LAB University of Applied Sciences

Bringing Knowledge Management to Professional Services Team

Case: Acrelec Nordics

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Tiivistelmä

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Bringing knowledge management to Professional Services Team

Case: Acrelec Nordics

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Markku Nopanen, Managing Director, Acrelec Nordics & Baltics

Tiivistelmä

Professional Services-tiimi on jo pitkään keskittynyt vastaamaan markkinoiden kysyntään itsepalvelukassaratkaisuille. Pandemia tarjosi ihanteellisen tilaisuuden arvioida uudelleen Professional Services -tiimin työtottumuksia ja -järjestelmiä.

Ensimmäinen askel kehitystyön käynnistämisessä oli kartoittaa tiimin tarjoamat palvelut ja niitä tukeneet prosessit. Tutkimusmenetelmäksi valittiin toimintatutkimus. Tässä toimintatutkimuksen ensimmäistä vaihetta kutsutaan jäätymisen purkamiseksi. Tutkija tekee alustavan tilanteen kartoituksen ja alkaa tehdä johtopäätöksiä siitä tässä vaiheessa. Nykytilanteen kartoituksen jälkeen tutkija ja muutama tiimin jäsen tekivät SWOT-analyysin. SWOT-analyysi antoi selkeät suunnan siihen, mitä kehitystyössä tulisi priorisoida. Tietojohtaminen, Professional Services -tiimi ja prosessien kehittäminen olivat kolme pääpainoaluetta. Suunnitelma laadittiin painopistealueita ajatellen ja kehitystyö aloitettiin joulukuussa 2021.

Kehityksen tuloksena syntyi helppokäyttöinen tehtävänluontiominaisuus uudessa projektin ja tiimin hallintatyökalussa ClickUpissa. ClickUp mahdollisti oleellisten tietojen keräämisen toiminnoista ja kojetaulujen luomisen. Kehityksen aikana luotiin 15 kojelautaa auttamaan asiakaspalvelua, projektinhallintaa ja tarjoamaan kattavampi kuva kokonaisuudesta. Laskutus nousi 27 % automaatioiden käytön ja helppokäyttöisen tehtävien luomisprosessin ansiosta. Tiedonkeruulle varattiin kuusi kuukautta aikaa. Tämän jälkeen Professional Services -tiimi ja Acrelec Nordics johtajat osallistuvat kehityspäiville, joiden aikana kerätty data analysoidaan ja tiimille osoitetaan uusia painopistealueita.

Asiasanat

tietojohtaminen, toimintatutkimus, kehitystyö

Abstract

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Markku Nopanen, Managing Director, Acrelec Nordics & Baltics

Abstract

The Professional Services team has been focusing on meeting market demand for self-check-out solutions for a long period of time. The pandemic provided an ideal opportunity to re-evaluate the Professional Services team's work habits and systems.

The first step in initiating development was to map out the services provided by the team and the processes that supported them. The research approach chosen was action research. The first phase of action research was unfreezing. The researcher conducts preliminary mapping of the situation and begins drawing conclusions about it during this phase. After mapping the current situation, the researcher and a few team members conducted a SWOT analysis. The SWOT analysis provided clear guidance on the development work that should be prioritized. Knowledge management, the Professional Services team, and process development were the three main focus areas. The plan was developed with the focus areas in mind, and development work began in December 2022.

The development resulted in an easy-to-use task creation feature in ClickUp, a new project and team management tool. ClickUp enabled the collection of relevant data about operations and the creation of dashboards. 15 dashboards were created during development to aid in customer care, project management, and to provide a more comprehensive view of the big picture. Also, invoicing rose 27% due to the use of automations and easy-to-use task creation process. Six months were set for data collection. Following that, the Professional Services team and Acrelec Nordics executives will participate in development days during which the collected data will be analyzed, and new focus areas assigned to the team.

Keywords

development work, action research, knowledge management

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1 Introduction

1.1 The need for the thesis

Utilizing creative knowledge management in organizational operations is one of the critical success factors in the global world today. In the management of knowledge capital, special attention is paid to the ability of the organization to innovate, the developing skills of individuals, and especially the ability to anticipate changes in the operating environment and the market. Ståhle and Wilenius (2006, 68). laid the foundation for this new management model, which quickly gained a strong foothold alongside performance management and other previous management models. This management reform has indeed been necessary, as one would have been able to guess how fast the development of digitalization has really been in recent years.

Alongside digitalization, there have been other significant factors that have changed the consumption behavior of people on a large scale. One of the most important of these changes is the focus on sustainable development, which has been driven by the need to act in an environmentally and climate-friendly manner. In addition, the global pandemic has contributed to the transformation of the retail sector, where distance purchasing and anticipation of purchasing transactions are an essential part of evolving activities.

The need for this thesis was originated from the development intentions of the Acrelec Professional Services Team, which aims at the best customer service in the rapidly evolving operating environment. Numerous issues are confronting the field of information technology today due to the sector's rapid growth and the development of mobile technology and its services. Therefore, the adequacy of the workforce, the development of professional skills, the agility of the organization, and coping at work and its meaningfulness are things that will be taken forward. At the same time, there will be an even more decisive shift to knowledge management.

The demand for self-checkout solutions has been increasing a lot in past years. Due to this reason, Acrelec Nordics has been in a permanent state where the focus has been on being able to answer the demand. The pandemic that started in 2020 slowed the business down. The situation enabled a perfect opportunity for Acrelec Nordics to start looking at the processes and services that have been created around the Professional Services Team of Acrelec Nordics.

1.2 Introduction to Acrelec

Acrelec is a global technology company focused on reinventing, innovating, and developing the customer experience for restaurant and retail brands and leveraging decades of software, hardware, and service expertise. In addition, developing and integrating new platforms that increase customer engagement, optimize efficiency, and improve operations. The headquarters of Acrelec is located in France, software divisions located in Romania and Brazil, and two manufacturing plants, one in France and the second in China. In addition, Acrelec has 17 offices around the world. They employ 900 employees worldwide. Currently, there are 275 ongoing projects, and Acrelec's client base consists of 68 clients, including the fast-food giants such as McDonald's, Burger King, Taco Bell, and KFC. (Acrelec 2022.)

Acrelec Nordics consists of three country companies and delivers projects and services in the Nordics and Baltics area. Acrelec Nordics have offices in Finland, Sweden, and Denmark. The Professional Services Team is a shared resource for all country companies inside Acrelec Nordics. The team delivers all the projects and services to Acrelec Nordics customers. (Acrelec Nordics 2022.)

The product range of Acrelec offers several different solutions to overcome the previously mentioned challenges in chapter 1.1. For their part, self-checkout, kiosk, drive-thru, click & collect, and related support services provide solutions for restaurants, shops, and other service functions, which are now rushing towards a new era.

1.3 Objectives and focus of the thesis

This thesis aims to overview the current situation and specify the need for the development of a professional service team. The main objectives of the developmental work are defining valuable data that needs to be gathered from the day-to-day activities of the team, building a visual representation of project overview, increasing the productivity of the team by removing insignificant work by automation, and deployment of cloud-based project management and team management tool. This leads to the creation of the preliminary action plan to be deployed.

The scope of this thesis focuses on activities related to the Professional Services Team. This includes:

- Core processes of the team
- Three most essential tools used by the team

- Three most critical managerial aspects

All three focus points are chosen to ensure that the thesis does not deviate into other exciting business areas. First, the team's core processes were chosen as a focus area because the empirical portion of the thesis aims to develop them. Second, the team utilizes a variety of tools. The thesis examines critical tools to determine if they need to be upgraded to align with Acrelecs future vision. Third, a great team and well-developed processes do not operate autonomously. As a result, it is reasonable to concentrate on the managerial aspects necessary to achieve desired outcomes.

This thesis is to answer the following research questions:

- What relevant data should Acrelec Nordics gather from project and service delivery to support the development plan?
- Why is knowledge management essential in team management?
- How to launch a knowledge management program?

The first question takes the researcher to validate relevant data for the team and organization. The second question aims the researcher to justify the knowledge management approach, and the third question puts the focus to provide a proper plan on how to bring knowledge management to the Professional Services Team.

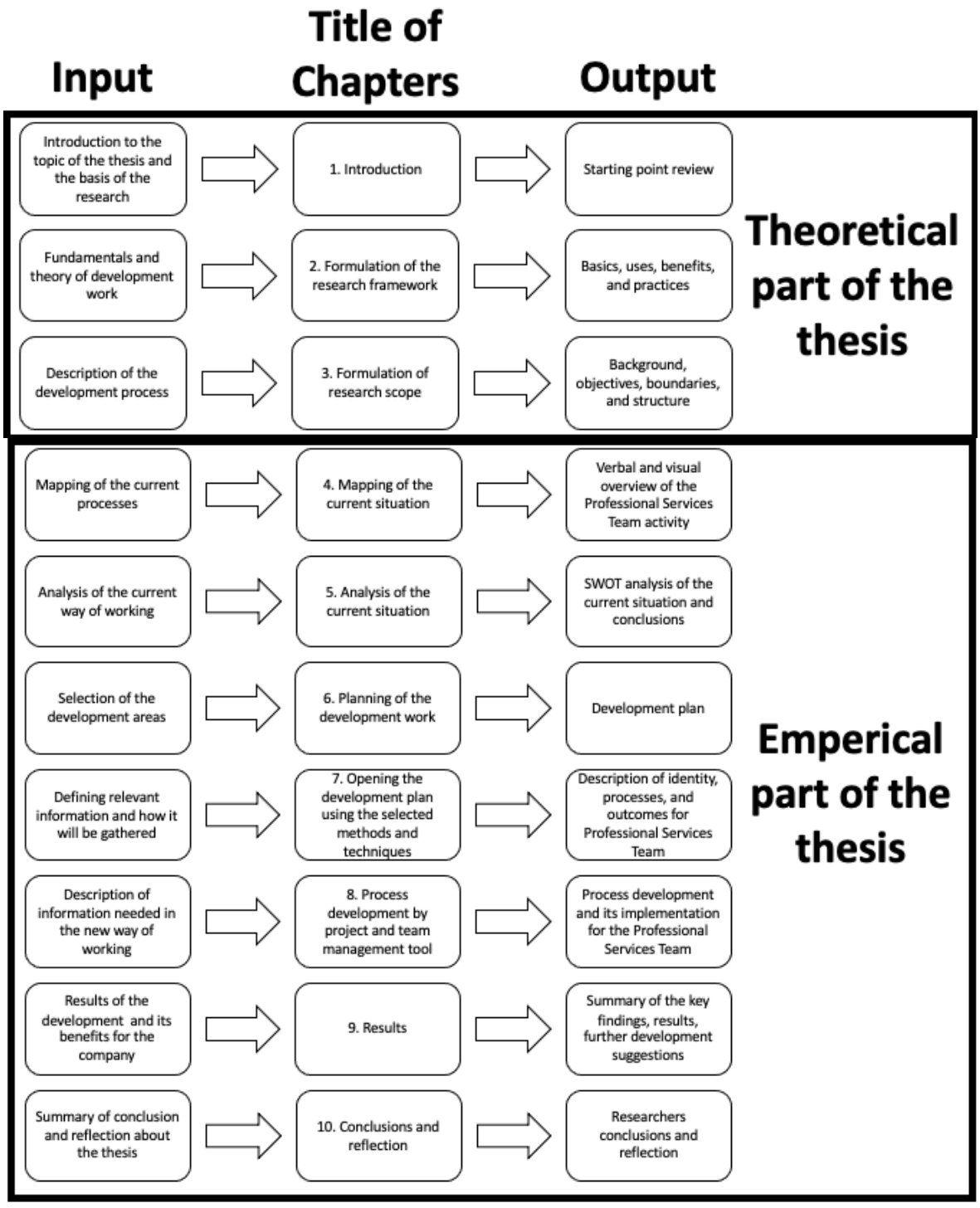

Figure 1. Input / Output figure on the structure of the thesis.

2 Formulation of the research framework

2.1 Qualitative research

Qualitative research is a broad phrase that involves a range of methodologies and methods to investigate natural social life. Most of the data collected and processed are non-quantitative in nature, consisting primarily of textual information such as interview transcripts, field notes, and documents. Additionally, the many types of documentation include individuals' experiences with others during social activities and reflective areas. (Saldana 2011, 3-4; Merriam & Tisdell 2015, 3-4.)

Qualitative research also has a variety of objectives, depending on the purpose of the project. Nonetheless, the results are frequent, consisting of essential presentations and demonstrations of the major discoveries from the analytical data synthesis. Additionally, they may include documentation of cultural observations, discoveries, human and social complexity judgments, program or policy evaluation efficacy, and the early phases of social justice. (Saldana 2011, 3-4.)

There are studies in very similar areas. However, they can take utterly different research perspectives. Here are four example perspectives:

- The ground theory research perspective
- Social representation theory perspective
- Biographical research perspective
- Ethnomethodological research perspective

(Flick 2007, 20.)

The ground theory viewpoint on research emphasizes the importance of examining everything from phenomena and practices to theory and explanations. Another term for the ground theory research perspective is bottom-up. The social representation theory perspective on ground theory research is the polar opposite. This study approach exemplifies a top-down perspective perfectly. The study progresses from scientific models and theoretical notions to everyday behaviors through the lens of social representation theory. Biographical research is an illustration of a perspective that begins at the mid-level. The experiences or coping strategies serve as the beginning point for the biographical research perspective. There are two approaches to biographical study. The first approach could be used to develop a framework for evaluating biographical experiences and narratives. The second approach could examine the kind of knowledge that people use to cope with situations and

how their exploitation differs. A more rigorous ethnomethodological perspective would investigate ordinary patterns of speech and activity. Without such a formal framework, ethnography would be more interested in detailed accounts of such practices. (Flick 2007, 21.)

2.1.1 Interviews as qualitative research method

Qualitative research has developed a systematic process in which interviews are done, data are categorized, and results are published in the form of summaries written in formal language. Interviews are a standard method of data collection in the social sciences. Although qualitative researchers today employ a number of perspectives and investigate a vast array of phenomena – from rituals to the unconscious – the predominant data collection approach is the in-depth interview. (Packet 2011, 42.)

Although verbal data can be elicited in the form of single words or phrases, or brief statements or explanations, interviewing has become a common and accepted component of qualitative research and research in cognitive studies, developmental psychology, and the learning sciences, among other fields. Qualitative methodologies that are otherwise entirely dissimilar – grounded theory, thematic analysis, empirical phenomenology, and interpretative phenomenological analysis – all agree on the importance of interviews for qualitative data collection. Moreover, numerous qualitative research projects rely only on interviews for empirical data. (Packet 2011, 42.)

2.1.2 Research cycle

Hackett et al. (2016. 18-19) emphasize the importance of a cyclical approach to research to pose questions and obtain answers. The figure two below illustrates the research process's circular nature:

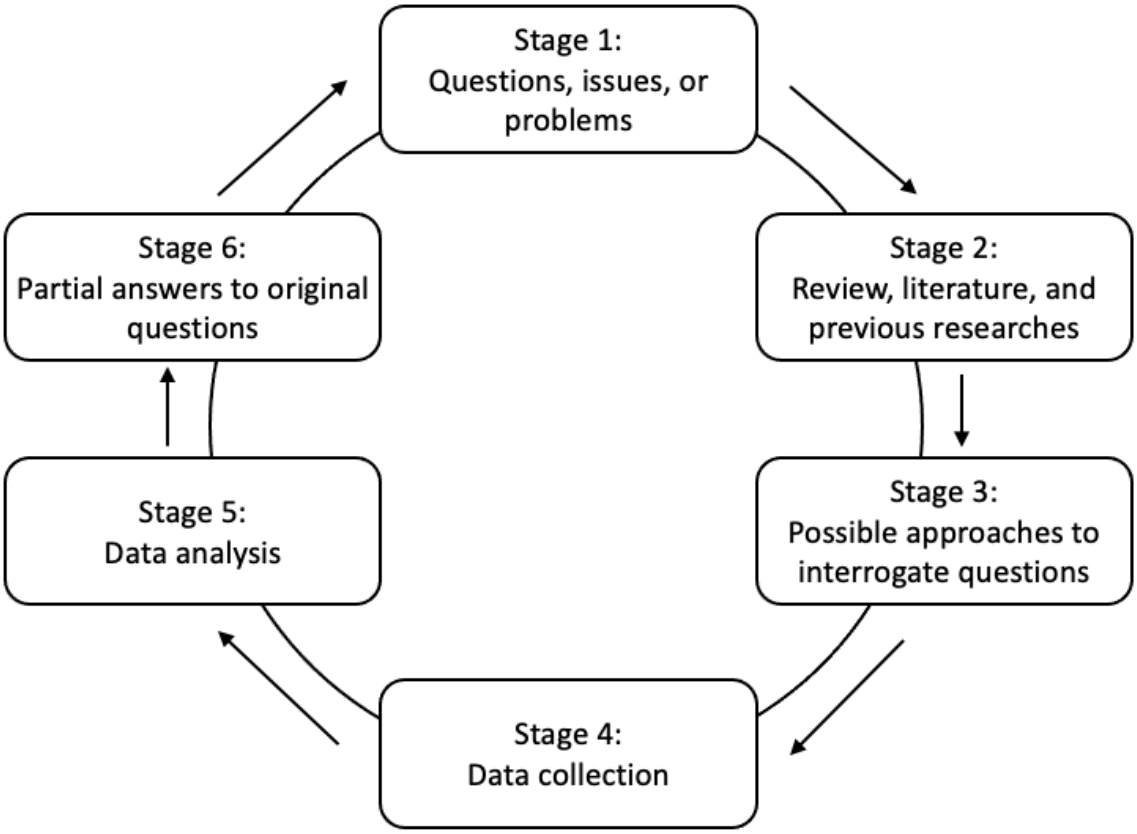

Figure 2. Research cycle. (Hackett et al. 2016, 18-19.)

