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Digitalization Consulting for SMEs

Digitalization Maturity Assessment Framework

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Abstract

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The focus of this thesis was to develop a framework for digitalizing clients´ business processes in SME context. The case company was Primanet Oy, which wanted to find repeatable and easy to use framework for the consultants to use.

The study was conducted using applied action research methodology. The study gathered data via three rounds of data collection from the interviews, experience stories and workshops. The first round of data collection was done for the current state analysis and identified strengths and weaknesses of the current ways of working in the case company. In the second round of data collection, a series of workshops were held to formulate the proposal for the framework. The proposal combined the results of data analysis with the information and best practices of the industry found during the literature search. In the third round of data collection, the proposal was piloted and validated.

The proposed framework provides a process for the case company´s consultants to handle SME clients in a unified way. The framework consists of five distinct phases: Assessing digital maturity, Analysis review with the client, Suggestions for improvement, Digitalization projects, and Impact measurement. These phases follow each other to allow the client to run through the Digitalization Maturity Assessment with the consultant, to get the improvement recommendations derived from the assessment, to implement digitalization projects based on those recommendations, and to get a measurement if the project has succeeded in delivering results. The framework is also designed to be cyclical, so after “Impact measurement” the consultant can return to “Analysis review with the client” to keep the process going continuously.

The tools and methods introduced in the framework are not new, as they have been in use in larger enterprises. However, for SMEs this framework enables the use of the same tools on a smaller scale. At the time of the writing, the framework is in use in the case company to provide digitalization benefits for the SME sector. It has opened a new channel between the case company and the clients.

Keywords Digitalization, SME, consulting, maturity, assessment

Contents

1 Introduction

Digitalization is one of the foundations of the Fourth Industrial revolution. It is a widely used term and constantly re-defined. Digitalization can be turning the manual workloads to digital ones or to automate the current partly digital and partly manual processes to decrease the requirement for human work. If the Third Industrial revolution took the manufacturing out of human hands to the machines, the Fourth Industrial revolution will do this to office processes. Less human interaction is needed where computer can be instructed to take over parts of the process or the process as a whole. This reduces human effort in the repeatable and often mindless tasks and frees the capacity to where human ingenuity is required. Increasing the efficiency of digital workers is the essence of digitalization in the context of this thesis.

Digitalization is far from unresearched but so far, the tools and processes have been in the hands of large international enterprises with large pool of resources and equally large teams to pour into digitalization. With the introduction and increasing sophistication of the Microsoft Power Platform, the tools of these large enterprises have been democratized to suit the Small and Medium Enterprises (SMEs). This thesis is going to explore the process and methods of digitalization in the SME context.

The Fourth Industrial revolution is not something that businesses can overlook. Distinct competitive advantages will be awarded for companies who move fast and in the correct direction. This creates an opportunity for those who are willing to take digitalization seriously. To fully take benefit from this change companies need to find where they are going, and what are the methods they are going to use to reach that end. This thesis is going to be part of the answer to this problem.

1.1 Business Context

Primanet Oy is a small Finnish IT service provider employing around 20 professionals in 2023. The goal of Primanet is to be a partner for SME clients on their journey to digitalized world utilizing the Microsoft ecosystem. For the fiscal year of 2022 Primanet had a revenue of 2,3 million euros. With the acquisition of a software development unit

the year before, Primanet has also separated digitalization consulting as a separate business unit.

The main target group for Primanet is SME companies employing 20+ information workers while larger amount of first line workers such as nurses and factory workers can be supported as their need for information services is more limited. There is theoretically no upper limit on client company size, but the regulatory weight and required personnel for providing services to large clients means that those organizations rarely are truly in the customer segment.

For the aforementioned target companies the digitalization tools have been largely unavailable until quite recently. The cost of the tools has been prohibitive, or the size of digitalization projects has required too much time from the key stakeholders. It is the goal for this thesis to cater to this problem.

1.2 Business Challenge, Objective and Outcome

In the context of Primanet Oy, to support IT support services and software development services, the Board of Directors has decided to separate digitalization consulting as a new business unit. The target of digitalization consulting is to help clients to accelerate their use of current digital systems in the Microsoft ecosystem or discover workflows or processes to digitalize with tool stack of the company. This unit can serve larger organizations and generate leads for our other departments.

Digitalization consulting unit needs formalized processes to serve clients effectively. Essentially, it would be required to know what are the processes that are worth digitalizing and how the actual digitalization of those processes would occur.

Objective is *to establish a framework to digitalize clients´ business processes.*

Outcome of the thesis is a framework to digitalize clients´ business processes.

1.3 Thesis Outline

The first step is a literature review to get ahold of key digitalization concepts and to inspect the numerous case studies to find relevant structures to compare with the current processes of the case company. Digitalization consulting is relatively new for the company and the number of established processes is so far limited. Many of the case studies in the relevant literature focus on large enterprise level companies, so it is important to remember the focus in SMEs. This might prove challenging, and it is possible that many of the insights gathered from literature review might not apply in this case or would need significant amount of simplification. The objective of this phase is to outline a conceptual framework which can be followed to digitalize client companies. This framework would be a guideline which companies can use to align their digital processes and vital to create the final digitalization framework. Thus, creating conceptual framework is one of the first steps on the way to success.

The second step is to interview the current consultants and practitioners in the company to get a better view on what already exists and what would need more work (Current State Analysis). At the same time, it is crucial to clarify what are the strategical targets for success regarding this thesis. In addition, exploring the existing cases of digitalization within company is likely to yield results. Especially finding the SME angle for digitalization projects could be easier through these cases, compared to the vast majority of cases present in the literature which focus usually on the larger enterprises.

The data gathered in CSA is combined to the conceptual data gathered from literature review to synthesize a proposal. At this stage there is a clearer view of how the framework should work and what constitutes its key elements. At this stage, it is important to detect what processes are required to complete the target picture and to formalize those to have them available for consultants and other practitioners when the business case requires it.

1.4 Key Concepts

Digitalization and digital transformation are used almost interchangeably in the industry publications. One of the many possible differentiations is presented by Dr. Volker Lang as follows (Lang, 2021). The key differences between Digital Transformation and

Digitalization lie in their maturity. Digital Transformation is highly mature and targets creating completely new business from digital information, as digitalization is more intermediate and targets to improve current systems, collect and analyze data to save effort and thus human resources needed to perform key activities. (Lang, 2021, p. 12.) For many SMEs the line between these is even more vague as the projects are small in total scale, but at the same time capture a larger chunk of the total strategic depth of the company.

For the purposes of this thesis, the differentiation between digital transformation and digitalization does not offer any additional value. For simplification, digitalization as a term has been chosen as the term to reflect the whole concept for usage and adoption of digital tools, as this term reflects better the scope of the change offered by the company.

2 Method and Material

This section briefly describes the research approach and methodology, as well as research design and data collection principles used in this thesis.

2.1 Research Approach

The research described in this thesis belongs to the applied qualitative field study family. The research is conducted in the style of Applied Action Research presented by Kananen (2013). The typical Action Research is unsuitable, as Action Research should have cycles. This thesis involves only one partial revolution of a cycle, not multiple revolutions. This thesis reflects a typical operational improvement project conducted in a company. (Kananen, 2013, p. 22)

The methodology of this research relies broadly on practitioner interviews and personal observations on existing cases in the field of study, as well as written material present in the literature to provide best practices and theoretical background.

2.2 Research Design

The research design of this thesis is as described in Figure 1. The relatively traditional design model is presented below with different stages following each other. Most of these stages also produce an outcome or require data to produce that outcome.

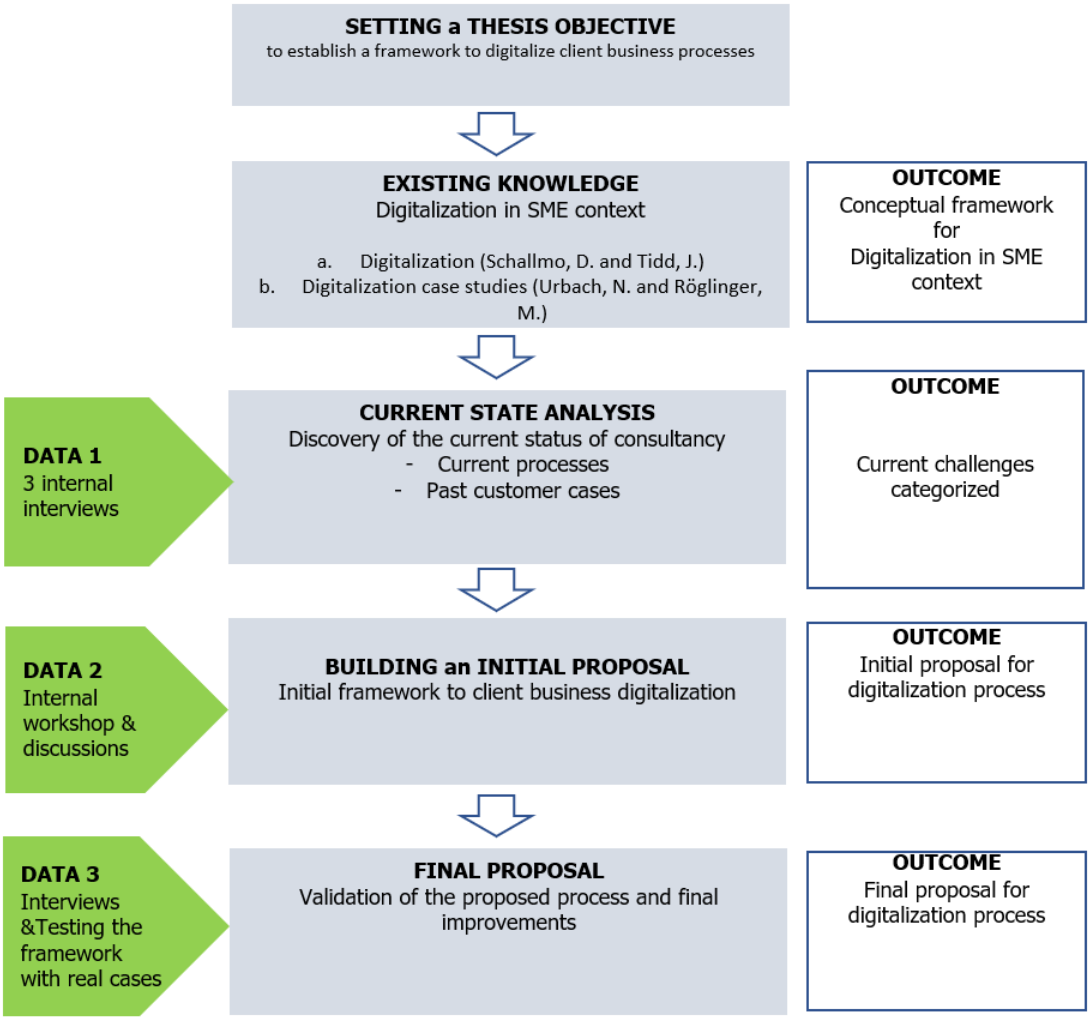

Figure 1. Research design

As shown in Figure 1, the study starts with setting a thesis objective, followed immediately by existing knowledge.

Second part is reviewing the existing knowledge, which items describing the digitalization as a phenomenon and case studies in the field of digitalization. This provides a working conceptual framework to build upon.

Similarly, interviews, experience stories and workshops were conducted as Data 1 for the CSA. This then produces the current challenges categorized in a list of strengths and weaknesses.

Internal workshop was held to gather Data 2. This data was used to construct an Initial proposal for digitalization framework.

For gathering Data 3, the initial framework was tested in real client cases to have sufficient feedback for validating the proposed process and getting improvements for the final proposal.

Putting the existing knowledge or literature review before the current state analysis is not done without consideration. In the context of this study, the CSA might yield only limited results as the current state is expected to be unsophisticated. Thus, reviewing the literature and gaining a knowledge of the best practices in the field is crucial for a successful end result. This is especially true, for creating a working framework out of limited pre-existing processes might prove to be difficult without examining first how similar results are produced in other cases or in the wider industry.

2.3 Data Collection and Analysis

This study uses various data sources to construct viable and sufficiently complete picture of the current situation, and as well to build and validate the proposal. Table 1 describes the data collection in greater detail.

Table 1. Details of Data collections 1-3 used in this study.

	Participants / role	**Data type**	**Topic, description**	**Date, length**	**Documented as**
	Data 1, for the Current state analysis (Section 4)				
1	Respondent 1	Teams meeting	General overview on the consultancy business unit current *modus operandi*	Mar 29th, 2022, 60 mins	Field notes and recording
2	Respondent 2	Face-to-face meeting	Cases about digitalization of business processes, general practices	Mar 23rd, 2022, 60 mins	Field notes and recording

3	Respondent 3	Face-to-face meeting	Cases about digitalization of business processes	Mar 23rd, 2022, 60 mins	Field notes and recording
4	Experience stories	Observations	Past experiences regarding digitalization of business processes.	past & current	Field notes
	Data 2, for Proposal building (Section 5)				
5	Workshop with Head of Consultancy, Sales Director, and CEO	Workshop	Initial proposal building	Apr 2022, 60 mins	Field notes
6	Workshop with Head of Consultancy, Sales Director, and CEO	Workshop	Proposal building	May 2022, 120 mins	Field notes
	Data 3, from Validation (Section 6)				
7	Testing with consultants	Face-to-face, discussions	Validation, evaluation of the Proposal, possible improvements	Aug – Sept 2022, 60 mins	Field notes

As seen in Table 1, the data for the current state analysis consists of three different data sources. First type is the face-to-face or Microsoft Teams interviews of the current consultancy practitioners and stakeholders. Mainly, it was done to get a good overview on how the consultancy business unit is currently operating; secondly, to draw out used processes from previous digitalization consulting cases; thirdly, to get a strategic perspective on how the digitalization consulting should work. Second type of the data was collected as experience stories in digitalization consulting. Third type of the data was hoped to be the existing consultancy materials, on which document analysis would have been conducted to gather more information on current processes and methodology. Unfortunately, no relevant documentation was found, so this data is ultimately not present. Therefore, it was strengthened by conducting workshops in the next data collection round.

