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Effects of implementing a global financial shared service centre in DNV GL

Sammendrag

Vi har undersøkt DNV GL's overføring av finansfunksjoner fra land i Europa til Global Centre of shared services i Polen. Vi fokuserte på effektiviteten i behandling av fakturaer og reiseregninger, reduksjon i kostnader og det menneskelige aspekt. Vi har gjennomført dybdeintervjuer med ledere på ulike nivåer og vi har supplert med kvantitative data hentet fra ERP-systemer brukt av DNV GL: Basware Monitor, Oracle Finance og BI Dashboards. Funnene våre indikerer en reduksjon i effektiviteten under overflyttingsperioden, noe mer for Danmark enn Nederland. På lang sikt ser vi at DNV GL muligens kan oppleve konsekvenser ved å ha mistet viktig kompetanse. Når vi sammenlignet perioden før og etter overflyttingen fant vi en økning i effektivitet. Kostnadsreduksjon som følge av lønnsarbitrasje og redusering av antall ansatte har gitt en umiddelbar effekt, men vi kan ikke si noe om hvor mye de kan ha spart i kostnader som følge av effektivitetsgevinst i prosessene. Alt i alt har vi funnet indikasjoner på at overflyttingen til Global Centre har vært en suksess.

Abstract

We studied DNV GL's migration of finance functions from European countries into the Global Centre of shared services in Poland, focusing on the efficiency regarding handling of invoices and travel expenses, cost reductions and the human aspect. We have conducted depth interviews with managers on different levels and we complemented with quantitative data obtained from ERP systems used in DNV GL; Basware Monitor, Oracle Finance and BI Dashboards. Our findings indicate that the efficiency decreased during the transition period, somewhat more for Denmark than the Netherlands. In the long term, DNV GL might also experience some repercussions of losing competency. When we compared the period before and after the migrations, we found an efficiency gain. The cost reduction through salary arbitrage and headcount reductions are clear, but we do not know how much they might save on the effectiveness of processes. Overall we find indications to support that the transition to the Global Centre has been a success.

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Preface

Writing this Master Thesis has been an exciting experience by gaining more in-depth knowledge of the Future State project, and we are grateful for the opportunity to travel to the Global Centre in Gdynia and gaining a deeper understanding of the shared service centre.

We would like to thank everyone who has contributed to our thesis in forms of interviews or other input, and we especially want to thank our counsellor at DNV GL, Anne-Line Aagedal and the Director of GSS Finance Operations, Christopher Jones for allowing us to write about this topic, and our consular at the University College of Oslo and Akershus, Einar Belsom for all the guidance throughout these five months.

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1 Introduction

In the last decade, many researchers have been looking towards Shared Service Centres (SSC) as a solution for optimization of efficiency of the support activities in companies (Bondarouk and Friebe, 2014). The term efficiency brings other aspects into the restructuring process. In the past, many companies would only focus on cost savings, now however they are continuing to see the importance of attaining more standardization of tasks and processes as a mean of reducing costs. Thus, many companies have been reorganizing their company into an SSC structure instead of outsourcing the service.

There are different ways to manage an SSC transition process and many aspects to consider for a successful transition to occur. If they do not succeed with the setup, the company could in the worst case lose all of their investments and potentially face a huge loss. If they are able to get a successful transition, there is still no guarantee that the quality of the output from the SSC is as good as what the company predicted. However, with a good project plan and constant process improvements, it should be possible to achieve the desired efficiency gain.

Since the findings are diffuse in the area of financial SSCs, we wanted to look closer into a specific SSC transition to see if we could find any changes in efficiency and costs. We were able to get insight in DNV GL's Future State Project (FS), where we received a lot of contributions from employees located in different countries. We wanted to look at both Denmark and the Netherlands in order to compare the two transitions. In our research, we interviewed ten employees where eight of the respondents are managers on different levels with responsibility of either transition, project or follow-up, the last two respondents were not managers. DNV GL also provided us with complete access to cost numbers and overview of sick leave, and we received permission to access their financial systems to perform analysis on process efficiency.

The project scope is the creation of a Global Centre in Gdynia. In this project, they are transferring different financial processes from all DNV GL offices in Europe into the Global Centre to enable cost reductions on salary and standardization of tasks which will result in an overall efficiency gain. FS was established with the purpose to reduce costs and foremost become more efficient, while keeping good quality and respecting people's livelihoods in the process. This project includes both the Finance and Human Resource (HR) departments on a

global level, but in this thesis, we are focusing on the financial processes and will not go any further into the transfer of the HR part.

The business areas (BAs) in DNV GL; Oil & Gas, Maritime, Software, Energy, and Business Assurance, have been through a lot of changes because of fluctuations in the market which has caused major cuts in the different BAs; globally they have had to cut many positions. The BAs have expressed discomfort towards the financial departments because they are cost centres who do not generate any revenues for the business. In order to decrease costs in this department, Finance Management decided to start the FS project.

In the following, we will present our theoretical framework, the methodology, data and analysis, discussions of our findings, and finally we will present our conclusion with some implications for further research.

2 Theory of why and how to change into a Shared Service Centre

In this chapter, we will discuss the different ways an organization's support activities can be structured by looking at different perspectives such as, SSC, make or buy and outsourcing, to determine which one will yield the most desirable results. We used former research and literature in order to show which concept best describes the restructuring of the company so that greater process efficiency and cost savings can be realized in the future. Furthermore, we will look at how the company's financial departments can be successfully migrated into an SSC and how this implementation can be carried out so that employee motivation is maintained, and any consequences can be managed.

2.1 SSC vs. alternatives

Most former research about SSCs has been made in the Human Resource departments and some in the Finance and Accounting departments. By reviewing literature and articles on the subject, Bondarouk and Friebe (2014) identified that the organizational structure of an SSC enabled tasks to be improved through standardization and control. However, they did not find support for whether a shared services centre should be centralized or decentralized, and even though formalization is important, they argue that some customization is needed.

2.1.1 The decision to Make or Buy

An important aspect in an organization is how they can streamline their production or services throughout the whole firm. To achieve this, the company must decide how to organize the support activities, and if it should be placed in the company or with a supplier; the latter called a make-or-buy decision. The first option, to make, is when the company has full control of the production or service. The second option, to buy, is when the company decides to get the product or service from a supplier. The decision to make or buy is based on the degree on which the company wants or needs vertical control of the activity in question. As an example, if the activity is embedded with confidential information it will be desirable to have high vertical control (Besanko, Dranove, Shanley, and Schaefer, 2010).

According to Besanko, et al. (2010), you can divide the different forms of strategy depending on degree of vertical control, as shown in figure 1.

Arm's-length market transactions	Long-term contracts	Strategic alliances and joint ventures	Parent/ subsidiary relationships	Perform activity internally
Less integrated		→ → →		More integrated

Figure 1: Make-or-Buy Continuum (Besanko, et al. 2010, p.120)

The decision to buy in the market can be referred to as an outsourcing strategy, which is to the far left of the figure above. Outsourcing is when a company places some of their activities with an external subcontractor, assuming that the subcontractors can deliver the service or product with a certain quality at a lower price. Besanko, et al. (2010) present some benefits and costs related to choosing a solution like this. The outsourcing supplier can more easily achieve economies of scale when producing for more than one company, which is harder to achieve in an in-house department. The supplier also has more pressure from the market to be efficient while an in-house department can often hide behind the processes in the firm. Nevertheless, there are three perspectives that are related to an increase of cost: the need for constant coordination, the need to share old and new knowledge that may be sensitive and valuable for the company, and transactions costs.

To avoid the three latter, the company should choose the strategy of making the service or product in a department within the firm. This type of strategy can be implemented by establishing a shared service centre (SSC), which Richter and Brühl (2016) with reference to work by Bergeron (2013) and Schulz and Brenner (2010) defines as;

> "*a partly autonomous business unit that operates consolidated support activities, such as accounting and human resources (HR) and provides services to internal clients*"

(Richter and Brühl, 2016, p. 26).

According to Strikwerda (2014, p.3) with reference to Strikwerda (2010), an SSC is often based on a Service-Level Agreement with a set transfer price. A firm needs the right resources to operate successfully as an SSC and organizations have to reconfigure their resources to fit the new required organizational form by changing their tangible and intangible assets and capabilities. If the organization is successful with the reconfiguration; they should operate as an SSC, if not, then perhaps outsource the service or production. A potential result of a successful SSC is that the company can develop new competences by turning some support activities into core activities (Richter and Brühl, 2016).

As stated by Williamson (1975, p.104):

"Vertical integration economizes on transactions by harmonizing interests and permitting a wider variety of sensitive incentive and control processes to be activated."

This type of structuring is called centralization, which can be split into two terms:

1. Centralization of power

2. Centralization of place

The first term refers to the decision-making process in an organization. If the organization has a hierarchical structure and centralization of power, the managers in the top of the organizations make the decisions. In contrast, if the process is decentralized, the decision-making authority will be delegated to a lower level. The second term of centralization refers to where the facilities are located. Centralization in terms of location is, for example, when most of the main departments are placed in one facility. In contrast, if the main departments are placed in several locations, it can be defined as a decentralized organizational form.

When choosing either centralization or decentralization of power, there should not be a question of either the first or the latter; it should be a combination of the two. To become more efficient in the decision-making throughout the whole company, it is important to consider a hybrid approach. For example, the decision of *what* a unit should deliver can be centralized but the decision of *how* to do it should be decentralized (Cramm, 2008; Von Simson, 1990).

By standardizing routines within the Global Centre, the organization can achieve economies of scale; referring to the benefits of producing goods or services in a large scale rather than in a small scale. The goal is to be cost efficient by minimizing the input of cost and maximizing the output. In other words; a firm can maximize the efficiency of the tasks, which will give an overall maximization of both cost efficiency and quality of service delivered.

2.1.2 SSC vs. Outsourcing

Herbert and Seal (2014) states that, while there has been a great focus on cost savings through labour arbitrage, which is often done through outsourcing, a focus on production efficiency and output effectiveness has become more important to keep up with the global competition.

To maintain and improve the company's output effectiveness and production efficiency, it has been shown that the Shared Services Model is preferred over outsourcing (Herbert and Seal, 2014). With an SSC, the company keeps high control over processes, and as mentioned by Besanko, et al. (2010), the costs connected to coordination of tasks will be less than with an outsourcing party. Furthermore, when the company keeps the tasks in-house it is easier to implement and receive acceptance of centrally determined decisions concerning how the processes will be executed and how the process efficiency can be constantly optimized (Hill and Hult, 2016). In the long run, after acquiring more knowledge of the processes, the company can reduce input and still increase output.

With outsourcing, there is an immediate cost reduction, but it may be difficult to get the supplier to develop employees or improve the efficiency if this has not been negotiated in the contract. As a result, the outsourcer most likely needs to offer an increase in salary or other incentives to get the supplier to make adjustments in the contract. In the end-state this will probably not give the same efficiency gains. However, this also depends if the contract is long-term or short-term. With a short-term contract, the terms might be more general, while with a long-term contract the company would make more detailed specifications of demands to the subcontractor, but in these cases, the subcontractor often knows more about the services than the buying company thus making it easy for the subcontractor to take advantage of them (Herbert and Seal, 2014).

However, there are some disadvantages related to an SSC solution. It is difficult to build a good team over night. When a company establishes an SSC they often need to hire a large number of people in a short period of time, and there are no guarantees that this will result in great teams. Furthermore, the people that start working in the SSC will not be familiar with the embedded culture of the company, and will require extensive training both to get to know the company and the tasks they will perform. There is also a possibility of facing some risk regarding cultural differences and learning to do business in another country. This can easily be avoided when outsourcing to an external supplier or acquiring a wholly owned subsidiary from the host country, where the culture is embedded in the unit. However, these types of solutions can lead to issues when merging with the rest of the company (Hill and Hult, 2016). Furthermore, to make a contract with a supplier that will give you the same level of securities and efficiency gains as an SSC is almost impossible (Herbert and Seals, 2014).

Herbert and Seal (2014, p.139) states that;

"...the chief benefits of adopting the SSC model over outsourcing are: control over processes and outputs is maintained, the risk of choosing an inappropriate supplier (or being "gamed" by the supplier), and most pertinent to this chapter, knowledge is retained within the firm."

Until now, we have introduced the SSC in the context of establishing a unit within the firm, but another possibility is to create a wholly owned subsidiary to perform the SSC operation (Outsourcing Law Global, LLC, 2017). A wholly owned subsidiary is defined as a company that is 100% owned by the establishing firm. Hill and Hult (2016) present two different ways of establishing a subsidiary. The first one is already mentioned above, to establish by acquiring a company that is already set up in the desired location, and integrate the people to the company. The second approach is to build up a new company from scratch with newly recruited employees. It is difficult to conclude if the creation of a subsidiary with SSC is a better approach than building an SSC unit within the firm, but some may argue that you have tighter control with the latter due to the unit actually being inside the same company.

2.1.3 A new approach to the SSC structure

Herbert and Seal (2014) have looked at several different approaches to the SSC structure. They have set up an alternative approach to how a company can include the SSC in the business model by using the model of Matusik and Hill (1998) covering the taxonomic approach, and Williamson's (1975) research on market and hierarchy. Once the tasks and processes are stabilized in the SSC, and benchmarking for further efficiency gains are established, they are now including contingent workers to the SSC model.
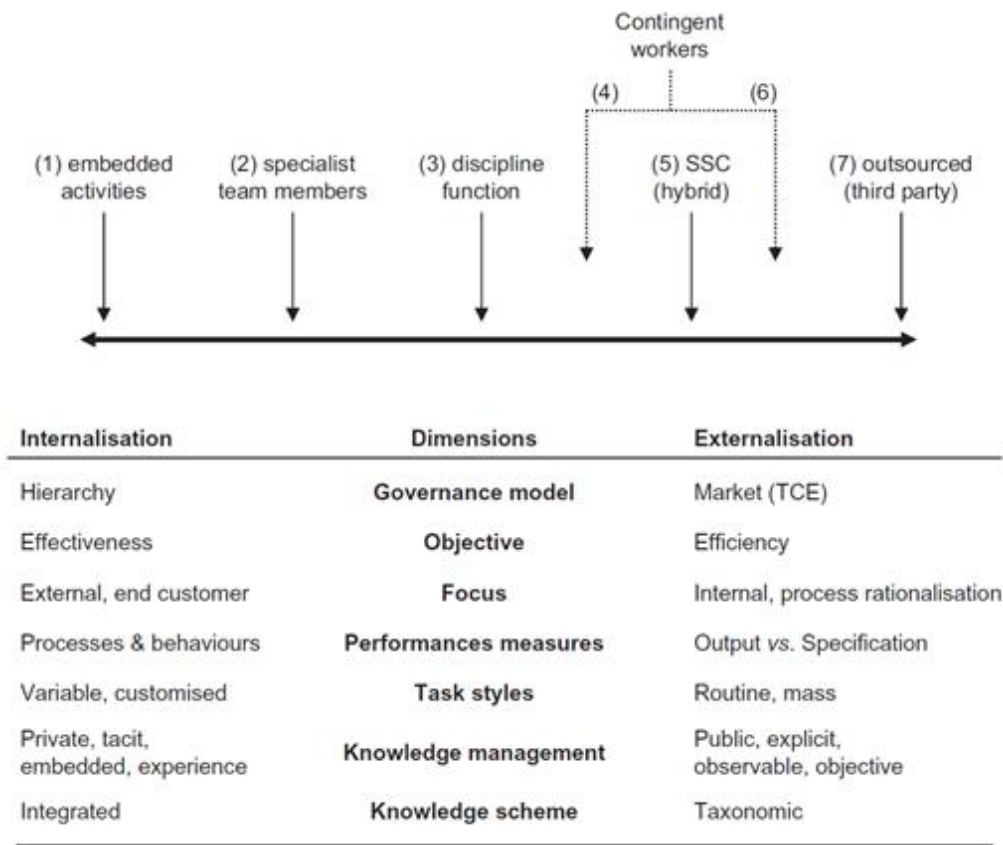
Figure 2: A continuum of approaches to service activities (Herbert and Seal, 2014, p.141)

According to Herbert and Seals (2014) model, there are 7 different business approaches, where at the one end (1) we have the traditional approach where activities are embedded in the BAs. The knowledge is mostly tacit and the focus is on knowing how to do things.