When attempting to comprehend the diagram above, the reader enters the cyclic process at the top of the diagram, at the questions, issues, problems stage. The researcher determines which questions, issues, or problems will be addressed in his or her research at this stage. The researcher essentially concretizes his or her questions and delimits the scope of the research to be conducted during this phase of the project. The researcher then proceeds to the next stage of the research cycle by following the arrows to the right and down. In this section, the researcher gathers and then evaluates background information on the product or service under consideration. The researcher conducts secondary research into other studies that have been conducted on similar services or products, as well as any other information that may be used to inform the design and analysis of the current research project. This stage should begin with a broad search and gathering a diverse range of information, which should then be sorted until only the most pertinent data remains. The third stage of the research cycle is another process that entails identifying and evaluating research opportunities. However, the researcher is not seeking background information on the product or service at this stage but instead is inquiring about the most appropriate research approaches to use. The researcher will answer these questions based on their personal experiences and training, as well as on similar research that has been published in the literature. After the researcher has made the decisions inherent in the first three stages

of the research cycle, stage four involves data collection. It is critical to emphasize that none of the research cycle stages, particularly the data collection stage, are as straightforward as the book implies. (Hackett et al. 2016, 18-19.)

In stage 5, the gathered data is analyzed correctly. This action results in stage 6, during which answers are provided to the questions posed in stage 1. Stage 6 is depicted in Figure 1 by the verbal description "partial answers. Unless the research topic and questions are exceedingly straightforward, the answers generated in stage 6 will invariably be incomplete, and new questions will emerge from the research. Thus, with partial answers in hand and new questions suggested by the research, the researcher re-enters, or another researcher enters, the research cycle at stage 1 with modified questions. From this point on, the researcher repeats the research cycle, and with each cycle, the research becomes completer and more valuable. (Hackett et al. 2016, 18-19.)

2.2 Action research

Kurt Lewin (1951) is the founder of action research. In 1951, he researched changing human behavior towards democratic values and leadership. Action research is a research method where the researcher intervenes during the research. Intervening serves two purposes:

- Intervening brings positive change to the research.
- Intervening generates knowledge and theory.

According to Lewin, the job of the researcher is to encourage employees to adjust their behavior towards democratic values and leadership. Action research aims to solve problems. The differentiating factor is that the researcher is an active participant in the process. This helps the researcher intervene faster and get a better understanding of the problems. (Janse & Vliet 2021.)

Action research is a type of systematic investigation that typically entails attempting to solve practical problems in real-world settings with the participation of stakeholders who work or live there. Action research is one of the numerous research methods used in the social sciences, which are broadly defined to encompass both fundamental disciplines such as sociology, psychology, and economics and professional fields such as education, psychology, business, and social work. While the question of whether action research should address both basic and applied research questions remains debatable, there is growing consensus that practical and applied questions should take precedence. In contrast,

fundamental and theoretical questions may be addressed if they do not obstruct the practical and applied research goals. (Willis 2014, 21.)

The action research method is a process that is repeated over time. The following figure 2 shows the action research that is divided into three phases. The purpose of the phases is to generate a continuous feedback loop. (Janse & Vliet 2021.)

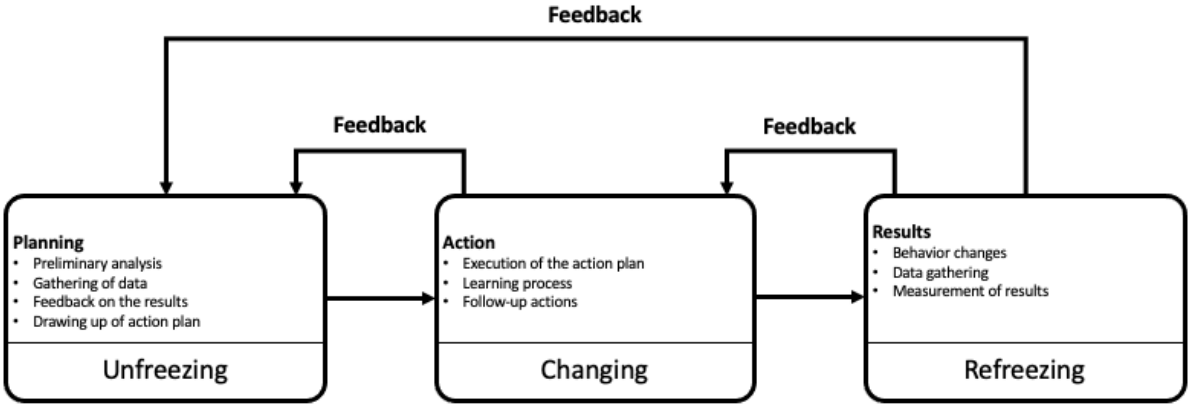

Figure 3. Action research (Janse & Vliet 2021)

Action research is intrinsically impacted by participants' values and culture because it is a methodology that incorporates them directly in a social context. Action research methodology is shaped to meet the group's objectives and the types of knowledge generated by action research projects based on the history, traditions, tools, and discourses of the group, as well as its dominant discourses and regimes of truth. Institutional structures and political constructions of power and ideology also influence how action research methodology is shaped. (Somekh 2005, 31.)

2.2.1 Participatory action research

Wadsworth (1998) breaks down participatory action research (PAR) is an umbrella term that refers to various participatory approaches to action-oriented research. When researchers and participants work together to investigate an issue or behavior, they are called upon to make recommendations for improvement. The traditional hierarchical links between research and action and between researchers and the researched have been questioned by proponents of participatory techniques for over seven decades. They aimed to replace the extractive, imperial paradigm of social research with one that dispersed the benefits of research more directly to the concerned communities. By aiming to abolish hierarchical role definitions, proponents have attempted to de-empower ordinary people in and via research, as well. Fordist modes of literary production have been replaced by more adaptive and socially owned processes. (Lawson et al. 2015, 1.)

The most frequently used methods in PAR are dialogue, storytelling, and collective action. With the decrease in technology costs over the last two decades, arts and media-based methods have gained popularity, as have visualization techniques such as participatory diagramming and mapping. Participants create charts, pictures, and maps to investigate issues and relationships. One of the most critical characteristics of these methods in work with marginalized or vulnerable groups is their hands-on nature and their capacity to enable people to produce information and communicate knowledge on their terms, using their symbols, language, or art forms. (Kindon et al. 2007, 36.)

2.2.2 Benefits of action research

Action research can result in increased comprehension and learning. It has the potential to result in changes in practice and beliefs. It has the potential to modify the forms and patterns of interpersonal connections and mutual understanding. As a result, action research transforms persons. It is a vehicle through which people can refine their practices. Additionally, it transforms the way groups interact, which can result in changes to entire communities and their relationships to their social and political settings. While all of these are critical, they are not the primary objective of action research. (Townsend 2013, 127.)

The adoption and promotion of action research aim to affect how people see and treat information, learning, and change. Small, targeted, and personally focused change activities produced from action research can be integrated into a bigger, more diverse examination of all these elements. Even if this remains a personal endeavor, engaging in action research implies membership in a community of devoted activists who share similar values. (Townsend 2013, 127.)

2.3 Three layers of change

When change is required, it is advantageous to think of it as a layered onion. Individual transformation is composed of three layers. The outermost layer is composed of outcomes. This outcome layer is constantly displaying the outcomes of current activities. The second layer of transformation explains the daily, weekly, monthly, and yearly processes and behaviors. The processes produce the outer layer outcomes. Finally, identity is buried behind the outcome and process layers. This layer is formed by the individual's worldview, self-image, beliefs, and judgments about himself and others. (Clear 2018, 36.)

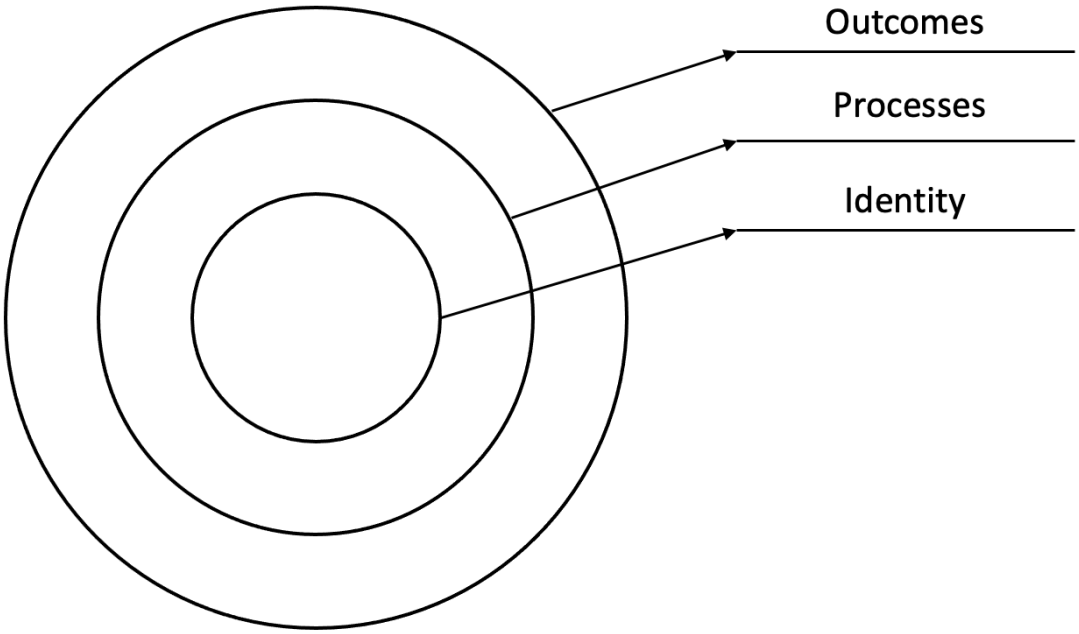

Figure 4. Three layers of behavior change (Clear 2018)

2.4 Knowledge management

From a practical standpoint, knowledge is defined as information in action. Until people make use of information, it is not knowledge. In a business setting, knowledge refers to what employees know about their clients, one another, products, processes, errors, and accomplishments, whether tacit or explicit knowledge. (O'Dell & Hubert 2011, 2.)

The Americas Productivity & Quality Center describes knowledge management as a systematic endeavor to facilitate the growth, flow, and creation of information and knowledge. The discipline is concerned with developing and managing processes that ensure the appropriate knowledge is available to the right people at the appropriate time and that enable people to exchange and act on information to improve organizational performance. (O'Dell & Hubert 2011, 2.)

2.4.1 Importance of knowledge management

Intellectual property management's significance has long been recognized. However, information has become increasingly perishable. There is a danger that the knowledge a company has accumulated over time will become an unprofitable asset overnight. As a result, selecting the appropriate knowledge has become critical for organizational competency. (Ishikawa & Isamu, 2007, 1.)

Technical knowledge is required to operate our computers and keep planes in the air. Practical knowledge enables us to communicate effectively and to comprehend the perspectives of others. Emancipatory knowledge enables us to comprehend potentially oppressive forces and strategies to overcome them while avoiding the temptation to become oppressors ourselves. Finally, relational knowledge enables us to comprehend the nature of our humanity and our multidimensional interconnectedness with others. (McNiff & Whitehead 2000, 138)

Knowledge does not emerge linearly. It can transform. Knowledge evolves and transforms, constantly pushing the boundaries of human knowledge and the capacity to know. Earlier forms are encased within more sophisticated forms. The more people seek knowledge, the more complex methods of knowing become. People create new epistemologies to assist in comprehending our own expanding experiences. All forms of knowledge are necessary for the ever-expanding commitment to understanding ourselves and another. As knowledge evolves, the knower evolves as well. Knowing enables knowers to live in ways that transcend and incorporate technical, practical, and emancipatory forms at a more advanced level of knowledge. They are necessary components of the learning process that aid in our advancement. (McNiff & Whitehead 2000, 138.)

2.4.2 Technology and knowledge management

As organizations transition to a knowledge-based economy, their business success will increasingly depend on knowledge workers' ability to create and apply information productively and efficiently. In addition, the ability to identify and exploit vital knowledge is critical for the survival and success of an organization. As a result, businesses are faced with the challenge of improving their knowledge management. (Handzic 2004, 4.)

Businesses in today's challenging economy are continually challenged to improve their efficiency to remain competitive and meet growing market demands. In addition, customers are increasing their demand on organizations to deliver solutions and services more quickly and cheaply. Knowledge management may help organizations become more efficient by transferring experiences and best practices to avoid duplication and save money. Often, technology plays a critical role in attaining efficiency gains. (Handzic 2004, 12.)

It is natural for knowledge researched in multiple disciplines to have varying interpretations, as different fields of study have varying purposes. However, there is one feature of knowledge that is universal. That seems to be that knowledge is only valuable if there are others who value it. Therefore, regardless of how advanced technology is, it dies with the individual who has the information until it is shared. When knowledge is defined as

"something which perishes unless it is purposefully preserved," it becomes evident that we want some sort of system to preserve and transfer knowledge. (Ishikawa & Isamu, 2007, 8-9.)

Innovation in products, processes, and structures has been vital for new-generation enterprises' success. The new products and services generated by the combination of knowledge and technology fundamentally alter how firms function and compete in the new economy. (Handzic 2004, 12.)

2.4.3 Mapping the knowledge

An organization's wealth of knowledge is frequently hidden because it resides in people or is buried in a folder. Undoubtedly, before determining where critical knowledge should flow, it is vital to determine its location and source. Knowledge mapping establishes a clear picture of an organization's knowledge assets and who controls them. (O'Dell & Hubert 2011, 25.)

It is essential to emphasize that there is no one-size-fits-all map. Instead, people inside the company are likely to modify one or more of these maps to fit company needs. The following ten basic steps must be followed whichever type of mapping is required:

1. Define the knowledge management flow's focal point.
2. Describe the rationale for the knowledge management mapping exercise.
3. Create a flowchart for the process or target area.
4. Identify critical factors.
5. Identify activities that are highly regarded.
6. Identify significant knowledge sources and recipients.
7. Identify critical bits of information required for each phase of the process.
8. Create an inventory of the categories of knowledge used and required.
9. Identify inconsistencies, insufficient connectivity, and information overload.
10. Create a strategy for assessing, validating, and disseminating the knowledge management map's findings.

(O'Dell & Hubert 2011, 28.)

It is essential to emphasize the critical nature of performing a gap analysis between what is discovered during the exercise and the perceived ideal state in step nine. A subset of key stakeholders, process owners, experts, and people impacted by changes and improvements would conduct the gap analysis. This gap contains the most precise, explicit information that a knowledge mapping can extract. Gap analysis assists in prioritizing and categorizing process information and also ensures that critical knowledge remains in focus. To conduct a gap analysis, it should be asked what fundamental knowledge or information is missing?, and what are the impediments to information flow?, and How may knowledge flow be improved? (O'Dell & Hubert 2011, 28.)

