

Optimizing decentralized organization model in cross-border IT Development - Case Handelsbanken

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| <p>Svenska Handelsbanken (SHB) is a private sector company that has applied decentralization as an organization and operating model since 70's. The model that professor Jan Wallander had investigated a lot is still valid in 2019 with all its principles. However, there are pressure from external factors such as EU banking regulators and authorities that is giving pressure for certain centralization. The old decentralized structures are slow and causes certain issues for the requirements of today. This pressure seems to steer SHB to have more cross-border and global IT development initiatives in the future, which makes the model interesting subject to be examined from IT developments point of view. The aim of the study is to find the benefits and issues of the Handelsbanken Way and from thereon to find actions and factors that could facilitate cross-border and global IT development in the future.</p> <p>The study is case study, where the author is part of the organization working closely with the subject, and therefore it has features of action research as well. The data were collected with deep-interviews from eighth participants within the group, who represented three countries, and business units that has operations in several different countries. The participants represent wide range of levels from top management to the hands-on projects.</p> <p>The outcome is that Handelsbanken Way is still valid strategy and it still is Handelsbanken's competitive advantage. The decentralization has led to decentralized IT as well and decentralized solutions, which is not ideal in today's world. It can be clearly seen that the IT will get more centralized in the future, along with certain other functions and processes. The technology needs to be updated into the internal guidance document, Our Way. The cross-border and global IT development requires a supportive and encouraging cost and benefit allocation in order to get more popular within the group. There are already initial steps towards recommended actions, such as thinking in group level which parts can utilize common systems and processes and which has local features that still justifies local systems and processes as well. Also, SAFe and agile methodologies implementations are already in early stages in the group. The sub-optimization is a problem when it comes to global and common solutions, that requires actions. The proposed means are clearer communication, supportive costs and benefits allocation and little bit increased top-down management.</p> | |
| Keywords | |
| Decentralization, Business Model, Operating Model, Centralized, IT development, Group common | |

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1 Background of the work

Handelsbanken is very local bank in all regions where it operates. In the annual report 2017 Svenska Handelsbanken Ab (2018) states following:

“Handelsbanken has a decentralized way of working and a strong local presence. The Bank has a nationwide branch network in Sweden, the UK, Denmark, Finland, Norway and the Netherlands. The Bank regards these countries as its home markets. Handelsbanken was founded in 1871 and has operations in more than 20 countries.”

Handelsbanken has followed the principles that Jan Wallander introduced in 70's, where the organization got highly decentralized. According to the document regarding Dodd-Frank Act published by Svenska Handelsbanken Ab (2015), decentralization leads to flat organizational structure. This has led to very distributed decision-making process as well, so that the decisions are made as close to the customer as possible. The aim of this study is to find the challenges that the decentralization brings to cross-border and global IT development, and to find actions that could facilitate those in the future at Handelsbanken.

Svenska Handelsbanken (SHB) has followed principles that Jan Wallander has introduced to Handelsbanken. Jan Wallander had revolutionary thoughts of decentralization. The business model is still today very unique and can be said to be successful as well, in terms of financial development of the SHB. The model has been referred as “Handelsbanken Way” in literature, as Jan Wallander (2003) also call his opus. However, the evolution of European Union (EU) and other regulatory requirements that according to European Central Bank (2018) are aiming for financial stability in EU area, are causing increasing pressure to have some certain IT systems centralized. Moreover, as the world and technological wheel of evolution keeps on spinning faster and faster forcing organization to be more agile in development. The world is changing even more rapidly than ever, which makes it interesting to examine, is there some needs to improve decentralization strategy in the future, to ease the global IT Development.

Because of decentralization, global IT development has played rather little role in SHB. Many solutions are very local. However, regulator and authorities are directing banks to more centralized solutions in some areas. For example, MiFID II directive and regulation changed the transaction reporting from local authorities to the authority of the group headquarters, meaning that SHB as a Swedish securities company, must report transactions executed by foreign branches to Finans Inspektionen, which is Swedish national banking authority. (2018).

Not only regulator is moving towards centralization. As banks have to overhaul their structures and seek for efficiency, Ernest & Young (2013) also proposes that urbanization is a global megatrend, that correlates with rising wealth in respective areas. Urbanization provides opportunities for banks as people are seeking for credit to buy home and cars, and insurances for them. Therefore, bank's customers are also concentrating into bigger cities. This concentrates much of the potential to the urban areas, which in turn dives the centralization of the branch offices into bigger cities.

Moreover, the need to produce digital services more efficiently is increasing. Ernest & Young (2018) says in its Global Banking Outlook 2018 that 85% of the banks who joined its study names digital transformation for their number one business priority. They also say that for them it is important to invest into technology in order to drive efficiency, manage risks and to get growth opportunities, which drives sustainable success. Price Waterhouse Coopers prediction (2018) says among many other predicted issues for banking, that it will become much harder for experienced managers to decide where to cut costs and where to invest, because the world keeps changing in faster pace all the time. This may force executives to change entire strategy in no more than few years. The new normal environment for banks forces them to embrace versatility and flexibility in planning, as the plans must most likely change before they are fully executed. Therefore, the balance between decentralized and centralized is difficult to obtain. Agility and smaller steps in the development are needed in the future. Even though banking industry has gotten back to its feet after the latest crisis, it has lots of challenges with the regulators and the environment that is changing in faster pace than ever before.

2 Objectives and research questions

The literature that is about decentralization is mostly concerning the public sector or governmental decentralization, that is globally very usual phenomenon. The thesis will be strongly a case study, because Handelsbanken is a usual case example of private sector decentralized organization. Therefore, most of the relevant books are usually having Handelsbanken as a case example. After giving an overall view on decentralization itself from general literature and presenting the case environment from book "Handelsbanken Way", the objective is to discover and formalize ways that could have positive impact on the global IT development in the future. Data will be collected from the organization to discover experiences, both good and bad, that the respondents think that are related to SHB decentralization operating model. The data will be analyzed in order to find the most critical issues that could have the most positive impact when changed, and on the other hand, the success factors that should not be disrupted. Finally, a proposal can be provided to Handelsbanken for further assessment.

The problem analysis of the problem is interesting for the organization as the direction seems to be that there will be more global projects and programmes than there are today. Therefore, it is beneficial for both group, countries and business units to understand how the decentralization is impacting the IT development, and also to understand which factors should be concerned in order to have the efficiency in it.

The outcome is validated at Handelsbanken with Project Management Office (PMO). PMO is a central function that controls the development in Handelsbanken, that has the best overview of the challenges of development projects. The findings will be walked through with PMO and reflected against PMOs insights of documented final reports of projects. It was expected that the thesis report will initiate further discussions internally, which is valuable.

Research Questions:

RQ1: How does the decentralization impact on Global or cross-border IT development, in good and in bad way in the case organization?

RQ2: How to support Global or cross-border IT development without big impact on concept of decentralization and its benefits in the case organization?

2.1 Scope and limitations

The scope is limited to global or cross-border IT development. The focus is on the decentralized concept of the organization rather than general technical difficulties. The data gathering will be limited to participants representing the global view from Stockholm and two other countries, Finland and Baltics (Estonia, Latvia and Lithuania). This rules out other countries, as Handelsbanken operates in more than 20 countries across the globe. Moreover, also a unit is represented, that is operating cross-border in several countries, other than the two that are directly represented.

The empirical study is based on data gathered from only limited number of roles that are involved in the global or cross-border IT development within Handelsbanken.

The roles involved in the interviews has been selected so that the sample of data would represent wide perspective. However, it is still limited to only the roles involved, as the data for empirical part is purely collected from this sample group. The group includes system owner who has internal clients in four different countries, Business and System and business development manager from business unit that is operating in several different countries, top management of the group IT, top management of home market's IT, Country manager of one of the Handelsbanken locations, Director of development of one of home markets, head of product owners in one of home markets and a project manager working with global solutions. The participants have decision power in many levels in the organization.

Moreover, the thesis will only propose items that could be developed for better support of global or cross-border IT development work. In scope is that the proposal is validated within the group and the feedback is collected from the participants. The actions are not in scope of this thesis work.

3 Methodology

The thesis will be case study, with some additional features of action research, where author is part of the organization, working as a project manager in projects that has cross-border features. The author is therefore familiar with the case organization. In the research, the theoretical framework will be gathered from Professor Jan Wallander's thoughts and theories that are Handelsbanken specific, but also from more recent general literature that also explains the concept of decentralization deeper. The literature regarding decentralized business model and organization are mostly concerning governmental organizations and structures specifically. Relatively small amount of literature can be found to concern non-governmental organization, and in many of those, Handelsbanken is considered to be the most usual case example.

The empirical research is based on data collection from the target case organization, Handelsbanken. The data is collected with semi-structured in-depth interview method (Fox, 2009). According to Boyce and Neale (2016), the in-depth interview technique is suitable for asking employees opinions and experiences on certain subject, especially when detailed information from interviewees is expected. Therefore, the in-depth technique was applied in the interviews. The research will follow the process that is described in the picture Figure 1 below. The methodology will be described below the picture step by step.

The goal was to find issues from both literature and data collection. Literature and data combined, the analysis can be deep enough to find some development ideas or initiatives to investigate, to ease the process in global IT development.

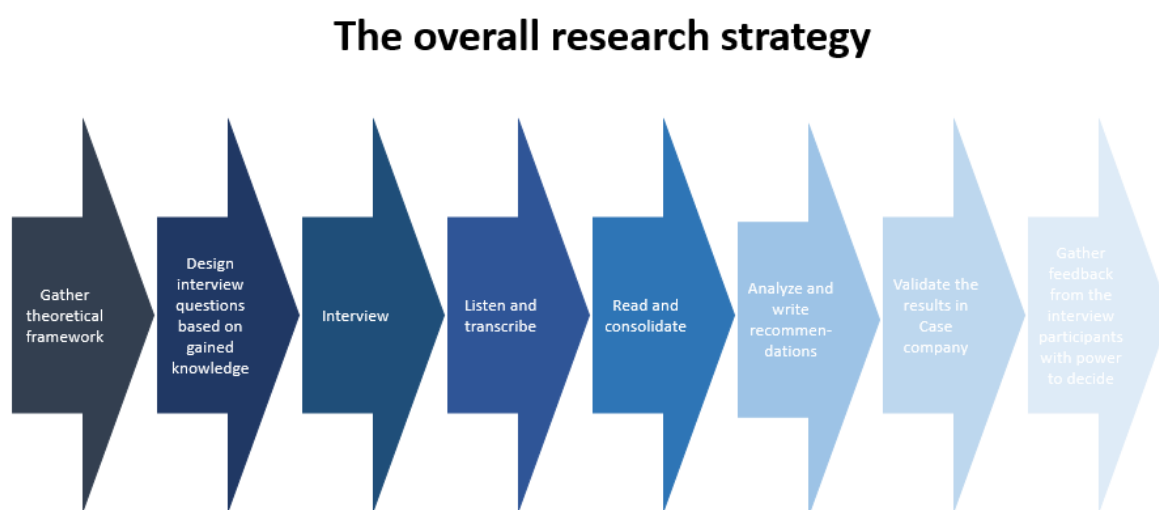


Figure 1 Applied overall research strategy, adopted from Newton Suter (2012.) opus Chapter 12

The participants to the deep-interview were chosen together with the thesis tutor in Handelsbanken, who had extensive career and experience of case organization, from Finland, from Sweden and elsewhere in Europe. As mentioned earlier, in the scope and limitations chapter, that there were eventually eight participants in the study. The criteria were that the participant has to be involved in cross-border IT development, and the aim was to find people from different roles and perspectives. The participants were requested to join to the study as an interviewed participant. First 10 participants were requested, and 7 agreed.

At first the plan was to conduct also a questionnaire for the participants that they would answer before the interview for statistical data collection. However, during the planning, the fitness of the questionnaire was re-assessed, and stated to be not valid method since the sample group is so small for quantitative analysis. After the decision, three more participants were requested to join to the deep-interview to get more data, where one accepted. The two others who did not respond represented USA and UK. The approved research participants were sent an invitation for one-on-one interview, at Handelsbanken premises, in Helsinki and in Stockholm. All interviews were planned to be held physically, but as a backup, also Skype or IBM Sametime meetings could have been used.

The pre-structured interview questions (Appendix 1) were designed based on the knowledge learned from the literature and reviewed with the thesis tutor in Handelsbanken before sending them to the participants. The set of questions (Appendix 1) included 16 questions and the interviewer had some hidden supportive questions for certain ones for guidance, if the question was not clear to answerer. These were used in some cases to steer the discussion to correct topic.

One open question was planned to the end of the interviews to collect data that respondent wants to say regarding the topic in general. Before the open question the two research questions were planned to be revised to keep the focus.

Closer to the interview event, interviewees received email with questions beforehand, and the purpose of the interview as forewords so they had the opportunity to prepare. In the email, the expected duration of the interview was estimated to be 45minutes by the author, based on rehearsals. The length of the interview was booked to be one hull hour so that there is some flexibility and possibility for open discussion as well.

The interviews were executed within Handelsbanken premises. All interviews were one-on-one interviews and the discussions were recorded using mobile device. The mobile device was running Android operating system that had a recording application by default,

that was used. Afterwards, they were listened carefully and transcribed for further analysis. The transcriptions were written with Microsoft Word into separate documents per participant.

