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Improving Customer Experience with Artificial Intelligence, Data Analysis, and Automation in Azets

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Abstract

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Net Promoter Score or System (NPS) is globally a leading management system for measuring and improving customer experience (CX). It is a straightforward metric and a powerful tool but using NPS for producing a competitive advantage requires data aggregation and analysis and a deep understanding of the nature of CX.

This development project is created for Azets to understand the predictive role of NPS in customer buying behavior. Azets has used the NPS methodology since 2013; as a result, the company has collected a vast amount of customer feedback data.

The primary purpose is to provide insights and proposals for improving customer experience and retention at Azets Finland and Azets Group. The objective is answered by analyzing NPS data with artificial intelligence (AI) and combining NPS data with invoicing and churn data, in addition to utilizing a comprehensive literature review when proposing development projects.

This thesis follows the single-case study research method. The research contains two parts and uses secondary data collected by Azets from small and medium-sized (SME) customers initially for other purposes than for the thesis.

The first part of the research combines quantitative NPS data, invoicing data, and churn data to seek connections between customer feedback and buying behavior. The second part of the research uses AI and natural language processing (NLP) to interpret 32,000 customer comments – collected in NPS surveys between 2013 and 2021 – to find key topics, sentiments, and feelings that affect customer experience at Azets.

Findings reveal the most valuable customers are not always Promoters with an NPS rating of 9 or 10 on a scale of 0-10 and that the NPS does not predict churn at Azets in the same way as described in theory. Qualitative data analysis with AI shows that the critical CX factors do not match the categories predefined in Azets' NPS process.

The research findings and suggested automation projects can enable Azets to increase revenues by millions of euros with moderately small additional investments. Most of the appendixes and found insights contained confidential information and are not included in the published version. Such data removed from the public version include, for example, the average billing in each NPS category and the sentiments identified by artificial intelligence related to critical CX factors. The thesis was evaluated based on the non-public version.

Keywords

artificial intelligence, automated communication, automation, buying behavior, customer experience, customer loyalty

Table of contents

1 Introduction

Digitalization – for example, automation through system integrations, robotic process automation, and artificial intelligence – is transforming the financial management industry in a way where accountants can spend less time on manual recurring tasks and more on providing high-value advisory services (Soro 17 January 2017).

The financial management industry includes various types of companies. The members of the Finnish Financial Management Association are known as accounting firms. In this thesis are used contiguous terms – accounting, financial accounting, and financial management – depending on the context.

“Financial accounting and financial management are two separate functions of finance where financial accounting requires to report the past financial transactions, on the other hand, financial management requires to plan about future transactions” (Talentedge 2021).

Accounting firms traditionally charge their customers on an hourly basis. New income sources for an accounting firm could be advisory and consultancy services and partner services resale. Many firms can also be responsible for almost all customer companies' business processes instead of only taking care of statutory accounting and financial management. Accounting firms that are reluctant to digitalize the business may gradually disappear from the industry. (Lehtomäki 21 May 2018.)

Over the past three decades, the Finnish economy's share of business services has grown from about 1% to over 6%. The financial management industry – Standard Industrial Classification TOL 2008 includes accounting, bookkeeping, auditing, and tax consultancy – has encountered changes in the past years that are not yet statistically visible. Auditing firms and accounting firms have started to offer other services than described in the TOL 2008 and its sub-categories. (Ministry of Economic Affairs and Employment 2019, 11-13.)

The emergence of knowledge-intensive business services is reflected in the blurring of industry boundaries. The most typical example of this blurring is the shift from operational services to consulting. This phenomenon is a consequence of IT, communications, marketing, legal, and financial management solutions all contribute more closely to a customer company’s strategy and management. The shift from daily administration work to

financial consulting in accounting and auditing firms is evident. (Ministry of Economic Affairs and Employment 2019, 13-14.)

In 2017, the Finnish financial management industry employed 16,311 people at 5,122 offices and generated EUR 1.6 billion revenue. The industry changes occur relatively slowly, partly because businesses need financial management services at all economic cycle stages. The industry is polarizing as large accounting firms acquire small and medium-sized competitors. Polarization is a natural course of development in the sector as smaller firms have retirement-aged entrepreneurs who have challenges finding successors to their businesses. (Ministry of Economic Affairs and Employment 2019, 15-35.)

The industry leaders also acquire other types of businesses such as software and invoicing companies to strengthen and streamline their operations and offer new digitalized services. Centralizing procedures and nearshoring manual work to lower-wage countries are standard practices to improve the leading firms' efficiency. (Ministry of Economic Affairs and Employment 2019, 35.)

At the other end of the financial management industry's polarization are highly personalized, often tiny, accounting firms. While leading firms centralize services and direct small businesses to remote services, small local accounting firms stand out by providing the most comprehensive service in one place which is physically close to the customer. Simultaneously, small firms have challenges meeting the requirements of a continuously digitalizing economy, such as the tax management is transmitting its traditional services to digital form. However, entrepreneurs in the small segment are often loyal customers of accounting firms who do not want to switch from personalized customer service to cost-effective centralized service. (Ministry of Economic Affairs and Employment 2019, 35-36.)

Digitalization, automatization, and changes in working methods do not mean the extinction of financial management professionals. It is about reforming jobs and the industry. Instead of recording numbers, expenses, and receipts, an accountant should be analyzing numeric information and providing insights that are either strategic or critical to the customer’s success. A modern financial management professional is foremost a service professional and a kind of business consultant. Utilizing and developing digital platforms are essential skills and the capability to sell own expertise to the customers. (Ministry of Economic Affairs and Employment 2019, 37-38.)

The purpose of this master’s thesis is to research how to improve customer experience (CX) in financial management services in Azets’ small and medium-sized (SME) customer

segment in Finland by analyzing customer data, utilizing emerging technology, and implementing automation. Azets is the leading business-to-business (B2B) organization in the Nordic financial management industry.

The company offers continuous services in accounting, payroll, and software as a service (SaaS). Over the past decade, Azets has expanded the offering to project-type services such as advisory, consultation, human resources, and leadership development. In addition to versatile services, a competitive advantage the company possesses is technological knowledge, resources, and solutions. The company has an opportunity to build a customer-centric and value-adding financial management service model that is at the same time personal for the customers and effectively highly automated.

Digitalization and the development of technologies affect in one way or another all industries. At the same time, markets are also becoming more people-driven. According to Puustinen & Saarijärvi (2020, 13-14), production-driven management was enough to succeed a few decades ago, but in the 2020s, the focus of competition will be on customer experiences. Therefore, in this thesis, the starting point for automating communication is to improve the customer experience and not to make customer service more cost-effective.

Finnish leaders are skilled in productional excellence. However, to succeed in the future, they need to understand why the customer experience is equal to the strategy, what the customer experience is about, and how it is managed. (Puustinen & Saarijärvi 2020, 14-15.) Those three essential questions are answered comprehensively in Chapter 3.

2 Context of the development project

The author works as a Marketing Manager and NPS Manager in the Finnish subsidiary of an international Azets. The subsidiary employs 700 professionals, and it is one of the biggest accounting firms in Finland. The subsidiary has over 40 years of history in accounting and financial management services. Over the past decades, the subsidiary has grown organically, acquired several businesses, and merged twice to an international business group – in 2002 to Visma and 2016 to Cogital Group.

In September 2020, Cogital Group changed its name to Azets. At the beginning of 2021, the group has 160 offices in 8 countries, employs 6,500 professionals, and globally serves more than 120,000 clients.

When referencing Azets in this thesis, it means the whole group. The group's Finnish subsidiary is referred to by the letter combination AIF, which comes from Azets Insight Finland. Using Azets and AIF aims to clarify the context's scope to the reader – whether the matter is national or international or more straightforward or complex to execute.

AIF’s strategy contains three objectives relevant to this thesis:

1. Improve customer retention to support organic growth
2. Sell more services to existing customers
3. Reduce manual work with automation and emerging technologies.

In June 2020, Azets conducted an international study and interviewed over 3,000 customers in the Nordics. Based on the study results, the CEO of Azets Nordic stated that "Customer experience and regular communication is an area where I truly believe we can differentiate us from our competitors in the future."

After the author was appointed Azets Finland's NPS Manager in the autumn of 2019, he noticed an opportunity. An alignment was missing between improving customer service at the customer level and improving CX at the company level. That nonalignment and changes in the industry – digitalization, polarization, and the job role change from accountants to advisors or controllers – were the author's starting points to research customer experience.

In 2021, this thesis is even more topical as AIF seeks strong organic growth in the SME segment. Without strong customer retention, that growth is not possible. A fast-growing

customer base requires standardized and automated processes for service delivery and customer service.

Currently, AIF serves thousands of organizations in accounting in the SME segment. According to Azets' definition, the SME segment consists of Micro, Small, and Medium-sized companies with a turnover of between 0-10 million euros. According to Alma Talent Tietopalvelut, which AIF uses to verify and analyze business information, there are more than 120,000 companies of that size in Finland. With that figure, it is easy to conclude that the growth potential is significant in customer acquisition, but growing requires improving customer retention.

2.1 Stakeholders

This thesis involves several stakeholder groups. Critical stakeholders were involved when selecting the thesis topic.

As this thesis is a development project, it is useful to review project management case studies as a best practice in managing stakeholders, engaging with them, and creating purposeful internal communication. According to Worsley (2017, 7), the complexity and size of a project affect how it should be managed, but any project can benefit from engaging stakeholders in a structured way.

Stakeholder management is useful only if it influences decisions, choices, and activities when running the project. In general, projects can be categorized in multiple ways. For example, technical difficulty and human difficulty can be used to define is a project stakeholder-neutral, stakeholder-sensitive, or stakeholder-led, as shown in Figure 1. Neutral projects have stakeholders with limited influence and power to the project. Various approaches in stakeholder management are required when the project is sensitive to the interests of stakeholders. When stakeholders have a lot of influence and power, a project is stakeholder-led. Engaging stakeholders appropriately helps avoid problems, crises, and failures caused by the project. (Worsley 2017, 7-10.)

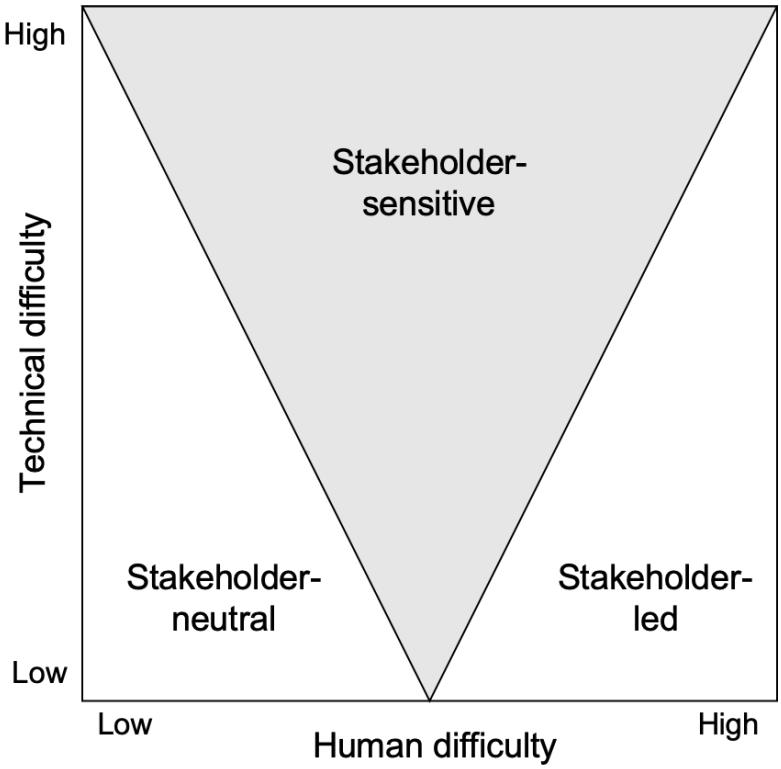

Figure 1. Stakeholder-neutral to stakeholder-led project management (adapted from Worsley 2017)

This development project can be any of the three categories described in Figure 1, depending on how the automation projects will be deployed and implemented. If the projects utilize only technology already available in Azets, those projects are not technically challenging. On the other hand, if the research findings suggest implementing new technologies and integrating additional data sources to the existing technology, the project may become moderate to very complex.

When evaluating the human difficulty, this development project requires skills AIF already poses. However, the project may become stakeholder-sensitive if the automation projects require stakeholders, such as accountants, to change the way they work with customers significantly. In this case, this stakeholder group may experience uncertainty, a sense of incompetence, and fear of their position within the organization, which may appear as a resistance to the projects.

Anybody can be a stakeholder, but not all should be considered as stakeholders of a project. Stakeholder management as a concept is not based on assumptions. Identifying a stakeholder can be found on a role or agenda. By identifying relevant stakeholders, the project owner can analyze them, develop strategies, plan approaches, communicate and engage effectively, as described in Figure 2. Stakeholder management does not solve all

conflicts, but it aims to improve the commitment and ensure success by planning when and how to engage and communicate with stakeholders. (Worsley 2017, 11-17.)

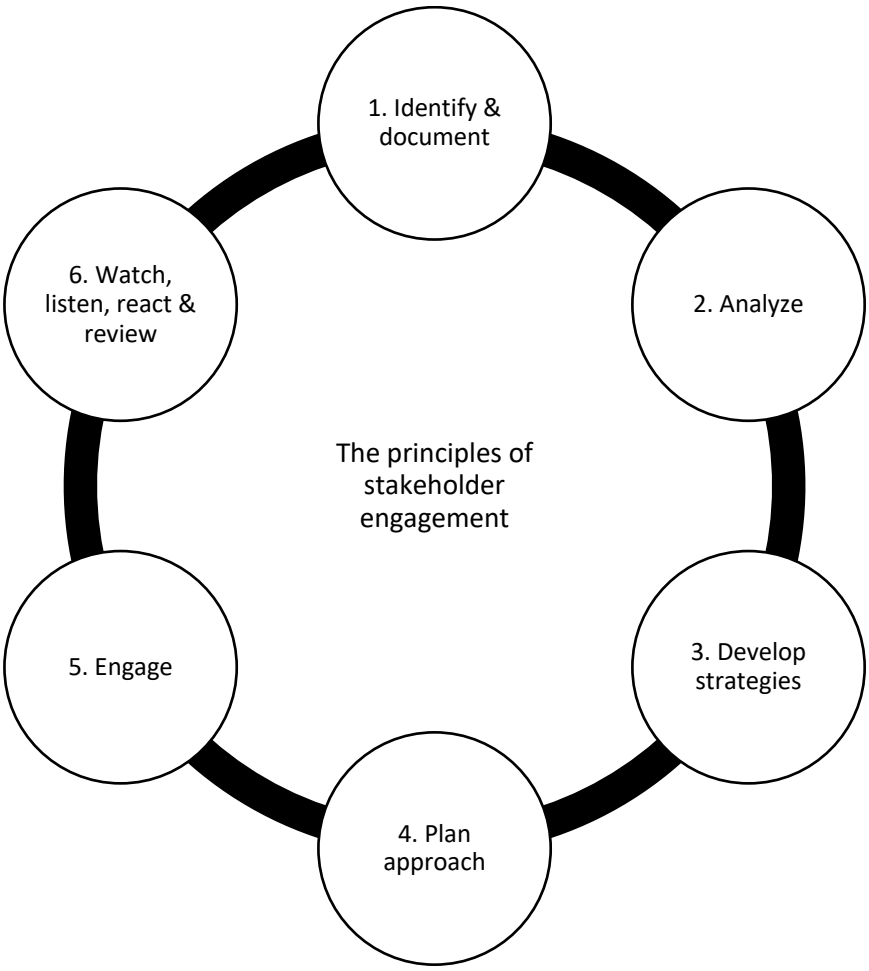

Figure 2. The stakeholder management process (adapted from Worsley 2017)

This project is categorized as stakeholder-neutral in the research stage, enabling objectivity to propose the most sophisticated approach for Azets. Before implementing the proposed measures in AIF, the author will re-evaluate the project category and re-identify the stakeholders with the project team for creating a stakeholder engagement plan to reflect the final state of this research project.

According to Cornelissen (2017, 7) a stakeholder is “any group or individual who can affect or is affected by the achievement of the organization’s objectives”. Worsley (2017, 20) adds to the stakeholder definition an aspect of project management by saying a stakeholder is “not already subject to another management process”.

When using Worsley’s definition, the project team and steering groups are not perceived as stakeholders because they are part of the project team management process. For the sake of clarity, the project team is also described with other stakeholder groups in Table 1.

Table 1. Stakeholders in researching and implementing this development project

Stakeholder groups	**Teams or Individuals**	**Agenda and motivation**	**Desired role**
Project team, *'Owner'*	Communications & marketing teams CRM specialists Finance specialists IT team Management Sales director	Improve CX and customer loyalty. Increase sales and profitability.	Allocate budget and resources. Communicate, plan and ensure implementation. Responsible of the return-on-investment of this type of strategic project.
SME unit, *'User'*	Director Team leaders Specialists Trainees	Improve customer service. More time for meaningful and productive work.	Provide information. Engage with the implementation. Support in adaption.
Customers of SME unit, *'Customer'*	Current customers.	More value for money. Easier cooperation. Competitive pricing.	Customers constantly give feedback about the development projects.
Management and owners of AIF, *'Sponsor'*	Management in the group headquarters Management in the private equity firm	Scalability and success in terms of growth and profitability.	Show support for development and implementation. Allocate budget and resources when needed.
Other internal, *'Learner'*	Other employees	Curiosity about how the projects affect to them.	Show genuine interest. Implement the projects widely in AIF and Azets.

After the implementation, other relevant stakeholders are current customers of other business units, competitors, job seekers, media, suppliers, partners, universities, and even governmental authorities. According to Worsley (2017, 23) *'witnesses'* is a group without power to the project but can have agendas and views or even can "influence or be impacted by the project".

Witnesses stakeholder group may be curious about this development project as it can affect their direct engagement with Azets. They may also learn about it indirectly, for example, if the projects becomes a benchmark for improving CX in B2B business. Thus, Azets has an opportunity to be publicly well-known as the forerunner in automated services.

2.2 Objectives

This thesis aims to improve customer experience and retention by utilizing data analysis, artificial intelligence, and automation. Azets, as any enterprise, poses a vast amount of customer data to be used in new ways for improving operations.

The second objective is to find a solution for AIF to complement and interpret existing monthly Net Promoter Score (NPS) customer surveys to produce meaningful and reliable insights from customer feedback for improving customer experience. As the NPS primarily measures over time evolving customer relationships and this thesis focuses on developing CX, a critical aspect is to seek complementary methods to continuously measure and analyze transactional satisfaction in the touchpoints that affect the overall customer experience.

After implementing the proposed means, the company should gradually improve customer retention, customer lifetime value (CLV), sales in additional services, and Net Promoter Score. Thus, the third objective is to find and propose reliable standards to continuously measure the progress and benefits of projects against AIF's key performance indicators (KPIs).

2.3 Scope and limitations

The development project covers only customers of one business unit (BU) in AIF. The customers of that BU are micro, small and medium-sized organizations (SME) located in Finland. All selected customers in SME BU are buying accounting services but can also purchase other services, such as payroll, human resources or financial advisory.

The company offers continuous accounting and financial management outsourcing services from other BUs to international customers (International BU), chain companies (Retail BU), and large to enterprise-sized companies (LA BU). Also, part of the accounting business division is financial advisory services that are not always continuous due to their nature. Two business units (Advisory BU and Group Accounting BU) offer those services, but accountants in SME BU also provide similar services on a smaller scale.

SME BU is selected for the thesis because it has the largest number of customers, and customer service is not as dense in daily work as in other financial management units. Utilizing automation, centralizing customer care, and developing the customer experience have the most significant business opportunity in this BU.

The research does not cover Azets' other subsidiaries because the thesis author oversees communications, marketing, and NPS only in Finland. However, at different stages of the thesis, the author strives to ensure scalability to other markets. The subsidiaries in other countries are already using the same or similar systems that are the base of this development project.