The next approach (2) is similar to the first as the activities still are within the BAs, but there is a difference in skills between the employees which might minimize the flexibility in tasks.

The third approach (3) is to form a department above the BAs to perform the activities. These workers will be specialists in the activities performed in the department.

The following approaches (4), (5) and (6) are based on input from contingent workers that are integrated in the company. The first (4) approach looks at the possibility to integrate skilled individual contingent workers within the teams in approach (1), (2) or (3).

In approach (6) there is a team of contingent workers that work alongside with the permanent employees. On the far end (7), we have the market-oriented approach where the tasks are outsourced to a third-party. The knowledge is mainly explicit and the focus is knowing about things.

Williamson is referring to these two extremes as the *in-house* and *out-house* modes, where he places the SSC between these two modes at (5) with the idea that SSC has some input from both (4) and (6).

Williamson (1975) argues that the communication between the contractual participants often can be difficult due to lack of knowledge and ability to acquire the knowledge, thus making it difficult to create a complete contract. He emphasizes that *learning- and teaching-by-doing* is a more efficient way of communicating, which supports this SSC (5) model, which includes the contingent workers with the company's team.

2.2   How to change into an SSC

For an organization to make a successful change to an SSC, it is of the utmost importance that employees are involved in the change process and are prepared for future changes to come. In this section, we will look at different aspects of the change process and how the transition can affect employees' motivation and productivity. Furthermore, we will present some recommended steps to ensure a successful implementation of SSC, and finally, we will emphasize the importance of knowledge transfer during change processes.

2.2.1   Organizational Change

Kurt Lewin's Change Management Model proposes different ways to make employees more receptive to organizational change by discussing how their mindset can be *unfreezed, changed,* and *refreeze* into the new processes (Connelly, 2016a).

Unfreezing, the first stage of this model, involves making employees within a particular unit understand why the change is necessary and preparing them to move into a foreign work environment. Ideally, employees would be receptive to the change and would be eager to contribute.

In this stage, Kurt Lewin also mentions the Force Field Analysis (Connelly, 2016b). This idea discusses the existence of two forces; one that is driving the change in a positive direction, and another in the opposite direction that is restraining the change. Therefore, in order for management to make progress towards change, either restraining force of change needs to be weakened or the driving force strengthened. Prior to this however, it is imperative to establish what exactly is making the employees resistant to change and what would compel them to embrace it.

The second stage of the model, change, is often the hardest because employees can be uncomfortable with new environments and uncertain of the future. It is crucial during this time that the leaders back up the change process with employee training, coaching and that the employees are assured that making mistakes while starting a new job is part of the learning process. It is very important during this time that management maintains a steady course in order to maintain and solidify the vision of change, thereby reassuring employees of the new direction and outcomes (Connelly, 2016a).

The third stage of the model, refreeze, is where you try to get the mindset of the employees to freeze into the new environment. Since the modern society is continuously changing, this stage can be criticized. The company might not be able to refreeze before they should be unfreezing again, due to the rapid changes in the market. Therefore, in a modern society, this stage can be referred to as a more flexible stage where people continuously adapt to the changes and in that way, be more prepared for the changes that arise.

2.2.2 Motivation and productivity

An important aspect when implementing SSC is to ensure that people are working towards organizational goals and objectives. According to Osland, Kolb, Rubin and Turner (2007), the motivation of employees is the key factor to increase productivity. However, this key factor is also a concern for the managers because it requires that they extract the correct energy from the employees and direct it towards the tasks and processes in order to achieve their goals.

Throughout history, there have been different approaches in relation to how people should work to become more productive. Through classical management theory, the organization was managed by a centralized top-down control. The organization was rational, and operated in an efficient manner thus increasing the productivity without considering the people involved. In contrast, Hawthorne's studies illustrated how people worked more effectively when needs were satisfied, and Maslow's hierarchy of needs focused on how some needs must be satisfied before others in order to achieve self-realization (Kvålshaugen and Wennes, 2012).

We elaborate on two theories that are criticized for being somewhat old, but we see them as most relevant to our subject and as a contribution to understand efficiency and motivation. First, Taylor's scientific management on how to streamline work processes. Second, Herzberg's two-factor theory on how job enrichment can affect people's productivity.

Scientific Management

According to Frederick Winslow Taylor's *Principles of Scientific Management* from 1910, excerpted in the National Humanities Center (2005), a work process could be more efficient if some sets of principles based on scientific research were used. The theory is strongly connected to economies of scale and useful in our context to understand why some tasks should be gathered in an SSC, and whether they contribute to an increase in productivity.

Taylor's first principle is that work methods should be based on scientific research about the specific task instead of rule-of- thumbs. That is, making clear guidelines with focus on how the specific tasks should be managed and by whom. Second, Taylor thought that employees should not train themselves, but that each employee should be chosen, trained and developed scientifically. In the SSC context, the employees should be assigned and trained to the specific process. Third, this requires a detailed job and task description for each worker and monitoring of each worker's performance. To ensure this process, DNV GL needs good cooperation between Regional Centres, Global Centre and managers on different levels. Finally, Taylor assumed that a more efficient work process could be obtained by dividing the work between workers and managers based on scientific management principles. In particular, the managers would do the thinking and planning of the work, whereas the workers would actually perform the tasks (National Humanities Center, 2005). This means that the employees will not have the responsibility of the process from A to Z anymore, but rather be specialized in specific tasks.

Taylor's theory has been criticized to treat humans as machines (Grachev and Rakitsky, 2013). However, in a complex and globalized world it might be necessary for a company to standardize processes and tasks to increase efficiency.

Two-Factor Theory

Frederick Herzberg's two-factor theory describes how productivity is connected to aspects of the job, such as employee's job satisfaction and involvement in the process. Assuming that some factors must be present to ensure a productive worker, the absence of some factors can lead to a less productive worker (Herzberg, Mausner and Snyderman, 1993). In this thesis, the employee contributions to the FS project may be dependent on whether they are working in the migrating country or in the Global Centre. Moreover, this theoretical perspective can give an overall understanding of how different factors affect the efficiency during the process.

According to Bassett-Jones and Lloyd (2005), Herzberg assumed that a satisfied worker would be more productive than a dissatisfied worker, and he distinguished between motivational factors and hygiene factors.

- Motivational factors: responsibility, involvement, challenging work, recognition and personal growth

- Hygiene factors: salary, interpersonal relations, company policy and administrative practices, status, job security and work conditions.

The presence of motivational factors can result in a satisfied worker if the hygiene factors also are present. On the other hand, the presence of hygiene factors does not result in a satisfied worker, though the absence of hygiene factors can lead to a dissatisfied worker (Herzberg, et al., 1993).

According to this theory, there are four possible outcomes:

	Low Motivational Factor	High Motivational Factor
Low Hygiene Factor	a. Dissatisfied, not motivated	b. Dissatisfied, motivated
High Hygiene Factor	c. Not dissatisfied, not motivated	d. Not dissatisfied, motivated = satisfied

Table 1: Possible outcomes of the two-factor theory (Andersen, 2009).

a. The worker is dissatisfied and not motivated in his or her job.
b. The worker is motivated in his or her job, but the working conditions are poor.
c. Even though the salary and working conditions are good, the worker is not satisfied because they may not experience challenging work, responsibility in their job or involvement in processes. This will result in employees who only work to get paid.

d. The worker is not dissatisfied and is motivated in his or her job. This scenario is the best situation in relation to productivity because a satisfied worker has fewer complaints and is assumed to be working more productively.

The theory can be criticized because people are different, meaning it depends on the person and the situation. One factor can lead to both satisfaction and dissatisfaction, and job satisfaction does not always lead to higher productivity. People can also be in a neutral state which means that they are neither satisfied nor dissatisfied. A criticism of Herzberg's research is on how he collected data from the interviews. He asked respondents how they would recall different situations in the past, and such methodology may not always lead to the truth about the past. People remember things differently and want to appear more rational afterwards (Bassett-Jones and Lloyd, 2005).

2.2.3   Implementation of an SSC

According to Bob Cecil (2000), an SSC creates a tremendous amount of value for a company by streamlining its decision-making processes through the standardization of information, tasks and routines. Many firms report a high degree of success after shifting to an SSC, this is however very dependent on a well planned and executed strategy. For proper implementation of an SSC, there are 12 recommended steps that a company should adhere to (Cecil, 2000):

1. Gain management approval: In order to gain full support from top management, it must be shown how the potential savings will outweigh the costs by switching from the current company structure to an SSC.

2. Plan for success: A company should expect to carefully adjust and redesign the internals of their organization and technologies in order to achieve the desired SSC goals. These adjustments should be carried out gradually so that major pitfalls can be avoided, such as; reducing number of employees and internal costs to quickly, minimizing the number of financial systems, etc.

3. Communicate: Communication between other departments or sectors within a company and business units that have shifted to an SSC is vital to ensure that SSC changes can be properly administered by the organization.

4. Build a competitive staff: Having a core team of competent staff that has competencies in both technical skills and interpersonal skills is very important. Recruiting a new

team of employees for the SSC tasks is often found to be more advantageous than attempting to retrain former employees for the same role since their qualifications are typically not in-line with the new role requirements.

5. Create a new culture: An open office structure with a relaxed atmosphere is a common choice for an SSC.

6. Motivate employees: Long term employee motivation is oftentimes sacrificed. In the short term, involvement in the process motivates the employees. In the long-term, however, there are often limited possibilities of promotion caused by a flat organization form, which weakens the incentives to get more involved in processes. In order to create a long-term success in the company, it might be necessary to setup a non-traditional career path; for example by job rotation, "pay at risk", "stretch goals", or an "up or out" program.

7. Measure and improve performance: There will be a need for a proper system to measure performance, further you need the knowledge on how to improve performance. This will also help the management to know which performances to reward or penalize.

8. Increase cooperation: By focusing on collective performance, and eliminating extra costs by measuring against internal customers and external best-practices.

9. Overcome problems of scale: To make a shared service centre worth investing in, it takes at least 100 people. Small firms tend to choose joint venture, outsourcing or a consortium agreement instead.

10. Control Growth: The SSC should not grow too fast or get too big (beyond 500 to 600 people). The main point is to have a global process ownership, and that standards are developed by a management team who ensure that the instructions are being followed.

11. Gain leverage through outsourcing: For some of the processes, a shared service solution is not an option. For these processes it might be necessary to look at the possible cost savings of outsourcing. However, a company should be aware that outsourcing can result in additional costs if nonstandard work, or extra effort is required.

12. Make transactions disappear: Due to new innovations and technology, a lot of the standard transactions are being handled automatically. As a result, the employees only need to handle the exceptions in the processes. With further automation of processes, this can ultimately be the main benefit and possible success of managing an SSC.

2.2.4 Knowledge Transfer in an SSC

As mentioned above, an SSC enables a company to develop good communication between its different departments or sectors. It is important that knowledge of processes and tasks in transition to the SSC are identified and transferred correctly to ensure that valuable information is not excluded from the process.

According to Argote and Ingram (2000, p. 151) knowledge transfer in organizations can be defined as:

"the process through which one unit (e.g., group, department, or division) is affected by the experience of another".

The authors argue that knowledge transfer is a basis for competitive advantage in firms, and that the knowledge is embedded in the members, tools and tasks of the organization. Furthermore, good routines of knowledge transfer are required because of the difficulties connected to the interaction between the members, tools and tasks. It is a subnetwork of knowledge, and the knowledge transfer can be hard to adapt into new contexts (Argote and Ingram, 2000).

The aspect of keeping the knowledge and skills within the company is a key element of the SSC. On that note we introduce the Knowledge Management Perspective (Serenko and Bontis, 2004), associated to Herbert and Seals (2014) study of SSC, with reference to earlier studies from Birkinshaw, Nobel, and Ridderstråle (2002), Penrose (1959), and Nelson and Winter (1982), four aspects are introduced;

1. How organizational knowledge is created, stored, shared and applied.

2. How different categories of knowledge might be structured between taxonomic and integrative approaches. Where taxonomic is the distinguish between tacit and explicit knowledge, and integrative puts knowledge in a situated context.

3. How retention of knowledge might explain the firm's existence.

4. How knowledge might become a contingent variable in the organizational structure.

When relocating tasks in an SSC it's important to identify the tacit knowledge and the explicit knowledge, but as reflected by Herbert and Seal (2014), the tacit knowledge is often embedded in the organization and its tasks. It is not easy to detect this type of knowledge, especially in processes that have existed for decades, and this is crucial in a relocation process. Furthermore, the refinement between tacit and explicit knowledge is indistinct, which complicates the detection of tacit knowledge even more.

To explain the integrative approach; the payment of a travel expense could easily be done by anyone; assuming they have been told what to check. Similarly, a computer could be programmed to know exactly what to check on the travel expense report and perform the payment automatically – this is explicit knowledge. However, a supplier invoice can be disputed if they are found to be delivering incorrect orders and future invoices should be withheld from the supplier if they did not meet delivery expectations. This is considered private and tacit knowledge that is typically known by competent employees in this field, and cannot be programmed into a computer.

3 Methodology

We used Dag Ingvar Jacobsen (2005) 8 stage method so that we could carry out the research in a structured manner. The first step is the development of a *main research question* and *sub research question* (research questions in continuation). The second step is to choose which study design is needed to answer the main research question. The third step is about collection of data, where you decide to use qualitative method, quantitative method or a combination. The two methods have different approaches and the steps from four to seven in the process will differ depending on the method you have chosen. These steps include collecting data, choosing units and analysing the collected data, and will only be applicable for our qualitative methodology. We also included an evaluation of the findings' and an assessment of the validity and reliability of results. The method we used in collection of quantitative data was incoherent with Jacobsen's steps and this presentation will be different. The final step of our thesis is where we interpret our findings.

3.1 Development of research questions

By using an explicit demarcation of the dissertation, we chose something to focus on and what to exclude in our work. In this thesis, we focused on different efficiency aspects of the shared service centre in DNV GL. We focused on the finance departments and we are excluding the HR departments, even though they are also being moved. DNV GL made a strategic decision to move some of the finance function to a global centre in Gdynia, and we wanted to know and understand how leaders thought the outcome would be. We wanted to find out if building a shared service centre actually increased efficiency and if the cost savings are greater after the transition.