After transcription, the data was written into the Chapter 6, and interview answers were consolidated into one, so that the answers cannot be traced into one respondent easily to keep the privacy (Figure 2). The actual transcribed interviews are considered to be sensitive material not to be shared in as is format. In the consolidation, same topics were consolidated into one, and it is expected that it helped that the author himself was working for the case company and familiar with the environment.

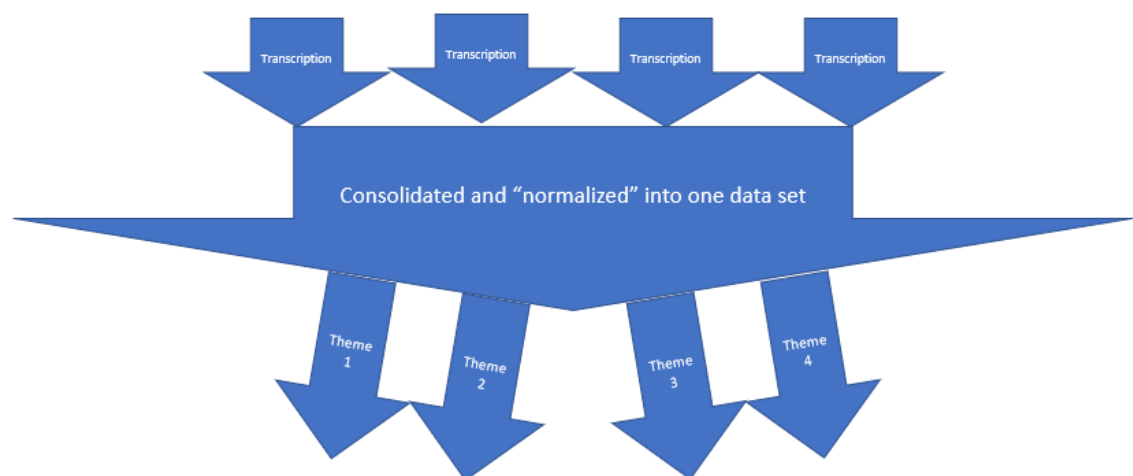


Figure 2 Data analysis method

After consolidation, the data was analyzed to find themes. During the data refinement (Figure 1) by listening, transcribing and consolidating the data, the themes were constantly hunted. The theme sketch was maintained in separate Microsoft Excel worksheet. The more similar topics appeared in the data, the more relevant the data were considered to be. This type of relevant topics was raised as a theme. However, also smaller observations were found that are considered to be relevant. In these cases, common sense was used that is based on the experience of the author from the case organization itself.

The found themes were then written into recommendations for the case organization. The outcome of the analysis was to be cross-checked against the knowledge of PMO from final reports of IT projects. The validation and critical review were conducted with central unit in Handelsbanken, PMO, which is the central following point of projects. PMO has deep understanding of projects, and their end reports. The critical review and validation were done by presenting the outcomes of the study, and then discussing with representa-

tive of PMO in a one-to-one meeting. The PMO also evaluates the findings and gives feedback whether the results are valuable from their point of view to enhance the global and cross-border IT projects.

After critical review and validation, the results were also planned to be presented to all participants in interviews for discussion of the possible actions to be taken to improve the cross-border IT development in Handelsbanken. Moreover, also SHB employees who were not participating the interviews have given feedback that is also included. Feedback from participants were collected regarding the study. Because the participants are representing key personnel of the case organization, they are also very busy. Therefore, it was planned that if everyone cannot join to the one meeting, two can be held, one in Sweden and one in Finland. As a backup, video recording with presentation will be done and shared for participants with request for feedback.

4 Decentralization – against growing complexity

Vantrappen & Wirtz (2017) describes pithily where the decentralization is trying to bring the answer. As a citation, they write

“Rare is the business executive who doubts the importance of responsiveness: to be acutely alert to business opportunities and threats, and to be capable of grabbing the opportunity or fending off the threat fast and effectively. Hence, when re-designing the organization structure, they tend to decentralize decision-making, so that decision rights are as close as possible to the people who deal with customers, competitors, front-line employees, and other stakeholders. By doing so they avoid the delays associated with information and approvals traveling up and down the management hierarchy.”

Scientist and Professor Gerrit Broekstra is well known in the field of organizational behavior and System Sciences. Gerrit Broekstra have been studying the decentralization and is also well aware of Handelsbanken Way and uses Handelsbanken as an example of a highly decentralized organization. IBM's study (2010) that consists input from 1500 CEO's, General Managers, Public Sector leaders worldwide, has indicated that coping with complexity has become one of the greatest challenges in their organizations. Respondents admitted that in many organizations they feel the inability to cope with the complexity, that is also expected to even increase over the years to come. Regarding Gerrit Broekstra (2014, pp.1-6) the study shows that the world is becoming different in its structures, and extremely complex system. The growing complexity is bringing more volatility, uncertainty and unpredictability with it. To tackle the complexity and its side effects, respondents of CEO study names few key things. Creativity on all levels, that begins from questioning their own old leadership ways and managing the organization. To clarify the complexity, Gerrit has explained the types of systems and behaviors, and created a table to illustrate the differences (Table 1).

Table 1 System vs Behavior (Broekstra 2014)

| | | System | |
|----------|--------------|--|--|
| | | Few degrees of Freedom | Many degrees of freedom |
| Behavior | Organized | Organized Simplicity (Newton's Apple) | Organized Complexity (Bak's sand pile) |
| | Disorganized | Chaotic Simplicity (Lorenz, Weather model) | Disorganized Complexity (gas or liquid) |

The complexity that is discussed about in economies and business ecosystems is the upper right corner, Organized Complexity systems. The main idea in these systems is that they are composed of many interacting components, that without any interference of an outside agent, organizes themselves into a poised, critical state, way out of balance. In this state, that is robust, anything can happen from small events to great catastrophes.

4.1 Mechanism behind undesired events that occurs in complex interconnected organizations

According to Broekstra (2014, pp.6-16), a good way to illustrate what happens in a complex system is called a sand pile metaphor. Sand pile is formed, when dropping sand slowly from above to a flat ground. A pile emerges and increases in size when continuing to drop the sand. Every now and then, when adding sand to it, some small or bigger avalanches appears. This is the critical state, where these events may occur. The likelihood of big avalanches is significantly lower than smaller avalanches in this kind of systems. Gerrit also refers to IBM's simulation that has proven these findings, that a very small event, also often referred to flap of a butterfly wing, may trigger a big or a small event in the system. The law behind the probability is called the inverse power law. It states that there is a linear way to predict the number of events in different impact categories. To clarify the idea with an example would be that there are 1000 magnitude four earthquakes in the United States annually. The amount of magnitude five earthquakes is 100, which is linear. It shows that smaller and bigger earthquakes are following the exactly same laws. These events happen, smaller more often and harder shakes less often.

Gerrit Broekstra refers Danish physicist Per Bak's words:

"Complexity is the consequence of criticality".

This has been also proven with extinction of species. Gerrit gives examples, where introducing new species to ecosystem at first may not cause big side effects at once. At some point, however, the history shows that extinctions occur. The fact that there is enough food and other basic needs are fulfilled for all species proves the rule of complex systems. Complex systems that are in critical state, are sensitive for forced changes. This is also called bursting bubble or punctuated equilibrium. It cannot be predicted exactly when it happens, nor is it a big or smaller event, both happens but with different probability, under same law.

Moreover, according to Gerrit Broekstra (2014, pp.18), there are studies that shows, how self-organized criticality (SOC) is in key role in stock market crashes. He also has taken the sand pile metaphor, and the Bak-Sneppen model to business world, where business-

es compete each other in the market. In Bak-Sneppen model, the individual with weakest fitness is eliminated and replaced with new individual. At the same time, also other individuals interacting with it will be assigned with new random fitness. Eventually, this model shows how the system drives itself into critical state and is vulnerable while the threshold is exceeded. Just like in Bak-Sneppen model, competition drives companies to “improve their fitness” all the time, which makes their competitors to do the same. This competition may get businesses to “overshoot” their markets. This evolves the market to the critical state, by feeding the customers with more expensive products and services, or bigger variety of products. At some point, the customers do not want to pay for them. This kind of punctuation of equilibrium in turn, could mean that for example disruptive technology overcomes existing old and stable businesses in the market landscape.

Gerrit Broekstra (2014, pp.21) has exhibited, how sand pile metaphor helps to understand local complexity in local instance of a global critical system. According to Broekstra, Danish Physicist Per Bak has provided the understanding of how global criticality develops local complexity. Moreover, he states that it is critical to understand, that exactly same law and mechanism is behind smaller and bigger unfortunate events. The reason is, that the ecosystem has evolved from sub-critical to critical state. The events, especially more critical ones, are unpredictable. This in turn means, that from the science perspective, strategic planning and budgeting are activities that may work in opposite way they are meant to work. The IBM’s survey has brought up that CEO’s are already questioning the current mainstream ways to lead an organization. Furthermore, Gerrit Broekstra suggest accepting the fact, that there is nothing one can do to anticipate the unpleasant events. Once the fact is accepted, it is easier to take the responsibility of the situation as it is, and act creatively once confronting the situation. According to Gerrit, Deepak Chopra has said in 1994 that responsibility means “the ability to have a creative response to the situation as it is now”.

4.2 Organizational concepts, decentralization and centralization

According to Gerrit Broekstra (2014, pp.33), American Organizational theorist Russell Ackoff has defined concepts that describes different approaches to corporations. Eventually, he has identified Enterprise as a machine, as an organism, as a social system, and lastly as an ecological system. (Table 2) Gerrit Broekstra has utilized this typology in defining Decentralization 2.0 and distinguishing it from 1.0.

Table 2 Gerrit Broekstra's view on Russell Ackoff's typology of systems of increasing variety applied to the concepts of decentralization (Broekstra, G. 2014, page 33)

| | | Whole | |
|-------|----------------|--|--|
| | | Not purposeful | Purposeful |
| Parts | Not purposeful | 1. Mechanistic system Centralization (Bureaucracy) | 2. Organismic system Decentralization 1.0 (Organizations with divisions, business units) |
| | Purposeful | 4. Ecological system (Business ecosystem) | 3. Social system Decentralization 2.0 (Autonomous units + enabling organization) |

Gerrit Broekstra (2014, pp.34) explains that the variety of system's organization gets higher from Mechanistic system centralization towards Ecological system. The fourth concept is to be considered as an ecosystem, where individual companies operate. As an example of ecological system there is an earth that does not have purpose on its own, but it is a ground for social, animate and deterministic systems. Ecological system is not described below, as it is not interesting from organizational point of view. The third one, Social system is the concept that Gerrit considers to be the one for Decentralization 2.0.

4.2.1 Mechanistic system centralization

According to Gerrit (2014, pp.34-36), Russell Ackoff has stated that in mechanistic organization, there is no purpose on its own. The external users, owners, creators etc. defines the purpose. Parts of organization are valuable only in contributing to the whole, to the machine. Parts are seen as replaceable parts, also human resources. Work is split to small fractions so that it can work like a machine. Strict management is seen as mandatory, also called as command-and-control bureaucracy. The concept is efficient when running smoothly, but undesired side effects may occur too. These side effects include politicking, power conflicts, autocratic management and communication problems. The machine also tends to become self-producing, which may be both good and bad. It may give organization identity and coherence, but also in some cases it may spread like a disease. Moreover, according to Gerrit, cybernetician Stafford Beer warns these self-producing organization to serve the organization instead of external purpose that it is meant to serve, which may be catastrophic. In Mechanistically leaded organizations, managers are considered to be better to judge the situations. The organization is top-down managed, and the lower you go in organization the less you have possibilities to choose from options, which is a form of dictatorship. Autocratic political structures drive lower level decision

makers to try to mimic the higher-level decision makers, as they have always the power to overdrive the decisions made in lower level.

4.2.2 Organization as organisms

Gerrit Broekstra (2014, pp.37-40) explains that organizations which are viewed as organisms differentiate from mechanistic organizations by taking into account the ever-changing environment and the pressures that the environment is giving to the organization. Where mechanistic view on organization metaphor emerged from Newtonian thinking, organization as organism metaphor were emerged from the survival of the fittest thinking. In this organization thinking, each organization is struggling and fighting for its survival in the market, like species in biology. Growth is thought to be necessary for survival, which often is achieved by acquisitions and mergers as a defensive move to cope with competitors in name of variety of the offering. As organizations are expanding in size, they also get more and more unmanageable in top-down management design. Therefore, in organization seen as organism, some of the decision making is distributed to lower levels. This is referred as vertical top-down decentralization. Usual functions that has been decentralized includes design, production, sales and marketing. However, often strategic and financial decisions are still kept in central units. According to Gerrit Broekstra, Ackoff has stated that in organismically conceived organization the brain and the body must be thought to be separate, where brain is purposeful, and body is purposeless operating core. It is explained that head has the will where different body parts function how the brain thinks is good to act. However, certain organs, such as blood, heart etc. are goal-seeking rather than purposeful, as they are functioning to maintain the whole alive, and are necessary, rather than being optional based on will.

When these types of organization started to emerge, resources became more educated and were responsible for more complex tasks. The human resources also became to be thought more as difficult-to-replace, which also differentiates from the machine-like organizations way to think about the resources in lower levels. Still, they are expected to do what the management says, and their interests and purposes are often neglected. Still, they have more choices than in mechanistic organization. Therefore, parts of organization can be managed by objectives, where the accountable unit has some freedom to choose the way it executes its task.