There are limitations in using numeric NPS to measure CX because the factors affecting that number varies between customers. It is essential to analyze the open text feedback customers are giving with the number to open-ended questions. Instead of being just a metric, NPS is a systematic process of listening to what customers have to say and improving the operations accordingly (Markey & Reichheld 2011, 12-13).

Development stages and the thesis

This thesis includes proposals for action based on the literature and the research findings. From that perspective, the development stage is part of the thesis.

Investments and resourcing needed for implementing the proposals require a decision from AIF or Azets. After delivering this thesis to Haaga-Helia for evaluation, this development project will be presented to the management by the author. Thus, the deployment, implementation, adoption, and sustain stages are not part of the thesis.

2.4 Hypothesis

"A hypothesis is a provisional idea whose merit requires further evaluation." That means hypotheses are ideas that someone can empirically test in research. Writing a hypothesis statement requires an understanding of existing literature but also dependent and independent variables. (Salkind 2010.)

A hypothesis is typically based on existing theories and past research. Even though there was no past research available in Azets, theories of NPS support the idea of testing a hypothesis in this research.

Hypothesis
NPS predicts buying behavior.

The chosen hypothesis is valuable because it studies the relation between NPS surveys and customer behavior. For example, suppose it turns out that customers giving Promoter

ratings (9 or 10) do not buy more or act as loyal customers. In that case, the NPS methodology provides misinformation about the current state of customers. That information leads to erroneous interpretations regarding how to improve customer service and customer relationships. In the automation of customer-specific communication, the collection of customer data is not a challenge. Instead, the most important thing is to ensure the reliability of the data so that it can be analyzed and utilized in practice with high quality.

2.5 Research problem

This thesis answers to one problem which is the main research question supporting AIF to improve customer satisfaction, loyalty, revenue, and profit in SME segment.

Main research question
How to improve CX in the SME segment?

The first sub-question seeks a connection between NPS survey data and buying behavior. That connection is essential when making strategic decisions based on numeric NPS data in AIF and Azets. Over the past eight years, in Azets, the focus has been on improving the relationships with customers who give Detractor (0-6) rating on NPS surveys, but Passives (7-8) and even Promoters (9-10) may act unpleasantly by terminating the contract, buying less over the years, or recommending AIF to their peers. There may also be differences in purchasing behavior within the NPS categories, or a rating may not indicate purchasing behavior.

Sub-question 1
What type of connection exists between the NPS survey and customer buying behavior?

The second sub-question enables to understand the current state of the aspects affecting customer experience. It also portrays the customer expectations by analyzing data of open customer feedback collected in NPS surveys over the past eight years.

Sub-question 2
Which factors influence the CX in the SME segment?

The third sub-question helps AIF to develop a market leading CX by reviewing existing and emerging technologies. Proposing practical applications for the technology is an essential part of answering this question.

Sub-question 3

Which technological solutions are available and applicable for improving CX at Azets?

The author collected the information and data for this thesis in three stages as described in the cover matrix (Table 2). Data collection methods answer sub-questions 1 and 2, while literature review provides information to sub-question 3. Data collection covers two evidence types – documents and archival records – in this single-case study research.

Table 2. Cover matrix of information and data collection methods

Sub-question	Evidence	Method	Time frame
Which technological solutions are available and applicable for improving CX at Azets?	Literature, chapter 4 (documents)	Author search literature from sources available through Haaga-Helia and beyond.	December 2019 – April 2021
What type of connection exists between the NPS survey and customer buying behavior?	NPS surveys, invoicing data, and churn data (archival record and documents)	A finance specialist collects invoicing and churn data. The author combines the data with NPS data and reports findings.	March 2020 – May 2021
Which factors influence the CX in the SME segment?	NPS surveys (documents)	An external partner analyzes qualitative data with AI. The author analyzes NPS data, compares the analyzes, and reports findings.	March-May 2021

2.6 Business context

This development project initially aims to create more value for the SME unit's current customers by improving customer experience. On the other hand, the project also aims to reduce manual work and streamline customer relationship management by automating processes and utilizing existing customer data. According to Osterwalder, Pigneur & Bernarda (2014, 144), to sustainably create value for customers it is a requirement to create value for the business as well.

The business model canvas is a tool to describe how a company creates, delivers, and captures value for the business. In contrast, the value proposition canvas tool helps visualize, design, and test customer value creation. (Osterwalder & al. 2014, 272.) The latter

tool contains two dimensions – the customer profile and the value map – which aim to understand the customers and map the value creation for finding a perfect fit (Osterwalder & al. 2014, 3).

With the business model canvas, the outcome of this thesis will be portrayed for the internal stakeholders to understand what fundamental elements affect the current and the potential business model, including a customer perspective. The author created an example (Figure 3) with a tool provided by Strategyzer.com – a website founded by Alex Osterwalder & Alan Smith.

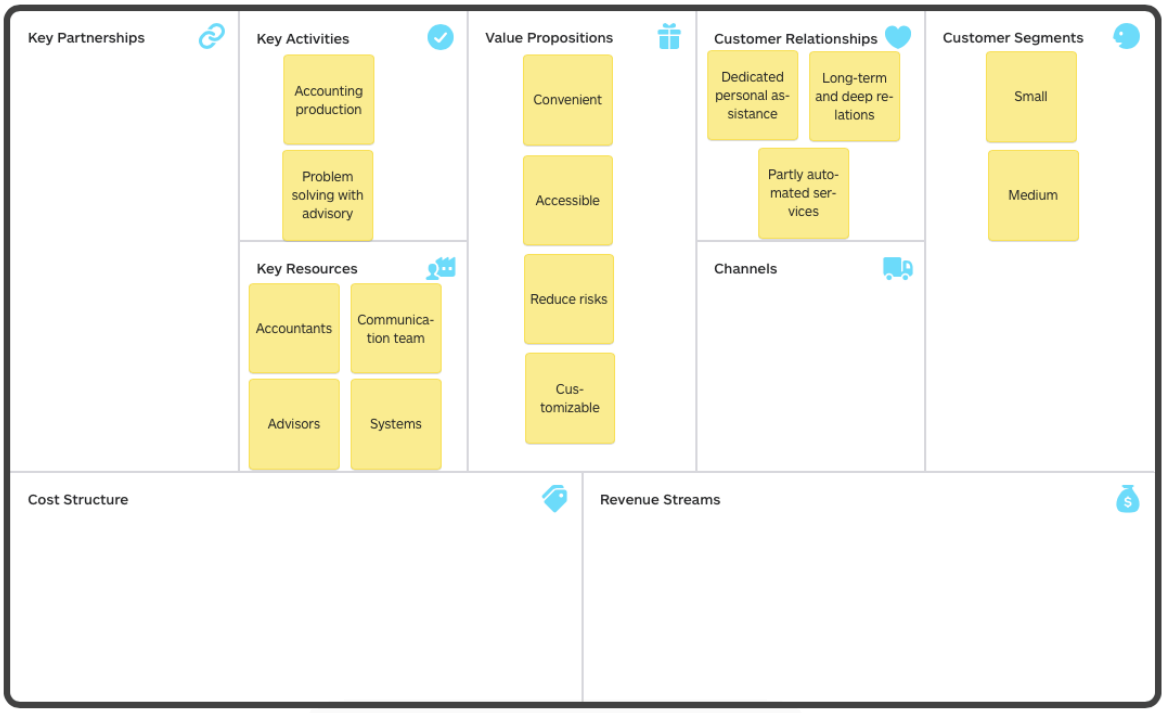

Figure 3. Business model canvas of this development project (adapted from Strategyzer.com 2020)

5

The critical elements in this development project visualized with business model canvas before conducting the research are listed below:

- Customer Segments = Small and Medium
- Customer Relationships = Long-term and deep relations, Dedicated personal assistance and Partly automated services
- Value Propositions = Convenient, Accessible, Reduce risks and Customizable
- Key Activities = Accounting Production and Problem solving with advisory
- Key Resources = Accountants, Advisors, Communications team and Systems

Using the value proposition canvas tool, AIF can improve and invent value propositions and develop business models. The value map is a structured method to describe pain relievers and gain creators the services promise to deliver for customers (Osterwalder & al.

2014, 8). The second part of the value proposition canvas – customer profile – describes the pains customers may encounter, the gains customers aim to achieve, and the jobs customers want to get done (Osterwalder & al. 2014, 9).

The author created a simple example of the value map and the customer profile (Figure 4), which is not yet made based on any research. It helps the stakeholders better understand how to use this design tool in creating and developing services and value propositions that customers and noncustomers desire. The author will update the canvas based on the findings of this case study research.

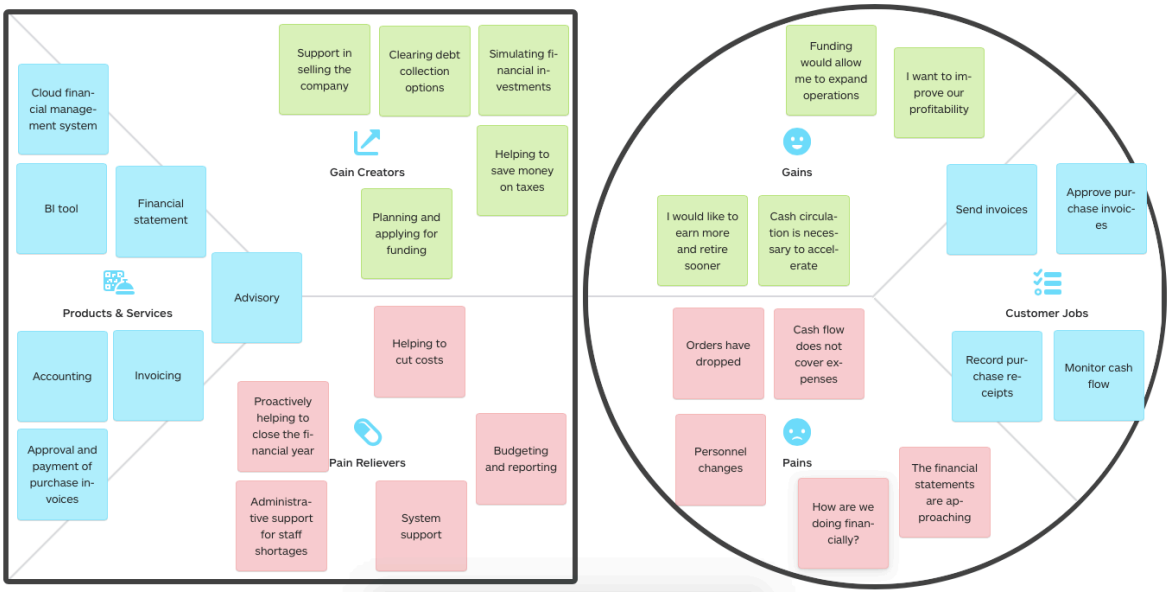

Figure 4. Value map and customer profile of this development project (adapted from Strategyzer.com 2020)

Strategically this development project can be a game-changer for Azets. Although the author does not have access to competitors' business models, it is plausible they are not exploiting automation in customer service and CX. That assumption is based on daily work observations when regularly visiting competitors' websites for comparing their value propositions and service promises. None of the accounting firms in Finland publicly state having a differentiated business model in financial management. Instead, all companies emphasize the importance of personal customer service. By creating a blue ocean strategy with automated services – extended from financial management to the entire offering – Azets can create a competitive advantage that makes rapid and profitable growth.

The blue ocean strategy is typically created by an incumbent company within a red ocean industry – high competition and defined boundaries – rather than outside the industry. When competing in a red ocean, the margins decrease as customers are more interested

in cost than value. On the contrary, blue oceans are about creating market spaces where competition does not exist. An example of the blue ocean is using existing technology in a new way to create customer value. Blue ocean strategy differentiates with lower costs and build brand equity without trade-offs. (Kim & Mauborgne 2004.)

A decade later, authors have identified six reasons why many companies are still struggling to adopt a blue ocean strategy. Managers understand the value of creating new markets, but their education and experience have developed assumptions and theories of business strategies causing mental barriers. (Kim & Mauborgne 2015b.) The six red ocean mental traps authors propose to avoid are presented in Table 3.

Table 3. Six mental traps to avoid for creating a blue ocean strategy (adapted from Kim & Mauborgne 2015b)

Trap	Mental barrier	Why to avoid the mental barrier?
1	Making customer satisfied is the highest priority.	Market opportunities are created by getting insights from noncustomers.
2	Niche strategies create growth.	Finding commonalities among customer segments and fulfilling similar needs with the same offering creates growth.
3	Technological innovation creates value.	Adapting existing technologies to create customer value is innovative.
4	Creating new markets requires destruction.	Disruption is created by complementing the current offering by allocating resources and showing support from the management.
5	Differentiation is about trade-offs.	Blue ocean pursuit differentiation, low cost and customer base expansion, simultaneously.
6	Lowering costs increases customer value.	Comparing costs and prices against alternatives and substitutes attracts noncustomers.

Blue ocean strategy is worthless without proper execution. The compelling value proposition and profit proposition are the starting point. To execute new strategies and business models sustainably, companies need to motivate and incentivize their stakeholders, such as employees and partners. Thus, the people proposition is the third success factor. All the propositions need to be aligned by the top management to ensure success and prevent competitors from imitating. (Kim & Mauborgne 2015a.)

To sum up, implementing this development project in AIF requires adjusting the value propositions, redesigning the business models, and motivating employees. Blue ocean strategy, business model canvas, value map, and customer profile are tools for AIF's

management to plan and design the development projects and ensure long-term success. Without top management's commitment, this project will remain just a short-term marketing and communications department experiment.

2.7 Key terminology and framework

The difference between customer care and customer experience management (CEM) is that the first is reactive, and the latter is proactive. They aim to increase customer satisfaction (CS) – customer care by answering customer needs and CEM by anticipating those needs. Customer experience is often measured with Net Promoter Score (NPS) and customer service with customer satisfaction score (CSAT), but also other methods exist to measure CS and CX. (Morgan 5 March 2018.)

Customer needs are what customers implicitly and explicitly need. Needs are subjective and multi-level and vary from customer to customer, which is why customers rarely know how to put their needs into words. That makes it difficult for companies to understand customer needs. (Puustinen & Saarijärvi 2020, 93-94.)

Customer needs do not apply to a specific service provider or product, but customer expectations do. Expectations are built on the unconscious and conscious cues and clues customers associate with the product or service they are buying. Cues and clues evolve from the information to which customers are exposed. The information is from general and personal expectations obtained from the industry standards, marketing communications, brand perception, intangible quality cues, previous experiences, and referrals. Expectations change over time, which is why the same product or service can produce initially positive and later neutral or even negative customer experiences. (Puustinen & Saarijärvi 2020, 94-98.)

Companies investing in CX have higher total returns and higher growth on the stock price (Morgan 5 March 2018). Morgan explains why automated customer communication can increase CX. The main reasons are efficiency and service. Companies can decrease inconvenience by understanding customer needs. Automated communication changes how customers interact with companies by removing unpleasant interactions such as calling to a switchboard by providing more personalized services based on customers' data. With automation, a company has more resources to deliver higher-quality services to customers. (Morgan 22 June 2017.)

The customer experience is inextricably linked to an organization's conditions to exist in a competitive market, which is why CX requires strategic planning. This empirically verified causality is the main reason why the customer experience must be an integral part of the agenda of management teams and boards. An organization's ability to create successful customer experiences in the marketplace is its core competency. Management's main objectives are defining a strategically sustainable customer experience – taking into account customers and the company's financial realities – and harnessing the organization's energy to realize this customer experience. (Puustinen & Saarijärvi 2020, 124.)

Good or bad customer experience results from a company's expectation management (Puustinen & Saarijärvi 2020, 94). Investing in customer experience development and management, AIF can improve customer satisfaction and loyalty, increasing customers' willingness to recommend the company. According to Azets's CRM solution, customer recommendation is essential in acquiring new customers in AIF. Developing CX can also improve the profitability in AIF because automating processes give accountants more time to provide advisory services with higher margins.

The theoretical framework contains the following concepts that are essential in understanding principles affecting this development project:

- customer experience management (CEM), development and measurement
- customer communication
- emerging technologies

3 Customer experience and customer satisfaction

The literature used in this thesis is collected with two perspectives in mind. Firstly, the literature explains the concepts, models, and theories relevant to the research. Secondly, the research aims to find best practices for managing and measuring customer experience (chapter 3) and developing customer experience with relevant technologies (chapter 4) for automating processes and utilizing customer data.

For decades company executives have been told the purpose of business is to maximize shareholder value which is a consequence of over a century-old “accounting tradition that emphasizes physical and financial assets”. As a result, many companies still focus on making short-term profits. However, recently, the CEOs of the USA's biggest companies woke up to this accounting dilemma and ‘signed’ a statement that corporations’ only purpose is not to prefer owners and investors but to equally deliver value to customers. (Markey 2020.)

According to Markey, creating value for customers is good for the business. Leading companies focusing on customer loyalty grow 2.5 times faster compared to their competitors. As there do not yet exist “financial-accounting standards” for reporting customer value, executives should proactively start reporting to their owners the changes in customer assets. The reporting can be made reliably and in an auditable manner within a reporting period by asking example questions listed and reporting the key performance indicators (KPI):

- How many gross new customers were acquired?
- How much were new customers billed?
- How many existing customers are actively buying?
- How much were existing customers billed? (Markey 2020.)

However, regularly reporting the customer assets to owners is just the beginning. Companies should also use auditable qualitative measurements to evaluate customer loyalty and quantitative measures to calculate customer value. Earning loyalty is about anticipating and meeting customer needs. Often those expectations are unexpressed. Companies can enhance loyalty by using design thinking methodologies to acquire customer data, analytics to develop customer-centric services, and artificial intelligence to personalize customer experiences. Also, companies driving loyalty for profitable and sustainable growth need to organize “around customer needs”, invest in creating customer value, and ensure dedicated leadership. (Markey 2020.)

3.1 Customer experience in business-to-business

This development project focuses on researching customer experience (CX) in a business-to-business (B2B) context. As CX is an extensive topic, all perspectives are not presented in depth. However, the author aims to cover all relevant aspects, models, and concepts from the B2B perspective.

Customer experience occurs when customers interact with a product or service in a variety of situations and environments, such as physical space or digital domain. From an organizational perspective, the experience should be consistent no matter where the customer meets the brand. CX is influenced by the expectations and set of values of a customer but is also affected by how the company operates throughout the customer journey. (Vahtola 2020, 30.)

The customer experience is always structured from the customer's point of view, as a subjective and holistic experience. It is important to understand that the customer experience has existed as a phenomenon as long as there has been economic activity related to exchange between people. CX has become a tool to concretize customer-centricity in practice. It is the ability to anticipate and respond to changing customer needs. CX is not about pleasing the customer, but about offering the best solution for the customer, taking into account business and competitive realities. (Puustinen & Saarijärvi 2020, 20-21.)

Where a customer-driven organization invests in better understanding its core customers and developing what it offers based on customer insight, a product- and production-driven organization focuses on finding new customers for its current offering. However, a production-oriented organization and a customer-centric organization are not opposites but complementary. A customer-oriented way of thinking enables innovation, and production-oriented operations ensure the standardization of services. (Puustinen & Saarijärvi 2020, 22.)

When beginning to write the theoretical part of this thesis in December 2019, handling customer relationships was old-fashioned in Azets. Employees met customers regularly face to face, AIF organized physical customer events and distributed physical gifts to delight its customers. When finalizing the thesis work in spring 2021, employees have lived a year in the COVID-19 era. The entire Azets staff has been mainly remotely working without any physical interaction with customers. At this stage, it can be stated the pandemic has significantly and permanently changed the customer journey.

