founded based on skills and social ties. I could not find any research on these factors, and believe it is important for getting good exploratory results. Also looking into how management can nurture teamwork in contextual ambidextrous environments can be of value.

These are questions and topics I would recommend for further research based on this thesis.

6 Conclusion

The paradox of exploitation and exploration is widely discussed in organizational theory, as two opposing strategies. Companies around the world are having a hard time coping with this balance. One strategy of doing this is letting the employees innovate on their own, using some of the working hours for exploring. This thesis has looked into the advantages and disadvantages of using a model like this. How this can be managed from the management of the company, and tried to see if there is some qualities in the innovating employee that seems extra useful. By interviewing employees in two companies using this model, and read relevant literature I have found some insight, and some topics I believe is worth looking deeper into.

To sum up my findings:

- The individual innovator bases his research on interests and motivation for innovating.
- He seldom works alone. He tries to collaborate internally or externally with other skilled people, that he has a good chemistry with.
- Abilities to be a good team player, a creative mind, and possess strong inner motivation, seem to be qualities that bring the best out of an individual innovator.
- These qualities can be learned with in the company, if the management helps to build a culture for exploring.
- The possibilities of raising the individual's intelligence by letting them explore. This can lead to better innovations in a long perspective of the company
- Management plays an important role, when letting the employees innovate on their own initiative. They need to show interest in the work being done, and reward the ones that put effort into exploring. They should be part of the arrangement as well, as good role models.

Reference

Andriopoulos and M.W. Lewis. (2009). Exploitation-exploration tensions and organizational ambidexterity: Managing paradoxes of innovation. *Organization Science*, 20(4): 696-717.

Benner, M. J., Tushman, M. L. (2003). Exploitation ,exploration, and process management: The productivity dilemma revisited. *Academy of Management Review*, 2: 238–256.

Bryman, A. (2008). *Social research methods*, Oxford University Press, Incorporated.

Chesbrough, H. (2003). *Open Innovation: The New Imperative for Creating and Profiting from Technology*. Boston, MA: Harvard Business School Press.

Chesbrough, HW. (2003). The era of open innovation. *Sloan Management Review*, 44 (3): 35-41.

Chesbrough, H. (2004). Managing open innovation. *Research-Technology Management*, 47 (1): 23-26.

Chesbrough, HW. (2007). Why companies should have open business models. *Sloan Management Review*, 48 (2): 22-28.

Chesbrough and Bogers, (2014) Explicating open innovation: clarifying an emerging paradigm for understanding innovation. *New Frontiers in Open Innovation*. Oxford: Oxford University Press, Forthcoming, 3-28.

Clercq, D., Thongpapanl, N., Dimov, D. (2013). Contextual ambidexterity in SMEs: the roles of internal and external rivalry. *Small Bus Econ*, 42:191–205.

Devan, J., Millan, A., Shirke, P. (2005). Balancing short- and long-term performance. *McKinsey Quarterly*, 1:31-33.

Dougherty, D. (2008). Innovation Bridging Social Constraint and Social Action to Design Organizations for Innovation. *Organization Studies*, 29: 415.

Duncan, R. B. (1976). The ambidextrous organization: Designing dual structures for innovation.

InKilman, R. H., Pondy, L.R., Slevin, D. (eds.), *The management of organization design: Strategies and implementation*. New York: North Holland: 167-188.

Eisenhardt, K. M. (1989). Making Fast Strategic Decisions in High-Velocity Environments. *The Academy of Management Journal*, 32(3): 543-576.

Eisenhardt, K. M., Schoonhoven, C. B. (1996). Resource-based View of Strategic Alliance Formation: Strategic and Social Effects in Entrepreneurial Firms. *Organization Science*, 7(2):136-150.

Ferrary, M. (2011). Specialized organizations and ambidextrous clusters in the open innovation paradigm *European Management Journal*, 29, 181-192.

Ghoshal, S., Bartlett, C.A. (1994). Linking organizational context and managerial action: The dimensions of quality of management. *Strategic Management Journal*, 15, 91-112.

Gibson, C. B., & Birkinshaw, J. (2004). The antecedents, consequences, and mediating role of organizational ambidexterity. *Academy of Management Journal*, 47: 209-226.

Gibson, C. B., & Birkinshaw, J. (2004). Building Ambidexterity Into an Organization. *MIT management review*, summer 2004, Vol.45 No.4.

Gottfredson, L. (1998). The General Intelligence Factor. *Scientific American Presents*, 9 (4): 24–29.

Greyvenstein, H., & Cilliers, F. (2012). Followership's experiences of organisational leadership: A systems psychodynamic perspective. *SA Journal of Industrial Psychology*, 38(2), Art. #1001.

Gupta AK, Govindarajan V. (2000). Knowledge flows within multinational corporations. *Strategic Management Journal*, 21(4): 473–496.

Gupta, AK., Smith, K. G., Shalley, C. E. (2006). The interplay between exploration and exploitation. *Academy of Management Journal*, 49 (4): 693–706.

He, Z.-L., & Wong, P.-K. 2004. Exploration vs. exploitation: An empirical test of the ambidexterity hypothesis. *Organization Science*, 15: 481– 494.

Jansen, J. J. P., George, G., Van den Bosch, F. A. J., Volberda, H. W. (2008). Senior team attributes

and organizational ambidexterity: The moderating role of transformational leadership. *Journal of Management Studies*, 45(5): 982–1007.

