The Faculty of Social Sciences
University of Helsinki
Finland
Dissertationes Universitatis Helsingiensis 9/2025

Anticipating futures during times of change: Empirical consumer research in corporate foresight

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DOCTORAL DISSERTATION

To be presented,
with the permission of the Faculty of Social Sciences
of the University of Helsinki, for public examination
in the Festive Hall of the Language Centre
on 16 January 2025 at 13:00.

HELSINKI 2025

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Publisher: University of Helsinki
Series: Dissertationes Universitatis Helsingiensis 9/2025

ISBN 978-952-84-0466-8 (print)
ISBN 978-952-84-0465-1 (online)
ISSN 2954-2898 (print)
ISSN 2954-2952 (online)

PunaMusta, Joensuu 2025

ABSTRACT

This article-based doctoral dissertation examines consumers' futures thinking and the role of empirical consumer research in corporate foresight. The research was conducted during a period characterised by multiple intertwined crises. Previous research has scarcely addressed the link between consumer research and corporate foresight, and the integration of consumers into foresight processes appears to be rare in the literature. However, companies conducting foresight need to understand consumption futures and engage consumers in foresight. In this dissertation, the dynamics and interpretations of consumers' futures thinking are addressed. In addition, the applied consumer research methodologies are linked to all parts of a foresight process.

The dissertation comprises five original articles. Article I investigates consumers' futures thinking at the onset of the global health crisis COVID-19. Article II examines future visions of everyday life in a global metropolis by involving consumers with a lead user profile. Article III engages early adopter consumers in last-mile logistics innovation to evaluate and develop future-oriented service concepts. The use of consumer foresight information is examined in an applied corporate foresight context, as Article II was conducted in collaboration with a leading globally operating company and Article III with a locally prominent SME firm. Article IV examines the use of foresight information in large companies with intermediate foresight maturity, identifying four organising archetypes. Article V conducts a qualitative content analysis of future personas created within expert-driven scenario processes, uncovering the limitations of future personas created without consumer and citizen engagement.

The study is multidisciplinary, and theoretical approaches from futures studies, corporate foresight, consumer research, and sociology of futures are used to interpret the data. The multi-method approach to data collection derives from consumer research, utilising several methods to collect mainly qualitative but also quantitative data. The study uses interviews, online diaries, chatrooms, a visioning workshop, and a survey to collect data. The participatory approach involves various consumer profiles, such as lead users and early adopters. As the research is partially conducted in collaboration with companies, strategic management and knowledge management perspectives are employed to understand the role of future-oriented consumer insights within organisations and their foresight systems.

The consumers studied showed resilience, adaptability, and the capability to look forward in volatile conditions. The changing conditions challenged consumption patterns and lifestyles but also influenced post-crisis horizons.

Consumer futures appeared as dynamic spaces of possibilities that present actions could shape, and personal agency was preserved in uncertain and unstable circumstances. Consumers' future imaginaries included both continuity and discontinuity in relation to the present situation. Consumers' future expectations did not always align with the companies' hypotheses. The consumers were capable of imagining a broad range of future possibilities, which were influenced by the concerns, issues, and trends of the time. The interplay between future imaginaries and present actions created anticipation in consumption. Social structures, technologies, and materialities influenced the anticipation. This future orientation in consumption forms a theoretical common ground for consumer research and corporate foresight, and provides applicable insights for corporate foresight practice.

Companies' strategic leadership can utilise future-oriented consumption insights at all stages of a generic foresight process. Consumer foresight can be a unique resource, allowing differentiation in competition. As consumers' roles during different parts of the process vary, choosing an appropriate consumer engagement method for each phase becomes crucial. There is no need to exclude any group of consumers from future-related reflections. This study demonstrates that consumer involvement orientations can be interpretative, visionary, co-creative, and validating. The future orientation in consumption must be recognised in the data to formulate consumer research findings in the form of foresight terminology. This integrative approach can be called participatory consumer foresight.

ABSTRAKTI

Tässä artikkelipohjaisessa väitöskirjassa tarkastellaan kuluttajien tulevaisuutta koskevaa ajattelua ja empiirisen kuluttajatutkimuksen roolia yritysten ennakointitoiminnassa. Tutkimus toteutettiin aikana, jota leimasivat useat toisiinsa kietoutuneet kriisit. Aiemmassa tutkimuksessa ei ole juurikaan käsitelty kuluttajatutkimuksen ja yritysennakoinnin välistä yhteyttä, ja kuluttajien kytkeminen ennakointiprosesseihin on tutkimuskirjallisuudessa harvinaista. Ennakointia tekevien yritysten kannattaa kuitenkin ymmärtää kulutuksen tulevaisuutta ja ottaa kuluttajat mukaan ennakointiin. Tutkimuksessa tarkastellaan kuluttajien tulevaisuuteen kohdistuvan ajattelun dynamiikkaa ja piirteitä. Lisäksi kuluttajatutkimuksen menetelmälliset lähestymistavat liitetään ennakointiprosessin kaikkiin vaiheisiin.