New touchpoints between companies and customers enabled by digitalization and the intensified competition are forcing organizations to shift their focus from products and services to holistic customer experience management. In managing the customer experience, it is vital to understand its strategic and operational nature. Strategically, management needs to concretely define a meaningful and excellent customer experience based on competitive advantage. At the operational level, it is described how the organization leads the customer experience and its implementation. (Puustinen & Saarijärvi 2020, 51.)

Customers are increasingly demanding and expecting companies to respond immediately and personally to their expectations. Delivering that requires knowing each customer deeply and analyzing their needs in advance. With real-time data and predictive analytics, companies can provide superior CX, which means solving customers' issues even before they even know about them. As some of the customer-company interactions continue to be human-human interpersonal skills are also important. (Vahtola 2020, 30-33)

Improving CX has been one of the top priorities of business leaders worldwide in the 2010s, even though, in theory, it was established already in the 1960s as a part of "customer buying behavior process models". In the 1970s, theories were expanded to "customer satisfaction and loyalty" and a decade later to "service quality". "Relationship marketing" in the 1990s and CRM in the 2000s were studied as a part of CX theories. "Customer centricity and customer focus" theories as a part of managing CX were presented in the 2000s and 2010s. Later, were developed "customer engagement" theories. (Lemon & Verhoef 2016, 69-71.)

Palmer (2010, 196) critiques CX as a managerial concept to substitute customer relationship management (CRM) or customer relations because the concept 'customer experience' is misused and applied in ambiguous manners. Even the term 'experience' is defined with a great range as some claim it is unique while others state an experience accumulates when customers "respond to stimuli with a learned response" (Palmer 2010, 197). As experiences are novel in nature, every time a customer interacts with the brand, part of the novelty value is lost (Palmer 2010, 207).

CRM concept and relationship marketing have challenges as customer satisfaction do not guarantee customer loyalty. Customer relationship managers usually lack the authority to deliver experiences to meet customers' expectations and needs. The CX concept is neither manageable with its complexity and because experiences are situationally specific. To succeed in CX, managers need to act as integrators between internal functions. (Palmer 2010, 208.)

The number of touchpoints customers can experience with companies and brands is increasing all the time. Improving the touchpoints companies can control in customer journeys has become complex, which is why CX is no longer a matter of marketing function. Instead, companies must integrate all functions from financial management to operations and from human resources and information technology to external actors when developing CX. (Lemon & Verhoef 2016, 69, 74).

Customer journey

Portraying customer journeys with three stages – prepurchase, purchase, and postpurchase – enables companies to understand, identify, manage and develop the critical touchpoints between brands and customers. The total CX is an iterative and dynamic process. During a journey, the customer can experience four types of touchpoints at any stage. (Lemon & Verhoef 2016, 76-78.) The touchpoint types are described in Table 4.

Table 4. Touchpoints in customer journey (adapted from Lemon & Verhoef 2016)

Touchpoint type	**Managed by**	**Examples of channels**
Brand-owned	Companies	Advertising, direct marketing, loyalty programs, personnel, products, services, invoicing and websites
Partner-owned	Companies jointly	Communication and distribution
Customer-owned	Customers	Home
Social or external	Companies and/or customers	Events, social media and 3rd party websites

According to Puustinen & Saarijärvi (2020, 62), the subjective and multidimensional customer experience building at different touchpoints can be viewed from eight sub-experiences, and the importance of each sub-experience for a company varies:

1. **Brand experience** is a customer's holistic experience of the cognitive and emotional reactions evoked by the brand. Essential for companies that manufacture consumer products and food.
2. **Consumer experience** is built as a result of consuming and owning the product. Relevant for companies that manufacture cars, clothing, and home electronics.
3. **Shopping experience** comes true at the time of purchase. For example, in an online store, ease of purchase, simplicity, and payment methods are critical experience factors. Important for shopping malls and B2B companies, for example.
4. **Service experience** usually means human to human interaction. Important in all service sectors, but also for grocery stores.
5. **Price experience** arises from the price image. Essential for companies in retail and e-commerce, as well as in the car and housing trade.

6. **User experience (UX)** is created when using a product or service. Usability, design, and other sensory experiences affect the CX. Important in device, machine, and software industries.
7. **Delivery experience** is created during the delivery process after purchase. Important in e-commerce and B2B business.
8. **Online and e-commerce experience** is created through information, entertainment, social and sensorial aspects, but also other sub-experiences affect this experience. (Puustinen & Saarijärvi 2020, 63-64.)

According to Puustinen & Saarijärvi (2020, 65), customer experiences are often hybrid experiences created by multiple brands, companies, products, and services. For example, when a customer runs with Nike sneakers, Adidas clothes, iPhone smartphone, Suunto smartwatch, and listens to music from Spotify with Sony speakers, the experience is hybrid.

Burton & al. (2017, 173) states the customer experience in B2B companies is even more complicated than in B2C because more actors and interactions are involved. For understanding CX in B2B, authors (2017, 179) suggest a dynamic, interactive and strategic approach.

The approach proposes shifting input-output-based measures to outcomes-based measures, which means the value a service creates is based on customers' objectives. Measuring all the aspects – "cognitive, affective, emotional, social and physical" – of B2B customer experience requires various data sources such as interviewing service personnel, observing partner networks, reviewing processes, and collecting data from customers' customers, co-workers, or end-users. (Burton & al. 2017, 178-180.)

Although improving CX in B2B requires sophisticated data sources, collecting data more often and exclusively directly from customers with traditional research methods that measure individual touchpoints or cumulative experience is not enough. Instead, companies should focus more on understanding all the aspects affecting customer experience and end-user experience, which requires measuring CX more meaningfully. Measuring outcomes is a co-creation approach where the service provider, suppliers, partners, customers, and end-users contextually influence and interact to develop entities that benefits everyone strategically. Thus, exploring idiosyncratic CX measurement methods and acquiring new capabilities – such as knowledge management – are needed to build collaboration and relationships and innovate offerings. (Burton & al. 2017, 180.)

The objectives B2B customers have are typically concreate and cognitive. They expect the outcomes to increase sales, decrease costs, improve profitability, or enhance cus-

tomer or employee satisfaction. For companies, it is also essential to define who their customers are – purchasing manager, contact person, specialist, business leader, CEO, customers' customer, or someone else – from a customer experience perspective. (Puustinen & Saarijärvi 2020, 85-87.)

Puustinen & Saarijärvi (2020, 88-89) defines six areas typically affecting B2B customer experience and questions for developing the CX:

1. **Commitment.** How is commitment transmitted in all situations of interaction between the company and the customer?
2. **Satisfying needs.** How to ensure a genuine understanding of customer needs and how to show that to the customer? How to improve reliability and show it to the customer?
3. **Seamlessness and ease.** How can customers' processes be made smoother? In what different ways can the inconvenience experienced by the customer be reduced?
4. **Responsiveness.** How to create a solution-oriented culture? How are staff encouraged to respond quickly to customer requests and inquiries?
5. **Proactivity.** How are changes in the market and technology communicated to customers, and how are the changes taken into account in customer service?
6. **Development.** How to build partnerships? How to communicate the company's desire to develop its operations?

Improving customer experience for building loyalty in B2B companies is more multidimensional than B2C business because channels are complicated, buyer communities are concentrated, and several people are involved in customer organizations. Building long-lasting customer relationships in B2B requires differentiation, reliable delivery, collaboration with customers, responsiveness to their needs, and tailored services. B2B companies focusing on customer loyalty establish sustainable competitive advantages and grow faster than the market. (Net Promoter System 2020a.)

Despite the differences in B2B and B2C customer experiences, there are similarities to consider when managing and developing CX. For example, different types of customer experiences can occur in both contexts.

The different types of customer experiences help portray the customer experience's characteristics from the customer's perspective. Figure 5 presents how organizations can pay attention from a single touchpoint to the journey and purposefully develop experiences to be, for example, more or less mundane or meaningful. (Puustinen & Saarijärvi 2020, 69-70.)

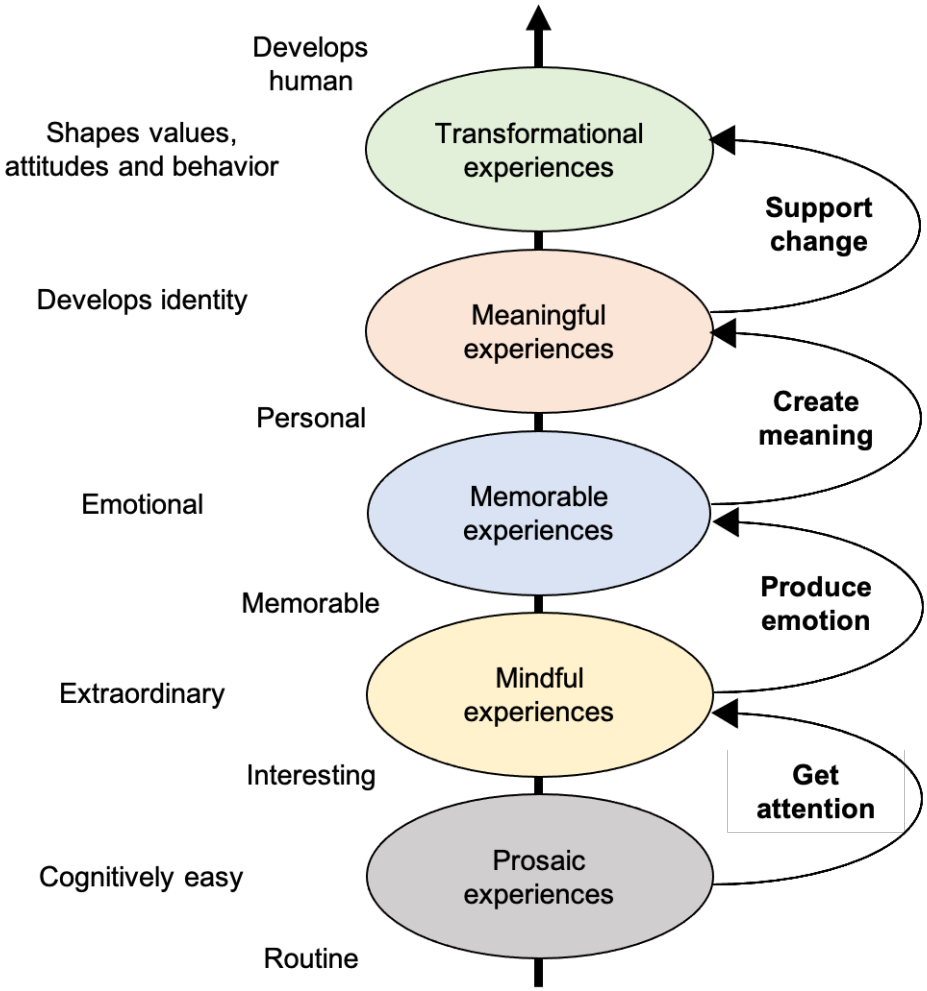

Figure 5. Different types of customer experiences (adapted from Puustinen & Saarijärvi 2020)

Most of the customer experiences are not particularly exceptional because vast amount of human behavior is routine. Companies, therefore, need to understand which parts of the CX must be functional without delight or aversion and which areas in experiences should exceed the customer expectations. (Puustinen & Saarijärvi 2020, 66-67.)

Customer experiences are multidimensional, different types and have sub-experiences, but they are also multi-level. The authors divide the levels into three:

- **Static** customer experience can be studied and developed as an independent experience that is not dependent on the customer's previous transactions. This objective view helps organizations to standardize experiences.
- **Dynamic** customer experience considers previous interaction with the customer. Subjective expectations and customer satisfaction emerge from the previous experiences. Organizations must ensure that the connection between separate customer experiences is maintained by utilizing CRM systems.
- **Relationship** customer experience aims to develop customer relationship outside the touchpoints. Organizations can use, for example, emotional marketing communication, social media, and mobile apps to communicate with customers for maintaining and developing relationships. (Puustinen & Saarijärvi 2020, 70-71.)

Organizations need to view the matter beyond the touchpoints when developing and managing CX. Leading customer experience means defining what type of activities are executed in all levels. (Puustinen & Saarijärvi 2020, 71.)

3.2 Customer experience management

Customer experience management (CEM or CXM) is more than designing and managing services. As customers are dynamically and iteratively moving between channels in different stages, companies need to analyze customer journeys to understand customers' perspectives. Using service blueprinting methodology, companies can map all the processes affecting customer experience for managing quality, developing improvements, and innovating services. However, this method is only the starting point because customer input is required to understand journeys holistically. Multichannel analyses can support building a better understanding of why a different type of customers prefer to use a particular channel in each stage. (Lemon & Verhoef 2016, 79-80.)

Three aspects affect CEM – 1. designing customer journeys and touchpoints, 2. managing partners and networks, and 3. focusing on internal factors. Great customer experiences are created by integrating channels seamlessly, reducing service issues in delivery networks, building internal capabilities, increasing cooperation between functions, and focusing on customer-centricity. (Lemon & Verhoef 2016, 82-84.)

Though, Customer Experience Management and Service Experience Management (SEM) approaches in creating superior customer experiences have been criticized in academic literature because those theories emerged from the service provider's point of view. CEM and SEM frameworks often ignore the factor that customers interact with each other and CX's organizational, temporal, and spatial dimensions. Thus, the authors propose a holistic and multidimensional framework (Figure 6) for co-created service experience to explain the complex phenomenon. (Aarikka-Stenroos, Helkkula & Jaakkola 2015, 192-195.)

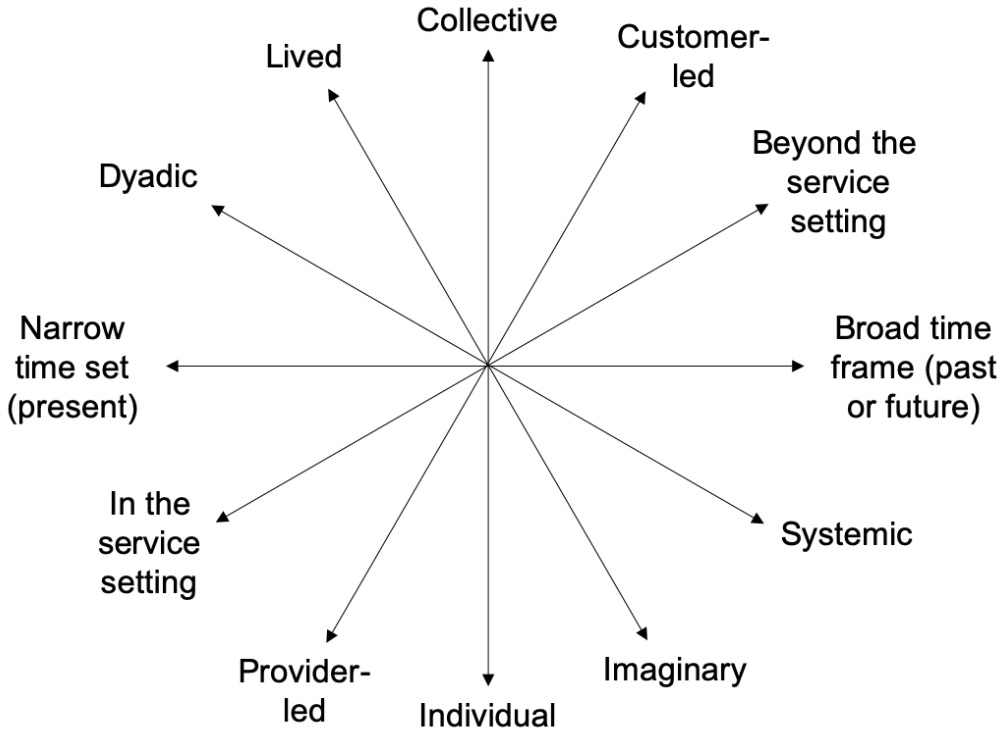

Figure 6. The key dimensions of service experience co-creation (adapted from Aarikka-Stenroos, Helkkula & Jaakkola 2015)

Authors connected the service experience co-creation with broader marketing topics – "value co-creation, foundational sociality in contemporary markets, and methods for measuring and managing service experiences". The proposed framework can help both B2C and B2B companies understand the facilitation of co-creating service experiences as a part of the strategic planning process and when developing specific services. (Aarikka-Stenroos, Helkkula & Jaakkola 2015, 198-199.)

Psychological distances in customer experience

Companies should understand customers' psychological processes in service situations and value creation in addition to the critical dimensions in co-creating experiences. Guest, Holmqvist & Grönroos (2015, 1430) explain those processes as "psychological distance is the customer's perceived distance from service interactions in terms of spatial distance, temporal distance, social distance, and hypothetical distance".

As customers co-create value by interacting with the service provider, individual characteristics play a significant role in how distant customers feel from the services. If a customer interprets that they are psychologically distant from the service situation, the customer might not want to enter the interaction. (Guest, Holmqvist & Grönroos 2015, 1436.)

Phone calls and virtual meetings are examples of spatial distance, and the unfamiliarity of service personnel is an example of social distance. Reducing distances of service interactions increases customers' willingness to engage, positive impressions of the provider, and the perceived value. Simple measures to minimize distances are adjusting the language used in services and removing physical obstacles – such as counters – between customers and service providers. (Guest, Holmqvist & Grönroos 2015, 1436-1437.)

The technology used in services can also increase psychological distance. When social connectivity is low in a system used by customers, value co-creation is more complicated. Temporal distance means customers are not aware when an interaction will occur, whereas hypothetical distance means customers are not sure will an interaction happen. Customers are individuals, which means they have different expectations about the psychological distance. However, increasing social connectivity on the technology used in service interactions can decrease all the four distance types – spatial, temporal, social, and hypothetical – and thus benefit the value co-creation. (Guest, Holmqvist & Grönroos 2015, 1438-1439.)

Customer experience management in financial services

Klaus, Maull & Ponsignon (2015, 295-320) studied customer experience in the financial services (FS) industry by collecting data from twenty FS companies and three consulting companies. Even though the study is about business-to-consumer (B2C), it is the closest available and applicable for a B2B financial management (FM) company such as Azets. The FS industry has similarities with the FM industry in terms of the nature of customer data they are handling and how they are obligated or regulated to operate with customers.

In customer experience management, the studied FS companies focus on "identifying the critical interactions in the journey", monitoring customers' encounters in those interactions, and improving dynamically under-performing interactions. The companies use "five customer experience management practices" as explained in Table 5. (Klaus, Maull & Ponsignon 2015, 303-308.)

Table 5. CEM practices in FS industry (adapted from Klaus, Maull & Ponsignon 2015)

Practice	**How**	**Why**
Define the customer journey	Defining and monitoring all stages holistically and continually. Identifying, validating, developing, and maintaining journey maps. Using various data collection methods.	Understanding customer's behaviors, needs, and preferences enable designing a successful customer journey lifecycle.
Monitor, track, and improve interactions	Evaluating and improving failed interactions with an integrated performance management system. Gathering various data types from customers, operations, and employees for developing interactions. Classifying interactions to high-level (moments of truth) or low-level.	Analyzing the impact of frequent or unique interactions improves satisfaction, loyalty, and word-of-mouth.
Engage with customers	Informing, guiding, and supporting customers proactively by engaging and communicating with educational activities.	Reducing negative emotions increases CX.
Leverage transactional data	Using advanced analytics to personalize CX and develop processes.	Improving efficiency, creating unique experiences, and predicting customer behaviors to promote services.
Apply sensory design	Designing communication and tone-of-voice from human senses perspectives – touch, sight, and hearing – for example, in printed documents, visual materials, and automated communication.	Developing tangible and visible service elements enable to deliver cues and clues about the brand and its values for improving CX.

The relationship between five CEM practices and the co-creation of experiences is essential. Customers co-create opportunities for companies to develop the most critical touchpoints by interacting with companies directly or indirectly. When customers are co-creating their experiences, their future experiences are enhanced, for example, by personalizing services based on the data from them and other customers. (Klaus, Maull & Ponsignon 2015, 310-311.)

Klaus, Maull & Ponsignon (2015, 312) propose a conceptual framework for co-creating customer experience in FS. When applied in AIF and Azets, the framework (Figure 7) increases the understanding of abstract characteristics, defines the CEM practices, and ensures the experiences are co-created.

