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Measuring Agility of Teams in a Contact Center Environment

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The objective of this thesis was to produce a measuring tool that can be used for measuring the level of agility in teams in a contact center environment within the Pohjola insurances´ Customer services business unit. At the time of writing this thesis, the number of publicly available tools for measuring agile was low, and the tools available were aimed towards software development organizations. This makes the novelty of the topic of the thesis.

This thesis includes both qualitative and quantitative research methods to collect all necessary data. This thesis is conducted as an evaluation research. The theoretical framework focuses on the topics of agile working methods, measuring of agile, key areas to measure, and existing measuring tools. Together with the results from the current state analysis, it serves as the basis for the proposal building.

The outcome of this thesis is a measuring tool that improves the understanding on the level of agility of teams on a sprint iteration basis. In addition to the tool produced, the results of this thesis indicate that short-term monitoring of team's agility improves leadership roles´ understanding on the level of agility of teams, monitoring the efficiency of teams, and provides teams with more data to analyse and adjust their actions accordingly. The results of this thesis also indicate that the measuring tool needs to be adjusted based on the way how agile working methods are implemented into the team measured and their core tasks, in order to provide the results that can be used in a more detailed level analysis.

This thesis provides one example how the principles of measuring the agility of teams can be implemented outside of software development organizations, in this case in a contact center environment. The outcome of this thesis adds to the list of publicly available tools for measuring agile working methods.

Keywords	Agile, Contact center, Measuring Agility

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1   Introduction

Agile working methods have been a part of software development processes for decades and were originally created to improve software development processes in small to medium sized teams. Foundation of agile working methods are self-organizing and cross-functional teams. These teams are working in collaboration with end users or customers in order to develop suitable solutions to either improve team's own performance or to solve a customer's problem. During the last decade different applications of agile methods have been on the rise outside software development in companies like ING (McKinsey 2017) and Lonely planet (Amazon 2014). Reason behind applying software development methods into other processes beside software development in companies are usually the need for improved ability to manage often changing priorities, improved transparency of projects and improve projects turnaround time.

At the time of writing this thesis public tools for measuring the success rate of agile implementation are aimed towards software development organizations and teams. Now that agile working methods are becoming more popular outside software development there is a growing demand for a way of measuring the success rate of agile implementations in different organizations outside software development. This thesis aims to provide a measuring tool that can be used for measuring the level of agility of teams in a contact center environment.

1.1   Business context

OP financial group introduced its own adaptation of agile methodology in the beginning of 2019. Challenge in this implementation project is that OP financial group has over 3000 employees that form many different business units with different organization structures. As a result, developing just one model wouldn't suit all the organizations. As a result, OP Agile was launched as a reference model of what agile methods could look like in different business units. Responsibility of adjusting the refence model accordingly to suit business units' needs are on the business units. In Customer services – business unit of Pohjola insurance, the implementation of OP Agile was launched during the autumn of 2019 and winter of 2020 in the form of two pilots in retail- and business –

customers services organisations. Based on the experiences from these pilot's new organization structure was created to support the daily operations of working in agile methods. This new organization structure was implemented in business customers services organisation during the autumn of 2020.

New organization structure provides support especially for the implementation and use of agile methods such as ceremonies and continuous development processes. On these early stages of the new ways of working in Customer services – business unit can collect numerical data about team's performance levels but is still in need of a tool that analyses the level of agility in teams inside the operation areas. Based on this, the objective is to produce a measuring tool that can be used for measuring the level of agility in teams in contact center environment within the Pohjola insurances Customer services – business unit.

1.2   Business challenge, objective and outcome

Usage of agile working methods is new topic in Customer services – business unit of Pohjola insurance both in organizational level and amongst the personnel. So far, the implementations of OP agile working methods have been done in other business units within Pohjola insurance which consists mainly of expert – level positions such as software- and product development teams. The employee structure of these teams is very different compared to teams in Customer services – business unit which consist mainly of entry-level positions such as customer service agents and insurance handlers. In order to solve this problem Customer services – business unit has created an implementation plan for applying an adapted version of the OP Agile working methods that is more suited for the structure of teams inside the business unit.

Objective of this thesis is to produce a measuring tool that can be used for measuring and the level of agility in teams in contact center environment within the Pohjola insurances Customer services – business unit.

The outcome of this thesis is a tool that enables measuring the agility of teams in Pohjola insurances Customer services – business unit.

1.3   Thesis outline

This thesis was conducted in business customers services organisation of Customer services – business unit of Pohjola insurance. Figure 1 below presents the organisation structure and target group teams for this thesis.
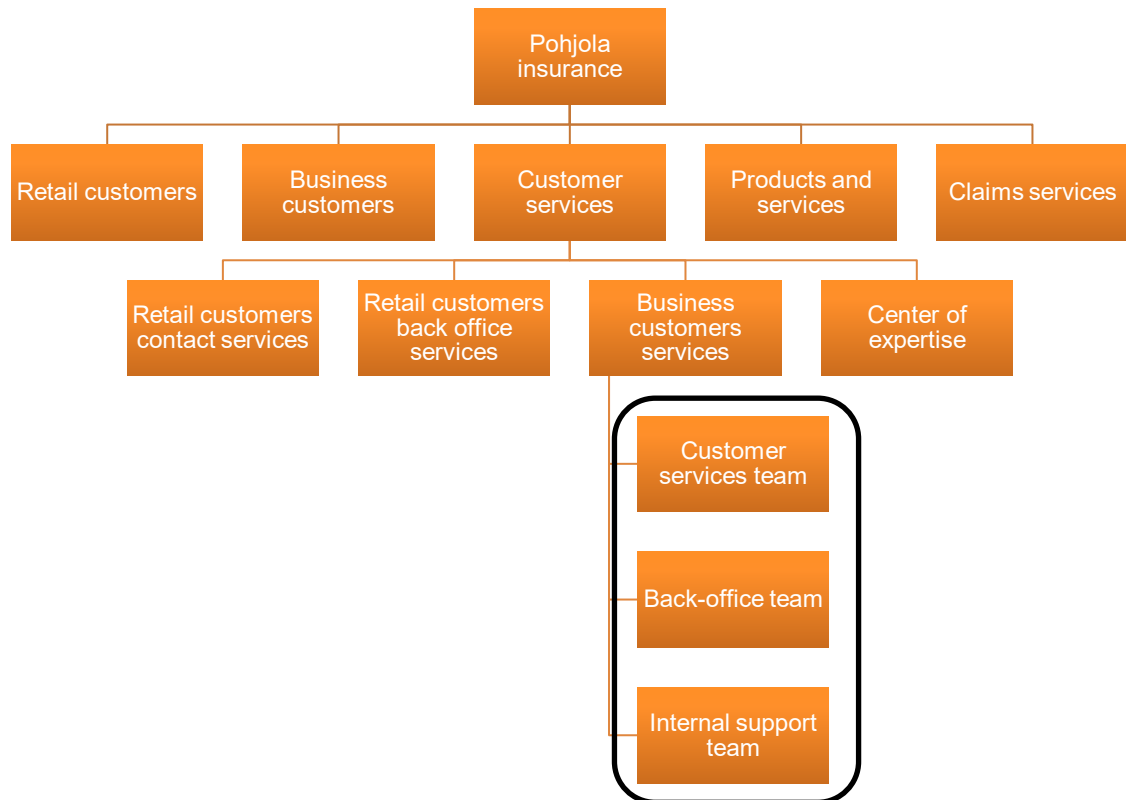
Figure 1, Organisation structure.

As figure 1 shows, the target group for this thesis are three teams located in business customer services organisation. Each of these teams are specialised in different operation areas. Team 1 is specialised in incoming customer contacts in phone- and online channels. Team 2 is specialised in back-office operations. Team 3 is specialised in internal support services. These operation areas form majority of the work done within business customers services organisation and therefore team from each operation area was selected to target group. All target group teams are located in Tampere, Finland.

This thesis was conducted by interviewing key roles in business customers services organisation and an inquiry to target group teams. This thesis will cover research design first, followed by existing solutions and knowledge on measuring agile working methods, current state analysis, building of the proposal, validation of the proposal and conclusion on the results.

Next section will cover method and materials for this thesis.

2 Method and material

This section describes the research approach, research design, and data collection and analysis methods used in this thesis. Research approach will be presented first, followed by research design and data collection plan.

2.1 Research approach

This thesis includes both qualitative and quantitative research methods to collect all necessary data. This thesis is conducted as an evaluation research.

2.1.1 Qualitative research

Qualitative research is an umbrella term for a wide variety of approaches to and methods for the study of natural social life. The information or data collected and analysed is primarily nonquantitative in character, consisting of textual materials such as interview transcripts, fieldnotes, and document or visual materials. (Saldana 2011)

Qualitative research methods are used in this thesis for current state analysis and in evaluation of the final proposal. Qualitative research methods are used to collect data and feedback that can't be collected with quantitative research methods due to small size of target groups. Qualitative research methods that are used in these parts of the thesis are interview fieldnotes and non-confidential internal documents of Pohjola insurance.

2.1.2 Quantitative research

Quantitative research is a research method that provides a general picture of the relationships between variables. A variable can be a thing, activity, or characteristic about a person. It is something that quantitative research wants information on. Quantitative research tools are for example surveys, interviews and observation forms. Quantitative research provides answers to questions "How much?" and "How often?". (Vilkka 2007)

Quantitative research methods are used in this thesis for proposal building and testing of the proposal. Quantitative research methods used in this thesis is a survey conducted for the target group teams during the building of the initial proposal.

2.1.3   Evaluation research

Evaluation research is used to systematically examine people, programs, organizations and policies to assess their quality, merit, and effectiveness. The research genre can employ a combination of both qualitative and quantitative data collection and analysis. Studies that use evaluation research involve the immediate stakeholders as part of the evaluation process from the beginning, soliciting from them their perceptions of the program, and how the evaluation will ultimately help them redesign current and future endeavours. (Saldana 2011)

This thesis is conducted as an evaluation research as evaluation research is suitable for combining qualitative and quantitative research methods. Evaluation research also suits the objective of this thesis that is to produce a tool for measuring the agility of teams for Customer services – business unit. Development of the outcome of this thesis will continue in the future and inclusion of the shareholders in the evaluation research is important for future development.

2.2   Research design

Research design used in this thesis is presented in figure 2. The research design consists of five stages and figure 2 below illustrates the research design and points of the outcome for each stage.
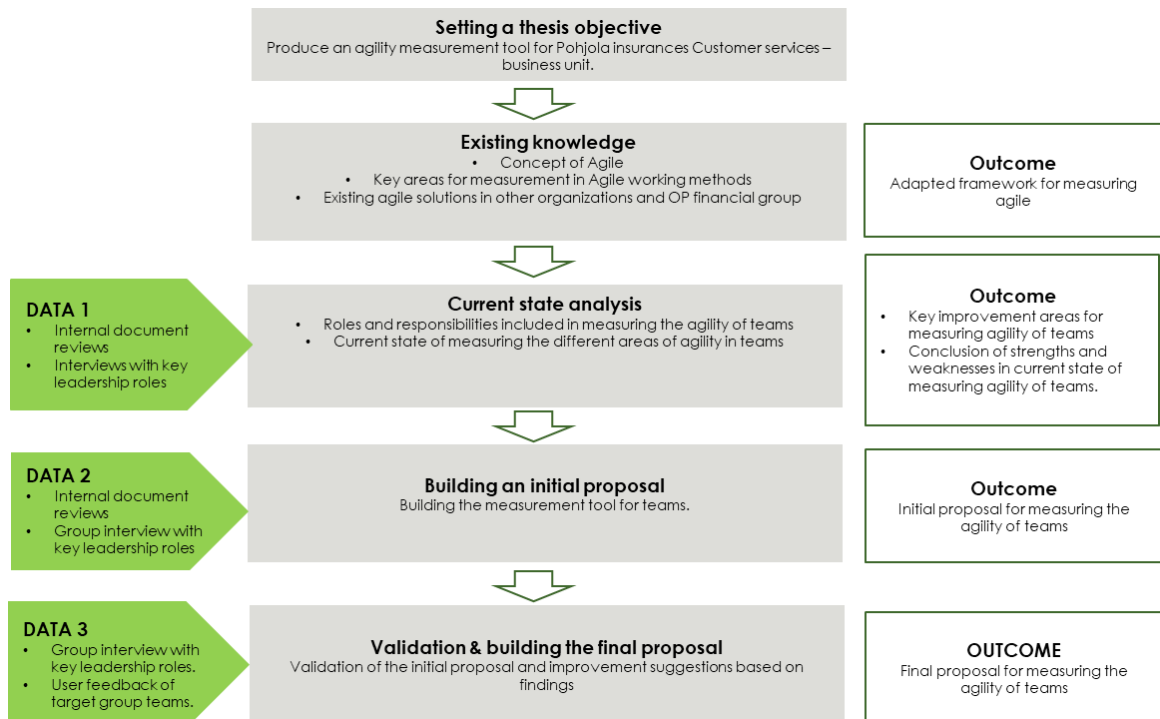
As figure 2 shows, first stage of the research design is setting the thesis objective. The objective for this thesis is to produce a tool that enables measuring the agility of teams in Pohjola insurances Customer services – business unit. The need for this tool was discussed and decided with the business unit manager of Customer services – business unit in September of 2020. Main purpose for the tool is to be able to successfully measure the agility of a team. This data will be used by key leadership roles to gain a better understanding on how the implementation of OP agile working methods progresses within their service organisations and if the sought benefits are achieved.

Second stage of this thesis consists of literature review and collection of existing knowledge in agile working methods and measuring agile. This stage will introduce the key concepts of agile, key areas for measurements in agile and existing solutions for measuring agile inside OP financial group and other organisations. Outcome from this stage is the adapted framework for measuring agile.

Third stage of this thesis is the current state analysis. In the current state analysis reviews of internal documents and interviews with key leadership roles were conducted. Goal for the interviews and internal document reviews was to gain an understanding how measuring the agility of teams is currently done. Current roles and their responsibilities in measuring the agility of teams were also covered in these interviews. Outcome from the current state analysis are key improvement areas for measuring the agility of teams

and strengths and weaknesses in current state of measuring the agility of teams within business customer services organisation.

Fourth stage of this thesis is building of the initial proposal. Based on the data collected and analysis done in current state analysis, a group interview with key leadership roles were conducted to collect further input on the key improvement areas from the current state analysis. To support the inputs from the interview also reviews of internal documents on OP agile working methods was done to ensure that measurement tool is suitable for use in other service areas also and does not produce duplicate data. Based on these inputs, the output for this stage is the initial proposal for measuring the agility of team.

Final stage of this thesis is validation and building of the final proposal. For this stage second group interview with key leadership roles and feedback collection regarding the initial proposal from the target group teams were conducted. Based on these inputs from the target group teams and key leadership roles, developments to the elements of the initial proposal were made. The outcome for this stage is the final proposal for measuring the agility of teams.

2.3   Data Collection and analysis

This thesis was conducted by using both qualitative and quantitative data collection methods from three data collection rounds. Materials used in this thesis were collected from interviews and internal document reviews. Based on their involvement both in daily operations with teams and in measuring agility of teams as presented in section 4.2, business lead-, operations lead-, operations area lead- and agile coach – roles were chosen to be interviewed for the current state analysis, proposal building and validation.

Table 1 below illustrates in detail the data gathered from the interviews of three rounds of data collection.

	Participants / role	Data type	Topic, description	Date, length	Documented as
	Data 1, for the Current state analysis				
1	Business lead	Teams interview	Role of business lead in OP agile Challenges faced in measuring the agility of teams. Strengths and weaknesses of current measuring process of teams	March 2021, 1 hour	Field notes
2	OPS Lead	Teams interview	Role of HR team leader in OP agile Challenges faced in measuring the agility of teams. Strengths and weaknesses of current measuring process of teams	March 2021, 1 hour	Field notes
3	OPS Area lead	Teams interview	Role of area lead in OP agile Challenges faced in measuring the agility of teams. Strengths and weaknesses of current measuring process of teams	March 2021, 1 hour	Field notes
4	Agile coach	Teams interview	Role of agile coach in OP agile Challenges faced in measuring the agility of teams. Strengths and weaknesses of current measuring process of teams	March 2021, 1 hour	Field notes
	Data 2, for Proposal building				
5	Business lead, OPS Lead, OPS area lead, Agile coach	Group teams interview	Findings from data 1, inputs to selected improvement areas.	August 2021, 1 hour	Field notes
	Data 3, from Validation				
6	Business lead, OPS Lead, OPS area lead, Agile coach	Group teams interview	Analysis of results collected from the data collection table of initial proposal Inputs to improving the elements of the initial proposal	November 2021, 1 hour	Field notes

Table 1, Data collection plan for this thesis

As table 1 shows, first data collection round was done in current state analysis in form of interviews with four key leadership roles who represent different leadership roles in OP agile methods. Separate interviews were conducted with business lead, operations lead,

operations area lead and agile coach roles to collect information on the challenges they face currently in measuring the agility of teams and what are the strengths and weaknesses of current ways of measurement. Topics for current state analysis interviews were selected based on the need to understand how the four elements of the adapted framework presented in section 3.5 compared to the current state of measuring agility of teams in business customers – service area. Selected topics for the interviews provided information on what kind of tools are used for data collection, how is the data collected used and what challenges they key leadership roles are facing in measuring agility of teams. Reasoning for conducting separate interviews was to ensure focus on the interviewee's role only.

Second round of data collection was done during the building of initial proposal. In this round a group interview was conducted with all four key leadership roles interviewed during the current state analysis. In this round of data collection, the focus was in collecting inputs on the selected key improvement areas selected based on the findings of data collection round 1. These key improvement areas are presented in section 5.2. Based on these inputs the initial proposal was built and shared with the target group teams.