Väitöskirja sisältää viisi tutkimusartikkelia. Artikkeli I tarkastelee kuluttajien tulevaisuusajattelua maailmanlaajuisen COVID-19-pandemian alkuvaiheessa. Artikkeli II käsittelee visioita suurkaupungin tulevaisuuden arjesta osallistamalla kaupunkilaisia, joilla on kärkikäyttäjäprofiili. Artikkeli III osallistaa kuluttajia, joilla on varhaisen omaksujan profiili, arvioimaan ja kehittämään logistiikan palvelukonsepteja. Kuluttajiin liittyvän ennakointitiedon käyttöä tarkastellaan yritysten ennakointitoiminnan yhteydessä: Artikkeli II toteutettiin maailmanlaajuisesti toimivan, toimialallaan johtavan yrityksen kanssa, ja Artikkeli III paikallisesti merkittävän pk-yrityksen kanssa. Artikkeli IV tunnistaa neljä ennakoinnin organisoinnin arkkityyppiä suurissa yrityksissä, joiden ennakointitoiminnan kehitysaste on keskitasoa. Artikkelissa V tehdään laadullinen sisältöanalyysi tulevaisuuspersoonista, jotka on luotu asiantuntijavetoisissa skenaarioprosesseissa. Artikkeli osoittaa rajoitteet, joita liittyy tulevaisuuspersoonille, jotka on kehitetty kansalaisia ja kuluttajia osallistamatta.

Tutkimus on poikkitieteellinen, ja sen aineiston tulkinnassa käytetään tulevaisuudentutkimuksen, yritysennakoinnin, kuluttajatutkimuksen ja tulevaisuuteen suuntautuvan sosiologian teoreettisia lähestymistapoja. Aineistonkeruun monimenetelmällinen lähestymistapa on peräisin kuluttajatutkimuksesta, ja tutkimus hyödyntää useita menetelmiä pääosin laadullisen mutta myös määrällisen aineiston keruussa. Tutkimuksessa hyödynnetään muun muassa haastatteluja, verkkopäiväkirjoja, verkkokeskusteluja, visiointityöpajoja ja kyselytutkimusta aineiston keräämiseksi. Osallistava lähestymistapa kattaa erilaisia kuluttajaprofiileja, kuten kärkikäyttäjät ja varhaiset omaksujat. Koska tutkimus on tehty osittain yhteistyössä yritysten kanssa, strategisen johtamisen ja tietojohtamisen näkökulmat auttavat tulkitsemaan, miten tulevaisuusorientoitu-

nutta kuluttajaymmärrystä hyödynnetään organisaatioissa ja niiden ennakointijärjestelmissä.

Tutkimukseen osallistuneet kuluttajat ilmaisivat joustavuutta, sopeutuvuutta ja kykyä katsoa eteenpäin epävakaissa olosuhteissa. Muuttuvat olosuhteet haastoivat kulutustottumukset ja elämäntavan, mutta vaikuttivat myös kriisin jälkeisiin tulevaisuusnäkymiin. Kuluttajien tulevaisuuskuvat näyttäytyivät muuttuvina mahdollisuuksina, joita nykyiset toimet voivat muokata. Henkilökohtainen toimijuus säilyi epävarmoissa ja epävakaissa olosuhteissa. Kuluttajien tulevaisuuskuviin sisältyi sekä jatkuvuutta että epäjatkuvuutta suhteessa lähtökohtiin. Kuluttajien tulevaisuuden odotukset eivät aina vastanneet yritysten oletuksia. Kuluttajat pystyivät kuvittelemaan monia erilaisia tulevaisuuden mahdollisuuksia, joihin vaikuttivat nykyhetken ilmiöt ja yhteiskunnallinen keskustelu. Tulevaisuuskuvien ja nykyisen toiminnan välinen vuorovaikutus loi kulutukseen antisipaatiota. Sosiaaliset rakenteet, teknologiat ja materiaalisuudet vaikuttivat antisipaatioon. Tämä kulutuksen tulevaisuusorientaatio muodostaa teoreettisen kytköksen kuluttajatutkimuksen ja yritysennakoinnin välille, ja tuottaa sovellettavaa ymmärrystä yritysten ennakointitoiminnan käyttöön.

Yritysten strategisessa johtamisessa voidaan hyödyntää tulevaisuuteen suuntautunutta kuluttajaymmärrystä ennakointiprosessin kaikissa vaiheissa. Kulutuksen ennakointi voi mahdollistaa erottumisen yritysten välisessä kilpailussa markkinoilla. Koska kuluttajien roolit ennakointiprosessin eri vaiheissa vaihtelevat, on tärkeää valita kuhunkin vaiheeseen sopiva kuluttajien osallistamisen menetelmä. Mitään kuluttajaryhmää ei tarvitse sulkea pois tulevaisuuden tarkastelusta. Tässä tutkimuksessa kuluttajien osallistamisen tavat olivat tulkitsevia, visionäärisiä, yhteiskehittäviä, ja validoivia. Kulutuksen tulevaisuusorientaatio on tunnistettava, jotta kuluttajatutkimuksen tulokset ovat hyödynnettävissä ennakoinnin yhteydessä. Lähestymistapaa voi kutsua osallistavaksi kuluttajaennakoinniksi.