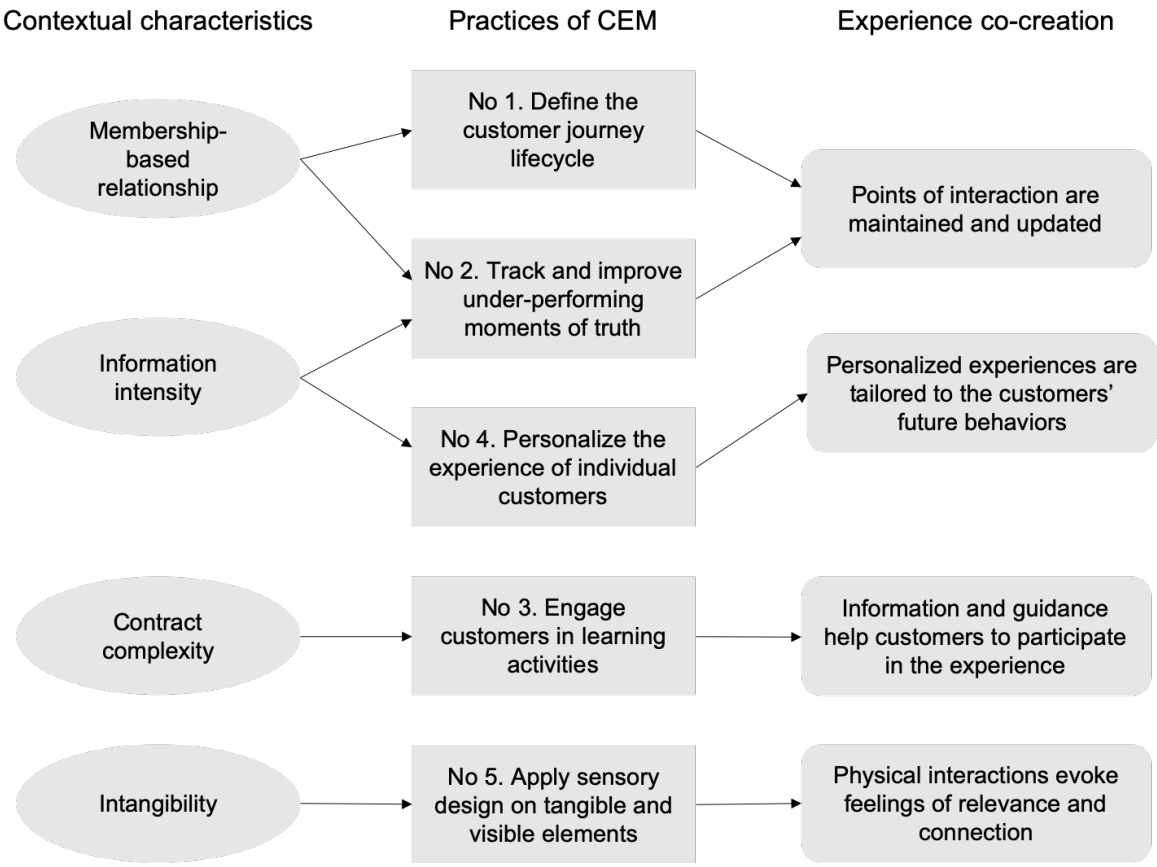

Figure 7. Conceptual framework for CX co-creation (adapted from Klaus, Maull & Ponsignon 2015)

3.3 Measuring customer experience

Fred Reichheld introduced NPS already in 2003 in a Harvard Business Review article with the title 'The One Number You Need to Grow'. NPS typically contains two questions – the first asks numerically how likely a customer would recommend the company, and the second inspects customer's thoughts behind the number with an open-ended question. Both of these questions aim to measure customers' feelings and attitudes and the reasons they are giving ratings on a zero-to-ten scale. (Markey & Reichheld 2011, 4.)

Today NPS is used by "two-thirds of the Fortune 1000". Probably every adult in developed countries have been participating to an NPS survey. For organizations the NPS is a simple metric and powerful tool. Still, for the customer experience managers and business owners using NPS as a management system that creates competitive advantage it is nothing but simple. NPS is not about a number but a tool to understand customer needs and improve operations continuously. (Colvin 18 May 2020.)

Customers answering NPS surveys are divided into three groups – promoters, passives, and detractors – based on the rating they have given. Customers in the first group with a 9 or 10 are considered loyal customers – the promoters. Those customers typically not only recommend the company but also buy more and give constructive feedback. Passives with a rating of 7 or 8 are satisfied and more ready to end the relationship than promoters if another company makes them a better offer. Detractor customers with a rating 0 to 6 are dissatisfied and do not act as advocates because they feel the company's interaction has seriously failed. Net Promoter score is calculated by subtracting the share of detractors from promoters' share (Figure 8). According to NPS methodology, the NPS groups should be separated when improving the operations and handling the relationship with customers. (Markey & Reichheld 2011, 5-6.)

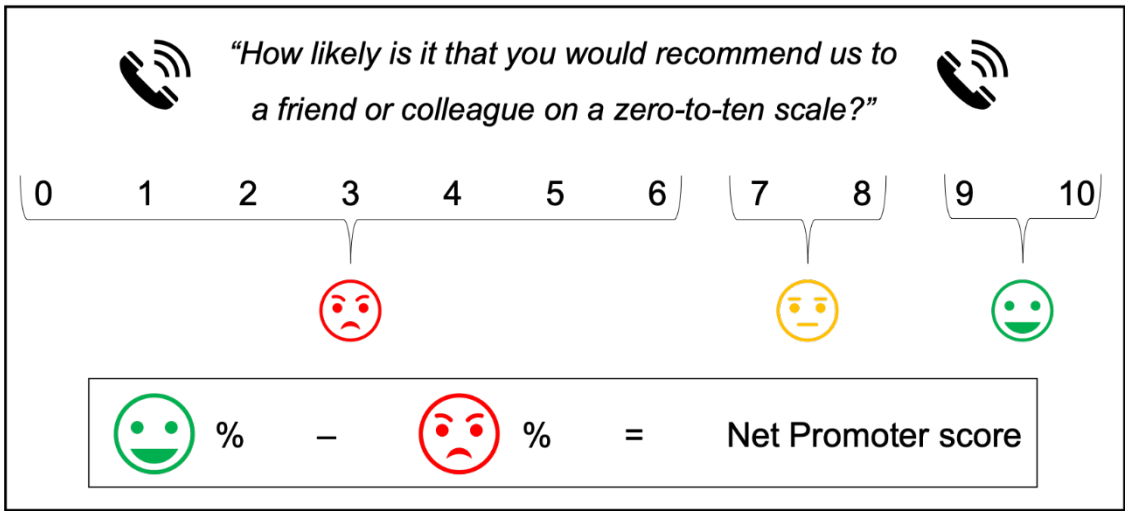

Figure 8. Calculating Net Promoter Score (adapted from Markey & Reichheld 2011)

Because every function of a company affects customer loyalty, the benefit of using NPS as a metric is its simplicity. Employees understand the scores as quickly as it is for the customers to answer the NPS surveys. NPS is a powerful and flexible management system that any organization can use to motivate all employees to produce more promoters and reduce the number of detractors. NPS is not a way to measure customer satisfaction but instead a philosophy to create operational excellence by continually learning and improving. Thus, it requires commitment from the top management. (Markey & Reichheld 2011, 9-15.)

Financial KPIs such as revenue and expenses are usually considered the hard facts that every company needs to calculate and monitor regularly. When it comes to doing the same with customer metrics, those measurements are often seen as unnecessary and are therefore called soft facts. Global examples prove what can occur when treating NPS as

one of the hard facts and acting accordingly as those companies have rapidly decreased customer-churn and increased growth rate. As NPS demonstrates customer loyalty, it becomes strategically a critical KPI that predicts cash flow, leading to a rise in stock prices in listed companies. (Reichheld 2012.)

Collecting customer feedback enables companies to improve customer experience in a way it leads to higher customer loyalty. Even more important than collecting that information frequently is to act upon it. The frontline employees who receive the feedback should take action, but the management also needs to analyze the feedback and seek patterns when aiming to become a customer-centric organization. Without managers' involvement, companies are unable to address the necessary investments and resources into company-wide improvements. (Markey 2014.)

According to Markey & Reichheld (2011, 65-67) and Bain & Company (Net Promoter System 2020b) – the loyalty company founded by the authors – for an organization to establish high-quality customer relationships, investments are required. Analyzing the trade-off to invest on turning "detractions into passives or promoters" should be measured with financials. Connecting NPS with economics might sound complicated, but most companies already have all the needed data. Calculating an average customer lifetime value (CLV or CLTV) can be made using the formula described in Figure 9. The calculation should be extended to each NPS group – detractors, passives, and promoters – to analyze the differences between those groups compared to the average CLV.

Figure 9. Calculating customer lifetime value (adapted from Net Promoter System 2020b)

Smith and Williams (2016) also claim why companies should not rely solely on Net Promoter Scores when evaluating CX programs' success or failures because satisfied and loyal customers might not be profitable. Complementing the Net Promoter Scores with four KPIs, companies can portray a more reliably overview of CX programs – 1. "cost to acquire and serve", 2. "customer penetration and share", 3. "customer lifetime value", 4. "customer churn".

Precise CLV considers several financial KPIs such as customer acquisition cost, the cost to serve or margin, pricing, retention rate, annual purchases, and value of recommendations. The latter KPI is essential to calculate (Figure 10) as up to 90 percent of positive customer recommendations are from promoters. Customers acquired through promoter referrals tend to become promoters as well. On the other hand, detractors weaken the business with harmful recommendations by communicating with their peers, writing reviews, and posting comments on social media. Negative word-of-mouth neutralizes 3-10 positive referrals. Still, as that can be difficult to measure, the authors suggest using 3 or 4 to estimate the effect of negative referrals in NPS group-specific CLV calculations. (Net Promoter System 2020b; Markey & Reichheld 2011, 67-72.)

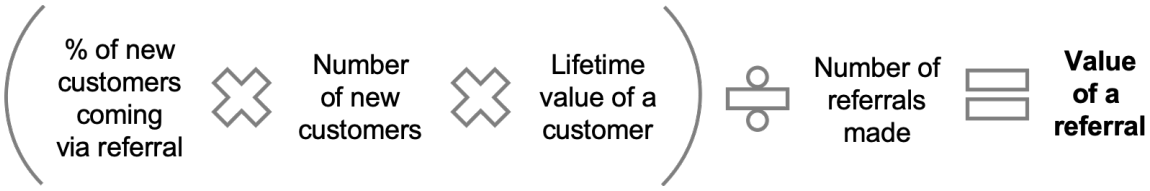

Figure 10. Calculating value of a referral (adapted from Net Promoter System 2020b)

According to Markey & Reichheld (2011, 102-124), collecting customer feedback accurately, granularly, timely, and credibly with NPS, companies should follow eight principles. Following the principles – described in Table 6 – ensures an organization applies CX survey as a management system instead of it being just an obscure metric.

Table 6. Eight NPS principles (adapted from Markey & Reichheld 2011)

#	What	Why
1	Ask the likeliness to recommend first. Follow up with only 1-2 open-ended questions to study the root cause.	Increase response rates and ensures simplicity when following up the feedback with customers.
2	Use a scale from 0 to 10 in the first question. Do not compare scores between markets.	Any customer can relate spontaneously that zero means failure and ten stands for perfect.
3	Do not mix internal and external NPS scores.	When conducting a benchmark survey, cherish anonymity to ensure reliability.
4	Collect feedback from the most important customers and make sure the response rate is high. To achieve a reliable overall score, mark nonrespondents as Detractors.	Segment customers based on profitability enable targeting the survey to core customers for ensuring profitable investments in making them promoters.
5	Align NPS data with financial data reporting and discussions cycle.	Conducting NPS surveys with financial reporting schedules reduces the focus on short-term profitability.
6	Break down the NPS data and make the customer feedback visible for everyone involved in CRM to learn faster and improve accountability.	Granularity ensures decisions and improvements are based not only on the score but also on the customer-level ratings.
7	Avoid bias by ensuring accuracy.	Regularly auditing the NPS process minimizes four types of biases.
8	Validate customer behaviors.	Analyzing the link between scores and behavior, NPS represents the reality and predicts the future.

The authors have studied how global companies such as Apple and American Express have achieved positive NPS results. They found three common characteristics of success applicable in any industry. Firstly, the CEO embraces customer loyalty as the top priority because NPS is an economical, inspirational, and moral metric. Secondly, in those companies, the Net Promoter System is integrated as a daily practice by ensuring it creates “closed learning and improvement loops”. Lastly, for creating profitable and sustainable growth, NPS is treated as a long-term cultural initiative. (Markey & Reichheld 2011, 152.)

Though NPS is a method to collect feedback on customer experience, it might not be enough to understand customer commitment. Loyalty, as that is what drives repeat purchases, is the objective companies aim for with CEM.

Ball & al. (2016, 152) did not find studies to demonstrate the connection between customer commitment and CX, but they did find competing models of the relationship between commitment and satisfaction. Authors remind there are five types of customer commitment – affective, normative, forced, habitual, and economic – whereas, on the other side, CX contains four dimensions – cognitive, emotional, physical & sensorial, and social. Companies rarely measure all four dimensions as CEM is complex. When companies make decisions to enhance a specific type of commitment, such as the economic, by establishing reward programs, they may fail if not understanding the connection to CX dimensions as different kinds of commitments drive customers. (Ball & al. 2016, 149-156.)

As customer commitments affect the customer experience dimensions and dissatisfaction or satisfaction, it helps describe the four dimensions in more detail. According to Puustinen & Saarijärvi (2020, 78-80):

- **Cognitive dimension** means the conscious purposefulness of customers when purchasing products and services. That is influenced by expectations, consisting of past experiences, communication, referrals, and industry image.
- **Emotional dimension** arises in interaction with the company and in the use of the company's products and services. Strong emotions, such as disappointment, frustration, anger, joy, or indifference, can result from failure or success in the cognitive dimension. Emotions are better remembered than the company's offering.
- **Social dimension** is formed through the company's staff and other customers and the images associated with them. Customers tend to evaluate companies based on other customers.
- **Sensorial dimension** consists of experiences in the buying and consuming environment. Sight, taste, smell, hear, and touch senses are affected by, among other things, lighting, decor, staff, colors, sounds, and packaging in both physical and digital environments.

Using NPS methodology in Azets is a literature-supported approach. However, to develop CX for increasing customer loyalty – retention, referral, revenue, and profit – Azets should also measure customer satisfaction in critical touchpoints to understand how different customer commitments and dimensions affect the CX.

As a part of CEM, Azets should also lead the customer expectations and constantly communicate evolving expectations to its employees. According to Puustinen & Saarijärvi (2020, 100), an outstanding or terrible customer experience, and the emotional reaction it causes to the customer, is due to customer expectations. Thus, many companies establish training programs to help employees understand and internalize the most critical customer expectations.

3.4 Measuring customer satisfaction

Whereas NPS measures the overall customer experience cumulated over time, customer satisfaction (CS) measures individual touchpoints customers experience with companies. Portraying a customer's entire value chain is required to measure satisfaction at the right time and to understand how different touchpoints affect overall satisfaction. Those touchpoints can be presented in a timeline of three stages – value-creating, value-charging, and value-eroding. By identifying all the critical touchpoints, measuring satisfaction in each of them, and improving matters that cause dissatisfaction, companies can enhance cumulated customer experience measured with NPS and recognize the momentum when to ask customer referrals. (Mendes & Teixeira 2019.)

The authors suggest using multiple metrics to collect customer feedback when aiming to predict customers' behaviors. Authors claim NPS and customer satisfaction measurements both predict reliably companies' performance. As each touchpoint can have a different indirect or direct influence on how customers act, it is critical to identify and measure the most important – moments of truth – touchpoints. (Lemon & Verhoef 2016, 82.)

How customer satisfaction could vary over time in AIF by measuring each touchpoint with a 0-10 scale is demonstrated in Figure 11. Based on this fictional example, the best time to ask customers to give a referral to the company would be right after reviewing financial statements when customers, on average, are the most satisfied.

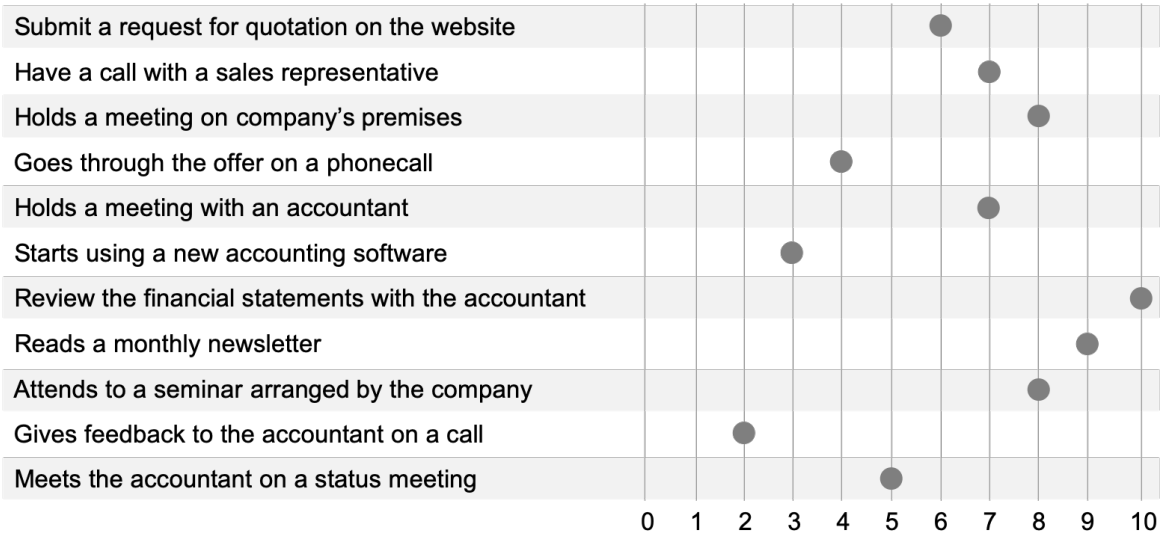

Figure 11. Measuring Satisfaction Scores Across the Customer Value Chain (adapted from Mendes & Teixeira 2019)

In the original figure, the hotel industry is used as an example. Still, according to the authors, the approach is applicable in any company that “delivers on more than one activity in the customer value chain”. Authors recommend not to ask the satisfaction in each touchpoint from every customer, but instead use random sampling to “avoid survey fatigue”. (Mendes & Teixeira 2019.)

Customer satisfaction at multiple touchpoints in the customer journey is a unifying factor in excellent customer experiences. The exceptional implementation of customer-relevant touchpoints can strengthen the relationship between service quality and customer satisfaction. By innovating and implementing those small but impressive details and touchpoints with agile methods can lift customer satisfaction to a new level. For example, employees may focus on developing only one specific phase of the customer journey for one month and measure the impact of the development on customer satisfaction. This approach can also help identify situations that evoke negative emotions in customers – such as disappointment, irritability, stress, frustration, embarrassment, or shock – that can jeopardize the entire company's reputation. (Puustinen & Saarijärvi 2020, 108-111.)

Complaints and reclamations are situations whose excellent handling can raise customer satisfaction to a higher level than before the terrible customer experience. In Finnish culture, a superb complaint process can differentiate. Thus, failed customer experiences should be managed as a separate core process of the company, such as a customer journey. That recovery journey is anticipatory, which can proactively lead to change measures even before the first complaint occurs. (Puustinen & Saarijärvi 2020, 113-117.)

To summarize, the touchpoints can be Azets’ own, partners', customers' or external, and the entire customer journey can be affected by eight sub-experiences, three levels (static, dynamic, or relationship), and twelve co-created service experience dimensions. Thus, contacting a customer with the NPS survey once a year or even less frequently is not enough for measuring and developing the complex CX. Especially from the customer experience perspective, the measurement of customer satisfaction should be carried out at relevant moments, where it is worth exceeding customer expectations, as well as immediately when disappointments occur and are handled.