Third data collection round was done during the proposal validation stage. During this data collection round, second group interview was conducted with key leadership roles. Main topics of this interview was to collect inputs from key leadership roles regarding the elements of the initial proposal and target group feedback. These inputs from key leadership roles are presented in section 6.2. Based on the inputs collected from the interview, development to the elements of the initial proposal were made and final proposal was built.

All of the interviews were recorded and documented in form of field notes. The questions and field notes of current state interviews can be found in appendix 1. The questions and field notes for group interview of proposal building can be found in appendix 2. The questions and field notes for group interview of proposal validation can be found in appendix 3. In this thesis the interviews conducted were the primary method of data collection. The interviews were conducted as semi-structured interviews and they were held on Microsoft Teams with questions created and shared with interviewees in advance.

This thesis also analysed a number of internal documents. Complete list of internal documents and reports used in this thesis can be found in table 2 below.

	Name of the document	Number of pages/other content	Description
A	Drive - survey report	1 page, PDF-format	Report on the results collected from the quarterly drive - survey.
B	OP Agile in business customers service area	2 slides, PPT-format	Description of key leadership roles and responsibility areas in OP agile
C	Agile workbook	1 page, XLS-format	Report on information collected by agile coach regarding the agility of teams.
D	Contact handling efficiency report	1 page, XLS-format	Report on the employees' number of contacts handled and contacts in hour – rate.
E	NPS-report	2 pages, PDF-format	Report on the organizations and individual net promoter score.
F	Agile - inquiry report	1 page, PDF-format	Report on the results collected from the quarterly agile - inquiry.

Table 2, List of internal documents reviewed.

As table 2 shows, first document reviewed was document A. Document A was analysed during reviewing existing solutions of measuring agile working methods. Document A was used to gain an understanding on the current solutions for measuring agile within OP financial group. Findings from the analysis and example of the report are presented in the section 3.4.3.

Document B was analysed during the current state analysis. Document B was analysed in order to gain an understanding what are the key roles involved in measuring the agility of teams in business customers service area and what their responsibility areas are. Findings from the analysis of document B are presented in section 4.2.

Document C was analysed during the current state analysis. Document C was analysed in order to gain and understanding what kind of tool agile workbook is, how it is used and what kind of information agile workbook provides for measuring agility of teams. Findings from the analysis of document C are presented in section 4.3.1.

Document D was analysed during the current state analysis. Document D was analysed in order to gain an understanding what kind of information is gained from measuring the efficiency of teams based on the contacts handled within given time. Findings from the analysis of document D are presented in section 4.4.

Document E was analysed during the current state analysis. Document E was analysed in order to gain an understanding what kind of information is gained from net promoter score reports regarding the level of customer collaboration. Findings from the analysis of document E are presented in section 4.5.

Document F was analysed during the current state analysis. Document D was analysed in order to gain an understanding what kind of tool agile – inquiry is, how it is used and what kind of information agile – inquiry provides for measuring agility of teams. Findings from the analysis of document F are presented in section 4.6.1.

Most amount of data was collected and analysed for current state analysis to establish a good understanding on the current state of measuring the agility of teams and future needs in business customers service area. The findings from the current state analysis are discussed in section 4. Data collected in data collection round 2 was used for initial proposal building and the findings are discussed in section 5. Data collected in data collection round 3 was used for validation stage and finding are discussed in section 6.

Next section will cover the existing knowledge of measuring the agility of teams

3 Existing knowledge of measuring the agility of teams

This section discusses existing knowledge on principles of agile working methods, key areas for successfully measuring agile working methods and existing solutions of measuring agile working methods in other organizations. Principles and key areas for successfully measuring agile working methods are covered to get an understanding of the structure in agile working methods and which areas are the most crucial areas for successfully measuring the agile working methods in daily work. Existing solutions of agile will be covered to get an understanding on different models of measuring agile and what KPI's they focus on. In this section principles of agile will be covered first, followed by measuring process, key areas for successful measurement of agile working methods and existing solutions of measuring agile working methods. In the end of this section adapted framework and key sources used in this thesis are presented.

3.1 Agile manifesto and principles of Agile

Agile working methods are based on the agile manifesto and twelve principles behind the manifesto. Agile software development is a term that includes a set of frameworks and practices based on the values and principles expressed in the Manifesto for Agile Software Development and the 12 Principles behind it (Agile alliance). The agile manifesto was gathered in 2001 by seventeen software developers. The manifesto was created to collect the key elements of different software development models such as extreme programming and SCRUM in one place. Main goal in the creation of agile manifesto was to help software developers to think about software development, methodologies, and organizations, in new more agile ways (Highsmith 2001). Contents of the agile manifesto are the following:

> "We are uncovering better ways of developing software by doing it and helping others do it. Through this work we have come to value:
>
> - Individuals and interactions over processes and tools
>
> - Working software over comprehensive documentation
>
> - Customer collaboration over contract negotiation
>
> - Responding to change over following a plan

That is, while there is value in the items on the right, we value the items on the left more." (Agile manifesto 2001)

As stated in the manifesto, first items mentioned in each part of the manifesto are valued over the secondary mentions even though both mentions produce value. The main concepts of agile working methods are divided into four sections in the manifesto. First section of the manifesto highlights the need of ensuring that the usage of any tools or processes can't hinder the need for competent personnel. Second section of the manifesto highlights the importance of working software over the documentation since there is no need for documentation if the software doesn't work. Third section of the manifesto promotes finding the balance between following the made contract to the last detail and creating solution that best suits the customer's needs. Fourth section of the manifesto emphasized the ability to adapt for unexpected events that could not be considered in the building of the original project plan. (Agile manifesto 2001)

Besides the manifesto itself, the agile manifesto also contains twelve principles that give detailed information about agile working methods. These twelve principles are more practical than the manifesto itself and therefore the actual ways of working in agile methods are presented more clearly. Twelve principles behind the agile manifesto are the following:

- Our highest priority is to satisfy the customer through early and continuous delivery of valuable software.

- Welcome changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage.

- Deliver working software frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale.

- Businesspeople and developers must work together daily throughout the project.

- Build projects around motivated individuals. Give them the environment and support they need and trust them to get the job done.

- The most efficient and effective method of conveying information to and within a development team is face-to-face conversation.

- Working software is the primary measure of progress.

- Agile processes promote sustainable development. The sponsors, developers, and users should be able to maintain a constant pace indefinitely.

- Continuous attention to technical excellence and good design enhances agility.

- Simplicity, the art of maximizing the amount of work not done, is essential.

- The best architectures, requirements, and designs emerge from self-organizing teams.
- At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behaviour accordingly. (Agile manifesto 2001)

As a whole, these principles of agile in combination with the agile manifesto provide a foundation for any team or organisation who want to deliver good products to customers by operating in an environment that does more than talk about to build their agile culture on. (Highsmith 2001)

Both agile manifesto and the principles of agile contain a lot of references to the software development. Since the topic and context of this thesis is focused using agile working methods in contact center environment, areas of both agile manifesto and agile principles regarding software development specific areas need to be adjusted to suit this topic. Target group teams of this thesis are using agile working methods to the development of daily work practices, improving operation efficiency and improving customer satisfaction. In Customer services – business unit the target group teams can't affect the terms of the contracts made with customers and therefore finding the balance between contracts terms and customers' needs is impossible in this scenario. As a solution, customer collaboration will be approached from the customer satisfaction and customer input perspectives in building of the proposal for this thesis.

3.2   Measuring process of agile working methods

In order to successfully measure agile within any environment, the measuring process of a team plays a crucial role. Since agile working methods are based on working in development cycles, it its logical to build the measuring process to work in the same rhythm (Davis 2015). Christopher Davis presents four step feedback loop to help teams make smarter adjustments and help improve communication across the organization. This feedback loop is presented in the figure 3 below.
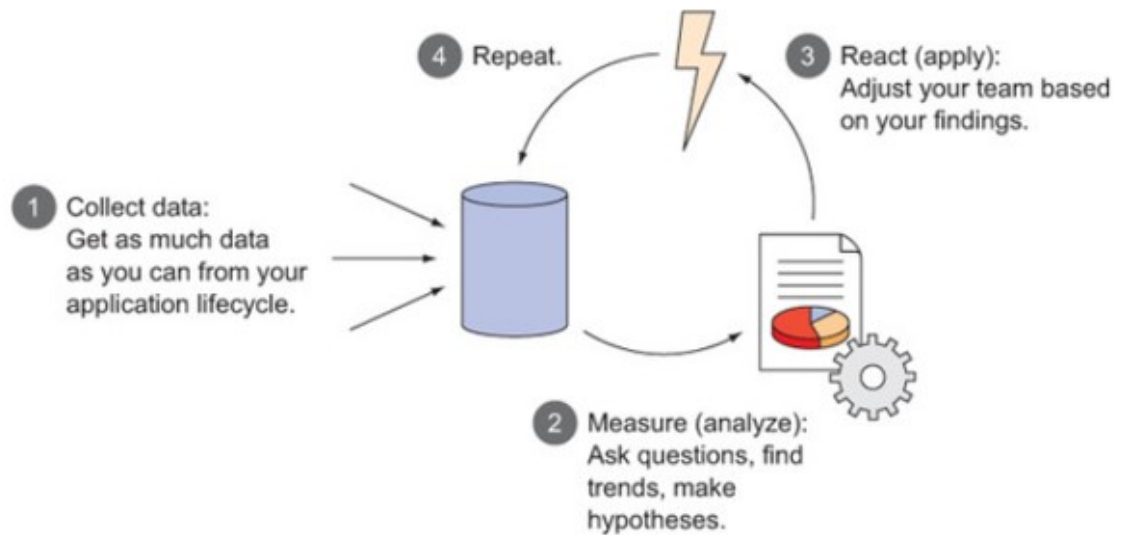
Figure 3, Feedback loop (Davis 2015).

As figure 3 shows, first step in the feedback loop is data collection on the team and its performance. During this phase one must gather all available data on team and its performance in order to fully understand where you are before changes are made. Davis presents the following list to make data collection more manageable:

- Collecting data from the several systems used makes answering simple questions possible.
- Combining data from multiple systems makes answering big-picture questions possible.
- Mind mapping helps breaking questions down into small enough chunks to collect data. (Davis 2015)

As measuring agile methods is not straightforward, using these simple techniques makes measuring agile methods easier for the organization according to Davis.

Second step in the feedback loop is the analysis of collected data. During this analysis one must look for trends and relationships between data points, formulate questions about the team's workflow or process and finally determine how to adjust based on the findings of the analysis. (Davis 2015)

Third step in the feedback loop is reacting and making the necessary adjustments based on the findings of analysis done in the previous step. (Davis 2015)

Fourth step in the feedback loop is repetition of the feedback loop starting from the step one. Data used and created during the previous feedback loop can be used to in the next feedback loop to in combination with the new data to continuously analyse and adjust the team measured. The feedback loop naturally fits into the operations of agile teams. As the teams are developing, they are generating and collecting data. When they pause to check and adjust, analysis is being done. When they continue working again the lessons learned are applied and new data is generated. (Davis 2015)

Measuring process presented in this section is suitable for measuring the agile working methods used in Customer services – business unit and therefore this process can be implemented in the building of the proposal for this thesis. The data collection and analysis phases of the feedback loop must be adjusted to suit the limited data collection capabilities from some systems in the building of the proposal for this thesis.

3.3 Key areas to measure in agile working methods

This section presents key areas for measuring agile working methods on a more detailed level. Each of the areas are covered individually and include findings from literature review. Team structure and interactions will be covered first, followed by working efficiency, customer collaboration and ability to respond to change.

3.3.1 Team structure and interactions

Cross-functional teams are a base structure for teams using agile working methods (Gothelf, Seiden 2013). According to Gothelf creation of diverse teams collapses the gated-handoff process known as waterfall and insights on each idea are brought in from all relevant disciplines earlier in the process. Importance of having diverse skillsets within the team is also highlighted by Mike Cohn (2009) in his list of optimal people structure for a self-organising and self-managing team. List contains the following requirements:

- Include all needed disciplines. As a cross-functional team, it is important that all skills necessary to go from idea to implemented feature be represented on the team. Over time individuals on a team will learn some of the skills possessed by their co-workers.
- Balance technical skill levels. One should strive to balance skill levels on the team.

- Seek diversity. Diversity can mean many different things—gender, race, and culture being just three among them. Equally important can be how individuals think about problems, how they make decisions or how much information they need before making a decision.
- Consider persistence. It takes time for team members to learn to work well together. Strive to keep team members together who have worked well together in the past. When forming a new team, consider how long members will be able to work together before some or all are dispersed to other commitments. (Cohn 2009)

Different elements for optimal team structure presented in Cohn's list are in line with Tom Demarco and Timothy Lister (2013) who claim that in the best organizations, there is natural authority working in all directions. Each of the team members is known to have some special area of expertise and is trusted by all as a natural authority in that area (DeMarco, Lister 2013). People don't enjoy being on a team in which they are not able to make use of their strengths or are constantly required to do things that they are bad at. In addition to meeting individuals' requirements the diversity of team is important as homogeneously structured teams reach consensus more quickly than do heterogeneous teams, but they do so by failing to consider all options (Mello, Ruckes 2006). Organizations should aim to continuously seek for an optimal team structures as good and motivated team members will do whatever is necessary for the success of the project. Organizations have to remember that this doesn't relieve the organisations from the goal of trying to find a team structure that accentuates the strengths of as many team members as possible (Cohn 2009).

Besides having the optimal people structure in a team, the size of a team is just as important and generally accepted ideal team size is five to nine individuals (Cohn 2009). Smaller team sizes are also supported by studies that have shown that individual effort is inversely related to team size (Stangor 2004, p. 220). Members that are part of smaller teams interact more with their team, are more committed to their team and are more committed to the team in general (Bradner, Mark, and Hertel 2003, p. 7). Small team sizes also enhance the interactions within the team as teams of more than 10 to 12 people have a difficult time establishing feelings of trust, mutual accountability, and cohesiveness (Robbins 2005, p. 133, 134). Due to the improved interactions between team members small teams spend less time coordinating the efforts of team members both in the aggregate and as a percentage of total project time (Cohn 2009).

For the teams interactions to be as effective as possible, teams should be operating in face-to-face and glass-house environments as team colocation is a significant

contributor to project success (Ambler 2008). Agile teams need to strive to make it easy for anyone who is interested in the iteration status to gain an accurate and honest insight into the ongoing and past iterations (Collier 2011). Operating in open face-to-face environments also enhances teams' culture- and team forming processes (DeMarco, Lister 2013).

According to Collier, just having the right people and team structure aren't substitutes to agile working methods. The agile teams decide how much work it can complete during an iteration, then holds itself accountable to honour those commitments. Agile teams operate as a cohesive unit whose success or failure on its commitments is shared by the entire team. In order to properly operate in this way, agile teams need daily synchronization so that everyone has a clear and accurate understanding of what has been accomplished, what remains to be done, and what issues may prevent the team from succeeding. Problems should not be solved during the daily or weekly synchronization meetings. Instead, a plan should be made about who the problem solvers are and when they will convene to address the problem. These meetings are often held next to the iteration planning so that team members can gain a sense of whether the entire team is on track for the iteration. (Collier 2011)

Team structures are pre-determined in this thesis by Pohjola insurances organisation structure. Therefore, all of the findings presented in this section won't be applied into the proposal building of this thesis. As a result, during the building of the proposal this thesis will focus in measuring the effectiveness of the current team structures and how well the target group teams are able to extract the benefits of the topics presented earlier in this section.

3.3.2 Working efficiency

According to Collier, teams using agile working methods work in short iterations that are generally one to three weeks long, and never more than four weeks. Either the creation of new products or developing existing solutions is done in small increments to increase the functionality from the end-users' point of view based on the user feedback. Short iterations with frequent end-user reviews help ensure that the teams are never very far off course in development. (Collier 2011)

Usage of short iterations is also supported by Tom DeMarco and Timothy Lister in their book, Peopleware: Productive Projects and Teams (2013). DeMarco claims that work expands to fill the time allocated for it based on the Parkinson law originally published in 1954 (DeMarco, Lister 2013). Visualization of Parkinson's law is presented in the figure 4 below:
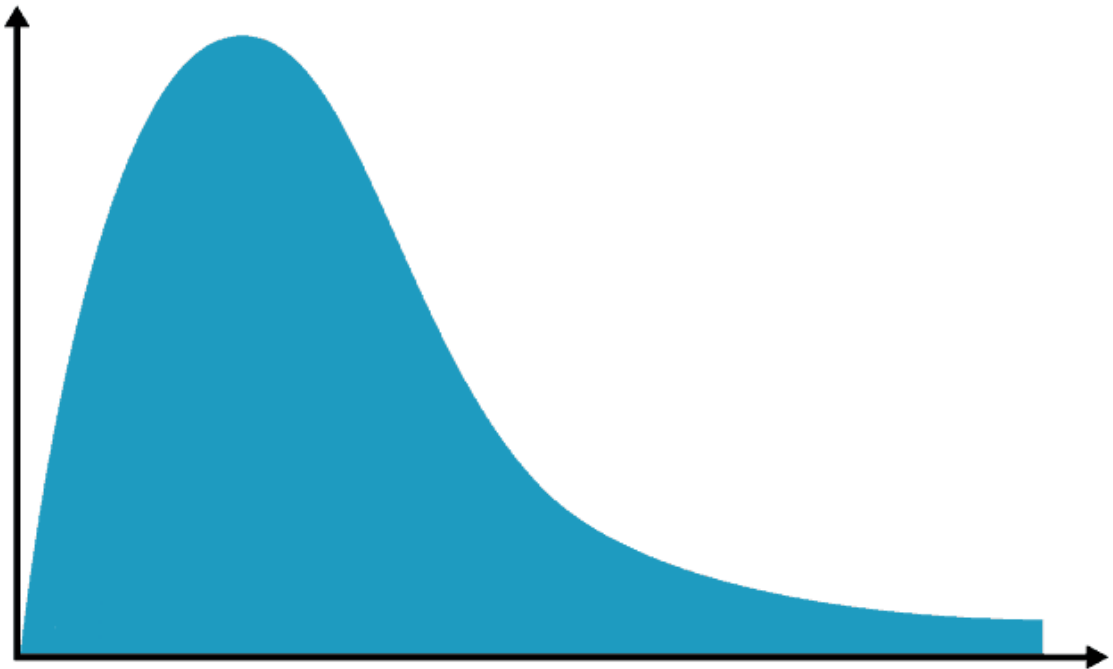
Figure 4, Parkinson's law (The Economist 1955).