Even though these organizations have greater variety to choose from and therefore more flexible to adapt to environmental changes, they still are not seen as creative or innovative. These type or organizations can react once its competitor acts in terms of lowering

the price or bringing new product to their selection, as it is necessary for its survival, as it must improve its fitness.

Moreover, in organismic thinking, organizations parts are loosely interacting with each other, even though the interaction with the brain is critical to function flawlessly. However, within body, there are sub-systems, that may also include sub-systems. This creates a hierarchy of loosely interconnected systems. This in turn means, that the different units for example within organization can be structured in a different way compared to each other. This sort of structure is called to be near-decomposable structure. Gerrit Broekstra is calling this type of organization a Decentralization 1.0, that is selectively decentralized, where the divisions preserve their autonomy as long as they can meet the goals set to them. The divisions can therefore be seen as goal-seeking organs. Still, the organs, the divisions, cannot choose to increase the decentralization on their own.

Broekstra names a Pennsylvanian Railroad company to be the first company to transform itself from mechanistic to organismic company. The observation shows, that as the employees became more educated, and got more freedom to operate, they also demanded more from their working environment and conditions. Moreover, as the complexity increased, and the company had to cope with that, employees became more non-replaceable, and further on they were treated as human beings with purposes on their own. Still, even though organismic organization has some degree of decentralization, both organismic and mechanistic organizations are based on command-and-control hierarchies.

4.2.3 Organization as a social system

According to Gerrit Broekstra (2014), organizations are social systems, that consist of interacting people. The system can affect its parts by increasing or decreasing the variety of the behavior they are able to display. This in turn is different from the organizations that are seen as mechanistic or organism where the parts are not allowed to have the purposes of their own, and therefore their degree of variety is limited or reduced. The social systems have their own clear purpose, but so do all its parts, and even the bigger whole where the social system is operating in as one organization. Social systems are seen as indivisible entities with functions in it and where the people collectively play major role. According to Gerrit Broekstra, it is natural that when the components of the social system are allowed to be purposeful entities, it will result in increasing variety. High-variety organizations are better in coping with the increasing environmental variety. Organizations conceptualized as social systems display active adaptation, where they are not needed to be forced to take action. Instead, they are active by nature and they are self-initiated. This is

achieved by them having the opportunity to choose themselves and act when needed. The choice itself is crucial for purposeful behavior. When comparing organismic organization and social system, organismic sees threat that forces it to act for survival where social system instead sees same event from continuous development perspective and as an opportunity to develop further. Moreover, a distinguishing factor is also that organismic organization is focused on its objective for growth, where social system is focusing on developing itself to be better in coping with the ever-changing complex world around it. Their purpose of social system includes development of their stakeholders, the larger system where it is part of, and itself. Development means capability and competence increase. The employees of a social system also are more into learning than earning. Purposeless organizations can grow but they cannot develop. Only purposeful entities can develop since they have the will, the desire on their own, and they have the ability to satisfy the desire. One needs to have the desire to develop all the time and that development cannot be done by anyone else. However, it is possible to coach and facilitate other persons development to enable the self-development.

4.3 Systematic approach to consider whether to decentralize or centralize

Moreover, according to McKinsey's study by Campbell, Kunisch, & Müller-Stewens (2011), revealed that in managers and executives do not have analytical approach to resolve questions should something be centralized or decentralized. That said, the decisions are often very controversial. One IT manager says that decentralized IT is the lowest-cost solution where another says completely opposite. There also seems to be certain timely trends, sometimes decentralization is vogue and sometimes centralization.

Vantrappen and Wirtz (2017) introduces a systematic approach to look on the practical level the dilemma of decentralization and centralization. They have built a table (table 3) to assist in systematically decide, whether a decision making should be centralized or decentralized in certain area. They call these the four qualities that should be assessed.

How Decentralized Should Decision Making Be?

It depends on your goals.

| | | | | |
|---|------------------|----------------|----------------|----------------|
| When it is important to have... | Responsiveness | Reliability | Efficiency | Perennity |
| ...it is usually advantageous to veer toward... | Decentralization | Centralization | Centralization | Centralization |
| ...as that solution enables and stimulates... | Immediacy | Compliance | Syndication | Detachment |

SOURCE HERMAN VANTRAPPEN AND FREDERIC WIRTZ

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Table 3 Table of the assisting four qualities by Vantrappen and Wirtz (2017)

The table 3 above illustrates that the decentralization is mainly built to increase responsiveness, but when the main driver is reliability, efficiency or continuity, centralization should be considered.

Vantrappen and Wirtz describes that responsiveness is a quality, that is inbuilt into decentralized decision making, and allows the responsible unit to take actions, at the right time when they see an opportunity or threat. However, if the source of the opportunity or threat is not genuinely distinct for the operating unit who has the decision-making mandate, decentralization can also be questioned. Once the source (customer, competitor, supplier, employee etc.) is distinct for the operating unit, the decisions are justified to be taken at that level.

The reliability through compliance is described to be necessary in some cases by law, for example by BASEL III regulatory framework (2015) that regulates banks, it is mandatory that chief risk officer is accountable for direction of internal audit. Moreover, lots of rules, policies, standards, methods, procedures etc. are reasonable to be centralized. A good example of this can be financial reporting systems or compensation and benefit policies.

Efficiency through syndication is apparent reason to centralize certain matters. As same centralized unit is repeating similar tasks over and over again, it leads to continuity, standardization, specialization, leverage and productivity. Furthermore, duplication of similar systems and solutions in parallel with other operating units can be costly and can be wasteful. A central expertise may for example have certain testing tools that could not be procured for each unit separately. Therefore, these centralized units may enable the units to have better tools and expertise for them to be utilized than decentralization would allow.

Vantrappen and Wirtz explains that perennity through detachment means that the units may not see the need for investment that would be essential in long-term for the company. If the benefits are uncertain, or too distant from business unit itself, it may not have the appetite to invest. Radical innovations, or disruptive technologies for example can be the case. Moreover, in certain initiatives or investments, benefits may be contingent on people across the business units. Moreover, comparing alternatives for a solution for example may be difficult if the decision-making is decentralized. Furthermore, if the decision-making is decentralized, and the unit is responsible for their own specific product only they have. There might be difficulties to admit the defeat and pull the plug from the product that is not profitable, or if the effort should be put to some product that is more profitable.

According to Vantrappen and Wirtz, organizational structure and change is not always needed in order to gain these qualities of responsiveness, reliability, efficiency and perennity. This may be possible also by other means, such as placing a person physically to the operating unit who then works as a permanent point of contact to central unit.

Moreover, Campbell, Kunisch, & Müller-Stewens (2011) at McKinsey have developed a framework to have a systematic approach to decide what is worth decentralization and what is better to be centralized. The McKinsey's model is based on three questions that should be asked when considering decentralization vs. centralization: Is it mandated? Does it add significant value? Are the risks low? (Figure 3).

A decision to centralize requires a yes to at least one of three questions.



Figure 3 McKinsey's three questions model (Campbell, Kunisch & Müller-Stewens, 2011)

First there should be assessment that does the company have choice, or is it mandated from external that has authority over company. If it is mandatory, centralization is the answer, according to Campbell, Kunisch, & Müller-Stewens, as it cannot be delegated to business units. On the other hand, compliance with health and safety laws is something that each unit can think on their behalf, and in this type of decisions, the model guides towards second and third questions. The second question is that even though business units could decide on their own how to adapt to the laws, would it bring any extra value to have it centralized? The hurdle is 10% so that the rough estimates can be done. Moreover, if the question is concerning small matter, should it be attached to some other bigger initiative, which then is estimated to bring more than 10% positive impact when centralized? The important thing is to discuss on the significance of the initiative at this stage. According to McKinsey's model, most of the initiatives do not pass the two first hurdles, they are not mandated from the company and will not have that significant amount of added value to the group. In these cases, the business rigidity, reduced motivation, bureaucracy and distraction are greater than the anticipated added value. However, if the two earlier questions got yes answer, the assessment should be conducted whether the risks in taking the decision to central level be greater or lower than the anticipated added value. The centralization decision should only go forward if the risks of negative effects are low and the reward is high.

4.4 Critic for decentralization

More than above systematic approaches while pondering whether to centralize or decentralize, there are higher level gains and losses that these two decisions can produce in bigger picture. According to Meyer (2006), who has written also several books on building healthy, high-performing organizations, the business leaders should also understand that in some cases, decentralization means more costs, reduced quality and missed opportunities that corporate strategy would have provided through synergy.

Meyer states that decentralization in bigger picture increases costs and lowers the quality by reduced specialization in the unit on the matter, and fragmentation. Meyer says that in decentralized organizations the scattered IT staff cannot have the deep knowledge on the IT systems. In consolidated IT function, the IT staff can specialize on certain modules, for example in finance systems one can specialize in receivables and other can specialize in general ledger. Specialists perform better than generalists, Meyer states. They can produce better quality with less effort, as they know the subject area better, and they can even keep up with the literature in the field and the latest technologies for example. This in turn enables innovativeness.

Moreover, if the IT staff is scattered around the organization, it is not exceptional that also the systems are duplicated in this type of organizations. This in turn, drives up the IT costs for several reasons; duplicated efforts for maintenance, economies scale is lost in licensing negotiations and bargaining power with vendors is smaller.

Meyer says that business leaders are decentralizing IT for three main reasons:

- To get the respect from IT staff and to make them better feel like business is their customer rather than nuisance.
- To get the IT closer to the business, so that the strategic alignment is easier to be managed.
- To retain the business unit autonomy, and to ensure that the IT resources are available when needed. Business units do not want to be competing with other prioritized needs for shared resources.

5 Case: The Handelsbanken Way – Decentralization built on natural factors of human needs

Jan Wallander (2003, pp.30) has examined literature regarding research of human nature. His conclusion is that researchers has proved that there are more than just material and high salary that are important for employees. Employee from any level of organization has a basic need to feel that he or she belongs to a group of people, gets encouragement and that the employee is seen and heard. These basic needs are natural to human beings. Moreover, individual has a natural will to take the initiative, develop the surrounding environment and working processes where he or she is operating and to get increased responsibility over time. The organizational structure model itself is not that important whether it is line organization or functional organization. The important question regarding the organizational structure is how the decision making is divided in the organization in different elements of it. Jan Wallander suggests looking into the degree of centralization. According to Wallander, it is nearly impossible to satisfy basic human needs in highly centralized organization, where management does the decisions and planning, and people involved in operational day-to-day work is expected to execute the plans without any arguments. Therefore, reporting units should be small sized, and the decision making should be decentralized to address the basic needs of a human.

Moreover, Jan Wallander (2003) also refers to earlier studies of natural human needs and he refers to Abraham Maslow's hierarchy of needs (Figure 4.). According to McLeod's (2018) article of Maslow's theory, human natural needs can be represented in hierarchical pyramid, where Physiological needs builds the basics of needs, including food, water, warmth and rest for example. On top of that, human tends to have a need to feel secured. These two can be referred as basic needs. On top of basic needs, pyramid consists psychological needs, that are divided into two layers: belongingness and love, and esteem needs. On the top level of hierarchy, human has a need of self-fulfillment. These are the needs, that motivates human and can explain human behavior.

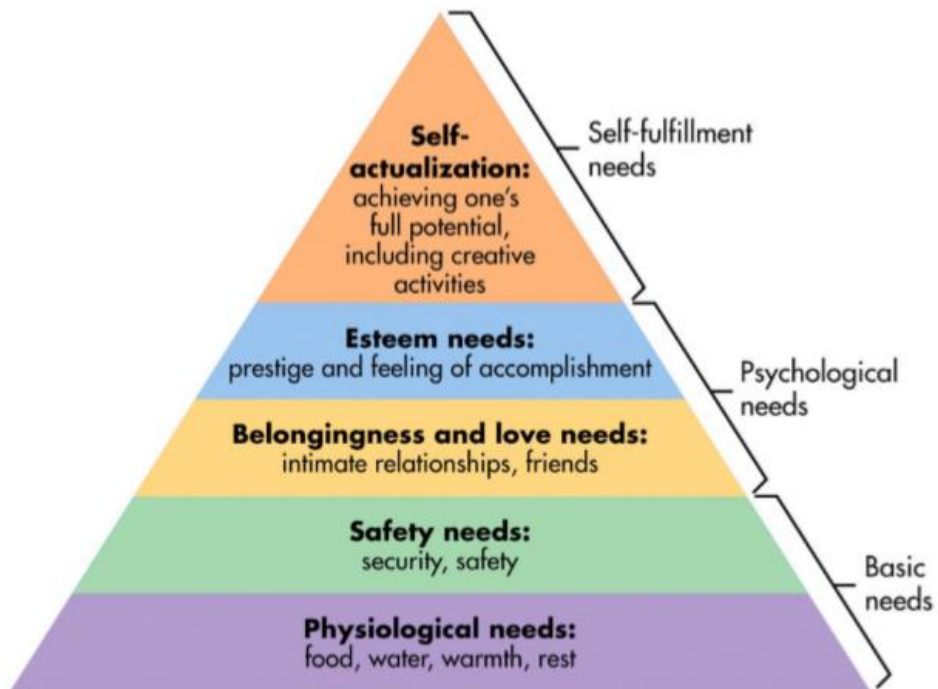


Figure 4 Maslow's Hierarchy (McLeod, S. 2018)

Jan Wallander (2003, pp.36) also states that the reasoning of centralization leads to the doubts of abilities of employees. On the other hand, if they are not controlled and steered precisely, they may go to wrong direction, make silly and harmful decisions and even won't work as hard as they should or could.