PREFACE AND ACKNOWLEDGEMENTS

Consumer research and corporate foresight have been the central areas of my professional career for over a decade. For a long time, these two disciplines seemed separate. Consumer research was about the present and relied on empirical primary data, while corporate foresight, concerned with the future, was based on secondary sources and expert views. In the corporate world, consumer research and foresight projects were typically conducted separately by different specialists in different company functions without shared terminology or substantial collaboration. In the late 2010s, I began to consider whether there could be common ground between these disciplines, and if empirical consumer research could play a significant role within the various approaches to corporate foresight. Simultaneously, I noticed that consumer insight and service design specialists had started learning and using foresight methods, signalling a need for integrated approaches. During my search for relevant literature on this theme, I was surprised to find an apparent scarcity of academic documents. This knowledge gap observation formed the scientific rationale for this thesis.

To use the vocabulary of foresight, several discontinuities, wild cards, and even black swans influenced the study period. The onset of the global COVID-19 pandemic highlighted the necessity of online methods in data collection and significantly influenced consumption. The pandemic also affected the project in practical terms: I did not visit the university campus even once during the first two years of my studies. Subsequently, the war in Ukraine led to an energy crisis and inflation in Europe, further changing consumption and consumers' future expectations. A new geopolitical order was established, altering trade patterns and supply chains. In the later stages of the research, the sudden spread of generative artificial intelligence tools became a transformative force in knowledge work, affecting the scientific community as well.

This project began to take shape when I met Petteri Repo in a quiet Thai restaurant in Kaisaniemi. I had previously sent some initial ideas for the thesis to Petteri via email, some showing promise and others less so – a distinction Petteri also kindly made. From that meeting, I systematically embarked on the doctoral research plan and application. Juri Mykkänen later became part of the supervisory team during the application process. I have had the great pleasure of receiving subtle yet firm supervision from Petteri and Juri. Although our discussions have centred on rigorously enhancing the research and writing, there has always been room for warm humour in our meetings. I am also grateful to the pre-examiners, Outi Uusitalo and Toni Ahlqvist, for their thoughtful and substantial feedback, which elevated the dissertation to a new level.

This thesis has not been written alone. I am deeply grateful to all the co-authors of the articles: Anu Seisto, Susanne Jacobson, Matti Pihlajamaa, Juuli Huuhanmäki, Sofi Kurki, Gerhard Schönhofer, Jan Oliver Schwarz, and Laura Bechthold. Doctoral research can often feel like a solitary endeavour, but collaborating with such bright minds has enriched the experience significantly. My doctoral research committee members, Oskar Korkman and Nando Malmelin, have annually offered valuable insights, particularly regarding the relevance of the research to professional practice. In the doctoral seminar, I had the pleasure of working with the distinguished scholars Elizabeth Shove and Frank Trentmann, whose demanding thinking left a lasting impression.

VTT Technical Research Centre of Finland has been my primary scientific community throughout the research. My team leaders – Antti-Jussi Tahvanainen, Tiina Apilo, Antti Ahola, and Nina Wessberg – have been exceptionally supportive of this endeavour. All members of my current team, Corporate Foresight & Strategy, have been a constant source of inspiration and encouragement daily. I am especially thankful to Juuli, also involved as a co-author, for smoothly executing numerous foresight client projects with me over the past years. I also want to thank Kalle Kantola for his encouragement and support.

In the latter stages of the dissertation, I was privileged to spend two months as a Visiting Researcher at the Bavarian Foresight-Institute of the Technische Hochschule Ingolstadt in Germany. It was an honour to collaborate with one of the study's main intellectual inspirations and reference points, Professor Jan Oliver Schwarz. The entire Bavarian team was incredibly supportive during my stay, providing a refreshing change from my routine in Finland. I will hold the memories of my summer at Villa Heydeck dear for a long time to come.

One of the foundational principles of this doctoral journey was that the time for it would not be stolen from my family. I believe I have largely achieved this. No weekends or late evenings were sacrificed for the completion of this project. My parents, Riitta and Markku, and my brother, Hannu-Pekka, have always supported my passions, no matter how quirky they may have appeared at times. My partner, Anna, and our children, Toivo and Valo, have been the hope and light in my life, both in times of joy and in moments of self-doubt. Thank you for always being there for me.

Pauli Komonen
November 2024

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ORIGINAL PUBLICATIONS

This doctoral dissertation is based on the following articles, referred to in the text by their Roman numerals.

I: Komonen, P., & Seisto, A. (2022). Consumers anticipating futures beyond the pandemic: A qualitative study. *Futures*, *142*, 103019.

II: Komonen, P., & Jacobson, S. (2023). Citizens envisioning life in 2040: A qualitative corporate foresight study in London. *Futures & Foresight Science*, e175.

III: Komonen, P. (2024). Exploring access-based consumption in last-mile logistics: a customer foresight study. *Foresight*, Vol. 26 No. 3, pp. 393–404..

IV: Pihlajamaa, M., Komonen, P., Huuhanmäki, J., & Kurki, S. (under review): Four archetypes of organizing corporate foresight at the intermediate maturity stage: A multiple case study.