As figure 4 shows, according to Parkinson's law the effort put into finishing a given task or project drops significantly the longer the given schedule is as the amount of work expands to fill the time allocated for it (The Economist 1954). In figure 4 this is visualized by X-axis presenting time available and Y-axis the amount of effort put into the work. These findings support Colliers claims of agile teams working in a maximum of four week-cycle as projects and tasks will have a forced deadline before the beginning of the next iteration (Collier 2011).

Collier presents that measuring the efficiency of these working cycles should be done by following teams' capacity and velocity. Collier reasoning for this is presented in the following quotation:

> "Every team, regardless of team size or project complexity, has a finite work capacity. Moreover, the very same team working on two different projects may have a different capacity on each project. Team capacity is a measure of how many tasks the team can complete in an iteration. Once optimal capacity is established, teams track their velocity against that capacity. Velocity is a measure

of completed and accepted tasks during each iteration. Velocity relative to capacity helps the team determine if it is working at peak effectiveness. "(Collier 2011)

Visualization of measuring the velocity and capacity of teams is presented in the figure 5 below. (Collier 2011)
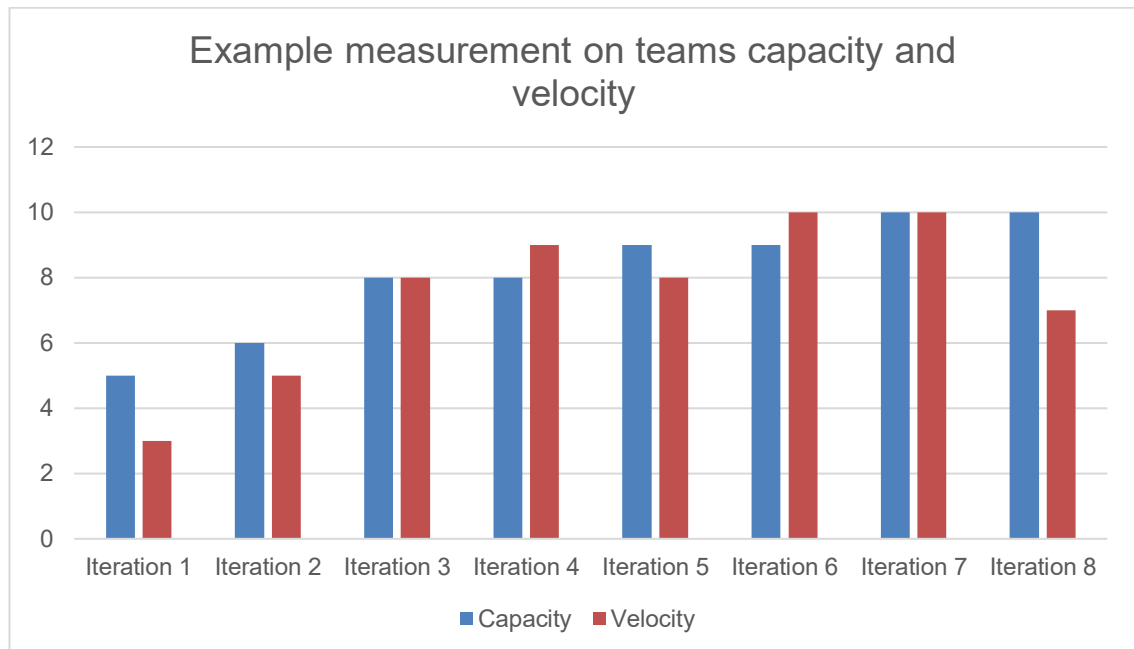
Figure 5, Example measurement on teams' capacity and velocity during different iterations (Collier 2011).

In the figure 5 above, blue colour presents the capacity and red colour the velocity of an example team. In this example analysis of eight iterations teams' capacity increases once the team's efficiency increases based on the velocity. Fluctuations both in capacity and velocity can happen if the structure or responsibility areas are changed as in these cases teams often have evaluate their capacity and velocity according to the new operation environment. (Collier 2011)

Measuring working efficiency by measuring the capacity and velocity of teams during iterations suit the topic of this thesis well. Target groups of this thesis already work in two-week iterations and therefore the foundation for measuring the efficiency of teams is already in place. Findings from this section can be used in the building of the proposal of this thesis.

3.3.3 Customer collaboration

Customer collaboration and user centricity are key areas in using agile working methods. Ultimately the success or failure of a product or a project isn't the team's decision but the customers. Taking customers opinions and wishes into account during the sprint iterations helps teams get a better understanding what kind of features and ideas customers want implemented into the final products. (Gothelf, Seiden 2013)

Key areas to measure in evaluating the level of customer collaboration are the amount and quality of user-valued features produced in each iteration. In agile development it is crucial that the user-valued features produced in each development iteration are actually usable and fully tested. Development in agile working methods is not about building hollow prototypes, but instead incrementally evolving to the right solution. (Collier 2011)

In order for a company or a team to have an efficient customer collaboration the process used need to have the following characteristics:

- All user types are sufficiently represented.
- Real users are actively engaged during every iteration.
- The user group is small enough to be manageable.
- There is a mechanism for prioritizing user input.
- There is a mechanism for resolving conflicting feedback from users.
- Customer collaboration quickly becomes a natural part of the process. (Collier 2011)

All of the characteristics presented in the Colliers list aims to ensure that the collaboration with customers will provide benefits that outweigh the efforts required from the customers' side. Following all of these characteristics often leads to creation of a co-development user group. In co-development user groups teams work closely with customers and can even share responsibilities based on the nature of the project or product. Benefits of co-development user groups for a product or project are having a clear ownership, shared responsibility for project success, bilateral commitments and retrospective involvement after each iteration. As a result, forming of co-development user groups help teams create an integrated process for customer collaboration that provide a communication interface for the whole duration of product or sprint iterations. (Collier 2011).

Besides just focusing on the efficiency of the interaction process with customers, teams using agile working methods need to ensure that the documentation of the customers' needs, and input is turned into an actual feature or product. Most important part in terms of customer collaboration in agile working methods is the quality of the product or service produced by a team. This quality is measured based on the customers reaction to the given product or service. Tools or processes used to collect the knowledge on what needs the customers have are irrelevant as long as the end results produces a positive reaction from the customers. Therefore, the teams should seek to find balance between the amount of customer collaboration and feature development based on the needs of the project at hand. (Gothelf, Seiden 2013)

Measuring the level of customer collaboration in the selected target group of this thesis is going to be limited due to the nature of the work done by the teams. Target group teams are located in the very start of the customer service processes as first or second point of contact. Target group teams have limited possibilities to take part in the development of the products as the product development is done by other organizations in Pohjola insurance. Therefore, the focus of measuring customer collaboration during the building of the proposal for this thesis will be based on the amount of customer feedback collected from net promoter score analysis and development of team's own processes based on the analysis of the feedback.

3.3.4 Level of self-organizing and adaptability

In agile working methods teams' ability to self-organize and adapt to changes based on their own decision making is important area to measure as self-organizing teams are key principle in usage of agile working methods (Collier 2011). Reason for having self-organizing teams when organization is using agile working methods is based on the three main factors that motivate people to contribute to personal and professional high performance. These three factors are:

- Autonomy. People want to have control over their work.
- Mastery. People want to get better at what they do.
- Purpose. People want to be part of something that is bigger than they are. (Pink, 2009 p. 207, 208)

These three factors are also key ingredients of teams using agile working methods. High-performing agile teams manage their own processes (autonomy), techniques (mastery),

and outcomes (purpose). Therefore, in order to keep teams motivated providing teams with freedom to decide how much work, what kind of work and how they organize the work during an iteration is crucial for organizations using agile working methods. (Collier, 2011)

Teams having ability to self-organize and adapt their workload in agile working methods doesn't mean that they are free to do whatever they want. Organizations using agile working methods need to collaboratively establish and commit to a set of core values and working agreements that establish the foundation for self-organizing teams. Core values and working agreements used in agile teams must be consistent with organizational values and guidelines must be documented. These core values then establish the criteria for teams' decision making and behavior. (Collier 2011)

Within the set core values each agile team is free to operate as they see fit. There will be differences on how each team organizes their work based on the collective wisdom of the team of organizing around the work. Goal of making this possible for teams is to encourage teams to gain the ownership of development of given product or service (Cohn 2009). The importance of teams gaining ownership of the development of given product or service is highlighted by Katzenbach and Smith in "Wisdom of teams" as they claim that no group ever becomes a team until it can hold itself accountable as a team (Katzenbach, Smith 1993 p. 60). For teams to be able to hold themselves accountable for their tasks, they must be able to track how well their self-organizing works and if they need to adapt something. Teams must establish a pattern of tracking the status of selected tasks to ensure that the team commitments are met. When the team fails to honor its commitments, the entire team shares responsibility for that failure (Collier 2011).

Even though teams must be responsible for their failures in meeting the set commitments, the organization must allow some level of experimentation to fully support teams self-organizing and adaptability. Gothelf and Seiden describe the need for this as follows:

> "Permission to fail breeds a culture of experimentation. Experimentation breeds creativity. Creativity, in turn, yields innovative solutions. When teams don't fear for their jobs if they get something wrong, they're more apt to take risks. It is from those risks that big ideas ultimately come. Frequent failures lead to increased mastery of skills." (Gothelf, Seiden 2013)

As stated in the quotation, in cases of teams failing to meet their set commitments focus must be set to analysing and helping teams adapt their ways of working for the future iterations. This approach allows teams to have more breathing room and develop the skillsets within the team further. (Gothelf, Seiden 2013)

Measuring the level of self-organizing and adaptability of teams in the selected target group teams can be used in the proposal building of this thesis. Customer services – business unit as an organisation is still very unexperienced in terms of using agile working methods and therefore the measuring of team's ability to execute one of the core areas of agile working methods is well reasoned.

3.4 Existing solutions of measuring agile

This section includes existing tools and solutions of measuring agile within the OP financial group and other organisations. Existing measuring tools outside of OP financial group including Shodan adherence survey and comparative agility will be covered first, followed by existing solutions of measuring agile inside OP financial group.

3.4.1 Shodan adherence survey

The Shodan adherence survey is used to measure the effectiveness and use of extreme programming methods by collecting information directly from team members. The Shodan adherence survey is used in software development environments. The survey consists of 15 questions that aim to find out to which extent each team member uses the extreme programming practices in a scale of 0% to 100%. The answers of each team member are gathered and used as a weighted average to create a number that represents the team's level of using extreme programming methods. Since the Shodan adherence survey is done after each sprint cycle it can be used to track team's development over time, but due to the subjective nature of the survey the results between different teams can't be compared. The Shodan adherence survey is shown in detail in appendix 4. (Williams, Krebs, Layman 2003, p. 60-69)

Since the Shodan adherence survey was developed to measure the use of extreme programming methods, its contents can be used only partially in the building of the proposal for this thesis similar to earlier presented agile manifesto and agile principles.

As a result, only the general themes measured in the Shodan adherence survey, and the structure of surveys questions can be used as a support material in the context of this thesis and building of the proposal. The concept of using weighted averages can also be used in building of the proposal to ensure proper weight of each measurement based on the needs of Customer services – business unit.

3.4.2   Comparative agility

Comparative agility is the world's largest agility assessment instrument that provides a ready to use tools for organisations to create a wide variety of performance indexes based on their needs. From the list of tools, the Comparative agile is the one that provides the organisation the information on its level of agility. Comparative agility is a survey that collects information from the members of a team or organisation that is measured based on the given answers. (Comparative agility 2021)

The tool provides information on eight dimensions of agile and these dimensions are shown in figure 6 below:
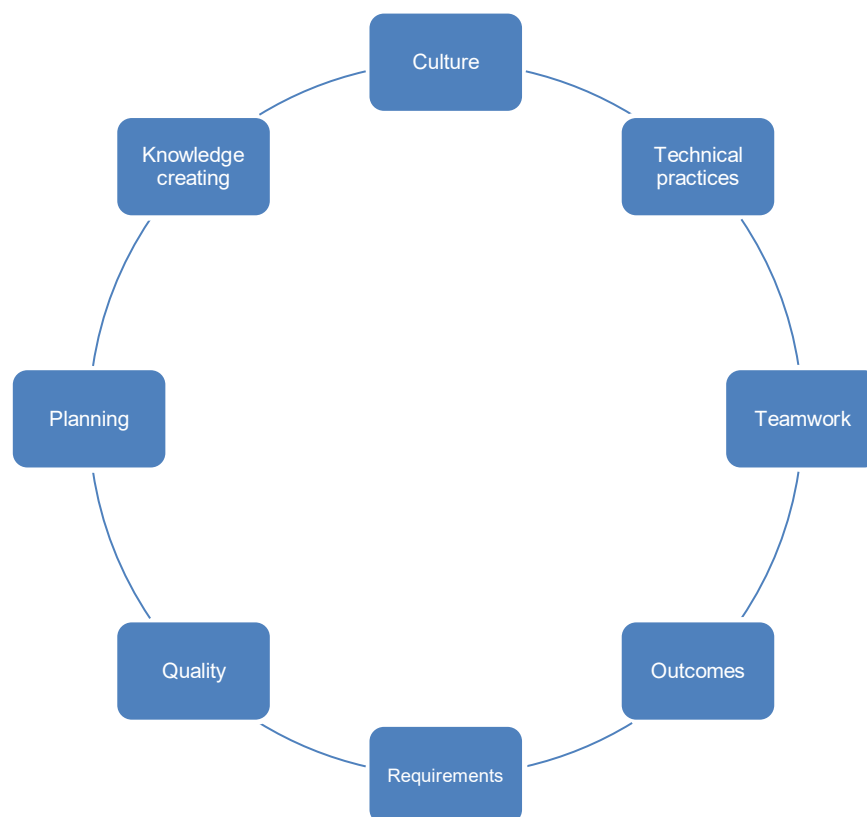
Figure 6, Dimensions measured in comparative agility (Comparative agility 2021).

Based on the results comparative agile provides organisation with a report that highlights the key areas development areas of each dimension. The results can be compared to industry averages to get additional insights on how the company's level of agility compares to its competitors (Comparative agility 2021). Example of the report with fictional values can be found in detail in appendix 5.

Most of the dimensions used in the comparative agile – tool can be used in the building of the proposal since they are also connected to the earlier presented key areas of measuring agile working methods. Dimensions regarding technical and software development practices have to be dropped due to the lack of expertise of teams in these areas as these areas are not part of target group teams' operation areas. Especially the structure and the visualization of the results provided by the tool is something that can be adopted to the proposal building in this thesis.

3.4.3 Existing solution of measuring agile in OP financial group

The implementation of agile working methods has begun in OP financial group in 2019. Banking operations area started using these methods in 2020. In the banking operations – business unit, the measuring of agile has been done by conducting a quarterly drive – survey for teams. In relation to agile working methods, main areas monitored by drive – survey are collecting information on how motivated the personnel is on their work (Pink, 2009 p. 70-85), how well they can take part in development of their own work (Cohn 2009) and how employees evaluate their freedom to organize their own work in everyday routine (Gothelf, Seiden 2013). Besides these areas of agile working methods, data collection regarding employee experience (eNPS) is also done with the Drive – survey. Example of the results collected from the drive - survey is presented in the figure 7 below. Values in this example are altered for data protection reasons.

Figure 7, Example report of the drive - survey.

As figure 7 show, results of the main areas related to agile working methods consists of multiple different questions. Main topics covered in Drive – survey and its results are fixed in order to keep the results comparable to the past results. Based on the development of the results, an analysis is done after each survey to find development areas for each team.

Information collection on the employee experience is done to track how the implementation and usage of agile working methods if affecting the employees. The data collection is done by conducting a quarterly drive – survey. By tracking the development of eNPS, banking operations aims to ensure that the usage of agile working methods doesn't cause issues such as employee exhaustion that could hinder the effect of wanted benefits. Results of the quarterly surveys are analyzed in multiple levels of management from the top management to team supervisors and necessary adjustments are done based on the analysis.

Findings on how the Drive – survey works as an existing agile measuring solution and how measuring of agile is implemented into OP financial groups banking operations area will be taken into account when building the proposal of this thesis to avoid duplicate data.