However, the decentralization that Wallander begun at Svenska Handelsbanken, takes another direction. In decentralization it is essential to be close to the customer, and to be able to fit to the local environmental conditions, in order to match decisions and the customer needs. This instead makes it possible to make decisions a lot faster and to test different solutions within the limited local area. In other words, this makes the business agile and dynamic.

5.1 Difficulties of Decentralization

Human nature also is that once you have reached a position where you have power to decide things, you do not want to delegate that to anyone else. This is basics of the fact that decentralization is difficult to take into practice. The decentralization requires clear goals and the transformation must be started from the top, the CEO and the Central Board of Directors. Jan Wallander (2003, pp.40-42) describes also how the resistance can also

be seen in the customer side who has used to go directly to the top management to discuss the credits for example.

In the superior role, it is essential not to interfere with decision maker in purpose to have impact on their decisions. This would be catastrophic for the decentralization, says Jan Wallander. For example, if office clerk has a mandate to make credit limit decision, and he does so for a certain customer. If a person in superior role would do different decision and tells that next time it would be better to check with manager, if the customer is suitable for bank as a customer. This would be bad for decentralization. Moreover, there may be temptation to change the internal payment and debiting system in order to make a centrally developed product more tempting for local units to be sold in their area. However, this would decrease the right to make decisions for local unit and would also be bad for decentralization.

5.2 The change in organizational authority system

In Handelsbanken, Jan Wallander (2003, pp.44-46) led a great change to the authority power of organization units. In previous model, central unit was a strong authority to the offices facing the actual customers. The top management spread the instructions and directions down the hierarchy with so called "Blue memos", and it was the responsibility of the organization to act as top management wishes. This was turned upside down with new policy, as the branch offices became the primary units of the organization. Also, the way to get promoted within bank changed, as the branch office work experience became the best merit to proceed on a career within the organization. Moreover, as the power started to go to lower level, managers in between both gave the power to their siblings, but also received power from their superiors. In head office, most of the people were only losing the power, and therefore the biggest cut-offs of personnel were conducted within head office.

The change also made the branch offices to a position of a buyer, and the central units the seller. Branch offices could therefore demand the central units to work as efficiently as possible and produce all the services as efficiently as possible, as the new model made it clearer that the branch offices pays the costs of all central units. This in turn created a great demand to have a fair and comprehensive internal debiting system that supported the ideology. Also, a Central Planning Committee was founded, where central units had to present their development plans with also costs to a crowd that consisted the members from Branch Offices, who then were able to judge the plans and assess their value for them. This became a major change management tool where the committee could then also decide to abandon some services that they did not value worth their costs.

5.3 Applying decentralization

As mentioned above by Jan Wallander (2003, pp.49-52), changing the whole organization dynamics upside down is a big change and requires lots of work effort and leadership. At first, it is required to stop the train that is chugging on. Jan Wallander stopped the head office departments and allowed them to only send the absolutely necessary communication and information to enable daily work and reports to the authorities. All budgeting activities were closed, hundreds of people were forced to stop working with all the development activities within new IT systems. Strategy and long-term planning activities were stopped. Marketing department was squeezed from 40 to only 1 person. All the central head office activities were turned down. A good booster message to the organization regarding the situation was that the bank's 100th anniversary celebration was also cancelled, that all departments and units across the group had waited for a long time. This emphasized the message to the personnel that things really are not well, and something needs to be done.

After the total halt of the head office functions, Wallander started to build new organization. Three levels of decision making were introduced; branch offices, regional banks and the central board. The power of the CEO Wallander himself was taken away and given to lower level, and the high status of the board of management was withered away by not inviting these people to the meetings any longer. Credit applications that ended up to the table of board of management fell more than 50% in eight years. Majority of the credit decisions were made in the branch office level. If the credit application was big enough, it was transferred to regional bank to be decided, and only the biggest or otherwise problematic applications came to board of management in head office. Moreover, all the decisions were tried to move from head office functions to the branch offices, including marketing for instance. The branch offices got the power to decide which products they will sell locally and how they will be pricing the products and services. Pricing in some cases had the boundaries and limitations, but in principle the branch office had the power in that as well. Also, HR related decision making was moved from head office to regional bank. This was not exceptionally given to branch offices as it may have had disastrous impact on costs increasing. Branch offices can also decide investments until certain small limit they have, and in certain procurement they must turn to regional bank for assistance, for example IT related procurement.

According to Jan Wallander (2003, pp.55), IT related projects can be expensive and difficult to administer. Moreover, for non-IT specialists, they can be really difficult to understand in the level it is needed. Therefore, it is often the case that a manager must rely on specialist. However, the business must assess whether the IT project will or has delivered

the value it costs, which is also difficult task. As an experience, Jan Wallander says that IT costs can easily get high, and even though the specialists say that it is only a peak, the costs can easily stay high. Therefore, he suggests keeping careful control of the IT costs and deadlines. The special planning committee for IT related big project was a solution to manage IT within bank. The branch offices were obliged to utilize Bank's computer system and the data centers in Stockholm. However, branch offices could buy the equipment where they wanted as long as it fitted to Bank's standards. (Wallander, J. 2003, page 55)

Jan Wallander (2003, pp.56) never had an organization chart that could have presented to someone, instead, he only referred to a phonebook that was in the intranet of Handelsbanken. The same principle remains still today at Handelsbanken. Jan Wallander had learned this by experience from Sundvallsbanken, that has operated hundred years well without organization plan. His predecessor at Sundvallsbanken had advised Wallander not to touch this principle they had. Jan Wallander understood that organizational plan that makes it all visible only makes it harder and painful for employees to handle the change if there is necessary to make any to the organization structure. It can also increase the unwanted ladder-climbing efforts within the organization. According to Jan Wallander, the organizational charts are misleading pictures, as in the reality the organization with all its connections would look like a complex spiderweb. Moreover, according to his experience, the organization should not be changed all the time if it works, even though some consultants often suggests so. The change for the sake of change only messes up the organization.

5.4 Clear goal in decentralized organization

Jan Wallander (2003, pp.63) criticizes the growth aim of the companies, and says that it easily leads to increased costs, and the profitability will suffer as on the way also the number of unprofitable customers increases. Moreover, the aim to increase the stock value in the stock market is a bad aim for a company, as it takes the focus away from the actual work and moves it to convince the stakeholders with usually generic promises such as "we will focus on the organic growth and do profitable acquisitions". Instead, Jan Wallander thinks that the prime aim should be to survive. To succeed in survival, company must have good, and preferably better profitability than its competitors. The profitability is based on having higher income and lower costs than competitors. The relative and dynamic goal where the result is always reflected against the competitors. The income will decrease when the competition gets tougher, and this can be tackled by lowering the prices. This in turn affects the profitability. Therefore, the key to success is to have the lowest costs. This became the foundation of the Handelsbanken's goal; to "attain a level of profit-

ability that is higher than competitors". That became the one and only goal the bank has had since its transformation, and it fits well for a de-centralized organization.

5.5 Steering system of a decentralized organization

In the beginning of transformation to the decentralized organization, Jan Wallander (2003, pp. 66) abandoned the budgeting. That did not cause much opposition except in the financial departments that had previously been in central role in the activity. The decision to remove budgets was evident from Jan Wallander's previous studies in the field, and he had also seen this in practice in Sundvallsbanken where the organization did not have any budgeted to be forecasted and chased. Instead of budget and its monitoring and as explained earlier, Jan Wallander had set the goal for the entire SHB to be more profitable than the average competitors. The same principle was applied in different levels inside the group. Regional Banks were competing with others, and Branch Offices were competing with each other. They are measured with C/I (Costs / Income) ratio. This gave also a dynamic goal, that was relative to each other player, on all levels. This creates a basis for formal steering system in Handelsbanken. This naturally needs a good and fair system to divide the costs down to branch offices but also fair way to divide the interest income. The computer systems are needed, and Jan Wallander also sees that in the future the IT systems will evolve to provide even better information to the Branch Offices, but this also increases the power of Central Unit who is running the systems. Moreover, all units competing each other needs to be able to see their position in ranking every month. Nowadays, as computerization has increased a lot, it also makes a significant cost for branches. Therefore, the size and direction of IT systems are contiguous topic in the Branch office meetings. Besides the formal steering system, there are also informal steering methods used. There is a publication called "Goals and Methods", that was started in 1970 by Jan Wallander. This short publication is mandatory for each employee to read when they begin work at SHB. Each Managing Director is responsible to keep the publication up-to-date personally.

5.6 Incentive programme that fit decentralized organization

Jan Wallander (2003, pp.72) wanted to have an incentive programme that fits the banks DNA, and he connected it to the one and only goal that the bank had. If the bank manages to beat the average competitors in the profitability, it will give half of the dividend to Octogonen, the foundation that was founded to take care of the savings that are given to the employees when they are retiring. The stake per employee is the same regardless the job or the salary. This was the counter strike against the profit-sharing systems that came from the USA at the time. Those systems usually were based on giving the direct shares

or options to the employees. However, these shares were usually sold. Another downside is that the company's stock price usually goes down at some point, and this does not satisfy all employees to get shares that are losing their value. Therefore, Jan Wallander's incentive programme tackled these issues, by giving the money to the foundation, where the shares were kept for a long time, and that made the employees the biggest owner of the bank. This also gave power to the representatives of employees in the decision making. Wallander likes to think that Octogonen engages the employees well and is one of the reasons why employees make special efforts for bank. He thinks this is reason for banks success over the years.

5.7 The criticism of the decentralized model of Jan Wallander

According to Wallander (2003, pp.77), in decentralized organization, sub-optimization is often said to be a big risk. This means, that the local units, with decision power, will embrace their own interest over group interest. For example, a new information system may be a big cost for branches and the benefits may be seen too far away to accept this cost. This may in turn be bad for the development of the banks IT systems. Jan Wallander says that in his experience this is more other way around, so that the Branch Offices usually desires better IT systems, thus are very much aware of the costs of the development.

Another criticized matter is that Handelsbanken did not use the portfolio management in credit management. This criticism was proven to be false, as the crisis hit the market, and it was clear that the portfolios that were balanced by the sectors, did not give protection. Instead, it was the quality of the credits that matters. Moreover, portfolio management is very much top down management, that does not fit into decentralized environment.

Third thing that often meets criticism is the shutdown of central marketing unit. However, this also is based on Jan Wallander's experiences in Sundvallsbanken, and also into his previous investigations where he had the chance to be involved. In Sundvallsbanken, he saw that their marketing against Handelsbanken was like David vs. Goliath, and he decided to completely quit the marketing effort. This experience gave confidence for Wallander to also do the same in Handelsbanken later. Moreover, his investigations also showed that marketing had very little effect on customers, who according to Wallander, makes decisions based on the quality and pricing of the products instead of the images that are tried to be created with marketing. Therefore, it is more important to concentrate on a good local service in branch instead of marketing.

He also faced criticism that does he really practice what he preaches, as many functions are centralized after all, currency trading for example. However, Jan says that it is the

principle that is tried to follow in everything, but in some cases, it is not practical in terms of efficiency. Therefore, it is evident that there are exceptions that are also reasonable in the name of decentralization. He also mentions that IT systems have had impact as well for example in the charges that are generally debited from customers for certain products, taking the power away from branches to decide. In some cases, still, Branch Offices are entitled to remove some fees and charges from certain customers if they see it is worth it.

5.8 Budget and control

Based on Jan Wallander's (2003, pp.113) critical thinking and experiences over the years regarding budgeting, he came up with a strong and well-reasoned idea to abolish budgeting. Budgeting makes decentralization impossible. Moreover, budgeting has number of fundamental flaws. It does not cover the chance of unpredicted events, and it is really expensive and time consuming. It also gives too much power to controller function. Instead, Jan Wallander thinks that the same results can be reached with more effective way, and that is the Handelsbanken decentralized way to distribute the power of decision-making. He gives advices for decision making: "Make your forecast as close in time to the decision as possible" and "Never make preliminary decisions that are to be realized at some time in the future and after a definite decision by the Board". Moreover, he suggests that it is important to understand that the predictions of the future may be wrong. Therefore, it is important to build general solutions instead of highly tailored. This gives space to move with-in details.

5.9 Vision and strategy

There is only one goal in Handelsbanken, that is to achieve higher profitability than the competitors in average. Jan Wallander (2003, pp.123) did erase the department that was responsible for strategies and vision of the bank. Ever since, there has not been such central department in the bank. Jan Wallander explains that the annual strategies, and connection to budgeting, means that you try to predict the future. However, the future is proven to be unpredictable in that extent, there always happens unexpected events that affects the world heavily. That said, giving the organization freedom to act as it sees best for the bank gives actually an advantage. This was proven when banks begun to go international, and Handelsbanken was also looking at opportunities in foreign countries. Eventually, after trial and error, banks were acquired from other Scandinavian countries. The first feeling was first taken by co-operating other banks in foreign countries, but eventually it was seen that Handelsbanken needs to go the foreign market fully, with acquisitions. This was an example of agility that the strategic planning is not so good for. Instead of defining the vision and strategies, Jan Wallander thinks that a managing director must constantly

try to give a little push to make the continuous flow better instead of an annual reporting paced steering.