In the second round of the data collection, two major workshops with the consultancy launch team (Head of Consultancy, Sales Director, and CEO) were held to build a valid proposal for new framework to digitalize client business processes based on the discoveries made earlier.

The third round of data collection was used to validate the proposed framework and to collect improvement proposals for the framework. For this end, informal feedback discussions were held with the consultants. In addition, a client interview was conducted by a consultant to evaluate the results of the new framework proposal.

As the study relies strongly on interview material, the interviews were conducted face-to-face or on Microsoft Teams. The interviews were conducted in semi-formal way, with pre-selected topics and some pre-selected questions. The interviews were recorded, and the field notes taken. The questions for the interviews can be found in Appendix 1. The summaries of field notes of interviews 1-3 can be found in Appendix 2.

As a part of this research minor (as in, not large enough to warrant a separate interview) experience stories of previous digitalization cases were collected in the form of field notes.

3 Existing Knowledge on Digitalization Consulting

This section discusses the existing knowledge in the field of digitalization consulting in the SMEs. Certain elements have been identified to support the very practical goal of finding a conceptual framework. These elements are explored first in the light of existing literature, and then reiterated later in the form of the complete conceptual framework. The focus is more towards best practice, rather than theoretical models. Thus, many commercial sources are used to gather the information.

3.1 Identifying and Selecting Digitalization Targets

Digitalization cannot start in the vacuum. To know what the key elements in digitalization are, the consultant must first be intimately familiar with the business he is trying to digitalize. Know your customer is one of the key foundations in the consultation field. There are some key ideas how to reach this end in relatively quick manner required in perhaps a new partnership where existing knowledge of the environment and the processes is practically non-existent.

3.1.1 Identifying pilot projects

For any digitalization consulting case to be viable, the benefits must be first demonstrated to the target company, especially if the client company has little to no previous experience in formalized digitalization projects. For this end it is vital to identify which projects could be used as pilot cases, to gather momentum for longer term digitalization. Dr. Volker Lang (Lang, 2021) lists the following key criteria to identify pilot projects:

- *Quick wins*: In order to create enthusiasm across your organization and convince stakeholders to invest in building up digital capabilities, a pilot project ideally drives for early results and quick wins. A pilot project should typically take between 6 and 12 months prior to delivering its final result.

- *Scalability*: A pilot project should be scalable so that it can be expanded to other business units upon its completion –poor scalability is the main obstacle most pilot projects suffer from.

- *Industry-specific focus*: Pilot projects should focus on areas, where you are going to go at scale, earn money, and intend to create value on a long term.

> • *Concrete business purpose*: Successful pilot projects always focus on concrete, well-defined business problems or challenges to experiment on and learn from. This may be a balky internal process or a previously intractable problem that can now be addressed by digital technology. In other words, digitalization and digital transformation need to fulfill [sic] a concrete business purpose and are no fashionable end in itself. (Lang, 2021, p. 262.)

According to Dr. Lang (2021), *the scalability* criterion is an important way to improve the ROI of any product, making the implementation more viable in financial terms. In addition, scalable projects, when implemented business-wide are an excellent way to increase the digital maturity throughout the whole company, without requiring the extended effort of the whole digitalization cycle. Albeit an important addition, finding scalability is not crucial in a pilot project. If the discovery of a pilot project gets stuck while the consultant is trying to find a scalable project (which very well might prove more difficult than anticipated), the whole idea of gaining momentum might be invalidated. Thus, finding a pilot project in a relatively short time frame is a lot more important than finding something scalable. (Lang, 2021, p. 262.)

The industry-specific focus of the pilot project comes clearly from the general business need of finding industries which have certain special needs and having a pre-existing solution for those needs. Fulfilling this criterion helps immensely to drive the purpose of the digitalization project home for target employees and decision-makers alike. In the larger picture, this helps the company transfer the found knowledge on other clients in the same industry. (Lang, 2021, p. 262.)

Keeping *the concrete business purpose* in mind is also crucial in successfully selecting pilot projects. The closer the project is of the day-to-day issues of the users; more goodwill is acquired from a successful implementation. This also ensures that the project implemented will almost guarantee savings in work hours spent, thus making the financial success easy to measure and to present to the stakeholders. (Lang, 2021, p. 262.)

There is also a need to find an internal champion from the target organization who wants to see the pilot project funded and approved by the company decision makers. The champion drives the initiation of a project and presents it to the funder. (Zwikael & Smyrk, 2011, p. 87).

All these characteristics are important when initiating pilot projects. It is perhaps not realistic that every project can fulfil all the requirements, but the more of these criteria are fulfilled, higher the likelihood of successful project initiation and eventually completion.

3.1.2 Selecting a Digitalization approach

Selecting a digitalization approach is vital when starting a digitalization journey in a company. The approach represents a roadmap through which the company can progress by completing the milestones, or phases, laid out by the approach. The approach and the company ecosystem can be strongly related, necessitating in different paths for different companies (Gierlich et al., 2019, p. 11).

When expanding from pilot projects to digitalization projects, such consultancy projects usually follow a certain flow. One of these process flows is presented in the Listemann digitalization case analysed by Kamm et al. (2021) in Figure 2 below.

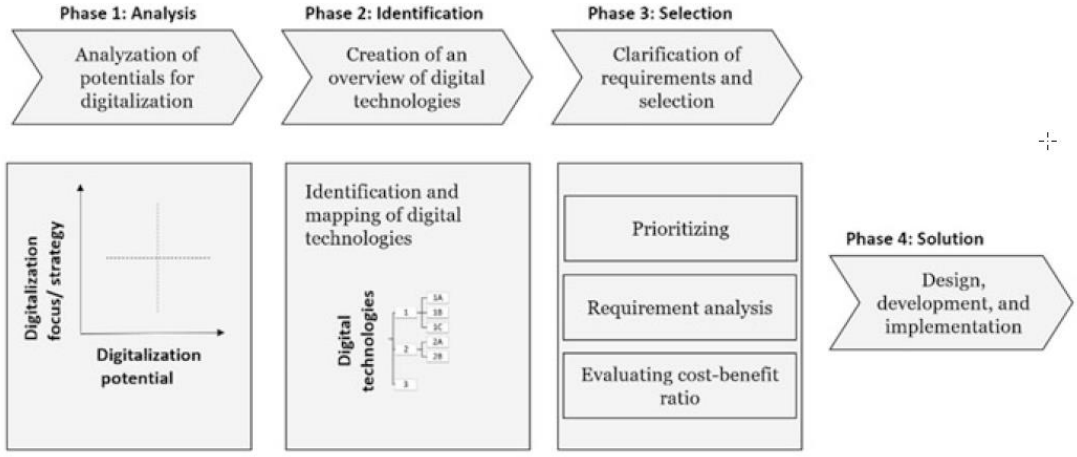

Figure 2. Digitalization approach at Listemann (Kamm et al., 2021, p. 12).

As can be seen in Figure 2, the Kamm et al. digitalization approach includes four separate phases following each other starting from Analysis and continuing through Identification and Selection phases to the Solution Phase (Kamm et al., 2021, p. 12). Especially the first three phases described in the approach are relevant for the topic at hand.

On *the Analysis phase* there is a need to map the potential projects for digitalization. This requires two dimensions. The x-axis of the map is the Digitalization potential, the measurement on where the projects which have the best composite value of the best ROI, easy accessibility, and scalability, are mapped. The y-axis is the relevance of the topic reflecting it against the Digitalization focus/strategy of the company. After potential projects are identified and mapped on these two axes, the best available cases should be in the top right corner of the map. This corner is the selection group for actual viable projects. (Kamm et al., 2021, p. 12)

Next phase is *the Identification phase*. This requires mapping of the current digital technologies utilized by the target company (Kamm et al., 2021, pp. 12-13). For the purposes of this thesis, where the case company implementation heavily relies on Microsoft ecosystem, a lot if this phase is already given in many of the client cases. It is of course possible, even likely that some of the technologies used exist outside of the Microsoft ecosystem. Some of these cases fall outside the scope, but some can still be examined or solved using this approach.

The third phase of the digitalization approach presented is *the Selection phase*. This requires the clarification of the requirements by analyzing them, prioritizing, and evaluating the cost-benefit ratio. This is mostly the same process than performed in the phase one but repeated to emphasis the continually changing priorities and requirements of the business world. (Kamm et al., 2021, p. 13)

The fourth phase of the Listemann digitalization approach is *the Solution phase*. This includes the design, development, and implementation of the project. This phase is of the smallest focus, as due to the nature of consultation, can be performed by any internal team, and thus this phase is not necessarily even included in all of the consultation cases. (Kamm et al., 2021, p. 13)

A similar logic is presented by Schallmo and Williams (2021) in their integrated approach for digital implementation. This approach is a lot more generalized than the approach discussed earlier. The approach flow by Schallmo & Williams is presented in Figure 3 below.

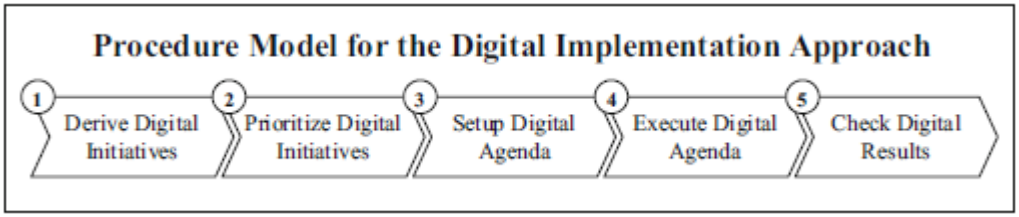

Figure 3. Procedure model for the digital implementation approach (Schallmo & Williams, 2021, p. 6).

First part of the model presented in Figure 3 is *Derive Digital Initiatives*. This phase collects potential initiatives from all across the target company (e.g. organization, processes, IT, infrastructure, technologies, systems) and the relevant initiatives are arranged to categories of technology, organization, skills, and culture. (Schallmo & Williams, 2021, p. 6)

Second phase is called *Prioritize Digital Initiatives,* in where the collected initiatives are analysed to derive their impact, time, and cost. All the interconnections between initiatives are also mapped to create a prioritization matrix of for categories: slow digital initiatives, active digital initiatives with a prime influence, passive digital initiatives, and critical digital initiatives. (Schallmo & Williams, 2021, p. 6)

Third phase is *Setup Digital Agenda*, where categorized initiatives are accompanied by change and communication management. Additionally, the digital initiatives are described in detail to include responsibilities, timeframes, KPIs, objectives, resources, actions, and a budget. (Schallmo & Williams, 2021, pp. 6-7)

Fourth phase is *Execute Digital Agenda*, where implementation is done and influence on customer experience, operational excellence, and digital excellence is measured. (Schallmo & Williams, 2021, p. 7)

Fifth and final phase is *Check Digital Results*, which is performed to measure the results against the objectives of the phase three. Additionally, the possible deviations to the original objectives are mapped. (Schallmo & Williams, 2021, p. 7)

What Schallmo and Williams presents, flows logically through different phases. Initiative mapping and sorting are presented, as well as guidelines how to proceed later with the

implementation and follow-up. Here lies most of the difference as this approach goes further into implementation and different steps regarding it.

The approaches introduced here follows a similar flow, passing the steps of initiative discovery, prioritization, implementation. The difference being in mainly how to divide the flow into different phases. Kamm et al. approach goes more into detail by dividing Identification and Selection into two different phases. Schallmo and Williams put this into one Prioritize Digital Initiatives step. Furthermore Kamm et al. summarize most of the steps into Solution phase, whereas Schallmo and Williams list out Setup Digital Agenda, Execute Digital Agenda, and Check Digital results. Synthesizing a similar flow like these two approaches adjusted to the objectives of the thesis and based on the examples given is done later in Section 5.

3.2 Measuring Digitalization Maturity Level

It should be stated that many maturity models have been developed recently and many of those tackle digitalization. A selection of those models is presented here for short-listing and further review.

One of such models is from Omar Valdez-de-Leon (2016), who lays down a Digital Maturity Model for Telecommunications Service Providers, where maturity level is assessed based on Strategy, Organization, Customer, Value chain / Ecosystem, Operations, Technology, and Innovation and those are ranked from Not started (0) to Pioneering (5). (Valdez-de-Leon, 2016, p. 21)

Another notable digital maturity model is the manufacturing-focused PwC (2018) Industry 4.0 model, which condenses the digital ecosystem to four different ecosystems: Customer Solutions ecosystem, Operations ecosystem, Technology ecosystem, and People ecosystem. (Geissbauer et al., 2018, p. 9)

Some of the maturity models inspected had a clear SME focus, like the model presented by Kljajić Borštnar & Pucihar (2021). This Multi-Attribute Assessment of Digital Maturity in SMEs provides a hierarchical structure of different attributes of the company, which are used to assess capabilities of companies. Aggregate attributes derived from sub-

categories include Digital technology, Management, Human Resources, Strategy, Digital Business Model, and Role of Informatics. (Kljajić Borštnar & Pucihar, 2021, p. 7)

One of the widely used maturity models is the Forrester's (2016) The Digital Maturity Model 4.0 which uses a self-assessment questionnaire to evaluate a target company in the categories based on Culture, Organization, Technology, and Insights. (Gill & VanBoskirk, 2016, p. 5)

Deloitte (2021) provides a Digital Maturity Index in which companies are ranked via a survey to maturity categories based on their Strategic index and Operational index. (Proff et. al., 2021a, p. 8) These are built from sub-indexes consisting of Digital Processes, Technologies, Digital Offers, Digital Business Models, Perception of Change, Seizing Strategic Options, Realignment of resources, Individual Capabilities, and Organizational Capabilities. (Proff et. al., 2021b, p. 61)

From the models listed above selection was made for further analysis. Valdez-de-Leon (2016) Digital Maturity Model for Telecommunications Service Providers was discarded due to relatively heavy industry focus. Similarly, PwC (2018) Industry 4.0 was deemed to be too manufacturing-focused to suit the needs of this thesis.