3.5   Adapted framework for measuring the agility of teams

An adapted framework for measuring agility of teams is built based on the existing knowledge discussed in this section. Adapted framework of this thesis consists of four main elements: team structure and interactions, working efficiency, customer collaboration and self-organizing and adaptability. These elements of the adapted framework are based on an adapted version of the agile manifesto (2001) presented in the section 3.1. Elements of the agile manifesto (2001) emerged throughout the literature review and during the analysis of existing solutions in use. Based on this the agile manifesto (2001) was selected for the structure to be used in the adapted framework for measuring the agility of teams. The four main areas of agile manifesto were adjusted based on the literature review to suit the context of this thesis. Visualisation of the adapted framework of this thesis is presented in the figure 8 below.
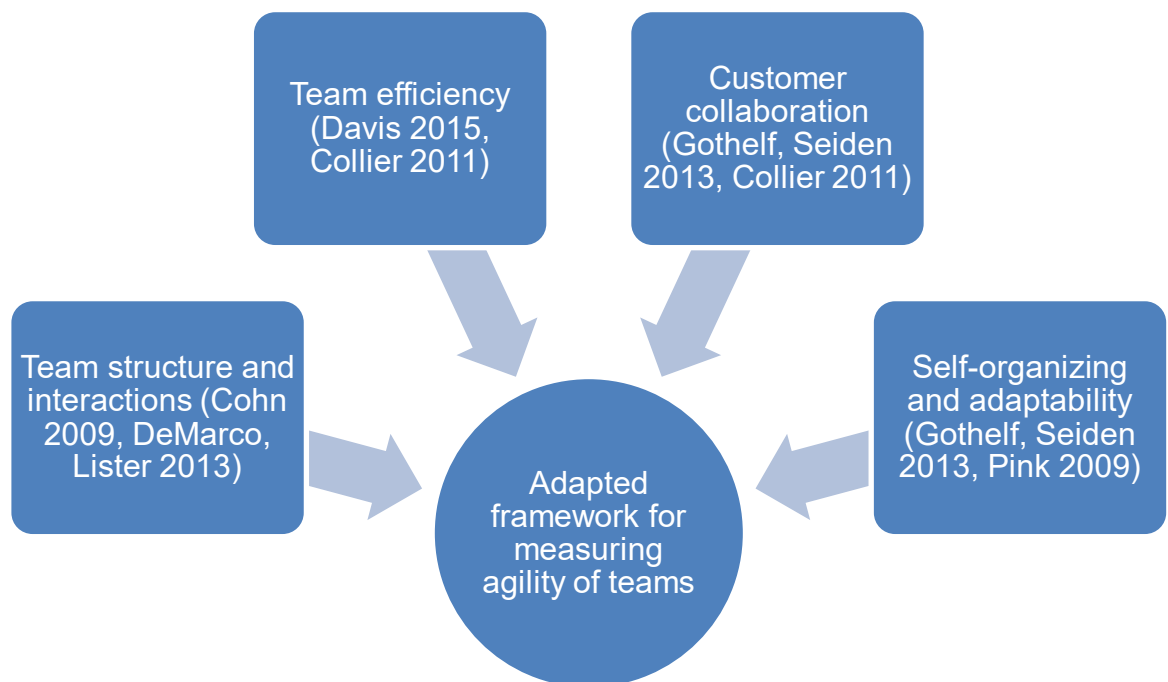
Figure 8, Adapted framework for measuring Agile methods (Agile manifesto 2001).

As figure 8 shows, the first element of the framework is team structure and interactions. This element focuses on evaluating if team has suitable structure to properly use agile methods and how the team interacts with each other, and with other teams within the organization. In measuring of team structure key points of interest are having wide variety

of skillsets and diverse structure in terms of gender and age (Cohn 2009). Benefits of structuring teams according to these guidelines is that the competence of the whole team will rise in long term (Collier 2011). In addition to team structure, the measuring of team's interactions must be built around systematic documentation of team's actions and transparent ways of communicating within the organization (Collier 2011). As open communication is key for teams' success in successfully organizing its own action during sprint iterations and collecting feedback from within the organization, the benefits of measuring these areas is clear (Collier 2011). These findings from the literature review combined form the foundation for measuring teams' structure and interactions. Key source in structuring this element were "Succeeding with Agile" by Mike Cohn (2009) and "Peopleware: Productive Projects and Teams" by Tom DeMarco and Timothy Lister (2013).

Second element of the framework is team efficiency. This element focuses on evaluating the level of output provided by the team in form of tasks or features. Measuring the output of teams should be done by measuring teams' capacity and velocity each iteration to successfully measure the development of the efficiency of teams (Collier 2011). Repetitive analysis of team's efficiency leads to a cyclical analysis that can be seen as a feedback loop. In feedback loop teams continuously aim improve their level of performance by collecting, analyzing, and reacting based on the data collected (Davis 2015). Similar way of cyclical measurement after each sprint iteration has also been tested in Shodan adherence survey. Shodan adherence survey was deemed to provide good subjective view on team's performance level (Williams, Krebs, Layman 2003). These findings from the literature review combined form the foundation for measuring efficiency of teams using agile working methods. Key sources in structuring this element were "Agile Metrics in Action" by Christopher Davis (2015) and "Agile Analytics" by Ken Collier (2011).

Third element of the framework is customer collaboration. This element focuses on evaluating how team can collect feedback from the customers and implement the given feedback into their development during the sprint iterations. Based on the findings of the literature review, measuring of customer collaboration needs to focus on evaluating how the elements of the sufficient customer collaboration process presented by Collier (2011) in section 3.3.3 are realized. Beside the customer collaboration process team's ability to prioritize customer input during the sprint iterations was found to be a crucial area of measurement to successfully evaluate the level of customer collaboration (Gothelf,

Seiden 2013). These findings from the literature review combined form the foundation for measuring customer collaboration in teams using agile working methods. Key sources in structuring this element were "Lean UX" by Jeff Gothelf and Josh Seiden (2013) and "Agile Analytics" by Ken Collier (2011).

Fourth element of the framework is self-organizing and adaptability. This element focuses on evaluating how team is able to organize its workload and how it is able to adapt its focus and workload during the sprint iterations. Based on the literature review, key part of measuring teams' level of self-organizing and adaptability are the three main factors of motivation (Pink, 2009 p. 70-85). If these factors are not fulfilled, the team's ability to self-organize its work is greatly hindered (Collier 2011). Besides the motivation factor, aligned working agreements between teams and the organization were also presented as a key part of measuring teams self-organizing and adaptability by Collier (2011). As each team can operate freely within the set core values, these values still provide framework for teams that guides teams' decision making and behavior (Collier 2011). In addition to measuring motivation factors and aligned working agreements, teams' ability to experiment was highlighted as a key part for measuring teams self-organizing and adaptability by Jeff Gothelf and Josh Seiden (2013). Once teams are provided with freedom to experiment, the development of teams will accelerate, and teams take more responsibility of managing their own workloads (Gothelf, Seiden 2013). These findings from the literature review combined form the foundation for measuring self-organizing and adaptability of teams using agile working methods. Key sources in structuring this element were "Lean UX" by Jeff Gothelf and Josh Seiden (2013) and "Drive: Surprising truth what motivates us" by Daniel Pink (2009).

Together these four elements of the adapted framework presented above provide the foundation for the current state analysis.

The next section will cover the current state analysis of measuring agility of teams in Pohjola insurance.

4 Current state analysis of measuring agility of teams in Pohjola insurance

This section presents the current state of measuring agility of teams in Customer services – business units business customers service area. Based on the current state analysis findings from current state of measuring agility of teams in business customers service area are presented and focus areas for initial proposal are selected. Overview of the current state analysis will be presented first followed by current state analysis of roles included in measuring the agility of teams, current state of measuring team structure and interactions, current state of teams working efficiency, current state of customer collaboration and current state of measuring of self-organizing and adaptability of teams.

4.1 Overview of the current state analysis

Goal for the current state analysis was to get a good understanding on which roles are included in measuring the agility of teams in business customers service area, how the measuring of different areas of agile working methods is done in relation to the adapted framework and what findings can be done from the current way of measuring the agility of teams.

The current state analysis was conducted using two data sources. These sources are collecting information on internal tools currently used to measure agility of teams from internal documents and conducting interviews for the key leadership roles within the business customers service area. Internal documents were reviewed in order to get an understanding on what kind of tools are currently used in measuring the agility of teams and what kind of information they provide the organization with. Interviews were conducted to gain an understanding what kind of responsibility areas key leadership roles involved in measuring the agility of teams have and how these key leadership roles participate in data collection and analysis in measuring the agility of teams

4.2 Current roles involved in measuring the agility of teams

This section presents what roles currently take part in measuring the agility of teams and their responsibility areas. Key leadership roles and their relations between each other are presented in figure 8 below.

Management of business unit Long-term goals and prioritization **Business lead**	HR-responsibilities and managing team capabilities **Operations lead**

Team
Everyday management
OPO in co-operation with team

| Leadership of operation areas **Operations area lead** | Competence management **Operations lead (teams) Operations area lead (services)** |

Agile coach provides support in implementation of OP agile.

Figure 9, Key leadership roles and their relations.

As figure 9 shows, there are four key leadership roles that take part in measuring the agility of teams in business customers service area. These roles are business lead, operations lead, operations area lead and agile coach. Each of these roles have their own responsibility areas in supporting the teams. Detailed description of each key role's responsibility area is presented in the table 3 below.

Role	Responsibility areas
Business lead	Leading the Business customers service area operations and personnel in a way that customer satisfaction-, employee satisfaction-, service level-, quality- and efficiency goals are met.
Operations lead	Operating as HR-supervisor for multi-skilled teams. Responsible for performance management,

	development of the competence and well-being of team members.
Operation area lead	Ensuring high quality of operations in own responsibility-area. Responsible for providing necessary tools and quality requirements for the team members. Development of processes in own responsibility-area.
Agile coach	Support achieving the business benefits of agile working methods. Takes part in sparring discussions with other roles and promotes the usage of agile working methods.
OPO	Team member responsible for preparing teams ceremonies and upkeep of the Kanban board. Takes part is weekly synchronisation with other OPO-roles. Works closely with operation lead role.

Table 3, Key leadership roles and their responsibility areas in measuring the agility of teams

As table 3 shows, business lead is a supportive role who are responsible on managing the business customers service area as a whole. Main focus of business lead role is ensuring that the implementation of agile methods provides support for achieving customer satisfaction-, employee satisfaction-, service level-, quality- and efficiency goals. Business lead roles has small part in daily operations of teams and focuses solely on management of the bigger picture.

Operation lead is focuses for the management of teams within the business customers service area. Operation lead is a HR-responsible supervisor for up to four teams at the same time. Operation lead role is responsible for performance management, development of the competence and well-being of team members. Operation lead works closely with OPO-roles.

Operation area leads is focused on the operational management of operation areas such as customer service – operations or internal support services. Operation area leads are

responsible for achieving the set service level and customer satisfaction goals within their operation areas. Operation areas consist of multiple teams and therefore operation area leads don't have direct subordinates in terms of HR-responsibility. Operation area lead work closely with operation lead – roles.

Agile coach is responsible for providing support in proper implementation of OP agile methods to the teams and operation areas within business customers service area. Main goal for agile coach is to support the achieving of the business benefits sought in implementing the agile working methods. Agile coach interacts with all other key leadership roles based on the need and the situation at hand.

OPO-role is a team member that is responsible for preparing teams daily and weekly ceremonies such as daily synchronisations amongst team and sprint iteration planning. OPO-role is also responsible for the upkeep of the Kanban board. Each team has its own OPO-role, and this role is revolving each month from one member to another. OPO-roles also take part in weekly synchronization with other teams OPO-roles to share latest news from each team. OPO-role works closely with operation lead role.

4.3   Current state of measuring team structure and team interactions

This section describes how the measuring of team's structure and interactions are currently done in business customers service area. Measuring team structure and team interactions focuses on evaluating if team has suitable structure to properly use agile methods, how the team interacts with each other and with other teams within the organization as stated earlier in the adapted framework for measuring agile methods. During the interviews conducted for key leadership roles for the current state analysis and internal document reviews, usage of agile workbook and observatory methods were mentioned as the key sources of information regarding team structure and interactions. Presentation of agile workbook - tool is covered first followed by observatory methods used by key leadership roles.

4.3.1   Agile workbook

Agile workbook is a tool used mainly by agile coach to track and monitor the development stage of agility in the business customers service area. The workbook monitors how well different ceremonies are utilized in teams, how well team dynamics are working within

teams and how well teams are utilizing the agile tools provided for them. This monitoring data is based on agile coaches' participation in teams' meetings, conversations with key leadership roles and team members and observations from the daily actions inside the service area. Visualisation on the data collected with the agile workbook is presented in table 4 below.

Scale
0=Not in use
1=In use, beginner level
2=In use, intermatiade level
3=Model example, can be used as a reference for others
N/A=Not relevant for this team

Team level

	Example team
Ceremonies	
Daily	0
Weekly	1
Retro	2
Sprint-planning process	0
Demo	1
Team performance synchronization	0
OPO-role synchronization	1
Team dynamics	
Handling of blockers	0
Team uses data in organising of their work	0
Team takes responsiblity of made decisions	1
Team is able to monitor service situation	2
Team organises its shift- and holiday-planning	1
Teams rules are obeyed	1
Team gives and recieves feedback	0
Maturity of OPO-role	0
Tools	
Kanban-board	2
Total	**1**

Table 4, Presentation of data collected on an example team in agile workbook.

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University of Applied Sciences

During the interview respondent 1 described the usage of the findings presented in table 4 as follows:

> " Main benefit of using agile workbook is the information collected from reoccurring areas of agile working methods. The workbook provides a good foundation in ensuring that the actions done within the service area are aligned between teams."

As stated by the respondent 1, with the agile workbook organization is able to track that the actions taken to improve agility of teams inside the business customers service area is uniformed amongst the leadership roles. Data collected by the respondent 1 with the agile workbook is presented and analysed monthly in co-operation with key leadership roles. Main takeaway from this analysis is ensuring that the business customers service area as a whole is on the going forward in the same rate in the implementation process of agile working method and that the process is constantly moving forward.

Agile workbooks provide good understanding on how well team and the whole organisations is utilizing the agile working methods. The measurable categories within the workbook focus on the elements of agile working methods that are currently in use in business customers service area. Due to early stages of the whole adaptation process of agile working methods within the business customers service area the list of elements measured by agile workbook is fairly short. Main challenge in the data collection done by the agile workbook is that the teams measured don't have access to the results. As a result teams are dependent on the analysis done by the key leadership roles and can't do their own analysis of the results from the collected data.

4.3.2 Observatory methods

Besides using the agile workbook for measuring agility of teams, observatory methods are also used to track the how teams' interactions are working and if the teams structure provides teams with all necessary skills. This tracking is done by operations lead and operation area lead roles. Presentation of how observatory methods are used by both roles is presented in the table 5 below:

Operations lead	Operations area lead
Observation of people's interactions in teams daily and monthly ceremonies.	Observation of people's interactions and comments in operation area related ceremonies.
Feedback discussion with team OPO-roles.	Daily discussions with team members
Daily discussions with team members.	Communication on the findings with operation lead-roles.

Table 5, Description of observatory methods used to measure team structure and interactions.

As table 5 shows, observatory methods used by operations lead-roles are currently revolving around ceremonies, feedback discussions and other informal daily discussions with team members. The observation of team's ceremonies is done in order to gain an understanding of the team's ability to function as intended. Based on these observation's operations lead-roles are able to keep their understanding of team's dynamics. In addition to the team focused observations, feedback discussions with OPO – roles and other daily discussions are also conducted with team members. These methods focus more on the individuals. From these conversations operations lead-roles collect information on the well-being of each team member and if there are any internal issues that need addressing in order to improve teams' structure or interactions.

Observatory methods used by operations area lead – roles are currently focused solely on the individuals instead of teams. Operations area lead – roles focus in observing the individuals' interactions in the operation area related ceremonies and in other daily discussions with team members. The purpose of these observations is to ensure that individuals have all the necessary tools needed to perform in their daily tasks. Operations area lead – roles work in continuous interaction with operations lead – roles in order to

share their findings and organise which roles take responsibility for which necessary action.

Besides the methods presented in the table 5, respondent 4 highlighted the following issues in observatory methods currently in use during the interviews:

> " Collection of reliable data is difficult due to two reason. First is the impact that one team member can have on how the performance of whole team is viewed. Especially active OPO-role can make the team look more agile than it actually is.
>
> Second reason is the amount of manual work necessary for gaining an understanding on the whole team's performance regarding agility. Data has to be collected from multiple individual conversations and due to the subjective nature of these conversation the findings can't be compared between teams. "

As respondent 4 stated, current usage of observatory methods is currently providing them with an inaccurate representation on how well the team structure and interactions of teams are supporting the proper use of agile working methods. Interviews with respondent 3 brought up similar issues as stated in the following quotation:

> "There is plenty of data available regarding how teams perform in their tasks connected to the operation areas, but the evaluating if the team's structure and interactions produce benefits to the performance of the operation area is based on the subjective view of individuals. "

These comments from respondent 3 in combination with comments from respondent 4 highlight the challenges of using observatory methods in measuring team structure and interactions. As the findings collected from these observations by both roles are based on the subjective views of individual team members and can vary widely depending on person, analysis based on these kind of findings is inaccurate. As a result measuring the effects that team's structure and interactions have on the team are left on very general level and development areas are hard to find.

4.4 Current state of measuring of teams working efficiency

This section describes how the measuring of team's working efficiency is currently done in business customers service area. Measuring team efficiency focuses on evaluating the level of output provided by the team in form of tasks or features as stated earlier in the adapted framework for measuring agile methods.

Main finding regarding teams working efficiency from the interviews conducted with key leadership roles for the current state analysis and internal document reviews was that the team's working efficiency is currently based on contact handling efficiency. Example of the contact handling efficiency report is presented in figure 10 below. Due to data protection reasons the values of the table are altered.