5.10 Handelsbanken philosophy

Jan Wallander's (2003, pp.136) philosophy is strongly based on human needs. Human needs are timeless and has been directing people for thousands of years. This is the fact where Jan Wallander has based his thinking and where the Handelsbanken way is also built on. Moreover, Gerrit Broekstra (2014) also refers to IBM study which clearly indicates that the complexity has increased among organizations, both internal and external. This in turn drives organizations to prepare to uncertainty. Gerrit also states that as employees are becoming more and more educated, they want to have meaningful and challenging work, and demands to be treated as human beings rather than replaceable resources. As decentralized organization as possible is the best way to lead an organization that is driven by human needs. According to Jan Wallander, decentralized organization makes it possible to achieve high degree of efficiency in production and marketing. Trust and respect are playing vital role in the organization. The transformation process is long and difficult from centralized to decentralized. There is lots of resistance within the organization. Leaders must get the employees to accept the new ways of working, and to accept the new increased responsibility. Moreover, Wallander reminds that the pressure from the leaders to the management must be constant, as it is easy to fall back to the centralization in many cases. The decisive factor, according to Wallander, is to create steering systems that do not support centralization but embraces decentralization instead. Therefore, budgeting must be abolished as it both is expensive and time consuming, and bad for decentralization. Wallander also states that the decentralized Handelsbanken way has been proven to be successful, as Handelsbanken has been the most successful in terms of profitability in 30 years period of time. The organizational charts do not describe how the employees are interconnected while trying to solve every day work life issues. Therefore, these diagrams are not relevant. The company culture is essential part of the organizational dynamics, that needs to be concerned as well. The common values are playing significant role in Handelsbanken culture. As a conclusion, Handelsbanken way is based on human nature and shared values. These factors are driving how people act in their work. The addition to the factors above is that in Handelsbanken culture, people are always pragmatic and down to earth, and does not bow down the buzzwords and trends. The incentive model that supports the decentralization and is long-sighted, Octagon, is also an important piece of Handelsbanken Way.

6 The data collection results

The data was consolidated into following text, where duplicates are merged into one. The consolidated text includes all meaningful data that came out from the interviews. The consolidation is the first step of the interpretation of the data. The data is presented below sub-chapter per question. All interviews took 55 minutes to 1 hour 8 minutes in time and were recorded with mobile device.

6.1 Global IT development, increasing or decreasing?

The participants were asked do they think that global or cross-border IT development will increase or decrease in Handelsbanken within next five years, and what are the drivers for that. All participants think that the global and cross-border IT development will increase in Handelsbanken during next five years. There were several drivers affecting the increase. The biggest driver is the IT costs, and the participants thinks that the global common IT systems and infrastructure are more cost efficient, which will be required more and more. Cost efficiency in IT is seen as requirement to remain competitive compared to other banks. Furthermore, the number of different vendors is seen as a burden and having more common solutions and common vendors would be benefit from financial perspective and managing less systems would require less internal resources. Especially Administrative tasks around systems could be more efficient. However, also competition between vendors is required and it must be avoided any vendor lock situations. Therefore, balance is important.

Another big driver is the regulations. Regulator and authorities' pressure towards banks are seen as a positive driver for development. Regulations are driving banks to have less products and to unify the products for simpler compliance and regulatory reporting. The regulatory driver for centralization was also seen as a good pressure for bank to drive the common systems development, that otherwise might not have business case. The unified products in turn enables common IT systems development. Moreover, global systems within group are seen as more strategic and long-term investments than the local systems that are seen more as quick and dirty solutions, that are fit for purpose just to fix certain acute issue but is not future proof. In global systems also, control is easier to ensure continuity etc. matters that regulators require more and more from banks.

As cross-border, and global centralized systems, also outsourced and SaaS (software as a service) is seen to be increased in the future. Also, the technological disruption is driving towards centralization. Global and central does not necessary mean that the service

would be produced in single location, but global, centralized or cross-border IT services can be produced also outside Sweden in the future.

One major enabler for global and efficient IT systems development in group turns out to be strong enterprise architecture (EA). Strong, clear, coherent EA would in turn enable the development to be done anywhere, even local solutions, if the architectural rules are followed. However, the EA has to stay on a correct level.

6.2 Positive effects of Decentralization for Global or Cross-border IT Development

One of the biggest benefits of having decentralized organization is the possibility to pilot new ideas in one market and to gain experiences from there. Also, in many younger home markets such as Netherland, the infrastructure has less legacy, which makes them fertile ground for piloting new technical solutions. Also, the structures of younger countries are more flexible than for example Sweden's regional banks. The regional banks can slow down the global development initiatives in bank where younger countries can drive the digitalization trend.

On the other hand, once the IT systems are not centralized, the interruptions in IT systems are limited to small amount of customer compared to fully centralized systems.

If looked purely from the down to top, from branches point of view, decentralization gives more options to achieve things. Development can be chosen to be done locally, where 100% control is achievable, and it can be chosen to go with common solution. In an optimal case these two fulfills each other. It also appears that is an ongoing attempt to begin to figure out what in overall can be done commonly and what has still some local needs that requires local development and systems.

Moreover, in decentralized organization, the competence is also decentralized to many locations, which is seen as an asset. However, it turns out that this asset is not effectively utilized in the group. This is because the benefits of sharing the competences and deep specialist is not clearly communicated and understood, instead, it can even be seen as a threat if external resource would be utilized for one countries IT systems development. Also, there is no platform to enable resource utilization cross-border-wise. As there is competence in several locations around the group, this lowers the dependency of central resources, which is seen as positive matter.

As the organization is decentralized, in each country, there is a strong local presence as well. Local personnel are still the key to ensure that the local customer needs are fulfilled. This can be the key, why a customer is Handelsbanken customer in first place.

6.3 Negative effects of Decentralization for Global or Cross-border IT Development

Decentralized organization is lacking transparency so that business units and countries do not know what systems each other has, and how the systems and processes are built and interconnected. This has led to situation where the group may have several similar systems doing the same thing, even more than ten similar systems. Having so many different systems handling similar purposes makes it difficult to have comparable data across the group. This can lead to difficulties in having consistent data between group level and local reports.

Because there is not much top-down coordination in development, also assessing the need for development is difficult, which has led to situations where the one who is the loudest gets to start the development effort. Sometimes the development efforts are started then fast but killed eventually for example because there has not been enough common understanding after all.

The decentralization also affects so that local organizations are required to have a lot of competences that is not feasible for its sized business. Even though the competence can be excellent, it still does not mean that the interpretations are the same across the group, which again causes segregation. Still, in some smaller countries it is not feasible to have all the competence and because of decentralized mindset, the country that has the physical resources gets most of the development and the one that is dependent on other countries resources is easily left without, or at least so it may feel.

One negative impact that decentralization enables is that units can from sometimes selfish reasons still always decide to solve issues purely locally. Even though there are attempts to minimize this, there still always is this option in the model. Moreover, some countries that utilizes service centers who produces digital services for the bank are limited in some ways to integrate into common systems. In some cases where the service center produces significant amount of the services there are practically no motivation for common solutions at all.

The decentralized organization works a lot in silos, and that's why same functionalities are developed in many locations of the organization. This negative side effect can now be seen in PSD2 and Open Banking, which can be big work effort in decentralized organization.

Decentralization was also referred to war strategies, where decentralization is good for holding battlefronts for example, for defense. Moreover, when attacking a decentralized

opponent, like Talibans in very small and decentralized units, also decentralized way to attack is only working. However, in the business, if you have a local mobile payment solution, and if the time is matured for more global solution, it will be difficult to defeat with local one. EU is harmonizing the markets in EU which makes it more difficult to answer to certain things with local solutions.

6.4 How does the challenges in global and local IT development differ?

In overall, local development is much lighter and easier. Only one country's law, customers etc. compared to PAN-Nordic, where you must consider four countries laws, customers, products, practices to operate in markets etc.

The communication is a challenge, though it is in both cases. But in cross-border it is even bigger. In cross-border cooperation, communication gets more difficult. It is difficult to find all the interested parties related to development effort. Also, the tools for communication can be local, which can make the communication in cross-border development even harder. Moreover, the language is different when doing cross-border development. It was also mentioned that even though there have been several global projects, but still the global projects are very Swedish, and there would be room to increase the global aspect in them. Locally challenges are easier to be overcome with communications and having enough sensitivity etc. but in global development the difficulty is the lack of meta-data of the technical environment etc. It is difficult to discuss if there is no good enough documentation.

Locally everything can be done faster, but when in global development, smaller countries and units always must wait for their turn, sometimes long time. Locally everything is in own hands and in own control. The dependency to other countries resources can be seen as lower level of control and the need to trust on other systems, people and other factors increases. Also, it usually takes more time. On the other hand, these solutions made purely locally can be more temporary than the solutions done together. The same can be seen also in business, if there is a global customer, it requires Handelsbanken to allocate resources globally which takes time.

As the organization is very decentralized, this means that each home market is in different level. This means that in young home markets the need can be more in product development where older and longer matured home markets can be focused on efficiency. Supporting this decentralized group can be difficult from groups perspective. This is a challenge in global IT development especially, to be able to serve units that are in different

stage. Also, in global projects the challenge can be that there are usually the limits of Sweden's IT and its legacy systems in the background when new systems are built.

Global solutions are good if you want to have masses with simple product, but it has difficulties to take into account cultural differences for example. Also, certain things are still driving some local features such as taxation, consumer protection and how different countries are supporting savings and investments products. With local solutions it is easier to do cherry picking in customers and to adjust to them, where in global development it is easier to get masses with simple product. With global products you need to be very strong in data and analytics to choose the biggest masses for your product and adjust to it.

6.5 Advantages of decentralized organization today?

As an advantage that the decentralization brings for Handelsbanken, the respondents saw the ability to pilot new things in a limited small market to gain experiences. The decentralization also brings the ability to adjust into local requirements and the local development is faster. This ability to adjust comes from the option that everything can always be solved locally if needed. Also, not having few big vendors can be seen as an advantage, as it can create healthy competition between the vendors.

The main benefits of having the decentralized model are in the business side, but when it comes to IT and back-office functions etc. the benefits are not so self-evident. The added value comes also from the local business knowledge, knowing the local risks, what local customers need, etc. The local personnel in branch offices are multi-talents in the bank's products, and there is no jumping from counter to counter, but single customer service specialist can handle it all. Therefore, also certain business systems need to be local and there is one advantage. The decentralized model pushes to be customer centric in all development, when decision making is close to the customer. However, not all customers are considering decentralization as the key factor why they are doing business with Handelsbanken. When it comes to the back-office services and administrative systems, it is not so important to have them locally. Also, corporate clients and institutions might not require decentralized model, but might be happy to do business with central unit.

6.6 Disadvantages of decentralized organization today?

The disadvantages of the decentralization are poor data quality, duplication of functions around the group and the costs that multiple functions, multiple similar systems can drive. It is also difficult to keep up with the development level everywhere, as the needs are dif-

ferent everywhere. The parts of the group are not following in same pace with development, which makes things complicated.

The option to do something locally is always there for units and countries. This option can be used from very selfish reasons, if for example compromise is not desired or there is no patience to look for the compromised solution.

The organization is also divided into so small profit centers, and all are measured separately, which makes everyone to think their own results. There is nobody who would really think the groups best, nor the big picture. Therefore, sometimes there may be some decisions that may be very odd. In some cases, someone may develop something into the systems that would not be wise at all if you would think it in the bigger picture. Moreover, in some cases one can undermine a common development work that would be necessary for all other participants but one. Getting a consistent view on the development can be really difficult if it is tried to make more global, as everyone has their opinions. To make this possible, stronger central unit and mandate would be needed so that all would be aligned into same plans. This would drive better long-term solutions.

The disadvantage is that Handelsbanken has pushed too much work to its branches, for example back-office, instead of having it centrally. Competitors can be faster because of this difference.

The decentralization can be disadvantage in corporate and institutional business, where the solutions cannot be purely local. In these Handelsbanken is slower because of the decentralization, where in private customers side we can be faster than competitors. Corporate side solutions can be expensive to build. To make it profitable, the volumes would have to be so significant.

The customer behavior is also changing, and customers are requesting services that are not fixed in terms of location nor time, which is the disadvantage of SHB model. Moreover, growth with decentralized model is extremely slow, and sometimes it can be costly.

6.7 How does the challenges of decentralization show up in respondents work?

The smaller the unit is, the later its needs are served usually in global development initiatives. The one size solution does not fit all, so for the smaller units and countries, the solution can be too heavy, and it can cost much without any real benefits gained.

From the centralized unit's point of view, the difficulties are that all have different needs and prerequisites for development. The data quality issues are noted also in central side,

and the architectural differences in all different countries and units, that also evolves over time. In central units, it is crucial still to have the knowledge and the expertise that is in the source systems, that are local.

In decentralized organization all units are involved in their own systems development. In some small units, there might not be so much knowledge how IT development is generally done, and they do not understand the common development model necessarily. This leads to difficulties with vendors, as they may not understand too thoroughly what they have ordered, or they may not have competence to accept the offer from vendors. The more professional the buyer is, the better the outcome. There could be need for an internal referee in this type of cases, who would then see what went wrong in the process, to improve the process of buying system development work from vendors, and more training and mandatory development model trainings.