Our main research question is a *clear* issue; we know something about shared service centres and cost efficiency. Since most research has been done in the area of HR and less in the area of finance, we wanted to see if our assumptions are correct. Our *main research question* is both descriptive and explanatory, where the descriptive approach wants to reflect in what state the process was at a given time, and the explanatory approach wants to figure out the reason for a given outcome and if that have influenced something else. To do this we have chosen a combination of extensive study design and intensive study design. However, we emphasize the intensive study design because our goal is not to generalize our findings statistically, but to understand the process in its context.

Our main research question is:

How is the efficiency and costs affected by the migration to a global shared service centre in Poland?

Our main research question is exciting, simple and can be investigated empirically and the goal is to explore existing knowledge, either as an extension or as a criticism. In order to answer our main research question, we have analysed three key components that have the greatest impact on the migration, they are; process efficiency, cost savings and human factors.

1. How efficient are the processes during and after the transition?

2. How has the Denmark and Netherlands migrations generated cost savings for the company?

3. How do people affect the process, and how does the process affect the people?

Former research about shared services has been performed in the past, yet it is often in a specific context that becomes inapplicable for our use. However, some of the research is relevant and it has helped us to understand the concept of shared services.

3.2   Study design

To solve our main research question we needed a study design. This is important in terms of validity and reliability of the research. By choosing an intensive study design we emphasis the value of going in depth with few respondents. In addition, we got information which was very detailed and nuanced, requiring a lot of analysis work. The purpose of using an intensive study design was to get a comprehensive picture of the topic, with as many details as possible. Cross-sectional study design gave us the opportunity to do this; in addition, our design has a retrospective aspect because we also asked about the past during the interviews. Since people can remember and give descriptions of the past and the present, we get interesting perspectives from our respondents. However, a disadvantage of this method is first of all, that people do not always remember things correctly. Second, sometimes they remember things in a more or less positive way than they actually did back in time. Finally, many people want to appear more rational than they actually are. In conclusion, since this design is a bit less reliable than other study designs, we added some extensive design to our thesis. In addition,

we analysed data with the purpose of comparing them with the findings from the interviews, and we hoped to see correspondence between the interviews and quantitative data.

3.3   Data collection

Based on our research questions we are using both qualitative and quantitative methods in this thesis. We will first introduce how we have conducted the qualitative part and then the quantitative part.

3.3.1   Qualitative methodology

In the qualitative method, we are following the steps in Jacobsen (2005). We will present how we collected the data, how we chose our respondents, how we performed the data analysis and how we evaluated the validity of our findings.

Collection of data

There are different ways of gathering data: open individual interview, interview with a group, observation and document examination. We have chosen the open individual interview where the interviewee and the interviewers are sitting in dialog. Most of the interviews were conducted in a natural work context, meaning face to face in meeting rooms at Hovik in Norway and Gdynia in Poland. Only two of the interviews were conducted over skype with video. The advantage of face to face interviews is the ability to observe the interviewee and his or her reactions, also it may become easier to talk about more sensitive issues. However, the risk of influencing the answers of the respondents may occur. The language spoken in the interviews were mostly English and a few in Norwegian.

Interviews can have various degrees of structure on a scale from completely closed to completely open. Our goal was to give the respondents the opportunity to be honest and we wanted our questions to be open. However, since we were interested in some specific aspects of FS project, the interviews were somewhat structured because the open approach results in very complex data to analyse.

We developed interview guides, see appendix 1 and 2. Appendix 1 represent the general interviews where we only made minor adjustments due to different roles and responsibilities, and with affiliation to different countries. Appendix 2 represent the interview we had with financial top management in Global Shared Services (GSS), and thus the questions were primarily aimed to the strategy and goals of the project. We assumed that our interviews

would be somewhere between 30 minutes and 1,5 hours. However, the longest interview lasted 2 hours, the shortest approximately 20 minutes and the average time of the interviews were 52 minutes. Due to the employment of 30 new people in the period we spent at the Global Centre in Poland, they were very preoccupied and they could not set aside more than 20 minutes for the interviews.

We were open and honest about our intentions regarding the interviews. The interviews were confidential, that is, when using quotations from interviewees it should not be possible for the reader to identify who said what. Furthermore, we used a tape recorder to record the conversations. All the interviewees accepted recording.

Respondents

The interviewees are referred to as respondents. We chose people involved in the FS project who we thought could enrich our dissertation by giving us wide and detailed information about the subject. We interviewed ten employees where eight of the respondents are managers on different levels with responsibility of transition, project or follow-up. Two of the respondents are not managers.

Although a qualitative method usually contains few respondents, we argue that our 10 respondents is a larger part of the population with the knowledge and experience on the FS project.

How to analyse the data

To understand and reduce the complexity in the data, we first had to simplify and structure the interviews by transcribing them; this took a lot of time. Since some of the interviews were in Norwegian, careful transcribing and translation was required in order to represent the knowledge gained from them in the most accurate way possible so that no information was "lost in translation".

Secondly, we systemized the interviews by splitting information into different categories based on our research questions. Our first main category is the efficiency in invoices and travel expenses, with subcategories such as difference in time spent, standardization, working strategies, and the systems used. The second category is cost efficiency with subcategories such as cost savings, difference in salary levels and unexpected costs. The third category is

people, with subcategories such as the recruitment process, information flow, motivation and satisfaction during the process.

Third, we connected categories of information together in a more simplified manner to understand the complexity of the data. With this process, we got different aspects and detailed information about phenomena and topics about the people and about the context. Because we recorded the interviews we also have correct quotations which are an advantage when presenting the data.

Validity of conclusions

Internal validity is when you investigate whether your data and conclusions are correct. One way of testing validity is through others, for example those who attended the interviews or specialists in the field of SSC.

There are some problems connected to collection of true information. First, it may be that we did not talk to the right people. Second, our interviewees may be incapable or unwilling of telling the true information.

It is an advantage to test how correct the categorisations are by cross-checking our categories to see if we still get the same conclusions, which was the approach we chose. Another option is to let other researchers make a new categorization.

As mentioned above, our research is not meant to lead to theoretical generalization; however, we hope to see trends and relations between the qualitative and quantitative data.

3.3.2   Quantitative methodology

We used Basware Monitor to collect the relevant data on invoice processing, for the travel expense process we received data from Oracle Fiance, and we used graphs from a Dashboard produced by DNV GL to see the trend in backlog, and external and internal unpaid invoices. The Dashboards are also based on numbers from Basware, and show the trends for Denmark and the Netherlands from end of February 2016 and up to the first week of May.

We have also received cost numbers from DNV GL regarding the setup of the Global Centre in Gdynia. For Denmark and the Netherlands, we received overview of sick leave from July until December 2016, the different salary cost and headcount reductions. This information was received through emails and will not be included in the Appendix. When we are

presenting personal communication in this thesis, we will refer to who, when and how we communicated.

We choose to not look at the building costs, as DNV GL is renting the buildings in the Netherlands and Denmark, they own the building in Poland. However, it is often said to be at least as costly to rent space as to own space, and we can assume that they will save some costs on owning the building in Poland contra renting in the long-term.

In the data we received from Oracle Finance, we got an overview of travel expense date and pay date for all travel expenses submitted in Denmark from 1. September - 1. January, and in the Netherlands from 1. October - 1. February. We used these dates to get data two months before and after go-live for the two countries and then we used Excel to set up a graph showing the trends in process time.

What we experienced for Denmark was that the data for process time was negative, which would mean that the expense was paid before submitting it. As this could not be correct, we chose to exclude all the negative numbers from our analysis, which resulted in reducing our data collection from 5517 to 2128. For the Netherlands, we also experienced some invalid numbers, but in this case, we only reduced our data collection from 5755 to 5696.

The data we collected from Basware gave us the lifecycle of invoices, from "invoice date-to-scan date", "scan-to-flow date", "flow-to-check date", "check-to-approve date", "approve-to-pay date", and "pay-vs-due date".

To extract the correct data, we had to choose the DNV GL Denmark 1330 Legal Entity and the DNV GL Netherland 8370 Legal Entity. In this data-set, we wanted to have approximately 6 months of data from before and after migration. We ended up with the following period for Denmark, 25. April 2016 - 23. October, and 24. October - 1. May, for the "before" and "after" go-live, which gave us a data collection of 1737 invoices in the "before", and 3013 invoices in the "after".

For the Netherlands, we extracted data from 1. June - 30. November, and 1. December - 1. May, for the "before" and "after" go-live, which gave us a data collection of 10723 invoices in the "before", and 10142 invoices in the "after". Even though we got a little over 1 month less in the extraction for the Netherlands, you can see that they have invoices in a much larger scale than Denmark, which gave us more than enough to compare.

After completing this search, we transferred it to Excel setting the two periods and countries in four different sheets and removed the invoices that were missing a payment date.

For Denmark, the data collection was down to 1723 invoices in the "before", and 2725 invoices in the "after", and for the Netherlands we now had 10386 invoices in the "before", and 9229 invoices in the "after".

To complete the data analysis, we made an overview of average time used in each stream, and then we compared the data from the "before" and "after" go-live period to see if we could find a difference in efficiency.

3.4   Interpretation of findings

In the final section, we interpret our results. Theories are just simplified illustration of reality, but they are helpful to interpret and understand different situations. Specifically, when we need to say something about why something is changing and what the consequences of the changes are. In our interpretation, we first discuss each research question in isolation, using our theoretical framework as supplement in the discussions. By comparing our data from the depth interviews with data from Basware, Oracle and Dashboards, we conduct a more nuanced interpretation of the FS project. Second, to understand whether the efficiency has changed, we are combining the different components into one discussion before we get to the conclusion and recommendations for further research. We should be careful in our interpretation of results to avoid making incorrect conclusions.

4   Data analysis

In the following section, we are presenting our results from the interviews we conducted, and where it is relevant, we will also present quantitative data retrieved from Oracle Finance, Basware Monitor, and Dashboards. We will use these results to answer our research questions within the three constituents;

- Efficiency in processes - changes in processes and tools
- Efficiency in costs - changes in costs
- Efficiency in people - changes in performance.

DNV GL's Financial Managers have also reflected this in their project scope; to ensure that the business is in a steady state during migration to Poland, they need the people, organisation, processes and tools in place.

This model is referred to as the Business Diamond, and the scope is that they will not be able to continue with the project plan if one of the elements; people, organization, process or tools, are not in place.
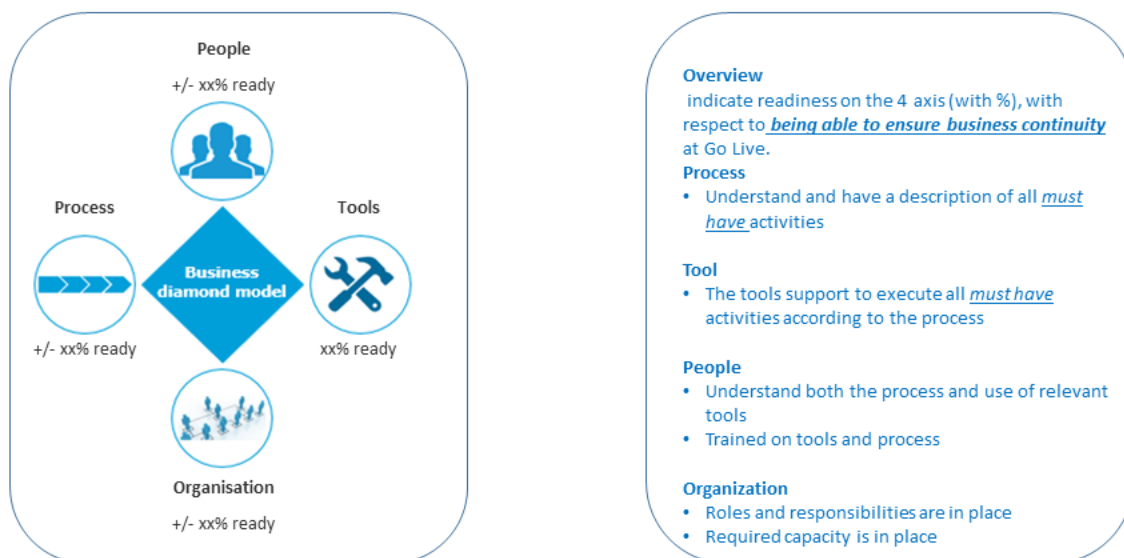

Figure 3: The Business Diamond with explanation (Received through email from Christopher Jones, 08.05.2017)

4.1 Research question 1: How efficient are the processes during and after the transition?

On the aspect of effectiveness of processes, we mainly focused on the handling of invoices in Basware and the process time for travel expenses. Because the Netherlands and Denmark both changed their accounting system to Oracle (the NGF project) before FS, we wanted to see if this had any effect on the outcome of this project.

We were also able to get statistics from Basware and Oracle Finance to support or give a contrast to what our respondent's impression of the processes was. We wanted to see if our respondents thought there were any differences in efficiency before and after the transition to Poland. If they believed there was a difference, did they think it was caused by the people, or if the changes of accounting systems had an effect.

4.1.1 Presentation of data

Before we asked about the processes we wanted to know what the respondents thought was the most important working strategy. We gave them two alternatives; working more effectively or more accurately.

One respondent wanted to split the alternatives between internal invoices and external invoices, whereas external suppliers do not need to be paid until due date, thus makes it inefficient in addition to increase cost for the company, if it would be paid earlier.

On the internal payments, it was mentioned that DNV GL in general have difficulties in collecting payments between the different customers, and that if they would treat internal customers as the external customers or suppliers, they would obtain efficiency gains.

Most respondents were leaning towards a solution of having a balance of the two alternatives, and agreed that they would probably emphasize accuracy more.

"...It is a good weighing. If you are not accurate then it will not be effective because you will need to do it again. So, you have to use the time it takes to make it accurate."

"...we have to get it right, and then once we get it right, we then have to think about how can we do this more efficiently"

We continued the interview by going further into how the processes work in Denmark and the Netherlands. We wanted to know if they noticed any changes from before and after they moved the Purchase to Pay (P2P) processes to Poland.The feedback we got regarding the Netherlands was that the process time did not change much during the transition.

"You would pretty much say that nothing's happened. The flows are all the same, the payments are all the same, everything, nothing's changed."

"If you look in the dashboards, the main drop we saw was because (...) keep some invoices because of the knowledge transfer(...) because you need to have enough volume to show the Global Centre colleagues. So, I think that effect, you see that in the numbers. (...) more or less on the same level as before."

As stated by Kasper Dashorst (email correspondence, 05.05.2017), the knowledge transfer from Netherlands for P2P started in week 44/45, where the employees in Poland came to Arnheim.

From the dashboard, Figure 4, we get an overview of the backlog in Basware for the Netherlands. It looks like the numbers in week 44/45 have the same trend as earlier periods, thus the knowledge transfer has not affected the numbers in any large extent. However, we can see that the Netherlands have an abnormal number of invoices in "Unprocessed invoices" for week 52 (in orange). It is possible that those numbers are common before year end, due to suppliers wanting to finish all the invoicing and that this is not connected to the transition itself. Nevertheless, since we do not have numbers from previous years, we are not able to confirm this statement.