Contact handling efficiency

	July	August	September
Contacts handled	400	450	350
Contacts in hour	2,5	2,6	2,6
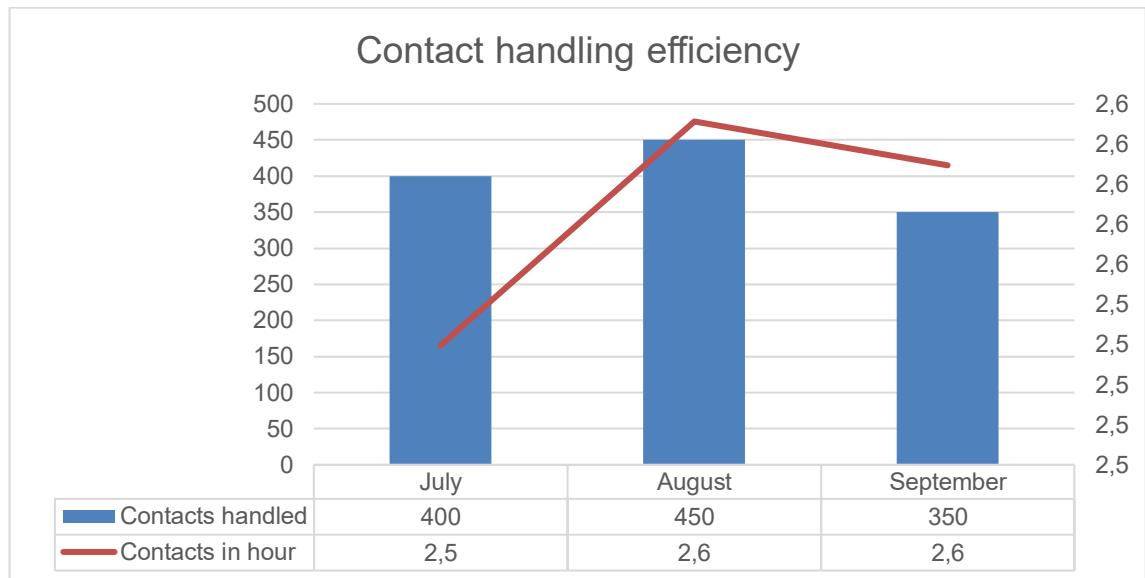
Figure 10, Contact handling efficiency report.

As figure 10 shows, contact handling efficiency report shows how many customer contacts one employee has handled and what is his or hers contact in hour – rate. This data is collected directly from the contact center software and is used as one of the measurements alongside sales and net promoter score to monitor individuals' performance.

Monitoring teams working efficiency regarding the efficiency of work or tasks done during the sprint iterations and monitoring both capacity and velocity of teams is currently not done in uniformed way. Teams are currently working in two-week sprint iterations and using Kanban-boards to keep track of the tasks involving their teams, but there are differences between teams how each one uses the Kanban-board. Visualization of a Kanban-board used by teams is presented in figure 9 below. Due to data protection reasons the details of each task are hidden.
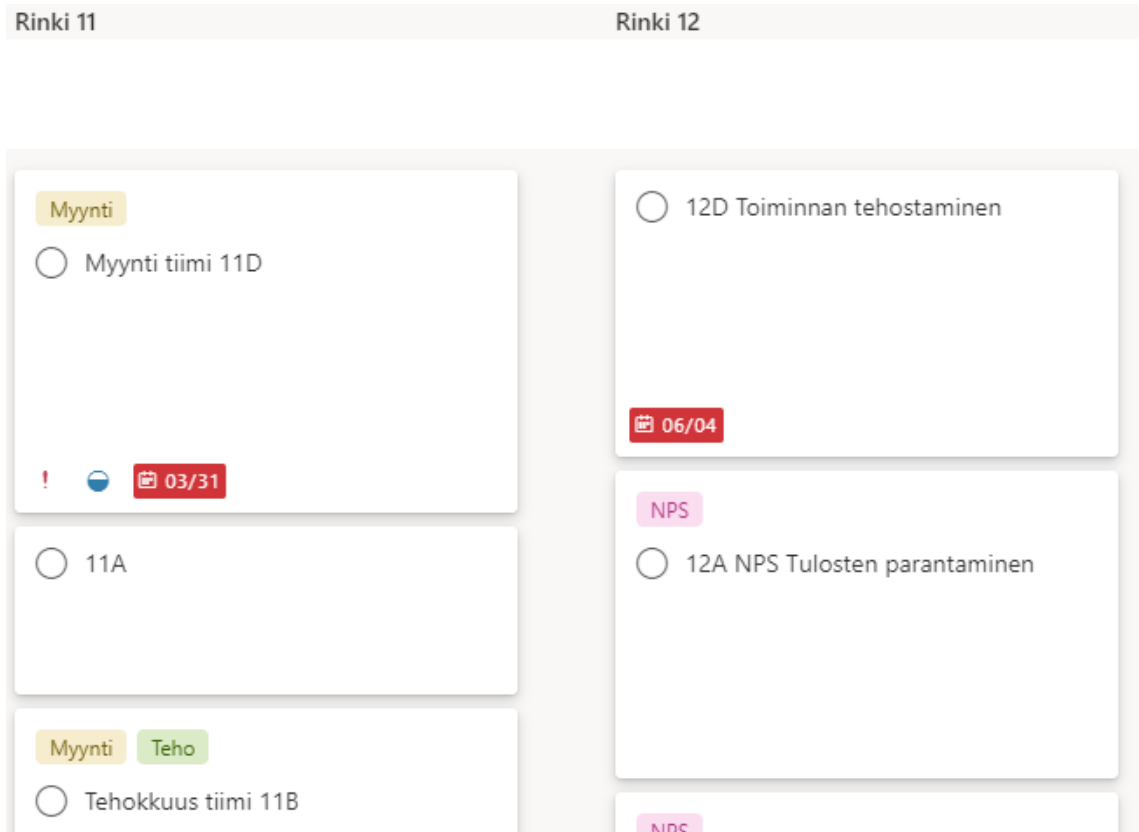
Figure 11, Kanban-board used by teams.

As figure 11 shows, each team has its own tasks, and the topics of tasks can vary a lot from sales to efficiency improvements or improving customer experience. Respondent 4 described the current way of measuring teams working efficiency via Kanban – boards as follows:

> "Teams are currently using Kanban-boards as their main tool for organising their tasks during the sprint iterations. The way how Kanban boards are utilized is greatly dependent on the person acting as a OPO – role and the selected tasks for the sprint iteration."

Due to the issues highlighted by respondent 4 in the interviews, tracking of the status of tasks via these Kanban – boards are not comparable between teams. In addition to comments from respondent 4, interview with respondent 2 highlighted following challenge regarding measuring teams working efficiency with current tools:

> " Current way of measuring teams' efficiency does not provide visibility on the adaptation of agile working methods within teams is progressing. As a result the realization of sought business benefits is hard to prove. "

Comments from respondent 2 highlights the lack of visibility on how the team's working efficiency is developing currently in teams. Current way of measuring teams' efficiency provides verification for key leadership roles that something is happening during each sprint iteration but leading the development of teams working efficiency cannot be done properly with current tools in use.

4.5 Current state of measuring customer collaboration

This section describes how the measuring the level of customer collaboration between teams in business customers service area and real customers. Measuring customer collaboration focuses on evaluating how teams can collect feedback from the customers and implement the given feedback into their development during the sprint iterations as stated earlier in the adapted framework for measuring agile methods.

The interviews conducted with key leadership roles for the current state analysis and internal document reviews revealed that the current state of measuring customer collaboration in business customers service area is based solely on the net promoter score (NPS) feedback collected from the customers. This is the only channel for measuring customer collaboration at the moment for all of the subject teams of this thesis. Customers receive questionnaires after their contact with the team members and give their opinions based on the quality of the service and if the reason for contact was solved. These responses from customers then form a numeric value that represents the level of recommendation on the scale from -100 to 100. Customers have a possibility to also give written feedback in addition to the numeric valuation if they choose so.

Net promoter score data is currently used to monitor the performance level of either the whole business customers service area or individual agents in terms of customer satisfaction. Example of service area level report is presented in figure 12 below. Values of the report are altered due to data protection reasons.
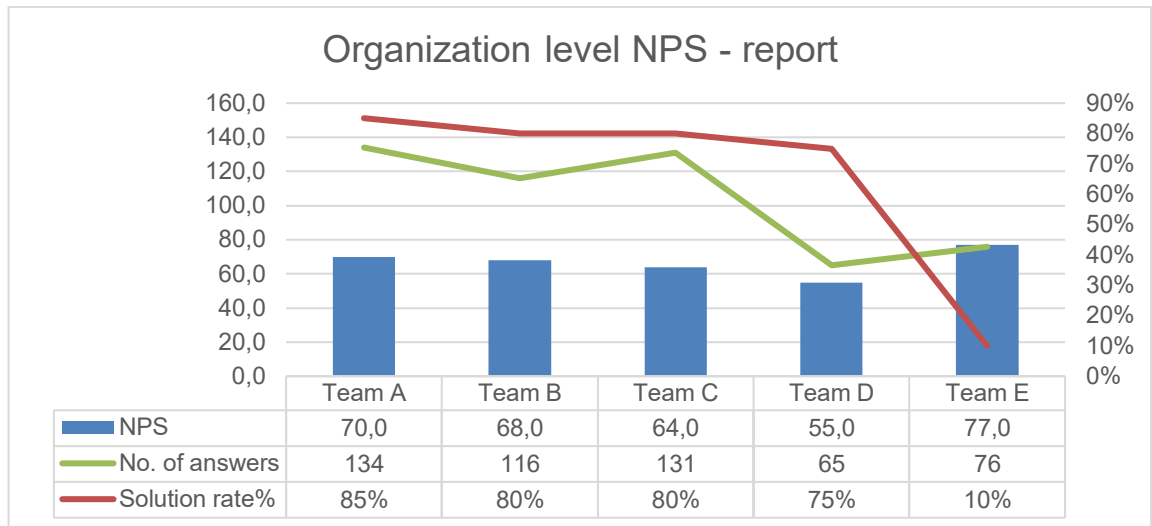
Figure 12, Service area level net promoter score - report.

As figure 12 shows, organization level report provides key leadership roles with information on the NPS values of teams and the organization, number of answers received and what the solution rate of the contacts has been evaluated by the customers. Solution rate provides information on how well the cause of contact has been solved in customers opinion by the team member handling the contact. In addition to service area level NPS – report, individual level report is presented in figure 13 below. Values of the report are altered due to data protection reasons.

Total answers	14
Answer percentage	18.18%
Average answer value	8.93
NPS value	71.4

NPS = Net Promoter Score

ANSWER CHOICE	ANSWER COUNT	PERCENTAGE
0		
1		
2		
3		
4	1	7.1 %
5		
6		
7		
8	2	14.3 %
9	5	35.7 %
10	6	42.9 %

Figure 13, Individual level net promoter score – report.

As figure 13 shows, individual level report provides key leadership roles with information on the NPS values of an individual, number of answers received and spread of the answers. In addition individual NPS – report provides access to written feedback received by an individual. Monitoring of both reports is done in collaboration amongst all key leadership roles presented earlier. Respondent 1 described the issues caused by this level of monitoring during the interview in a following way:

> " Teams should have clear visibility on the level they are operating in all the key areas of using agile working methods. Now that the customers collaboration is reviewed only in individual level, the teams does not have an understanding on its performance in this area as a whole. "

As highlighted by respondent 1, main challenge in current state of using net promoter score data is that neither organization or individual level of monitoring of individual feedbacks does not provide any information for the team on how it could improve its working ways to better respond to customers' needs and wishes. Interviews also revealed that the teams have limited vision on the written feedback of other team members and as a result possible direct improvement proposals from customers are not transparent to the whole team.

4.6   Current state of measuring of self-organizing and adaptability of teams

This section describes how measuring of self-organizing and adaptability of teams is currently done in business customers service area. Measuring self-organizing and adaptability focuses on evaluating how team is able to organize its workload and how it is able to adapt its focus and workload during the sprint iteration 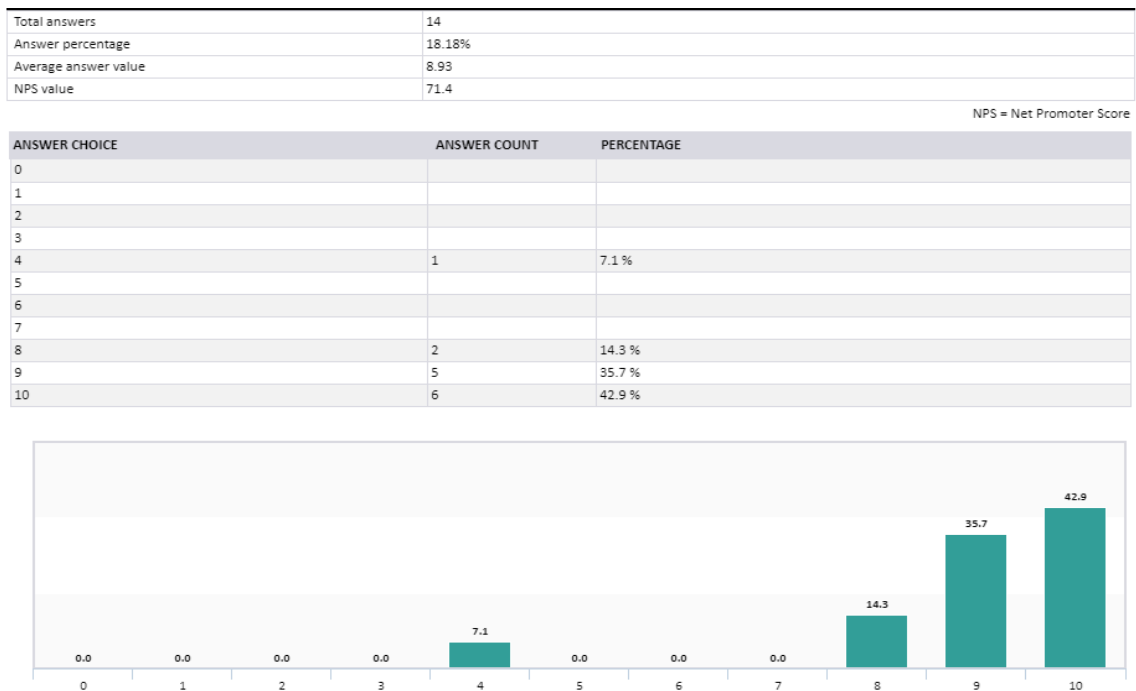as stated earlier in the adapted framework for measuring agile methods. During the interviews conducted with key leadership roles for the current state analysis and internal document reviews agile inquiry and observatory methods were mentioned as the key sources of information regarding self-organizing and adaptability of teams. Presentation of agile inquiry - tool is covered first followed by observatory methods used by key leadership roles.

4.6.1   Agile – inquiry

Agile – inquiry is quarter based inquiry that is done in order to collect information on the level self-organizing and adaptability in different parts of the organisation in OP financial group including Pohjola insurance. Agile – inquiry is conducted for the whole organisation

at the same time to make comparison of the results between different operation areas easier. Example report of the results collected from the agile inquiry is presented in the appendix 6. Values of the report are altered due to data protection reasons.

Results presented in the report of the agile – inquiry in appendix 6 are collected from the answers of each team member in different operation areas within the OP financial group. Usage of the results collected from the agile – inquiry was described by respondent 1 in a following way:

> "Agile – inquiry provides fairly good understanding on what challenges teams are currently facing regarding self-organizing, adaptability and in which areas teams need more support from key leadership roles. Downsides of using agile – inquiry are that it requires lots of answers from team members to be reliable. Possible misunderstandings made by team members when answering the inquiry are also common and skew the results."

The results collected from the agile – inquiries are analysed by the roles included in measuring the agility of teams and the key findings from the analysis are collected into documentation. This documentation is shared to the teams by operations lead – roles and based on the team's situation appropriate development topics are selected for the next quarter by the team. Team members don't have direct access to the results of the inquiry and therefore teams are dependent on the analysis made by key leadership roles included in the measuring of agility of teams. Results that are presented to the teams are also summarized results of all teams inside the business customers service area. As a result, teams have difficulty validating which results reflect best the status of their self-organizing and adaptability as a team as they don't have access to direct results.

4.6.2   Observatory methods

Observatory methods are methods that are used by operations lead and operation area lead roles to track the development of self-organizing and adaptability of teams. Tools used by both roles are presented in the table 6 below.

Operations lead	Operations area lead
Observation on the level and quality of how teams are using the agile tools provided to them like Kanban-boards and data-reports.	Daily discussions with team members
Feedback discussion with team OPO-roles.	Communication on the findings with operation lead-roles.
Daily discussions with team members.	

Table 6, Description of observatory methods used to measure self-organizing and adaptability.

Observatory methods used by operations lead – roles are currently revolving around tools that teams are using, feedback discussions and other informal daily discussions with team members. The observation of utilisation of given tools are done in order to gain an understanding of the team's ability to function as intended. Based on the observation's operations lead – roles are able to keep their understanding of team's dynamics and ability to react to changes up to date. Feedback discussions with OPO – roles and other daily discussions with team members focus more on the individuals. From these conversations operations lead – roles collect information on the well-being of each team member and if there are any internal issues that need addressing in order to improve teams' performance.

Observatory methods used by operations area lead – roles are currently focused solely on the individuals instead of teams. Operations area lead – roles focus on interactions with team members in daily discussion. The purpose of these interactions is to ensure that individuals have all the necessary tools needed to perform in their daily tasks. Operations area lead – roles are in continuous interaction with operations lead – roles in

order to share their findings and organise which roles take responsibility for which necessary action.

Comments from the respondents regarding the measuring of self-organizing and adaptability in its current state are similar to comments presented in section 4.3. when discussing measuring team structure and interactions. As the findings collected by operation lead- and operation area lead – roles from these observations are based on the subjective views of individual team members and can vary widely depending on person, analysis based on these kind of findings is inaccurate. As a result measuring the level of teams self-organizing and adaptability is left on very general level and development areas are hard to find.