V: Schönhofer, G., Komonen, P., Schwarz, J.O., & Bechthold, L. (under review): Futures of everyday life: A qualitative content analysis of future persona scenarios.

1 INTRODUCTION: THE CONSUMER PERSPECTIVE IN CORPORATE FORESIGHT

The future is an open space. It is a blank sheet of paper for a writer, an empty canvas for a painter. Nobody knows the future, yet everyone thinks about it at least occasionally. People have dreams, plans, and ideas about their personal futures. Some of these are critical long-term decisions, while others may be casual everyday plans for the forthcoming days or weeks. Some thoughts last, while others come and go. These thoughts about the future manifest in actions. One might decide to pursue a particular career direction, aim to start a family or invest in a new home or car. This dynamic relationship between the future and the present creates a future orientation in thinking and behaviour. Understanding this orientation in consumption and connecting it to companies' foresight activities are the primary themes of this doctoral thesis.

The world is in flux, and so is the consumer. The past years have been characterised as an era of 'polycrisis' (e.g., Henig & Knight, 2023). Multiple global crises, such as climate change, the COVID-19 pandemic, and Russia's war on Ukraine, are interconnected so that one crisis seems to trigger or worsen another, and these links are significant in scope and destructive in effect (Lawrence et al., 2024). In these times, multiple ideas of the future are powerfully acting on the present (Facer & Sriprakash, 2021). The systemic crises have had an impact on consumers' lives and their future expectations. For example, the pandemic ignited an active and widespread engagement with the future (Boons & Mylan, 2020). The future became less linear and deterministic. Although experiencing entangled multiple crises may not be pleasant, it allows us to examine the dynamics of the future and present in consumers' thinking in an exceptional situation.

This study is a multidisciplinary endeavour. The approach to data collection is derived primarily from consumer research, utilising multiple methods to gather mainly qualitative but also quantitative data. However, the perspective is future-oriented, necessitating theoretical approaches from corporate foresight, futures studies, and sociology of futures to interpret the data. As the research is partially conducted in collaboration with companies, insights from the disciplines of strategic management and knowledge management are essential for understanding the role of corporate foresight in strategic decision-making and as an element of companies' capabilities. So far, documented cases of consumer integration in foresight activities have been limited (Schweitzer et al., 2019). A corporate foresight literature review does not identify a significant consumer-

related sub-stream in the field, although consumer inclusion is identified as part of collaborative and open foresight approaches (Marinković et al., 2022).

The terms "consumer foresight" (Rohrbeck et al., 2007), "customer foresight" (Eller et al., 2020), and "strategic customer foresight" (Schweitzer et al., 2019) have been used to describe corporate foresight activities that integrate consumers. This study deliberately focuses on the term "consumer" instead of "customer". As a term, "consumer" is more general and does not require a transactional relationship with a certain organisation, even if consumers have relationships with organisations. Consumption is understood as engaging in practices in which items are appropriated, and wants stem from practices which emerge, change, and develop (Warde, 2005). The term consumer is also broader from the perspective of companies. When developing consumer-based strategies, it is critical to foresee how both non-customers and existing customers will respond (Hamilton, 2016). A hypothesis is that systematic consumer integration in foresight processes can provide business value for firms.

The guiding questions throughout the research have been: 1) How do consumers think about the future? 2) How can consumers' futures thinking be interpreted? 3) How can consumers' futures thinking and its interpretations be utilised in corporate foresight? The thesis begins by situating the study within the discipline of corporate foresight. This contextualisation is followed by an explanation of the study's methodological approaches. Subsequently, the main findings of the conducted research are presented. Finally, the results are synthesised and discussed in relation to the former literature, and the main conclusions and future research avenues are outlined.

2 CONTEXTUALISING THE STUDY

This chapter presents the essential theoretical elements of the dissertation. First, it builds an understanding of corporate foresight based on its historical development and current theoretical knowledge. Following this, consumer research is positioned as a component of corporate foresight. The chapter continues by addressing key literature on consumer trends research and the theory of anticipation. It concludes by examining theories related to leading-edge consumer groups, such as lead users and early adopters. These theoretical elements address the two objects of study in the research questions: 1) consumers and 2) organisations conducting corporate foresight. Consumption is examined within the theoretical contexts of anticipation, consumer trends, and early-adopting consumer profiles in the innovation diffusion curve. Corporate foresight is primarily framed as a dynamic capability that absorbs, utilises, and communicates consumer-related information. The simultaneous use of multiple theories is aligned with the epistemologically pluralist background of the field, which incorporates predictive, interpretive, critical, and anticipatory elements (Camrass, 2020).