The communication is really difficult and heavy duty in decentralized organization when doing cross-border development. It feels like you have said same things all over again, but you still need to repeat yourself. Also, it is difficult to be heard in cross-border or global development initiatives. There should be some help for communication. The SAFe (Scaled Agile Framework) trains make it a bit easier, and it brings all the competences from business and IT together, which makes the cooperation much easier.

The challenge is also that all head of unit's wanting to decide themselves regarding the entire solutions. Central units need to be really strong to steer the development if global solutions are needed. Moreover, in IT, it is important to have a vision where to go, as the systems development is very long-term work. The challenge is that the business strategy and IT strategy are not going hand in hand. On both sides clearer vision of the future state would be needed. The issues come from that IT is more or less cross-border, but businesses are local, and the businesses has very strong mandate to do as they think is the best to do. It would be good to define the areas where we want to be local, and where we want to have central solutions. The architectures do not match to each other, business architecture and IT architecture, and even less when we look at Sweden vs. other countries. Following a common framework would ease things, such as BIAN.

The development should be more focused also to certain areas, in both business and in IT together. Being universal bank is a heavy infrastructure to be developed. Also having more and more common products across the group would make the development effort easier. It should be thought from the very beginning, where there are good opportunities to do things together, and where not, so that the future state would be clear, and the organization could be also arranged accordingly.

6.8 Does the Handelsbanken Way need any updates?

There are different interpretations of the book describing the model for employees called "Our Way". The need for updates depends a lot of how you interpret it. In some cases, you might say it does not require much updates. However, this is also one need as update, to get it more consistent so that people interpret it same way. Currently there is also sub-optimization there, to read the Our Way the way it fits for the local business best. Also, the IT and technology need to be involved much more into Our Way, which is very business centric today. Lately there has been external changes such as Open Banking, Ecosystems thinking etc. The business part is still quite valid though, but it needs updates of how to handle IT.

One thing mentioned was also to start to consolidate from process perspective, to get common processes for example customer onboarding and money laundering. Currently Our Way only says that financial process, marketing and credit process must be the same.

The regulatory requirements have been a lot lighter than they are today. In the 70's, the focus was on product development. Today, significant share of development effort is regulatory requirements. Eventually, if the regulator is the only one for whom the development is done, it is wise to ask is there still valid case for decentralization. The regulation is also forcing banks to have more and more similar products so that they are easier to manage.

The following the church tower might not be so important at some point. The need to be in all locations physically has to be assessed and the rules needs to be updated to the model. The cash is not required in all locations for example. The most important thing is to get all customers and employees on board when doing the changes. The structures have to change because of the costs of them. This can also be seen already today, that the amount of branch offices is actually decreasing, while more staff is hired to head offices, mostly to fulfill regulatory requirements.

Today, young millennial employees have different view on work as it used to be. Earlier employees wanted to have long career in same place, which is what Handelsbanken also is targeting. Today it is not necessary so, but the work is more contract based, and employees wants to move quickly to next opportunity. Therefore, it is more external factors that forces the change needs to the model.

6.9 Will the level of decentralization increase or decrease in the future?

The view is that in overall, the level of decentralization will decrease in the future. The risks are increasing, and therefore it is required to increase central power and management to manage the regulatory risks. This does not mean that all personnel in central units must sit in Stockholm, but the central organization should include participants from all over the group.

The need for strong and good enterprise architecture will increase, and a proper meta data of the systems. And nobody should be waiting on the line for long time, otherwise they will develop entirely own solution. So, the enterprise architects and local architects are needed to glue the IT infrastructure together, and to provide good meta data.

The decentralization level also should not be decreased too fast, or only by looking at certain numbers. If we want new locations to grow their business, they need to be supported.

The competitors are decommissioning their branch offices all the time, which seems to be inevitable for us eventually too. More offices are decommissioned in Handelsbanken too and more staff is hired into head offices. IT and common functions are moving towards more centralized model.

By centralizing the economy of scale will be beneficial. As we do not target to get big masses of customers, the masses can be obtained by centralizing. Then it is possible to have enough of volume to the systems to have them justified. The technology is developing fast and there are ways to share costs with others better than earlier, cloud services and bought solutions for example.

6.10 Can Decentralized business and centralized IT be achieved in parallel?

These two should be able to be obtained together, even though it is not an easy task. It should be local business and centralized administrative and business support functions. Being local mainly means that the contact is local, but the systems used can be the same for all. Local needs can be usually handled by talking and interacting with customer, often by other means than IT system.

Moreover, the regulation is forcing banks to centralize a lot. One issue is that some local authorities are still trying also to fight against EU authority by setting little bit different regulatory requirements than rest of the EU. But eventually this will also be harmonized.

A way to achieve decentralized business model and a centralized IT landscape is architecture on the correct level, so that it does not slow down the development but is the clue to have these together in parallel.

However, it is also so that the business should speak with one voice so that their needs are also thought together. Then businesses can be served efficiently. Eventually with well-integrated business and IT into cooperation and operation model is a key. Here the early experiences of SAFe model are encouraging.

It is also good to understand that all IT cannot be centralized. It should be defined where we want to remain local in IT solutions and where not. Also, one size does not fit all. Still everyone needs to be served, regardless of their organization's maturity level. In decentralized systems, there is also this benefit that when there is an interruption in IT services, it does not affect whole group, but only very limited customers.

6.11 Is sub-optimization problem or not?

The sub-optimization is a real problem for decentralized organization. Projects that are done for one unit are not good from groups perspective, where same solution could have repeated for other units too. Currently sub-optimization is preventing group to gain benefits. For example, one unit can prevent common development in worst cases if they do not see the benefit right away. Or if the one unit has first declined, it may afterwards join as a free traveler and the initial units has taken the costs.

There can be more than ten similar systems, even 15. This may seem nonsense, but if you look at some other companies who put big efforts on processes, it is probably not so efficiently used money either.

It is crucial to be able to communicate the benefits of common systems well. In many cases a common solution is more expensive than local solution for organization needing it, but for group it is other way around. These benefits should be clearly communicated, which may change them more attractive. Also, the principles of cost allocation keys should change in order to support global development better in the future. Currently it is normal that the first one in the solution pays the development, which does not support to think global solutions. All profit and cost centers are measured by money, which does not drive at all the development of global or common solutions. The cost saving should be communicated too for the units who are wanted to be joined. If the benefits are not understood, nobody is willing to help the further development nor willing to join in the first place.

Moreover, it is noted on all levels of respondents that global solutions must be steered harder to be implemented into local businesses. The tools are that strategy and vision should be clear. The work strategy is not widely in use in Handelsbanken, but during last year it has been started to use. Also, a certain amount of infrastructure related costs is proposed to be fixed for all countries and units regardless if they use it or not. Then on top of this, transaction-based cost would be applied. This would drive to the fact that each transaction that you do to the common system, makes the ratio with fixed infra cost better.

6.12 Do you consider IT as centralized or decentralized in SHB?

Respondents thought that IT is getting more and more centralized all the time, and there are more common solutions. Their journey must be careful and not too fast. However, from bottom up, the view is more decentralized than from top to bottom. Still the overall assessment is that IT is rather centralized. Also bought, quite comprehensive services are getting more common. Still, countries and units decide themselves where they want to go.

6.13 Do you consider R&D as centralized or decentralized in SHB?

Research and Development is not very visible in countries and units. So, it was assessed to be more central. However, more research is needed as the information has become so easily accessible in the internet. This type of responsibilities may be seen to be involved into local product owners job description, where competitors must be followed. Moreover, respondents recognized that there are test labs in Sweden where they have real test customers to test the products. At least Finland was not part of this type of product testing, and it was thought to be a good to have also some Finnish customers in the test customer observations. It was also recognized that there is some future visioning in Sweden, but it is not actively shared to other countries. Many new things are very Sweden centric these days, respondents thought. Business development is very local at the moment, and local systems development is too.

6.14 Total cost of ownership (TCO) in centralized vs. decentralized solutions?

All respondents thought that centralized solutions would be more cost efficient if you consider total cost of ownership. However, Handelsbanken has done rather well in its IT costs compared to its competitors even though the decentralized business model. Earlier the own solutions were more justified, as all home markets had their own regulators. Today, it is not so justified anymore.

The topic also requires more research internally so that it can be proved to be cheaper in total cost of ownership, and this information must be spread all over the organization. Currently it is mostly the feeling that centralized solutions will be more cost efficient. At least in heavy IT solutions common solutions are seen to be cheaper, where lighter applications can be cheaper to be produced decentralized. Also, it depends the perspective where you stand, small country may see that the centralized solution is more expensive where from groups perspective it is more cost effective to operate one system for several countries.

However, the transfer to central solutions is costly, but it must be taken where it is sensible. Architectural shift must be done, and the technical debt must be paid, and this must be accepted in top management.

Centralization makes also things more cost efficient in a way that for example only one instance is interacting directly with vendors. Many different units dealing directly with vendors can be ineffective.

6.15 The effect of having generalists vs. deep specialists in organization?

Organization cannot afford to have several deep specialists, and they are very rigid. Losing a deep specialist is much tougher to replace than a generalist. Also, generalists are motivated when they have wide playground where to work, and you are taken into the team and you are closer to the actual business where the development is done. In centralized deep specialist it is quite opposite.

The world has become much more complex, and deep specialists are needed so that good decisions can be done. Multiple people should know about multiple topics so that absences would not stop the work. In certain areas deep specialists are needed, especially in centralized solutions, but always also generalists are needed. Also, in for example compliance and law matters, centralized deep specialists would be justified. However, even deep specialists may have different opinions on things, so having them does not guarantee the same view all over the organization.

In Sweden, people are organized differently as there are more staff. There the IT staff is more grouped by business areas, where they develop certain area such as loans or accounts. These Swedish business area groups should be more available also for other countries and units, they should work in global level. In Finland people are more involved across the business areas and are more generalists.

Currently there is a big shift ongoing in Sweden to work in SAFe, where there have been good experiences of it. There a certain business area developer takes more global per-

spective on the development. The teams are more permanent, and the work is steered to them, instead of moving people around to do different work. This is the way in Sweden specialists has been now focused on certain business areas and the expertise is more shared. The teams are also taking care of development and maintenance. This change has brought IT and business much closer together and IT developers are also involved into business development to gain more understanding of the entire chain. In SAFe and agile, it seems that business tends to become IT and IT becomes business, so the roles are blending.

6.16 Efficiency in having more centralized specialists serving entire group?

This divided the opinions. On the other hand, there is a risk to lose the connection between IT and business, when IT moves more far away. The development may become slow for local needs. Moreover, deep specialists can also affect ineffectively into development in some cases. On the other hand, central deep knowledge is seen effective. Still, if there are any special local needs, the knowledge must be also local. The banking industry requires a lot of knowledge and specialists just to retain banking license.

6.17 Open word

After the pre-designed questions, respondents were asked if there were anything they want to say that would relate to the research questions, and they were repeated to them.

Many respondents wanted to focus on why the centralization is inevitable, which is the costs of IT that must be cut down in order to retain Handelsbanken position as better in profitability than the average competitors.

Moreover, the situation has changed a lot from the 70's where regulator was not centralized either. Customer behaviors has changed as well, and also employees' behaviors. On the other hand, if you do not comply with regulations, the penalties are tremendous. Everything drives to have less products, and similar products which drives to have more global common solutions.

Also, there is currently bad reputation of global or cross-border projects in Handelsbanken, which would be important to be tackled with successful ones that are then presented to the organization.

Sweden is actually slowing down the global development, as the five regional banks in there do have very strong mandate, and it is difficult to find common ground there. That would require clear commutation from groups top management to have all aligned.

Also, information sharing tools were seen that they could help the global or cross-border development in communications, and the cultural change to discuss openly with each other, and to also share non-finalized materials with each other so that people can work together better.

One topic that raised especially when interviewing Swedish respondents, was the Agile and SAFe, which is one way the group is trying to get IT and business to get closer to each other.

7 Analysis

There were identifiable themes in the answers and interviews that were recognized during analyzing process. Similar key words were identified from transcribed text, and also similar logical topics were consolidated and merged. It helped that the author knows the environment and the topic area well and is part of the organization itself. Therefore, also common sense was used in themes identification. Moreover, one respondent was often very much stick to certain theme that were repeated many times in different questions. Themes are described one per sub-chapter below.

7.1 Journey towards more centralized IT with decentralized business

Certain things look very clear, as all respondents are sharing similar thoughts. The IT systems are going to be more centralized than they are today, and the key drivers are cost efficiency and the regulation that is also under centralization in EU (Figure 5). Meyer (2006) states that decentralization drives up the costs. Also, Vantrappen & Wirtz (2017) explains that decentralization is good for responsiveness but not in efficiency. Responsiveness is needed and in decentralized organization it is emphasized very much, and it is good in situations that Gerrit Broekstra (2014) has described in detail, where uncertainty is very high. However, according to European Central Bank (2018) centralized regulations are targeting for financial stability in EU area, which lowers the uncertainty (Figure 6). Therefore, there is some pressure for some part of SHB group to lower the level of decentralization. This can mean that different parts of SHB can have different level of decentralization.

According to the data, in SHB the common systems are believed to be cheaper in TCO, but proofs are also needed to back up this believe. Furthermore, also the maintenance of the competence around the system makes common systems better in TCO. Administrative functions seem to be also going towards centralization, such as Back Office functions. Also, institutional business and other corporation customers' needs might have benefits in having them centralized, because locally these systems do not have enough volume to cover the costs. Centrally there might be enough volumes so that IT development could be a business case. Centralizing functions naturally raises question of centralizing the IT systems of for example Back Office functions. All participants also agreed that it still is Handelsbanken's competitive advantage to have local business and to know your customers personally, and for example local risks. This is something that must not be altered. However, it can also be seen already, that the branch offices locally are decreasing, as the global megatrend in the world is that the people are moving towards cities and the most rural areas are becoming deserted.