4.7 Key findings from the current state analysis

This section presents the key findings from the current state analysis off measuring agility of teams. Lack of short-term uniformed data is presented first followed by limitations in measuring teams' efficiency, limitations in customer collaboration and teams having limited access to raw data.

4.7.1 Lack of short-term uniformed data

Current state analysis revealed that the tools used to measuring agility of teams provide information either in monthly or quarterly basis. Since teams are working in two-week sprint iterations as presented in section 4.4., this longer data collection cycle has led to a gap in short-term data collection as key leadership roles have little to no data to analyse in sprint iteration basis. Regarding the use of existing measuring tools, respondent 1 highlighted the following issue:

> "Usage of the existing measuring tools provides a good foundation for monitoring long-term development of the agility of teams. Issue with using these tools is that they are designed outside of our own business unit and as a result we have limited possibilities to effect what areas are measured by these tools."

As a result of using existing long-term measuring tools and a gap in short-term data, leadership roles are facing difficulties in evaluating if teams have all necessary elements in place to properly use agile working methods and how their teams are actually using the agile working methods during each sprint iteration.

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Currently some short-term data collection is done via observatory methods, but these findings are not documented in formal way by any role as stated in sections 4.3.2 and 4.6.2. Each leadership role does the documentation of the observations in their own way and in some cases no written documentation is done at all. As a result of the lack of formal documentations, the peer support for the development of teams is hard to organise since teams naturally develop in different rates. During the interviews operations lead-roles mentioned that they have noticed that each team faces the same challenges at some point of team's development. Due to the lack of documentation each teams have to develop their own solution instead of sharing the existing solutions within the organization.

4.7.2   Limitations in measuring teams' efficiency

Current state analysis revealed that the measuring of team's efficiency is currently based on monitoring the amount of contact handled within given time and monitoring the progress of selected tasks via Kanban boards used by teams. Data regarding the amount of customer contacts handled is well structured, but it does not offer visibility on how well team is able to develop their processes to produce more efficient service. The data collected from monitoring of Kanban boards is currently not uniformed and is heavily reliant on how often each team updates the Kanban board and how detailed the notes done to the board are.

Currently monitoring teams' capacity and velocity is not done at all. As a result on the lack of data regarding teams' capacity and velocity, leadership roles are currently not able to properly measure either their team's current status of efficiency or how it has developed over between past sprint iterations. This has led to a situation in which leadership roles are having difficulties evaluating if the teams are gaining the sought efficiency benefits of implementing agile working methods.

4.7.3   Limitations in measuring customer collaboration

Current state analysis revealed that the measuring of customer collaboration in teams is currently based on the net promoter score feedbacks collected from customers after each contact. As presented earlier in section 4.5, the limitation in customer collaboration is how the data collected from customers is analysed. When discussing long-term goals

for the level of customer collaboration that should be achieved within business customers service area, respondent 1 highlighted the following goal:

> "Long-term goal regarding customer collaboration is to make the benefits of using agile working methods visible for customers through better customer experience. In practice this should become reality as a result of improved internal processes that lead to a more fluid lead time."

As seen from the quotation by respondent 1, current state of measuring customer collaboration in business customers service area has is not aligned with the long-term goal. Current state of analysing net promoter score data is based on analysing the whole organization or one individual's performance in terms of net promoter score. This way of analysis does not provide any information for the team on how it could improve its working ways to better respond to customers' needs and wishes. As a result of not receiving inputs from customers how to improve its processes, teams currently don't have all necessary tools to achieve the long-term organisational goals in terms of customer collaboration.

4.7.4   Teams having restricted access to raw data

Current state analysis revealed that the tools used to measuring agility of teams are built for providing information mainly to key leadership roles. As presented earlier in sections 4.3. and 4.6., all the data collected is processed first by key leadership role presentative depending on the tool used before it is available for teams. When discussing long-term goals for business customers service area in measuring the agility of teams, following things were highlighted by respondent 4 during the interviews:

> " Long term goal for teams is to be able to self-organize with the data they have at hand. Current situation where teams are dependent on the pre-processed data given to them is not sustainable in long term."

This usage of pre-processed data highlighted by respondent 4 is present in all of the current tools used in measuring the agility of teams in business customers service area. Pre-processed data provides teams with more clear key points to focus into, but at the same time it limits teams' capability to analyse the data and make findings that are the most important to them in that moment. This limitation hinders teams' ability to self-organize and requires more input from key leadership roles in order to keep the team moving forward. As a conclusion usage of pre-processed data in teams is in conflict with the organizations long-term goals.

4.7.5   Summary of the findings from the current state analysis

Summary of the key findings from the current state analysis is presented in the table 7 below.

Finding from data 1	Description of the finding	Effects of the finding
Lack of short-term uniformed data	Formal measuring of the agility of teams is currently done by quarterly-based tools. Short-term measuring is done in unformal way and findings are not properly documented.	Leadership roles have no clear understanding if the criteria for properly using agile working methods are met. Monitoring the development of teams can't be done due to lack of comparable data.
Limitations in measuring teams' efficiency	Teams' efficiency is currently measured by amount of customer contacts handled and tracking of tasks documented in Kanban boards. Teams efficiency regarding development is not measured.	Teams ability to develop their processess can not be done and evaluating the benefits of using agile working methods is uncelar.
Limitations in measuring customer collaboration	Current way of measuring customer collaboration is based on net promoter score feedback. Feedbacks are reviewed on individual level and don't provide information for the team.	Customers needs and wishes are not taken into account in systematic way when developing the processess of teams.
Teams have restricted access to raw data	Data provided for teams is pre-processed to guide teams focus into pre set key points of intrest. Teams rarely get chance to analyse raw results.	Pre-processed data limits teams' capability to analyse the data and self-organize as they see necessary.

Table 7, summary of the findings from the current state analysis.

As seen from the table 7, four main findings were done from the current state of measuring agility of teams in Pohjola insurance. These findings are lack of short-term uniformed data, limitations in measuring teams' efficiency, limitations in customer collaboration and teams having limited access to raw data. Table 7 also presents brief description of each finding and what kind of effect they currently have in measuring the agility of teams. All of the findings from the current state analysis were selected as key focus areas for the initial proposal.

Next section will cover building of the proposal for measuring agility of teams in Pohjola insurance.

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5   Building Proposal for measuring the agility of teams

This section presents the steps in the proposal building for this thesis. Overview of the proposal building state will be covered first, followed by findings from collection of data 2 and the initial proposal for measuring the agility of teams.

5.1   Overview of the Proposal Building Stage

Current state analysis provided four main improvement areas for measuring agility of teams in Customer services – business unit. These improvement areas are:

- Lack of short-term uniformed data
- Limitations in measuring teams' efficiency
- Limitations in measuring customer collaboration
- Teams having restricted access to raw data

Proposal building of this thesis aims to provide outcome that enables key leadership roles to have an improved understanding on team's level of efficiency and customer collaboration in each sprint iteration. Additionally proposal building aims to improve the teams access to raw data that is collected from their actions via different tools and surveys presented earlier in section 4. Proposal building of this thesis is based on the relevant best practices that were found from literature. Best practices and adapted framework of this thesis were presented earlier in section 3.

Proposal building was conducted in two stages. First stage was doing and internal document review on the reports of tools currently in use in business customers service area. This was done in order to gain an understanding on the provided results and avoiding unnecessary duplicate information on the selected improvement areas.

Second stage was conducting a group interview for key leadership roles. This was done in order to present the findings from the current state analysis and collect inputs for the building of the proposal on the selected improvement areas. Key leadership roles were presented earlier in section 4.2, and they are the stakeholders in the context of this thesis. Inputs provided by key leadership roles are presented more in detail in the section 5.2.

5.2   Findings from data 2

Main inputs from stakeholders for data collection 2 in addition with the inputs from conceptual framework and data collection 1 will be used in the building of the initial proposal. Findings from data collection 2 in relation to findings from the other inputs are presented in the table 8 below.

Selected improvement area (data 1)	Input from literature (AF)	Suggestions from stakeholders for the Proposal, summary (Data 2)	Description of stakeholder suggestion in detail
Lack of short-term uniformed data	Implementing measuring process to align with sprint iterations. (Davis)	Implementing a way to measure agility of teams either in sprint iteration- or monthly cycle in a set format.	Key leadership roles presented an idea that the measuring of team's agility could be improved from the current state by doing it either in sprint iteration - or monthly cycle. Majority of the leadership roles agreed that sprint iteration cycle might be a bit too short for the contact center environment, as teams tend need to balance between handling daily customer contacts and development tasks. Set format is necessary in order to gain comparable results and reduce the amount of work necessary to gain this information.
Limitations in measuring teams' efficiency	Implementing in measuring teams capacity and velocity in aligment with sprint iterations. (Collier)	Measuring if the teams are achieving the set efficiency targets by valuating if team is developing its operations systematically.	Especially business lead and operation area lead roles are interested in the achievement of efficiency targets set by teams as a result of implementing agile working methods. Currently the overall visibility on the status of efficiency targets are on the organisational level, but the teams should have better visibility in their contributions in improving efficiency of the whole organisation.
Limitations in measuring customer collaboration	Taking customers opinions and wishes into account during the sprint iterations to help teams improve their actions based on what kind of features and ideas customers want in the final products. (Gothelf & Seiden)	Reviewing customer feedback in improved way compared to the current state. More information to the whole team on received feedback.	Leadership roles want to enhance the involvement of customers input in the development of team's operations. By enhancing the way that teams go through received feedback as a whole team the goal is to help teams find development ideas more easily.
Teams have restricted access to raw data	Teams organise their work and commitments based on set commitments and the information available to them. (Cohn)	Measuring teams' agility in a way that provides instant feedback and visible results to the team itself.	Leadership roles highlighted the need for teams to be able to self-organize and take responsibility of the development done by the team. Currently most of the input of the teams comes from the outside and not created by team themselves. In the future this is something that must be improved and therefore teams need tools that provide more direct information for them to use.

Table 8, key stakeholder suggestions (data 2) for proposal building in relation to findings from the CSA (data 1) and the adapted framework.

As seen from table 8, suggestions from stakeholders focus on either increasing the amount of data collected, improving the analysis of current data or increasing the frequency of the data collection done depending on the selected improvement areas.

Increasing the frequency of data collection done was seen as a best solution by stakeholders when discussing the lack of short-term uniformed data. Stakeholders agreed with the findings of data 1 presented in section 4.7.1, but also highlighted that the two-week sprint iteration-based collection cycle in the conceptual framework is too short for the contact center environment of business customers service area. As target group teams need to balance their time management between handling daily customer contacts and sprint iteration related task, two sprint iterations long measuring cycle was agreed upon for the initial proposal. Stakeholders also highlighted the importance of doing the data collection in a set format so the results of each team could be compared. Based on this input creation of data collection table for the initial proposal was agreed upon.

Stakeholders suggested increasing the data collection as a possible solution to the limitations in measuring teams' efficiency. Suggestions regarding the limitations in measuring teams' efficiency were based on the need to add understanding and transparency towards leadership roles on the rate that teams are working towards achieving the set efficiency goals. Since current efficiency measurement of teams is based on the contact handling capability as presented in section 4.7.2, stakeholders proposed that additional data collection on the team's efficiency must be done in other metrics besides contact handling capacity. Inputs from conceptual framework regarding the team's efficiency provides good solution to this in form of measuring teams capacity and velocity during the sprint iterations. When presented to the leadership roles all of them agreed that this solution should be tested and therefore measuring teams' capacity and velocity was selected as a part of initial proposal.

Suggestions regarding the limitations in measuring customer collaboration focus on improving the analysis and usage of current data collected. Stakeholders saw potential in more open way of reviewing received written customer feedbacks as a whole team instead of just reviewing the feedback amongst the individual team members. This is also aligned with organisational long-term goals of increasing the customer satisfaction in the business customers service area and therefore was seen as a crucial area of improvement. Since current data from customer feedbacks involves written feedback

from customers as presented in the section 4.7.3, the number of feedbacks analysed by team was selected as a part of the initial proposal. This is supported by the conceptual framework which highlights the importance of taking customers opinions and wishes into account during sprint iterations.

Stakeholders' suggestions regarding teams having restricted access to raw data were similar to the suggestions of improving the lack of short-term data. Conceptual framework suggests that teams need to be able organise their own work based on the information available to them. Stakeholders agreed with the findings from data 1 and suggested that teams need to have better tools to collect inputs from within the teams as currently most of the input for teams comes from outside of team from the leadership roles. Stakeholders also highlighted the importance of doing the data collection in a set format that provides teams with instant feedback after filling their inputs to the data collection table. This input further elaborated on the creation of data collection table and it was agreed upon for the initial proposal.

As a conclusion from the data collection 2, five main elements for the initial proposal were recognized:

- Creation of a set format data collection table
- Implementing measuring teams' capacity and velocity as a part of the data collection table.
- Implementing amount of customer feedbacks analysed as a team as a part of the of data collection table.
- Ensuring that the data collection table will provide direct feedback to the teams after filling the input.
- Data collection cycle must be two sprint-iterations long.

These elements will be included in the initial proposal. Next section will present the initial proposal for measuring agility of teams.

5.3   The initial proposal for measuring agility of teams

This section presents the initial proposal for measuring agility of teams. This initial proposal is based on the adapted framework presented in section 3.5 and the findings of data collection rounds 1 and 2. Findings from data collection round 1 provided an understanding on the current state of measuring agility of teams in business customers

service area and what are the key improvement areas. Data collection round 2 provided inputs from stakeholders on the key improvement areas found from the current state analysis and how the improvement areas should be approached. As a result of the findings and inputs from data collection rounds, the initial proposal consists of a set format data collection table and testing schedule for the initial proposal. Visualisation of the initial proposal is presented in the appendix 7.
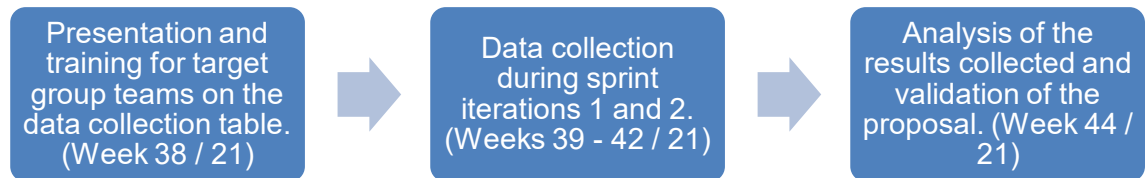
Set format data collection table consists of four main topics that are based on the adapted framework. These areas are team structure and interactions, team efficiency, customer collaboration and level of self-organizing and adaptability. Each of the main topics consists of smaller measurable parts that are based on the best practices found from the literature and inputs collected from the stakeholders. The data collection table includes additional measurable parts besides the ones recognized in data 1 and data 2, as the stakeholders wanted to include parts from existing measurement tools in order to compare the results between short-term and long-term data collection. Teams provide inputs for majority of these measurable parts on a scale from 0 to 3. Exception to this are teams' efficiency and customer collaboration topics. In these topics teams input the numeric values of the capacity, velocity and amount of feedback received and analysed. Explanation for each value of the scale is presented below:

- 0 = Team unanimously disagrees
- 1 = Majority (over 50%) of team disagrees
- 2 = Majority (over 50%) of team agrees
- 3 = Team unanimously agrees

Evaluation scale is based on the comments of the stakeholders from the data 2, in which the need for fast and easy to collect feedback towards the teams was highlighted. Adapted framework also supports using the subjective view of the teams in measuring the agility of teams, as the teams must have a common understanding that they have all necessary skills and tools to succeed in usage of agile working methods. Besides the numeric valuation of each measurable part, teams also have a possibility to provide written comments for further elaborating their decisions making process on the given evaluation. Once the team has provided evaluation to every measurable part in the data collection table, they can see their combined results at the bottom of the data collection table. Percentage value provides teams with a feedback on their level of agility in

comparison to the maximum points of each topic. In addition to percentage values teams see their evaluation visualized in radial diagram.

The schedule for the testing of the initial proposal is presented in figure 8 below.

Presentation and training for target group teams on the data collection table. (Week 38 / 21)	→	Data collection during sprint iterations 1 and 2. (Weeks 39 - 42 / 21)	→	Analysis of the results collected and validation of the proposal. (Week 44 / 21)

Figure 14, Schedule for the testing of the initial proposal.

As seen from figure 8, data collection table will be presented to the target group teams during the week 38. In this presentation session teams will be provided with training on how to use the data collection table and their responsibilities in order for the testing of the initial proposal to be successful. In this session it was agreed with target group teams that they will evaluate each sprint iteration separately during week 39 to 42. The results of the evaluations will be combined in order the achieve the two sprint-iteration long data collection cycle. Finally the analysis of the results collected, and the validation of the proposal will be done in the week 44.

Next section will cover the validation of the proposal.

6 Validation of the Proposal

This section presents the steps in the validation of the proposal for this thesis. Overview of the validation state will be covered first, followed by developments to the initial proposal, final proposal and recommendations for the future.

6.1 Overview of the Validation Stage

Validation of the initial proposal aims to further develop the initial proposal based on the information collected from data 3. Based on the findings and inputs from data 3, adjustments to the initial proposal will be made and the final proposal will be presented at the end of section 6.

Validation of the initial proposal consists of four stages. First, the testing of the initial proposal was conducted according to plan presented earlier in section 5.3. Second, feedback was collected in written form from the target group teams to gain understanding if the initial proposal was easy enough to use. Third, results collected from the testing and user feedback were combined for analysis of the results. Fourth, results of the analysis on testing and user feedback were presented stakeholders and inputs to the development of the elements of the initial proposal were collected. Presentation and collection of stakeholder input was conducted as a group interview.

6.2 Developments to the Proposal

Development of the initial proposal is based on the data collection round 3. In this data collection round inputs from stakeholders regarding the results of the testing of the initial proposal and user feedback were collected. Stakeholder inputs and developments to each element of the initial proposal are presented in the table 9 below.