Kljajić Borštnar & Pucihar (2021) Multi-Attribute Assessment of Digital Maturity in SMEs, Forrester's Digital Maturity Model 4.0, and Deloitte (2021) Digital Maturity Index were selected for further review. In the following section, there is a general overview of the selection of models and which particular elements of those models would be relevant in the simplified model which is pursued for the end result.

3.2.1 Questionnaire-based approach

One of the suitable models for the purpose of simplified maturity models would be Forrester's The Digital Maturity Model 4.0. This includes a self-assessment questionnaire, which evaluates the target company in the fields of Culture, Organization, Technology, and Insights. Self-assessment scoring in questions related to aforementioned topics results in a simple score range, which translates to different maturity segments. Those segments have then characteristic behaviours and associated strategies to increase the level of maturity. The resulting measurement table is presented in Figure 4 below. (Gill & VanBoskirk, 2016.)

Maturity segment	Characteristic behavior	Strategy	Score range
Differentiators	Leveraging data to drive customer obsession.	Blend the digital and physical worlds.	72-84
Collaborators	Breaking down traditional silos.	Use digital to create competitive advantage.	53-71
Adopters	Investing in skills and infrastructure.	Prioritize customer relationships over production.	34-52
Skeptics	Just beginning the digital journey.	Prompt a willing attitude.	0-33

Figure 4. Firms Distribute Into Four Maturity Segments (Gill & VanBoskirk, 2016, p. 5).

As seen in Figure 4, the maturity segments divide into Skeptics, Adopters, Collaborators, and Differentiators.

For companies falling into *the Skeptics category* the model suggests finding initial pilot projects to prove value of the digitalization and to familiarize the company employees with the digital. Another crucial task for these companies is to centralize their digital resources, as they tend to be decentralized and distributed into local teams operating independently of one another. This would limit redundancy in these companies and create visibility for the digitalization around the company. (Gill & VanBoskirk, 2016, pp. 7-8.)

For the next set of companies falling into *the Adopters category*, the model suggests finding existing, but perhaps lagging digitalization efforts and fast-tracking those to completion. Another suggestion for these companies is to upgrade their data management to another level to leverage the existing data efficiently and easier measurement of results of the strategy. (Gill & VanBoskirk, 2016, p. 8.)

The third category of the resultant companies are *the Collaborators*. For these companies the model suggests the higher use of analytics and business intelligence to drive the competencies further. Additionally, these companies should focus on the customer experience utilizing the digital. Furthermore, as a larger portion of the revenue in these companies should come from the digital, the suggestion is to leverage the end customers to create more content and use their insights to improve. (Gill & VanBoskirk, 2016, p. 9.)

The last category of the model are *the Differentiators*. These companies are already very sophisticated in their digital maturity and thus the suggestions are also more high-level. The model suggests for example using real-time data analytics to bring to end customers and employees alike to enrich every part of the business. Another way for this would be to expand the digital across employee base with mobile apps and digital education. (Gill & VanBoskirk, 2016, pp. 9-10.)

As seen, the measuring digital maturity level can be relatively simple, and it would still promise big improvements. This simplistic approach is of course not without flaws. Self-questionnaires have the inherent weakness of being exactly as accurate or honest as the person or team answering the questions. Unless the questionnaire is completed by people highly knowledgeable in the questionnaire topics, the results will be equally skewed. This flaw can be somewhat circumvented if the business partnership is already ongoing and the consultant or the organization delivering digitalization has previous knowledge of the client company and can answer the questionnaire partly or fully on behalf of the client, or at least help the client to find realistic answers to the questions.

One of the other methods to limit the answer-variability weakness of self-questionnaires is to increase the number of participants within the company to include varied opinions or viewpoints of the target community. This is the method taken by Deloitte in their Digital Maturity Index, which is based on a wide survey, designed to measure Digital Maturity and on the other hand to showcase the linkage between maturity and EBIT impact. (Proff et. al., 2021a, p. 4.)

The main axes of this survey are the completeness of the digital strategy – measured as Strategic Index, and the ability to operate – measured as Operational Index. The combination of these two is then used to map the companies participating into six different categories (or ‘archetypes’ in Deloitte’s terminology). This categorization is presented in Figure 5 below. (Proff et. al., 2021a, p. 8.)

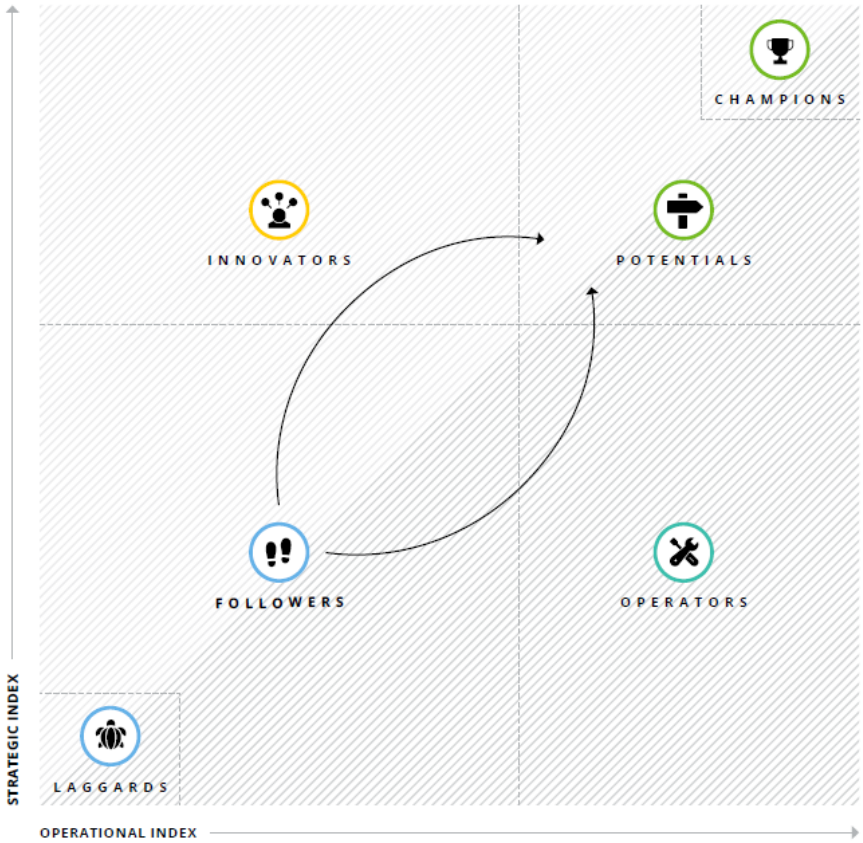

Figure 5. Six digital archetypes (Proff et. al., 2021a, p. 8).

In the bottom left corner of Figure 5 are the Laggards, the companies with almost no strategic vision or the operational capability considering digital maturity. For these companies it would be absolutely crucial to improve both of these dimensions to get to the Followers category. The difference of a Laggard company in the ability to improve compared to the most mature top-right corner of the chart is immense (Proff et. al., 2021a, p. 23). While Followers are still far from reaching the end of the digital maturity journey, there is a clear possibility of transitioning into different category.

The bottom-right corner of the chart contains the Operators category, who have the ability to operate smoothly, but are limited in their strategic vision or direction. It is typical that these companies have implemented many digitalization projects, but without the focus provided by the strategic guidance. Diametrically opposed to this group in the top-left corner are the Innovators who have a complete strategic vision but are lacking the operational methods to execute. (Proff et. al., 2021a, p. 24.)

Most of the top-right area in Figure 5 is taken by the Potentials category. These companies have quite mature systems and strategy in place. In spite of this, these companies still need to focus on the enhancement of their digital product portfolio to reach the full potential in the extreme top-right of the Champions category. (Proff et. al., 2021a, p. 24.)

The main takeaway from the Deloitte's model is that the two main axes of Operational and Strategic capability are both required to reach a digitally mature organization. It presents hints for distinct roadmaps for companies in the different parts of their digital maturity journey. Most of the details are surely proprietary information and not available in the material, but the approach in general is still valuable in the search of digital maturity measurements.

3.2.2 Questionnaire-based approach in practice

Questionnaire-based approach seems to be the golden standard also in the technology industry. Microsoft offers Solution Assessment packages for companies to assess their current technological capabilities. (Microsoft, 2021.)

Big part of the assessment is a questionnaire, which is filled by the client in co-operation with a Microsoft (or partner) consultant. Questionnaire contains questions in several different categories. Questions are statements, and for each the client must answer on a scale of 5 between agree and disagree. The consultant is present when the client answers the questionnaire and can provide help for the client to better understand the questions presented and guide the client to answer the questions in a consistent manner. Free text box is presented with each question, so justification or clarification for the answer selected can be given if necessary. (Microsoft, 2021.)

Based on the questionnaire answers the consultant will create a presentation which displays the current status of for example client cyber-security in several different categories. In addition, the results include a list of those questions where the client has answered with lowest scores. These questions represent the biggest weaknesses in the client company which are usually where the improvement can focus and also is likely take the least amount of effort. (Microsoft, 2021.)

The main takeaway from the Microsoft Solution Assessments is to see what the value of consultant is who can assist in filling the questionnaire in a methodical way, also helping the client to progress when any troublesome questions arise. These are important qualities when considering if and how the client will complete the questionnaire assessment.

It should be noted that there are two approaches in questionnaire-based assessments. It is possible that the questionnaire is a full self-assessment, or it is third party assisted as the previously inspected Microsoft assessment. Teichert (2019) has made a systematic literature review on Digital Transformation Maturity and provides the following table in Figure 6.

PRACTITIONER				
Study	Model Character. (# dimensions/ # maturity levels)	Model approach (focus of model, maturing approach, application method)	Domain	Culture
Valdez-de-Leon (2016) [ ]	7 / 6 stages	Domain-specific, linear, self-assessment	Telecom Serv.	Yes
MIT / Deloitte (2017) [ ]	4 / 3 archetypes	General, n/a, n/a		Yes
MIT / Capgemini (2012) [ ]	6 / 4 archetypes	General, non-linear, self-assessment		No
PWC (2016) – Industry 4.0	7 / 4 stages	Domain-specific, linear, 3rd party assisted	Manufacturing	Yes
Forrester (2016)	4 / 4 archetypes	General, linear, self-assessment		Yes
McKinsey (2015)	4 / "Dig. Quotient"	General, non-linear, 3rd party assisted		Yes
Roland Berger (2015)	4 / "Digital Gap"	General, linear, 3rd party assisted	Industry sectors	No
Strategy&/Booz (2012)	4 / "Digitiz. Index"	General, linear, 3rd party assisted	Industry sectors	No
Neuland (2015)	8 / 5 stages	General, linear, 3rd party assisted		Yes
PWC (2017)	9 / 4 archetypes	General, non-linear, self-assessment		Yes

Figure 6. Digital maturity models developed by practitioners. (Teichert, 2019).

As is seen in Figure 6, 4 out of 10 models created by practitioners are self-assessments and 5 out of 10 models are third party assisted models. (Teichert, 2019.) While this data is not sufficient to draw any definite conclusions, it hints that both approaches are at least viable.

3.2.3 Elements of Digital Maturity

One of the more comprehensively detailed maturity model packages is the Digital Maturity Index offered by Organization Development Tools Institute (ODTI). In general terms, this model ranks the target companies into 7 different maturity categories and

suggests a process to improve maturity. Unfortunately, the model is not exactly open source, so only pieces can be picked up without further exploration of the package. (ODTI, 2022.)

The most interesting finding from this model is the introduction of Capability Building Blocks as a method to manipulate digital maturity dynamics. This is given in Figure 7 below.

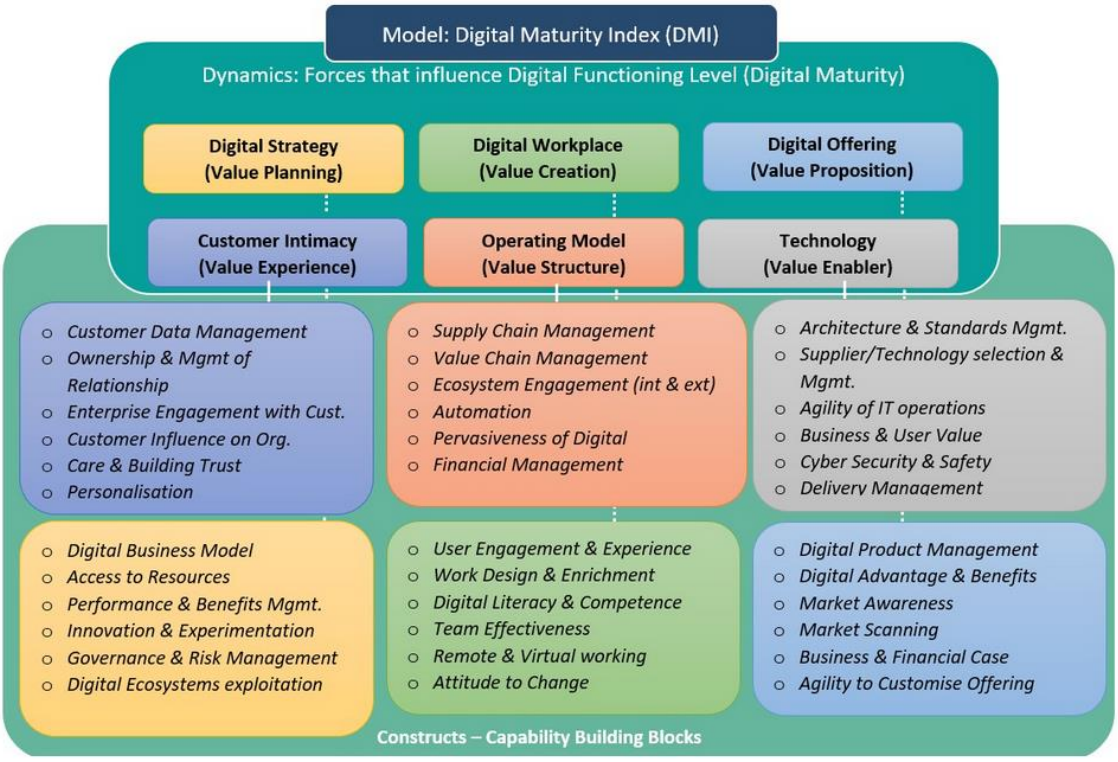

Figure 7. The Constructs of Digital Maturity (ODTI, 2022).