4 Communication and technologies in customer experience

This thesis is primarily about communicating the service and customer experience related matters with the SME unit's customers by utilizing communication channels and technologies available in the market. Thus, marketing communication is scarcely covered in this chapter.

In this chapter is used a variety of source material such as podcasts and even commercial content. The reason is the use of evolving technology in business. For example, artificial intelligence applications evolve so rapidly that scientific literature is not available about the latest solutions. How other companies utilize the technology also serves as an inspiration and benchmark for Azets.

4.1 Customer communication

The customer-integrated marketing communication (CIMC) model can help communication and marketing practitioners to understand why and how to change the mindset from inside-out to outside-in when planning customer communications. Traditional integrated marketing communication (IMC) aims to “integrate all outgoing messages into one voice” for ensuring consistency effectively. CIMC instead is a customer-driven approach that is built on three aspects – customer-dominant logic (CDL), relationship communication, and value-in-use. (Finne & Grönroos 2017, 445-449.)

CDL is the opposite of making decisions and planning communications based on what companies want to achieve even when aiming to create something customers might value. Customer value is an important part of CDL because it is created by customers when using services and consuming communication in their ecosystems. Thus, with CIMC, relationship communication and value-in-use are considered from the customer’s perspective when the company plans messages and decides communication channels to facilitate customer value creation. “When analyzing customers’ need for communication messages”, companies need to remember the recipient decides where and when to communicate. This highlights the importance of customer insight in the planning and execution phases. (Finne & Grönroos 2017, 446-453.)

Although implementing a CIMC model in practice is demanding – likewise understanding situational and temporal customer perceptions – it aims to simplify complexity by utilizing the communication-in-use concept. CIMC is about relating to customers’ ecosystems and creating messages customers want to engage with, which can cause using more effort on

customer insights and less on communication. Messages are targeted to individual segments based on customer-specific data because sense-making processes and value-in-use are also unique. This approach can decrease communication costs when avoiding efforts of unnecessary communication. Customer-driven communication also aims to create meaningful messages that stand out from the competition. (Finne & Grönroos 2017, 458-459.)

In Figure 12 is presented the CIMC model. It is applicable in this thesis because automated communication and customer communication includes marketing messages. Currently, AIF sends a monthly newsletter to customers via email. Sometimes the newsletter is tailored to different customer segments, for example, by creating an email version to SME customers and another version to other customers. The newsletters are made from the company's perspective (inside-out) and include service-related information and marketing messages. However, this development project aims to switch the mindset to outside-in. In this case, a customer-driven approach means customers can influence what type of news (services or marketing) and information they receive, how often and through which channels based on their expectations and perceived value of communication-in-use.

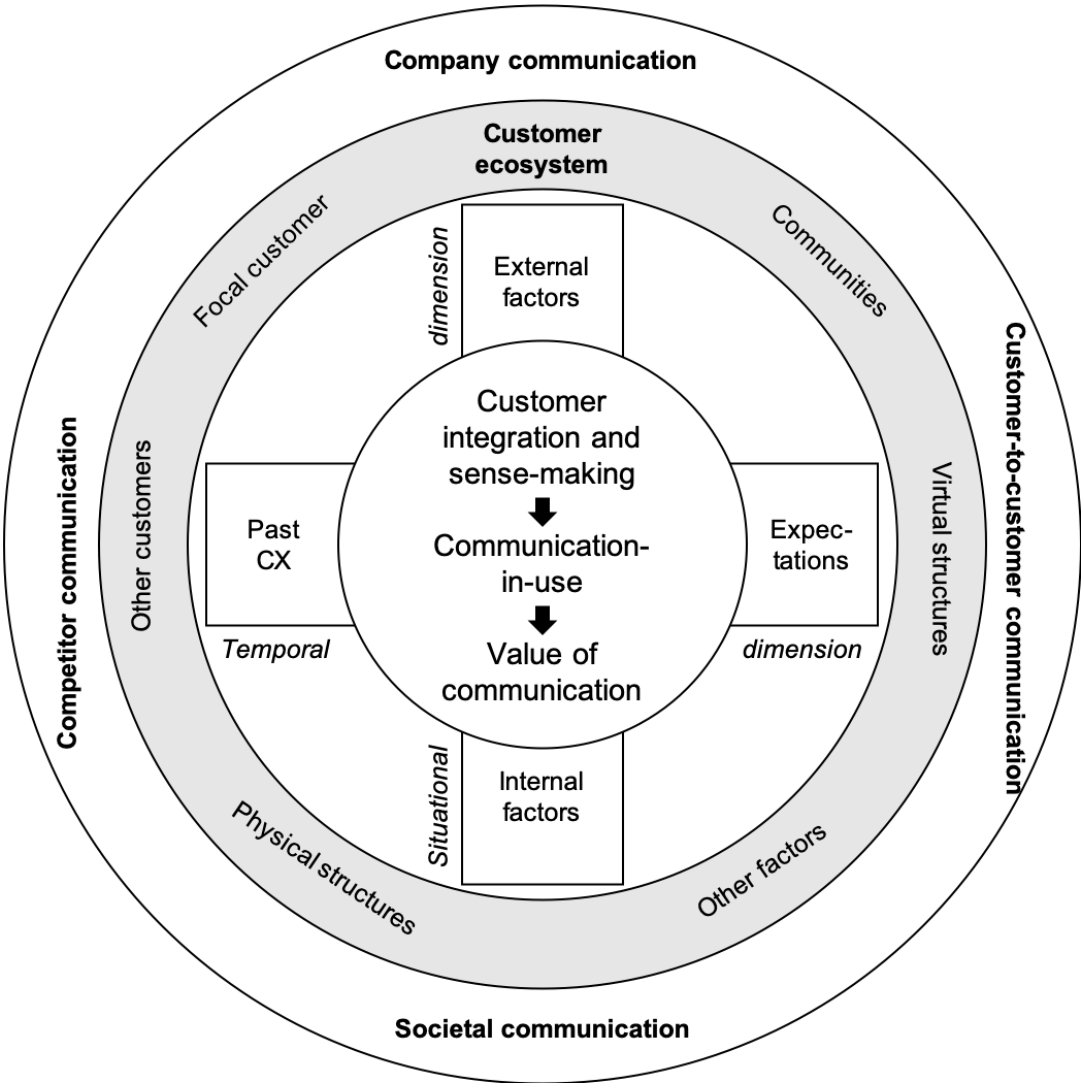

Figure 12. CIMC model (adapted from Finne & Grönroos 2017)

The CIMC model does not describe the type of messages the company and its competitors can deliver. According to Finne & Grönroos, those message types are either planned, product, service, or unplanned. Examples of planned messages are digital communication and customer communication. Unplanned messages can be about unexpected product or service failures or misbehavior of employees. Customer-to-customer (C2C) communication includes social media and word-of-mouth types of messages. Societal communication means, for example, regulations from government. (Finne & Grönroos 2017, 456-457.)

4.2 Automated customer communications

Automation in customer communication is not a new buzzword. For years companies have been using customer communications management (CCM) software to automate communication. The benefit of automating customer communication is reducing human factors for improving consistency of interactions with fewer costs and higher customer loyalty. With automated customer communication, companies can serve more customers and

faster than humans. Technology can also help employees communicate faster with customers by providing prepopulated draft messages to improve productivity and job satisfaction (Zimmerer 2018.)

Although it is difficult to define ‘automated communication’ by reviewing academic literature, most Finnish adults are likely to have received automated customer communication. When visiting a bank office, the customer often gets an automated text message or email to ask for feedback about the customer experience. Another example is when a customer calls a phone operator or public authority; an automated voice message guides the caller on selecting options or providing real-time queue information.

Defining ‘automated communication’ – with or without s-letter – is difficult because communication theories focus on human-human communication processes. According to Guzman & Lewis (2020, 71-73), communication and artificial intelligence (AI) research are becoming closer because AI can act as an automated communicator. Humans are already perceiving and interpreting machines as independent communicators.

Communicative AI means machines utilizing Natural Language Processing (NLP) and Natural Language Generation (NLG) technologies to interact with humans. Authors exemplifies communicative AI with three implications – automated-writing software, conversational agents, and social robots. (Guzman & Lewis 2020, 72.)

Machines have been sending messages to humans for a long time, but before AI, they could not adapt to human messages. The shift from devices sending static messages to dynamically conversating with humans has created a research area called human-machine communication (HMC). The research area includes at least aspects of human-computer interaction (HCI), human-robot interaction (HRI), and human-agent interaction (HAI) theories from a communicator perspective. HMC challenges the status quo of communication being solely a human activity. (Guzman & Lewis 2020, 72-74.)

The role of humans is changing in the age of information. In the past, people's mission was to communicate information, but today, Google can give more accurate facts than any expert, and AI can even give smarter suggestions. At work, the value of humans is measured with information and interaction. Human-human communication is more than the exchange of information presented with numbers and letters. Body language, emotions, empathy, expressions, eye contact, compassion, manners, senses, silence, tone, touch, and use of time are also information and interaction that machines are unable to express with humans. (Pölönen 2020, 84-87.)

There are currently two type of relationships – human-human and human-it. In the future there might also be human-machine and machine-machine relationships. These new relationships require skills to change the communication style for each context. Humans can easily remember stories, notice non-verbal communication, and understand abstracts things whereas machines are better with facts and concrete things. (Pölönen 2020, 87-92.)

Automated customer communication in this thesis is defined as *automatically delivered messages to customers through the channels or machines influenced or managed by AIF*. In this thesis, automated messages are categorized as either triggered or timed.

When a customer acts and instantly, or with a short delay, receives a response from the company, the message is triggered. In contrast, timed messages are scheduled in advance. Example of triggered message is asking a question from a digital assistant such as Apple's Siri. Whereas an example of timed messages are email flows created with Marketing Automation technologies such as Eloqua, HubSpot or MailChimp.

An opposite to automated communication is human-human communication, where employees personally interact with customers in physical or virtual spaces. Because automated communication is unable to displace all the communication between humans, such as comforting, this thesis focuses on researching the type of communication that can be automated with technologies available currently or soon.

4.3 Marketing automation as a part of automated customer communication

The author invented the 'automated customer communication' topic while planning marketing automation (MA) activities in AIF. Marketing automation in Azets means software and practices to automate email communication between its external stakeholders. For example, when a potential customer or existing customer downloads material from AIF's website, a nurturing workflow with multiple scheduled emails starts. This type of flow aims to push the recipient from the interest stage to purchase intention.

According to HubSpot (2020), marketing automation is software used to increase efficiency and personalize the customer experience by automating repetitive tasks. Salesforce (2020) adds MA helps marketing and sales functions to simplify and streamline the most time-consuming responsibilities across multiple channels such as email, social, text messages, and websites.

Marketing automation software either includes an inbuild customer relationship management (CRM) tool or is integrated with an external CRM software through an application programming interface (API). When a MA and CRM software are connected, they can help companies build stronger relationships with potential, new, and existing customers by enabling consistent communication and unified customer data management across organizational functions. (Agile CRM 2020).

Creating consistent and personalized communication requires information on customer's motives and aspirations. Thus, collecting customer data from various sources, analyzing the data, and creating insights are prerequisites for improving customer experience with automated communication. (Lehtovaara 2020.)

Marketing automation technology, resources, and knowledge can be extended from sales purposes to streamline customer communication and improve customer experience in Azets. The timing is perfect for the company in 2021 to start automating customer communication because the CRM software was integrated with the MA software some time ago, and initial data transmission issues have been resolved.

Hubspot (2021) lists 13 examples of different type of automated and triggered email workflows. Although those examples are primarily for marketing purposes, the author found five of them to be applicable for automated customer communication:

1. Workflow based on a page view. For example, when a current customer visits the contacts page ('yhteystiedot' in Finnish), an email would be sent to the customer providing additional information that is not available on the webpage. The message would be tailored to each business unit's customers based on the frequently asked questions received by customer support.
2. Workflow based on a new purchase. For example, when a new customer starts using AIF's accounting service or software, a series of emails would be sent to the customer educating customers on how to collaborate with AIF or use specific software.
3. Workflow based on past purchases. Employees working closely with customers might not always remember to talk about new services and products or ask for feedback on existing ones. Gathering feedback on a specific service or software customer is buying could get the customer to commit to current purchases and buy more.
4. Workflow based on Net Promoter Scores and feedback categories. For example, a customer giving a rating of 6 and complaining topic A would receive a different email than another customer with the same rating but dissatisfied with topic B. These emails could gather more feedback on different matters, provide guidance to customers, reward customers or ask permission to use the recommendation in AIF's marketing and sales activities.
5. Workflow based on contacting customer service. When an identified customer calls to the switchboard, chats on the website, or fills out a web form, an email would be sent to the customer to ensure that the customer got their problem fixed and collect data from that important customer experience touchpoint.

4.4 Customer relationship management as a part of automated communication

Marketing automation and automated communication require customer data for targeting messages to appropriate individuals. AIF has been able to utilize customer data in automated messages. For example, an automated email flow currently reaches out to recently terminated customers for asking a marketing communication consent. The flow was created because Azets takes a rigorous approach to privacy issues. Although, in B2B marketing, it is legally allowed to continue marketing communication even after the customer relationship has ended, despite the general data protection regulation (GDPR), if the recipient's role and status are justified (ASML 2018, 2).

For AIF to automate customer communications, data in the CRM system must be consistently and regularly maintained. In Azets, one particular CRM software is integrated with MA software, but Azets' CRM contains multiple applications. Thus, in this thesis, a CRM system means the whole entity. Baran & Galka (2017, 39) explains CRM is a defensive marketing strategy as it focuses on CX by systematically answering the needs and purchase behaviors of existing customers.

There is no unambiguous definition for CRM, but when referring to a system, it typically has three functions – collect customer data from all touchpoints, store and share the data with employees, and create valuable insights of the data. CRM is more than technology but a management practice that aims to change the company culture to focus on customer communication and relationships instead of transactions. CRM is a strategic concept to improve customer satisfaction and loyalty for increasing revenues and profits by enabling "organizations to tailor specific products and services to individual customers". (Baran & Galka 2017, 4-7.)

Customer relationship management typically focuses on existing customers, but understanding the customers enables companies to attract more similar and profitable new customers. Profitability is essential because often, companies should not aim to retain all customers. CRM is about identifying, retaining, and pleasing customers that repeat purchases with high margins. When planning customized and personalized one-to-one communication or marketing activities based on CRM data, a company should keep in mind each customer's profitability because even the loyal customers might be unprofitable. (Baran & Galka 2017, 9-10.)

CRM is also an essential part of CEM. Classifying customers helps to identify the types of customers for which the CX is being developed. Classification ensures resources and energy are used productively. Customer profitability is a common choice, but companies can also use demographics, customer relationship stage, growth potential, or even transaction channels to classify customers. Value matrix can be used to segment customers within a classification. Customer data rarely is the issue for being able to classify customers, but the challenge is often the ability to process data into relevant insights that support decision making. (Puustinen & Saarijärvi 2020, 129-131.)

As CRM systems can collect any type of customer information, the purpose of one-to-one communication is to ensure learning relationships which means customers are continually telling about their needs and preferences. Based on that information, companies aim to fulfill customer expectations with personalized interaction. This learning practice makes customer relationships more robust and creates a unique competitive advantage. Four practices of one-to-one customer communication with CRM:

1. knowing customers as well as possible
2. differentiating customers based on profitability
3. automating customer interactions
4. personalizing customer communication. (Baran & Galka 2017, 12.)

4.5 Emerging technologies in customer communications

Azets already use various modern channels for communicating and interacting with its stakeholders – social intranet internally across Europe, social media for potential customers, and service portal for customers. However, communications are not only about current and emerging channels. This sub-chapter presents some existing and emerging technologies to be considered in customer experience and customer communication.

According to European Communication Monitor (2020), communication professionals, in general, have significant competence gaps regarding data and technology. That gap is also one reason why the author wants to understand data and technology by examining the subject in this paragraph.

4.5.1 Artificial Intelligence (AI)

While writing this thesis, the author completed Helsinki University's Elements of AI online course to understand how to utilize emerging technologies at Azets. The course helps to demystify AI and think applications in any business.

According to Elements of AI (2020, chapter 1.2), the taxonomy of artificial intelligence (AI) can be represented with Euler's diagram, which helps to understand the relationships and hierarchy of the main concepts related to AI, as shown in Figure 15.

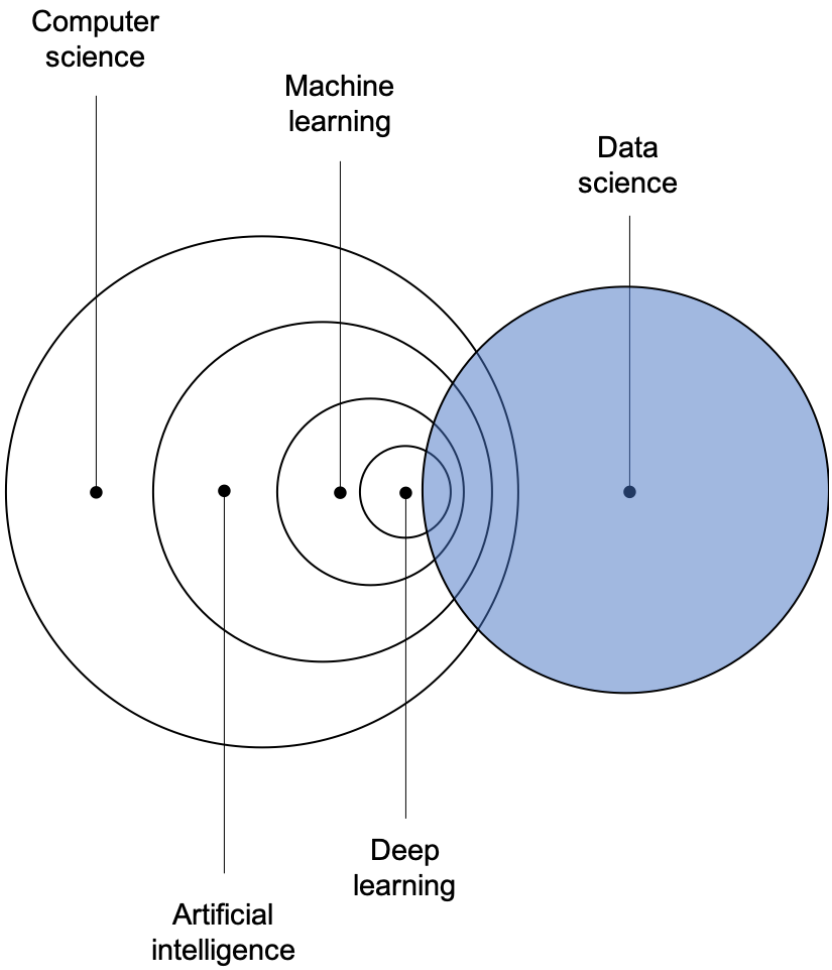

Figure 15. AI taxonomy (adapted from Elements of AI 2020)

As there is no generally accepted definition for artificial intelligence (AI), the easiest way to understand it is the features of AI – autonomy, and adaptability. The first means an ability to perform tasks in complex environments without constant human control. The latter means an ability to improve performance by learning from experience. When both features apply and subject is not human, the solution performing tasks probably contains a touch of AI. The term AI is a bit misleading because it does not seek to mimic human intelligence but solve tasks by utilizing computer and data sciences. An example of AI is Spotify's algorithm that recommends music based on the user's listening habits. (Elements of AI 2020, chapters 1.1 & 1.3.)

Essential aspects of AI are data and communication. Companies have a growing amount of data, and the challenge for executives digitalizing businesses is how to add AI to existing processes and services. Emerging technologies such as AI and machine learning are already influencing and shaping our daily lives by processing information and communication. Thus, executives should define company-level strategies for AI and data. When AI is part of every decision, executives can think about how value and meaning are produced through the human-machine relationship. A sustainable future for that relationship includes economic and technological development, but also environmental and ethical considerations. (Aaltonen & Merilehto 2017, 152-157.)