To get even more details about changes in efficiency, we also looked into the dashboards showing an overview of the unpaid invoices. From figure 5, we see from the light blue line that there is a little peak in week 43/44. In the rest of the period, it looks like the trend is comparatively stable.
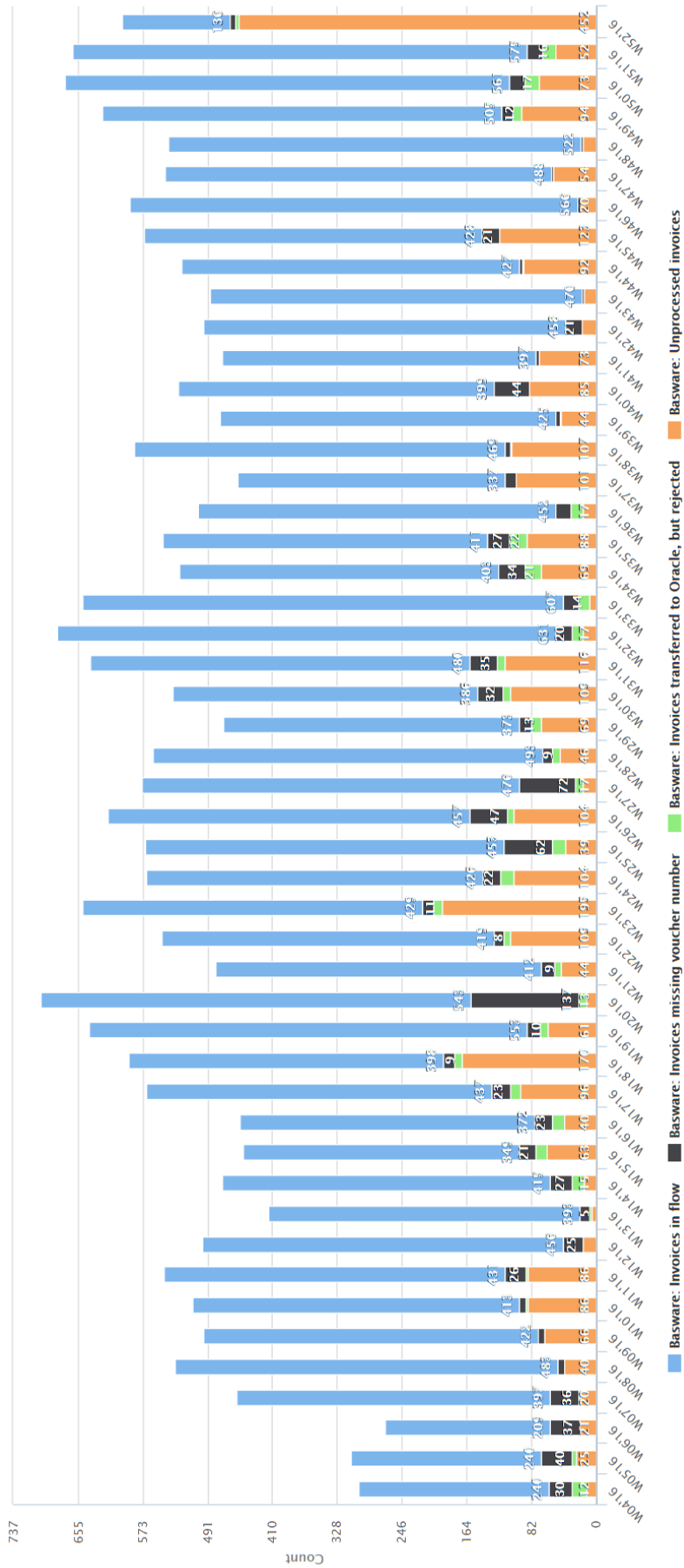
Figure 4: Backlog Netherlands 2016

Figure 5: External unpaid invoices, Netherlands 2016

Since we know from Kasper Dashorst's input (email correspondence, 05.05.2017) that the record to report (R2R) stream was handled by the Netherlands through the month-end-close of week 44/45, this peak is most likely caused by some other effect than the transition to Poland.

Figure 6: Travel expense process for Netherlands

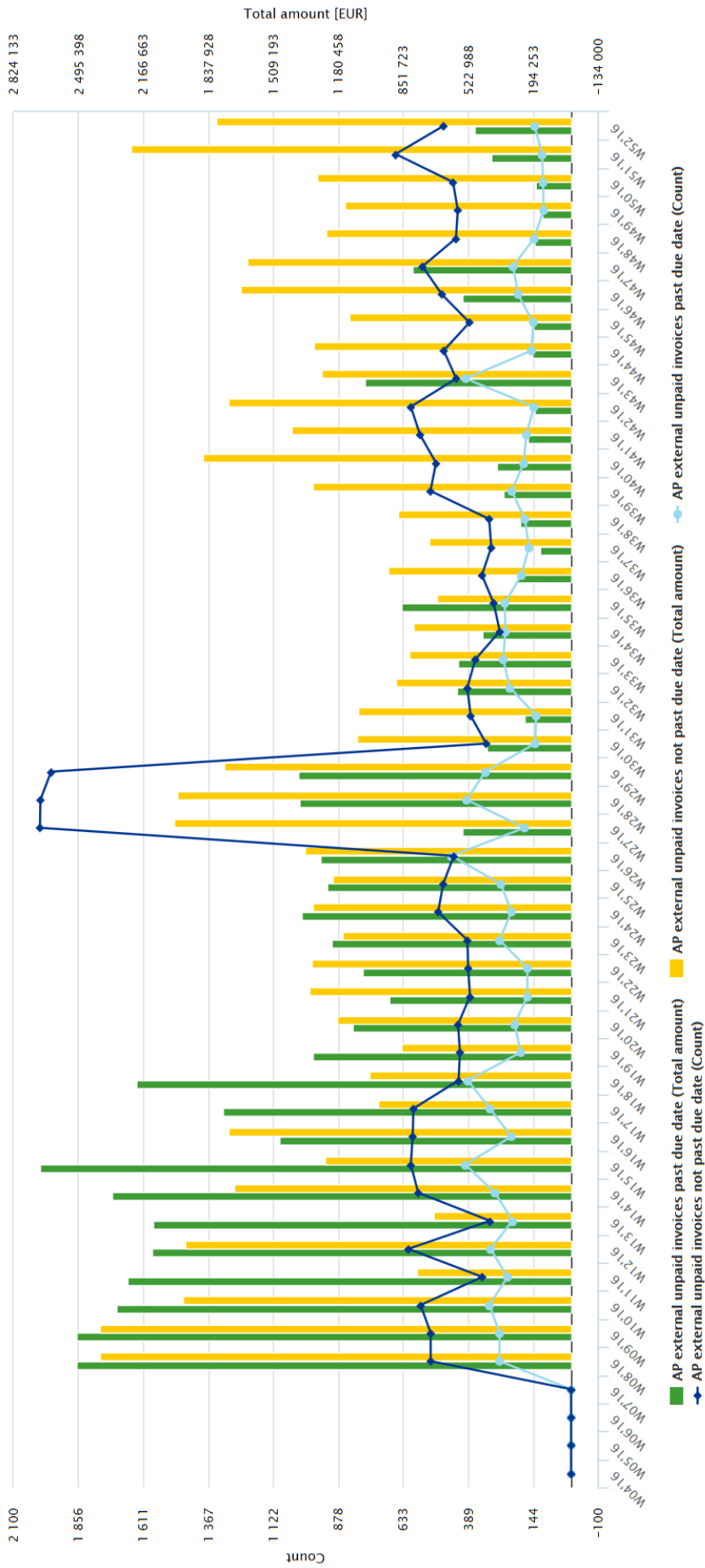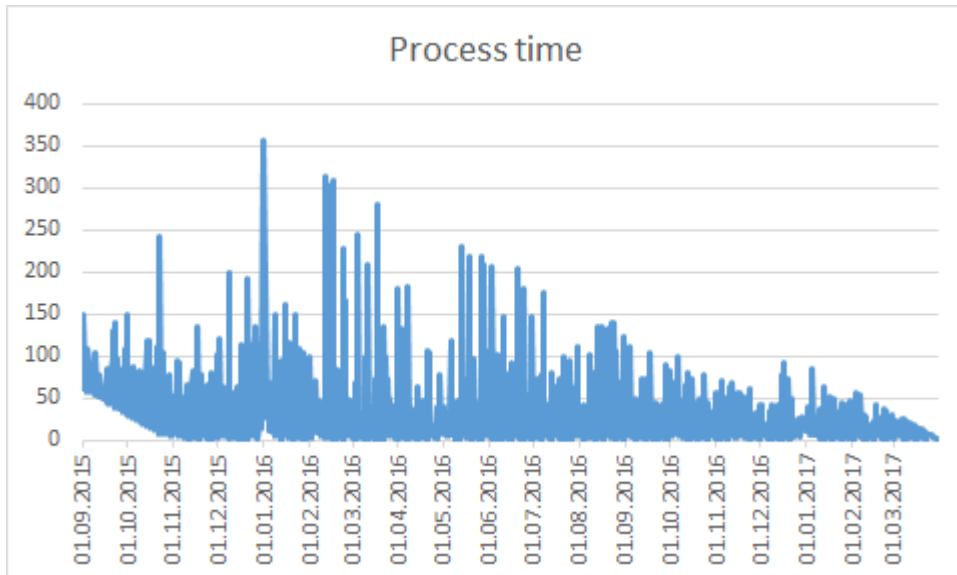Figure 6 present process time used on travel expenses. You can see that there are more fluctuations in the period before migration to Poland. Furthermore, it looks like the process time is still improving after the migration to Poland.

When we talked about the same process for Denmark, most our respondents agreed that Denmark had more issues with this migration. It was also mentioned that Denmark probably was struggeling a bit more than the Netherlands due to less people to help with the transition. Denmark was around 300 in total, and in Finance just about 5 people. While the Netherlands had about 1300 people in total, and about 20 people is in Finance.

> *"(...) people from Poland coming into Denmark. The people in Denmark went "sorry, this is just too much". And you can see that, overdue invoices, expense claims, weren't being paid. (...) and then, Gdynia took over and then it comes back down"*

A few of the respondents experienced that the process time is longer in Poland, and that they were struggling with the approval rights on important invoices.

> *"(...)The mobile phones, eh, that arrive in big invoices that wasn't being paid, and then the supplier threatens to lock all of the employee phones... That's not funny..."*

"(...)Before the processes are set, they are probably taking longer than before, and obviously when you do the whole process it is done in a minute (…) but now it has to go through several levels, and that is necessary to get the processes up and running (…) right now there are no efficiency gains, but it will come."

"(…)because processes are taking longer, like the closing (…), the woman sitting in Denmark had to go down to Poland and help with the closing of December, and at that point it should not have been necessary."

We see from Figure 7 that the light blue line peaks significantly near the month end close for August and September, but the peak declines for the close of October. Interestingly, the close for November has no peak. From conversation with Anne-Line Aagedal (email correspondence, 21.03.2017), we know this was the first month end close in Poland, which supports the statement that Poland stabilized and got the numbers back down.

For the 2017 numbers, in Figure 8 we see for "external unpaid invoices past due date", that there is a new peak in the beginning of January (week 1), and the month-end-close for January also show a significant peak. But as we mentioned for the Netherlands, this might be a common trend associated to year end. Nevertheless, it is difficult to make a statement based on this graph alone.