As Figure 7 presents the six forces influencing the digital functioning level (or maturity) of the company (Digital Strategy, Digital Workforce, Digital Offering, Customer Intimacy, Operating Model, and Technology) are further divided into ‘constructs’ demonstrating the possible focal points for digitalization. (ODTI, 2022.)

In this model Digital Strategy category refers to how the organization sets goals and actions for achieving those goals with the help of the resources available. This category helps the company to set the course of the digitalization, answering the important questions of what direction is taken, how to proceed, and what is the role of digital tools in enabling the strategy. (ODTI, 2022.)

Digital Workplace category includes the company employees and how their digital skills and dispositions are used or nurtured effectively in the context of modern technology driven business. (ODTI, 2022.)

Digital Offering category represents the products and/or services the company provides to their clients, and how such offer is managed and presented. (ODTI, 2022.)

Customer Intimacy category gives insights on how the channels between the organization and the client are structured and how the customer-specific knowledge is leveraged to provide the customer experience desired. (ODTI, 2022.)

Operating Model category represents the management aspects of the company. This includes how the co-ordination between the elements within the company works and how it is used to structure the company. (ODTI, 2022.)

Technology category pertains how the company manages and uses the technology available and discovers new emerging technologies to enable the many of the previously mentioned categories. (ODTI, 2022.)

Every category is accompanied with a list of possible themes or topics which could be further analyzed or improved to reach maturity in the category. The lists are fully available in Figure 7 presented earlier. These topics can be used as a basis to measure how far the company has advanced. For example, Digital workplace category includes the construct named Digital Literacy & Competence. This refers to the level of digital skills of the stakeholders, so they can perform optimally with the digital tools presented. (ODTI, 2022.)

While inspecting only one particular element does not give the whole picture of the status of one category like Digital Workplace in the company, it is easily understood why making sure the employees have sufficient skills to use the tools available is required for any organization trying to achieve digital maturity.

Kljajić Borštnar & Pucihar (2021) present a Multi-Attribute Assessment of Digital Maturity in SMEs, which provides similar element categorization, albeit in a hierarchical structure of different attributes of the company. Partial structure is given in Figure 8 below.

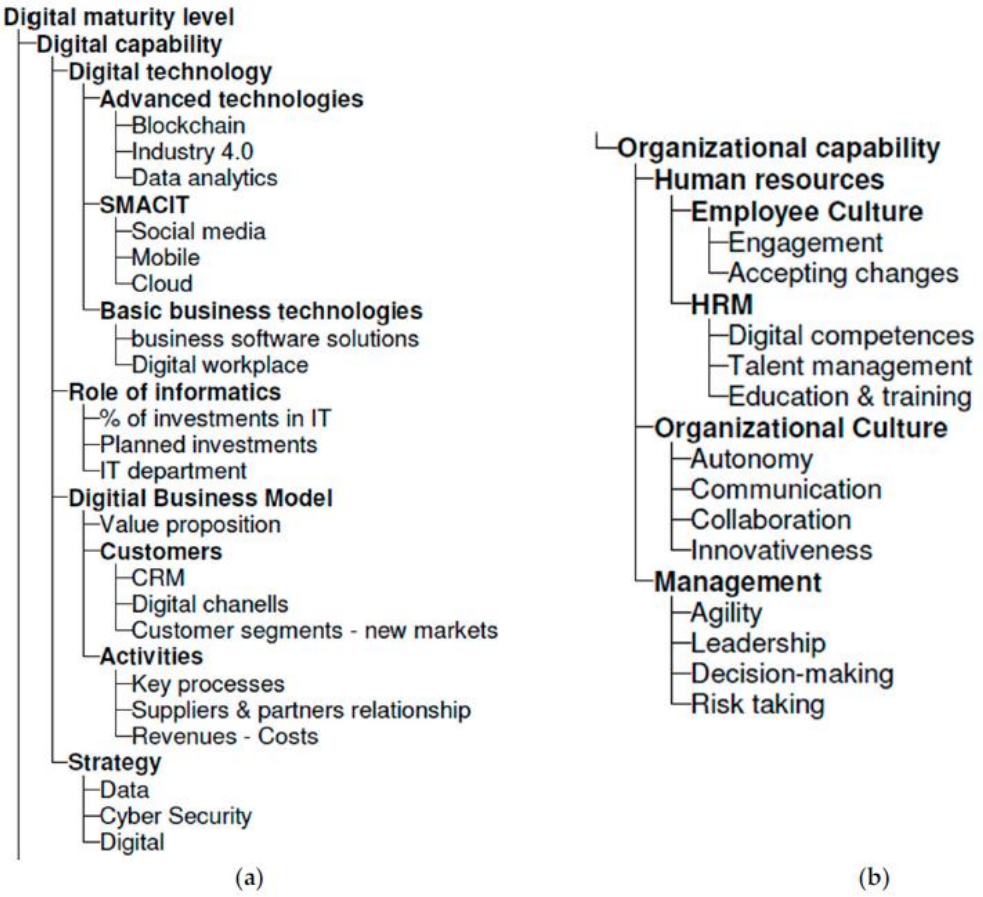

Figure 8. The hierarchical tree of attributes (a) subtree of digital capability and (b) subtree for dimension organizational capability. (Kljajić Borštnar & Pucihar, 2021, p. 7.)

As seen from Figure 8, grouping the attributes (or elements) can be done in many ways. However, similarities to other categorizations can be found from the lowest category level. For example, Accepting changes is present in the ODTI elements as Attitude to Change.

Multi-Attribute Assessment of Digital Maturity in SMEs provides example for valuing the attributes presented. Three or four levels of maturity for each component is available for the end-user to scale, ranging from weakest toward the strongest. For end user, this is presented with descriptors such as “We don’t use any data analytics.” to “We use advanced data analytics, including Machine Learning, big data analytics, etc.”. (Kljajić Borštnar & Pucihar, 2021, p. 7.)

Although hierarchical categorization is not required, the model from Kljajić Borštnar & Pucihar (2021) provides an alternate way of sorting the elements of digitalization. This also hints that there is not only one way of achieving categorization, but instead many.

Based on Teichert (2019) the most common digital maturity areas in the studies (out of 22) are Digital Culture, Technology, Operations & Processes, Digital Strategy, Organization, Digital Skills, Innovation, Customer Insight & Experience, Governance, Vision, Digital Ecosystem, Leadership, Compliance & Security, Products & Services, and Business Model. (Teichert, 2019, p. 1681) Many of these are also found in the models explored, but this list is certainly worth inspecting as a part of the element discovery.

Finding the construction areas, blocks or attributes, the smaller elements of digital maturity, is crucial in mapping the potential digitalization cases. Dissecting the abstract categories in a palpable bite-sized chunks helps the client and the consultant alike to understand where to look when attempting to measure or improve the digital maturity of the company. Having a ready-made list of potential targets is brilliant and acts as a good starting point for a consultant to start the potential project discovery.

3.3 Implementing digitalization

Any selection of possible digitalization targets or measuring how mature the organization is, would be in vain unless there is some general idea how the required changes are going to be implemented. Based on the case company's requirements the use of Microsoft ecosystem is heavily encouraged, as this is the environment where employees have most experience in. Luckily, Power Platform provides excellent tools for quick and easy digitalization.

Much of this section of implementation falls in the domain of praxis, and thus is outside the scope of the literature, less written sources than perhaps usually can be utilized. This effect is somewhat mitigated by the fact that Microsoft offers a lot of publicly available information to guide the implementation when using their products.

The core of any digitalization case is the streamlining the business process, reducing the human effort required. This can be either collecting the data, processing the data, or analyzing the data. The tools for all these cases are available in the Microsoft ecosystem

and presented in this chapter. Moreover, Microsoft provides entry-level access for free, making the adaptation easy and cheap (until premium features are required by the business). In addition, Microsoft does not offer only Business Intelligence, but also low- and no-code application development and integrations with Power Apps and Power Automate plus the native integration to all the Microsoft data stores and Office apps, making it very versatile in many environments.

3.3.1 Power BI

Having the data is useless unless it cannot be utilized in a sensible manner. Power BI (Business Intelligence) is the Microsoft application for data analysis and visualization. Almost any business has at least a few sets of digitized data, ready to be formatted and inputted to Power BI for analysis. Power BI accepts most of the usual data sources, including but not limited to csv (comma-separated values), Excel and SQL databases. For example, ERP data can usually be exported and then formatted and cleaned for Power BI. After that a reasonably skilled consultant or data analyst can easily visualize the data on relevant dimensions to perhaps forecast future resource usage. (Pearson et. al., 2020, p. 173.)

Other benefits of Power BI include the shareable interactive dashboards, which can be used to view and analyse the data without compromising the integrity of the data. Power BI can handle large data sets, upward to hundreds of millions of rows. (Clark, 2020, p. 2.)

Power BI alone is one of the world's leading business intelligence solutions with a market share of 7.17 % in 2022, making it number three after Mode and Tableau. (Datanyze, 2022.)

The widespread utility and easy accessibility of Power BI makes it a to-go Business intelligence tool for any enterprise which is at least moderately integrated into Microsoft ecosystem.

3.3.2 Power Automate

If there is a business workflow which is performed in the Microsoft ecosystem, there is a reasonable chance that a digital automation workflow can perform at least part of the task. Especially if the task is very repeatable (and thus usually boring for the office worker performing it), Power Automate can be used to automate the process and to complete it with less or even no human input. Similarly, if there are data sources which are not currently integrated, Power Automate provides a solution to integrate the data movement between the sources. This can be used to for example fill metadata for digital archiving, when the data structure is clear. (Pearson et. al., 2020, p. 73.)

It is necessary to state that Power Automate is not limited to the Microsoft ecosystem. While one of the endpoints must live in the ecosystem, there are several third-party applications integrated to the Power Automate functions. This includes but is not limited to Adobe Creative Cloud, Dropbox, Calendy, or Salesforce. (Microsoft, 2022.)

Power Automate is great for small integrations and tricks which can save specialist time to more useful tasks. It is not suited for larger application development needs due to the lack of possibility to create an user interface, but that is why Power Apps is available in the same ecosystem.

3.3.3 Power Apps

Power Apps is the application creation tool for the citizen developers. Although theoretically this could be used by anyone, there are proficiency limitations, which require an efficient user to make the most out of the creation platform. (Pearson et. al., 2020, p. 3.)

With Power Apps creating easy integrations with data sources in the Power Platform or elsewhere in the Microsoft ecosystem is seamless and easy. Easy development means lower costs and quicker development time compared to traditional development. (Leung, 2021, p. 7.)

If there is data, which does not exist yet in the digital world, Power Apps can be utilized to create the interface for the data input. Similarly, these Power Apps can be used for

simple data processing, which might not be available natively in the ecosystem. (Pearson et. al., 2020, pp. 4-5.)

Power Apps can natively use for example Excel, SharePoint, and SQL Server as data sources. With a special connector data can be accessed from Dynamics 365, Salesforce, Twitter, Facebook, or from many other sources. (Leung, 2021, p. 7)

In the hands of a skilled developer Power Apps can be utilized to create large variety of applications with minimal development needed compared to the traditional methods. If not always best suited for business-critical workloads, it can provide quick proof-of-concepts or data input platforms easily and with low cost.

3.3.4 Alternatives to Power Platform

While Power Platform is a comprehensive collection of tools, there are competitors offering similar tools. Due to the case company focus on the Microsoft platform, these competitor tools are not investigated in further detail.

Mode offers similar business intelligence capabilities than Power BI, including interactive dashboards and self-serve reporting. Mode can integrate into SQL data sources making advanced queries and analytics. (Mode, 2023.)

In the no-code integration filed, there is a striking similarity between Power Automate and another low-code platform called Zapier. It remains a notable tool in achieving quick integrations between systems like for example Pipedrive and Mailchimp (Zapier, 2022).

For the more comprehensive low-code application development one of the competitors for Power Apps is the Appian low-code platform. Appian offers deep and visual development experience, which is versatile for variety of business automations and applications. (Appian, 2023.).

The availability of alternative tools mostly highlights the possibilities available in the field at large, and something worth a deeper look when more company resources are available. However, Microsoft is the rare company to offer a whole set of tools, which integrate to a larger ecosystem. This is an advantage in the highly competitive field of technology.