These questions aid in the identification of gaps in an organization's knowledge management map. A knowledge management map is something that must be updated on a regular basis. Organizations and teams undergo constant change, which has an effect on the knowledge management approach used by the organization. (O'Dell & Hubert 2011, 28.)

2.4.4 Knowledge management approach

There are numerous approaches to knowledge management. All approaches seek to achieve a balance between the demand for information technology and the requirement to prioritize people. It is critical to keep in mind that the primary objective should always be the people. After all, human beings are the originators and carriers of all knowledge. When beginning the process of determining which knowledge management approach is best for the organization, the following considerations should be made: (O'Dell & Hubert 2011, 49.)

1. Is crucial information concealed or made explicit?
2. What type of knowledge conversion is required?
3. What kind of task is performed?
4. What existing ties exist between the target employees?
5. What additional features affect the flow of knowledge?
6. What tools are currently being used?
7. What resources are available to initiate and maintain a knowledge management strategy?
8. Is the approach to knowledge management resolving some crises?
9. What is the intended result?

The answers to these questions provide insight into the people and knowledge involved and the resources available to the knowledge management program. For instance, if the work is scientific and technical in nature and the intended audience is scientists interested in discussing research issues and problems, creating dialogue opportunities will be part of the design. Additionally, if they already participate in technical forms, assistance in capturing more of the tacit knowledge shared at those events might be helpful. Between these meetings, a community of practice could meet virtually to continue the dialogue on critical issues. Additionally, they may wish to have improved access to additional documents and previous research and the ability to record and share other content. This information starts to reveal which knowledge management approaches to use. (O'Dell & Hubert 2011, 49.)

2.4.5 Knowledge management visions into strategy

A vision is a guiding principle that defines what the organization should be. Vision is eternal. The broad direction is established by vision. The vision articulates the ideal world or organization that one aspires to be. A vision acts as a guide for businesses as they navigate tumultuous times. Visions are a very effective tool for coping with change. Organizations that successfully define and express that vision can dramatically affect their internal operations and industry or sector. A vision can aid in promoting and accepting change on all levels. Visions are the most important factor affecting an organization's performance in moving from an industrial to a knowledge-based economy. When that vision is disseminated throughout the organization, it can energize employees by connecting them to its purpose. A vision inspires people, identifies knowledge capital, and enables everyone to comprehend the investments and growth necessary to sustain the business in the future. A vision serves as a framework for decision-making. (Ceruti et al. 2019, 36.)

Each business will have a different vision that will emerge through a distinct process. How would the organization define the process of visioning? What techniques might be employed? Who should be a part of this process? It is critical to have a basic procedure in place since any vision must be updated continuously as the future unfolds. This will not be a one-time effort. Four straightforward questions can aid in the definition of the company visioning process, including the following questions: who creates the vision, what variables should be taken into account, which techniques should be employed, and how is the organization going to sustain and keep the vision alive? (Ceruti et al. 2019, 36-37.)

After developing a vision for the future, the organization is now prepared to act. Missions, cultures, strategies, and tactics are all based on and translated from visions. Visions show us where the organization is heading and what the future holds. Visions describe the future knowledge organization and its behavior. Missions and goals define an organization. It

explains the motives. It defines the work. It is the first step towards achieving the vision. The organizations' vision is centered on our mission and aims. While the company's vision is forward-looking, the mission is grounded in the present. Therefore, adjustments should always be in line with the company's mission and values. (Ceruti et al. 2019, 36-37.)

Everyone in the organization should be aware of the mission and evaluate actions and decisions against it. Culture contains its core assumptions, ideas, values, and actions. Organizational culture reveals its core ideas, attitudes, and actions. Culture shapes how people generate and share ideas and integrate innovation and creativity into daily work surroundings in a knowledge organization. The impact of culture is more significant than the impact of values. A conventional mission statement lacks organizational culture. Organization's risk having poor strategies and methods separated from the vision and mission by ignoring culture. A vision is worthless as a management tool if that is only a wish list for the future. Every day, organizational values, assumptions, and beliefs shape behavior at all levels. When the culture supports the vision, everyone understands what to anticipate. In cultures, deep-seated beliefs reflect the vision when the vision is shared. Having distinct values influences personal and organizational effectiveness. People are more accepting of change when they grasp the basic principles and how they relate to the vision. Healthy organizational culture is one where individuals and organizational values align successfully and where rewards and recognitions reinforce the values. Disconnects between culture and vision have serious consequences. The organization's strategy tells people what it does and provides. Tactics are developed to implement visions, missions, and cultures. (Ceruti et al. 2019, 45-46.)

Strategy never shows where to go. It tells how to get there. Strategy embodies the organization's mission, which embodies the vision. The strategy is the big picture approach to make one's dream come true. Businesses have various levels of strategies: corporate, industry, or sector-focused if they are varied, function or business capability-focused, and operations or front-line strategies. Finally, tactics define the organization's actions. Tactics are acts taken to implement a strategy. Tactics are focused on daily operations. Because they all have 'strategic value,' strategies are often confused with other management tools. For example, plans for the year are not tactics. Neither are tactics or initiatives. Missions are also not strategies. However, they all play a part in creating a favorable atmosphere for organizations' methods to flourish. (Ceruti et al. 2019, 45-46.)

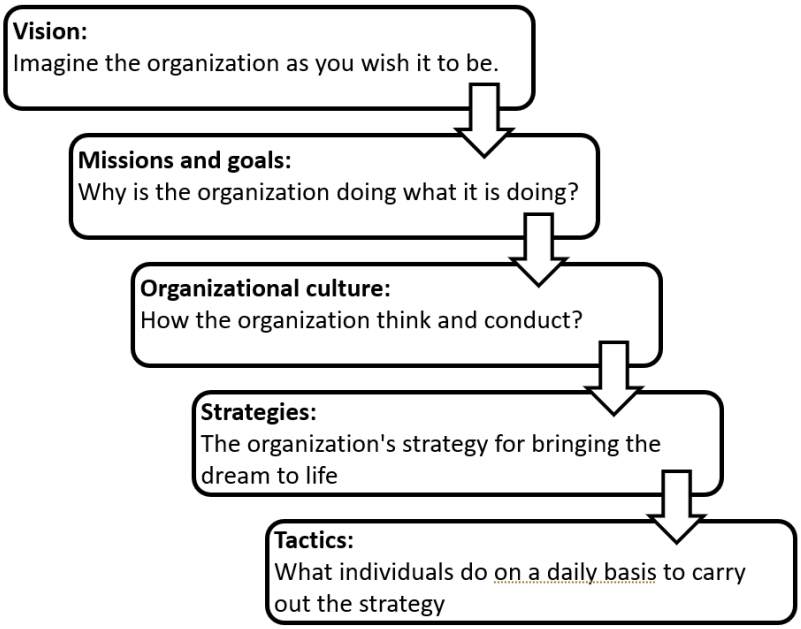

Figure 5. The big picture context for strategy (Ceruti et al. 2019, 46)

2.5 Company's core processes

The core process is the function chain between companies' core mission and operations. This function chain produces a service or product for the customer. Here are a couple of examples of core processes:

- Production
- Purchase
- Research and Development
- Customer Relationship Management

The core processes need support processes to function correctly. It is essential to mention that core processes do not produce the wanted outcomes without the supporting processes. Support processes, as the name implies, support main processes. The main objective of the support process is to increase the fluency of the core process and make the organization more functional. (Työturvallisuuskeskus ja tuottavuustyöryhmät 2015.)

2.5.1 How business became process-oriented

Within less than two decades, increasing company performance through identifying, assessing, and improving business processes has become common practice in organizations

worldwide. It has developed into a recognized discipline, referred to less formally as process orientation and more formally as business process management. Process management appears to be an essential part of managing corporations, government agencies, and other organizations. However, it is easy to forget that it is still a relatively new field. (Sharp & McDermott 2009, 13.)

At the beginning of the century, the scientific management revolution began searching for optimal production processes. However, the emphasis was on individual tasks, not the final business process that organizations now know. This emphasis on individual tasks continued for most of the century and did not begin to shift until the 1980s when widespread allusions to cross-functional work appeared. Then, in the early 1990s, business process reengineering exploded onto the scene, igniting a fresh interest in business processes. (Sharp & McDermott 2009, 13.)

2.5.2 Process inventory

The process inventory is a list of the business processes that belong to a department or area. This list must create one if such a list does not exist. One can identify business processes by evaluating a department's work, scanning job descriptions, or conversing with colleagues about their roles and duties. (Page 2010, 19-23.)

Given that a single business process might include several subprocesses, each major process can be further divided into subprocesses. Therefore, while creating the process inventory, break down extensive processes into subprocesses to ensure that no business process is overlooked and identify the owner or the person responsible for each process. (Page 2010, 19-23.)

Another technique to arrange the process inventory is to categorize all business processes. For example, if collaboration is done with an information technology department, classify their business processes into relatively broad categories that should work in most circumstances. (Page 2010, 19-23.)

2.5.3 Simplifying the process

Simplifying or streamlining a process refers to reducing or eliminating the complexity of activity inside a business process to make it more understandable and efficient. When a process is kept simple, it becomes easier to sustain and more responsive to client/customer needs. Unfortunately, our business processes become increasingly complex as companies react to new business conditions. As a result, people bloat an organizations' processes by

continuously increasing complexity. Additional questions one can as trying to streamline the process are the following:

1. Is it possible to streamline any phase of the process?
2. Can any of the procedures be streamlined or simplified?
3. Where do employees go to obtain information necessary to fulfill process steps?
4. Are people aware of how many errors they make and why?
5. Is it possible to remove or combine any phases from the process?
6. Is everyone aware of the processes?
7. How do specialists bring data and reporting into the process?

(Page 2010, 154-156.)

2.5.4 Process Performance Indicators

Process Performance Indicators (PPIs) are automated measurements of a process-oriented organization's operational success. The emphasis is on operations and automated process performance assessment. While Key Performance Indicators (KPIs) are universally used to provide a strategic overview of a business's performance, PPIs provide a more detailed look at specific processes. (Minit 2022.)

PPIs are not a substitute for key performance indicators but rather a supplement for organizations that derive their competitive advantage from process excellence. Beyond the conventional realms of manufacturing and banking, process-driven organizations exist. Any organization that views business processes as central to its existence and prioritizes process performance as a means of achieving a competitive advantage is process driven. (Minit 2022.)

Whether processes are explicitly defined informal documentation or are only implicitly defined through repetitive actions, processes define whether an organization succeeds or fails. When processes are embraced, monitored, and measured, they strongly indicate the bottom line, employee happiness, operational risks, and customer satisfaction. PPIs cover a more condensed but detailed view of how processes operate. While KPI reporting is effective when it provides a high-level, bird's eye view of performance, PPIs focuses on operations' micro-level. Based on operational demands, organizations will create PPIs. Quality, time, cost, and flexibility are standard process performance metrics. Tradeoffs are inevitable

because time and cost indicators are negatively related to quality and flexibility indicators. Therefore, quality and flexibility are prioritized over speed and cost. (Minit 2022.)

Business strategy and organizational emphasis will determine which criteria are most critical. Time, cost, quality, and flexibility are the essential considerations in most corporate business operations. Competitive advantage and crucial performance measurement is time. For this dimension, look at the lead time and throughput time, including service time, queue time, wait time, move time, and setup time. Time is related to cost since time equals money, human labor is hourly, machine labor involves depreciation and power costs. Quality and flexibility are linked to costs. The outcome of poor quality and restrictive processes is high costs. Quality can be external or inside. External quality is perceived by the customer, whereas the maker perceives internal quality. Flexibility is adaptability. This dimension applies to resources, tasks, and the process as a whole. There are five categories of flexibility: mix, labor, routing, volume, and process adjustment. (Minit 2022.)

3 Formulating research scope

3.1 Research strategy and methods

Qualitative and action research were chosen as the critical methodologies of research. Qualitative research tries to explain the organization's inherent social functioning. Given that this thesis aims to enhance the functionality of the Professional Services Team, the qualitative research approach will be advantageous. As a result, qualitative research and action research are strongly intertwined. The researcher is an active participant in action research. This enables the researcher to intervene appropriately and better grasp the issues at hand. As discussed in Chapter 2.2, action research consists of three stages. The first phase involves development planning. The second step of research contains development action. The third phase of the research examines the results of the activities and planning.

The thesis work will utilize:

- Mapping of current processes as they are and new developed processes to be.
- Interviewing key persons.
- Community brainstorming and forecasting methods within the company.
- Analysis and use of written sources.

The aims for the research methods are the following: mapping the current process is an essential starting point for developmental work. After the current processes are mapped out, the analysis gives essential feedback towards new, improved processes. Interviewing key persons helps with finding out the wanted developmental aspects regarding the functionality of the team. It is always better to use more brains to solve or develop things. Therefore, community brainstorming and forecasting methods are being used in this thesis. Lastly, analyzing already written literature about the topics handled in this thesis gives a strong spine for the work.

3.2 Research questions

The first research question comes from knowledge management principles. First, it is beneficial to map the processes and see what data is currently being collected. Mapping the relevant data to the organization is essential because the developed processes need to produce the relevant data. The second research question aims to explain why the knowledge management approach is picked for this thesis. Finally, the third research question aims the thesis towards making an implementation plan for the knowledge management

solution. A good plan without an implementation plan will not produce anything for the organization. This is why, it is essential to have an implementation plan and divide it into implementable phases. Therefore, this thesis aims to answer the following research questions:

- What relevant data should Acrelec Nordics gather from project and service delivery to support the development plan?
- Why is knowledge management essential in team management?
- How to launch a knowledge management program?

4 Mapping of the current situation

4.1 Overview of Acrelec Nordics core and support processes

In November 2021, the current situation of Acrelec Nordics core and support processes were mapped out. The mapping was done in a meeting where the researcher, managing director, head of business development, and operations manager of Acrelec Finland attended. The mapping was done mainly by using documents from the company intranet before the meeting. However, the more comprehensive picture could be mapped out better in an actual meeting. The mapped company core processes, Professional Services Team core processes, and support processes were validated by the managing director of Acrelec Nordics.

Acrelec Nordics functions are formed from four core processes. These core processes are representing Acrelec products and services in Nordics and Baltics, customer relationship management and sales, and providing support and maintenance for the solutions.

The purpose of the Professional Services Team is to support the core processes mentioned above. Core processes of the Professional Services Team support the Acrelec Nordics core processes. Core processes for the Professional Services Team are sales consulting, project management, installations, 2nd level support, and content management. It is essential to mention that the Professional Services Team provides software support and development to the customer with the help of Acrelec Software, which is located in Romania.

Support processes support both the Professional Services Team and the rest of the Acrelec Nordics organization. These support processes are strategic development, billing and economics, resources and resourcing, management services, and team leadership.

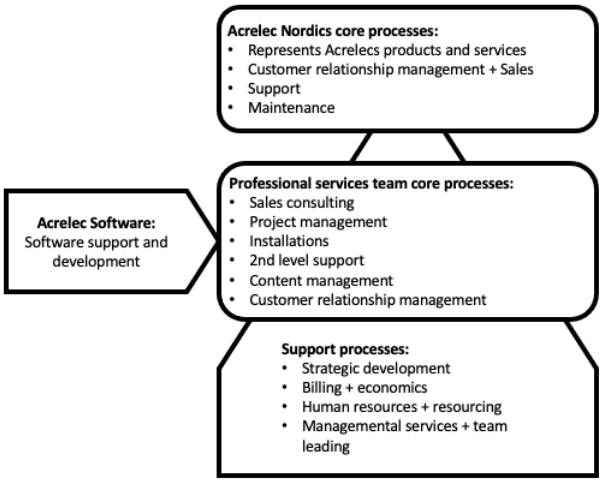

Figure 6. Core and support processes map of Acrelec Nordics

4.2 Professional Services Team's core processes

4.2.1 Sales consulting

The task of sales consulting is to guarantee a successful sales transaction, installation, and subsequent maintenance and service operations. The task of the sales support is to ensure that the seller receives all the necessary technical information, information about the time required for installation, and confirmation of the compatibility of the equipment. The following Timeline estimations of the work, cost estimations of the work, and Techical details that need to be taken into consideration are information exchanged between the Professional Services Team member and sales representative.