2.1 The historical development of corporate foresight

In corporate foresight, theory and practice are mutually informative. The theories and methodologies of the field are applied in commercial organisational settings, and corporate foresight aims to support the organisation's goals and increase its success. Corporate foresight, which has also been called strategic foresight and organisational foresight, has a relatively long history. Rohrbeck et al. (2015) trace the field's inception to the 1950s, identifying two primary origins: the French 'prospective' school and the 'foresight' school, which was based on Herman Kahn's work at the RAND Corporation in the US. Key corporate foresight methods, such as scenario planning and the Delphi technique, were developed during this early period. Notably, in the context of this dissertation, many of these initial methods were expert-driven, focusing on consolidating expert opinions in a systematic and informed manner. The two principal roots of corporate foresight have inspired other national schools, like the Italian school, which adopted a sociological approach (Rohrbeck et al., 2015), further exemplifying the field's multi-disciplinary nature, which has remained until the present day. The Italian tradition of "social forecasting" and the foundation of

the Club of Rome, involving leading Italian sociologists, assumed that human action primarily shapes the future (Rohrbeck et al., 2015).

The field advanced further during the 1960s and 1970s, largely due to the development of the scenario method and its applications at Royal Dutch Shell (Wack, 1985), which led to the method's widespread adoption and popularity in the broader corporate world (Fergnani, 2022; Schwarz, 2023). The Shell scenario practices have remained a prime example of the effectiveness of corporate foresight to the present day. However, the expert-driven nature of scenario planning has also led to a lack of voices of citizens and marginalised and under-represented people in scenario processes and their outcomes (Andersen et al., 2021). Scenario planning is nevertheless still considered perhaps the most prominent foresight technique, owing to its basis in systems thinking, its ability to create shared visions of alternative futures, and its function as an integrating platform for other methods (Rohrbeck et al., 2015). In the 1970s, scholarly discussion also focused on how technological forecasting could be integrated into organisational planning and decision-making processes (Gordon et al., 2020). Since that era, technology road-mapping has remained a central tool in corporate foresight – also an expert-driven technique. In strategic management, Ansoff (1975) emphasised the importance of detecting weak signals, early indicators of change, in managing strategic surprises that companies may face in their environment. In later decades, weak signals have become an integral concept, especially in the environmental scanning phase of foresight processes (Hiltunen, 2008; Schoemaker et al., 2013). Novel and innovative consumption practices can be understood as weak signals as well.

The 1980s and 1990s were characterised by the professionalisation of methods and processes in corporate foresight (Rohrbeck et al., 2015). The former stability of industries became increasingly challenged by a more complex and dynamic understanding of the competitive environment, and planners were encouraged to forecast the future of socio-technical systems more creatively than before (Taylor, 1976). Planning for uncertainty and unpredictability became a topic of discussion (Bjorklund, 1988), later followed by the long-standing VUCA initialism, which highlights the volatility, uncertainty, complexity, and ambiguity of the operational environment (Taskan et al., 2022). It became increasingly clear that long-term plans are difficult to develop in a rapidly changing and discontinuous environment, and the trend was towards planning systems that proactively and flexibly turned threats into opportunities (Mahajan & Wind, 1989). The VUCA concept was further developed by Cascio (2022) with BANI, which stands for brittle, anxious, nonlinear, and incomprehensible, especially emphasising the chaotic nature of the operating environment.

The most prominent definition of corporate foresight used in recent years was authored by Rohrbeck et al. (2015, p. 2), emphasising the role of corporate

foresight in building competitive advantage, identifying change factors, and responding to them through implications and actions:

> *"Corporate foresight permits an organization to lay the foundation for future competitive advantage. Corporate foresight is identifying, observing and interpreting factors that induce change, determining possible organization-specific implications, and triggering appropriate organisational responses. Corporate foresight involves multiple stakeholders and creates value through providing access to critical resources ahead of competition, preparing the organization for change, and permitting the organization to steer proactively towards a desired future."*

A bibliometric review spanning from 1968 to 2019 demonstrates that corporate foresight is a dominant research stream in most journals within the field of futures studies, and its article volume and relative popularity have steadily increased over the past two decades (Fergnani, 2019a). However, this field also appears relatively isolated from other research areas of futures studies. The practical nature of corporate foresight tends to be detached from a deeper exploration of traditions, values, worldviews, and cultures, as well as from broader concerns such as macroeconomic sustainability and poststructuralist and integral approaches (Fergnani, 2019a). Environmental issues, such as climate change and biodiversity loss, are commonly observed as change factors in companies conducting corporate foresight. Nevertheless, the research itself strives to maintain a value-neutral stance and typically does not encompass grand visions of planetary development and challenges typical for more normative directions of foresight and futures studies (for comparison, see e.g., Slaughter, 2020). However, as sustainability concerns are becoming more pressing and integral in all corporate activities, they may also increasingly influence the practice of foresight. Over the past decades, the field has evolved from expert-led, quantitative forecasting towards qualitative, action-based, and participatory approaches (Voros, 2017), even though recent views have also anticipated a renaissance in quantitative forecasting, driven by technological advancements (Lampert & Duffner, 2023).