Summing up, the technologies to achieve digitalization vary, but Microsoft's Power Platform offers a whole range of products for citizen developers to enhance the digitalization level in the organization, would it be business process automation with Power Automate, creating a new app with Power Apps or analyzing the existing data with Power BI. Therefore, these specific tools were selected as the focus for implementing digitalization. This thesis will not go into detail regarding the implementation, but it aims to provide some initial guidelines in tool selection to help kick start any digitalization case.

3.4 Conceptual Framework of This Thesis

To guide consulting companies in digitalization projects, a complete picture for digitalization consulting is required. This can be best represented as a Digitalization cycle where different stages follow each other in a continual manner. In many organizations this Digitalization cycle is already ongoing, but especially for many SMEs, it is likely that the cycle needs to be started, as there is no previous culture of digitalization, or the culture is lacking in progress. Thus, this conceptual framework attempts to generalize a digitalization approach for digitalization consulting.

The conceptual framework is visualized below, with supporting references presented in following Figure 9.

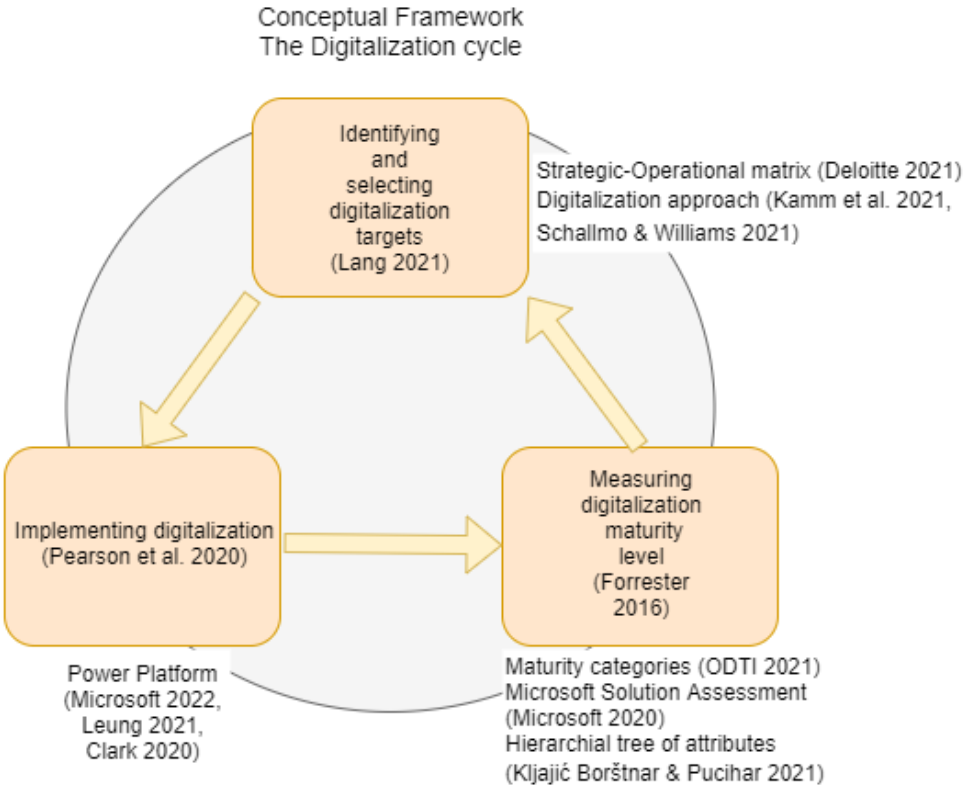

Figure 9. Conceptual framework: The Digitalization cycle.

First of the stages presented at the top of Figure 9 is the *Identifying and selecting digitalization targets*. This sets the digitalization cycle in motion no matter the maturity level of the target organization. This stage borrows a lot of the approach presented by Kamm et al., but for the needs of this thesis the three phases of Analysis, Identification, and Selection are compressed in one larger stage. Elements of the pilot project implementation presented by Lang (2021) are also crucial in the construction of this stage, especially in the cases where the business partnership is new, or the digital maturity of the target company is low. Vital to this stage are also the digitalization approaches presented by Kamm et. al. (2021), as well as Schallmo & Williams (2021). These provide a structure to the digitalization projects and further improve the probability of a successful implementation. Part of this stage is also the categorization of the possible digitalization projects and reflecting that to the Deloitte model created by Proff et. al. (2021a), as to get insight into what projects would be most impactful to the target company.

Second of the stage presented in the figure is the *Implementing digitalization* stage. The method of delivering this relies heavily on the Microsoft Power Platform tools and the praxis available in the practitioners of the digitalization. These tools are presented by practitioner focused manuals created by Pearson et. al. (2020), Leung (2021), and Clark (2020).

The third stage is *Measuring digitalization maturity level*. Considering the requirements presented for this thesis, the stage is best completed by using a simplified digital maturity model, like the one presented by Forrester (2016). Although it might be challenging to find suitable respondent for a digitalization questionnaire from a SME, as long as sufficient knowledge is collected and questionnaire completed, the measurement accuracy would be sufficient. This weakness can be mitigated if the partnership between the consultant and the target company is previously established and in a good working condition. In these situations, it is already possible that the organizational knowledge of the consultant is sufficient to answer most of the questionnaire on behalf of the client, or the expertise is enough to guide the client to provide realistic answers to questions. Usually, this measurement of digitalization maturity level is made to demonstrate the improvement (or lack thereof) in digitalization maturity for the executive committee or similar decision-making entity. This method of consultant-assisted questionnaire assessment is fully supported and mirrored by the Microsoft Solution Assessment presented by Microsoft (2020). Important to this phase is also the inclusion of necessary categories or attributes as presented in the model by ODTI (2021) and in the hierarchical model by Kljajić Borštnar & Pucihar (2021).

The Digitalization cycle can be started either from measurement of digital maturity or from identifying and selection stages. Implementing follows the latter stage and is thus unsuitable for a starting point. However, even starting from the implementation stage is not unheard of if there is a previously identified concrete business problem that needs prioritized solving. This basically means that the identification and selection are in-built and thus present in a sense, but not in a structured way presented in the conceptual framework. This is not explicitly stated by any of the models inspected but can be inferred logically.

The discovery of the conceptual framework and the Digitalization cycle gives a structure against which the following current state analysis can be reflected upon.

4 Current State Analysis of Digitalization Processes for Consulting SME Clients

This section of the thesis discusses the current state of digitalization processes for consulting SME clients. As outlined previously, the expectancy of the current state analysis is not to find a fully encompassing digitalization framework, but elements of it, which could be integrated into a model similar to something presented in the conceptual framework.

4.1 Overview of the Current State Analysis

The target of the current state analysis was to discover and analyze the current status of the digitalization consulting business unit to figure out which parts of the consulting process were already laid out, and which parts would need further development. This was to determine the future focus points in the proposal building stage.

The premise of the current state analysis was to find the typical case workflow, in order to discover any common practices and to determine the strategic motive for the consultancy business. It was already known that the digitalization consulting business in this case had not worked previously in a separate business unit and would not have unified methods or perhaps even unified ethos to go through the client cases. Therefore, consultant and practitioner interviews were deducted to be crucial to analyze the current state.

Due to the recent reorganization and start of the consultancy as a separate business unit, it was known that not many documents or material would be available to analyze. Lack of any meaningful quantitative data limited the selection of methods and influenced the outcome. Due to these limitations and the target to create a holistic picture of the consultancy business unit, interviews were selected as a main method to conduct the CSA. Document analysis was planned for any relevant material found during the discovery process, but as no usable material was found, this part was dropped from the final iteration of the CSA.

In the light of this knowledge, it was decided that one round of interviews would be sufficient to gather data. Therefore, the analysis was conducted via semi-structured interviews with the guidelines sent in advance, but enough room for free topic discovery

to find the strengths and weaknesses. Information about the previous digitalization cases was also collected simultaneously. These interviews were recorded and are in the possession of the thesis writer. The interviews were conducted in Finnish, but selected parts containing major discoveries were transcribed, translated, and quoted in the text.

Thus, the current state analysis was conducted in three steps. First, the data was gathered from the interviews. Second, the data was analyzed to understand the current practices and the typical case workflow. Finally, strengths, weaknesses, and selected focus areas were identified from the analysis results.

The interviews were booked beforehand on availability basis, preferring face-to-face interviews whenever possible. To arrive to the best possible result, it was decided early on to gather data from all aspects of the current consultancy business – proper consultants, decision maker stakeholders, as well as software developers highly connected to implementing these consultancy cases. At the time of the writing only one person would be doing full-time consulting, they were a natural choice to be selected for the interviews. Other logical selection for the interviews was one of the software developers who had actually implemented these digitalization cases with Power Apps Final selection for the interviews was the decision maker in charge of the business unit, who would provide the top-level view on the business and the current targets.

4.2 Description of the Digitalization Consulting Status

The case company has some previous cases which could be categorized as digitalization consulting. However, it was not immediately clear which parts of the process could be systemized, and which were done on ad hoc basis. Even if no systematic process could be found, it would be crucial to find commonalities in the previous cases to determine where the current knowledge is sufficient and where it would need more refinement.

This section is divided into three parts. Firstly, attempting to give an outline of how a typical digitalization case progresses, based on previously completed cases. Secondly, to explore the current practices available for the consultants. And thirdly, to give a strategic perspective for the current setup.

4.2.1 Anatomy of a Digitalization case

During the interviews several of the digitalization cases were selected and dissected to better understand what the usual flow of the case is. Most of the cases explored were relatively new, completed within the previous twelve months at the time of the interviews. Few older cases were also inspected in the interviews if they were particularly interesting to the topic at hand.

The previous cases which appeared in the interviews were varied. Unfortunately, not much written evidence survives. Examples of the projects include:

- Transformation of the internal communication and collaboration from traditional file system + e-mail combination to facilitate Microsoft Teams. (Respondent 2)
- Power Apps application for mobile data input. (Respondent 3)
- Power Apps application for requesting user account modifications. (Respondent 3)

Describing a typical case based on the interviews does not seem to be quite possible. There are some clear commonalities, including the heavy utilization of the Microsoft tools. Another commonality was the heavy technical focus, as only one of the projects dissected in the interviews included major rework of how the organization functions and the related training required for the end users.

According to Respondent 3 and based on the previous deployments, it could be summarized that a successful digitalization project is well-defined, and the scope should be optimized to deliver the best possible results.

A well-defined project needs less adjustments in the later stages where implementing them might require complete rework of parts of the solution. Optimized scope on the other hand means that the project can be completed in a sensible time frame, and all the features work in a satisfactory manner.

Otherwise, what the digitalization cases in the future should be is clearly something expanding out from the implementation, to actually advise clients on their use of technology and to accelerate the utilization of digital tools. According to Respondent 1, for a smaller company the role of the consultancy is to drive sales in other areas. For

larger companies the billed consultancy hours themselves can be the main part of the revenue stream.

4.2.2 Current practices

Basically, all of the projects inspected followed a similar flow, where a client has identified a business problem which would require solving using technology. Some of the times this would involve the pre-sales team in one way or another, usually making the client aware of the possible technologies and their use-cases. For some other projects, the client had already recognized the need for a technological solution and made the specifications independently, mostly requiring the help of the consultants in defining if the use of technology would be viable and how much the project would cost to implement.

After the project is properly defined, the implementation team of the company would create a suitable solution and usually made final edits based on the client user feedback. Focus on the Microsoft technology stack seemed to be one of the commonalities concerning the current practices in the implementation phase. While inspecting the past projects, all of them were conducted in a Microsoft ecosystem, so that majority of the technical operations would involve a Microsoft product.

Post-implementation support was not present in all of the projects, but in some cases where the end user experience had significantly changed, this phase included also some training sessions for the end users. Depending on the implementation size, this would be either workshop style small group training, or classroom training for bigger groups. In the later projects training was routinely offered, but if the training actually was part of the post-implementation support depended if the client had bought the option or not.

4.2.3 Strategic perspective

In the strategic perspective one of the points raised by the interviewees was that the consulting processes and cases are mostly seen as a sales tool in the small end of the SME field. Larger companies have a culture of purchasing surveys and digitalization maturity mapping projects, but such culture is lacking in the smaller businesses. In addition, the average small business decision maker has little to no knowledge about

digitalization and needs preparation to understand the basic concepts concerning digitalization and the value provided by digital transformation.

The idea of having a single digitalization partner who can provide IT support services, consulting, and software development had support from the interview Respondents 1 & 2. In theory this combination should provide holistic view of the digitalization assets and processes of the client. This should provide possibilities to shorten the discovery of potential digitalization targets and enable continuous communication with the client companies.

The company stakeholders interviewed believe that, to reach the previously mentioned goal of fully encompassing digitalization consulting, would require heavy investment in understanding the core business of the client and how to transform – not only the technical infrastructure – but also the working processes and the strategic thinking in the client company. This issue is explored in further detail during the analysis of the current capabilities later in the chapter.

According to Respondent 1, especially at the beginning, it would be less important that the digitalization consulting unit would be profitable on its own. The more important aspect would be the cases generated by the unit to drive sales to software development and to the IT services departments. For the long-term view, it would be preferrable that the consulting unit would be a profitable business, while also generating synergy benefits for the other parts of the company.

4.3 Key Findings from the Current State Analysis

Based on the interviews conducted, several interesting categories emerge. These categories have a lot to do with firstly the missing processes and formalized practices in the business unit. Secondly, the current capabilities and how the balance between the implementation and business understanding would play out. Thirdly, the topic of the definition of digitalization in the SME context. The findings are presented in more detail in this section of the thesis.

4.3.1 Missing processes

It was immediately apparent that one of the major problems of the current status was the lack of systematic documentation or any unified process to gather it. None of the three interviewees could tell that there would be a documentation process in place. Similarly, there was no systematic way to approach the clients when starting the consulting cases. Respondent 2 was able to provide some sales material on the cases and Respondent 3 could provide some field notes on implementation of the cases.