The co-operation between the sales and Professional Services Team help to make more accurate quotations for the customers. Accurate quotations reduce the possibility of unprofitable sales.

4.2.2 Project management

There are three sorts of projects that the Professional Services Team provides to customers. We can categorize them as follows: Product project, development project, and integration project.

A typical product project covers the implementation of Acrelec products in the customer environment. In development projects, the Professional Services Team is developing additional features or implementation to the already existing customer environment. Lastly, the integration projects are all about creating integration between different systems.

The projects that Acrelec delivers to the customers usually consist of five phases. These phases have different tasks that need to be completed before moving into the next phase. Picture 2 below contains information on how the phases are divided into five phases.

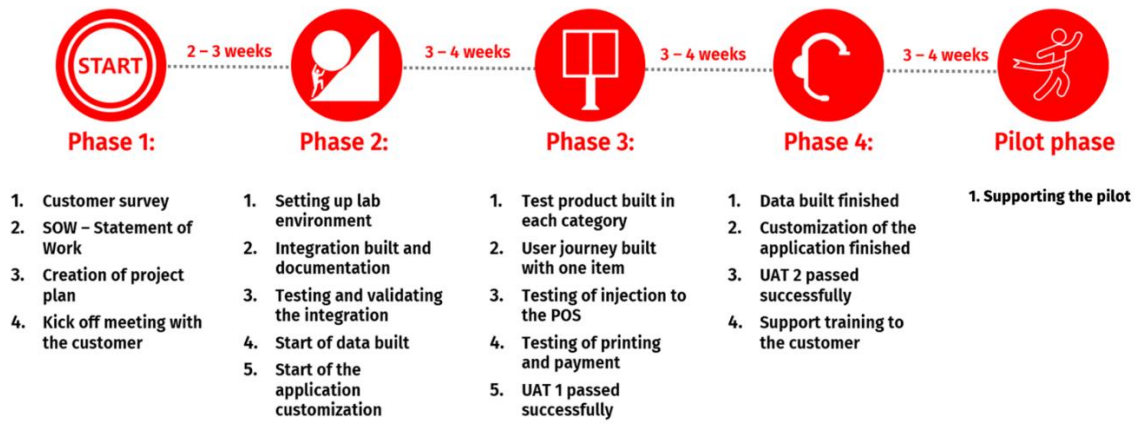

Figure 7. Project phases for typical Professional Services project

In phase one, basic procedures are gone through with the key personnel of the customer. When Acrelec has secured a new customer, project management starts with a document that is called a customer survey. The customer fills in this documentation. This document contains all the required information about the project. Knowing what the customer expects with Acrelec products and services is crucial. This document also contains hardware and software information that the Acrelec software team needs. Once the customer survey is filled, the professional team starts preparing the statement of work. Statement of work (SOW) is documentation where things and tasks included in the project are defined. SOW defines the following things represented in figure eight:

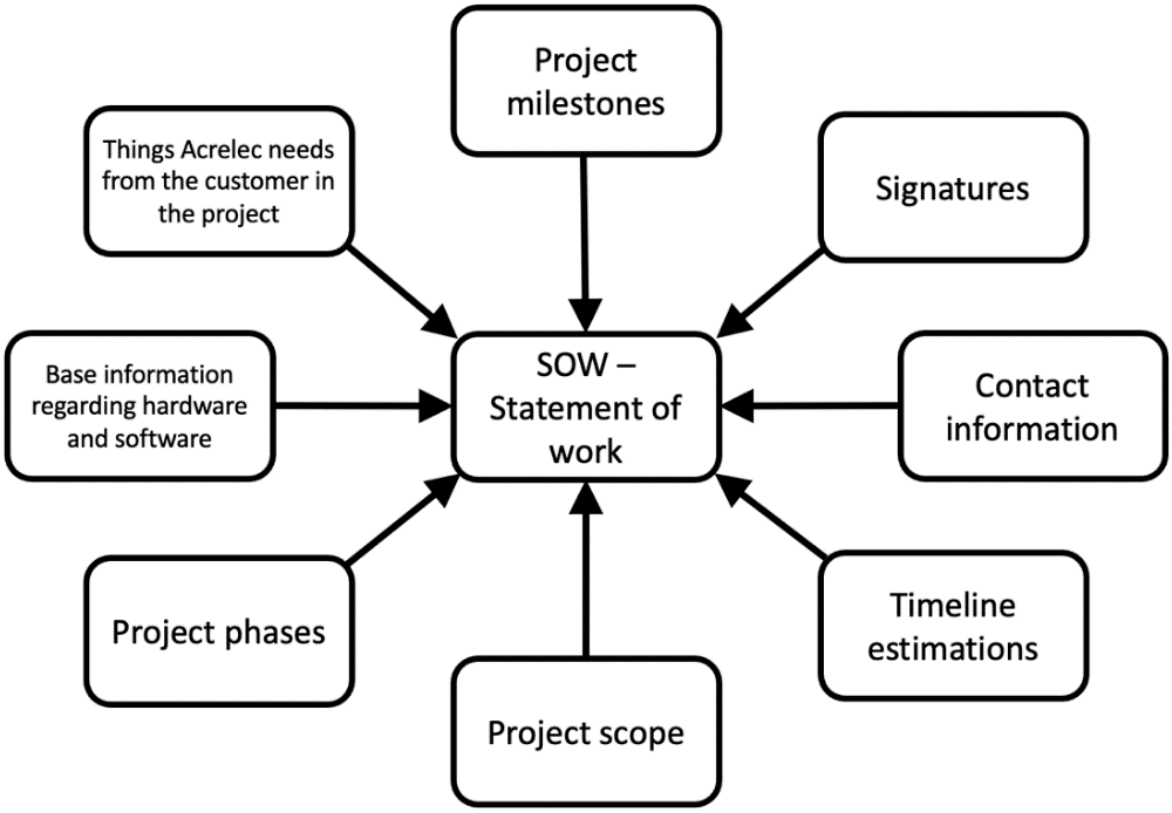

Figure 8. Typical contents of Acrelec's statement of work

When the SOW has been approved and signed, Acrelec creates a project plan and starts working on the project. The first step is to open the environments to Acrelec platforms. Acrelec has multiple platforms that help to manage the different environments. It is dependent on the agreement with the customer who does the environmental management. The last step of phase one of the project is a kick-off meeting with the customer. The main goal for this kick-off meeting is to introduce the project teams to each other and go through the project plan with the customer. In phase two, the first step is to build a lab environment. This

lab environment is used to prepare the software and data inside it for the live environment. The lab environment contains a self-service kiosk with a printer and scanner in the most common cases. This bridge handles the communication between the self-service kiosk and customer cash register or point of sale. The abbreviation that is being used for point of sale is POS. Once the lab environment is working correctly, and the connection to the POS is established. This is the point where the customer data is retrieved from the POS. POS data is exported to the platform called KioskBuilder, where the data can be structured into the correct format for the self-service kiosks. Part of phase two is to go through the application with the customer and decide the application-specific colors and pictures.

However, the first step of structuring the data is to build one product in each item category to the kiosk. One of these items is usually a meal. The meal has a journey that every end customer must go through. One item from each category group is built in the beginning for testing purposes. This is called User Acceptance Test (UAT).

The purpose of UAT is to test that test items, and meals look correct, and that information flows correctly from the kiosk to the customer POS system when injecting. Acrelec requires two successful UATs before going to the pilot phase of the project. After successful UAT1, the project moves to phase four.

In phase four, Acrelec finishes the data built and customization to the application. Once the application and data are ready, UAT2 can be performed. This is a broader test than UAT1. Here the team goes through all the pages in the application, views the products, and sees that they are performing correctly, validates the application design, validates the receipt, and validates that the POS system is getting orders correctly. If the UAT2 fails, problems are found from the environment, required adjustments are made, and a new UAT2 is performed to see if the previously found problems are fixed. Once the UAT2 has been successfully passed, the preparation of the customer for the pilot phase is started. The preparations include giving training sessions regarding the different products and environments. The usual time for the pilot phase is about one month. In the pilot phase, the Professional Services Team supports the customer with the problems that might arise during the pilot. The pilot is usually done with one or two restaurants. After the pilot, the Professional Services Team rolls the new products and environments to the rest of the customer restaurants.

4.2.3 Installations

The Professional Services Team does not do physical installations. Acrelec Nordics has a team of field technicians for that. The installations that the Professional Services Team does are software and environment installations. The software and environment installations are

most commonly done to customer restaurants or offices. However, there are cases when customers do the installation by themselves or hire a third party to do it.

To be able to perform software or environment installation, the Professional Services Team requires information represented in table one to be able to perform the installation:

Information type	**The reason the information is needed**
Installation date and time	Installation date and time is needed in order to schedule the installation
Remote control access	The software side of the installation is done by utilizing a remote control tool called TeamViewer.
Store name and code	Store name and code are needed for the installation. These values allow the team member to create an environment for the restaurant.
IP-address for the devices	IP addresses are needed to get the information flowing between Acrelec devices and the POS system.
Applications needed for the environment	Applications required to complete the installation needs to be known before starting the installation

Table 1. Required information for installations

When the above-mentioned information is known, the professional service team performs the installation and asks the field technician or customer employee to perform test purchases to ensure that the environment is functioning currently.

4.2.4 2nd level support

A critical aspect of the Acrelec business is to provide 1st and 2nd level support for the customers. This is a service that customers buy from Acrelec. Acrelec has a help desk that handles the 1st level support. 1st level support does the basic level troubleshooting. All the calls and emails are logged into a 1st level support system called TopDesk. This system helps keep track of problems that occur while the systems are running. If the problem cannot be solved by 1st level support, it will be moved to 2nd level support. The second level of

support has more in-depth knowledge of the environments and products and will do deeper troubleshooting to find out what is causing the problem for the customer. If the problem can be solved, 2nd level support will solve it, but if there is a need to update some part of the environment to fix the problem, 3rd level support needs to be contacted. 3rd level support is provided by Acrelec Software located in Romania. Here the ticket will be open until 2nd level support receives new parts to fix the problem. Once the part arrives, QA (Quality Acceptance) testing is required to see if the environment is functional with the new parts.

4.2.5 Content management

The process regarding content management is relatively simple. As a backstory, Acrelec allows customers to do their content management on the kiosks and digital menu boards or buy content management from the Professional Services Team. The assignment comes either by asking the customer if there are any upcoming content updates or by sending the Professional Services Team a notification about the upcoming content update. After receiving a content management request from the customer, the person responsible for the team email replies that the Professional Services Team has received their content management request. Then the customer request will be estimated. The hour estimation is essential information for the team members and the supervisor. The hour estimation helps to see how much work is on the current task list and reserve resources for the upcoming week or month. Then the task will be added to the Kanban board of the team. Kanban board is used to keep track of ongoing and upcoming tasks. Before the task is created, the material sent with the content update request needs to be checked. If there are deficiencies, those need to be notified to the customer.

In some cases, hour estimation is sent to the customer, but this is not mandatory. If there are deficiencies, the person responsible for the content management follows up with the customer until all the required information and materials have been received and the task can be completed. Customers are required to send information about upcoming content management needs one week before the campaign needs to be in restaurants. See the following figure that illustrates the flow of content management.

The Professional Services Team requests customers to send content management requests with needed materials one week before the content management is wanted to the restaurant. Check the flow chart of the content management process in figure 9.

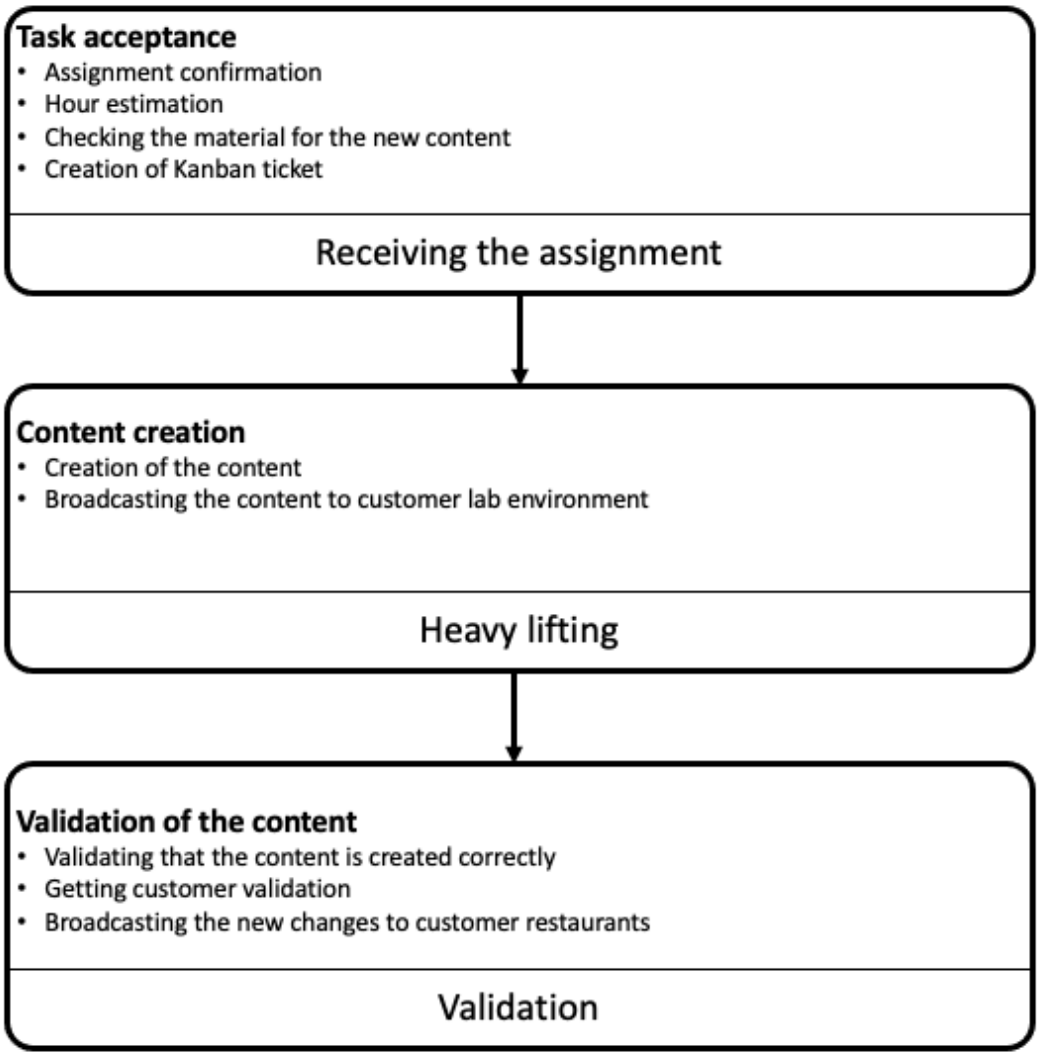

Figure 9. Flow of the content management process

When Acrelec has all the necessary material to perform the task, the content will be created in a platform called KioskBuilder. After the content is created, it will be broadcasted to the lab environment of the customer. The purpose of the lab environment is to enable the possibility of testing campaigns and new developments before pushing the new changes to live restaurants. Once the customer validates the content, it will be broadcasted to the restaurants on the desired day.

4.2.6 Customer relationship management

The easiest way to understand customer relationships is to look at them as an ongoing process between the customer and company. This process consists of encounters that aim to benefit both parties by changing resources (Storbacka & Lehtinen 1997, 15.) In this process, it is mainly a matter of satisfying one particular need, where one part is looking for a

solution for a problem or need, and the other provides the service needed at the time to fulfill the need.

Currently, Acrelec Nordics are in the process of developing customer relationship management. The current process is that every person responsible for customer relationship management does their own thing regarding customer relationship management. The way Acrelec Nordics are aiming to develop this process is to have more aims towards customer management. When there are aims towards the task, the person performing the tasks starts looking for ways to accomplish the set target.