The epistemological foundation of corporate foresight is rooted in the broader discipline of futures studies (Fergnani, 2022). Futures studies, a multidisciplinary field sometimes also referred to as futurology, futures research, or simply futures, is characterised by a mosaic of approaches, methods, and objectives at different stages of evolution (Kuosa, 2011). The modern history of futures studies dates back to the end of World War II, although contemplating the future has been a universal human activity since the dawn of civilisation (Masini, 2006). In an applied, practical context, this field of inquiry is often termed 'foresight'

(Fergnani, 2022). A foundational assumption of the field is that the future cannot be predicted, as it does not yet exist; however, alternative futures can and should be forecast (Dator, 2019). Moreover, it is argued that preferred futures should be envisioned, invented, and implemented, with the findings being linked to strategic planning and administration for practical utility (Dator, 2019). Over time, it has become apparent that foresight is important not only in order to know where one is going, but also in choosing where one wants to go (Masini, 2006). The knowledge created through foresight and futures studies approaches is expected to lead to practical outcomes, emphasising the symbiosis of theory and practice in the field. According to Kuosa (2011), the first main area of futures research is the creation of future images, visions, and scenarios, and the second main area is its ability to support planning and decision-making. Futures studies and foresight share the same methodological approaches and aim to transform future-oriented thinking into concrete actions. The disciplinary boundaries are a line drawn in water.

The field largely holds constructive, interpretative, and critical epistemological stances, in which the constructive orientation is often combined with critical philosophy (Piirainen & Gonzalez, 2015; Voros, 2007, 2008). Pragmatist epistemology can be summarised as "what works, is true" (Piirainen & Gonzalez, 2015): truth is a set of relations within the human experience, and there is no absolute or ultimate truth (Ruwhiu & Cone, 2010). The pragmatist stance implicitly characterises many corporate foresight research initiatives that aim to collect, create, and utilise future-related knowledge for organisational purposes without explicitly addressing the epistemological background of the investigation. Foresight is conducted in formalised processes, which aim to create value through phases such as environmental scanning, creating alternative futures, visioning, experimenting with solutions, and applying and connecting foresight to other processes of the organisation (Gordon et al., 2019; Hines & Bishop, 2013).

2.2 Theory in foresight

It has been critically argued that foresight lacks a coherent theoretical basis (Piirainen & Gonzalez, 2015), and there is even resistance to scientific theory in futures studies and foresight (Fergnani & Chermack, 2021). It is unclear what theory means in the field, and different theoretical resources are used in a versatile manner. According to Marinković et al. (2022), the field is fragmented and lacks a comprehensive framework. A survey for futures studies researchers and post-graduate students conducted by Minkkinen (2019) identified 192 different theories or theoretical frameworks in the field. As the survey had only 24 responses from a single organisation, the number of theories identified appears massive. Consequently, Minkkinen (2019) calls for reflexivity when

moving across different theoretical fields. Fergnani & Chermack (2021) have outlined that the term "theory" is often used interchangeably, referring to epistemologies, ontologies, philosophies, and conceptual frameworks, and these can sometimes be summarised as theoretical underpinnings. Many publications focus on methods instead of theory (Fergnani & Chermack, 2021).

Despite the rather fragmented and disputed starting point for theory in foresight, certain major theoretical directions have been identified. According to Piirainen & Gonzalez (2015), foresight is an organised social process, an intervention in an organisation, to create actionable domain and context-specific information or knowledge about the future. Foresight is highly context-dependent: knowledge of the context, boundary conditions, and path of development are essential in creating foresight (Belis-Bergouignan et al., 2001; Piirainen & Gonzalez, 2015). Foresight can also be conceptualised as a social negotiation (Piirainen & Gonzalez, 2015) and knowledge creation (Dufva & Ahlqvist, 2015) process, which emphasises the interactive aspects of foresight. A typical foresight process involves stakeholders exploring futures and interpreting the results of present actions. Futures knowledge can be defined as "justified contingent plausibilities" because the foresight process deals with alternative images of the futures and the logics behind these images under certain plausibility assumptions, and investigates how present actions could influence these images (Dufva & Ahlqvist, 2015, p. 252). This doctoral thesis is primarily linked to this tradition, in which foresight is understood as a contextual social process involving various actors, examined within a constructive and interpretative epistemological orientation. However, the difficulty of exact theoretical and epistemological positioning is acknowledged due to the heterogeneous state of the field and the interdisciplinary nature of this study, which connects consumer research to corporate foresight.

The resource-based view and the dynamic capabilities theory have been major theoretical paradigms in strategic management during the past decades. Resources are tangible and intangible assets tied to a firm at a given time, such as brand names, skilled personnel, machinery, customer loyalty, technological knowledge, and so forth (Wernerfelt, 1984). Value, rareness, imitability, and substitutability are essential empirical indicators for resources that can create a sustained competitive advantage (Barney, 1991). A firm needs to create a situation in which its resource position directly or indirectly makes it more difficult for competitors to catch up (Wernerfelt, 1984). The perspective of the theory is internal: it focuses on the organisation's internal environment and its bundle of resources that drive its performance and allow it to build a competitive advantage. Corporate foresight is a resource that can create a lasting competitive advantage (Fergnani, 2022). Corporate foresight activities allow the firm to create a unique future-oriented knowledge and skills base, which can steer its strategic efforts. As the maturity level of foresight capabilities varies across firms

(Buder, 2021; Rohrbeck & Kum, 2018), it is possible to differentiate in the market through sophisticated foresight practices. Sometimes, top management has even considered foresight as an expensive luxury (Malmelin et al., 2021). However, the resource-based view does not sufficiently explain why certain companies have a competitive advantage in situations of turbulent change (Eisenhardt & Martin, 2000).