This lack of documentation hampers the growth of the business unit, as any possible case needs to start from zero, instead of relying at least partly on the previous cases and the output created on those cases. If there is a possibility to document how a typical case progresses in detail, there is a much higher probability to find something repeatable, which can be used to shorten the time needed for execution. In general, missing the leverage provided by repeatability means lost time available for other duties.

Another major area of improvement related to this topic was clearly that there was no established approach to present the digitalization consulting to new or potential clients. There were some existing packages, including but not limited to: information security assessment, Microsoft Teams learning package for end users, and ERP implementation package. These had some marketing presentations and pricing available in the company systems. However, these were only products in the company portfolio, not specifically a process to introduce a new client to the company’s consulting services in a more encompassing manner.

According to Respondent 1, the current plan to remediate the lack of processes was to complete one full digitalization case with the target client to collect the maximum amount of documentation to use as a basis for future projects. This is likely to take extended period of time as creating the documentation simultaneously while developing a functional solution takes more resources than a typical case. (Respondent 1)

One other plan to increase the repeatability of the consultancy process was to create a tool to draw digital architecture map which could be used to guide the client towards an ideal architecture defined by the size and perhaps the industry of the client. (Respondent 1)

4.3.2 Current capabilities

The respondents found that the company's ability to understand the technical solutions selected by the client was decently good. The company has strong knowledge in IT services and software development, demonstrated by more than 20 years of experience in respective areas separately. This background offers a varied selection of products to facilitate digitalization in a client company.

Respondent 2 adds that on the other hand, the same wide knowledge also results in some aspect relatively shallow knowledge, providing no specialization path or niche knowledge to leverage. Bigger competitors focusing in one of our product categories are able to provide deeper knowledge and out-compete in a comparison situation where these details matter.

One of the detected difficulties in the current capabilities was to determine what should be the level of knowledge on digitalization consulting should try to achieve. This is required to understand if the end state for the digitalization consulting business unit should be of only business consulting, or to what degree practical technological solutions are part of the equation. Value proposition needs further refinement to understand how the business model works in general. For the consultant, sufficient understanding of the client business processes is difficult to achieve. This is illustrated in the following quote by the Respondent 1:

> There are two ways to achieve competency in digitalization consulting: recruiting or training. Recruiting new talent is the quickest way. Training is a lot slower. In practice it takes a very long time. If we think about a potential candidate and try to make them a digitalization consultant, we are talking about years of training instead of months. In addition, there is no guarantee of success. It depends mainly on the candidate's ability to learn. (Respondent 1)

As demonstrated in the quotation, the company's ability to grow in these circumstances might prove to be difficult. The limiting factor clearly is the availability of staff able to perform in a manner that provides value to the client.

Respondent 3 was in the opinion that Power Apps was one of the cornerstones in producing quick digitalization wins for the clients. If the application is business critical, Power Apps might not be the correct choice in most of the cases, but otherwise using it results in quickly defined and tested applications for the client.

As to support the previously mentioned point, Respondent 3 gave many examples of successful implementations of Power Apps projects. The typical development time for Power Apps applications is about two weeks, whereas using the traditional software development method is likely take at least the double amount of time. In addition, as a result for this quick development time the costs are usually lower, which suits a typical SME client with less than ideal amount of capital available. Quicker implementations are also possible if necessary, but should be avoided for the need for post-implementation fixing is likely to grow with hasty work.

Based on the quite smooth and relatively pain-free implementation of a collection of Power Apps applications, this is clearly a powerful tool in the right hands. The only limitation for scalability is the availability of experts outlined previously. Hiring is relatively expensive, and the skills required are relatively rare. Digitalization consultants or Power Apps developers don't exactly come ready straight from the schools. In-house training is a viable option, but takes precious time, also limiting the time for others involved in the process.

Respondent 2 highlighted that most of the current and previous projects are heavily dependent on the Microsoft ecosystem, but there was a certain need to understand also alternative products to select the best option for the client instead of religiously sticking with Microsoft. In these cases, it is necessary to at least point the client to the better solution. Afterwards it is mostly a strategic decision to make the choice to implement an alternative (perhaps unfamiliar to the company) product or to forward the client towards a partner who is focused on such solutions.

According to Respondent 2 one of the ways to sell digitalization products to the clients has been to package it into products and sell those. For now, the digitalization consulting is not offered as a recurring service, which is the way some of the competitors are selling it. For example, one of the possibilities is to offer recurring digitalization workshops to accelerate the use of digital tools in the client company.

4.3.3 Defining digitalization in SME context

From a client perspective it is difficult to know what the term digitalization contains, and what is a company selling digitalization consulting actually doing, so what are the services or products offered. One of the definitions from the interviews is as follows:

> Digitalization provides an alternative method to processes which have been traditionally manual. It creates a tool to achieve the same thing using digital technology. (Respondent 2)

As demonstrated in the quotation above, it might be easy to define digitalization at a relatively satisfactory level, but the definition does not tell the potential customer what the concrete tools are or what the potential offer will contain. There is another possible definition for digitalization offered earlier in this thesis. Despite the relative ease of getting *a* definition for the term, the true difficulty is getting a *good* definition for the term.

Producing a clear and succinct definition for digitalization is vital, as the time to convince a cold client is very short and wasting it for an extended explanation to clarify an exact definition is non-productive. Thus, it might be a lot more fruitful to let the client to discover organically during the sales process what is the particular brand of digitalization offered by the company.

> The potential client might think that digitalization includes creating web sites or digital marketing, which are parts of digitalization as well, but not available in the product selection in this case. (Respondent 2)

As the quotation above exhibits, the distinction of what digitalization this particular company is offering compared to the competition is not trivial. In the scope the digitalization consulting is offered currently, it is important for the client to understand the limitations. If the case company grows a lot and *all* the aspects of digitalization can be offered, eventually this issue becomes moot. But as for now it is crucial to define what is meant by digitalization.

This issue is closely related to albeit separate from the missing processes to guide the client through a certain workflow to introduce the concepts related to digitalization and the product portfolio associated with it. Creating a clear prototype roadmap to for client guidance could be one of the solutions to this challenge.

4.4 Summary of the Current State Analysis Results

This section summarizes the findings of the current state analysis. Findings are presented by listing the main strengths and weaknesses of the consulting business unit. These are not all the topics discovered during the CSA, but a selection of the most

important and relevant findings. After the strength and weakness analysis is presented, the most relevant improvement topics are selected for further investigation.

4.4.1 Strengths and Weaknesses of digitalization consulting business unit

The current strengths and weaknesses identified during the current state analysis are presented in Table 2 below in the order of relative relevance to the company.

Table 2. Strengths and weaknesses of digitalization consulting business unit.

Strength/Weakness	**Description**
Weakness: Project discovery	The role of the consultants has been so far reactive and passive, waiting for the client prompt for need.
Strength: Implementation skills	The ability to execute technical challenges and to deliver them to the customer were deemed to be sufficient.
Weakness: Missing process and documentation	The lack of common ways to work leads to uneven quality and confusion.
Strength: Wide industry knowledge	It was identified that the company has uniquely wide industry knowledge.
Weakness: Lack of niche knowledge	Perhaps due to the wide range of products, there is no specific niche to focus on.
Weakness: Defining digitalization	While digitalization is a widely known term, it does not explain the client what the offer will be exactly.

As seen in Table 2 above, there are plenty of weak spots to focus on. Luckily, there are also some distinct strengths which should be used as an advantage in the proposal building phase.

Finding commonalities was not immediately apparent. However, one glaring omission is apparent in majority of the cases; most of the time the problem recognition and discovery has happened internally in the client company and there has been only little input from our consultants before the case is transferred to software development for implementation. Thus, more active role in discovering potential in the client organization should result in more refined vision of the future path taken. This is one of the weaknesses requiring further attention.

One of the major weaknesses of the digitalization consulting at the moment is the lack of formalized documentation. The case implementation has been relatively straightforward so far, and the case size has been small enough not to warrant any in-

depth documentation of the technicalities. The company file system includes just a few sales presentations and instruction documents, but these are now mostly obsolete as the technology has progressed.

The main strength discovered was the implementation skills of the company. Most of the projects executed had resulted in at least a satisfactory result from the client perspective. Capable professionals are the key resource of the company, and this reality reflects beautifully in implementations which can be a pride for their makers.

Another main strength identified was the wide industry knowledge in both managed IT services and software development. This is perhaps closely related to the previously mentioned strength in implementation, but adds more to the strategic perspective, where the potential client can choose to buy most (if not all) of their digital technology needs from a one partner.

From this wide industry knowledge comes also the weakness of the lack of niche knowledge. So far it has been necessary for the company to act in a more technology generalist role. This means that for the truly technologically deep projects, there might be some lack in the depth of the knowledge.

The final weakness recognized was the lack of proper marketing story to tell the company's vision of the digitalization and what it encompasses. While not a huge weakness in theory, this strongly undermines the understanding for new clients what the product portfolio of the company contains. This could result in unnecessary hiccups at the start of the journey.

4.4.2 Selected Focus Areas

Based on the strengths and weaknesses presented earlier, it would seem prudent to focus on project discovery, as naturally having a healthy order base is required in any business and focusing on execution before there is a decent queue of projects is not really a smart idea. To reiterate what was mentioned in the earlier section, most of the cases so far have been client-generated. More active approach is clearly needed to lead more projects to our starting digitalization consulting unit. Mapping the client situation and maturity level is one of the ways supported by the conceptual framework and is thus

worth investigating further. Some kind of maturity assessment designed specifically for the SME clients might be a possible way to achieve this.

To iterate this further, part of the issue is also the client understanding of the offer. In other words, this is the dilemma of the elusive common definition for digitalization. The solution proposed must incorporate the path to introduce digitalization to the potential client in bite-sized chunks not to overwhelm even the least sophisticated buyer, but at the same time to prove that there is enough value in the offer for even the more advanced organization. Demonstrating this potential is one of the cornerstones in building a competitive offer.

Another potential focus area is the missing structure of the business process leading the client through our consulting workflow and potentially leading to improvement areas in the client business. This would require building process maps and diagrams to support the business. This is also supported by the conceptual framework, but it would require more holistic picture to guide the consulting personnel through the Digitalization cycle.

No matter the exact choice of focus, it is imperative to find structure in the current on-need based culture. Finding the correct methods which would support the strategic view of the company as well as the day-to-day requirements will be the main focus of the proposal building following in the next section of the thesis.

5 Building Proposal for Digitalization Processes for Consulting SME Clients

This section of the thesis gives an organized view on how the current state analysis and conceptual framework were combined to a Proposal for Digitalization processes for consulting SME clients.

5.1 Overview of the Proposal Building Stage

Based on the information collected during the current state analysis and the theory synthesis in the conceptual framework, there was a clear direction for the Proposal building to progress. The burning issue at hand was to generate first set of consulting cases for the fledgling business unit in a proactive manner, rather than passively wait for clients to figure out what exactly they need help with. The theory discovered in the conceptual framework stage clearly supported the idea that mapping the client situation via digital maturity assessment would give a lot of information on strengths and potential weak spots to improve on. This combination seems to be an excellent question-and-answer pair to examine as a basis of the Proposal.

Firstly, the start for the Proposal building was quite straightforward. The consultancy business unit had already been created and the sales department (combined with the consultancy unit) were tasked with a plan to fill the orderbook. Natural pressure from these facts resulted in a workshop meeting between the consultancy and sales, where the results from the thesis conceptual framework and current state analysis were presented to the stakeholders.

Based on this workshop it was decided that the best course of action to reach the strategic objectives presented was to start creating a digitalization maturity assessment for SME clients. This would at the same time generate project leads for the company, as well as give the potential client a good way to experience first-hand what digitalization topics the company handles.

Secondly, another workshop was held to lock down more details. The main idea was to create a relatively quick but comprehensive enough questionnaire, which gives consultants enough information to correctly assess which aspects of the digitalization in the client business requires improvement. The assessment provides the client a decent

idea if their strategic and operative capabilities is competitive and where further refinement is needed. In addition, the assessment gives categories to illustrate strengths and weaknesses. It was decided that the questionnaire would be targeting key stakeholders in charge of the client digitalization. Further end user questionnaires could be created with slightly different question set if there would be a need for them later. End user questionnaires could be especially useful in measuring the impact of the digitalization projects executed in the client company.

The key stakeholder suggestions are presented in the next section of the thesis.

5.2 Findings from Proposal building

Stakeholders had an active participation during the Proposal building phase. The findings of the stakeholders were documented and are summarized in following Table 3.

Table 3. Key stakeholder suggestions for Proposal building in relation to findings from the CSA and the Conceptual framework.

	Literature concept	*Focus area from CSA*	*Suggestions from stakeholders for the Proposal, summary*	*Description of their suggestion (in detail)*
1	Digitalization cycle phases: *Measuring digitalization maturity level, Identifying and selecting digitalization targets, Implementing digitalization*	Missing processes to digitalize client business processes	Addition for phases in Digitalization cycle to increase clarity	The principal consultant suggested to clarify the Digitalization cycle by splitting *the Identifying and selecting digitalization targets* to two separate phases: *Analysis review with the client* and *Suggestions for improvement*. This would be done to separate the discovery made with the client from the suggestions presented later by the consultant. Similarly *Measuring digitalization maturity level* was suggested by the principal consultant to be split into initial *Assessing digital maturity* and later *Impact measurement* phases.
2	Digitalization cycle: *Identifying and selecting*	Project discovery challenges	Additional questions to gather free-form data	The principal consultant suggested that additional data could be gathered to better understand why the

	digitalization targets		during the questionnaire	client has selected their answer to the question. This could help to identify some key issues holding back digitalization maturity in the client organization.
3	Digitalization definition	Client understanding the offer	Gradual exposure to the company's definition for digitalization and related offers should be present before the client is onboarded to the Digitalization cycle	The sales manager suggested to create a supporting marketing story based on the digitalization maturity assessment to expose the company's definition and product portfolio gradually during the sales process. This would limit the amount of onboarded clients with sub-par potential and reduce the time for the consultant to introduce the concept to the client.