It is essential to do an initial mapping of the customer needs and what Acrelec wants to achieve with the customer. This creates a beneficial foundation for the process. Usually, Acrelec has weekly, bi-weekly, or monthly calls with the customer. In these calls, the Professional Services Team member goes through essential information regarding ongoing projects, possible support needs, rising issues, and inquiries regarding developmental needs. These calls are essential because they chance to understand the situation of the customer better. Therefore, it is essential to have goals for this communication. Figure 10 shows the focus areas for a Professional Services Team member when communicating with the customer.

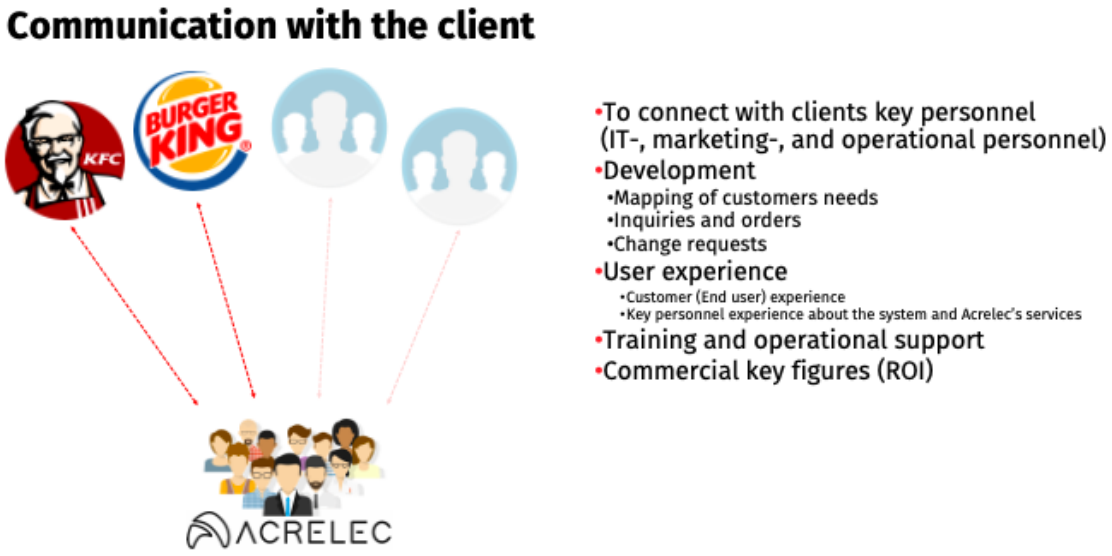

Figure 10. Communication with the customer

5 Analysis of the current situation

5.1 Overview of the current situation

This chapter analyzes the current situation of the Professional Services Team. The analysis was done using the SWOT analysis method, where the situation will be divided into four categories. Strengths, weaknesses, possibilities, and threats. The SWOT analysis regarding the Professional Services Team was conducted on December 2021 by the researcher of this thesis and two team members by brainstorming. The validity of the produced analysis was validated by the managing director of Acrelec Nordics.

The following figure gives a quick overview of the SWOT analysis. Each category will be opened more comprehensively in the following chapters, and the last subchapter will handle the conclusions based on the SWOT analysis.

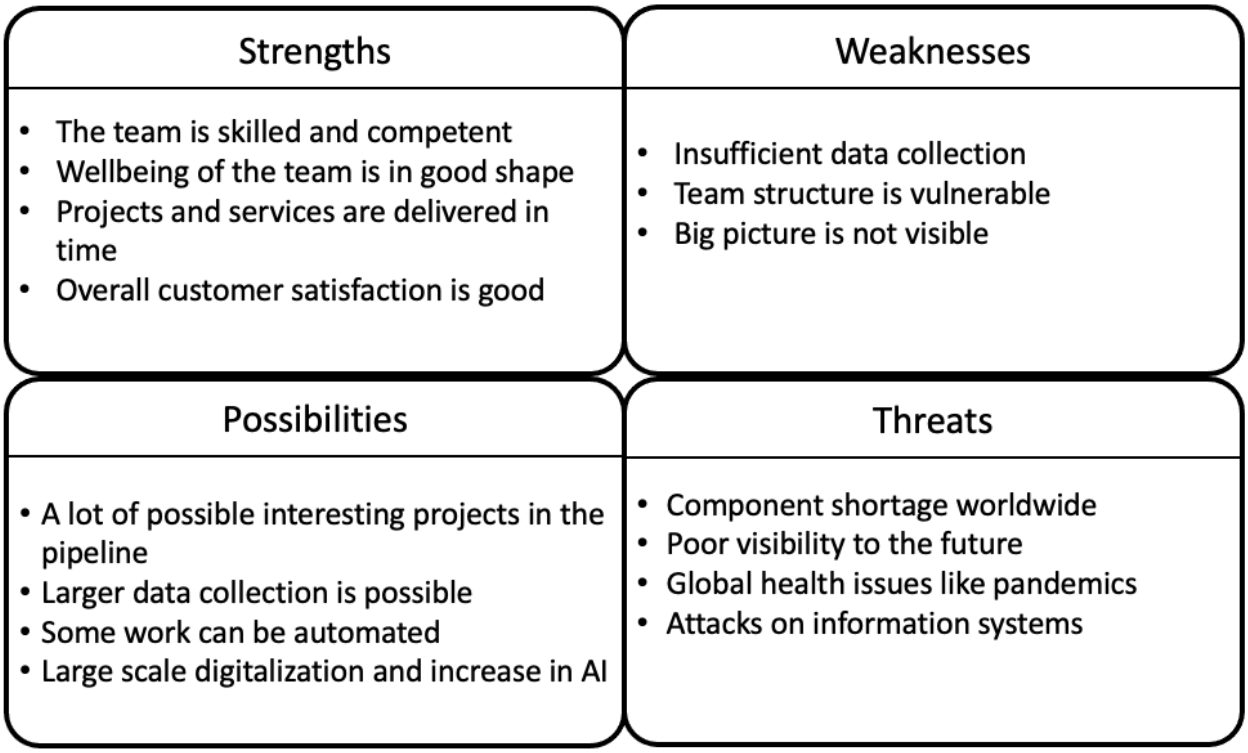

Figure 11. SWOT analysis of the overview of the current situation

5.2 Strengths

Professional Services Team has consolidated its operations at a basic level, which is reflected in the success of project activities. Many aspects of the work are done well. Overall, the customers are happy with the level of service that the Professional Services Team is delivering. The internal operation of the team is also at a good level, which is reflected in a

steady and clear flow of information in the project management program. The team members are self-directed and vary in skills and interests. This enables a great possibility of mentoring for less experienced members of the team.

In the strategy of Acrelec, the development of the team and especially individual skills has been raised to a significant competitive advantage. Another area of focus is the resilience and well-being of workers, which will create the conditions for long-term employment in a sector where labor supply is a significant challenge. Significant efforts have also been made in working conditions and equipment. For example, all the specialists have screens that are good for the eyes and electric desks that allow the possibility of standing while working.

5.3 Weaknesses

There are a few notable weaknesses in the Professional Services Team operations. A significant challenge for multi-level and multi-system projects is to gather correct and accurate information. Often the necessary information must be collected from various sources, and some projects must be started in a situation where the basic information is incomplete or not available. This makes looking at the bigger picture hard. Currently, the tasks that will be invoiced from the customer or other country company are being manually reported into Excel. Also, some data regarding task distribution can be sorted from the team Kanban board.

The size of the team supports multi-skills, but in larger projects that require expertise at multiple sites, resourcing is challenging. It is almost impossible to use external assistance because the necessary expertise is not available. Therefore, the second weakness of the team is that the structure is vulnerable. Currently, the team has four members and one shared resource. The team structure is team manager, senior specialist, and three system specialists. This means that illnesses and holidays can overload the working team members.

5.4 Possibilities

There is a vast number of possibilities for the Professional Services Team. The growing distance between eCommerce and its needs has opened new markets. Acrelec products and services portfolio is growing strongly, which means more work for the team. Therefore, learning is possible when taking over the latest products. There are also many new customer prospects interested in the products and services that Acrelec has to offer.

Consolidating service processes and investing in operational control systems will make operations more efficient, which will also help the team to cope at work, enabling employees to focus on essential tasks. In addition, a few adjustments to the processes could help

gather essential data. This data could help see a more comprehensive picture of the overall status and indicate the possible problem areas.

There is work that can be automated. Automation of the insignificant manual work increases the time that specialists can use doing more important things. This could also raise the well-being of the team because the work that can be automated is quite time-consuming but straightforward. The overall substantial increase in digitalization is a huge opportunity. Also, the significant increase in Artificial Intelligence (AI) and automation in data processing offers new possibilities.

5.5 Threats

Currently, ongoing component shortage causes the biggest threat. Acrelec products are all dependent on the supply of components. Therefore, hardware sales are one of the most significant sources of income to Acrelec. Unfortunately, at the moment, the availability of screens and PCs is poor. This affects project timelines and the decision of the customer to invest in self-checkout solutions.

A well-functioning infrastructure in the digital world is as vital to societies as securing energy supply, and its security of supply must be defended. Also, the cloud services in use and the contract terms used by the service providers do not always allow for effective control of decision-making in Europe.

5.6 Conclusions based on SWOT

Currently, the performance of the team is good. Projects and services are delivered in time, and the level of customer satisfaction is good. The Professional Services Team members are competent, skilled, and motivated. Acrelec is making sure that specialists are working with top-of-the-line equipment. However, there is unnecessary work being done daily. For example, some work assignments must be manually logged into excel files. No team member is enjoying this work. Due to this, logging is done in the final days of the month when the invoicing department needs the information.

Another clear improvement area for the team is gathering data about the daily operations. Currently, looking at a bigger picture through the data is relatively challenging because the information is indicative and fractured. This means that getting the operations data to be easily viewed is extremely difficult and time-consuming. Therefore, the data gathering about operations needs to be considered when developing processes. Furthermore, the simple data entry should be automated as much as possible.

Resourcing towards the Professional Services Team is a necessary action. Currently, the team structure is vulnerable due to the small number of team members. The workload for each team member is appropriate, but an illness or holiday will create too much extra load for the working specialists. Recruiting a new specialist to support the team will make the structure of the team more stable.

The global component shortage is a possible cause of a problem in the future for Acrelec. Currently, the delivery of hardware orders dictates the timelines for projects. This should be taken into consideration. Acrelec Finland has a good warehouse next to the office where a small inventory of popular products could be stored. This way, it would be easier to stay on the schedule if the hardware deliveries get delayed in the future.

6 Planning of the development work

6.1 Selection of the development areas

The selection of the development areas was made in December 2021. The selected development areas were approved by the managing director of Acrelec Nordics. In action research, preparing an action plan is the final step of the first phase of unfreezing (Janse & Vliet 2021). First, the action plan is generated using previous analysis of the current situation. In this case, the action plan was prepared to utilize the mapped-out current processes and SWOT analysis. This chapter serves the purpose of the action plan. Next, the development work was divided into three categories. These categories were knowledge management, Professional Services Team, and process development. The next step of the action plan is to move into a second phase of the action research called changing.

The knowledge management part of the development consists of three aspects. Knowledge management focuses on focus areas and key factors, knowledge management approach, and meeting structures. Each development area aims to support the information flow inside the team and the organization. Professional Services Team development also has three developmental focus areas. These focus areas are resourcing and continuous competence development, employee engagement, and coping and well-being at work. These development areas aim to improve the competence, engagement, and well-being of the team.

Lastly, the third aim for development is process development. This is done by exporting the currently existing processes to the project and team management tool. Here, the problem areas found in the initial mapping of the processes will be taken into consideration. The goal is to choose a tool that can remove problem areas of the processes with the functionality offering of the platform. Chapter eight is dedicated to this topic. The selection of development areas has been illustrated in the following figure 12:

Selection of development areas

Knowledge management	Professional services team	Process development
• Focus areas and key factors • Knowledge management approach • Reporting and meeting structures	• Resourcing and continuous competenence development • Employee engagement • Coping and well-being at work	• Exporting existing processes to project and team management tool • Implementation of the tool • Consolidation and further development of processes

Figure 12. Selection of development areas

6.2 Specifying the knowledge management focus area

The specification of the focus area has been done by utilizing knowledge management mapping principles from chapter 2.4.3. The questions in that chapter guide to finding the necessary information that the organization requires.

The first step of knowledge management is specifying the focus area of the knowledge management flow. For example, the focus should be on gathering data from the day-to-day activities of the Professional Services Team. The purpose of gathering data from daily operations is to enable the possibility of looking at the bigger picture. Adjustments can be made to ensure wanted outcomes when a bigger picture can be looked at through reliable data.

The gap analysis was performed after doing the preliminary mapping of the information. Chapter 2.4.3 has three that aid in identifying knowledge management gaps within an organization. It is essential to mention that a map of knowledge management must be updated regularly because organizations and teams undergo constant change, which affects the organization's knowledge management strategy.

6.2.1 Identifying key factors and essential data

Every task that a Professional Services Team member does is logged to our Kanban board. These tasks are a way to follow project and service deliveries. Therefore, it would be essential that the tasks would carry essential data. The table two represents pieces of data that should be gathered:

Essential data	Explanation
Assignee	A person who is doing the task
Customer	The customer to whom the task is performed
Time estimation	Estimation on how much it will take to complete the task
Due date	When does the task need to be completed?
Invoicing	Is the time spent on the task invoiced from the customer?
Emergency fee	Does the task carry an emergency fee?
Task type	Is the assignment a task, request, or issue?
Product	What is the product that the task is related to?
Phase	What is the phase of the restaurant?
Status	What is the status of the task at the moment?
Time tracked	How much time is already spent on the task?

Table 2. Essential data and content explanations of Kanban board

6.2.2 Knowledge management approach

All knowledge management approaches are trying to find the golden path between the need for IT and the need to focus on people. Since people are the source and carriers of all knowledge, the logical choice is to keep the primary focus on people. (O'Dell & Hubert 2011, 49.)

As mentioned previously in chapters 5 and 6, one of the most significant weaknesses that Professional Services Team operations carry is the insufficient data collected. There are no visual representations of the current situation regarding different aspects of the team operations. Since the logical choice is to keep the primary focus on the people when choosing

the knowledge management approaches, it is essential to focus on how all the crucial data about the daily tasks are easy to enter.

The Professional Services Team needs a project management tool to support the operations. The currently used planner by Microsoft does not have enough functionalities to gather all the needed data. The new tool needs to support more extensive data collection. For example, creating a custom field tailored to Acrelec needs to be in the new tool. Another functionality required in the new system is the ability to create visual representations of different aspects of data. For example, it would be beneficial to have a dashboard informing current project statuses or a dashboard that would show how the service is distributed between the clients. All the dashboards would support the creation of a more comprehensive visual picture of the situation.

Visually represented information would give meaningful feedback that is hard to see without the data collection. This data gives essential feedback about several things. The knowledge management approach would look to give feedback on the following aspects of the team described in table three:

The aspect of the feedback	**Essential to Acrelec**
Resourcing	Current workloads on each team member. Is there a need for resourcing?
Issue distribution	Which markets have the most problems?
Most common issues	Is there a way to permanently solve the most common problems? If yes, with what method and what is the solution?
Distribution of work	Usually, there are quitter times during the year. Therefore, this information could be used, for example, to schedule vacations of the team members.
Invoicing	How much is the team invoicing monthly or yearly? Is there a way to increase the invoicing?

Table 3. Important aspects of the feedback and their essentials to Acrelec

6.2.3 Reporting

Reporting is one of the aspects that the development work aims to fix. The project and team management tool is required to allow setting the data into wanted formats. There are three types of reporting needs that the new platform should support. These needs are towards invoicing reporting, project reporting, and service reporting.

The correct format regarding the invoicing reporting was acquired from the invoicing apartment. Invoicing reports need to be divided into three sections, a separate report for each country company inside Acrelec Nordics.

Project reporting needs to contain key aspects of the projects. The goal is to fit all the essential data to be viewed quickly, leaving the viewer a comprehensive understanding of the project status.

The service report needs to show how the service is distributed in different ways. One of the ways is to show how the services are distributed between the customers. The essential knowledge here is to see which customers use our services the most. Another goal of the service reporting is to provide the timing of the service requests. It has been noticed that some months are busier than others in the industry. This is valuable information for multiple reasons. One of which is resourcing, for example, in the form of vacation time for team members. It is not intelligent to schedule many team members on holiday during the busiest months.