If we look at the Netherlands dashboard for 2017, Figure 9 (looking at the light blue line), we see that they have had a much more stable transition than Denmark. Note that even though the numbers are much higher for Netherland, they are a much bigger unit than Denmark, so we can only comment on the trend curve.
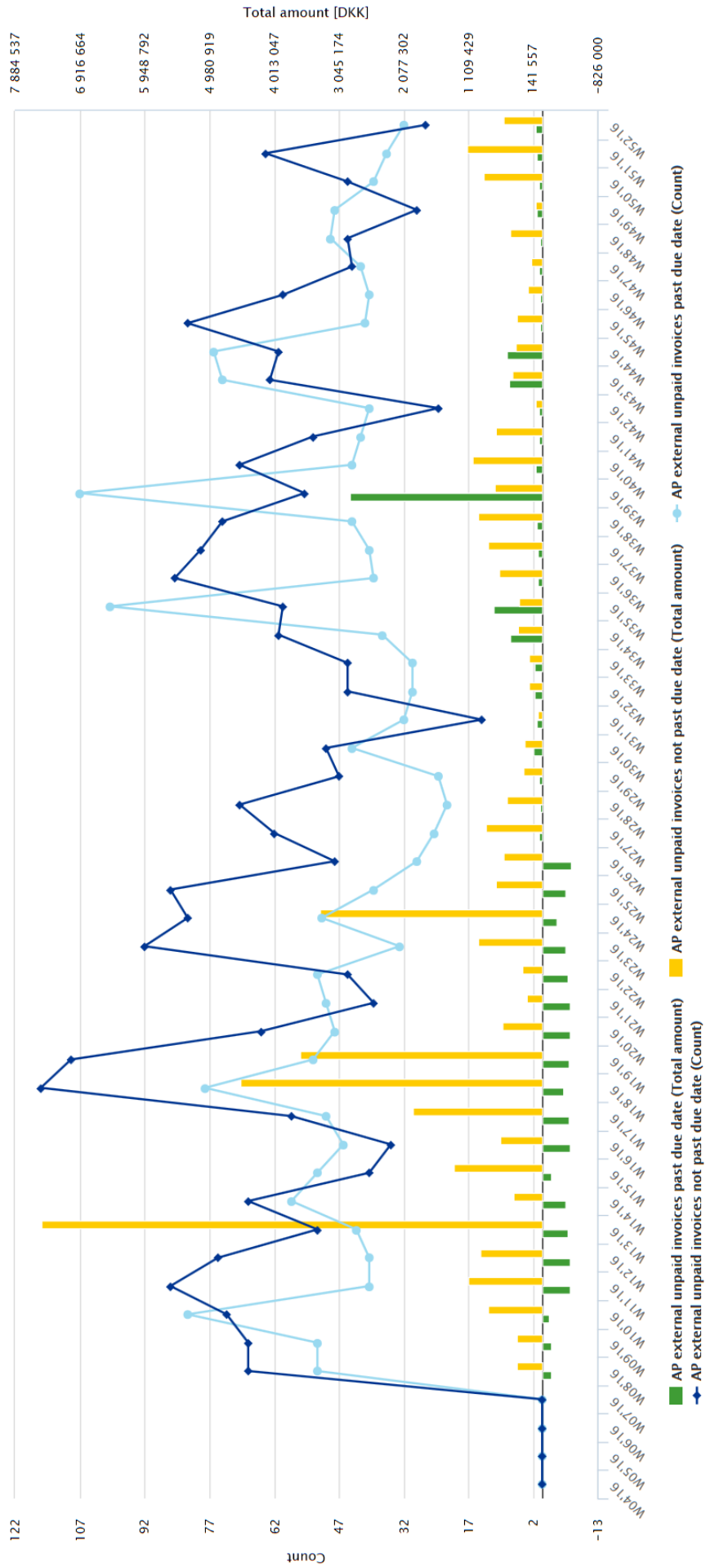
Figure 7: External unpaid invoices, Denmark 2016
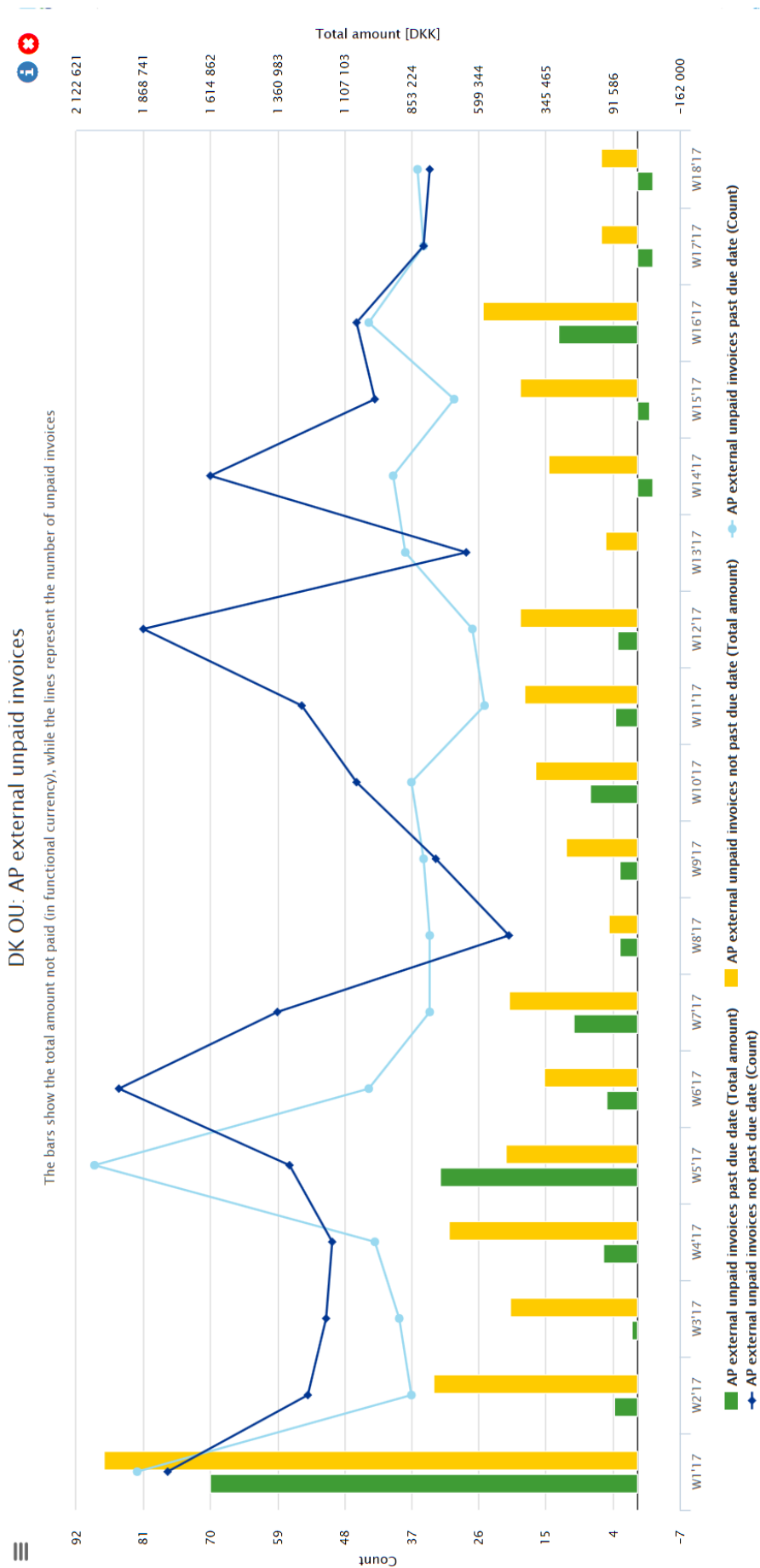
Figure 8: External unpaid invoices, Denmark 2017
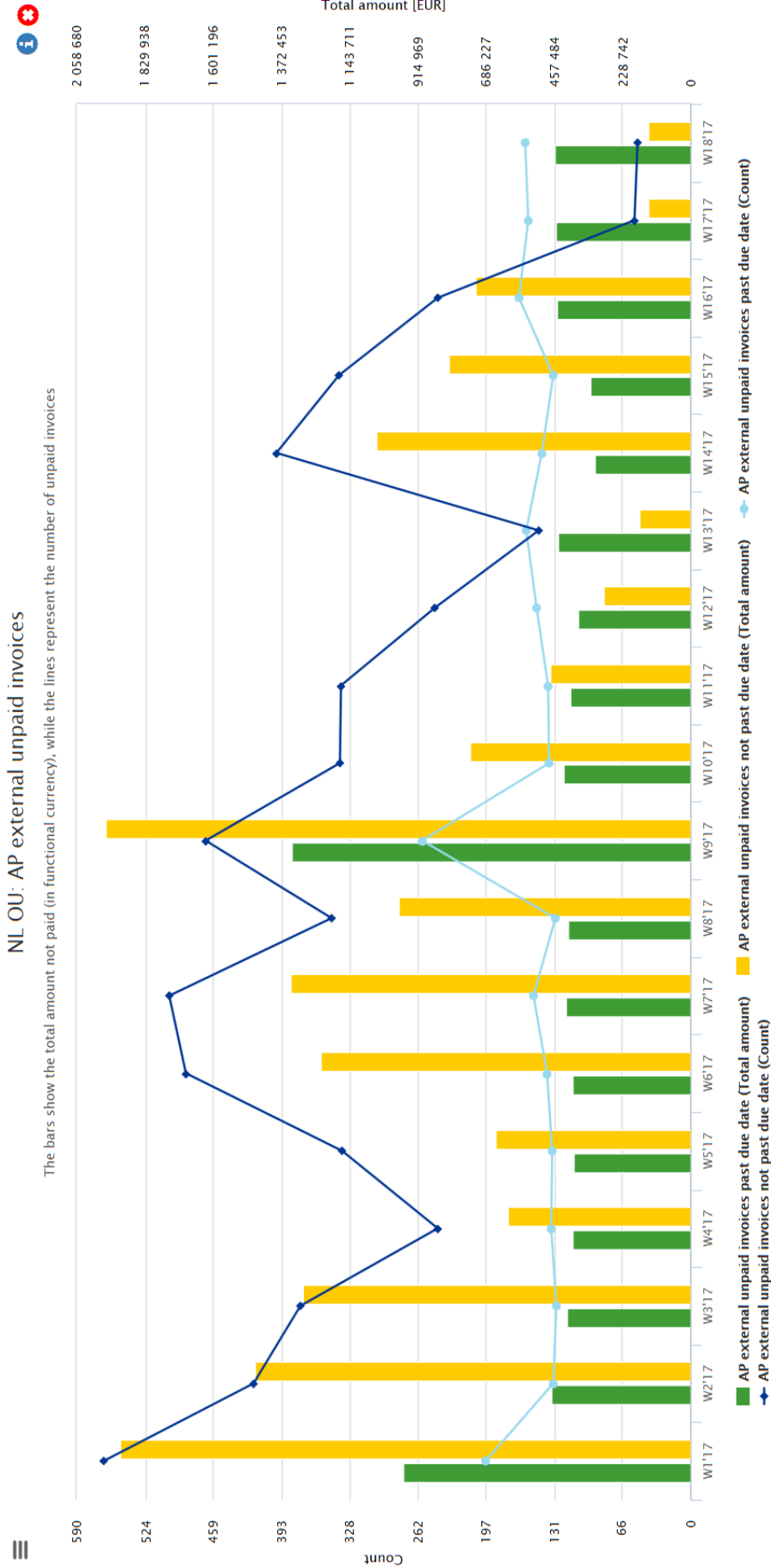
Figure 9: External unpaid invoices, Netherlands 2017
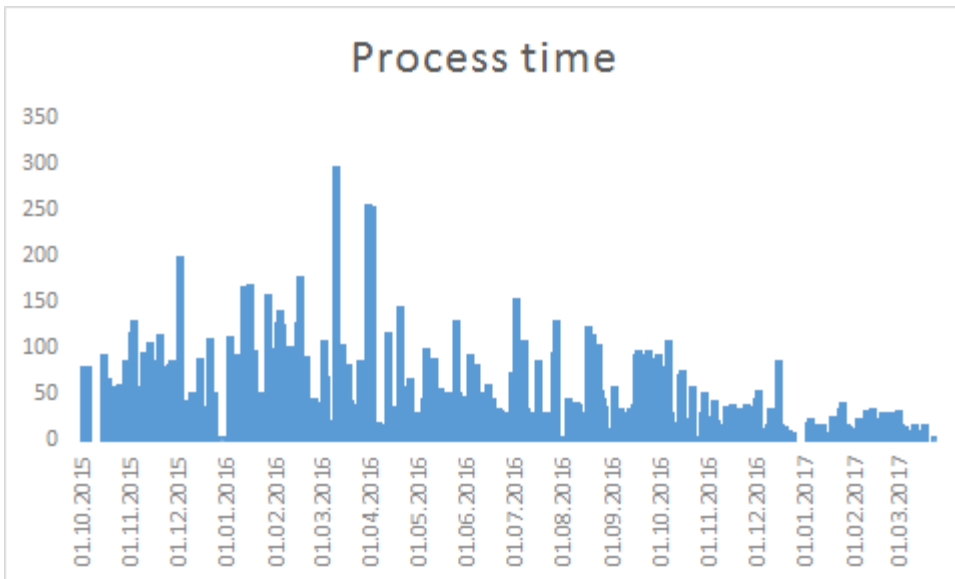
Figure 10: Travel expense process for Denmark

From Figure 10, the trend show that the process time has decreased after the transition to Poland. From the interviews, the respondents remarked that this process probably was the one that was the least affected by the transition. Some emphasized that this process also is the least difficult, which might explain why they say this migration went more smoothly.

"What I've heard regarding travel expenses, which is a part of the AP stream, is that they get paid eh, quickly, when they first submit it. So, that's working well"
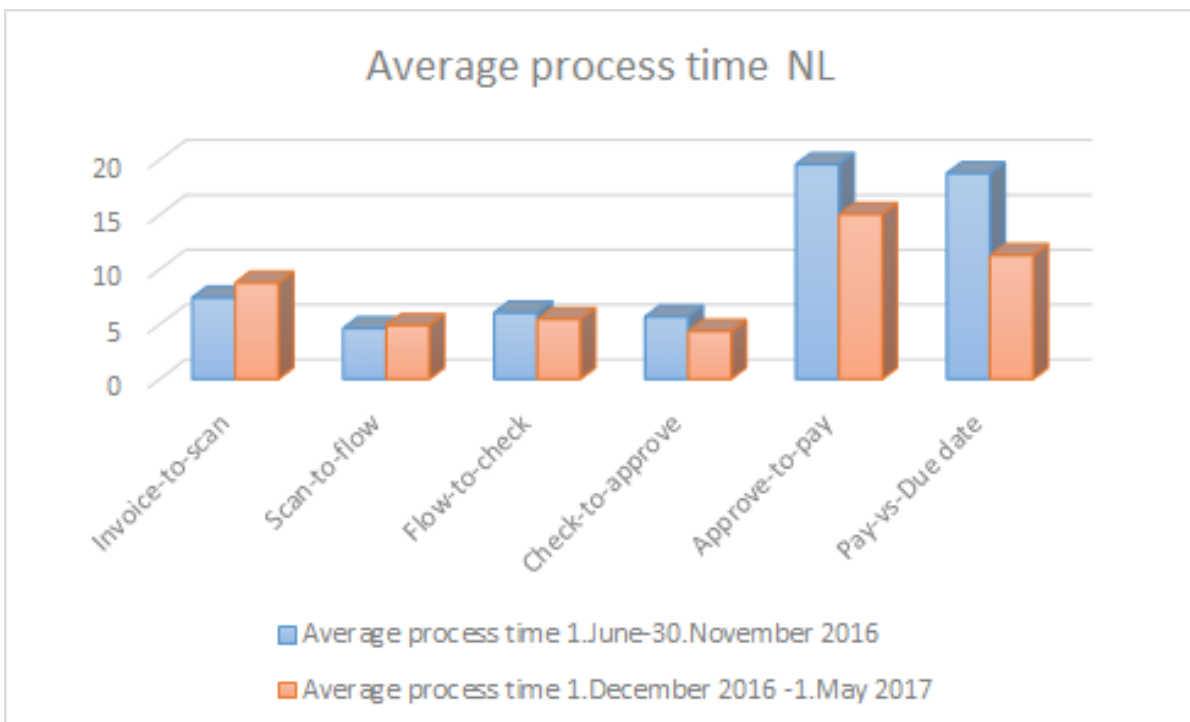
Figure 11: Invoice process for Netherlands

From the analysis taken from Basware, Figure 11, we can see that the processes from "flow-to-check" and "Approve-to-pay" are quicker after the transition to Poland. "Pay-vs-due date" is also decreasing, but from the numbers, we actually see that there is a large number of invoices being paid before due date. Of these invoices, there was only one invoice that regards an internal customer, the rest was payments to external suppliers. As mentioned earlier in the empirical analysis, this is very inefficient for the company and causes additional cost.
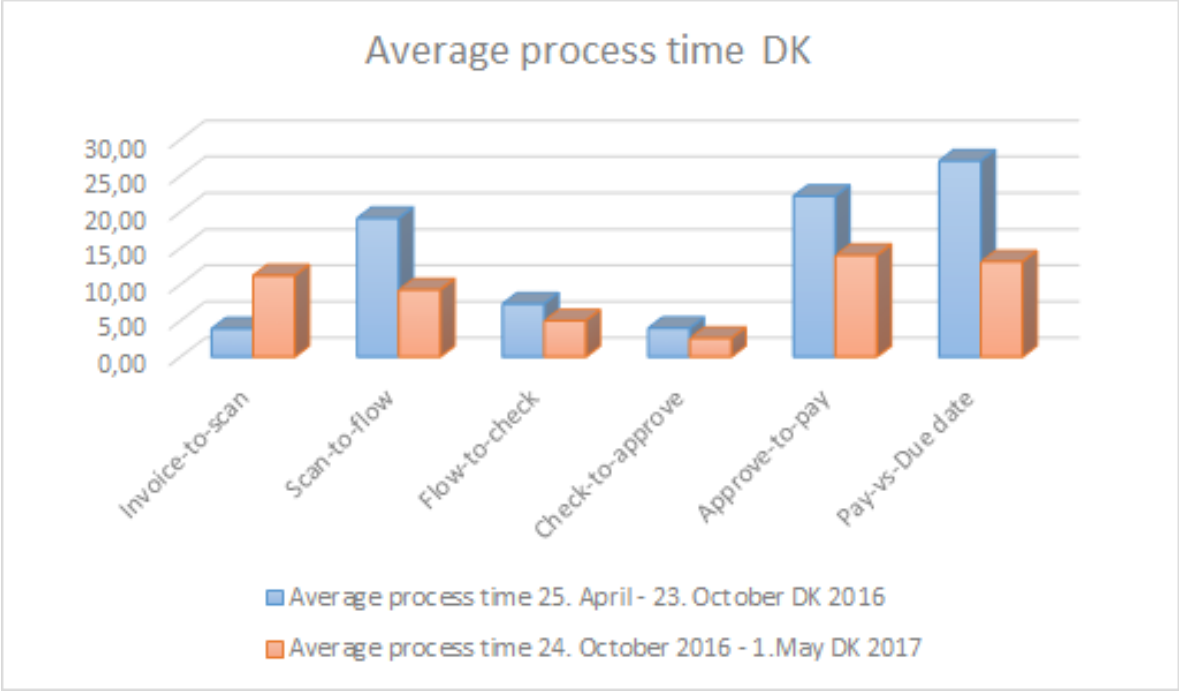
Figure 12: Invoice process for Denmark

In Figure 12, due to 24 internal invoices in January with a difference of 249 days from "Invoice-to-scan", we see a negative change from before and after the move to Poland. Nevertheless, we can see a good trend on the processes, where "Flow-to-check", "Check-to-approve", and "Approve-to-pay" are more efficient after the transition. In this analysis, we also found that there is a large number of invoices being paid before due date. However, in this case, of approximately 2700 invoices being paid before due date, about 2000 of these are internal invoices, thus giving us an indication of efficiency gain on the process for internal suppliers.