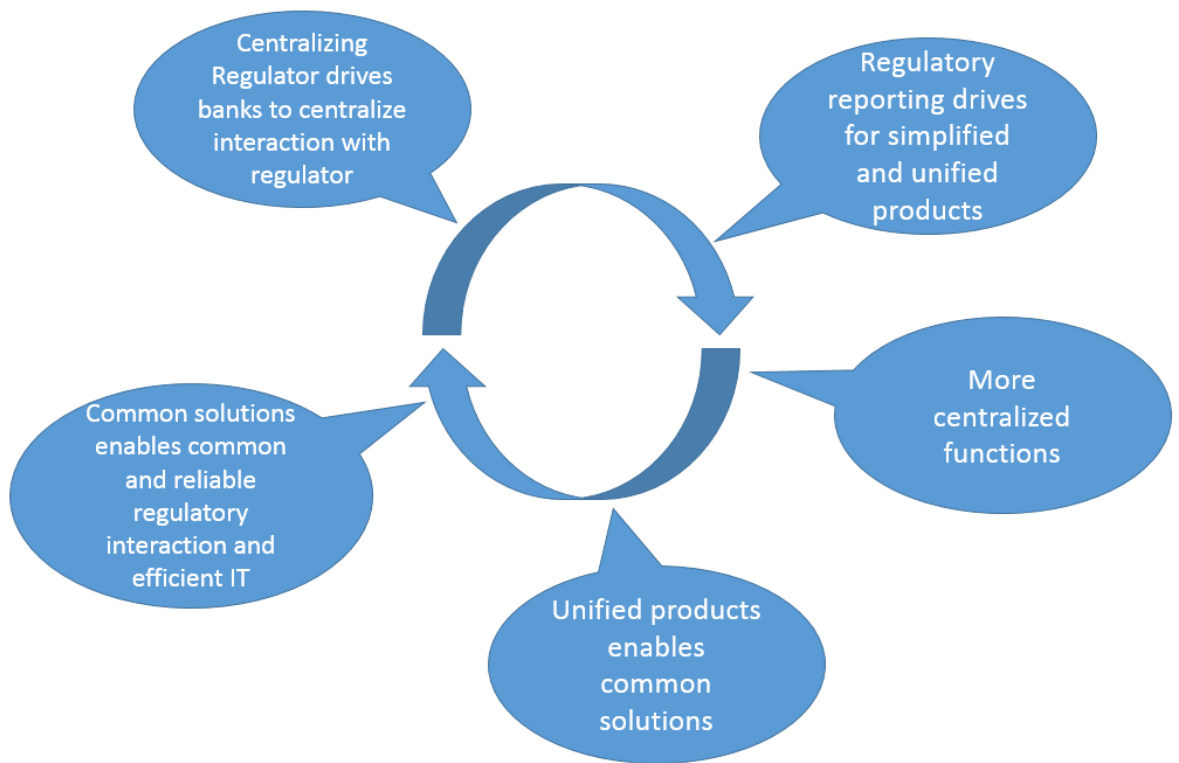


Figure 5 Regulation in EU drives common solutions and more efficient IT

Financial Stability increases and uncertainty is lowered

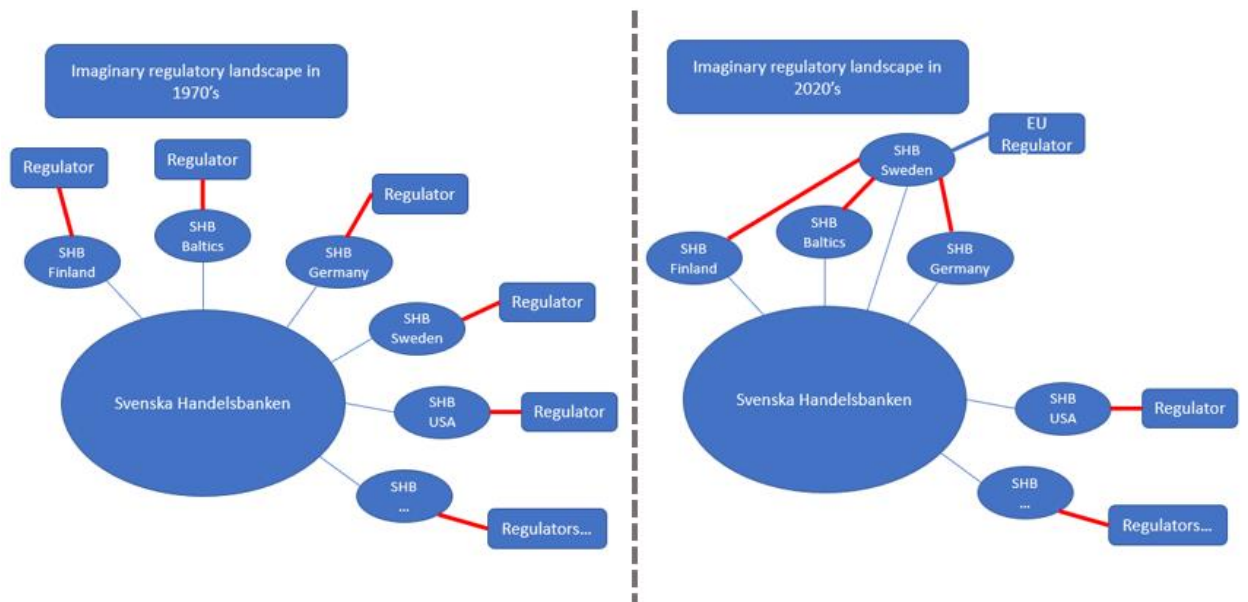


Figure 6 Imaginary illustration of how EU regulations lowers the uncertainty

Moreover, all participants agreed that in general common IT systems and local decentralized business model can be achieved together, so there is no controversy. All participants also mentioned that IT and technology related guidance need to be updated into the Our Way (Mål och Medel), which the respondents feel is missing and where the world has changed most significantly. Also, the millennial way of thinking about the job is very different than it was in 1970's, that might also need some impact in the Our Way guidance. Millennials are not so keen about the job that lasts the entire working career, what it used to be in the past. Moreover, providing smaller assignment within group might even be more what millennials are interested.

7.2 Consistent view is the key, the Enterprise Architecture

From the data it can be seen that the view is different from top to bottom than bottom to up. The gap should be mitigated with clear communication. The top management is seeing very clearly that centralized solutions are coming, and so that IT is already very central function, where different countries, units and other roles are seeing also the decentralized side clearer.

From other home markets towards Sweden, it looks more decentralized than from Sweden towards home markets. There is not enough of meta-data of the solutions, systems and environments. Without this, it is difficult to discuss when the current state is not clear and if discussion is interpreted differently on both sides.

The enabler would be a coherent, top to bottom, across the horizon architectures, that connects to each other, and connects IT and business. Within the sufficient Enterprise Architecture, also it must be thoroughly thought where the common solutions are wanted to be and where the local solutions are mandatory or justified with other reasons. A systematic approach is needed as there may be opinions from parties that are just feelings, just as Campbell, Kunisch & Müller-Stewens (2011) proposes. Moreover, business and information technology must be developed together, and requires long-term vision. The EA should also have the common view on how to utilize Software-as-a-Service (SaaS), Cloud Technologies, etc. new possibilities that are provided from outside the bank.

With good architectural guidelines, it would be easier to develop locally, globally, and even to utilize external service providers and even offshore. There need to be strong mandate for all to follow the architectural guidelines too and a plan to adjust into it. The EA and local common language in solution architectures is also a strong tool for communication across the group.

Having more common architectures and some integration through coherent IT and Business strategy also would unify the IT landscape in the long-run. Having more unified IT makes it easier to serve the entire groups purposes, that is mandatory anyway. Without unification at all, growth of the group will get more difficult all the time, where unification actually also enables the group to grow more. Moreover, without common steering, the data quality may remain poor. Proper data and analytics capabilities are required to also achieve mass markets in the future, where global products and systems are good.

Never the less, the EA should also provide a path towards the more unified world, and the transfer must be smooth. Too quick or hesitant transfer is seen as a big threat, that can affect our customers negatively.

7.3 Non-realized benefits of decentralized organization, an opportunity to be exploited

Decentralization has benefits, but some of the potential is not yet realized as well as it would be possible. The group has lots of competence around its parts, but there is no active resource sharing based on competences. In fact, today resources coming from external unit can even be seen as a threat from branches point of view. Therefore, the resource and competence sharing should be facilitated and supported from top management, throughout the group, and there should be common tools for that. Sharing resources over projects also provides millennials a way to have different experiences within the group and not to look for another company. Meyer (2006) proposed that deep-specialists are better in performance, but according to the data, both generalists and deep-specialists are needed in the future. Moreover, building global or common solutions must not be thought that it must be geographically centralized. Global and common solutions can be managed from different locations around the group, where also bought external services can be central solutions for the group.

Moreover, the opportunity of piloting in different countries and units should be exploited more in group level. The older the structures are, the harder they are to change. Therefore, the group could start to build new services from the countries that does not have the legacy as a burden and make them globally available for others. The solutions should be scalable so that they would fit for high volumes. When there is a up and running service ensemble, old systems would be easier to be decommissioned. To build common solutions from small countries towards bigger ones requires rethinking of cost allocations, because the heavy solutions are not sensible for small countries if they cost more than the value is for the business. However, as a strategy, this might be smooth way to unify old structures into new technology. Gaining experiences and building new technological ca-

pability with pilots that do not suffer so big technological legacy burden gives faster implementation and cleaner solution. Also, common enabler solutions should be re-built, so that the ensemble would be easy to deploy at large, and only minimal local integrations into old and other systems are needed.

There is also some research activity in Sweden, but it is also not too much visible at least to countries outside Sweden. Also, the test labs are valuable, but currently at least the countries that were represented in the study do not gain much visible benefits from them. Having also customer profiles of other countries in the test labs or spreading the practice of having the test labs around the group should be assessed. After all, Handelsbanken wants to be very close to the customers, and this would bring the actual customers closer to the development itself.

7.4 Sub-optimization is issue in decentralized organization

Sub-optimization is poison for global and common solutions. Jan Wallander (2003) has denied the problem of sub-optimization even though it has been the critic for decentralization during his time. This might be because "Our Way" is very business oriented and does not give much guidance for IT systems (Figure 7). Also, in the 70's it was very much reasonable to have decentralized IT systems, as the regulator and countries were very unique. However, nowadays the environment is a lot different and the external forces are pushing banks to centralize systems for consistent communication with authorities and lately also standardized way to open interfaces for 3rd parties.

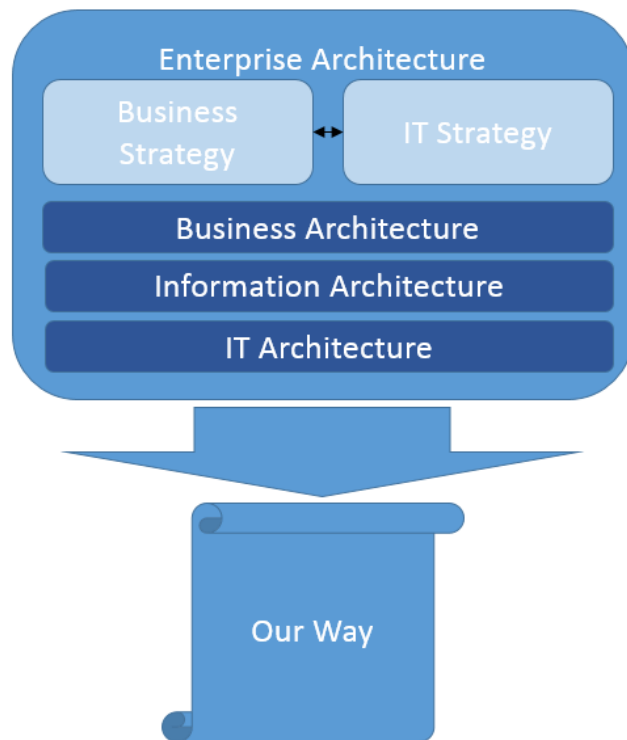


Figure 7 Proposed input for updated Our Way guidance

Respondents raised especially the first deployments of common systems are not desirable, because the one who implements first has to pay the implementation, and others benefit of this but not the one who paid the initial cost. There must be a new model how to build common solutions, including cost sharing that supports common solutions. The benefits must be clearly communicated from groups perspective, and even the profit centers measurements must be redesigned to better support cross-border development and common solutions. The aforesaid matters are currently a clear obstacle for building global, common solutions and is driving sub-optimization issue, that Jan Wallander (2003) has stated that was not an issue back in the days.

Moreover, the benefits that group gain from common solutions must be clearly communicated in organization and added on top when solutions are assessed in cost – benefit calculations. This would be one possible incentive for countries and units, so that they could get the benefit for their own unit or county's result. This is how the common good would be added on top of the benefits and compensated for the one who implements common solution instead of a local.