6.2.4 Meeting structures

Professional Services Team meetings can be divided into two types. Type one is internal meetings. Internal meetings consist of daily stand-ups and monthly in-house meetings. Type two meetings are meetings with the customer. The Professional Services Team hosts many kinds of meetings for the customers, such as weekly project status meetings, weekly customer care meetings, and problem-solving meetings.

Visual representations mentioned in the previous chapter 6.2.3 are beneficial in internal and external meetings. In internal meetings, the Kanban board has proven to be an effective tool for daily stand-ups. It is a very efficient way to go through the tasks that are currently in progress and start discussions about the next tasks to move from to-do to in-progress. In monthly meetings, essential data about the team could be displayed. The data displayed could be modified to answer current questions. For external meetings, the visual representations would be highly beneficial. For example, the visual representation of project statuses and customer care meetings could be easily led.

Visual presentations would be constructed to contain important information to the customer. This would increase the probability that the Professional Services Team member would get the full attention of the customer. Then the status of the project or customer care could be gone through with the customer leaving the customer a more comprehensive understanding of the current situation.

6.3 Professional Services Team employee engagement

Employee engagement is essential because the plan is just a plan if the team is not behind the change. Few essential aspects have been considered in developing the processes. These aspects are described in chapter eight. One of the most significant aspects is community brainstorming. Discussion about the most frustrating daily operations has been conducted with the team members. One of the focus areas is to dispose of the frustrating and purposeless daily tasks by automation.

In order for individuals to feel that they are doing meaningful work, they must have a genuine opportunity to develop their own work and its processes. (Vervaeke 2019.) In addition, another focus area for the development is to build the process of creating tasks easily and quickly. Nevertheless, simultaneously making the task to carry as much information as possible.

6.3.1 Professional Services Team continuous competence development

When the developed processes have gathered a few months of data, the data should give a more comprehensive picture of the current situation. The first step of continuous competence development is to get updated data about the current situation. When the processes have produced a sufficient among of information about the operations, for example over a period of six months, a better understanding of their functioning and development needs is obtained.

The figure 13 shows the continuous feedback loop that the developed processes give to the team.

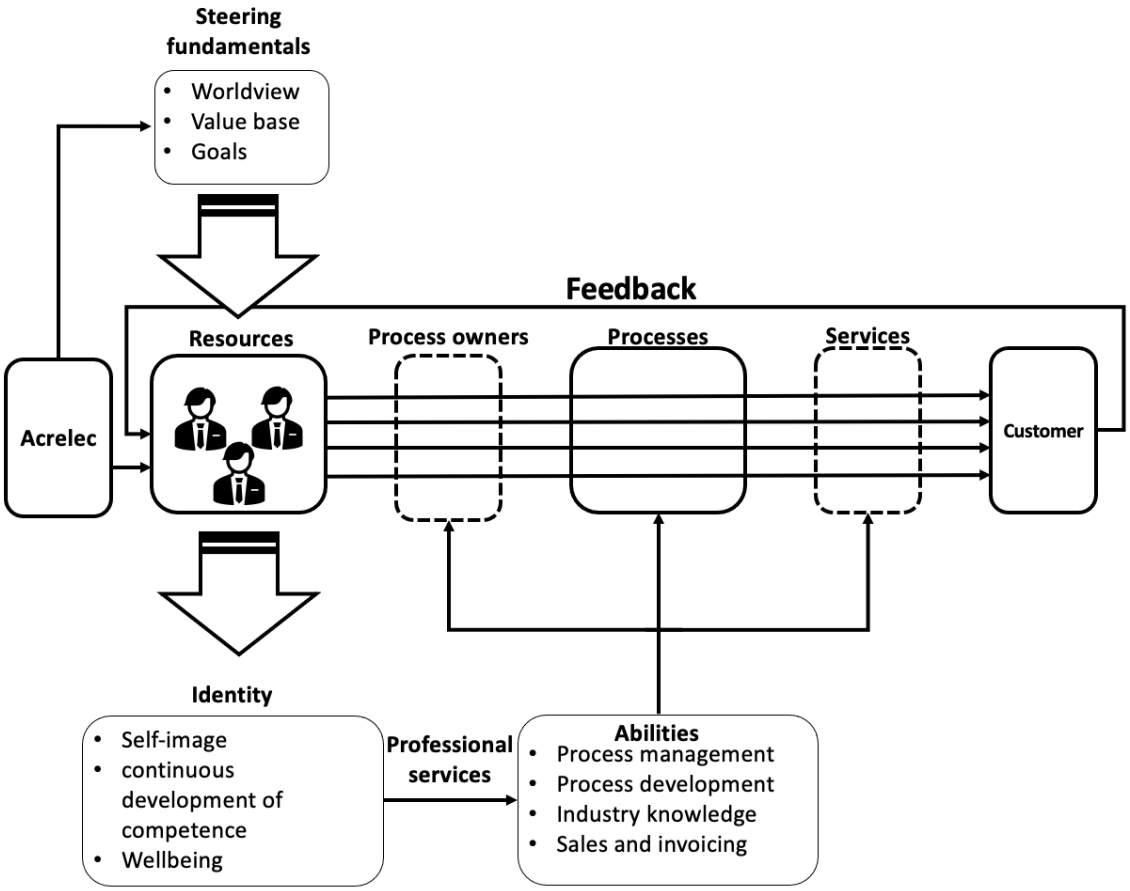

Figure 13. Process to produce continuous development feedback loop

Everything starts with the steering fundamentals that are provided by company headquarters. These fundamentals consist of worldview, value base, and goals. These factors guide our resources. The resources or team members are owners of the processes that Acrelec Nordics offers for the customers. There must be ownership for each process, so company can get feedback from the customer when the service has been delivered to the customer. At the bottom of figure 12, there is a box for professional service team identity. The identity consists of the self-image, continuous competence development, and well-being. The purpose of the team-building identity is to provide services to the customer professionally. To provide services to the customer properly, investments towards abilities need to be made. The most important ability for the team members is to be able to complete the tasks required by the process. This includes process management, process development, industry knowledge, sales, and invoicing. Each ability directly affects the level of service. Therefore, the investment towards abilities is fairly justified.

Once the developed processes are implemented and working as desired, they will start to produce important feedback. To be able to gather feedback, a proactive attitude is required from the team. This feedback guides the team towards essential adjustments. Therefore,

the proactivity provides the continuous development loop where the team competence increases with every project or service delivery.

6.3.2 Coping and well-being at work

Knowledge management does not recommend the organization of separate well-being at work events. However, it emphasizes the importance of anticipatory skills and, in particular, the focus of an individual's skills on tasks that they perform at a reasonable level without much effort. In addition, the ability to live in ever-changing conditions and independently assess the quality and space of one's work is considered particularly important. (Ståhle & Wilenius 2006 56.)

Based on the above, the processes must be transparent, and the challenges involved must be at an appropriate level. In practice, this means automating tedious and repetitive routine tasks so that it is possible to focus on tasks that require skill at the individual level. Alongside self-assessment, encouraging leadership has its meaning. However, an even more significant role is played by the individual's ability to recognize the importance of their work at the level of services provided by the organization.

7 Opening the development plan using the selected methods and techniques

7.1 Base work three layers of change

Mapping the developmental tools and methods started with listing things that need to be improved in the team environment. It is beneficial to think of this developmental overview of the team with a picture of three layers of behavior change. As shown in chapter 3.1, figure four, the change consists of three critical layers of change. The three layers can be used to view team performance and individual performance. The most effective change happens when it is started from the team identity. When changing team identity, there are a few essential questions to consider:

- What is the self-image of the Professional Services Team?
- How does the Professional Services Team view the world?
- How does the Professional Services Team measure our success and customer satisfaction?

These essential questions are steering development in the right direction. Processes and outcomes rise from the identity, so it is very beneficial for the Professional Services Team to define their self-image and beliefs. Then, when the identity works as a strong base for the team, processes and outcomes of the team can be considered.

Processes are the following subject to look at. Like said, the habits and processes rise from the self-image, beliefs, and attitude of the team. The processes should be constructed so that the team defines focus points for their work. Currently, there are four main processes for the Professional Services Team. These processes are content management, 2nd level support, project management, installations, sales consulting, and customer relationship management. Each process has subprocesses to support the primary process.

Processes always deliver outcomes. Outcomes are a perfect source of feedback. The feedback that the team gets from the outcome can produce a developmental feedback loop that works as a tool to help the team further develop processes and adjust the core identity of the team. This leads the team to be in the forever-developing stage where outcomes have been created that answer customer needs, and the process structure can be adjusted to support the outcomes. The Professional Services Team identity creates confidence and a healthy worldview. This worldview allows the team to see possibilities instead of obstacles.

7.2 Identity of Professional Services Team

The actions of the individual usually reflect the identity of the individual. The actions of the individuals indicate what type of person the individual believes to be either consciously or unconsciously. According to identity research, once individual believes in some aspect of their identity, they are more likely to align their actions according to that belief (Clear 2018, 42).

Conscious identity building for the Professional Services Team is essential for the development work. By defining as a team what the team beliefs are towards identity, actions of the team can start to be aligned towards those beliefs. The self-image of the Professional Services Team should be that services are professionally delivered to the customers. Delivering services to the customer in a professional manner is a broad concept. Therefore, it is beneficial to elaborate on what that means. The following picture shows Professional Services Teams core beliefs. These beliefs were mapped out by the team in December 2021:

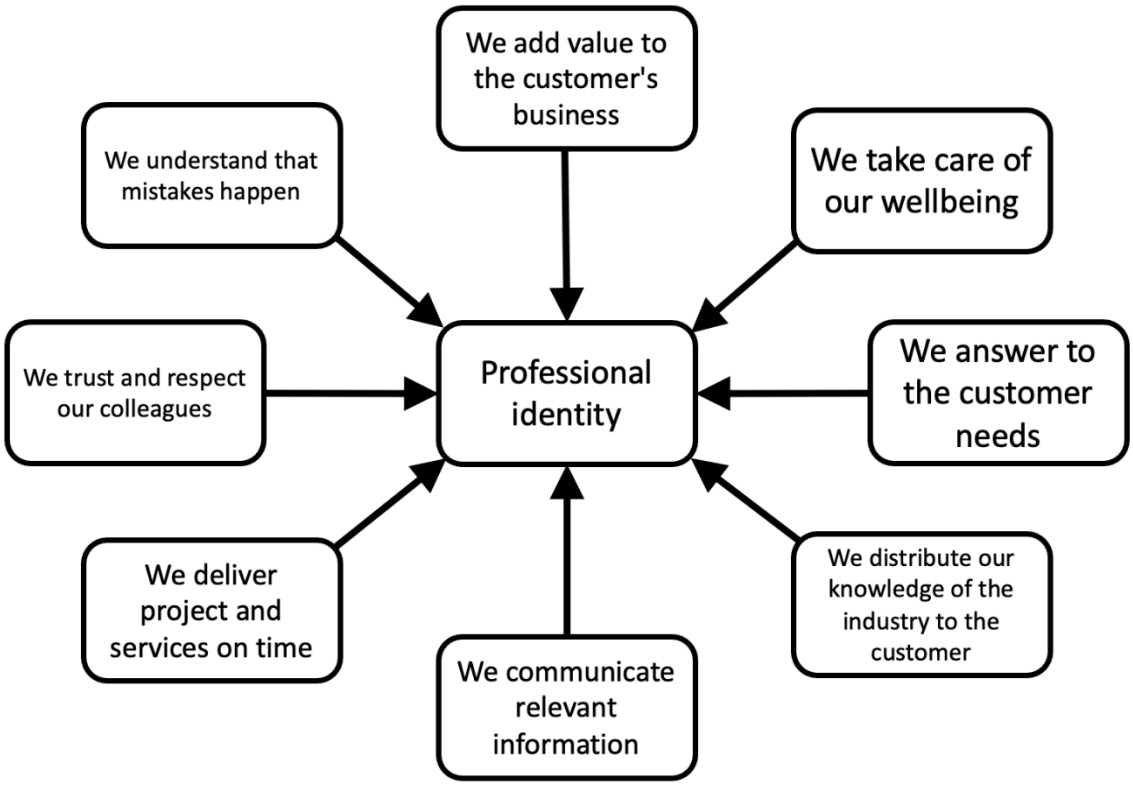

Figure 14. Core beliefs of the Professional Services Team

Implementing these beliefs into the daily routines is hugely beneficial. It allows the team to look at upcoming obstacles in a different way. These beliefs can be used as a stable base to start building a professional way of working.

7.2.1 Processes of Professional Services Team

Developed processes is described more in-depth in chapter eight. Two things will be added to the current process of the Professional Services Team. The first one is process owners to be added to each main process of the Professional Services Team. Shared responsibility is something that just does not seem to work. This is the reason why the responsibilities need to be distributed to individuals. The second thing supporting the current processes is a cloud-based project and team management tool. The advancement that the platform brings to the team is described in chapter eight.

7.2.2 Outcomes of the Professional Services Team

The feedback that the team gets from the projects or services that it delivers indicates what the team is doing right and what aspects of the service need to improve. The question is, "how does the team get feedback constantly from our services? ". A few things should be considered to get the required feedback. First, the team member needs to adopt a way of working where they gather this information when they are in contact with the customers. The second thing that needs to be done to get feedback is to perform customer satisfaction surveys at regular intervals. In the beginning, the regular intervals for customer satisfaction surveys will be quarterly.

The outcome that Acrelec is looking for is to deliver projects and services that meet customer needs, staying on schedule and in an agreed time and cost structure. The delivery of the services is done professionally. This means that the services team takes pride in being part of the team and value the experience that Acrelec has accumulated from the food and beverage field. The team does its best to distribute this knowledge to enable the best outcome possible.

8 Process development by project and team management tool

8.1 New platform for work

Chapter eight is where the action research in this thesis moves into a changing phase. In this phase, the team starts executing the previously put-together action plan by moving into a new behavior state and adopting new habits. This chapter describes what preparations were done in order to move into the changing phase. Moreover, how the implementation of the new way of working was done. The Professional Services Team started moving into the new way of working in December 2021. The moving was divided into three phases that will be explained in chapter 8.5.

After analyzing the current situation, it was decided that the Professional Services Team needs a cloud-based platform for work that supports the team's needs. This new platform is required to fill the tasks, projects, and team management requirements. It should also support the creation of multiple dashboards so different kinds of data can be easily viewed by team members, corporate management, and customers.

The platform chosen to support the Professional Services Team is a cloud-based project and team management tool called ClickUp. This highly agile platform allows the users and teams to create a space for working. The following figure 15 describes the basic workspace setup that is created in ClickUp:

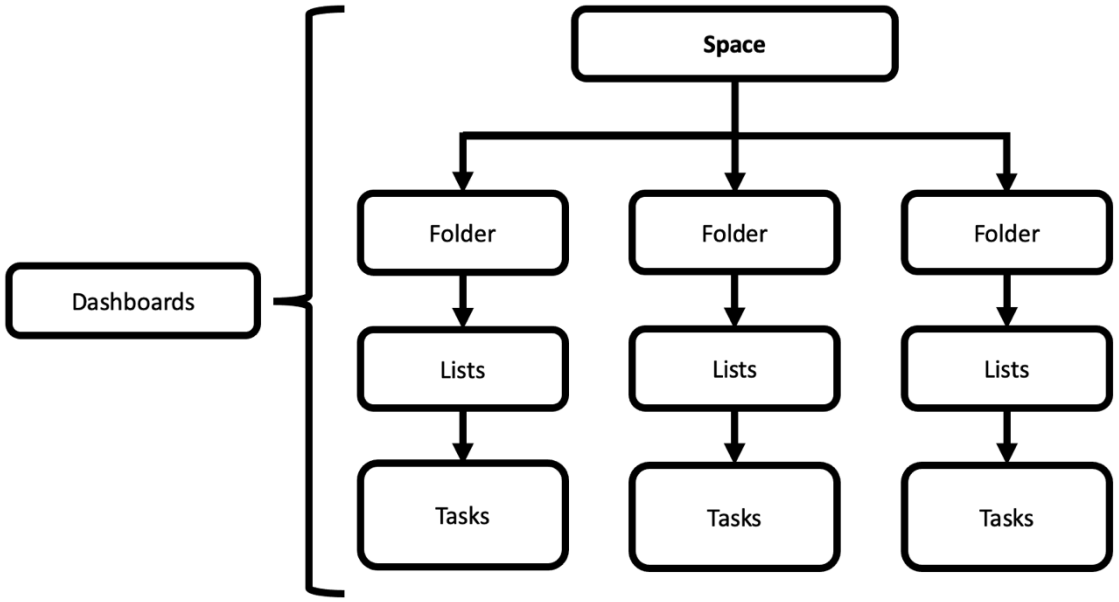

Figure 15. The basic structure of ClickUp workspace

In ClickUp, the user can create an unlimited number of spaces. Inside a space, users can create folders and lists. In the case of the Professional Services Team, these folders represent the brands that Acrelec Nordics is currently working with. Inside the folder, two types of things can be created. These things are lists and documents. The list and documents can contain any information. The great thing about ClickUp is that dashboards can be created to visually represent the information inside space, folders, and lists. Every piece of information inside the tasks can be used to give a visual representation of the chosen topic.