Lane, P.J., Lubatkin, M. 1998. Relative absorptive capacity and interorganizational learning. *Strategic Management Journal*, 19: 461-477.

Marais, S. J., & Schutte, C. S. L. (2009). The development of open innovation models to assist the innovation process. In 23rd Annual SAIIE Conference, Conference Proceedings.

March, J. G. (1991). Exploration and exploitation in organizational learning. *Organization Science*, 2: 319–340.

Morison E. (1966). "Gunfire at Sea". In: *Men, Machines and Modern Times*. Cambridge: MIT Press, 17-44.

O'Reilly, C. A., & Tushman, M. L. (2004). *The Ambidextrous Organization* - Harvard Business Review *The Ambidextrous Organization*.

O'Reilly, C. A., & Tushman, M. L. (2008). Ambidexterity as a dynamic capability: Resolving the innovator's dilemma. *Research in organizational behavior*, 28, 85-206.

O'Reilly, C. A., & Tushman, M. L. (2013). Organizational ambidexterity: Past, present, and future. *Academy of Management Perspectives*, 27, 324-338.

Plomin, R., Haworth, C.M.A., Meaburn, E.L., Price, T.S. (2013). Common DNA markers can account for more than half of the genetic influence on cognitive abilities. *Psychol Sci*, 24(4):562-568.

Raisch, S., J. Birkinshaw. (2008). Organizational ambidexterity: Antecedents, outcomes, and moderators. *J. Management*, 34(3) 375-409.

Raisch, S., J. B. Birkinshaw, G. Probst, M. L. Tushman. (2009). Organizational ambidexterity: Balancing exploitation and exploration for sustained performance. *Organ. Sci.*, 20(4) 685-695.

Smith, W.K., Tushman, M.L (2005). Managing Strategic Contradictions: A Top Management Model for Managing Innovation Streams. *Organization Science*, 16(5):522-536.

Soosay, C., Hyland, P. (2008). Exploration and exploitation: the interplay between knowledge and continuous innovation. *International Journal of Technology Management*, 42: 20-35.

Squalli, J, Wilson, K. (2014). Intelligence, creativity, and innovation. *Intelligence*, 46: 250-257.

Stake, R. E. (1995). *The Art of Case Study Research*, SAGE Publications.

Streeton, M.C., Campbell, J. (2004). Researching the researchers: using a snowballing technique. *Nurse researcher*, 12(1): 35.

Subramaniam, M., M.A. Youndt. (2005). The Influence of Intellectual Capital on the Types of Innovative Capabilities. *Academy of Management Journal*, 48: 450-463.

Tidd, J., Bessant, J. (2013). *Managing innovation*, fifth edition. West Sussex, United kingdom.

Tushman, M.L., and O'Reilly, C.A. (1996). The ambidextrous organization: Managing evolutionary and revolutionary change. *California Management Review*, 38: 1-23.

West, J., Salter, A., Vanhaverbeke, W., Chesbrough, H. (2014). Open innovation: The next decade, 43(5): 805-811.

Yin, R. K. (2009). *Case study research: Design and methods* (4th ed.). Thousand Oaks, California: Sage.

Internet sources

Vg.no

http://en.wikipedia.org/wiki/Verdens_Gang

Telenor.com

<http://en.wikipedia.org/wiki/Telenor>

7 Appendix

7.1 Interview guide

7.1.1 List of interviews

Espen Hovlandsdal, Developer , VG

Kristoffer Bratland, Developer, VG

Hilde Kjølberg, Interaction designer, VG

Audun Nittedal, Head of operation, VG

Aksel Haugan, Head of interaction design, VG

Tomas Couronne, Senior researcher, Telenor

Geoffrey Canright, Vice president, Telenor

Questions For Employees

Your name, age and title?

How long have you been working in VG/Telenor?

What do you think of letting the employees use some of their time to innovate?

What do you think of the arrangement of being able to work on your own ideas one/two days a week?

How do you elect what to work on?

On what criteria's do you choose your projects?

Who decides if you can work on a concept, and what sort of criteria's decides if its ok or not?

How often have you worked on innovative projects?

How many self-started projects have you worked on?

What is good about being able to work on your own projects?

Do you find it useful?

What's your best experience with being able to work on your own innovative projects?

Have you had any disappointments from this arrangement?

Does it happen that you work more than allowed on your own project?

How long does a project last on average?

Have any of your projects been taken further?

What is the process to take a project to the next level in the company?

Do you often collaborate with others, and in what way?

Do you think everyone who uses this opportunity use it wisely?

Do the project steal any focus from your normal work tasks?

When it comes to your regular work tasks, do you feel that you get more motivation doing them based on the one day you do something different?

Have you had any thoughts on quitting your job and start up on your own based on projects you have been working with?

How do you feel this process helps the innovation of your company?

What would you have done different with the program?

Extra questions for managers

What's your view on the contextual ambidexterity, where you let your employee use some of their time on their own innovative projects?

Do you think it works as intended?

What's the percentage of the projects that you bring further?

How do you select what they can work on?

Do they collaborate with any external parts?

Have there been any disagreements between the employees and the leaders, about the directions of a project?

Do you have any success stories that have come out of this arrangement?

Have the leaders discussed other options for innovating internally?

Do you see other benefits from this arrangement?

What is the next step after a project is finished?