The dynamic capabilities theory extends the resource-based view and addresses the question of how firms can sustain their competitive advantage in rapidly changing environments. Beyond accumulating valuable assets and guarding them, winners in the global marketplace must demonstrate timely responsiveness and flexible innovation, in addition to the managerial capability to effectively coordinate and redeploy internal and external competencies (Teece et al., 1997). Corporate foresight is a dynamic capability (Schwarz et al., 2020; Scoblic, 2020). Foresight methods like scenario planning allow the company to be more perceptive, flexible, and adaptable to environmental change, and the basis of foresight aligns with the microfoundations – sensing, seizing, and reconfiguring – of dynamic capabilities (Scoblic, 2020). In this context, Semke & Tiberius (2020) have noted that foresight can indirectly contribute to the reconfiguration of the resource base, innovativeness, and firm performance through the sensing process of dynamic capabilities. Teece et al. (1997) define dynamic capabilities broadly in terms of sensing and shaping new opportunities. Corporate foresight capabilities, such as scanning the operational environment for weak signals and emerging trends, are directly connected to the sensing capability. Day & Schoemaker (2016) have called this capability "peripheral vision" and linked it to the dynamic capabilities framework.

Overall, corporate foresight is connected to both the resource-based view and the dynamic capabilities theory. Corporate foresight contributes to building and maintaining a company's resource base, but it also enables companies to operate dynamically in uncertain and turbulent environments, thereby creating a sustained competitive advantage by identifying changes responsively. These changes can occur in consumption, but also in other domains, such as environment, regulation, technology, or competition. However, it should be noted that the resource-based view and the dynamic capabilities theory are not theories of corporate foresight per se. Instead, they help position corporate foresight within the broader literature and scholarship of strategic management, where corporate foresight has so far played a relatively marginal role.

2.3 Consumer research as a component of corporate foresight

Changes in consumption have a significant impact on businesses. As the world changes, so do consumers' lives. Recent years have proven that major events like war, inflation, and the pandemic have caused notable changes in consumption, some of them temporary and some lasting. Consumers, on the other hand, are actors who adjust their practices based on personal preferences, plans, and wishes. They think about the future and steer their behaviour accordingly. Personal agency, the market, and societal structures are interwoven in future-oriented consumption.

As noted earlier, forecasting the business environment has become increasingly challenging due to its inherent volatility, uncertainty, complexity, and ambiguity. Linear projections are problematic. Short-term forecasts, based on economic indicators such as the consumer confidence index, can be useful in evaluating the macroeconomic view of near-future consumption. However, their use in long-term futures thinking is challenging. Consumers can be a source of both continuity and discontinuity. Changes in consumer demographics, values, lifestyles, and consumption-related attitudes and behaviours over time can lead to discontinuities (Mahajan & Wind, 1989). Some of these forces of change, such as the population's age structure, degree of urbanisation, and migration patterns, can be forecast with reasonable accuracy. However, lifestyle-related fashion trends may shift within months or even weeks. Fads in consumption, often spurred by the viral effects of social media, can lead to abrupt but typically temporary changes in the market. On the other hand, consumers may stick to their routines, practices, and norms, and many aspects of consumption may remain relatively stable over years or even decades. Whether foresight's tendency to focus on change may cause blindness to permanence and lead to overestimating the significance of change can be debated, although Hines & Bishop (2013, p. 42) have also emphasised the role of "constants". The level and depth of change vary, and some aspects of consumption may be relatively stable.

Based on these initial premises, one would logically assume the existence of an extensive body of scientific knowledge regarding the role of consumer research in corporate foresight. However, this does not seem to be the case. Schweitzer et al. (2019) have pointed out that surprisingly few foresight studies integrate consumers when analysing new forms of consumption, often relying on expert opinions rather than primary consumer data. Customer foresight, a field that combines the methodologies of strategic foresight with consumer research, has emerged as a novel yet niche area of applied research (Eller et al., 2020). According to Schweitzer et al. (2019), strategic customer foresight has a dual-purpose task in capturing how consumer needs and behaviour might change in the future, but also in developing appropriate strategies based on

these insights. The objective of customer foresight is to understand consumers' future circumstances and preferences concerning the products and services of tomorrow (Eller et al., 2020). Rohrbeck et al. (2007, p. 4) have defined consumer foresight as "identification, assessment and anticipation of consumer needs, lifestyle and socio-cultural trends". These terms – customer foresight, strategic customer foresight, and consumer foresight – have largely the same content.

In addition to scarce literature, there seems to be a lack of practices and capabilities in customer foresight. A survey study on the foresight capabilities of 80 Finnish companies (Boardman, 2021) found that strategic customers and target groups are typically not involved in foresight processes, despite the companies' interest in their engagement. In addition, the companies acknowledged the importance of anticipating both their customers' and the customers' customers' emerging needs, but they admitted that their ability to do so effectively is not very mature. Nevertheless, a need to understand and integrate customers appeared to be an important dimension of the foresight activities of the companies surveyed.