8.2 Process performance indicators

Time and quality are the most essential PPIs for Professional Services Team processes. The goal for time is to get the lead time for tasks that lead to service or project delivery down. Task completion times are accelerated by using different kinds of automations.

Service quality is another important PPI. The focus relating to quality is to increase the level of service. This is done by utilizing the data collection and feedback loops built into the processes. With the help of real-time data and customer feedback, the team gets relevant information on how to increase the level of service.

8.3 Platform structure

Platform structure building started by creating Professional Services Team space. The space contains folders that are named after clients Acrelec Nordics have. For example, Acrelec Nordics works for a brand called Kentucky Fried Chicken (KFC). This brand has a folder, and there are two lists inside the folder. The list represents the KFC clients that Acrelec Nordics works with. Inside the list, there are tasks related to the client in question. A list can contain client-related tasks or project-related tasks. The naming of the list indicates if the list is for an account or a project. The platform structure created for the Professional Services Team is demonstrated in the following figure 16:

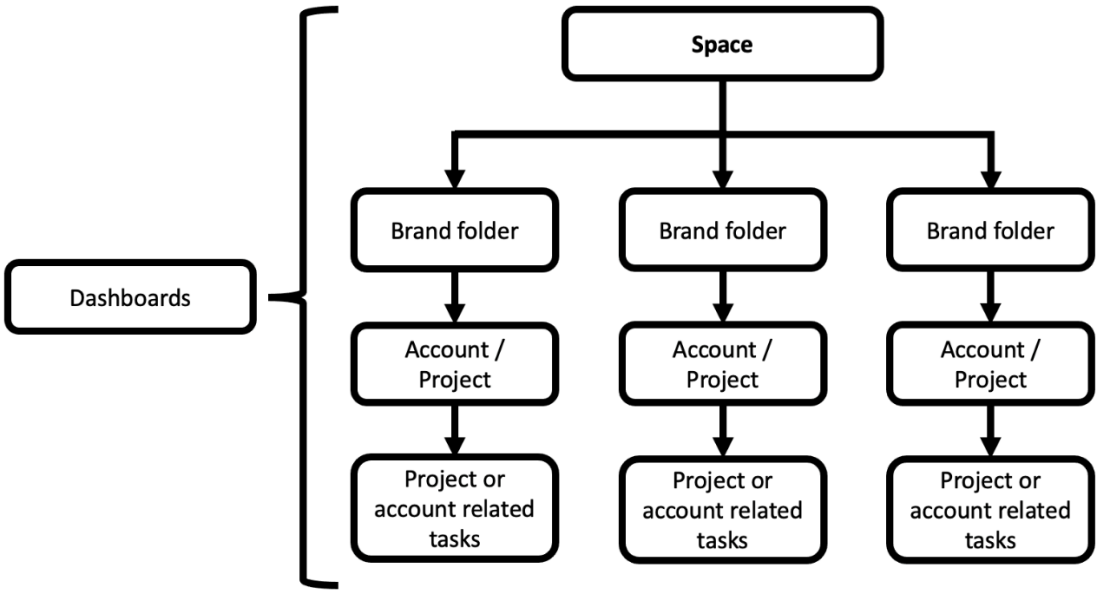

Figure 16. Platform structure for Acrelec

8.3.1 Creating a task

Simplifying a process refers to reducing or eliminating the complexity of activity within a business process to make it more comprehensible and efficient. When a process is kept simple, it becomes more manageable and responsive to the needs of team members. The principles previously explained in chapter 2.5.3 were used to create the task-creating process. The task creation went through the seven questions that the simplifying method suggests using in chapter 2.5.3.

When entering any list, the user can create a task. Task creation starts with entering a name for the task. This name ought to be descriptive because it will be shown to the customer when the invoicing is done. After the name of the task is added, the user has to fill nine columns. The columns are explained in the table four:

Field	Purpose of the field
Assignee	Here, the user has to assign the task to a team member.
Time estimation	If time estimation can be given about the task, it will be entered into this column.
Due date	If there is a due date for the task, it will be entered into this column.
Invoicing	This checkbox will be checked if the task contains billable work.
Emergency fee?	Content management tasks need to be informed to the Professional Services Team five working days before the due date. If the customer needs the change faster emergency fee will be invoiced. If this checkbox is checked, the task will contain the emergency fee.
Task type	All tasks are divided into three different task types. These task types are task, request, and issue. The user will enter the task type when creating the task.
Product	There are many different products and platforms with which Professional Services Team members work. To be able to collect a comprehensive set of data, the product or platform needs to be entered when creating a task.
Phase	The phase represents the status of the project or customer restaurant.
Task label	Task label represents the type of work that the task is. There are eight different types of task labels. These labels are the following: content, support, maintenance, project, internal, training, and development.

Table 4. Task fields and their specified purposes

Once the task is created, it will get a status. In the beginning, the status for all the tasks is to do. Other statuses are pending, in progress, review, hour entry, and completed. The table five explains the purpose of each status:

Status	Purpose of the status
To do	The task is created, but the work towards the task has not started yet.
Pending	Work towards the completion of the task has been started, but the Professional Services Team is waiting for a third party to finish their work in order to continue the work.
In progress	The task is currently being worked on.
Review	The work is being reviewed by the Professional Services Team or third party.
Hour entry	The working hours spent on the task are checked in this status.
Completed	The task is completed.

Table 5. Task statuses and their status

8.3.2 Automations

In ClickUp, the user can create automations to three different levels. These levels are previously mentioned spaces, folders, and lists. Here is a figure 17 demonstrating the levels:

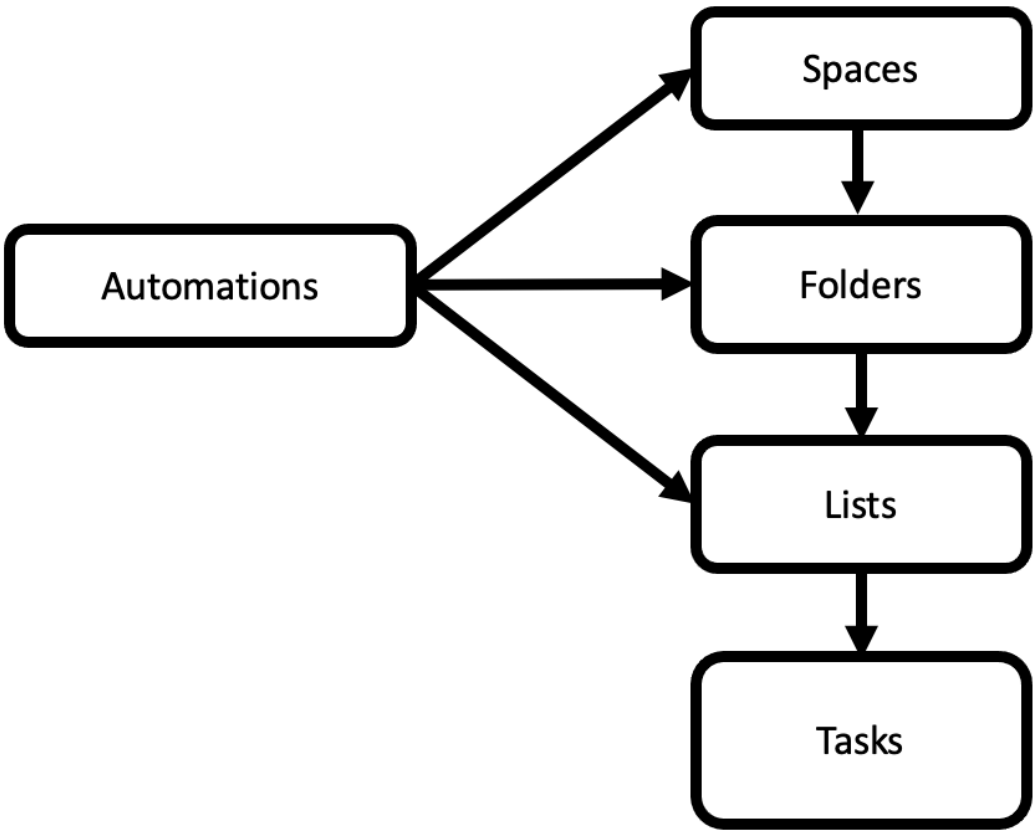

Figure 17. Automation possibilities in ClickUp

It is essential to understand that the spaces have a hierarchy when creating the automations. For example, if automation is created to space level, all the folders and lists inside that space will use that automation. The same rules apply to folders. All the lists inside a folder will use the automation created for the folder.

For the Professional Services Team, the automations aim to do two functions. These functions are entering essential information into a task when it is created and moving the tasks to correct places when the tasks are completed. The table six explains the automations created to help the Professional Services Team:

Automation level in the hierarchy	Automation	Purpose of the function
Space level	If the task inside the space has an emergency fee checkbox checked, the automation will add the correct price to a field that takes in the emergency fee price	This is a space-level function because it applies to all customers.
Folder level	When the task is created, automation fills the brand field to the task.	The folders are named after brands. All the lists inside the folder belong to the brand. The information is used for invoicing purposes.
List level	When the task is created, automation fills the billable customer to the task.	There are many sub-franchisees for most of the big brands. Therefore, each list has automation that fills the correct customer for billing. This information is used for invoicing purposes.
List level	When the task label is entered into the task, the automation adds an hourly rate for the task.	There are different prices for different types of work. Therefore, the task label dictates the price for the task. This information is used for invoicing purposes.
List level	When the task is created, a tag is added to the task.	Each customer, including all the franchisees, has its own tag. This is added to the task when the task is created. Tags are used in dashboards to see different useful information about customers.
List level	When the status of the task changes to complete, and the task has invoicing check box checked, the task will be moved into their country-specific invoicing list.	The Professional Services Team does work for three different country companies. The Finnish invoicing department does the invoicing. Therefore, there is a to distribute the tasks into three different lists depending on the customer

Table 6. Automations created for the team and their purpose

8.4 Dashboards

The purpose of a dashboard is to give a visual representation of chosen data. The dashboards created for the Professional Services Team and Acrelec management can be divided into five categories. These categories are project management dashboards, service

distribution dashboards, customer weekly call dashboards, invoicing dashboards, and team workload dashboards.

Creating a task has multiple fields that need to be filled because those fields can be utilized in dashboards. The following subchapters will show how the Professional Services Team uses the data from tasks to create dashboards for different uses.

8.4.1 Project management dashboards

The following figure represents a project management dashboard. In the dashboard, the left part of the dashboards has two widgets representing completed tasks and tasks that are not completed. The middle of the dashboard has the progress of each project phase. Here, the data regarding phases are represented in the form of a pie chart. The right side of the screen has numbers regarding the project, the overall status of the project, and the distribution of the different products of the project.

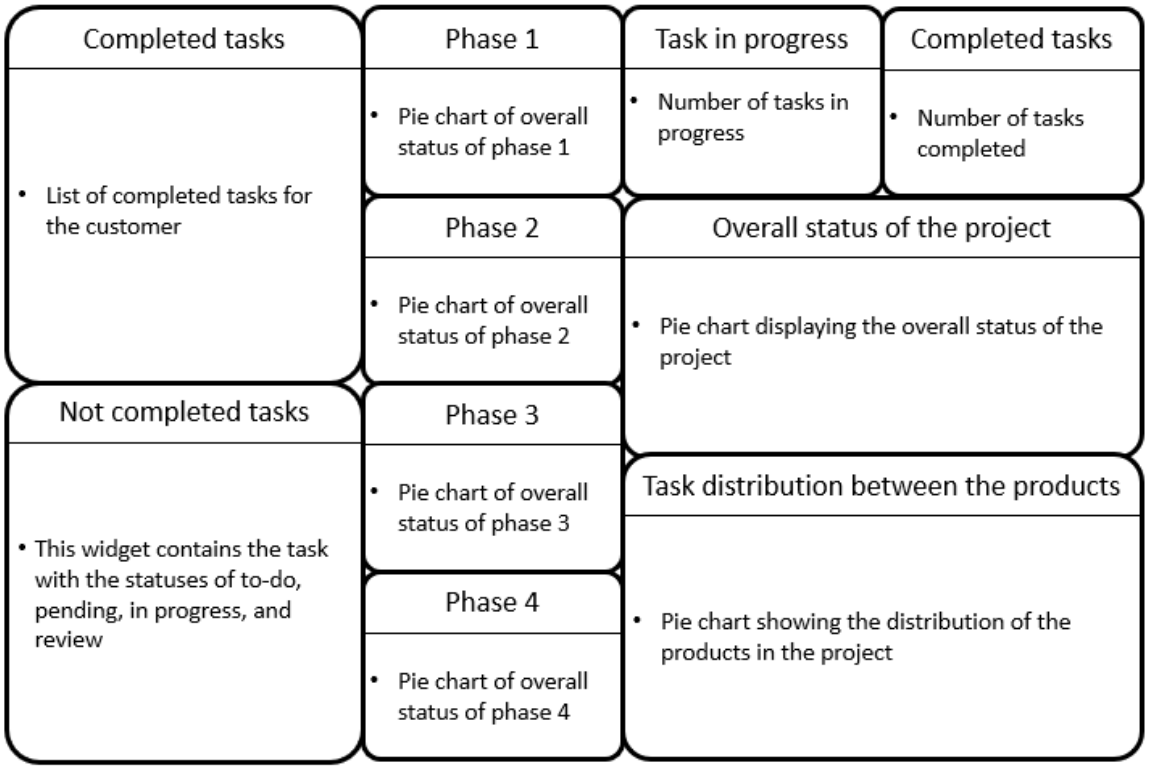

Figure 18. Mock-up of the project management dashboard

Project management is one of the most essential functions of the Professional Services Team. This is because, for some customers, this is the first touch to Acrelec as a company. Therefore, the Professional Services Team must establish their new professional identity from the beginning of the customer relationship. One aspect of the professional identity is

to show that the Professional Services Team has its project management processes under control. The project management dashboard visualizes everything in an informative way.

The project management dashboard is designed for three functions. The first is to gather all essential data regarding the project to be displayed on one screen. The second is to help go through the project status in various project meetings with customers. ClickUp allows giving access to users to view dashboards anytime free of charge. Thirdly, this allows customers to review real-time data regarding the overall status of the project. This is beneficial because it saves time and effort. Customers can view the status of each task in a project without contacting the project manager or team members.

8.4.2 Service distribution dashboards

Information about service distribution lets the company know how its customer base uses its services. This allows the company to make choices based on reliable data.