In the continuance, we wanted to know if changing system to Oracle caused any specific difficulties for Denmark or the Netherlands. For the latter, the respondents tell us that the change to Oracle did not have a big impact on the transition. However, Denmark experienced more difficulties, perhaps also because they were in the first group for both NGF and FS. To

get a better idea of the NGF process, we asked the respondents if Denmark had gotten any adjustments in Oracle during the implementation;

"Not enough (...) and it depends on what they refer to as location, which is important in regards to laws and regulations. So, there have been a lot of workarounds, and this is also why it has been important to get Norway on Oracle, you can't have workarounds when you have 2000 employees."

"Even if we piloted today, it would never work, because it didn't anchor inside of our operations at all."

We also got an example from another respondent regarding Iceland and Faroe Islands which are two other small offices.

"(...) what they did with Iceland and Faroe Islands, which clearly is not one of the 20 biggest countries, is that they used the same regulations as for Denmark. So now they have travel expenses with a regulative that doesn't match. So, in this case it would be better to do everything manually."

"(...)the conclusion has often been to do things manually, there have been too many "we do not support this", it's a standard system, but not everything is standard. I agree that we should have a standard system, but some things have to be adjusted."

Our respondents typically did not have much experience with the accounting systems that are being used, but they all agreed that Oracle have some needs for improvements.

"In the UK they put one pound into the bank just to see where it ended up, (...) Suddenly it appeared in an account no one knew existed, it was difficult to reconcile. The reconciliation of bank and system have been extremely difficult."

"(...)in Oracle you have these subledgers that needs to be updated, and you have to do a batch run to update it, and then you are dependent on that it gets run in the correct manner, which is a completely different setup than in Agresso. "

Even though most of our respondents mainly focused on the flaws of Oracle in contrast to Agresso, there are other factors to consider. In this NGF process they have also standardized what tasks will be within the different streams, and an employee will not be able to work with

multiple streams. Before you could experience that, due to too few employees in the Finance department, people had to have responsibility across two or three different streams. This would be in violation of the segregation of duties.

"(…)What people are telling me, and what I see is, Agresso is very flexible. So, in a way, it's easier to use. So, from an end-user perspective, I can imagine that Agresso is a eh, is easier to work with, but I think that's, also from a company perspective, the problem. Because it's too flexible (...) in Oracle we are making it much more restrictive because we want people to really follow the process, and I think there the system forces you a lot more to follow the process in a certain way and certain steps and you can restrict responsibilities and no segregation of duties, that's designed in Oracle, and in Agresso it's sometimes not even possible to do it because conflicting tasks are within one responsibility"

It is fair to say that problems will occur and mistakes will be made when you implement a new system. Furthermore, it would probably be independent of what system you choose, it takes time to get to know the new ways of operating. This was also reflected by one of our respondents.

"(…)honestly I think if you see where we have the main challenges in the company, then it has more to do with ehm, I would say ehm, with people's behaviour than the system itself."

Despite all the difficulties, the main motivation of changing to Oracle is that DNV GL are getting one accounting system globally. This elevates the possibility to get more data, and analyse it centrally without having to collect from different systems. With a global system, you can also get global processes which leads to better control of the processes and how to make it more efficient. When you have everything in one system, you also facilitate for employees to move around to different locations.

Even though Oracle might need some adjustments to function optimally as a finance system in DNV GL, a few respondents expressed that Oracle actually is not the main accounting system. They are using APRO, OnGuard, among other systems, and the output they get from these systems are interfaced into Oracle.

"(…) when we started the process it was, everything was "Oracle just solve everything", and what we've learned is, if we can figure the tools and the upside right and

interface into an Oracle, (...) we should be doing the minimum amount of work in Oracle, rely on Oracle as a, you know, of the shelf ERP-system."

4.1.2   Discussion

In this project, there has been a lot of focus on getting the processes standardized, and getting everything into a global environment. By implementing the NGF project, they are trying to get all the countries into the same financial systems which will give them the opportunity to collect data more easily, furthermore, it will enable them to actually have the same processes worldwide.

The tasks that are being standardized in the Global Centre are more restrictive, and it is not possible for an employee to work across different responsibilities. They are setting up different rules and guidelines for each process so that it will be performed in the most efficient manner. This way of organizing the processes has also been reflected in Taylor's' scientific management where he is treating people as machines and argue how they should only concentrate on specific tasks. By choosing a setup where you want to keep tight control over the processes, the company limit themselves from choosing an outsourcing strategy; instead they need to go for an in-house solution which has a high degree of vertical integration.

Our respondents' impression of the migration of Denmark and the Netherlands has been more or less unanimous. From the Dashboards, we could also see that the Netherlands numbers stayed the same, and the impressions from our respondents were that the people contributed to a successful transition. Denmark was much more fatigued and struggled even before the transition started, but when Poland took over the tasks, the numbers decreased. What we found from the dashboards also support these observations from our respondents.

We wondered why there were so substantial differences between the two countries. What we learned was that, firstly, the Netherlands had two entities working on another version of Oracle before the NGF and FS projects started. Secondly, Denmark had much less people to contribute in the process, around 300 in total, and in Finance just about 5 people. While the Netherlands had about 1300 people in total, and about 20 people is in Finance. Thirdly, Denmark was in the first group for both projects. As mentioned by one of the respondents, the Oracle they started with did not fit into DNV GL's business model, so Denmark was exposed to many difficulties even before being told to give away their tasks. When you gather all of

these factors, it seems very clear why things went better for the Netherlands than Denmark. Nevertheless, when we look at the numbers from Basware showing process time on invoices before and after migration to Poland, the numbers are showing an overall positive trend.

For the Netherlands, we see that "Invoice-to-scan" and "Scan-to-flow" are taking slightly more time after the migration. Furthermore, the "Pay-vs- Due date" contains more supplier invoices than internal customers, which indicates that DNV GL are losing money by paying suppliers too early.

For Denmark, we also see that "Invoice-to-scan" are much worse after migration. However, from the data, we found that we had 24 invoices that was scanned 249 days after invoice date, and these extreme values are probably the reason why the differences before and after the migration is so negatively large. Overall for Denmark, we see a huge improvement on the process time which indicates efficiency gains.

In conclusion, we find improvements for Denmark for the travel expenses and invoice process, but we cannot say anything about the cause; if it is due to the people or processes being improved. The Dashboards indicate that they mainly experience a setback on efficiency before and during the transition period but it normalizes in the continuance. We also find a positive trend for the Netherlands for the travel expenses and invoice process, but the changes seem to be somewhat smaller than for Denmark. A possible explanation might be because we have data for one more month for Denmark than the Netherlands. However, we see that the Netherlands had less fluctuation in the backlog before and during the transition than Denmark.

4.2   Research question 2: How has the Denmark and Netherlands migrations generated cost savings for the company?

In order to discuss if the Netherlands and Denmark generated any cost savings after the transition to the Global Centre, we wanted see which aspects our interviewees would emphasize and if there are other aspects than headcount reduction and salary arbitrage that might contribute to cost savings.

4.2.1   Presentation of data

When we asked about why the company should choose a shared service centre, some of the respondents stated that the strategy of SSC is a result of a need to become more efficient and

to reduce costs at the same time. Some of the respondents meant that working with quality and costs in several locations is very hard, and that the best solution would be a shared service centre.

We wanted them to elaborate on whether outsourcing had been on the agenda; the majority said that there was never a goal to outsource main parts of GSS. However, some areas like payroll and facility management are outsourced today. The respondents argued that DNV GL are big enough to make their own services in-house.

"But to outsource Accounting or, let's say, end-user, support, IT or whatever, I don't know if I believe in that... until further."

In general, our respondents emphasized that one of the most important advantages of the FS project is cost savings. We wanted to know what our respondents saw as the major cost advantages. Some of the respondents mentioned the benefits of economies of scale as one advantage. As an example, the company will save approximately 180 million NOK every year from 2018.

"(…) We are in a beautiful part of the world, but we are in a very expensive part of the world (…) you know the average cost per head in Norway with an experienced team is probably five times as high as the teams that we've got in Gdynia"

"We need to reduce costs just like the business areas. When they perform bad we cannot sit and continue to be the same ... effective or ineffective or (…) so that's the way we have to go"

A few respondents point out that the BAs always complain about GSS being too expensive and that they do not do anything about their efficiency.

"(…) it has completely shut up the BAs (…) you know, here we go, 23% cost savings"

GSS got to the point where it became difficult to gradually reduce costs in all the locations. They had to do some things differently, and by creating the Global Centre they got a much more centralized structure to benefit from.

"So we're lifting, we're fixing and we're dropping, into Gdynia, and that's certainly something that (…) is immediately showing benefits"

"(…) actually, we're late, you know. We're almost ten years late to this party"

Furthermore, by downsizing and standardizing the processes, several of the respondents believe the quality will stay the same or higher, after the transition to Gdynia. They also believe that there will be an immediate salary arbitrage.

"I think immediate, you know, once we start transitioning work, out of Norway and into Gdynia there is a massive salary arbitrage that comes."

"the blunt economics are that the moment you start moving jobs you are making cost savings straight away".

"certainly the regional break down, the sort of 2017, 2018 targets eh, you know, you can see Norway go from 50 million NOK region down to a 20 million NOK region."

To compare the average salary costs between the countries we present the full-time equivalent (FTE). DNV GL's business case assumes the following headcount costs (Tim Ward, email correspondence, 12.05.2017):

Denmark and Netherlands fully loaded average salary cost of MNOK 0.74 per FTE/Annum. Gdynia fully loaded average salary cost of MNOK 0.37 per FTE/Annum.

According to these numbers we see that the average salary costs per FTE/Annum are lower in Poland than in the migrating countries, and give an immediate cost saving to the company. In contrast to Denmark, the Netherlands are a Regional Centre which they started building simultaneous as they migrated their tasks to Poland, thus they did not have to reduce their office with the same percentage as Denmark.

From the interviews, we were informed that Denmark went from 5 people down to 2 people in the Finance department, which will indicate an immediate cost reduction of approximately 1.950.000 NOK (Christian Ruhs, email correspondence, 19.05.2017).

For the Netherlands, they went from a headcount of 21 to 16 which is a reduction of 5 people in the Finance department. This indicates an immediate cost reduction of approximately 3.210.000 NOK (Kasper Dashorst, email correspondence, 22.05.2017). Of the 16 positions in the Regional Centre, 11 was from the old team in Netherlands and of the 10 people that was not placed in the Regional Centre, 6 was redundant, 2 moved to GSS HR, 1 moved into the

BAs, and 1 got another position within GSS. Nevertheless, this new team is serving 19 countries while the old team only served the Netherlands, so, we might be underestimating the cost savings for the Netherlands.

In total for the two offices, we find a reduction of 5.160.000 NOK on headcount reduction, but since we have not been able to attain information on how many positions the Global Centre are covering for Denmark and Netherlands we cannot say anything about that cost implication.

Some of the respondents stated that the tough part is setting up the path of the future with respect to the people involved and the quality of tasks. If the quality is poor after transition, it will have a huge impact on cost to get the quality back.

> *"It's immediate, quality takes such long time to get back".*

> *"(…) we'll probably down to about 400 people, bearing in mind there was 624 people (…) 2 years ago. So, we're definitely becoming more efficient (…) the difficulty then (…) is our cost model shift significantly."*

Most of the respondents think that recruitment costs have been as expected. Some of the respondents believes that even though they save costs by lower salaries in Poland, they have to be strict because of a hot market where many shared service centres are offering similar positions. However, most of the respondents are not concerned about salary levels escalating in Poland, but are aware of the costs due to "jumpers" and delays in the recruitment process.

> *"Even though everybody says, and have been saying for many years that the salary will increase in Poland, it has been held very stable the last years, but we see a small increase"*

> *"(…) unexpected costs (…) we were slower on our recruitment in the beginning (…) we didn't recruit as fast as we hoped"*

> *"I could've recruited 20 and I would have been ahead, but in the long run it would have cost us, so, you know, we've stayed true to our values in the recruitment (…) and we've been very thorough."*

It is mentioned that the cost regarding buildings and rent is not giving any specific cost savings in comparison to Denmark and the Netherlands, but might have more savings in comparison to United Kingdom and other countries that will migrate. Nevertheless, the cost of owning the building in Poland versus renting it can be considered less costly in the long run.

Some of the interviewees think that the costs after the transition will turn out to be unnecessary high and that this could be avoided if DNV GL had invested more resources to preparations in the first place.

> *"(…) In a transition phase, it's important to see that it actually requires more resources than vice versa. "*

> *"That things are cleaned up properly before handing over, that is something to learn from"*

Other disadvantages mentioned were the extra use of money on process documentation and NGF issues. Furthermore, they believed travel expenses increased because of the need of extra meetings and workshops in relation to the project. Some of the interviewees mention that there are big risks due to delays in the process, and that any delay may be a possible cost to the company. A few respondents believe that redundancy costs will be higher than expected, but that they don't know how big these costs will turn out to be.

Several of the interviewees stated that cost reduction in itself is an easy task, but the challenge is that you need to be considerate to other perspectives.

> *"(…) do I see a world without Denmark? Yes, I do (…) Do I see a world without Piraeus? Yes, I do. Do I see a world without Milan? Yes I do. You know, but we need to draw a line, we've been very conscious in this process that it isn't all about efficiency. This isn't just a cost grab; the cost grab is easy to do."*

> *"So each time we look at those kinds of considerations we have to go back to our values and the roots of where this project started."*

Most of the respondents agree that cost savings is one of the most important aspects of the Future state project, and it is strongly connected to the quality and people of DNV GL. Cost savings is one of the short-term targets, and in the long-term, it will give GSS a scalable platform.

"When the company goes up and down, one can adapt quickly, and we can do that when we have a global centre"

"It's obvious, (...) you are cost effective, you have quality, so the business as such will look at that unit and give them new tasks, but if you are cost-ineffective and have low quality, you will not get any new tasks"

According to some of the respondents there are more cost saving opportunities out there.

"(...) operating centres in Houston, Dubai, Singapore (...) Not the lowest cost locations around the world. So, there's more opportunity out there"

"(...) probably be looking East and West rather than inside Europe for a while."

4.2.2 Discussion

The decision to make or buy the service were never equal alternatives to DNV GL, and respondents agree that the most efficient strategy is to choose SSC over outsourcing or other alternatives. By having an SSC, respondents believe DNV GL can keep high control and ensure that they can benefit from a scalable platform in the long term, by reducing the input and still increase the output. Supported by Hill and Hult (2016), the decision of doing tasks in-house is the best solution because it is easier to get the acceptance of centralized decisions and optimizing the processes. Our respondents believe that the cost reduction in isolation is an easy task, in addition, they agree that the implementation have been successful because DNV GL are reducing costs.

Since the respondents believe that reducing costs is an important part of becoming more efficient, they also have great expectations to the costs savings as of 2018. The expected savings are 180 million NOK per annum and consist of two parts. First, the global salary arbitrage, exploitation of the lower salary level in Poland in contrast to the migrating countries. The respondents assume that the salary level in Poland will continue to be low in the future. Second, the reduction of headcount during this process.