Though AI can create new ways to deliver and capture value for both parties – customers and businesses – companies should not rely on a human-machine relationship. Aaltonen & Merilehto (2017, 38) emphasize that the best services almost always include human-human and human-machine relationships.

AI applications typically learn from training data which can be incomplete if the sample is based on limited and non-representative data or has been intentionally misrepresented. When relevant data is missing or incorrect, the AI system's algorithms cannot identify deficiencies, leading to erroneous conclusions. Thus, the data used in AI should be able to be inspected and tested. (Aaltonen & Merilehto 2017, 185-195.)

Customer data itself is worthless in business. Transforming up-to-date data to information is the first step in enabling data-driven business. However, that is not enough. Building customer insight from the information is the next step. The last and most crucial step is to think about how customer insights and understanding are applied to create more value for the customers. Technology is not the matter business executives should internalize. Instead, they should be focusing on asking powerful questions. (Merilehto 15 January 2020.)

The importance of AI in business is the ever-decreasing cost of forecasting. At the beginning of an AI-driven analytics project, a company should allocate between 60% and 80% of the time to data acquisition and conditioning as even access to data can be challenging from a technical or juridical point of view. As perfect data does not exist, starting with something is more important because new data types can always be added to improve the forecasts when utilizing AI to categorize and harmonize data.

AI-driven analytics can handle structured and unstructured data – such as text, numbers, pictures, and documents – and provide answers and predictions to unspecified questions.

For example, through semantic analysis of customer feedback, artificial intelligence finds and classifies meanings from various channels for developing business. (Merilehto 24 April 2019.)

By using artificial intelligence in sentiment and category analyses, companies can build real-time customer insights that trigger either humans or AI to respond to the customer. Sentiments enable companies to understand customer satisfaction levels – for example, positive vs. negative – but categorization is a prerequisite for understanding the feedback context. Based on those two analyses, AI can decide whether the response should be handled automatically or by a human. In the latter case, AI can identify which department and individual should respond to the customer. When companies combine CRM data and live data sources and analyze those simultaneously, identifying trends and improving the CX aspects that matter the most to customers becomes more effortless. (Kaartemo, Lages, Männistö, Perez-Vega & Razavi 2020.)

The benefit of using customer insights to automate communication is savings in time and resources, but it also enhances customer retention. “This also relates to the envisioned, predictive insights from their customers’ feedback and react automatically to their needs before unsatisfied customers decide to end the business relationship.” (Kaartemo & al. 2020.)

4.5.2 Machine learning (ML)

Currently, AI most often equals machine learning (ML), which is part of computer science and data science, as described in Figure 15. Machine learning is helpful in finding regularities and dependencies on a data set.

Machine learning is a new type of computer programming that includes mathematical models and predictive analytics. ML can change its mathematical model when new data is available, and this learning process distinct it from traditional programming. (Sterne 2020.)

ML techniques often use old and standardized statistical methods, such as Bayesian or linear regression. Depending on the problem, roughly three types of machine learning that can be used:

1. Supervised machine learning seeks answers to binary classification problems. For example, a machine identifies a specific traffic sign from a photo and answers yes or no to provide helpful information for the next machine-controlled operation, such as slowing down the vehicle. Human is needed to decide what happens after finding an answer to the problem.

2. Unsupervised machine learning seeks answers to problems without predefined classifications. For example, a machine seeks frequencies in the data for building a structure for the unstructured data set. Human is needed to decide how the structured data is named and used in different applications.
3. Reinforcement machine learning seeks answers to complex problems. For example, a self-driving car needs reinforcement machine learning to evaluate the success of driving retrospectively. (Elements of AI 2020, chapter 4.1.)

The boundaries of ML types are volatile. Often the case is about semi-supervised learning, which is something between supervised and unsupervised machine learning. An essential part of a functional and reliable machine learning algorithm is teaching data, test data, and data quality. (Elements of AI 2020, chapters 4.1 & 4.3.)

The nearest neighbor's classifier, linear regression, and logistic regression are typical techniques to build supervised machine learning. Still, there are thousands of other machine learning techniques (Elements of AI 2020, chapters 4.2 & 4.3). Whatever technique is used in supervised learning, it is essential to "give continuous feedback until the machine understand the criteria" (Sterne 2020).

The unsupervised machine learning algorithm is practical when it is essential to identify unknown patterns, outliers, similarities, and differences. Though it provides correlations, analytical skills are needed to add meaning to the correlations. (Sterne 2020.)

Using machine learning techniques, Azets can predict customer behavior based on other customers' previous behavior and automatically communicate to the customer to foster the desired outcome.

- Supervised ML can combine Net Promoter Scores/Ratings and sales data and continuously analyzing that data set to prevent churn by segmenting customers.
- Unsupervised ML can find patterns and trends in the open feedback of NPS surveys for centrally developing customer communication and customer service.
- Reinforcement ML can spot new patterns to identify thousands of micro-segments for new sales opportunities and contact those customers with highly personalized and effective email messages.

According to Sterne 2020, "machine learning improves by trying new things". Instead of humans thinking about possible scenarios of how different types of customers might behave, it is more important to have an open mind and test different ML approaches.

4.5.3 Natural Language Processing/Generation (NLP & NLG)

Typically, Naturally Language Processing (NLP) is a four-stage process to analyze large volumes of words. First, it recognizes a speech from other sounds such as clapping or barking. Then NLP converts the speech or words into text. In the third step, NLP creates a

meaning of the speech through text comprehension. The last step is understanding the emotional state of the speaker through sentiment analysis. (Sterne 2020.)

According to Sterne (2020), NLP is suitable for analyzing survey results, feedback forms, and conversations with customer support. In AIF, SME customers communicate remotely with the company through multiple channels, for example, by sending emails to centralized support centers, chatting on the company website, and calling the switchboard. Azets could record all the conversations on those channels by informing customers in advance and analyzed with NLP for developing the customer experience.

Whereas NLP analyzes text, the Natural Language Generation (NLG) creates text. When pages of texts can be produced in minutes by an NLG application, companies' communication to their stakeholder becomes more efficient. Generating text automatically with NLG involves six steps – content determination, data interpretation, document planning, sentence aggregation, grammaticalization, and language implementation. (Kantarci 2021.)

NLG aims to produce content that humans understand based on insights found from data. It can be implemented in chatbots to create meaningful and personalized communication based on customer-specific data. For example, “NLG techniques can be used to support fintech chatbots that interact with customers for personal financial management advice”. Natural Language Generation is not just the future technology but is in use today. For example, many sports news are already created from the results and statistics of sports events. (Kantarci 2021.)

In Azets, NLG has several potential applications. For example, thousands of AIF’s SME customers are using the same financial management software. NLG can produce personalized financial reports and recommendations from the software to improve customers ’cash position and profitability and ensure the continuity of their business. Compared to static and number-only reports, such communication produced by the NLG would be easier to understand and more concrete for customers without financial education.

4.5.4 Chatbots

With text analytics, companies can utilize all customer service channels to collect and classify customer data for processing and delivering valuable information back to service operations for serving customers better. For example, when customer support includes a chatbot, a self-learning algorithm can classify the conversation data more accurately and

provide answers faster than a rule-based algorithm. AI can also identify the customers who require immediate and personal attention. (Merilehto 13 April 2019.)

Chatbots utilizing machine learning can reduce the number of non-value-added human-human customer interactions. If the number of calls, call duration, and NPS measure the traditional customer service function, a KPI for automated customer support is the number of reduced human-human interactions. When manual work decreases, customer support specialists still play an essential role. In this case, their job is to improve customer satisfaction by teaching chatbots based on the data collected on customer conversations in various channels. More challenging job profile can increase their job satisfaction. Chatbots handle routine work faster and scales to serve a more extensive customer base than humans with improved customer experience. However, applying new technologies in customer service requires an open company culture. (Merilehto 13 April 2019.)

Chatbots are getting better and becoming real conversation bots. Providing answers to frequently asked questions (FAQ) is already enough because chatbots can learn and understand the various ways people ask those same questions. Automated and instant customer service that chatbots can offer gives customer support specialists more time to answer the tough questions. In addition to saving customer service costs, chatbots can also help customers to buy more by asking questions or supporting them in the buying process. For example, a customer can request an appointment with the company, and the service chatbot checks free time and book a meeting on behalf of the client for the parties. (Sterne 2020.)

A chatbot can be designed to serve only existing customers in AIF, and it can even locate on the customer portal to ensure confidentiality and security. For example, a chatbot can answer questions about accounting such as ‘what you need to mark on your travel bill’ or ‘how many projects have been invoiced this month’. With machine learning and financial management specialists' input, both the generic FAQs and customer-specific questions can improve all customers' automated service. Continually and automatically analyzing the NPS data can help to identify topics of customer expectations for the chatbot. Providing the self-service chatbot can increase services' availability when answering customers’ questions is not location or time-bound.

4.5.5 Voice control in communication

Machine learning requires data, but big data is not a prerequisite for applying AI in business – almost all sized companies have enough data for an AI application. Currently, AI in

business is narrow, which means applications can only perform the assigned tasks. For example, voice assistants can answer basic questions such as a weather forecast or ordering batteries from Amazon. For complex queries, those automated virtual assistants provide Google search results. Despite the lack of answers, over half of Google searches are made with voice. (Merilehto 3 April 2019; Merilehto 13 April 2019.)

As humans control devices more with voice, they may start to expect this communication channel to be available in all types of services and systems. In Azets, the increasing role of voice control should be considered when developing any type of service solution utilizing emerging technologies.

4.5.6 Robotic Process Automation (RPA)

The last area of technology presented in this chapter is Robotic Process Automation (RPA). It is not an emerging technology in the same way as artificial intelligence, but its potential for customer service and communication is still underused.

“RPA is an application of technology, governed by business logic and structured inputs, aimed at automating business processes.” Simplified, RPA mimics people when performing tasks in software and platforms, but it does it much faster, without errors, and around the clock. RPAs are easy and cheap to implement. The challenges of RPA are the same as with human resources – when something changes in the software or platform used by RPA, it needs to be retrained. Companies in the Financial Services industry were the firsts to adopt RPA in practice. (Boulton 3 September 2018.)

It is essential to cover this technology in this chapter because AIF uses RPA heavily to automate payroll processes. Also, the company is a pioneer in process automation in the industry and aims to stay in that positioning by having a team specialized in RPA deployment throughout the organization. Currently, AIF has about 20 different RPAs to bring thousands of hours of cost savings and improve the quality of repetitive tasks.

In automated communication, RPA can take place when integrations between systems are not possible or cost-effective investments. For example, an RPA can analyze NPS progress over time for creating forecasts of customer churn on a customer-by-customer basis and by sending an email to each Customer Success Manager. Ideally, that type of information would be available on CRM, but even in that case, the RPA can help to scan the NPS data of thousands of customers and report critical findings.

4.6 Applying emerging technology in communications and customer experience

Leading with knowledge requires four types of activities – collecting data from various sources, synchronizing multiple kinds of data, creating predictive models and forecasts, and making decisions based on scenarios. Humans and machines work best together, which means humans should always know when to challenge AI's suggestions. (Merilehto 3 April 2019.)

Applying AI in services is too often the responsibility of IT departments. Especially in large companies, decision-making ability and understanding of AI should be present throughout the organization. When a small data science team drives AI projects, the business's connection may not be strong enough, leading to never reaching a more significant scale deployment. Company executives need to perceive investments and resources in emerging technologies more broadly than from the IT's point of view. (Merilehto 13 April 2019.)

Delivering exceptional customer experiences may require changing the business model. Traditionally CX has been considered part of service and support operations, marketing, and sales functions. However, a Chief Information Officer (CIO) is often playing a critical part in changing the company to be customer-centric because CX relies on networks, platforms, and technologies. Innovating services is a combination of five areas – data, customer experience, operational processes, technology infrastructure, and business models. When innovating digital customer journeys, companies can benefit from three approaches – providing meaningful personalization, enabling hyper-convenience, and creating ever-increasing value. (Tiersky 31 October 2017.)

Chief Marketing Officer (CMO), CIO and operations executives should have a collaborative practice to improve total customer experience with technology. Data located in each function can cause developing customer interfaces in siloes with conflicts in overall CX. Another challenge with organizational siloes is finding all the relevant customer data and identifying CX's most critical touchpoints. Cross-functional collaboration to develop CX through technology does not simply reduce the challenges with data and touchpoints but also enables companies to build scalable and ongoing assets instead of standalone solutions. (Tiersky 31 October 2017.)

5 Case study research

This chapter describes the case study as a research method and the research process. The hypothesis, main research problem, and sub-questions – the purpose of this development project – presented in chapter 2 were the starting point for the empirical study. Data types, data collection and analyzing processes, and findings are presented in this chapter with a discussion of reliability and validity. Conclusions and development proposals are explained in more detail in chapter 6.

5.1 Research method

Initially, the author planned to do action research where an automated communication approach would have been implemented during the research. According to Haaga-Helia (2020), a master's thesis is a development project with valuable organizational outcomes. That objective would have justified the action research as the most appropriate method.

However, there was one major issue of using action research. It would have limited the implementation of automated communication to channels already in use at AIF and Azets. As a result, the development project could have been technologically old-fashioned and allowed only limited automation capabilities, which would not have provided the best possible support for improving the customer experience and enhancing the organic growth of AIF.

After comparing other social science research methods, the most appropriate research method for this project is the single-case study research, even though it requires more techniques and effort than other research methods. According to Yin (2018, 13), a case study is suitable when the research searches answers to 'how' questions about "a contemporary set of events" and "over which a researcher has little or no control".

A case study as a research method investigates a phenomenon in a real-world context with or without primary quantitative or qualitative research. An objective is to explain complex causal links, describe interventions, illustrate topics, and enlighten situations. (Yin 2018 15-18).

The benefit of a case study as the research method is it encourages using various sources as they complement each other. The six commonly used sources of evidence in a case study are documentation, archival records, interviews, direct observations, partici-

pant observations, and physical artifacts (Figure 16). For example, documents can be formal studies already made about the specific topic and relevant administrative records. An example of an archival record is a service record that shows the number of customers in a particular period. Whatever sources of evidence are used in the case study, the researcher must understand the procedures associated with each type of information. (Yin 2018 113-129.)

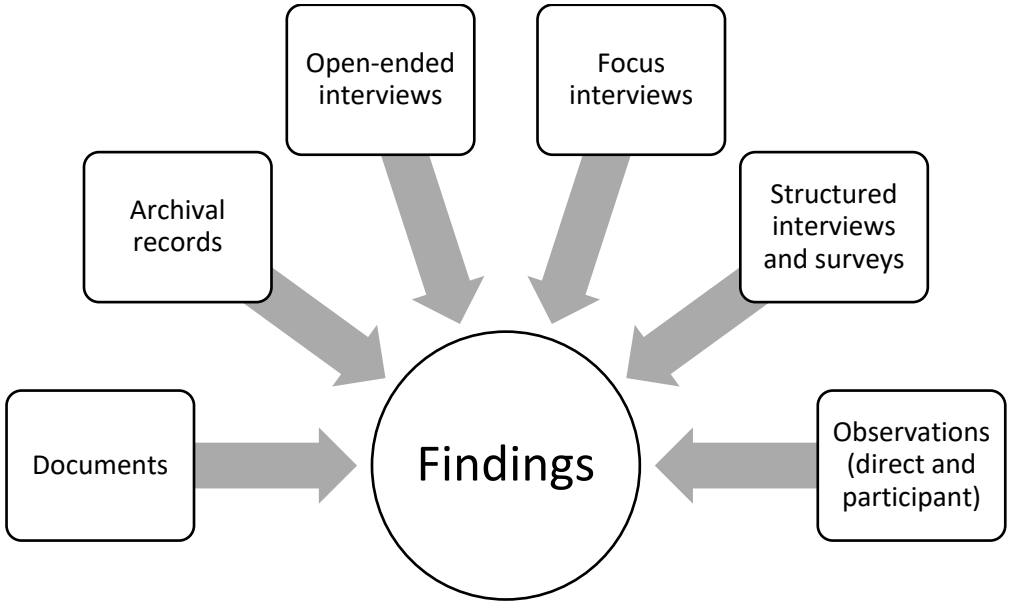

Figure 16. Convergence of evidence in a single-case study (adapted from Yin 2018, 129)

The four principles in a case study ensures quality and transparency in data collection:

1. "Use multiple sources of evidence". The strength of a case study research is it does not rely on one source but instead is in-depth and contextual at the same time. Using multiple sources, the conclusions of a study are more accurate and convincing. Triangulation is a prerequisite for analyzing the database of various sources.
2. "Create a case study database". The database includes four types of data – notes, documents, tabular materials, and narratives – and should be documented separately from the research report. This procedure improves reliability by enabling external stakeholders to inspect the entire database instead of just accessing the report. Following this principle helps the researcher in analyzing the evidence.
3. "Maintain a chain of evidence". This procedure increases the validity by ensuring an external stakeholder can trace the data collection process from collecting the actual evidence to the findings or backward from the findings to the case study questions. This principle portrays the circumstances that occurred in the data collection and the case study protocol.
4. "Exercise care when using data from social media sources". (Yin 2018, 126-136.)

The fourth principle is not relevant in this thesis as social media was not used as a source. But the principles one, two, and three are applied.

One of the objectives is to understand past and current customer behavior by analyzing 1st party data collected in AIF without the author being involved. That type of data is secondary because it was not initially collected by the author for the thesis but instead categorized, merged, and analyzed during the research.

According to Kananen (2011, 69), triangulation "refers to combining several different research methods in one study". Yin (2018, 288) supplements that triangulation improves the validity of the research because the evidence collected from multiple sources requires convergence. Bryman (2011) adds the triangulation cross-checks findings and strengthens any weaknesses of a single finding.

As there are multiple secondary data sources available – CX survey history data with numeric NPS results and customer feedback on open-ended questions, billing data, and archival records of customer churn, data triangulation is used in this thesis. Triangulation aims to improve understanding of the research phenomena and increase reliability and validity.

The reason for using historical CX survey data in this thesis is no one has thoroughly analyzed it. AIF has collected 8,075 responses from its SME customers from 2013 until February 2021 through NPS surveys – 99% through Computer Assisted Telephone Interview (CATI) and 1% through Computer Assisted Web Interview (CAWI).

The phone calls have been conducted monthly by an external company specializing in customer research. Interviewers record the phone surveys to Azets' NPS solution by typing the answers manually. Phone calls are not recorded. Web surveys are registered to the solution automatically and in real-time while the interviewee answers to the survey. The data of each interviewee stored to the NPS solution includes, for example, the name of the customer (organization and individual), the BU and an employee responsible for the customer relationship, historical information on numeric ratings about the willingness to recommend Azets in a scale 0-10 and answers to open-ended questions.

The NPS survey data has been analyzed monthly by an NPS Manager since the beginning. Improvement suggestions from a Detractor customer have been automatically delivered only to customer relationship managers in charge of that customer's relationship – typically office managers and team leaders – not directly to all relevant employees or

management. At the company level, customer feedback is evaluated using categories that can be misleading. The NPS data has neither been analyzed with billing data nor churn data to understand the connection between NPS survey responses and future customer buying behavior.

While playing with the AIF's NPS data, the author noticed valuable and contradictory findings – improvement suggestions from the customers – that can be categorized, analyzed, and utilized when developing, implementing, and executing suggested automation projects. The findings of this data can also be used to improve the service models and train employees' interpersonal skills, such as customer care, interaction, and communication. Analyzing the NPS data, billing data, and churn data, located in three different systems, made the research laborious that the implementation of additional research would have made the work more extensive than expected from a master's thesis.