As seen from Table 3, the stakeholders expressed several inputs regarding the findings from the current state analysis and the conceptual framework.

One of the suggestions made by the Principal consultant was to revise the Digitalization Cycle from the Conceptual Framework to split the *Identifying and selecting digitalization targets* to *Analysis review with the client* and *Suggestions for improvement* phases. This would separate the analysis part done with the client and the later suggestion part, which would be done mostly independently from the client. In addition, this would create the time separation between the analysis and suggestion creation, which would be required to create a credible result. Similarly, *Measuring digitalization maturity level* would be done twice to accommodate the initial *Assessing digital maturity* and the later *Impact measurement* to demonstrate the client that the digitalization efforts are moving in the correct direction and with desired speed.

Next major suggestion from the Principal consultant was to add optional questions to the questionnaire to guide the client in answering the questions in a consistent manner. In addition, these additional questions could yield extra information about the client, which could be useful when creating the action suggestions for the client in a later stage.

The ever-elusive topic of the exact definition of digitalization was one of the main points needing clarification during the proposal building. Some definitions are provided earlier in this thesis but introducing any of these definitions for the business-minded SME client

would likely to be difficult. It is important that the client understands what practical meaning and implications the term digitalization entails. The sales manager suggested that the company's definition of digitalization, i.e. what services are offered under the umbrella of digitalization, should be gradually introduced during the process of digitalization assessment. The marketing material introducing the assessment should prime the client. In addition, even if the client would take the assessment without inspecting any of the materials beforehand, the assessment itself should introduce the aspects the case company offer is focused on. This was incorporated in selecting the digitalization maturity categories, which are introduced later in Section 5.3.2, to closely follow the company product portfolio.

5.3 Initial Proposal

This section of the thesis presents the elements required for the Initial Proposal in detail and summarizes the structure of the Initial Proposal.

5.3.1 Stages required to guide the client through the Digitalization cycle

The digitalization cycle presented during the conceptual framework provides a good basis for a more encompassing process to support the client digitalization journey. The original phases included *Measuring digitalization maturity level*, *Identifying and selecting digitalization targets*, and *Implementing digitalization* repeating in a cyclical manner. The main change from the conceptual framework to the proposal building was to split some of these stages to achieve more granular and easier to follow process. The stages in the proposal are the following:

1. Assessing digital maturity
2. Analysis review with the client
3. Suggestions for improvement
4. Digitalization projects
5. Impact measurement.

The first stage of *Assessing digital maturity* includes the consultant filling the questionnaire assessment in co-operation with the client. The details of the assessment are further discussed later in this thesis.

The second stage of *Analysis review with the client* is the presentation the consultant gives to the client after analyzing the results of the assessment, highlighting the strengths and weaknesses of the client organization in the context of digitalization. This is also the stage where client has a possibility to give input on their current digital strategy, and the direction they feel the organization should progress.

The third stage, *Suggestions for improvement*, comes after the consultant has reviewed the analysis results with the client. This stage includes the consultant's proposal on how the client could improve their digital maturity level. This includes a short-list of potential digitalization projects identified in the analysis.

The fourth stage, *Digitalization projects*, comes if the client decides to proceed on one or more of the suggestions presented by the consultant in the previous stage. This corresponds to the *Implementing digitalization* phase in the conceptual framework. In this stage, selected project is implemented in the target organization, either by consultancy, software development, IT services, or even a third-party partner.

The fifth stage is the *Impact measurement*, where the client runs through the assessment again (after the previous stage has been completed) to produce another measurement point to give visibility if the digitalization projects have improved the digitalization maturity of the company in the desired manner, and what are the next areas which require addressing.

After the fifth stage, the consultant returns to *Analysis review with the client* stage to communicate the results of the impact measurement and to continue the digitalization journey through another cycle. To emphasis again, this framework is not designed to be a one-off project for the client, but a start for an engine creating innovations to save human capital and create new business models. After all, the technology environment is in a constant movement and the companies who want to stay competitive need to keep running just to maintain their position with the competitors.

5.3.2 The questionnaire-based assessment structure

The backbone of the proposal is the assessment of the maturity level of the client company. The value of the assessment to the client, as well as the consulting company,

would be only as good as the accuracy and completeness of vision provided by the assessment.

As found in the conceptual framework, questionnaire-based approaches are pretty much the industry standard of maturity assessments. It was logical, nearly obvious, from the offset that the proposal should include a questionnaire-based assessment.

The literature explored in the conceptual framework section of this thesis provided the bulk of the questions used in the assessment. Some others were suggested by the workshop participants based on previous knowledge acquired working with the client systems and processes. The total number of questions collected and invented ended up being 32.

The questions are be presented to the client in the form of statements about the digitalization status in the company. The client answers the statements with a scale of one to five, where one represents strong disagreement and five represents strong agreement. To simplify the calculation of results, the statements are formed so that agreeing responses represent the most digitally mature organizations and disagreeing responses represent the least mature organizations. This design gives a theoretical aggregate score maximum of 160 and a minimum score of 32. The aggregate score is not displayed to the client, as categorized scores are more important than the total score.

Simple values tied to questions would only result of a single measurement of maturity. Thus, additional dimensions are gathered by categorizing each question into different categories representing the areas of digitalization. Again, the literature helped by providing several different methods of categorization. Out of many different categories, two sets of categories were created to combine and synthesize sensible categorization taking the company product portfolio into account. The categorization might be somewhat arbitrary and subject to change in the later stages of development but provides enough added depth to be useful. In addition, it might be useful to properly define the categories given at some later point. For now, it is assumed that the categories are self-explanatory, or if not, the consultant presenting to the client can expand on the meaning without much trouble. The category sets are presented in Table 4 below.

Table 4. The categories measured by the digitalization maturity assessment.

Category set 1	*Category set 2*
Analytics	Employees & Culture
Infrastructure	Organization
Business modeling	Strategy & Decision-making
Modern work	Devices & Technology

As seen in Table 4, the categories follow closely the traditional technical aspects of the digitalization, while incorporating the important organizational aspects. Especially category set 2 follows the division introduced in the literature, while category set 1 provides a division with closer relation to company product portfolio. It should be noted that these categories are not in a relation to each other. For example, a question in Analytics category can also belong to Organization or Strategy & Decision-making categories. The limitation is that one single question can belong to exactly one category in each set.

It should be also noted that the categories are measuring digitalization maturity, not other aspects of the client company. A low score in the Strategy & Decision-making category implies only a lack of digital strategy and issues in decision making relating to digitalization. Other aspects of the client company strategy might or might not be in a good order, as this is not measured by the assessment.

To further provide depth to the assessment, all the questions are also divided by scope into operational or strategic. This creates an additional dimension which is then represented by a position in a strategic-operational capability chart, where x-axis represents the operational capabilities and y-axis the completeness of strategic vision. Again here, the dimensions relate only in the context of digitalization.

To make the assessment as repeatable as possible (regardless of the client or the consultant), it was decided to create an application tool to present the questions, collect the answers, and visualize the results of the assessment. This was achieved with Power Apps with a development time of about two weeks.

5.3.3 Digitalization cycle and assessment practices

During the proposal building it was decided that the first assessment meeting with the client should last between one hour and one-and-a-half. This decision was made to ease

the hesitancy of the yet unsure prospect to commit to the assessment, as the required time commitment would not be large. This was done to minimize all possible entry barriers, for if the prospect embarks the process, it would be a lot more likely that they would go through all the phases, which is the ultimate target of the framework. On the other hand, this time limit set constraints of how many questions the assessment could include and how long the presentation priming the client could be. A good balance with a short priming presentation and relevant questionnaire set was achieved to adequately answer to this challenge.

Proposal building also included a debate on whether to vet the prospect before enrolling them to the first phase of the cycle. The framework itself supports client of any size or sophistication, but at the implementation phase a client of too small scope would result in a project which would likely be of no financial value to the company considering the time used in the process. Vice versa, a too large client company would result to resource exhaustion at implementation and likely sub-par results. It was decided not to implement any hard limits at this point, but the issue was marked for later review if this could prove to be a problem at validation or any later time.

5.4 Summary of the Initial Proposal

This summary includes all the aspects presented earlier in this chapter. Summary of the Initial Proposal is represented in diagram in Figure 10 below.

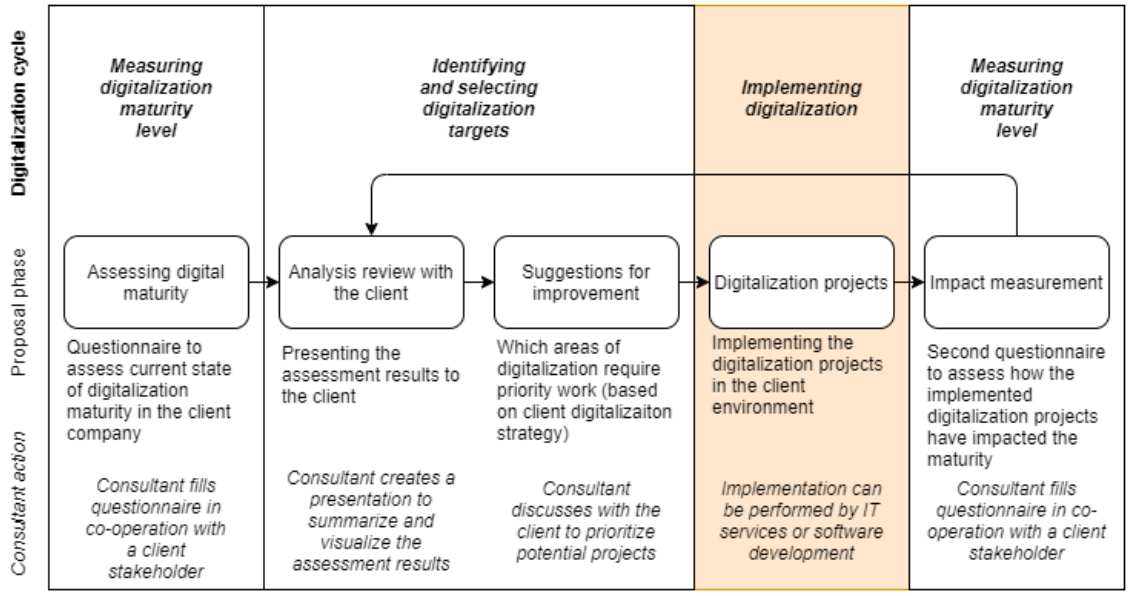

Figure 10. Initial Proposal diagram.

As seen in Figure 10, the initial proposal synthesises the original conceptual framework and integrates the strengths and weaknesses discovered in the current state analysis.

Any potential digitalization targets identified earlier can and should be used in the next cycle to shorten the delivery time, and to utilize all the insights acquired. Likewise, any innovations discovered in the implementation phase should be recycled by the company across different clients. Similarly, the next maturity level measurement is based on the previous and can be less comprehensive, and still result in accurate findings, as long as the series of measurements provides a clear indication of the progress made.

The Initial Proposal suggests a logical-sounding framework. Nevertheless, every proposal must be exposed to reality to validate the mechanisms empirically. Next section of this thesis focuses on the validation of the presented framework.

6 Validation of the Proposal

This section reports on the results of the validation stage and points the further developments to the Initial Proposal. At the end of this section, the Final Proposal and recommendations for future use are presented.

6.1 Overview of the Validation Stage

As the framework in the Initial Proposal was relatively refined, it was decided to target for the strongest possible validation and roll out the framework to production use with a pilot stage to iron out any deficiencies discovered.

Firstly, to validate the Initial Proposal, the framework was introduced to the consultants. Supporting marketing materials created during the Proposal building were used to prime the consultants to the concept and then the consultants were introduced to the tools used to conduct the Digitalization Maturity Assessment, the backbone of the framework. Suggestions for improvement was collected based on the professional opinion.

Secondly, significant amount of marketing and sales power was expended to introduce the framework to potential and existing clients who would be interested in potential improvements of their digitalization capabilities. The resultant group of real clients would be the pilot group on which the framework would be tested upon and refined.

Thirdly, the consultants implemented the framework in the pilot group. This included as many stages of the framework as possible in the relatively short time period reserved for the validation but including at least the first three proposal stages (*Assessing digital maturity*, *Analysis review with the client*, and *Suggestions for improvement*). Feedback from one of the clients was collected by a consultant during the pilot phase.

The focus of the internal interest from the company for this framework is the creation of new channels or contact points towards the clients and the ability to transform any information collected to real projects. Thus, the aforementioned three proposal stages are crucial in evaluating the success of the framework. The latter stages are important in making sure that the framework translates to a continuous process easing the

possibilities to sell more services to the client repeatedly but as the framework is quite sequential, the success of the first stages is paramount.

6.2 Developments to the Proposal

Table 5 below summarizes the inputs from the consultants during the validation.

Table 5. Expert suggestions for the Initial proposal.

	Proposal phase of the Initial proposal	*Parts commented in Validation*	*Description of the comment/ feedback by experts (in detail)*	*Development to the Initial proposal*
1	*Assessing digital maturity*	Assessment question clarity and ambiguity	The consultants suggested that some of the questions should be revised to clarify the intended meaning and to remove ambiguity.	Questions were revised to address the issues.
		Additional data collection during the assessment	The consultants found additional questions designed to collect extra information during the assignment difficult to use, interrupting the flow of the assessment.	The use of additional questions was dropped for now.
2	*Analysis review with the client*	Internal process for storing the project leads missing	The consultants found there was no unified process in place to store the potential digitalization projects discovered during the analysis with the client, especially if particular project was not selected in this iteration of the Digitalization cycle	Internal process to store the potential projects to CRM was created.
3	*Impact measurement*	Need for a separate Impact measurement questionnaire	The consultants found that a separate questionnaire would yield better data for the Impact measurement.	The framework was updated to include a separate questionnaire for Impact measurement.