Element of the Initial proposal	Parts commented in Validation	Description of stakeholder comments	Development to the Initial proposal
Creation of a set format data collection table	Format of data collection table and the results were deemed successful. Further development for more targeted data collection tables was highlighted.	Stakeholders confirmed that the format of the data collection table and visualization of the results works well, and it was further supported by user feedback. Stakeholders highlighted the need to further develop the data collection board towards more customised version for each team to better support the analysis of the results.	Plan for creation of the customized data collection tables was created.
Implementing measuring teams' capacity and velocity as a part of the data collection table.	Providing new insight into team's efficiency was successful. Results were lacking in terms of the benefits gained from the completed tasks	Measuring teams' efficiency provided new information that was lacking earlier. Overall the interest towards efficiency rose to a level that the stakeholders suggested to develop the data collection table towards focusing solely on the sprint iteration efficiency and its results. Results were lacking in terms of the benefits gained from the completed tasks and it should be addressed better.	Adding parts to the team efficiency - topic of the data collection table. Focus on these added parts is to evaluate and record the influences the completed tasks have.
Implementing amount of customer feedbacks analysed as a team as a part of the of data collection table.	Measuring customer collaboration works in inbound teams and does not work in internal support- or back-office teams.	Based on the results measuring customer collaboration was deemed difficult especially in back -office and internal support teams due to the low amount of feedback collected. Stakeholders agreed that within these teams' customer collaboration processes needs to be developed further to successfully measure it with the usage of data collection table. Regarding inbound team, the need for further commendation made by the team was deemed necessary to better understand the results.	Improving the instructions for teams and highlighting importance of commendation on their evaluations.
Ensuring that the data collection table will provide direct feedback to the teams after filling the input.	Data collection table providing instant results for team was deemed successful. Analysis made by teams was low and further support for teams was deemed necessary.	Stakeholders confirmed that the format of the data collection table provided teams with instant results and therefore the possibility to analyse their results right after the evaluation. Low number of comments in evaluation and user feedback revealed that teams had not really used the possibility for analysis of the results. Further support session for teams right after evaluation was deemed necessary in the future.	Improving the instructions for teams and key leadership roles. Highlighting importance of doing a joint analysis of the results with all necessary roles.
Data collection cycle must be two sprint-iterations long.	Data collection cycle served its purpose. There is room for trying different measuring cycles in the future.	Based on the results the two sprint-iteration long measurement cycle is the minimum length to be used. In the future iterations even longer cycles can be considered, as the development of teams seems to be producing only small results during the two sprint iteration long cycle.	Testing of different measuring periods.

Table 9, stakeholder inputs from data collection round 3.

As seen from table 9, development of the elements of the initial proposal focuses on further customization of the data collection table based on the core tasks of the target team, improving how the measurement of team's efficiency is done within the data collection table, improving the instructions of the data collection table provided to teams, improving the analysis process of the results in collaboration with the teams and testing of different measuring periods.

First element commented by stakeholders was the creation of a set format data collection table. Stakeholders confirmed that the format of the data collection table and visualization of the results supported understanding the agility of target group teams in general level during the measurement period. Stakeholders' comments were further supported by user feedback which highlighted the ease of use of the data collection table and the visualisation of the key areas in using agile working methods such as feedback or and planning of the sprint iterations. Regarding improvements to the data collection table, stakeholders highlighted the need to further develop the data collection board towards more customised version for each team measured. Stakeholders reasoning for this is to better support the measurement of the agility of teams based on their core tasks. Work structure of teams can be very different based on the core task and as a result using one general data collection table does not respond to the needs of every team. As a result, plan for creation of the customized data collection tables in collaboration with the operation areas was created for Q1 of 2022.

Second element commented by stakeholders was implementing measuring teams' capacity and velocity as a part of the data collection table. Stakeholders agreed that measuring teams' efficiency using data collection table provided new information that was missing with earlier way of measuring. Regarding improvements to the measuring of team's efficiency, stakeholders highlighted the need to better understand the effect that the completed tasks have had to different operation areas. Data collection of just the capacity and velocity of teams provides skewed results as the teams have different ways of determining the sizes of selected tasks for each sprint iteration. As a result, the topic of team efficiency topic in the data collection table will be improved by adding following input areas for teams to measure:

- Which operation area will be improved by completion of the selected tasks?
- What is the estimation on the effects of completion of the selected tasks?
- Final effects of the completed tasks for operation areas?

Besides stakeholders' input, user feedback regarding measuring teams' efficiency suggested that the data collection table could include tools for tracking the status of each selected task. Pohjola insurance has dedicated tools available for task management and sprint iteration planning and therefore this suggestion was ruled out of further development to avoid duplication of tools.

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Third element discussed with stakeholders was implementing measurement for amount of customer feedbacks analysed as a team as a part of the of data collection table. Results regarding the customer collaboration process were difficult to analyse especially in internal support team and back-office team due to the low amount of feedback collected during the testing period. Inbound team did not have issues with the amount of feedback, but instead the lack of input in evaluation phases made analysis of inbound teams results also difficult. Stakeholders agreed that within internal support and back-office teams' the angle of measuring the customer collaboration processes needs to be developed further to successfully measure it with the usage of this kind of data collection table. This is also partially connected to the earlier mentioned need of having more customised data collection tables available for different kind of teams. Stakeholders took responsibility on the improvements to the customer collaboration process within internal support and back-office teams. Regarding inbound team, the need for additional inputs made by the team was deemed necessary by the stakeholders to fully understand the results and reasoning why the analysis on the customer feedback did not reveal any possible tasks for sprint iterations. This will be addressed in the final proposal in a form of improved instructions for teams and highlighting the importance of providing additional insights besides the numeric evaluation.

Fourth element presented in the table 8 is ensuring that the data collection table will provide direct feedback to the teams after filling the input. Stakeholders confirmed that the format of the data collection table provided teams with instant results and a possibility for teams to analyse their results right after doing the evaluation. Low number of comments in evaluation results and user feedback revealed that teams had not really used the possibility for analysis of the results. Stakeholders agreed that teams need further support session for teams right after evaluation in the future in order to gain the benefits of this kind of short-cycle evaluation. Booking a support session will be implemented into final proposal as a part of the planning process at the start of each iteration. Besides the support session the instructions for team members will be improved to highlight the importance of a joint analysis with necessary key leadership roles based on the topics.

Final element discussed with stakeholders was the data collection cycle being two sprint-iterations long. Stakeholders confirmed that the data collection cycle was suitable for this kind of data collection table. Stakeholders highlighted that different measuring cycles could be tested in the future, as the development of teams seems to be producing only

small results during the two-sprint iteration long cycle. It was agreed upon that the testing of the measurement cycles will be done once all the previously discussed improvements are implemented.

As a conclusion from the stakeholder inputs regarding the results of the testing of the initial proposal and user feedback four developments to the initial proposal were recognized. These developments are:

- Plan for creation of the customized data collection tables.
- Adding parts to the team efficiency - topic of the data collection table to improve evaluation and recording of the influences of the completed tasks.
- Improving the instructions for teams and highlighting importance of input on their evaluations.
- Improving the instructions for teams and key leadership roles. Highlighting importance of doing a joint analysis of the results with all necessary roles.
- Testing of different data collection cycles.

From the listed developments, adding parts to the team efficiency - topic of the data collection table to improve evaluation and recording of the influences of the completed tasks was decided to be implemented immediately. Implementation was done by adding 3 input fields under the team efficiency – topic in which teams can input which operation area will be improved by completion of the selected tasks, what is the estimation on the effects of completion of the selected tasks and what are the final effects of the completed tasks for operation areas once the task is completed. Implementation of these additions will be considered in the implementation of improved instructions for teams and key leadership roles. Final proposal of this thesis with the made implementations is presented in the appendix 8.

Improvement areas regarding plan for creation of customized data collection tables, improvements of the instructions for teams and key leadership roles and testing of different data collection cycles were decided to promote during the Q1 of 2022. These developments will be covered in detail in section 7 when discussing next steps and recommendations towards implementation.

Next section will cover the conclusion of this thesis.

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7 Conclusion

This section presents the conclusion of this thesis. Executive summary will be covered first, followed by thesis evaluation and closing words.

7.1 Executive summary

Objective of this thesis was to produce a measuring tool that can be used for measuring the level of agility in teams in contact center environment within the Pohjola insurances Customer services – service area. Selected target group for this thesis consisted of three teams located in business customers service area that represented three main areas of operations conducted within the service area. These operation areas were incoming customer contacts in phone- and online channels, back-office operations and internal support services. One team from each operation area was included in the target group in order to cover all the major operation areas in the building of the proposal.

As an outcome of this thesis set format data collection table was produced to be used in measuring the agility of teams. Final proposal of this thesis consists of four measurable areas that are team structure and interactions, team efficiency, customer collaboration and level of self-organizing and adaptability. These topics are based on the adapted framework. Contents of each measurable topic were based on the adapted framework, key improvement areas found from the current state analysis of data collection round 1 and the findings from the stakeholder inputs regarding possible solutions to the key improvement areas during data collection round 2. Final developments to the outcome were made based on the stakeholder inputs from data collection round 3. Stakeholder inputs during data collection round 3 focused on the validation of the proposal based on the results of the testing of the initial proposal.

Regarding next steps and recommendations towards implementation of the outcome of this thesis in daily operations within Customer services – service area, further actions on the development of the data collection table and user instructions must be taken. These three areas were highlighted in the stakeholder and user inputs as the main reasons for not being able to collect detailed data and do accurate analysis on the agility of teams.

First, the customized data collection tables for each operation area measured must be developed. As stakeholders input stated, reasoning for this is to better support the measurement of the agility of teams based on their core tasks. As the implementation of agile working methods varies a bit based on the core tasks of the operation area, using one general data collection table does not respond to the needs of every operation area. Plan for creation of the customized data collection tables was agreed in collaboration with stakeholders and will be implemented during the Q1 of 2022.

Second, the improvements to user instructions for more efficient usage of data collection table must be implemented. As the accurate analysis of the results collected by using data collection table is based on both numeric and written evaluation done by teams, the instructions provided to users with the data collection table must be guide users towards providing both inputs. It was agreed with the stakeholders, that the improvements to user instructions are done once the creation of customized data collection tables is finished in Q1 of 2022. Reason for this is to ensure that the user instructions are fully aligned with the custom data collection table based on the needs of each operation area.

Third, the testing of different data collection cycles must be done once the customized data collection tables are created and improvements to user instructions are implemented. The results of this thesis were not able to conclude an optimal data collection cycle for Customer services – business unit. Therefore, the optimal data collection cycle for needs to be sought by testing different scenarios with the teams.

7.2   Thesis evaluation

Based on the inputs collected from stakeholders, outcome of this thesis was successful in providing stakeholders with a tool in which the format of the data collection table and visualization of the results improved the understanding on the level of agility in target group teams during the measurement period. Inputs from stakeholders also confirmed that the outcome of this thesis produced new information to measuring teams' efficiency, that the outcome of this thesis provided teams with instant results and a possibility for teams to analyse their results right after doing the evaluation. In addition to stakeholder inputs, inputs from users provided confirmation that the outcome of this thesis was easy to use during daily operations and the visualization of the results provided reminders to

key areas in usage of agile working methods such as giving feedback and proper planning of the sprint iterations.

Inputs from stakeholders and users also highlighted areas in which the outcome of this thesis did not succeed. Outcome of this thesis did not successfully take into account the different characteristics of each operation area. As a result of this, the outcome of this thesis did not provide totally accurate results on each of the measurable topics and full analysis based on the findings could not be done. This shortcoming effected especially the measuring of customer collaboration, as the approaches towards customer collaboration are different from each other in every operation area and one shared way of measuring customer collaboration does not suit them all. In addition to inaccurate measurement of customer collaboration, outcome of this thesis also did not succeed in the collection of written inputs from the target group teams. During the building of the proposal, the possibility for users to provide written input to further explain their reasoning behind the numeric evaluations was seen as an important factor for successful analysis of the results. Due to the insufficient instructions on the data collection table, the amount of written feedback collected was minimal and as a result the evaluations made by teams were hard to validate.

As a conclusion, the outcome of this thesis provides Customer services – business unit with a tool for successfully measuring agility of teams based on sprint iteration basis. With even narrower focus on just one operation area, the outcome of this thesis would have been able to provide results to be used in a very detailed analysis on the development of agility within target group teams.

7.3   Closing Words

At the start of this thesis process the supply for publicly available tools that measure the success rate of agile implementations was limited and most of the tools developed were aimed towards software development organizations. Now at the end of the thesis process the situation has hardly changed in terms of the tools available, but the demand for implementing agile working methods in various organizations keeps growing if the amount of conversation around agile methods can be used as an indicator. Even though the implementations of agile methods can vary a lot depending on the organization, the fundamentals of agile working methods remain the same. This thesis provides a good

foundation for anyone interested in measuring the agility of teams in any organization despite of industry by showcasing how the measuring was done in a contact center organization.

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Appendix 1. Questions and field notes from current state interviews.

Question 1: In which ways you are currently measuring the agility of teams? What kind of tools you use?

Stakeholders' answers:

Respondent 1: Agile workbook and agile inquiry are the main tools.

Respondent 2: Inputs from agile coach-, operations area lead- and operations lead roles. In addition to this also agile inquiry.

Respondent 3: Participating and observing in daily meetings of operation area. Taking part in operation areas monthly meetings and observing.

Respondent 4: Observing teams in daily operations, participating in teams sprint iteration planning and monitoring Kanban-boards.

Question 2: What kind of data is collected from these current ways and tools of measuring agility of teams?

Stakeholders' answers:

Respondent 1: Agile workbook provides good information on things that are happening systematically ie. daily, weekly or monthly. Agile workbook helps monitoring the level that each team operates at. Agile inquiry highlights possible blockers of development and provides focus areas for the future.

Respondent 2: Inputs provided by other key leadership roles provide a good understanding on the state of the whole organization regarding the agility.

Respondent 3: An understanding on what is happening within the operation area in terms of agility of the teams.

Respondent 4: Data from observing daily operations and Kanban-boards helps the management of teams in own responsibility areas.

Question 3: How is the data collected used at the moment?

Stakeholders' answers:

Respondent 1: Results of agile – inquiry are analyzed in co-operation with HR-department and other key leadership roles. Findings are presented to teams.

Respondent 2: Results from multiple data sources are analyzed in service areas monthly meetings in co-operation with key leadership roles. Good practices are shared amongst key leadership roles. Things that need improvement are highlighted and scheduled for solution.

Respondent 3: Data is mainly used for finding and solving technical issues inside operation areas. Aim of this is to reduce the downtime caused by technical issues and this way improve the efficiency.

Respondent 4: Data is used to give feedback towards teams, focusing the support given based on team's situation and intervening if the development of team seems to stop. Findings on each team are shared in weekly meetings.

Question 4: What challenges are you facing in the current way of measuring the agility of teams?

Stakeholders' answers:

Respondent 1: Teams don't have good understanding on main elements of agile working methods. Without this teams are having difficulties analyzing their level of agility and can't do proper development without outsider assistance.

Respondent 2: Currently comparing the agility of teams is close to impossible. Measuring efficiency of teams is inaccurate and makes achieving the efficiency goals difficult. Also, the level of self-organizing in teams is invisible for key leadership roles.

Respondent 3: There is lots of data available for operation areas, but data is scattered, and it makes doing a detailed analysis hard. Also, collection of data is manual based which hinders the accuracy of the data used.

Respondent 4: Reliability of the data is low because OPO-role can have in teams' performance and results don't represent the whole team. As a result, the results between each team can't be compared.

Appendix 2. Questions and field notes from proposal building stage group interview.

Question 1: What are your suggestions regarding the lack of short-term uniformed data for the building of the proposal?

Stakeholders' answers:

> In order to improve short-term data collection on the agility of teams, measuring of team's agility could be improved from the current state by doing it either in sprint iteration - or monthly cycle. One sprint iteration cycle might be a bit too short for our purposes, as teams tend need to balance between handling their daily tasks. Some sort of set format is necessary to gain comparable results between teams. Also, it would most likely reduce the amount of work necessary to gain this information.

Question 2: What are your suggestions regarding the limitations in measuring teams' efficiency for the building of the proposal?

Stakeholders' answers:

> One of the key results for OP agile is to achieve the set efficiency targets set for teams. Currently the overall visibility on the status of efficiency targets is actively discussed and monitored on the organisational level, but the teams don't really have a good way to keep track on the status of efficiency targets at the moment. Teams should have better visibility in how their contributions in improving efficiency effects the whole organisation. One way to do this could be measuring if teams develop their operations systematically during each sprint iteration.

Question 3: What are your suggestions regarding the limitations in measuring customer collaboration for the building of the proposal?

Stakeholders' answers:

> The way how customer input is taken into account when teams are making decisions regarding the development of team's operations should be in higher priority. This could enhance the way that teams go through received feedback as a whole team as the goal is to help teams find development ideas more easily. We would like to see improved way of reviewing customer inputs that would provide more visibility to the whole team instead of just the individuals.

Question 4: What are your suggestions regarding the teams having restricted access to raw data for the building of the proposal?

Stakeholders' answers:

> In addition to earlier mentioned efficiency goals, teams being able to self-organize is just as important area in implementation of OP agile. Teams need to be able to self-organize and take responsibility of the development they do during the sprint iterations. Currently most of the input of the teams comes from the outside and not created by themselves, which hinders teams' ability to self-organize quite a lot. In the future this is something that must be improved and therefore teams need tools that provide more direct information for them to use. In the proposal we would like too some way to provide instant feedback for the teams based on the results of the measurement.