5.2 Research process – collecting and analyzing data

In this thesis, referring to data types means three different collection methods – primary, secondary, and third-party. Primary data – quantitative or qualitative studies – were not collected in this thesis by the author. The secondary data was collected before the empirical part of the thesis initially for other purposes but utilized and analyzed during the thesis process. Third-party data, for example, company data collected by other parties than the author or Azets, were also not used.

Azets acquires third-party data of its customers from Bisnode, such as standard industrial classification, number of employees, and each customer's revenue. The thesis author expected this data to be available for analyzing NPS history data more diversely. The third-party data source is integrated with Azets' CRM system, but unfortunately, relevant data fields were not yet connected to the NPS system when conducting this research. Bisnode was selected to serve multiple Azets countries. Still, the author has noticed in daily work that other companies providing similar business information can deliver more reliable, up-to-date, and higher quality data in Finland. Thus, third-party data was not used.

The data storing practices used in this research are described in Appendix 1. The appendix is constructed as described by Yin (2018, 132-134) to maintain a chain of evidence and improve validity.

5.3 Data analysis strategy and technique

Analyzing data in a case study is not about computer-assisted tools. When a researcher is creating the case study protocol, asking questions about the evidence can help create a general analytic strategy. However, tools can be very helpful in analyzing large amount of data but understanding 'how' and 'why' questions requires human's analytic rationale. 'Playing' with the data – numeric and narrative – and looking for "patterns, insights, or concepts" can be the first step, because there is no one defined way to analyze data in a case study. (Yin 2018, 164-167.)

According to Yin (2018, 168-175), four strategies and five techniques can be helpful with any combination when analyzing data in a case study. The second strategy – working your data from the ground up – was chosen for this thesis. Yin (2018, 169-170) explains that inductive strategy can offer innovative or relevant concepts by finding patterns of quantitative data. Strategies and techniques for analyzing data are presented in Table 7.

Table 7. Analyzing data in a case study (Yin 2018)

Strategies	**Techniques**
1. Relying on theoretical propositions.	1. Pattern matching
2. Working your data from the "ground up."	2. Explanation building
3. Developing a case description.	3. Time-series analysis
4. Examining plausible rival explanations.	4. Logic models
	5. Cross-case synthesis

The pattern matching technique was chosen to support the strategy. According to Yin (2018, 175), a pattern matching technique compares the predicted and empirically tested patterns. A predicted pattern in this case study is the hypothesis "the customer's willingness to recommend predicts buying behavior". The hypothesis is an argument supported by NPS literature (Markey & Reichheld 2011, 5-6.) – the assumption means customers giving a Promoter rating (9 or 10) are likely to buy more and stay longer as customers compared to Passives (7 or 8) or Detractors (0-6).

For a long time, the author was thinking about different ways to implement this empirical research. When the research questions were set after several edits, and the data collection methods were selected, it was clear what information to look for. Nevertheless, analyzing thousands of open text feedbacks would be difficult without computer-assisted software. Haaga-Helia's methodology teacher suggested using the Atlas tool for analyzing the

text-format data collected in NPS studies, but unfortunately, the tool was not available at the school. Thus, the author investigated alternative methods to analyze the data.

5.4 Secondary data analysis

Recent changes in AIF's CRM systems and Azets's NPS system forced the author to research sub-questions 1 and 2 as separate studies, but it was also necessary to analyze the data in two parts. In stage 1, customer-specific data had to be interpreted in an identified manner by the author to carry out the analysis. In stage 2, customer data had to be processed anonymously because the analysis utilized external subcontractor technology.

- **Stage 1:** Answering sub-question 1 for seeking *connections between the NPS survey and customer buying behavior*. This data is in four Excel files located in a 'Buying behavior' folder. The invoicing and churn data available for this analysis is from 2014-2019, but the NPS data is from 2013-2019, enabling a possibility to compare Net Promoter Scores from 2013 and churn in 2014.
- **Stage 2:** Answering sub-question 2 for seeking *factors affecting CX in the SME customer segment*. This data includes three Excel files located in a 'CX factors' folder. The NPS data is from 2013-2021.

Conducting NPS surveys in Azets is a well-defined process. For this master's thesis, it is not essential to describe the whole process, from maintaining the CRM systems to sampling the respondents and handling the customer feedbacks. Still, it is crucial to understand how the surveys progress and how the responses are stored in the NPS system to evaluate the reliability of the research of this thesis. The data storage practice affects how data can be further processed, for example, by downloading the data in Excel format and combining it with other data for analysis. The survey questions and the recording of responses (data) are described in Table 8.

Table 8. The NPS survey at Azets

Survey phase	**Interviewee**	**Question**	**Response type**	**Column in Excel**
Rating 0-10	All	On a scale from 0 to 10 how likely is it that you would recommend Azets? 0=not likely, 10=very likely	Number	T
Recommendation	9-10 rating	I am pleased to hear that you are satisfied with Azets. If you should recommend Azets, what would you emphasize?	Category + text	U + V
Improvement	9-10 rating	Even though you have indicated that you are satisfied with Azets, there is always something that we could do to improve. Which main area of improvement would you suggest that Azets' focus on to become even better?	Category + text	W + X
Improvement	7-8 rating	For you to become even more satisfied with Azets, which main area of improvement would you suggest that Azets' focus on?	Category + text	W + X
Improvement	4-6 rating	I understand that Azets need to improve to make you more satisfied. Which main area of improvement would you suggest that Azets focus on?	Category + text	W + X
Improvement	4-6 rating	Is there a specific issue that needs immediate attention?	Text	Y
Improvement	0-3 rating	I am sorry to hear that you are not satisfied. Azets wants to improve, so please help us to better understand what to do. Which main area of improvement would you suggest that Azets focus on?	Category + text	W + X
Improvement	0-3 rating	Is there a specific issue that needs immediate attention?	Text	Y
Closure	All	Is there any other feedback you would like to give us?	Text	Z

As described in Table 8, data from customer feedback only starts at the T-column. It means that the 19 preceding columns from A to S contain other information such as details about the Azets subsidiary/unit/sub-unit/employee responsible for that particular customer relationship, customer-specific information, and information about the NPS data collection. All the information is relevant for the NPS system to produce dashboards and reports to users' extent. Still, analyzing the actual responses at a company level, more than half of the columns are less relevant.

5.4.1 Stage 1 analysis manually with Excel

An internal finance specialist at AIF collected customer invoicing and churn data from two different business operation systems in spring 2020. An Excel template created by the author was used to ensure the author could combine and analyze that data with the NPS survey data as efficiently as possible.

- The invoicing and churn data of SME customers collected in 2014-2019 contained more than 102,000 cells of information. The finance specialist transmitted this data to the author.
- The NPS data of SME customers collected in 2013-2019 was exported from the NPS system by the author as an Excel file with more than 137,000 cells of information.
- Both data sets were stored in AIF's network drive, as explained in Appendix 1.
- The churn, invoicing, and NPS data in total contained more than 239,000 cells of information from 8,884 customers.

The most reliable way to analyze purchase and invoicing data with Net Promoter Scores on a customer-by-customer basis would be to utilize the business ID as a unique identifier. However, the old NPS system did not have business ID's when the NPS data was exported for the stage 1 analysis at the beginning of 2020 by the author. The author decided to use the customer organization's name as the identifying factor in the data analysis. That name on AIF's CRM typically corresponds with the customer's registered name. But as some customers change their business names from time to time and keep the business IDs unchanged, those customers could not be identified and analyzed in this stage.

Manual analysis of nearly a quarter of a million Excel cells was not relatively straightforward because the data in the two different files were not in a consistent order. The first step was to create a new file that merged the data into a unified format using various Excel formulas such as v-lookup and manually converting numeric texts to number format. At the same time, unnecessary data was removed from this new Excel file by the author. Still, all the original data was left in the original files and separate folders to be returned for more detailed analyses or research process reviews, if necessary.

Analyzing this extensive data set with Excel was challenging because some customers had been interviewed multiple times on NPS surveys within a year. According to Azets NPS process, customers are put to 12 months quarantine after completing the survey. To continue the analysis, the author decided to calculate average ratings for the customers interviewed more than once within a year. For example, the average of Net Promoter ratings 7 and 8 is 7,5. In general, only natural numbers (0-10) are used in NPS ratings, but decimal numbers in this research made the analysis more reliable because, this way, invoicing information and churn information remained unchanged.

While merging the NPS data, churn data, and invoicing data into one master file, which took approximately 40 hours, the author followed the research method. Recording all the intermediate stages, for example, all the functions and formatting tools used and notes and thoughts to the file facilitated the construction of conclusions. The practice enables an assessment of the reliability of the study and allows work to continue in the AIF by easily adding more recent data to the work to the existing formulas.

Working the data from the “ground up” strategy found out to be a suitable way to compare churned and non-churned customers – their buying behavior through invoicing data and attitudes through NPS ratings. As a result, the author created 39 graphics (appendixes removed from the public thesis version) to identify the patterns. The pattern matching technique helped to understand how the findings correspond to the existing literature as well as to the hypothesis.

Buying behavior analysis – churn and NPS

Typically, AIF did not survey most of the invoiced customers yearly. Churn percentage decreased significantly from 2015 to 2018. The churn rate was the lowest in 2014, 2018, and 2019 when, compared to other years, more commonly, some of the customers were interviewed twice or thrice a year. Collecting customer-specific feedback seems to help AIF respond to critical feedback and thus prevent customer churn. As the monthly sampling size has been fixed, interviewing a customer multiple times per year means AIF cannot interview as many unique customers that year as intended. Based on the findings, interviewing the customers with high churn risk twice per year, ensuring all customers are surveyed every year, and making the sampling size dynamic can reduce the total churn.

The long-term trend in customer churn and NPS has declined. However, according to the hypothesis made by the author based on literature, those should have progressed in opposite directions. The NPS trend should have increased when fewer customers are leaving the company. The change in Net Promoter Score at AIF does not directly predict customer retention, at least as expected. For example, the churn rate increased 53% from 2014 to 2015, and NPS improved simultaneously. Improved NPS is supposed to improve retention, but the data does not support the literature and the hypothesis.

SME’s Net Promoter Score has been relatively stable over the seven-year review period when looking at the entire scaling starting at -100 and ending at +100. The most significant change in NPS groups has been the decrease in Promoters and the increase in Passives. Yearly changes in the share of Detractors were the smallest. Comparing an NPS

group and churn rate does not provide a clear pattern. In some years, when the percentage of Promoters declined in the previous year (e.g., from 2013 to 2014), the churn rate increased a year after (2015), but in general, the trendlines of NPS group changes and the churn rate progress did not match.

NPS (-100 to +100) and average ratings (0-10) are typically higher one year, especially two years, before customers churn. Customer-specific decrease in NPS rating, even a decrease in one digit, is a reliable indicator of potential churn. This finding supports the suggestion that AIF should conduct NPS or other customer satisfaction measures more often than once a year to identify the customers at churn risk and improve services.

NPS and average ratings have had no significant variance when analyzing non-churned customers and comparing the results against churned customers. The author tried to identify differences by calculating a median and a mode for both customer types per year and years before churn/non-churn. Still, the result was always a same number – the most common rating customers have given in AIF's NPS surveys. Non-churned customers' NPS and ratings have remained remarkably stable from year to year. However, this does not mean that a customer giving the same grade from year to year could not be considering leaving. Any negative and subjectively critical encounter that has not been identified and tried to fix by AIF may result the customer to churn.

Buying behavior analysis – invoicing and churn

The author was able to identify multiple patterns by combining and analyzing invoicing and churn data together. These findings are strictly confidential and valuable for any company operating in the same industry in Finland. Thus, the author removed the findings presented under this headline from the public thesis version.

Buying behavior analysis – invoicing and NPS

This part of the analysis answers directly to sub-question 1, and the findings deliver valuable insights for AIF and the entire Azets Group. The connection between the NPS and customer buying behavior is clear and unexpected. However, these findings are also confidential and were only presented to the thesis evaluators by the author.

5.4.2 Stage 2 analysis with AI and NLP

Since NPS surveys had been conducted from November 2013 to February 2021 and the NPS system was replaced with a new software in 2020, more NPS data was available than in Stage 1 – a total of 218,000 cells of information. Before analyzing NPS open text feedback data, customer comments, the first step was to remove irrelevant information and make the data anonymous because the feedback combined with individual customers was not relevant in the analysis. There was also a data protection risk in the processing of the customer data.

- Data from SME's sub-units that no longer existed was removed from the file.
- Stakeholder names, company names, business IDs, phone numbers, and email addresses were removed manually. This cleaning process took approximately 8 hours but speeded up file usage, and anonymity increased reliability and improved data privacy.

After cleaning the file, 129,000 cells remained, and **32,000** of those cells contained open text customer feedbacks from few words to multiple sentences per cell. Although almost half of the unnecessary cells were removed, manual data analysis would have been too time-consuming. In addition, it would not have made sense to narrow the research, for example, to Promoter customers because they also share development and improvement suggestions in open text feedback. In contrast, Detractor customers praise some aspect of Azets' operations when answering the open-ended questions in NPS surveys.

Thus, the second step in this stage was to find a solution able to analyze a large amount of text data collected in NPS surveys. Another requirement for the solution was to be language-independent and so rapid that it could be integrated into the ongoing monthly analysis of NPS studies in five different languages in five Azets countries. When reading the literature, it was clear the solution would need to be based on AI.

After searching software providers, a suitable partner was met in February 2021, and the agreement was signed for this proof of concept (PoC) pilot in March 2021. The partner promised to analyze the qualitative NPS data to find key topics and sentiments and report the findings with quantitative graphs. The cleaned data set in an Excel file was sent to the partner through a secure and protected Azets FileHUB software to ensure data privacy.

In NPS surveys conducted through the phone, the answers to open-ended questions are categorized by the interviewers. Those categories are standardized and the same in all Azets countries. The problem with the categorization practice is that the answers may fall into more than one category, but the interviewer can only choose one category. Also, customer feedback does not always fit into any category. The use of predefined categories is

artificial and may lead Azets' management to draw erroneous conclusions of the NPS data.

Another challenge with NPS surveys is categorizing the numerical ratings into Detractor, Passive, and Promoter groups. According to Langhe (Fernbach & Langhe 2019), NPS has two categorial-thinking problems – it treats all ratings within a group equally and disregards Passives.

A customer giving 0 and another giving 6 are treated equally as part of the Detractor group. Because six is much closer to the Passive group with a rating of 7 or 8, those customers should be treated very differently than customers with 0. "Small differences across category boundaries matter in determining the score, in other words—whereas the same or larger differences within a category don't." (Fernbach & Langhe 2019.)

On the other hand, two companies can have the same NPS but with a very different customer base. If company A has only Passives, its Net Promoter Score is 0%. If company B has half Promoters and half Detractors, the NPS is also 0%. (Fernbach & Langhe 2019.) Those two companies have the same Net Promoter Score, but they have more dispersion in customer attitudes. Thus, the means to develop CX can be very different between those two companies.

Categorization is useful and a necessity for humans to make sense of complex matters and to share information. When using categories for analyzing and interpreting data in business, the categories need to be valid and valuable. Continuously analyzing data and auditing the decision-making criteria can avoid pitfalls of categorization. (Fernbach & Langhe 2019.)

This thesis does not portray the findings based on the existing NPS categories Azets is already using to analyze improvement areas and recommendation areas the customers are giving feedback about because the category names are somewhat superficial. Instead, a categorization is presented from the actual findings the AI software created of the customer feedback data. This procedure makes the analysis more reliable and opens opportunities to discover new topics important for the customers.

It is essential to mention that the AI was instructed to analyze the data based on how it was initially collected and disaggregated. Recommendation feedback has been collected

only from customers who have given an NPS rating of 9 or 10. Still, improvement feedback has been collected from all customers who participated in the NPS surveys in 2013-2021.

The method of conducting NPS surveys is based on the idea that customers with a rating from 0 to 8 are not Promoters and do not give positive feedback. Still, the NPS data does not verify the validity of that assumption. The author has noticed countless times that customers do not just answer the question asked. If the customer is asked 'what should be improved', the answer often reflects a combination of negative and positive experiences. That means customers think about business development from two perspectives – what should be improved and what should not.

AI analysis – topics and meanings

The topics founded by the AI and the categories predefined by Azets are divided into two dimensions – recommendations and improvements. The recommendations (Table 9) relate CX factors valued by customers and delivered by Azets. The improvements (Table 10) are about the CX factors customers expect Azets to improve.

Table 9. Recommendation categories vs. topics

8 categories by Azets	**7 topics by AI**
Contact person	Employment
In general satisfied	Communication
Proactivity	Computer
Professionality	Knowledge
Quality and competence	Reliability
Service minded	Surprise
Service offerings	Trust
Technical solution	

The topics AI software founded (Table 9) are based on the Excel file's column containing only recommendation comments from AIF SME customers. Some of the topics seem to have similarities, for example, 'technical solution' vs. 'computer', while others are very different. The topic 'Communication' may relate to 'Contact person', 'In general satisfied', 'Proactivity, 'Professionality', 'Quality and competence', or 'Service minded' categories. Based on this analysis, it is clear an NPS interviewer can easily choose a wrong category when a customer praises, for example, Azets's communication.

When AI discovered the topic clusters, it also identified words, feelings, and sentiments close to each topic. According to Gupta (7 January 2018), traditional sentiment analysis can only tell if a person is communicating in a positive, negative, or neutral manner, but a contextual sentiment analysis can provide intentions behind sentiments. Intentions in this analysis mean the topics. The AI analyzed each topic with seven feelings – anticipation, anger, fear, disgust, sadness, joy, surprise, and trust – and the main sentiments 'positive' or 'negative'.

The AI found out that the following words and meanings were attached to each topic:

1. Knowledge – anticipate challenges, rapid, and skillful.
2. Employment – person, professionalism, society, and joy.
3. Computers – flexibility, versatility, anger, stress, prompt, timely, accurate, and easy.
4. Surprise – time, need, "moralistic attitude", activity, and consideration.
5. Trust – money, professional and satisfied.
6. Reliability – processes, financial, electronic, friendly, smooth, accurate, beneficial, and flawlessly.
7. Communication – punctuality, speed, payment, bookkeeping, and price.

The most common recommendation category in SME NPS studies set by an interviewer in CATI survey or selected by the customer in CAWI survey is 'In general satisfied'. That category does not in any way increase AIF's understanding of the state of the customer experience and what customers value. A more innovative and sensible way to classify NPS results would regularly let the AI discover the topics. Analyzing customer feedback and sentiments within each topic and comparing longer-term changes in topics would enable the CX development to become concrete and more manageable to observe the change.

The improvement topics AI software founded are presented in Table 10. The findings are based on the same Excel file's column containing only improvement comments from all AIF SME customers who participated in NPS surveys between 2013 and February 2021.

Table 10. Improvement categories vs. topics

10 categories by Azets	**4 topics by AI**
Competence	Customers
Consulting and business understanding	Good morals
Customer attention and communication	Money
IT system/technical issues	Surprise
Nothing in particular	
Other – please specify	
Prices and cost efficiency	
Proactive/follow up	
Quality	
Reliability	

The most visible difference compared to the categories set by Azets is the scarcity of topics founded (Table 9). All the matters customers expect to be improved, or what they have answered to this question, can be categorized under four topics in this data set from more than eight years containing over **8,000** improvement comments from the customers. To be precise, there are thousands of more improvement feedback in the data, but only the responses specifically recorded under that question were analyzed.

According to the AI, customers used the following words and meanings with each topic:

1. Surprise – customers expect the customer communication to avoid surprises and increase trust.
2. Good morals – price, payroll, accounting, exchange, and value for the money.
3. Money – documents and knowledge.
4. Customers – finance, sadness, negative, and entrepreneur.

When looking at the data in Excel, the most common category selected by an interviewer, or a customer is ‘Nothing in particular’. But when reading the actual feedbacks within that category, there are multiple improvement comments which could fit under several other preset categories. With these categories is the same issue as with the recommendation categories – individual feedback is not about just one category. The selection of categories is wide and narrow simultaneously, and categories are too one-dimensional to describe real customer intentions and feelings. For example, cost efficiency is not an objective financial matter but about a sense of getting value for the money and effort.