As seen from Table 5, the suggestions presented during the validation were quite minor, mostly focused on the minutiae of the framework.

6.2.1 Developments to Assessing digital maturity of the Initial Proposal

One of the more major developments was the additional data collection questionnaire set. This questionnaire set was not integrated to the assessment tool, as the tool view would be visible to the client during the assessment, and the additional questions were designed to be presented on-demand basis where sufficient discussion was not occurring. One of the consultants summarized this issue:

> There was just about enough time ask the questions, mark the answers from the client, and write something in the notes field. Even reviewing the additional questions during the assessment would grind this process to halt and create unnecessary confusion. (Consultant 2)

As the quote demonstrates, the original function of the additional questions was to create support for the consultant if no discussion arises, but the function was almost reversed by creating an unnecessary burden for the consultant. Integrating these additional questions to the main question set would be possible solution, although the time limit available for any single assessment session likely prohibits this. However, the additional questions can be used in the future to familiarize any new consultants on the multidimensionality of the digitalization.

6.2.2 Developments to Analysis review with the client of the Initial Proposal

Even though the framework created tries to be as detailed as possible, there are certain gaps. The framework is more of a high-level guide to walk the client through the Digitalization cycle, not a complete instruction set how to exactly do it. For example, the framework does not tell where to store the information which is not connected to the answers to the assessment, or any similar minutiae. This is partly intentional, but this can create some points where it is possible for the consultant to ‘drop the ball’, especially if the time frame of the cycle expands. Safeguards to prevent this should be enacted, perhaps in the form of CRM prompts to store necessary information, or similar remainders to keep the consultant highly focused on delivering a full cycle even if many simultaneous cycles with different clients are running.

6.2.3 Developments to Impact measurement of the Initial Proposal

Unfortunately, none of the pilot clients reached the Impact measurement phase during the validation period. Nevertheless, there was a discussion regarding the *Impact*

measurement phase during the consultant onboarding for the framework. Initial framework implied repeating the exact same questionnaire again might be less beneficial than having a separate question set more focused into particular issues the digitalization project was trying to remediate. A more focused impact measurement questionnaire would also compress the time required. The framework was adjusted to accommodate a distinct Impact measurement questionnaire. The consequences of this change are yet to be fully determined, but further validation should yield sufficient data to decide if this change should stay is place or be reverted back to the original.

6.3 Final Proposal

Based on the feedback gathered during the validation, the proposal was updated to accommodate the changes required. The diagram for the Final Proposal is presented in Figure 11 below.

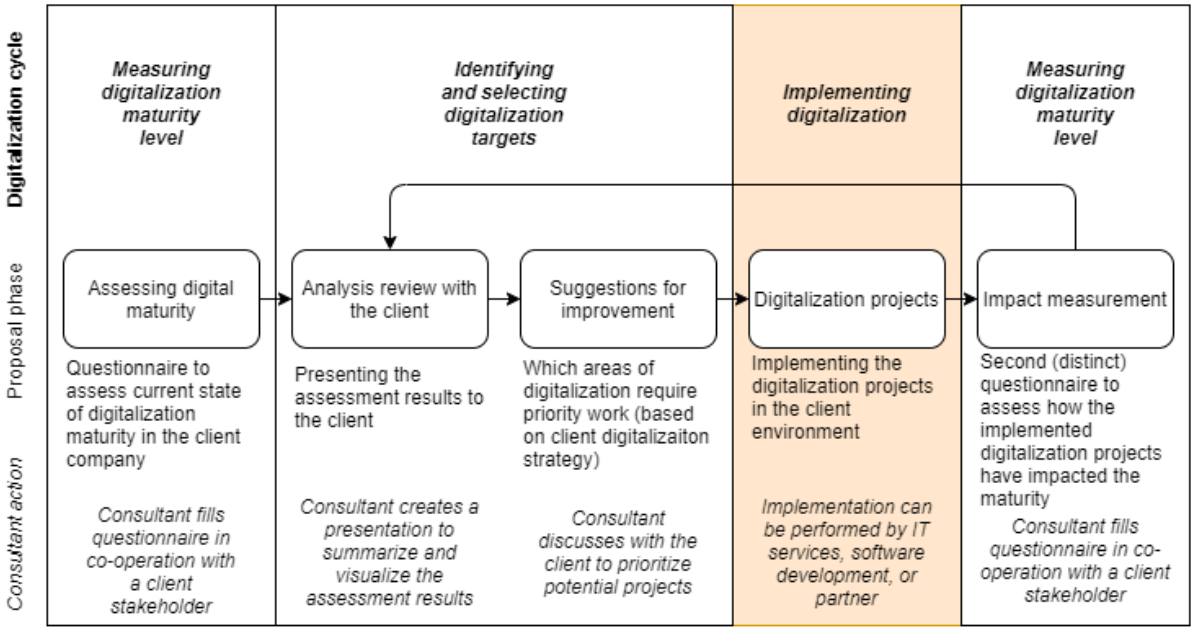

Figure 11. Final Proposal diagram.

As seen in Figure 11, the framework is very similar to the Initial Proposal with only minor adjustments. The main structure remains the same, the improvements relate mainly to internal processes surrounding the framework, not the framework itself.

The general feedback was positive. Based on the client feedback, the framework was easy to follow and delivered concrete suggestions how the client could improve their digitalization in a meaningful manner. Digitalization is widely discussed, but for SME clients the concrete meaning is usually left in the dark. The framework enables to clarify the digitalization concept to the client and creates initiatives which are designed to future-proof their digital tools and processes.

6.4 Recommendations

The framework guides the consultant in assessing the digitalization status in the client company but is not all-encompassing. Much responsibility is still shouldered by the consultant making sure that the framework is executed, necessary information is discovered and filed, and that every stage is actively followed through. More guidance on how to use the framework might be required, especially on how to transfer the suggested projects to implementation or how to store the information for the future cycles.

However, as the feedback during the validation was mostly positive, it seems that continuing to utilize the framework presented and improving it further would be the correct way to proceed. The *Impact measurement* phase was not yet validated with real client cases. Therefore, continued use of the framework would be important to validate it fully. In addition, the initial results – new channel to approach the potential clients, and increased capabilities for project discovery – warrant giving this framework a proper rollout and further improvements.

7 Conclusion

This section contains the conclusion of this thesis, including the executive summary, managerial implications, and the evaluation of the thesis.

7.1 Executive Summary

The objective of this thesis is to establish a framework to digitalize client business processes in Small and Medium Enterprises. The digital consultancy had recently started as a separate business unit and needed unified process to handle clients and to deliver results.

This thesis was conducted utilizing applied action research methodology. The data gathered was mostly in the form of interviews with practitioners inside the company, analysis of experience stories, as well as a number of workshops to formulate and deliver the framework.

The literature search surrounding the digitalization consulting and case studies regarding digitalization and maturity assessment resulted in a conceptual framework consisting of a three-phased wheel including three key elements: *Measuring digitalization maturity level*, *Identifying and selecting digitalization targets*, and *Implementing digitalization*. After developing the conceptual framework, the current state analysis was conducted to find out of the current strengths and weaknesses. Major weaknesses included the lack of common processes, the lack of client understanding of the company's offer and the lack of niche knowledge. Then the conceptual framework was compared to the interview data collected during the current state analysis to formulate the framework.

The proposed framework provides a process for the consultants to handle SME clients in a unified way. The framework consists of five distinct phases: *Assessing digital maturity*, *Analysis review with the client*, *Suggestions for improvement*, *Digitalization projects*, and *Impact measurement*. These phases follow each other to allow the client to run through the Digitalization Maturity Assessment with the consultant, to get the improvement recommendations derived from the assessment, to implement digitalization projects based on those recommendations, and to get a measurement if the project has succeeded in delivering results. In addition, after the *Impact measurement* phase, it is

easy to return to *Analysis review with the client* and to repeat the other phases accordingly. This opens a new channel towards the client and keeps the consultant up to date on the current digitalization issues faced within the client.

The proposal was piloted with a small number of new and existing clients. This validation was done for the three first phases of the proposed framework. The feedback from the validation was mainly positive, and the framework structure was found to be robust. The final adjustments were mainly towards the internal processes surrounding the framework or the tools used in delivering the framework, not the framework itself.

At the time of the writing, the framework continues to be in use. The use continues with handling the enrolled pilot clients with the help on the framework, as well as enrolling further clients to use the framework. If the framework is utilized in full, it could very well be one of the main channels for delivering the value proposition of the company towards the clients, as well as enabling the clients to communicate towards the company. The ease of enrolling new clients to the framework also implies that this could be a good way in acquiring new SME clients who are interested in digitalization but have not yet found the correct partner to implement it with.

7.2 Managerial Implications

To implement this framework in the consultancy business, there should be sufficient resources allocated to make it work optimally.

Firstly, decent amount of marketing power needs to be allocated, likely for an extended period, to funnel prospects at the starting phase of the framework.

Secondly, the framework relies heavily on the consultant driving the process forward and keeping simultaneously the client engaged and the company informed about the information extracted. This necessitates that each consultant has enough time to handle all the simultaneous pipelines moving at parallel.

Thirdly, it is imperative that enough implementation power is available to deliver the projects envisioned when utilizing the framework. Otherwise, all the marketing power and consultant effort expended previously will be wasted.

If the following criteria are met, there is a considerable chance that the framework functions as intended.

7.3 Thesis Evaluation

The original objective of this thesis was to deliver an applicable framework for client process digitalization in SME context. This framework has been created, partially piloted, and evaluated. This framework is generalized to serve variety of different client industries. Generalization helps to make the framework valid for most of the client cases, but perhaps lacks detail compared to industry-specific specialized frameworks. The target was to serve SME clients, and thus streamlined process was built over more complex. This again results in lost accuracy in places, but careful judgement was used to retain as much detail as possible. Due to these reasons, the thesis might at some points steer towards general rather than specific.

Originally, there was a heavier focus on the Microsoft ecosystem, which while important in the delivery of the result of the client, plays smaller role in the actual framework.

There is also lesser focus on the implementation side than originally envisioned. In the hindsight this is not surprising as much of the implementation side material is usually not publicly available (as it is usually part of the competitive edge of the company) and thus quite unsuitable for review. However, it would have been interesting to be able to deliver even a generalized guidelines how to implement these digitalization projects in practice.

The current state analysis might have yielded better results if the preparation for the interviews would have been more through. With a slightly better question set, there would have probably been more insights to uncover, something which would have made synthesizing the proposal easier. This is the point which lacked focus and came together more by luck than skill.

Summing it up, it can be said that the objectives were met in a satisfactory level. While more detail would improve the work in general, no big stones were left unturned.

7.4 Closing Words

For those embarking on a journey towards digitalizing the businesses processes, the path might not seem clear from the beginning. However, it is a journey worth taking and worthy of the efforts, as the rewards highly outweigh the risks. No Amazon, Tesla, or Netflix would exist without the brave companies redefining what is possible with digitalization. Even if the target is not the moon, but the small steps toward a better business, digitalization is tool to achieve these goals. While this thesis does not revolutionize anything, this is a small step towards a world where digitalization is everywhere and even the smallest company is entitled to the results previously reserved for the big enterprises. It is easy to get lost in the digital jungle, but with a proper guide the path is safer to travel. And if the guide has a proper map, it might be almost guaranteed that you will reach the end.

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Question template used in CSA

What are the most important tools for digitalization consulting at the moment?

Is there any consultation data saved in the company databases? If yes, where?

What are the company's strengths in digitalization consulting?

What are the company's weaknesses in digitalization consulting?

What are the biggest opportunities?

What are the biggest threats?

Field notes summary for interviews conducted during CSA

Interview	Observations
Respondent 1, Mar 29th, 2022, 60 mins, Microsoft Teams meeting	Typical digitalization mapping project should result in a graph of the software tools the client uses. One of the goals of the thesis project could be a graphic tool to map the digital architecture of the client.
	One of the biggest weaknesses is the small size of the company, which limits the resources available.
	The average SME CEO does not have a strong grasp of digitalization.
	Current plan of getting a more defined process is to map one of the clients fully and to create the needed documentation on the go.
	Regular consultant usually advises, the implementation is not done. For a small company, consultancy is only a tool for additional sales. Larger company should be able to bill from the consulting hours done.
	Having a single digitalization partner who can offer IT services, software development, and consulting provides additional value.
Respondent 2, Mar 23rd, 2022, 60 mins, Face-to-face meeting	Microsoft portfolio and the tools surrounding it are most important tools available, but the company should also know the competition. A better option for the client should be pointed out if such exists.
	There is a lack of niche knowledge or deep knowledge in some things. For example, consulting modern work and Sharepoint use goes usually quite deep.
	The company has a wide knowledge of IT and a 360-degree view of what is available for SME clients.
Respondent 3, Mar 23rd, 2022, 60 mins, Face-to-face meeting	A successful project is usually well defined and of correct size, not too ambitious.
	Power Apps shortens the development time. In cases reviewed, the development time was approximately half compared to traditional methods.
	Power Apps has worse performance than tailored code. This means that Power Apps might not be ideal for business-critical software. For supporting apps Power Apps suits fine.
	Although Power Apps is marketed for Citizen Developers, it pays off to be a professional when making a real application or a system. Rarely there is an opportunity for a layperson to develop an app in their work time.