Question 5: In which time period the testing of the proposal could be conducted?

Stakeholders' answers:

> Weeks from 38 – 42 should work fine.

Appendix 3. Questions and field notes from validation stage group interview.

Question 1: Did the elements of initial proposal fulfil their intended purpose?

Stakeholders' answers regarding creation of a set format data collection table:

> The format of the data collection table and visualization of the results supported understanding the agility of teams measured. For future iterations we would like to see more customized versions of the data collection table for each operation areas, as the more general data collection table seems to leave out some operation area specific findings.

Stakeholders' answers regarding implementing measuring teams' capacity and velocity as a part of the data collection table:

> Measuring teams' efficiency using data collection table provided new information that we have no access to earlier. For future iterations of measuring teams' capacity and velocity estimation of the effects of given task should be documented. This information is necessary for big picture evaluation of achieving the set efficiency targets.

Stakeholders' answers regarding implementing amount of customer feedbacks analysed as a team as a part of the of data collection table:

> The number of feedbacks analysed, and comments provided seems very low especially in back office an internal support services. Within these operation areas the angle of measuring the customer collaboration processes needs to be rethought for future iterations. In addition to this teams need to provide more inputs on the results of their analysis of customer feedbacks and why they were discarded.

Stakeholders' answers regarding ensuring that the data collection table will provide direct feedback to the teams after filling the input:

> Based on the user feedback we have received the data collection table is working as intended in providing teams with instant feedback on different elements of agility during the past sprint iteration. In the future iteration the user instructions of data collection table should be improved to make the use of the data collection table more fluid during the sprint iterations. This can be implemented into the same project as building customized data collection tables.

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Stakeholders' answers regarding data collection cycle must be two sprint-iterations long – element:

> Based on the results the two sprint-iteration long measurement cycle is the minimum length to be used. In the future iterations even longer cycles can be considered, as the development of teams seems to be developing only small results during the two sprint iteration long cycle. Long-term analysis also requires continuous use of the data collection table.

Question 2: Do the results collected using the data collection table support measuring the agility of teams?

Stakeholders' answers:

> In total the data collection table provides us with new information and is definetly an improvement to the earlier situation. The results collected can not be used for 100% accurate analysis yet, but once the earlier mentioned improvements to the data collection table are made we should be pretty close.

Question 3: What you see as next steps and what kind of timetable you see for future?

Stakeholders' answers:

> Based on the earlier conversations, improvements to the customizability of the data collection table and user instructrions need to be done before the tool can be fully implemented into daily actions. The earlier mentioned improvements should be done during the Q1 of 2022.

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Appendix 4. Shodan adherence survey.

XP Practice	Weight	Description / Question to be answered
Automated unit tests	6%	You run automated unit test each time you make a change. What % of your changes are tested with automated unit tests before they are checked in?
Customer acceptance tests	3%	Make sure both the developers and the customer know what they want *What % of your requirements have corresponding tests specified by the customer?*
Test first design	3%	Write test cases, then the code. The test case is the spec. *What % of your code line items were written AFTER an automated test was developed for the corresponding scenario?*
Pair programming	12%	Two people, one computer. One thinks strategy, the other tactics. *What percentage of your work (design, analysis, coding) was done in pairs?*
Refactoring	10%	Rewrite code that 'smells bad' to improve future maintenance and flexibility without changing its behavior. *What % of the time do you stop to cleanup code that has already been implemented without changing functionality?*
Release planning	6%	Customer and developers trade items in and out of the plan based on current priorities and costs. Adaptation is favored over following a plan.*Do you allow for changes in release plans/requirements after each iteration based on customer feedback and current implementation?*
Customer access	6%	On Site Customer is best, you can use chat, etc. to quickly verify requirements and get feedback. *What % of the time do you get quick interaction with your customers when needed?*
Short releases	6%	You have frequent smaller releases instead of larger, less frequent ones. This lets the customer see how it's going and

		lets you get feedback. *How close are you to having releases that are about 3 months with interim iterations of a couple weeks?*
Stand up meeting	6%	The team takes 10 minutes each day to review what needs to be done each day and assigns user tasks to team members.
Continuous integration	10%	Code is checked in quickly to avoid code syncup / integration hassles. *How often do you syncup and check in your code on average?* (10 = 3 times a day, 8 = once a day)
Coding standards	5%	Do you have and adhere to team coding standards? Besides brace placement, this may include things like logging and performance idioms. *How often do you follow your team standards?*
Collective ownership	8%	You can change anyone's code and they can change yours. You don't get stuck when the expert is busy on vacation. People know many parts of the system. *How often do people change code they did not originally write?*
Sustainable pace	5%	People need to be effective over the long haul. *How well do you pace yourself?* Example Scores: 10 - I maintain a sustainable pace and the same high rate of output. 5 – I work longer than what I consider a sustainable pace, but still produce at a high rate and feel only a little burnt out. 2 – I work beyond a sustainable pace and feel burnt out. My code isn't at its usual high quality.
Simple design	8%	Keep it simple at first; do the simplest thing that could possibly work. You don't follow the philosophy of "I'll include this because the customer might possible need it later" even though the feature isn't in the requirements. Also, you do not spend a lot of time on design documents. *How often do you succeed in 'Keeping it Simple'?*

Metaphor	6%	A single, overarching metaphor is used to describe the system. It is used by developers to help communicate ideas and to explain concepts to customers. *How often do you feel this is true of the systems you develop?*
Lessons learned		The team reviews how to get better after every release.
Growth		Consider the latest tools and practices in addition to skills. If you're not learning, you're falling behind!
Morale		How often can you say you're enjoying your work?
Artifact reduction		With agile methods you have fewer/thinner versions of artifacts from classic techniques. This saves time, which can be invested in better tests, new code, refactoring, etc. *To what extent have you been able to:* Have fewer code reviews (Pairing instead), Thinner design specs (Test First Design), and Lighter comments/internal docs (Simple Design, Refactoring)
Comments		A blank text field for comments is provided

Appendix 5. Report of comparative agile results.

| Insights | Statements | Notes |

Key Strengths   Key Opportunities

Statements with the Highest Scores (Average)

65.	Our business is recognizing greater economic value than before.	5
64.	The team has higher morale than before.	5
59.	The team acts on retrospective feedback in a timely manner.	5
42.	Automated unit and acceptance tests are run as part of each automated build.	5
30.	There is a highly visible representation of the team's progress within a release.	5

Statements with the Largest Positive Difference (compared to the Benchmark)

42.	Automated unit and acceptance tests are run as part of each automated build.	1.55
9.	Management rarely changes the team's priorities during an iteration.	1.44
29.	Teams know their velocity.	1.37
65.	Our business is recognizing greater economic value than before.	1.31
64.	The team has higher morale than before.	1.25

Statements with the Highest Amount of Agreement (Standard Deviation)

1.	Everyone required to go from requirements to finished system is on the team.	0
2.	Team members are willing to work outside their specialties to achieve team goals.	0
3.	Whole teams, including the ScrumMaster and Product Owner, have no more than 11 people on them.	0
4.	People are not on more than two teams	0
5.	Team members are kept together as long as possible.	0

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Appendix 6. Report of agile inquiry results.

OP Ketterä –kysely, ketterään siirtyneet heimot: Yhteenveto

Ajankohta	Heimo All	Linjaorganisaatio All	Tarkastelutaso All	Paikkakunta All

Vastausten lukumäärä heimoittain

Heimo	Lukumäärä
Asuntorahoitus ja asumisen palvel...	59
Digitaaliset alustat	32
Digitaaliset kyvykkyydet	41
Henkilöasiakkaat	97
K&T:n yhteiset toiminnot	47
Kortit ja kuluttajarahoitus	24
Midas	11
PK-yritysasiakka...	57
Tiedonhallinta	32
Tietovarastointi	49
Tilit, maksaminen ja taloudenhallin...	43
Uudistamisheimo	15
Varallisuudenhoi...	22

Vastausten keskiarvot heimoittain

3,3 · 3,6 · 3,3 · 3,3 · 3,4 · 3,4 · 3,9 · 3,3 · 3,5 · 3,3 · 3,6 · 3,8 · 3,8

Vastausten keskiarvot heimoittain, kysymyskohtaisesti

Kysymys													
Itseohjautuvuus ja vastuunotto tiimissäni kasvaa	3,9	4,1	3,8	4,0	4,0	3,8	4,3	4,1	3,9	3,8	4,2	4,2	4,2
Tiimin ja heimon tavoitteet ohjaavat työmme suunnittelua ja priorisointia	3,7	4,3	3,6	3,7	3,8	4,0	4,5	3,5	4,3	3,6	4,2	4,3	4,4
Parannamme toimintaamme jatkuvasti nostamalla retrossa tunnistettuja asioita sprinttisuunnitelmiin	3,3	3,4	3,6	3,6	3,4	3,4	4,1	3,5	3,5	3,4	3,8	4,1	3,5
Käytämme iteratiivisia kokeiluja ja mittareita oppiaksemme ja ohjataksemme työtämme	2,8	3,2	2,9	3,2	3,3	3,1	3,7	2,8	3,1	3,2	3,4	3,3	3,3
Ketterät seremoniat ja toimintatavat auttavat tiimiäni ja heimoani menestymään	3,4	3,7	3,7	3,6	3,4	3,5	4,0	3,4	3,7	3,4	3,7	4,6	3,9
Meillä on hyvä läpinäkyvyys heimon toimintaan ja työn etenemiseen, päätöksenteko pohjautuu yhteiseen tilannekuvaan ja faktoihin	3,0	3,4	3,2	2,9	3,3	3,3	3,7	2,9	3,6	2,8	3,4	3,9	3,9
Asiakaskeskeisyyden lisääntyminen näkyy työssämme	3,2	3,4	3,1	3,3	3,6	3,5	3,8	3,4	3,7	3,1	3,9	3,5	4,0
Osaamisen kehittäminen on systemaattista ja jatkuvaa	2,9	3,4	3,0	2,9	3,1	3,2	3,7	3,3	3,0	3,2	3,2	3,1	3,6
Agile Coach auttaa meitä saavuttamaan (liiketoiminta)tavoitteemme	3,3	3,4	2,8	2,8	2,6	2,9	3,0	2,9	3,3	3,0	3,0	3,1	4,0
Saan riittävästi tukea työskentelylle ja kehittymiselle ketterässä	3,4	3,7	3,3	3,4	3,5	3,3	4,2	3,7	3,7	3,5	3,6	4,0	3,9
Tiimimme yhteistyö muiden tiimien kanssa on sujuvaa ja riittävää	3,2	3,8	3,3	3,2	3,8	3,3	3,9	3,2	3,4	3,1	3,5	3,7	3,7

Appendix 7. Initial proposal.

Valuation instructions
0 = Team unanimously disagrees
1 = Majority (over 50%) of team disagrees
2 = Majority (over 50%) of team agrees — *Provide additional insight on what the valuation is based on.*
3 = Team unanimously agrees

	Value	Comments Iteration 1

Team structure and interactions

Team structure

	Value	
Team had all necessary skillsets to turn ideas into tasks.	1	
Team had wide variety of expertise ie. Junior- and senior level members.	2	
Team had diverse sructure, ie. It includes people with different strenghts, gender and age	3	
Team members were able to apply their strenghts and expertise into practice.	1	

Interactions

	Value	
Team operates in glass-house environment, ie. Everyone in the organization has access to teams tools and documentation	2	
Team was in interaction with other teams during the iteration.	2	
Team worked in co-operation with other teams during the iteration.	3	
Team had daily synchronizations	1	
Team had a planning session at the start of iteration	2	
Team had a check-up session at the end of iteration to evaluate if set commitments were met.	3	
Team members gave feedback to each-other during the iteration.	1	

Team efficiency

Sprint-iterations

	Value	
Team capacity (no. Of tasks) during the iteration	5	
Team velocity (no. Of tasks) during the iteration	2	

Customer collaboration

Net promoter score (NPS)

	Value	
Amount of written feedback collected	6	
Amount of written feedback analysed	2	
Amount of written feedback transfered into tasks	1	

Collaboration process

	Value	
All relevant customer types are sufficiently represented.	3	
Real customers are actively engaged during every iteration.	1	
Team has a mechanism for prioritizing customer input.	2	
Team has a mechanism for resolving conflicting feedback from users.	3	

Level of self-organizing and adaptability

Self-organizing

	Value	
Team has set of core values and working agreements that are align with the organization.	2	
Team has ability to decide their workload for each iteartion.	2	
Team manages their own processes, ie.	3	
Team manages their own techniques / ways of working.	1	
Team manages outcomes of their iterations.	2	

Adaptability

	Value	
Team has a way of tracking tracking the status of their tasks.	3	
Team tracks and analyze the status of their tasks.	1	
Team was able to adapt based on the status of the tasks during the iteration (if necessary)	2	
Team was able to analyze the reasons behind not meeting the set commitments (if necessary)	3	
Team was able to adapt their working ways for future iterations based on the analysis (if necessary)	1	

Tools

	Value	
Team used data-sources provided to them during the iterations.	2	

RESULTS

Team structure	7	58 %
Team interactions	14	67 %
Team efficiency		40 %
Net promoter score analysis		33 %
Customer collaboration process	9	75 %
Self-organizing	10	67 %
Adaptability	10	67 %
Tools	2	67 %
TOTAL	52	71 %

RESULTS

Metropolia
University of Applied Sciences
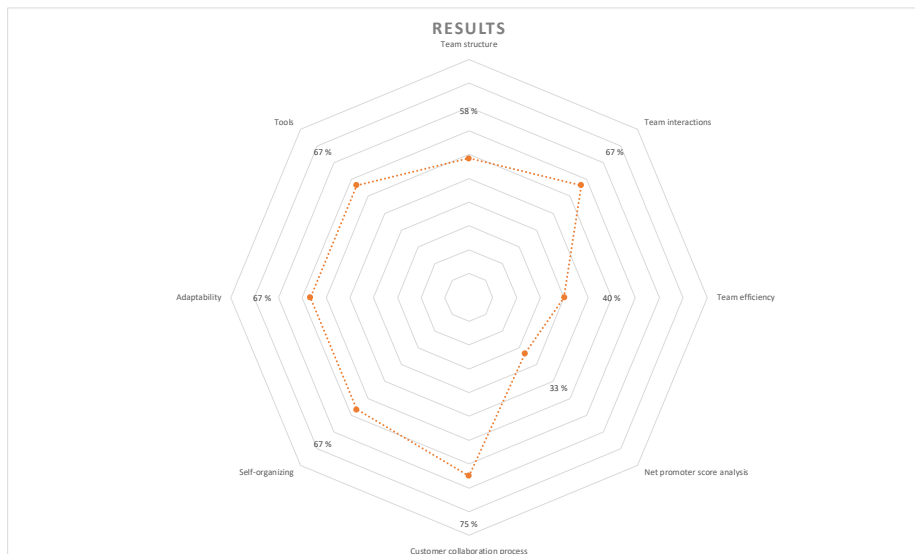
Appendix 8. Final proposal.

Valuation instructions
0 = Team unanimously disagrees
1 = Majority (over 50%) of team disagrees
2 = Majority (over 50%) of team agrees
3 = Team unanimously agrees

Provide additional insight on what the valuation is based on.

	Value	Comments Iteration 1
Team structure and interactions		
Team structure		
Team had all necessary skillsets to turn ideas into tasks.	1	
Team had wide variety of expertise ie. Junior- and senior level members.	2	
Team had diverse sructure, ie. It includes people with different strenghts, gender and age	3	
Team members were able to apply their strenghts and expertise into practice.	1	
Interactions		
Team operates in glass-house environment, ie. Everyone in the organization has access to teams tools and documentation	2	
Team was in interaction with other teams during the iteration.	2	
Team worked in co-operation with other teams during the iteration.	3	
Team had daily synchronizations	1	
Team had a planning session at the start of iteration	2	
Team had a check-up session at the end of iteration to evaluate if set commitments were met.	3	
Team members gave feedback to each-other during the iteration.	1	
Team efficiency		
Sprint-iterations		
Team capacity (no. Of tasks) during the iteration	5	
Team velocity (no. Of tasks) during the iteration	2	
Which operation area will be improved by completion of the selected tasks		Input from team
What is the estimation on the effects of completion of the selected tasks		Input from team
Final effects of the completed tasks for operation areas (once the task is complete)		Input from team
Customer collaboration		
Net promoter score (NPS)		
Amount of written feedback collected	6	
Amount of written feedback analysed	2	
Amount of written feedback transfered into tasks	1	
Collaboration process		
All relevant customer types are sufficiently represented.	3	
Real customers are actively engaged during every iteration.	1	
Team has a mechanism for prioritizing customer input.	2	
Team has a mechanism for resolving conflicting feedback from users.	3	
Level of self-organizing and adaptability		
Self-organizing		
Team has set of core values and working agreements that are align with the organization.	2	
Team has ability to decide their workload for each iteartion.	2	
Team manages their own processes, ie.	3	
Team manages their own techniques / ways of working.	1	
Team manages outcomes of their iterations.	2	
Adaptability		
Team has a way of tracking tracking the status of their tasks.	3	
Team tracks and analyze the status of their tasks.	1	
Team was able to adapt based on the status of the tasks during the iteration (if necessary)	2	
Team was able to analyze the reasons behind not meeting the set commitments (if necessary)	3	
Team was able to adapt their working ways for future iterations based on the analysis (if necessary)	1	
Tools		
Team used data-sources provided to them during the iterations.	2	

RESULTS

Team structure	7	58 %
Team interactions	14	67 %
Team efficiency		40 %
Net promoter score analysis		33 %
Customer collaboration process	9	75 %
Self-organizing	10	67 %
Adaptability	10	67 %
Tools	2	67 %
TOTAL	52	71 %

RESULTS