According to our findings, DNV GL's expectations are supported. However, because of the competitive market in Poland and the possibility of salary levels increasing in the future, there might be a possibility that the cost savings will be smaller than first expected.

The headcount implications from Denmark who are not a Regional Centre, they had to reduce positions by 60%, from 5 to 2 positions. Because Netherland is a Regional Centre we see a smaller percentage change in reduced positions with 24%, from 21 to 16 positions. Although there were only 5 positions less in the Regional Centre, there were 6 people from the Finance department that was redundant, which is closer to 29% of the department.

Unexpected costs can lead to a lower outcome in the long term. According to the respondents, unexpected costs can occur due to the lack of preparations before implementation, delays in the process, or NGF with its former issues. They also argue that some of the costs most likely will turn out to be higher than first assumed, such as severance packages.

In conclusion, we see that FS have generated some immediate cost savings due to salary levels and headcount reductions.

4.3 Research question 3: How do people affect the process, and how does the process affect the people?

In a transition process like Future State, you are changing both the company structure as well as the way people are used to work. As mentioned by Lewin (Connelly, 2016a), it is important to prepare the employees who carry out the project on the coming changes. Furthermore, it is important that they have been able to change their mindset so that they contribute to the changes. Thus, you can say that the people of the organization are the weighting factor of the project becoming a success or a failure. For us to be able to answer our main question, we also needed to understand how the human resources in the company might have been affected by this process and if they have had an effect on the success of the transition.

4.3.1 Presentation of data

We asked the respondents if they could give us some examples of advantages and disadvantages of the FS project in terms of the people involved. Most of the respondent thought that one of the advantages of having a global centre is that you can structure people in a more professional setup. In the past, people would be working across different process streams, while in the Global Centre, they will only be able to work in one process stream. It is important that the company have this setup, in order to keep segregation of duties and being aligned with the rules and regulations. The work being performed in the Global Centre will be reported back to the Regions where it gets controlled by Accounting Specialists and Chief

Accountants. The Chief Accountant will also function as an intermediary who attain good communication between Poland and the BAs.

"So, it's a great advantage to gather this, and we get the specialists where we need to have specialists"

"(...)Instead of, maybe having, let us say, 40 employees who did everything from A to Z, you will now get 15 employees which are professional…"

"(…) as we all know when you start a new role, it takes months before you get to a level of being highly competent, and I, that's one of the disadvantages. We're taking, we're effectively taking activities from people who're already highly competent, highly knowledgeable"

The respondents believe that most of the employees understand the process, but points out that a clear disadvantage for the individuals is the downsizing. However, there have been many opportunities in the Regional Centres and BAs, if they are willing to change.

"I can categorically say that we are doing the right thing, it might not be the right thing for A, B, C or D, but it's the right thing for DNV GL."

"a disadvantage is that people lose their jobs, but those who then eh... stays behind, they will get a chance to- I believe they will get the chance to work more in depth where they want to."

"A degree of flexibility and a healthy curiosity, there are jobs, you know. It may not be what you do today, it may not be in your little box, (…) but get out of your box, you know, because the world is changing."

We asked if DNV GL tried to relocate the people who loses their jobs. The respondents answered that if a position opens internally, or they knew something would open up in the near future, they would try to coordinate with the other leaders to that they keep most of the people somewhere in the company.

"so, you have a period when you are on "guide and leave", and they'll get access if there are any vacant positions, they also get coaching on how to externally build up their CV and, eh. But our goal is to fill the org. charts that are set, and the rest will be redundant..."

Most respondents do not see any practical issues of moving these types of tasks to a global centre. Today's situation where DNV GL has several financial departments containing 2-3 people doing the processes seems less efficient. The respondents also point out that on some of these locations, they could easily reduce the hours with approximately 20%, which is not applicable when the people in that process wishes to work 100%. By placing it in a Global Centre, you are able to allocate resources in a more efficient way, and if you need to reduce the input on Netherlands and increase input on Denmark, as an example, you can allocate within the Global Centre.

"(...) so I do not see any, like in practical terms, I see mostly for finance, so you, if you are sitting one person doing those tasks here or in Poland, it's quite back office, so I don't think it will have any disadvantages."

"The big advantage is (...) is that it becomes a proper muscle"

"Also, many of them comes with shared service backgrounds, they have been working in the industry for many years so they see things with such a different perspective, so they will probably be able to challenge us in many areas that we haven't needed to be challenged in before(...)"

Time spent and timing of the project is pointed out as a disadvantage by some of the respondents. The project should be done faster to preserve the quality of the processes, and to avoid the uncertainty among employees. A few respondents said that they do not know much about the actual information flow. However, they believe it was not given enough information, and that the information came too late. Even though this is hard to document, they remark that the information flow could have been better.

Information about FS started in the summer of 2015. In April 2016, there was a meeting that was streamed for the whole company, which was not very detailed. The respondents believed that there were no direct reactions from the employees. However, since the meeting was streamed and a large number of the employees was not present at the meeting, the respondents assume that questions came afterwards. A few respondents stated that sometimes it might be difficult for people to realize what the consequences are before they have to leave their jobs, while others take all their sorrows in advance. The communication is extremely important in a change process like this, because the information tend to lose some of the meaning when it is transferred from strategy to reality.

"(...) the more you manage to be, meet the people and have direct communication the better, to help local leaders and ensure that information (...) comes out."

It is important to keep focus on the employees and how they are affected by this project. A few respondents indicate that differences in culture can cause a tough tone between the Global Centre and the migrating countries, and that it is highly important that the cultural fit in Gdynia is aligned with the rest of the company.

" but it's a little bit of science in here, for every reaction, there is an equal opposite reaction, and that's what's happening in the regions, the regions have the, the opposite of what's happening in Gdynia"

"(...) the cons, is cultural effect."

"It has a lot to do with culture. Scandinavians, (...) have a much flatter organization, and (...) do not direct each other. While in Poland it is a whole different way, with lines and yes. That is noticeable. So, what becomes important is to actually teach them about our culture."

A big difference between Denmark and the Netherlands is that the latter is a Regional Centre, and during this transition process, the Regional Manager was present for the whole period. For Denmark, however, the Regional Manager is located in Norway and was not able to be present at their office during the whole period, which might have affected how fatigued and stressed the employees was.

"Because we got on one hand presence, Regional Centre, the Oracle piece is a factor, ehm. And on the other hand, we've got poor Oracle knowledge, we've got no leadership presence eh, no belief in the model and it's not a regional centre"

Even though the Netherlands also were losing their tasks to Poland, they got the new opportunities in the Regional Centre, which gave them more incentives to contribute to the process. This was not the case for Denmark. The last few years, Denmark have been put through a lot of changes; they were in the first group for both NGF and FS, and during these projects, they have had a lot of old issues coming up to the surface. As a result of the workload and continuously having to correct and improve their work, the people in Denmark were stressed and tired. When you know that your job is at risk either way, it is understandable that they were reluctant to give away their tasks.

"(...) while in Denmark, it was very difficult to get that shift. They felt that they were so busy and that the Global Centre didn't understand why they were that busy, because they had taken over a lot of the work, right."

"(...) they had gone through the NGF- pilot, and had been pilot for a lot of other stuff earlier, eh, so they were already tired when this started"

"They hadn't set aside enough time for the transition. That's really important. Because they were the first to go, it's not just training for Denmark, it was a complete training of those who were employed in Poland."

Most of the respondents believed that the workload in Denmark was high. Being in the first group for the projects increased uncertainty about the new processes, which is highly connected to stress. From the interviews, the respondents told us that two of the employees in Denmark had heart attacks, and they are relating this to the stress at work. In general, they reported a high level of sick leave.

"That process is a mathematical equation, NGF plus Future State over a sustained period of time equal sickness."

Unit			201607		201608		201609		Q3 2016	
	Hours worked	Sick hours	Hours related to accidents	Sick hours	Hours related to accidents	Sick hours	Hours related to accidents	Sick hours	Hours related to accidents
SFNDK	Denmark	7,5		7,5		60		75	

Unit			201610		201611		201612		Q4 2016	
	Hours worked	Sick hours	Hours related to accidents	Sick hours	Hours related to accidents	Sick hours	Hours related to accidents	Sick hours	Hours related to accidents
SFNDK	Denmark	98,5	0	27	0	65	0	190,5	0

Figure 13: Overview of sick leave Denmark

We can see from the overview that the sick leave increases as they get closer to the migration date in end of October. After the migration, the sick leave decreases dramatically from 98,5 to 27, but then increases to 65 again. The average in that period is 63,5 hours divided on approximately 5 employees which gives an average of 12,7.

For the Netherlands, for October, November and December, the sick leave was 248, 240 and 248 hours (Bianca Linstra, email correspondence, 13.04.2017). The average in that period is 245,3 hours divided on approximately 20 employees which gives an average of 12,2 hours per person. The numbers for January and February were 0 hours of sick leave.

Some respondents experienced that Denmark had a much more emotional response in this process than the Netherlands. Adding to the sickness issues, they say that satisfaction levels were low for Denmark. As mentioned earlier, Denmark had been through many pilots at this point, and when the people in Gdynia continued to point out flaws in Denmark, the relationship got tense.

"(...) Those people in Poland continued to point out mistakes, right, and that's, and then you eventually take it personally and you can't take it anymore"

"And what I hear several times in Denmark is that they use so much time explaining things to Poland, if they had done it themselves it would be finished a long time ago."

With a stressful situation like this, the people in Denmark was not the best at cooperating with the Global Centre either;

"(...) we have had some hiccups where they are asking for something, and the Chief Accountant is unwilling to share it because they believe that it is none of their business, so, it's like that."

Most of the interviewees pointed out poor leadership as the main reason why Denmark did not work out in the first place. The different leaders had a responsibility to communicate the FS project throughout the organization, but it might seem like this was not followed through. The respondents say that they do not know exactly what and how the project was communicated to the employees; they just had to trust their colleagues.

"(...) some say more than they should, while others say nothing."

"(...) So we had to trust them, at least all of them are managers, but when some of them don't believe in the idea, they become reluctant to talk about it, and it gets difficult..."

All the respondents point out that the bottleneck of communication for Denmark lies between the lower level management and the employees. Furthermore, they recognize that there are some leaders that simply should not lead change processes in the first place.

"(…)not everyone is suited to lead these kinds of processes, or they actually don't want to"

"The management needs to be 100% behind the change from the top and all the way down to Denmark, and we were, we were not strong enough, to be blunt, in the setup for Denmark."

"So it just became such a downward spiral in Denmark that came from the top"

We wanted the respondents to elaborate on how the motivation among the employees was for the two countries. They noted that, because of the lack of leadership, workload and stress levels, Denmark had poor motivation. In the Netherlands, they reported that there were not any significant changes in motivation, and that the building of the Regional Centre and proactive management probably was the reason why.

After going into all the probable issues with Denmark and the Netherlands, we wanted to know how they thought things had been in Poland. Firstly, we wanted to know about the recruitment process and how they proceeded to get the right profiles into the Global Centre. The respondents said that they were impressed with the people that had been recruited until now, but that things had been slow in the beginning because they wanted to stay true to DNV GL's values. As mentioned in research question 2, the main focus was to ensure good quality and to avoid "jumpers". Most of the respondents said that they think the turnover situation in Gdynia will be different from the rest of the company.

"(...) it is such a different culture for, call it "jumpers" (...) they come in, then they want salary, hears salary and then uses it more to push the other employer, and then they don't show up when we are starting.

"(…) we understand turnover will certainly be higher in Gdynia than in the rest of the company, given that all of them work in this company for "X" number of years"

"(…) we want people who want to work for DNV GL, for the company values, for the profile of the company, eh, for the way that we are investing in people…"

In the last few years, there have been a lot of SSCs emerging in Gdynia which have resulted in a more competitive market and adjustment of salary costs were forced. Nevertheless, our respondents said that DNV GL only adjusted to be at the same level as the rest, and that they were not interested in a "bidding" war. DNV GL started preparing contracts before the interviews so they could give a direct offer to people they really wanted.

In the process, they have mainly recruited locals, used referral programs and tried to boost the positions through graduate programs. Yet, they experienced that some positions were harder to recruit than others.

> *"AP is by far the most difficult, it requires the largest number of people and it's hard to acquire, eh ... for example, record to report is easier"*

The accounting streams that will be placed in the Global Centre has different levels of difficulty, and they think that the employees that are supposed to work in the P2P stream will be more difficult to keep within the stream, and perhaps the company too. Due to the tasks being easier than other streams, such as R2R, there are less applicants in the market who are not overqualified, and DNV GL find this to be a huge challenge in the recruitment process.

> *"There aren't that many people who wants to work in that process, like, forever, they'd like to progress"*

R2R attracts more seniors because of more complex tasks, which makes it easier to keep them within the company.

The respondents described the process and strategy in training the new employees. The knowledge transfer consists of four stages.

1. On boarding: Normally it should last for one month, and is a period of courses that contains; "we in DNV", and learning Oracle, Agresso, APRO and OnGuard. Because of the slow recruitment in the beginning, and perhaps some other components, the plan shifted and this period was shortened. In some cases, the new employees were put on the plane to the migrating country the day after they signed their contract.
2. Work Shadowing: Learning by observing. Employees from Poland goes to the migrating country and sits next to the employee to observe and learn all the tasks and processes. This period should last for 3-4 weeks. In this step, we were also informed in

our interviews that the employees from Poland wrote down all the procedures. When a new person comes in, the main goal is to have the procedures in place.

3. Boots on the Ground: The team from the migration country comes to Gdynia to be available for questions and help on processes. The employees in Poland are now doing the tasks with supervision. This period should last for 3-4 weeks.

4. HyperCare: The people in Poland are up and going, but are able to contact the migrating country via Lync or mail. This period does not have an expiration date.

In the knowledge transfer, what they experienced as a major difficulty was that the FS project was executed just a short time after the NGF project. The respondents expressed that there certainly was a downside for the employees in the migrating countries to teach the Global Centre processes they had recently learned themselves.

"In an ideal world, if we would start in this with a clean piece of paper, rewind the clock two to three years, (...) would have done Future State before NGF."

One of the respondents also commented that they should have acquired more temporary employees early in the process to relieve stress from the permanent employees.

However, they believed that the cooperation between the Global Centre and the different countries will be a success, and that they will experience fewer difficulties in the continuance. The only difficulties they might expect are if some of the processes have not been mapped properly. This was also one of the issues they had in Denmark.

"(...)In Denmark they were just supposed to map their local peculiarities against the global process, but what happened was that they had to map against something that didn't exist"

The respondents believe DNV GL can learn from the migrations they have been through. It was also commented that they have already changed some of the routines regarding knowledge transfer, and that they have a much better list of activities to go through. Overall, the setup of Future State has improved since the Denmark migration. They have hired Global Process Owners to get the standardization of tasks which will help the Global Centre in defining what tasks are within which responsibility. In general, our respondents are pleased with how this project has been carried out.

"We've proven that we can execute high change project in a short period of time"

When we asked if FS project is a success, most of respondents were positive, however a few respondents meant that it is too early to say.

"there are more difficult conversations to come, but I'm incredibly proud of what the teams have done eh, to get us here, so yeah, I would consider it a success so far."

As noted by the respondents, an extremely important aspect for future migrations will be to ensure that all of the leaders and managers believe in the idea.