Feelings and sentiments on topics by AI analysis

Appendixes removed from the public thesis version contain all the feelings and sentiments connected to each '**recommendation**' topic and similar graphs and statistics related to each '**improvement**' topic. In addition, those confidential appendixes demonstrate statistical comparisons of affects (feelings) by topics.

Statistically (highest F value), comparing the factors that affect the customer experience among Promoters – customers who have been asked feedback for their 'recommendation' rating – two topics and feelings emerge significantly. One emotion emerged when the effects were similarly statistically compared across the factors for the 'improvement' feedback. Appendixes portray the positive and negative remarks per each customer segment and the trend in 2013-2021. An appendix shows which commonly used words and word clusters are associated with positive or negative sentiments. Because of the confidentiality, the actual findings are not included in this public thesis version.

5.5 Reliability and validity of the research

The stage 1 of the secondary data analysis is reliable, and it can be repeated by Azets' employees. Following the case study research method protocol, presented at the beginning of this chapter, ensures the data analysis is stored and reported in a manner each of the findings can be traced and checked independently. The author has processed the original data with quality and included extensive notes with later inspections and interpretations in mind throughout the research.

The author is unable to inspect the data provided for this research by the finance specialist and the NPS system. Data collection and storage errors occur in both humans and systems. However, the amount of information used in this study is very extensive that even the inaccuracy of dozens of individual data would not distort the findings. The validity of this part of the study relies both on the literature provided in chapter 3 and the data stored in AIF's systems.

The stage 2 of the secondary data analysis was conducted by an external AI company. Reliability of their methods and algorithms is something that cannot be inspected by the author. The AI company is established by two university professors, one located in Finland and other in the United States. The latter presented the findings in an online meeting to the author. Validity in this stage is based on the research sub-question 2 set by the au-

thor. As noticeable in the subchapter 5.4 the factors affecting to the CX weren't comprehensively and concretely founded, because customers participate AIF's NPS surveys only once a year, but the CX evolves from one touchpoint to another, and the customer satisfaction can change even within a day. However, the stage 2 provided valuable findings about how to improve the NPS process in Azets.

6 Conclusions and discussion

This chapter compiles the entire thesis and presents proposals for action to the AIF. Although the research of this development project was conducted for Azets' local subsidiary, AIF, this thesis provides valuable findings and practical development suggestions for the entire Azets Group in both the Nordic and UK countries. In addition, this chapter presents recommendations for future research and reflections from the author.

6.1 NPS and customer experience development

The main research question is “how to improve CX in the SME segment?” sounds simple, but customer experience is a complex and holistic entity, as described thoroughly in chapter 3. A student researching customer experience can approach the question from various perspectives such as leading change, managing expectations through advertising, innovating offerings, or designing pricing strategies.

Two approaches were chosen for this thesis, as the author was interested in applying communication theories and the utilization of evolving technology in CX. It would have been easier to choose only one approach.

Measuring customer experiences with NPS has become one of the most used metrics in business. Even so common that customers have begun to avoid them. Those who do participate do not express their true feelings and opinions in the survey when giving a rating. Companies that stare at only a numerical result lose the whole purpose of the survey. (McColl-Kennedy, Neely & Zaki, 4 May 2021.)

The value of NPS methodology is not the score but the open-ended customer feedback. The issue with NPS is that the customer's thoughts and feelings are hard to impossible to analyze manually, even though those portray and predict more about a customer’s behavior than a rating. Artificial intelligence can help analyze large data sets of qualitative data, even collected from multiple channels, and deliver valuable information to improve customer retention. AI combined with NPS can point out the hidden spots, support employee training, identify problems in the organization, fasten the survey process to real-time, “prevent declines in sales”, and “prioritize actions to improve customer experience”. (McColl-Kennedy, Neely & Zaki, 4 May 2021.)

6.2 How to improve CX with automation?

This thesis aims to provide concrete development ideas to improve customer experience. Utilizing the research findings in automation is natural consequence because it is one of the significant cultural and technological core features of AIF. Thus, automation was chosen as the central theme for this development project.

Based on the literature and the research, the author proposes to divide the utilization of automation in CX development into five areas. The five projects can be deployed separately by AIF or Azets, but the projects do complement each other. Those confidential development projects are explained in an appendix removed from the public thesis version.

6.3 Business Case

Automating CEM and customer communications requires technological development, outsourced AI software, and surprising human resources to manage, analyze and develop the entity. This approach is an investment that, like all investments, should have an expected return. Implementing the approach is a project where most one-time costs are incurred initially with ongoing labor costs.

A business case is a tool for decision-making. It justifies starting the project by demonstrating costs, benefits, and risks. Financial investments are divided to overall, implementation, maintenance, and project level, and described which costs are expenses and which are recognized in the balance sheet. Development projects seek benefits that outweigh the costs during a given review period. Therefore, only monetizable benefits are taken into account in the calculation of benefits. Risks can be analyzed by using strengths, weaknesses, opportunities, and threats (SWOT) analysis, but all identified risks should be categorized, enabling the creation of contingency plans for significant risks. (Myllymäki 2019, 3-43.)

Because not all benefits and costs can be calculated in figures, a well-created business case contains verbal reasoning. Topics that typically require verbal reasoning are the projects affecting organizations' image or reputation and work-related aspects such as atmosphere, culture, and meaningfulness. Further development of the project, compatibility with organizations overall architecture, changes in the legislation requirements, problems caused by technological obsolescence, and customer satisfaction issues are other relevant matters that can be hard to demonstrate with figures and calculations. Still, these as

well are essential aspects for the decision-makers to understand when evaluating the investment. Therefore, a business case often includes a preliminary project plan. (Myllymäki 2019, 45-46.)

The author initially planned to create a business case as a part of the thesis. However, while finalizing the report, something unexpected occurred at AIF, and the SME unit decided to be dismantled by the management team of AIF. Adapting to such sudden organizational change affects this business case so that the author cannot make it before returning the report. Also, this approach is deployable either in an AIF-level, Nordic-level, or Group-level. Creating a project plan for different implementation scenarios requires further discussions, which are out of the scope of this thesis.

However, the research demonstrates AIF can generate millions of euros revenue by identifying customers at churn risk from the existing NPS process and improving retention with the help of AI and NLP technologies. More business benefits will accrue from expanding operations from the former SME unit to all businesses.

Investing in an automated AI analysis is fairly reasonably yearly cost. Human resources can be reorganized, and new hires are not needed, because AIF poses service design professionals, an extensive technology unit, and the marketing team's current specialists. Suppose AIF can extend the average customer lifecycle even by one year while keeping billing unchanged. In that case, the return on investment (ROI) is a minimum of thousands of percentages within the SME unit and twice or thrice when expanded to all business units participating in the NPS process.

The author proposes to set KPIs and targets for each automation projects. These are explained in an appendix which is not part of the public thesis.

6.4 Evaluating the research

In this sub-chapter the author evaluates the literature chosen for this thesis and the research conducted. This self-evaluation is based on the set hypothesis, objectives, main research question, sub-questions, and the chosen methods.

Research method

The chosen ‘case study research’ method was suitable because the author wanted to get access to a data that was not daily available to him for understanding customer experience more deeply at the daily work and being able to support the employer in improving customer retention. With the help of finance specialist, it was possible to combine data from three different sources. Collecting evidence from multiple sources is the foundation of case study research. The method was obviously the best choice for this thesis.

Hypothesis

The hypothesis ‘NPS predicts buying behavior’ is partly true but also false. Net Promoter Score and especially the NPS groups should not be treated as explained by the founders of NPS in 2011, at least in AIF as argued in the answers to the sub-question 1. Turning Passives in into Promoters is not the most critical matter. Essential is to increase the tenure and value of the customer base by developing a customer experience for which the answers are not found in numbers but open feedback.

Answering the main research question

The main research question, ‘how to improve CX in the SME segment?’, is answered in this thesis – holistically through the literature in chapters 3 and 4, empirically in the research chapter 5, and practically in this chapter from the automation perspective. The main research question was appropriate and justified for this type of practical case study research. However, the scope of the main research question could have been even narrower. Because CX is multidimensional and three-level with different types of experiences and sub-experiences, it is not realistic to research everything considering the scope of the master’s thesis.

Sub-question 1, ‘what type of connection exists between the NPS survey and customer buying behavior’, was a risky choice. It was possible that there would have been no connection between the three different numerical data – invoicing, churn, and NPS results. However, the author identified patterns by using the chosen research method. The five key findings were removed from the public thesis version. to the sub-question 1:

According to Smith and Williams (2016), companies should not rely on the Net Promoter Score because Promoters might not be profitable. This research supports the literature

that Promoters are not in all cases the most valuable customers in terms of invoicing, but AIF should also research and compare the costs to serve between different NPS groups.

Sub-question 2, 'which factors influence the CX in the SME segment?' was challenging. The author was uncertain can the question be answered in this thesis because extensive 32,000 customer comments could not be analyzed manually by the author. According to the recent Harvard Business Review article, "AI tools are not yet widely adopted by marketers and customer experience managers" in analyzing customer comments collected with NPS or other CX survey methods (McColl-Kennedy, J., Neely, A. & Zaki, M. 4 May 2021).

It is fascinating to be globally at the forefront of peers when utilizing AI in open feedback analysis in this thesis. The key findings to the sub-question 2:

1. Azets should stop using preselected categories when asking open-ended questions and reporting the answers because the categorized do not show customer sentiments, feelings, or even the most critical topics to be improved.
2. More meaningful categorization would be based on the actual customer feedback analyzed automatically by AI and dynamically changed monthly.
3. Seven topics positively affect the customer experience.
4. Four topics negatively affect the CX.
5. Two factors are critical.

Sub-question 3, 'which technological solutions are available and applicable for improving CX at Azets?', was an easier sub-question to answer. In chapter 4 are intentionally introduced only emerging technologies that can supplement or replace traditional communication channels such as email, phone, and in person.

Which technology to use in customer communication is not a matter of Azets or AIF but about customers' evolving preferences. AIF should rely on one channel as it may become despised by customers. Instead, the company should continuously discuss with customers and measure how various channels are used and why.

One customer can use multiple channels depending on the need. For example, a chat to find contacts, an email to ask a question, and a phone to make a complaint. How these and future communication channels are integrated into AIF's customer service processes and how customer communications are recorded and analyzed using NLP-based AI can provide a uniquely high-class customer experience.

The most helpful finding for this sub-question was the author's understanding of how artificial intelligence can be utilized to analyze NPS data. For example, without this sub-question, it would not have occurred to the author to ask, 'does a solution and at what cost exist for the NPS surveys customer comments can be analyzed automatically'.

AIF processes a large amount of financial data when accounts are doing accounting for the customers. To an increasing extent, accounting documents are handled automatically. However, customer-specific reports are still partly made manually, even though the data used in the reports are in a uniform format – income and expenses in euros and percentages. The author suggests AIF explore possibilities to use NLG for creating those reports in the form of sentences understood by the client.

Objectives

The primary objective was to find ways to improve CX and retention. The author ended up proposing a robust automation approach including five individual and/or complimentary development projects that AIF or Azets Group can deploy with modest investments.

The second objective was to propose a solution to interpret and complement existing monthly NPS surveys. This solution was tested in the research. The chosen AI can produce findings, such as patterns and sentiments, of existing data that were not visible for AIF and its employees. The author suggests Azets to continue using AI for analyzing the NPS data and integrate the technology to its existing CRM and NPS systems for storing and sharing the AI-driven findings with employees automatically and preferably in close to real-time instead of monthly.

Part of the second objective was to seek a complementary method to constantly measure and analyze transactional satisfaction in critical touchpoints. Survey methods were not explored in-depth because that would have required service blueprinting for mapping the entire customer path and processes affecting the customer experience, including customer and employee interviews. As a result, the thesis would have become too extensive. However, the literature presented in chapter 3 can help the author and AIF to understand customer experience more holistically and evaluate whether to invest in measuring transactional customer experiences.

According to Klaus, Maull & Ponsignon (2015, 310-311), as described in chapter 3, leveraging transactional data with advanced analytics can help to personalize CX but also improve the service delivery processes, customer retention, and CLV. Measuring critical

touchpoints, for example, the switchboard, support channels, customer portal, offices, meetings, and deliveries such as financial statements, is not complicated nor costly. Sending an automated SMS is relatively cheap and effortless, but the data collected can quickly provide findings currently non-visible for the management.

The last objective was to find reliable standards to evaluate the progress and benefits of each automation project. The author suggests KPIs for each automation project as well as common KPIs for all automated projects.

6.5 Limitations of the research

Evaluating the research from an ethical perspective, the author has a non-disclosure agreement with the employer. Customer-specific data was used, but the analyzes were performed anonymously. The AI partner did not receive any other sensitive information besides the Azets name and its preceding business names, including Visma. The author analyzed the customer data only on his company computer, and any sensitive files were not transmitted from AIF's internal network drive. Virtual Private Network (VPN) had to be always on for even accessing any of the files.

An ethical viewpoint to consider is in the deployment of this thesis. Important questions include whether and to what extent customers are informed about the automation of services? Do customers expect to get the work done by a human and what does it mean for the client's expectations? For example, some customers may have core values that make them want to buy services from people rather than machines.

This case study research is applicable only in Azets. Similar studies, even within the same industry, can produce different results. However, the author hopes that this study will lead companies and customer experience developers to think about the NPS method from a new perspective.

6.6 Recommendations for future research

AIF has not made studies to analyze how much their customers give positive or negative referrals. However, gathering information from customers enables calculating more accurate CLVs and creating more robust decisions about which customers and how much to invest for building faster and more profitable growth through word-of-mouth.

Two other future research topics are to study employees and analyze additional financial costs caused by customers. According to Markey & Reichheld (2011, 75), understanding

the total cost of detractors is not only a matter of referrals. For example, unhappy customers harm employees' job satisfaction because facing unpleasant customer situations can decrease commitment and motivation. Also, estimating the cost to serve, bad debts, and legal expenses enables a better overall view of customer profitability against NPS ratings.

The fourth research topic for AIF is to study Net Promoter Score against competitors regularly. When conducting a market analysis about NPS, the company also need to take into account other factors of each competitor, including organic growth rates that do not include acquisitions and mergers, pricing, innovation, cost management, and whatever data related is available for building sustainable and profitable growth (Markey & Reichheld 2011, 78-81).

The fifth topic for AIF to research is to analyze in the SME segment how Net Promoter Scores affect buying other services than financial management. According to Markey & Reichheld (2011, 83-84), companies leading the market with excellent customer relationships can more easily extend their products and services within the existing customer base.

The sixth research topic would be to understand how AIF's customer experience is currently designed against competitors. Using the buyer utility map companies can compare industry focus and a blue ocean offering from six utility levers and six stages of buyer experience cycle (Kim, C. & Mauborgne, R. 2021).

The author has a personal objective to find a research group interested in studying communication and technology in customer experience in a broader business context. Furthermore, the author aims to continue his study path to doctoral studies, for example, at Jyväskylä University's Program of Doctoral Studies in Business, Digital Marketing, and Communication. The author and the research group would further research this extensive topic and write academic articles to increase the awareness of possibilities and threats of automated services in the B2B environment.

That type of doctoral-level research requires funding. The author has not yet investigated which institutions or organizations would possibly be interested in supporting the study of automated customer communication, automated services, or automated customer experiences. However, the author is confident the funding is not an issue because automation and utilizing AI are topics with global demand.

A practical example is Leadoo. It is one of the ten fastest-growing start-ups in Finland, specialized in developing and licensing interactive text bots for websites (Lappalainen 3 March 2020). Leadoo's success is a consequence of utilizing AI only to the extent that it benefits the human-machine interaction (Lappalainen 19 September 2019). Two years later, the company raised 5 million euros funding for internationalization (Ylä-Anttila 26 January 2021). With the doctoral studies, the author would want to enable Finnish entrepreneurs to have research support for inventing global technological growth companies like Leadoo.

Future research should pay attention to the speed of applying emerging technologies in business. Four-year doctoral studies in automated communications should not lead to the publication of articles that have become obsolete on the day of publication. When the author started designing this thesis in 2018, the technology used in the research part in 2021 was not available on the market back then. It says a lot about the exponential rate of technology change. Even though artificial intelligence research began as early as 1956 (Tekoäly.info 2021).

6.7 Reflecting personal learning, thesis process, and the research

The thesis process started in August 2018. The first draft of the plan was delivered to the supervisor in December 2018. Five versions of the plan were written during spring 2019 to focus on the research problem, scope, literature, and methods. Writing the actual thesis started in December 2019 when the author had finalized all courses of the Master's Program in Communication Management. All those courses supported the thesis process and were somewhat part of the literature or the empirical research. Learning more about the courses improved in practice while conducting this research project.

The original plan was to finalize the thesis in spring 2020 but then came the COVID-19, and the author needed to focus entirely on daily work at Azets. The thesis work was on a break for almost a year, but the delay improved the thesis. The author found an alternative way of carrying out part 2 of the research using newly introduced artificial intelligence technology. The thesis was returned to the supervisor in June 2021 for comment before evaluation.

Writing the theory deepened the author's expertise, especially in the customer experience. The learning helped to identify that the research sub-questions were initially incorrectly defined. The sub-questions were slightly rewritten, and some irrelevant ones were removed along the way before starting the research stage.

Comparing different research methods, such as action research, supported deciding how the research could be carried out and helped understand many different approaches to the same problem. The case study research method was the most appropriate choice because AIF did not clearly understand how the NPS predicts customer behavior. Action research could have led to a more concrete outcome, but it could have led to doing things that are not based on in-depth analysis. Case study research could have included more evidence, for example, by observing AIF employees or interviewing clients, but that would have made the thesis too extensive.

Getting to know AIF's clients through NPS and invoicing data helped the author understand more about the Financial Management business at AIF and Azets. Regarding future working life, the aspect that benefits the author most was implementing the research and especially reporting the research findings. It was surprising to see how customer behavior can differ significantly from customer experience measurements. The resulting skills to question customer surveys and combine and analyze data are helpful in current and future jobs.

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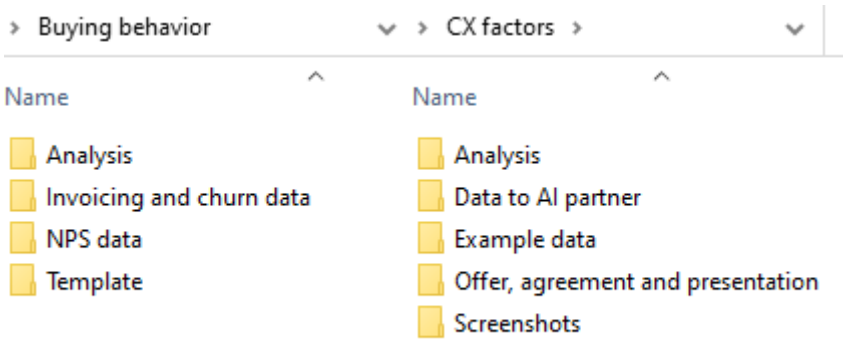
Appendices

Appendix 1. Case study database

The database in this case study was collected and stored with the practices described in this appendix. Using these practices helped to conduct the case study professionally in a manner the data can be accessed subsequently by internal stakeholders of AIF and Azets for later retrieval.

The study data was stored on the author's personal network drive, which is also accessible by the AIF's IT department. In terms of trade secrets, this was the most secure place to store information.

Unique folders for both parts of the research:



Data contains raw and analyzed file versions of NPS data, churn data and invoicing data in Excel files including comments from the author. AI data was provided by an external partner in PDF and Excel formats.

Upon completion of the thesis, the files and notes related to the research data will be copied to the online disk of the AIF management team.

"The main purpose of the open-ended response is to document the connection between specific pieces of evidence and the various issues in the case study, generously using footnotes and citations." (Yin 2018, 134.)