The service distribution dashboard is divided into different services that the professional service team offers for the customers. These services are content management, support, maintenance, project management, installations, training, and development. The dashboard also shows how many percentages of the work is billable work. The following figure 17 displays the look of the service distribution dashboard:

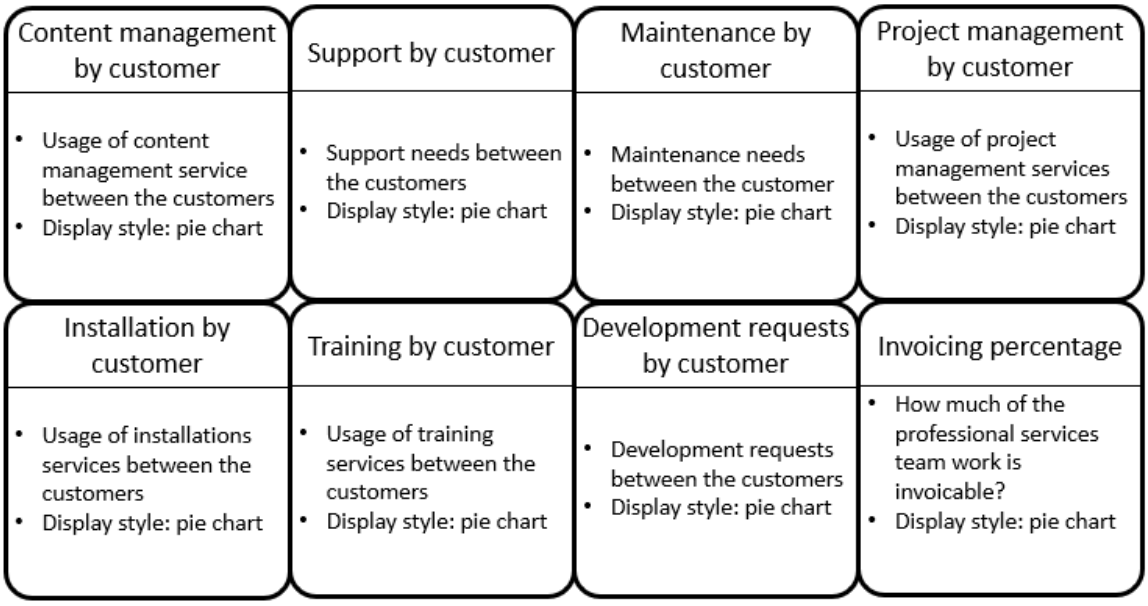

Figure 19. Mock-up of service distribution dashboard

8.4.3 Customer care dashboards

When the customer care is done correctly, the customer feels that Acrelec is putting effort into taking care of the customer relationship management. This is a feeling that Acrelec wants to provide to its customer base.

The purpose of the customer care dashboard is to collect everything that we are about to do, everything that we are currently doing, and everything that we have done. This sends a message that the Professional Services Team is on top of things. Furthermore, nothing falls between the cracks when the customer works with Acrelec. In addition, the customer care dashboard aims to support the customer care meetings that the Professional Services Team provides to customers weekly, bi-weekly, or monthly depending on the customer.

The customer care dashboard is constructed in the following way. The dashboard is divided into four widgets. The top-left widget shows a list of completed tasks since the last customer care meeting. The bottom left widget consists of a list of tasks not completed yet. On the right side, there are also two widgets. On the top, there are completed tasks shown in a bar chart. The X-Axis shows the time range of the current year by month, and Y-Axis shows the number of tasks completed that month. Finally, a pie chart displays the task type distribution on the bottom, indicating the ratio of tasks, requests, and issues.

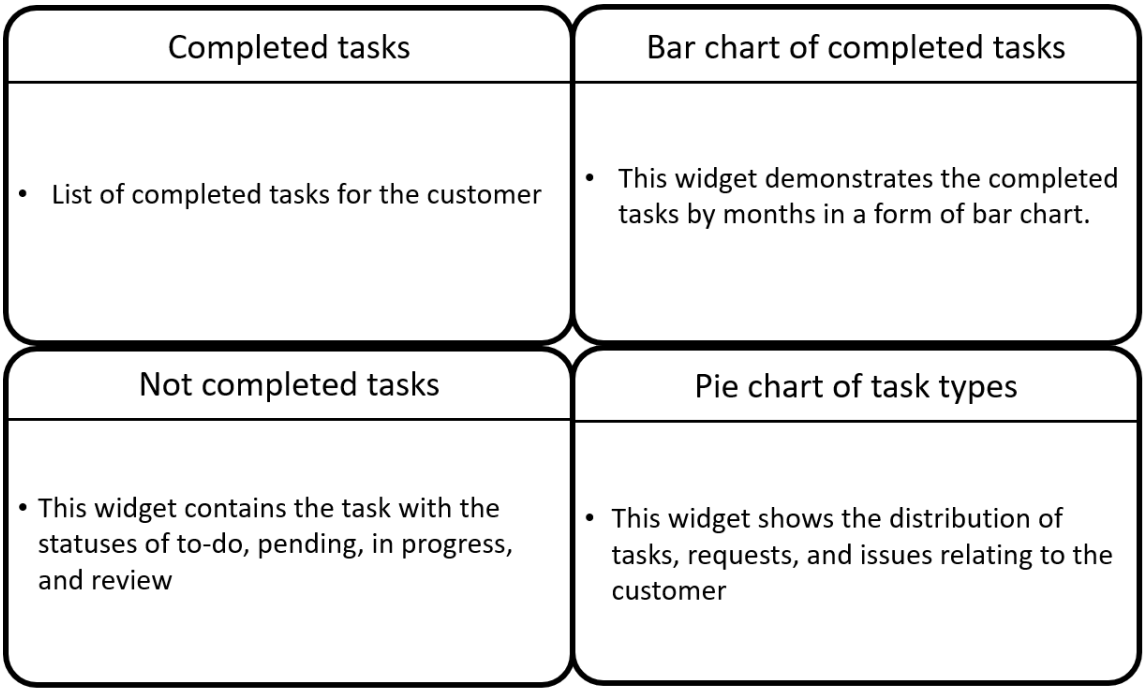

Figure 20. Mock-up of customer care dashboard

8.4.4 Invoicing dashboard

The invoicing dashboard has been designed for the invoicing department in Finland. The dashboard combines the information from three lists. These three lists consist of the invoicing needed for Finland, Denmark, and Sweden. The dashboard has three list widgets. Each widget shows a list of tasks that have not been invoiced for the current month. Here the task carries the following information. Each task has an informative name, a person who has performed the task, customer brand, billable customer, time spent on the task, hourly rate, if the task carries an emergency fee or not, and a total billable amount for the task. The brand groups each list of tasks to make the invoicing more efficient than before. There is a checkmark on every task. When the person doing the invoicing presses, checkmark the status of the task changes from not invoiced to invoiced, and the task disappears from the dashboard.

8.4.5 Team workload dashboard

The team workload dashboard aims to aid the manager of the team and the management of the company. The purpose of the dashboard is to give reliable information about the functions of the team. The widgets in this dashboard show the information represented by table seven:

Format	Information
Pie chart	The percentage of tasks completed to each customer
Pie chart	The percentage of tasks in progress to each customer
Pie chart	The percentage of distribution of tasks, requests, and issues
Calculation displayed in numbers	Number of tasks in progress at the current moment
Bar chart	Completed tasks monthly
Pie chart	Service utilization rate by brand
Pie chart	The percentage of each product that the Professional Services Team has worked on
Pie chart	The percentage of task labels

Table 7. Team workload widgets and information contents

8.5 Implementation of the platform

After the space, folder, and list structure had been created to ClickUp. The implementation of the ClickUp platform was made in three steps. These steps are moving professional team members and tasks into ClickUp, creating dashboards and automations for the environment, and mapping the developmental needs of the processes. The implementation was done following the action research method.

Every step of the implementation was done with group effort. Every team member was required to participate in each step. For example, in the first step, licenses were purchased for each team member, and each team member got assigned the responsibility of moving the customer tasks into the correct folders and lists inside the ClickUp. This exercise aimed to get the team members accustomed to the new way of creating tasks. Team members already knew the purpose of each field in the task creation because the required fields were decided in a community brainstorming session.

The completion of the first step was enough to start using ClickUp as a primary tool for keeping track of the work. In addition, every team member was told to keep track of possible development ideas regarding the platform for later use.

The second step of the implementation was to create the automations and dashboards. Automations were created in the same way as the tasks in the first step. Again, every team member participated to ensure that the knowledge of the ClickUp functionalities was shared. Once the automations were ready, the team members were told to log their billable hours in ClickUp following the new procedure and log the hours in the previously used excel file. The purpose of the double booking of the billable hours was to make sure that the automations were working correctly. The double booking of the hour entry lasted for one month. After the month, minor adjustments to the automations were made to get the hour entries to match. After that, the team members were told that the hour entry would be made in ClickUp starting now.

9 Results

9.1 Results of the development work

The third phase of action research is called refreezing. This step is all about examining the results from the previous phases. During this phase, the newly developed behaviors and processes will be reinforced and will gradually evolve into standards. The purpose of this phase is to assess the changes brought in by the action plan. Other critical aspects of refreezing are evaluating the results and collecting data.

The review of results was done during February 2022. This includes the results of the developed processes, analysis of the implementation of the developed processes, and answers to research questions.

The development work had quite many positive influences on the Professional Services Team. The most significant effect was that using the newly developed processes increased the number of invoiced tasks by 27%. There are a couple of reasons for this. The first one is that the previous process was very time-consuming regarding the hour entry of billable tasks. By automating this process, the number of tasks that were not recorded decreased. The second change to affect the invoicing percentage is the new flow of task creation. The task creation has a checkbox that the team member needs to check to tell the system that invoicing automations need to be used. In other words, the simplified process of task creation makes a significant difference.

The other useful benefit that the new system ClickUp is starting to produce is the dashboards. The data collected during the three months of use is starting to show a more comprehensive picture of the workload and how different customers are using the services of the Professional Services Team. The dashboards are also providing real-time status of the ongoing projects. These dashboards are used in the weekly and bi-weekly project calls with the customer. There is also a dashboard providing upper management with the status of each ongoing project. The feedback on the dashboards has been excellent.

Another use for the dashboards is to improve the customer care that the Professional Services Team is providing. So far, the Professional Services Team has introduced the customer care dashboards to their key clients. The response to the new visual grip on customer care has been good. The current status for the development of the customer care dashboards is that the feedback is being collected from the customer. This feedback allows to further develop the customer care model once the time is relevant for that.

9.2 Answers to the research questions

1. What relevant data should Acrelec Nordics gather from project and service delivery to support the development plan?

First, it is important to point out that the only way to find out what is relevant data to Acrelec Nordics and Professional Services Team is to map out the current situation. Without mapping out the current situation and analyzing it, the relevant data would rely only on a guess. After the analysis of the current situation was done, it was clear that will be collected in the improved process would have to serve three different purposes.

The first purpose was to deliver Acrelec Nordics invoicing department required information regarding teams' monthly invoicing. The second purpose was to gain an understanding of how services are distributed among customers. The third purpose was to provide Acrelec management with real-time data on the operations of teams.

To provide relevant data to serve the previously mentioned purposes, the new system ClickUp needed to gather the information represented in table eight about the tasks that Professional Services Team does on a daily basis:

Field	Purpose of the field
Assignee	Here, the user has to assign the task to a team member.
Time estimation	If time estimation can be given about the task, it will be entered into this column.
Due date	If there is a due date for the task, it will be entered into this column.
Invoicing	This checkbox will be checked if the task contains billable work.
Emergency fee?	Content management tasks need to be informed to the Professional Services Team five working days before the due date. If the customer needs the change faster emergency fee will be invoiced. If this checkbox is checked, the task will contain the emergency fee.
Task type	All tasks are divided into three different task types. These task types are task, request, and issue. The user will enter the task type when creating the task.
Product	There are many different products and platforms with which Professional Services Team members work. To be able to collect a comprehensive set of data, the product or platform needs to be entered when creating a task.
Phase	The phase represents the status of the project or customer restaurant.
Task label	Task label represents the type of work that the task is. There are eight different types of task labels. These labels are the following: content, support, maintenance, project, internal, training, and development.

Table 8. Task fields and their purpose

2. Why is knowledge management essential in team management?

The dashboards created during this research are critical in addressing this research question. Different dashboards can be used to view the data generated by the improved processes. The great thing about dashboards is that they visually represent critical information for the user. The dashboards enable the team manager to gain a quick overview of project statuses, service statuses, and workloads.

Furthermore, once sufficient data has been collected, the data can be used to improve the operations. Six months of data collection should be sufficient to establish a baseline. Once the team manager has the big picture, he or she can identify problem areas and direct the team's efforts toward resolution.

3. How to launch a knowledge management program?

The most important steps towards launching the knowledge management program happen before launching it. The mapping and analyzing the current situation give direction for the development work. After the knowledge management needs have been determined, platform that supports the newly picked knowledge management approach needs to be chosen.

In the Acrelec Nordics case implementation of the newly developed processes with ClickUp was successful. The key finding from the implementation was that dividing the implementation into three steps was the right choice. The first step is moving into the new system without dividing the implementation would have been hard. Building the basic structure first and using it for a month gave the team a more comprehensive understanding of the system and how it works. This understanding helped to create the needed automations and dashboards to support the team's activities in the second step.

Currently, the team is living in the third phase of the implementation. The third phase is all about gathering data from the operations and thinking about possible areas of further development. These two activities actually walk hand to hand because the data collection is structured to aid further development. Therefore, it seems that the developed processes are creating a continuously developing loop.

9.3 Further development suggestions

So far, a few ideas to further development ideas have surfaced. The first one is the usage of functionality called forms. This functionality could be used to create, for example, a customer-specific support form for customers. This form would contain all the required information regarding the support request coming from the customer. Using the form would have two benefits. The first would be that filling of the form creates a task, so the task creation regarding support would be left to the customer. The second benefit is that the form would require customers to give all required information. This would decrease back and forth emailing that is currently happening to get the required information for problem-solving.

The second development idea is to create dashboards containing all the completed tasks regarding specific task labels. This dashboard would serve the purpose of a database. It would allow specialists to search, for example, if there has been a specific type of problem in the past and see how the problem was solved.

The development of the processes will continue following the action research principles and planning for new development, doing the developmental work, and looking at the results.

Looking at the feedback every step of the way is vital, so the continuously developing state continues to travel with the team.

10 Conclusions and reflection

10.1 Conclusions

One of the purposes of the thesis was to map out the data that is relevant in developing the Professional Services team's way of working. After the relevant data had been mapped out, the next step was to acquire a system to support the data collection. Development work helped by a comprehensive data set provides a useful window into problems that would not be otherwise visible.

The development efforts resulted in the construction of an easy-to-use task creation mechanism that prompts team members with critical assignment information. The easy-to-use task creation mechanism brought more to Acrelec Nordics than just critical information about the tasks. The combination of automation tied to the task creation process led the Professional Services team to invoice 27% more in the first three months of using the new platform for work.

Additionally, 15 dashboards were constructed to visualize various parts of the data. The objective of dashboards is to provide as much useful information as possible to the dashboard viewer.

Six months have been set aside for data collection. After collecting operational data for a half year, development days will be organized for Professional Services team members and Acrelec Nordic executives. The objective of the development is to utilize community brainstorming to assist in determining what type of conclusions and actions the organization should take in light of the acquired data.

10.2 Reflection

The research and writing for this thesis were unexpectedly fun. The last few years have been tremendously chaotic for the entire organization. The standstill created by the pandemic provided an ideal opportunity to refine the way the Professional Services team operates. The development work completed for this thesis enables Acrelec Nordics to remain functioning in terms of project and service delivery. Even if the demand continues to grow, the data collection will predict future resource requirements.

The organization, team, and customers have been happy with the new way of working. Unnecessary data entry has been removed from the tables of the team members. This allows the working hours to be spent on productive assignments. Also, data collected regarding project and service delivery is easily viewable for the executives. Due to the success

of the development work, a POS system called TCPOS and the senior specialist working with the product have been moved to the Professional Services team. The same kind of data collection and dashboards have been built to support projects and services around TCPOS.

10.3 The ideas for academic research

One possible academic research area could be around data system integrations. Usually, it would be beneficial to have all the relevant data under one system. However, the system needs for companies are expanding, and it is getting harder and harder to find an agile system that would serve all the company's needs. Therefore, it would be beneficial to research the possibilities of integrating the systems. There are many questions to answer regarding the integration. Here are a couple of questions that most likely would come up:

- What needs to be taken into consideration when building the integration?
- Which systems host the master data?
- How much does the integration cost?

Getting answers to the questions above would be beneficial for many companies. The system structure is fractured for many companies. The fractured system structure creates a lot of unnecessary costs for the companies. Therefore, intelligent integrations between the critical systems would be a cost-efficient choice. The usual problem is that there has to be a consultant or expert hired to analyze the systems and come up with a plan to be able to create the integrations. This scares companies to keep their current fractured system structure. Providing research that shows what needs to be considered when considering integration between the systems might be the things needed to get companies moving forward.

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