"that the management is onboard, that they really are behind the idea, and are communicating clearly"

4.3.2 Discussion

Our respondents have highlighted the aspects of how people in Denmark and Netherlands were affected by the FS project and how the process may have affected them. According to Lewins change management model (Connelly, 2016a), organizations need support from the people to be successful. If they are successful, DNV GL can continuously improve their processes to become more efficient.

Before implementation of FS, DNV GL should have motivated and prepared their employees for changes. This could have been done by giving information early and explaining the process, giving detailed information about how it affects the individual and how the individuals could contribute in the process. Our respondents agreed that DNV GL delegated the responsibility of communicating throughout the organization to the mid-level managers. However, there is no known record of what kind of information or how much information was given. What we do know is that most respondents believed Denmark were troubled, and it was caused by lack of support from the mid-level managers.

Furthermore, Denmark prepared for something that did not even exist, and the change process implied downsizing which is a negative outcome for the individual. In contrast, Netherlands experienced people to be more motivated because of the opportunities in the Regional Centre. According to Herzbergs two-factor theory (Herzberg, Mausner and Snyderman, 1993), people who are afraid of losing their jobs are more likely to be dissatisfied. Similarly, those people who are not motivated in their work are most likely not supporting change processes like Future State. The respondent's shared the opinion of lower motivation in Denmark in contrast to Netherland.

Whereas the Netherlands seemed to be well prepared for implementation, our findings suggest that Denmark was not. The decision to go for the FS project was made by the top management, and they assumed that the lower-level management were behind the idea and would support and motivate the other employees in the process. However, how could the people be motivated when they were not involved in the process, experiencing poor working conditions and having a leader who did not believe in the idea? Not to mention NGF related issues, the increased workload over a sustainable period of time, and the fact that people knew they might lose their jobs. This is most likely some of the reasons why Denmark experienced a lot of sickness issues, which the respondents related to stress at work. Thus the absence of Herzberg's hygiene and motivational factors are supporting our interpretation of people being dissatisfied in Denmark (Andersen, 2009).

Figure 13 confirms the respondents' statements about higher sick leave in Denmark during implementation of FS project; however we have no data confirming the actual cause. By looking at Q3 and Q4, we see increase in sickness hours around the date of "go live" and as stated by our respondents, this was an abnormal increase in sick leave.

Even though our respondents understood how people felt about the downsizing, they argue that to be efficient you have to work smarter, and be more flexible when it comes to changes in the market. By centralizing tasks and processes, it gives DNV GL an opportunity to work more efficient, which means, instead of reducing people's positions with 20%, they can adjust internally in the Global Centre to ensure efficient use of resources where it is needed. According to Cecil (2000), this should give better decision-making processes and advantages beyond cost savings. This also shows that DNV GL becomes more effective in their way of organizing their business in the long-term perspective, by centralizing in terms of location.

DNV GL hired people with previous work experience from SSCs and can thus benefit from their shared service experiences. However, the focus on efficiency must not outweigh other challenges in the process. First, you lose highly competent people in migrating countries if they are not relocated into the Regional Centre. Second, you have to provide training to the people in Poland so they become aligned with DNV GL's culture and values.

However, the time used was an issue because of the delays in the recruitment process in Gdynia. In some cases they had to send employees to start work shadowing in the migrating

countries the day after they signed the contract. Consequently, the employees lost the opportunity to learn DNV GL's systems and tools before going to the migrating country.

On one side, losing the onboarding can result in a lack of understanding and foundation for coping with challenges later. On the other side, since work shadowing implies observing how the tasks are carried out, the respondents argue that there will be small or no consequences in terms of learning outcome. However, according to Argote and Ingram (2000), the training will only be a success and a competitive advantage if the knowledge transfer are prioritized and that the company ensures a well prepared process. Because the employees from Poland also are writing down the procedures, they are facilitating for a successful knowledge transfer and making it easier for new employees coming into the company in the future.

We believe the employees, when skipping first step, expects more information and explanations from DNV GL in the second step, and thus increases the pressure on people from migrating countries. Our findings suggest that the knowledge transfer went well, and that people from Global Centre experienced the process to be successful. However, a few of the respondents' remark that the situation was more complex for Denmark, and that they used a lot of time on explaining things to the Global Centre. Since the system still was new for the employees in Denmark, they felt uncomfortable being asked questions they did not know the answers to. Because migrating countries are supposed to be sharing their knowledge, their motivation to do so is highly important. According to Lewins force field analysis (Connelly, 2016b), the process can be successful if either the restraining force against the change is weakened, or the driving force of change is strengthened. But to figure out how to do one or the other, it requires a lot of research and knowledge about the people.

In contrast to Denmark, we have no data indicating that the Netherlands did not want to help or participate in the knowledge transfer. Whereas the Netherlands understood the new tools and systems, the people in Denmark didn't have Oracle experience. The employees were getting more fatigued by the increased workload and uncertainty, and their motivation to contribute was very low. These factors are caused primarily by the NGF project and are not due to FS itself. Despite difference between the countries, we argue that the strategy of lifting, shifting and dropping into Gdynia is hard to manage. According to the criticism of Lewin's third step (Connelly, 2016a), there are a lot of fluctuations in today's society which makes it difficult and unnecessary to *refreeze* the changes in another context and DNV GL should instead be preparing themselves for eventual changes in the future.

In this discussion, we have highlighted the aspects of people in terms of how they have been affected by the process and how they influenced the process in being a success or failure. DNV GL has not been sufficient in their handling of Denmark regarding the people and did not ensure that the mid-level managers believed in the idea. As a result, we found that this process was not as successful as for the Netherlands where they had a more inspiring leadership present. However, there is no doubt top management can see Denmark as a lesson to learn from in the future.

4.4   Combined discussion of process efficiency, costs and people

We cannot conclude about the changes in efficiency and costs by only looking at one aspect at a time. In the following section, we want to summarize and combine our discussions. Our goal is to see how our three constituents (process efficiency, cost reduction and people) can help us explain whether the FS project has affected the efficiency and costs in DNV GL.

From our interviews, we found that Denmark faced problems connected to the people and their motivation during this process. The leadership team in Denmark did not support the project and were not able to push the project through, which resulted in a less successful transition for Denmark. This effect might also be connected to the negative numbers we saw from the Dashboards before and during the transition period. In addition, we see that the willingness to share knowledge was low for the employees in Denmark. Without the support of the people, they were not able to have a successful knowledge transfer. However, the employees from Poland did a good job in writing all the procedures which might help the company to keep the good quality in the processes.

From the quantitative data, our findings suggest a more effective handling of invoices in Denmark after the transition to Poland. We also see that the overall trend is positive, as an example, they are paying most of the internal customers before due date. We also find that the average salary costs are lower in Poland compared to Denmark in addition to the reduction of headcount. In total, we see a decrease in costs and increase of efficiency.

In the Netherlands, they experienced a more successful transition due to leadership supporting the project and executing accordingly. In contrast to Denmark, our findings suggest that the Netherlands did not experience resistance against change or any significant issues during the process. We also found in our data collection that they had less fluctuation in the Dashboard numbers before and during the process. We believe that the positive contribution from the

Netherlands is caused by the opportunities in the Regional Centre, earlier experience with Oracle Finance, and the positive leadership on the ground in the Netherlands. Our findings also include that the knowledge transfer process was perceived as good, even though some parts of the training were skipped.

From the quantitative data, we found an overall positive trend in the handling of invoices, other than that, the changes were small. However, the Netherlands are paying a lot of external suppliers before due date after the transition. We argue that this is inefficient and causes additional cost for the company. In the continuance, they should strive to pay external suppliers on due date to avoid this unnecessary cost. Nevertheless, we see the immediate cost reductions, as with Denmark, they obtain benefits from the difference in salary levels and headcount.

In general, we already see the benefits of standardizing tasks and making clear distinctions of what should be performed by Global Centre and what should be performed in the Regional Centres. The efficiency gains on process time can also indicate some cost reduction, however we are neither capable of determining what the cause of this efficiency gain is, the processes or people, nor the amount they might be saving. The amount the company is saving on salary arbitrage, headcount reduction, and with the possible cost savings on efficiency gains for the Netherlands and Denmark migration, still seems small when you compare it to the target of 180 million NOK.

Nevertheless, we do see indications of issues occurring in the future if the processes are not mapped properly, or the Knowledge Transfer is not good enough, so that the people in Gdynia are dependent on even more assistance in the aftermath. Furthermore, they need to map which people they need to use in the knowledge transfer, who attains important knowledge about the different streams, in order to preserve the tacit knowledge in the company. The shared service centre is facilitating for the future and it is an efficient way to adapt to the changes in the market.

5 Conclusion

In our thesis, we have argued that the creation of an SSC will benefit DNV GL by increasing the efficiency of processes and decreasing the costs. Our findings indicate that the efficiency decreased during the transition period, somewhat more for Denmark than the Netherlands. However, we found that both experienced some efficiency gains when we compared the period before and after the migrations. The cost reductions through salary arbitrage and reduction in headcount are clear, but we do not know how much they might save on the increase in process efficiency in the long run. The overall data trends indicated and supported the argument that the shift to a Global Centre was successful. There were however some unfortunate side effects of the move such as many people in Denmark not being on board with FS, thereby potentially causing a loss of competency in certain areas and compromise in process quality. The issues we have identified might increase in magnitude with multiple concurrent implementations. Because of this, we believe that DNV GL can learn some valuable lessons from the situation in Denmark by ensuring that adequate preparations are in place and enough time is left for implementation in the future.

Since this project is still in progress, we recommend that DNV GL conduct a new analysis to see if the cost saving target was achieved through headcount reduction and salary arbitrage after all the offices has been transferred to the Global Centre. Furthermore, we recommend more research into the cost implications of the efficiency gains in processes. Since there has been an efficiency gain in the process time of invoices and travel expenses, we would recommend that DNV GL researches if this effect is caused by improved processes or the change of people from Denmark and Netherlands to Poland.

Our primary focus for this thesis has been on the corporate perspective, but we also recommend further research on other aspects of finance departments in shared service centers. We believe that further research is required for process time of invoices and travel expenses, so that we can decouple whether efficiency gains were due to the change of processes alone or the changing of employees.

It is necessary to understand how the cultural differences and customs may affect employee mindset and performance when a company changes their organization. For example, in the knowledge transfer, the people in Poland need to be more considerate to the people in the migrating countries who are essentially giving away their jobs.

We believe that a more thorough review of larger dataset regarding efficiency in processes and task across countries can help organizations to understand the efficiency gains occurring before, during and after a transition; thereby avoiding unnecessary costs. The level of efficiency gain should be investigated to see if it was caused by the tools and processes or by the people of the organization. Finally, we recommend an investigation of the internal company processes to determine if any of them can be totally standardized or perhaps replaced by robotics in the future.

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Appendix 1

Information:

<u>Background:</u>

- Changes in efficiency and costs because of FS with focus on Finance.
- Confidentiality, identification of you and what you tell us.

  - Open and honest

<u>Start record</u>

- Accept recording
- Please speak loud and clear

Starting questions:

We would like to get to know you better and what role you have in DNV GL.

- For how long have you been working in DNV GL?

  - Number of years
  - Positions/work titles
  - What was your position in GL before the merger?

- How would you describe your role in GSS?

  - What about your role in FS?

- In your opinion, what are the pros and cons of the Global Centre in Gdynia?

  - What are the main motivation for this type of solution?
  - Pitfalls?

- Is there anything you want to add?

Research questions

<u>Invoice flow: How effective are the systems and the people using them?</u>

- In your opinion, what is the most important working strategy in terms of handling invoices?

  - Work as fast as possible or work as accurately as possible?

    - What would you emphasize most?

- Can tell us anything about the invoice flow in DK/NL today?

  - Do you see any improvements?
  - Are invoices being paid in time for DK/NL today?

- What are your thoughts about NGF(Agresso->Oracle)?

  - What are pros and cons in terms of using Oracle instead of Agresso?

- Is there anything more you would like to add?

Reduced cost as a necessity to become more efficient.

- What are the expectations to Norway when they go on FS?
    - Do you think that costs will increase or decrease as a result of FS?
    - Is the cost perspective different for DK or NL? Why?
- Has there been any unexpected costs? What is the reason?
    - E. g. salary
    - Administration costs
    - Recruitment costs
    - Building/rent?

- Would you say that the FS project is a success? Why/ why not? Please explain.
    - How would you interpret the word "success"?
- Do you think there is a difference between DK and NL when it comes to achieved success?
    - Why do you think that is?
- Have you seen any change in efficiency (tasks or processes) after the move to Poland?
- Anything more you would like to add?

How was employee satisfaction before FS project?

- How has the recruitment process to the Global Centre been?
    - E. g. easy or hard to find people to the job positions in GC?
    - Please explain.
- How do you think the satisfaction among employees in NL/DK was during the implementation of the project?
    - Was the work load low or high? (stress)
    - sick leave
- Do you know if any of those who worked in Finance in NL/DK still have a position within DNV GL?
    - What kind of solutions did DNV GL try to offer their employees In DK/NL when the functions were moved to PL?
        - Differences between DK/NL and NO?

- Do you have anything you want to add?

Learning, other questions

Do you know if there has been any feedbacks from employees in DK/NL about the FS process?

- o Can you elaborate this, please?
- o Do you experience that the employees are motivated by the changes? are they requesting more responsibility or involvement in the process?

- How do you think the environment or atmosphere among employees in Norway is today? (Finance).
  - o Is the work load normal or unusually high? (stress)
    - ▪ If yes, are you doing anything to unload?
  - o Do you know if the sick leave has changed?

- How much information have been given to the employees about the FS project?
  - o Does everyone know everything? Someone know less? Why?
  - o Any reactions so far?

- What are the main concerns in relation to the transition from NO to PL?
  - o If any, please explain.
  - o Are you taking any additional precautions on the NO migration?
  - o Are you expecting any delays?

- Do you have anything to add?

To summarize:

In your opinion: What is the overall goal with FS and the GC?

- What are the short versus long term goals?
  - o Human resources
  - o Reduced costs

Appendix 2

Information:

Background for the interview:

- In this interview, we want to get some insight into the planning of FS, the strategy in the beginning and how it has developed, what it looks like today and what is the plan ahead.
- We believe that your experience and insight into this project is valuable for our results, and hope that you will be open and honest in your answers.
- We would like to use direct quote of this interview, but if there is something you do not want to be included, just say it during or after the interview.

Starts recording

- Acceptance of the recording?
- Speak loud and clear
- Do you have any questions before we start? Or is there something that is unclear?

Initial questions:

- We would like to get a little better acquainted with you and what role you have in DNV GL
    - How long have you worked in DNV GL?
        - Number of years
        - Jobs / job titles
    - How would you describe your role in the Future State?
        - What are your tasks?
        - The number of employees you are responsible for?
- Is there anything you want to add?

- What was the reason for the decision of FS?
- Can you say something about what the strategy was at first?
    - Have you had to change it during the process?
    - Why?

- Why did you choose a Global Center and not outsourcing

- - Was it because of a desire to have control?
  - What are the advantages of having a Global Center?
  - Do you see any disadvantages of this solution?
- Is there anything you want to add?

- What do you want to say is the overall goal of FS and Global Center?
  - What are the short-term vs. Long-term goals?
    - human resources
    - reduced costs

- In your opinion, what are the most important factors for a successful implementation of FS?
- What is the strategy ahead for the entire project?

Is there anything you want to add?