Alongside of the common solutions benefits that should be counted into the cost – benefit calculations, there is a proposal that certain part of common systems infra costs are divided to also units who decide not to utilize them. Then a transaction-based cost on top of

the system for those who utilize the system. This would also drive towards the situation where common systems would be seen more beneficial in the calculations.

7.5 Communication and tools

Communication is a problem that stands out in cross-border development. Effective communication required good common tools, common language and more attention in cross-border development. Locally the communication is a lot easier and can be managed. Also, the communication theme is connected to Enterprise Architecture theme, which is also a tool to communicate between countries regarding the technical environments. Therefore, not only the subjects of the common development are under centralization, but also the tools used to manage the work must be common to ease the communication.

7.6 Fuzziness as a problem

Those who has the resources can get the development more than those who are scarce of resources and are dependent on others. Moreover, there is a possibility that being loud ensures you get development. This has led sometimes already into bad decisions and development efforts have even terminated after some time. This can make the system unfair and can make people to count more on their fully own resources, where they can have all the control.

Moreover, as the development is done all across the organization, this means that even very small units can and must develop something on their own. Better understanding of common development rules are needed. Among them is a mandatory knowledge of Utvecklings Model (UMOD), the development method of Handelsbanken. If UMOD and development principles are not understood, badly defined development orders can end up into development. This sometimes then reflects to the end result, that sometimes is not desirable at all.

7.7 New working practices to boost the work

New working practices has been initiated already to boost the organization's ability to work together towards common goals. SAFe and agile was raised several times in the interviews. Moreover, the generalists were also seen as a good thing, that is one usual outcome of the decentralization. The generalists are actually good in Agile way of working, as they can be cross-functional or so called full-stack developers. This observation is linking Agile teams to fit decentralized organization. However, the work must be coordinated well and steered strongly so that the built solution is as standard as possible and is

deployed for as many units as possible. The common solutions require a lot of top management steering, which is not so common in Handelsbanken, but in the future necessary.

SAFe and Agile methodologies provide a good ground for many things found in the analysis. Having stable small teams around business area that then serves many countries and units at the time is a good framework to get things consolidated. It also helps the communications as business and IT are represented within the train. However, the strategy could be thought, that should the development be begun from younger countries without legacy and create an area at the time with all it requires, that has very limited interfaces to old legacy systems. Then the whole would be easier to be deployed for other countries.

8 Recommendations

It is recommended, that Handelsbanken approaches information technology all the way from the “Our Way” guidance. Also, it is worth to mention how the world has changed and why it has impact on “Our Way”. For input to the guidance document itself, business and IT strategies need to be aligned, and it is worth to know where to concentrate when speaking about group common solutions. Enterprise Architects should be heavily involved in the work keeping the view consistent from all aspects, technology, business, data and information and current systems. Enterprise architects, information architects, business architects and IT architects then should build a coherent view on the upcoming target enterprise architecture. This should also include the understanding where Handelsbanken wants to embrace common solutions and where it is still today justified to have local solutions. During this path, Handelsbanken has already taken steps towards unifying the development roadmaps. While designing the path towards the target architecture, also it is worth to keep in mind the possibilities that younger countries without legacy burden are offering.

For clearer communication, and to also to support decision making, a new model for cost sharing must also be developed. The system must support and encourage utilizing common solutions more than today, and the initial implementation and deployment must be encouraged a lot. For this it is recommended to really calculate the benefits that common solutions offer for group, and then to allocate these benefits for the branches who deploys the solution. Also, the initial implementation must be supported so that the implementing unit will not suffer for being first. Moreover, if the systems are decided to become group common solution, certain part of the costs could be allocated to all units even if the decide not to utilize them. At large, model must be fair, but it must include also the benefit of the common solutions that it does not have as of today. This would also make sub-optimization more difficult as the common solutions becomes much more attractive.

Moreover, only soft means might not be enough to make common solutions more popular, but also more top down approach is needed and harder steering towards them in some cases. The top management must be very clear when the plan is communicated out, where we want to embrace common solutions and where we think we can have local solutions.

When doing cross-border development, common tools are needed to ensure communication. The technological tools but also other means that facilitates the work. As a framework, SAFe, that is already been started to use can provide some help in communications. It ensures that the business and IT knowledge is in the same team and the commu-

nication within the team is seamless. Therefore, SAFe rollout is recommended to be continued. However, while building the agile teams, the whole groups competence should be considered.

Competence sharing should have also common solution to be enabled and supported better in the group. It is SHB's advantage that it has competence all around its organization. Sharing resources more around the group could add more value to the group than each branch having their own specialists. It is worth to be investigated deeper, what type of model would enable this, with clear responsibilities so that countries and units also dare to ask for resources from other locations.

9 Feedback from the case organization

The review and feedback from PMO were gathered in open discussion in one-to-one meeting. The general feedback was that the language is very readable and good wording is used. The PMO agreed with the analysis conducted from the data in general. Moreover, the results of analysis were no surprise for PMO, but it raised correct matters to the surface.

One on the success factors for projects that PMO noticed that did not raise in the data was the relationships between units trying to co-operate. PMO mentioned that they have identified that regular face-to-face meetings, especially in the beginning of cross-border project usually leads to better outcome than trying to cope with video conference meetings or other similar. The prerequisite for this is that there are accountable persons in each unit for common development in the first place. Therefore, fostering these relationships between responsible persons is really important especially in the future if these common systems development initiatives will increase.

In the data, the communication difficulties were raised, but the participants did not see this as a mean to ease the communication issues. Moreover, in the data SAFe trains were raised as one tool that has is seen to facilitate communication issues in the early trials of SAFe, because it brings business and IT closer together. Furthermore, it was also said that business and IT has been working together ever since 1970's, and probably earlier too. However, SAFe still seems to be a new breeze that makes people feel that they work closer to each other. In the collected data, it was explicitly mentioned that SAFe is good as the teams are permanent, and work is brought to these permanent teams instead of moving people and building up new teams around projects. This may be the reason that makes people feel that SAFe helps in communications and to resource people better into development initiatives from line work.

Moreover, over time it is a risk that Agile is felt to be a silver bullet for all issues, which it is not. Very similar things that are also included into normal project work are emphasized in Agile. Training the whole personnel is also rather expensive and transformation towards agile way of working costs too.

From the analysis PMO raised the fact that smaller units and countries must be able to afford the investments needed. This is difficult for so called HI countries, that are smaller branches in global SHB network, but are not considered to be home markets yet. The proposal to adjust the way how the cost centers are measured, and how the investments are calculated was thought to be correct way to go.

Author asked what would be the one new thing that this investigation brings to the surface, and the response was that the unexploited opportunities that SHB has because of the history of the decentralized organization. There is lots of competence around the group that could be utilized more. PMO proposed to hand over the thesis results also to the managers in central personnel department. Building networks within SHB is important and competence sharing and for example expat programs are supporting this well. Sharing personnel in development initiatives could be assessed, if it could be supported more in the future somehow.

9.1 Feedback from participants and elsewhere in the organization

After PMO review, the results were handed over to the participants of the interviews. Furthermore, the thesis report was checked by the head of security in SHB Finland. The feedback from security was very similar to PMO that all findings are familiar. It was also mentioned that there was another degree study end report that had very much similar findings, which suggests that the findings are valid. Therefore, the report was also handed over for the author of that degree study report. The person in Head of position, who had written that degree report gave good feedback also regarding the clarity of the thesis and the overall structure. Moreover, he raised the question regarding the chapter 6.16. and would like to investigate further the scenario if SHB would go towards more centralized common services, would there be bottlenecks in the resourcing, if the centralized solutions would be delivered globally? Another one that he raised was that the mindset must change so that development must always primarily serve global view instead of Swedish view. This is an important change that must be done and must not be understated.

The points raised above are valid scenarios and risks to be managed well if the target is towards common group wide solutions. However, here also it might be good to investigate would it provide solution to utilize SHB group wide competence around the group, so that all common services are not only resourced from Sweden, but the group could utilize its resources more globally.

In general, from the participants the feedback was also that the raised findings are familiar, but the thesis analysis brings everything together and connects them, which is valuable and helps to connect different known things together. Moreover, the theoretical framework that supports the thesis was found interesting, clarifying where the decentralization actually is trying to be the answer and where it is not so good for.

System owner commented that the direction seems to be less decentralized in the IT area. He also raised the unexploited global competence as a good point that was seen as a

great opportunity to deliver global common IT services from different places of the organization. A comment was that SHB could start to build center of excellences to different locations.

Moreover, participant from Baltics named more detailed needs that drives towards less decentralized organization. She stated that the need to control risks better on group level should also drive for centralization in general. Moreover, she considered it as important matter to respond to the customer behavior with agile methods in development. Furthermore, the development of scale makes it feasible to make a technological shift to the latest technologies available.

10 Conclusions

As an answer to RQ1, there are clearly both benefits and disadvantages that are driven from decentralized model. On the negative side, there are lots of same functionalities in IT landscape because of decentralization. The model itself gives always still option for countries and units to sub-optimize and not to think for common good. Furthermore, the current cost-benefit allocation model does not either support common systems development. The model must also make sure that also small HI-countries can afford to implement common solutions. The decentralized model also complicates the communications in cross-border initiatives.

On the RQ1 positive side, due to decentralization there is lot of competence in across the group and it is not just centralized to Stockholm. Having the competence spread over the organization is seen as a huge asset for SHB. Moreover, the decentralized model provides fertile grounds in it branches for piloting and developing new solutions. The less legacy there is the easier it is to develop new as long as the scope can be isolated from other group common legacy systems.

However, it seems that these benefits of decentralized organization are not exploited as much as they could be, which is why the competence and resource sharing has a lot unutilized potential. Facilitating and supporting resource sharing and creating cross-border teams and projects should be considered in the future. Also piloting in countries and unites with least legacy should be considered in the future. These two recommendations are already part of RQ2.

The world has changed quite a bit from the 70's where the Handelsbanken Way was initially defined by professor Jan Wallander. The decentralization is good for fighting against unpredictable external events and factors to remain in life, but it is not good for cost efficiency, reliability nor continuity. In 1970's it has been very well justified because Europe has been much more decentralized. The business model, that it actually is, is still valid and shall remain Handelsbanken's competitive advantage. However, due to RQ2, the technological leap in general, the centralizing regulator and banking authority in Europe sets requirements for updating the Our Way guidance. Furthermore, centralizing regulator is supposed to make the EU even more stable environment, which is supposed to lower the uncertainty. The data and information requirements form systems has grown, and the need is to interpret the data in same way. Decentralized IT is not optimal for this kind of requirements. In overall, decentralization is good for uncertainty which is getting lower in EU.

Therefore, to embrace more common solutions, more guidance is also needed through coherent enterprise architecture and aligned business and IT strategies. Proper enterprise architecture including current system, information and business architecture and a path towards the vision are key things to enable good communication across the group, in all levels. Good architectural plan also enables more flexible execution of the plan, as it can be executed locally, globally and even in off-shore as the architectural guidelines has to be followed.

Decentralization has its impact on global and cross-border IT development in many ways. The changing environment where Handelsbanken operates, has also impact to the fact that the sub-optimization has become issue that it earlier was not, according to Jan Wallander. While common solutions are becoming more justified because the data needs to be reported and interpreted the same way, the common solutions must also be made more desirable for countries and units to implement. Therefore, as an answer for RQ2, also an amended cost-benefit allocation and calculation is proposed to facilitate common solutions implementation.

SAFe and agile methodologies provide good practices to align development with business and IT, and it has already given some good early experiences in Handelsbanken. This path is therefore good to be continued, as Handelsbanken has already taken the first steps. However, it is a risk that there are too big expectations of agile methodologies.

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Appendices

Appendix 1. The script of the deep interviews

1. Do you think that the need for Global IT development will increase or decrease in next five years? Why?
2. In which type of cases do you think that Local IT system overcomes Global IT system?
3. In which type of cases do you think that Global IT system is better than Local IT system?
4. What positive effects do you see, that decentralization has for Global IT development?
5. What negative effects do you see, that decentralization has for Global IT development?
6. Are the challenges that you have encountered different considering local vs. global IT development? If so, how they differ?
7. What specific components of a Handelsbanken decentralized model do you consider as an advantage for SHB?
8. What specific components of a Handelsbanken decentralized model do you consider as a disadvantage for SHB?
9. How does the challenges of decentralization show up in your position, regarding global IT development?
 - a. Concrete symptoms that you think are caused from decentralization
 - b. How would you make the situation better?
10. The SHB organizations decentralization has been built in early 70's. Do you think the model should have some adjustments in order to support Global IT development?
11. Do you think that the level of decentralization should increase or decrease in next five years, why?

12. Do you see any contradiction in centralized IT development and decentralized business model? Could they both be achieved at the same time, or do you have to choose one to go with?
13. Do you consider sub-optimization as a problem in decentralized organization, that prevents to gain global benefits from IT systems?
14. Do you consider IT in SHB more centralized or decentralized function? Why?
15. Do you consider Research and Development centralized or decentralized function in SHB?
16. Do you think that decentralized and local IT solutions has lower total cost of ownership than central global IT solutions, or wise versa? Why? (for example, economy of scale and negotiation power / bargaining power).
17. How do you think that the quality of IT would be affected if IT specialists could be more specialist in one area compared to being generalist? Do you think that it is feasible to have all the knowledge / competence duplicated in all countries? (for example, TRS, GDPR, etc.?)
18. What kind of effect do you think it would have for efficiency, if there were more specialized IT staff in certain smaller area, serving wider geological area?