The significance of the consumer perspective has been acknowledged in principle. Within a conceptual framework for corporate strategy, Liebl & Schwarz (2010) identify 'the world of the customer' as one of four critical components, alongside competencies and resources, strategy formulation, and trends and issues in the environment. 'The world of the customer' encompasses aspects such as consumers' knowledge, imaginings, perceptions, and experiences. This perspective interacts directly with the other three dimensions of the framework. Documenting the case of Daimler's foresight unit, Ruff (2015) has argued that competition over consumers has developed beyond just fulfilling consumer needs articulated in traditional market research, to anticipating non-articulated and latent needs. Methods for anticipating future consumer needs have become a competitive advantage (Ruff, 2015). However, companies may face challenges in developing a coherent picture of consumers, and these insights can be widely dispersed or conversely isolated within a single company function (Schoemaker et al., 2013).

As observed earlier, scenario planning is a central technique in foresight. Future personas have been used as a method to incorporate the consumer into scenarios (Fergnani, 2019b; Hines, 2015; Ojasalo et al., 2015). As scenarios are often depicted in general terms, future personas represent individuals 'living' within these scenarios, with the scenario storyline being written from the persona's perspective. Consequently, the future persona method is not a scenario planning method per se but rather an addition to communicate scenarios more vividly (Fergnani, 2019b). Future personas can embody emerging needs (Hines, 2015). The application of customer personas originates from the field of service design and highlights user-centric thinking (Ojasalo et al., 2015). Future persona studies do not typically utilise empirical consumer data; instead, they rely on

generalisations based on expert-driven environmental scanning and scenario planning. Consequently, there is a risk that the personas represent the mental models, worldviews, and biases of the experts instead of those of the consumers.

2.4 Consumer trends research

Businesses can be built and grown by identifying significant consumer trends. Vecchiato & Roveda (2010) have documented how Starbucks' success was created by anticipating changes in social practices. In the early 1980s, the widespread adoption of a healthier lifestyle led people to substitute alcohol with coffee, influencing the demand for coffee. However, an even larger shift occurred in the form of a new pattern in social life. Owing to the rising popularity of coffee, people began seeking quiet and cosy locations to meet friends, business associates, and new people, responding to the need for dialogue and community. Coffee became a social experience in the US market. Having initially anticipated and capitalised on this shift, the consumer experience has remained at the core of Starbucks' strategy.

With broad market shifts, companies that react early can gain a first-mover advantage. Therefore, consumer trend research and trend management systems have become major components of corporate foresight (e.g., Blechschmidt, 2022). Many consulting agencies, such as Trendwatching, TrendONE, and Trend Hunter, focus on identifying, interpreting and applying consumer trends for their clients. However, with its many definitions and applications, few terms have caused as much confusion in the contexts of foresight, strategy, and management as the term 'trend' (Schwarz, 2023). In everyday discourse, the term is often associated with fashion, indicating something that is 'trendy' in terms of lifestyle. In this sense, trends are observable in various domains, including clothing, restaurant culture, music, and travel. For instance, most people have an intuitive understanding of the distinctive styles and sounds of the 1980s, attributable to the prevalent trends and Zeitgeist of that era. Trends may also overlap with fads, which are transient phenomena that rise and fall in popularity rapidly, such as fidget spinners in youth culture. However, within the field of foresight, the understanding of a trend is more conceptual and extensive.

Liebl & Schwarz (2010) have conceptualised trends as socio-cultural innovations arising from a transgression of contextual boundaries. Saritas & Smith (2011) have proposed a definition wherein trends are change factors that stem from broadly generalisable change and innovation. These trends set broad parameters for shifts in attitudes, business focuses, and policies over several years, typically having a global reach. This interpretation aligns closely with the concept of megatrends, commonly understood as extensive, global shifts. In scenario planning literature, trends are often recognised and utilised as 'key

uncertainties' (e.g., Schoemaker, 1995). However, in the context of consumption, the conception of trends as socio-cultural innovations has proven particularly insightful. In this regard, a trend may be understood as 'a vague silhouette, whose (new) quality and outline has to be identified and evaluated' (Liebl & Schwarz, 2010, p. 318). One of the fundamental roles of corporate foresight is to identify these silhouettes in consumption.

Trends exhibit a lifecycle and a development pattern; not every trend evolves identically. Some trends gain prominence and achieve mainstream adoption more rapidly than others, while some alter their form or disappear swiftly. Trends occur in consumer culture, which can be understood as 'dynamic relationships between consumer actions, the marketplace, and cultural meanings' (Arnould & Thompson, 2005, p. 868), but trends can also be intentionally created by powerful actors in the marketplace, such as companies and regulators. However, these "top-down" trends can be interpreted, adjusted and used differently than the originator intended. Certain trends may persist as marginal or subcultural phenomena, whereas others become embedded elements of popular culture. Employing vivid language, Matthews & Wacker (2010) have conceptualised the evolution of trends from the fringe to the edge, the realm of the cool, the next big thing, and ultimately to social convention. In this framework, a trend's commercial potential increases as its authenticity wanes. Initially, a trend's relationship with conventional society is antagonistic and hostile, but eventually it becomes assimilated into mainstream culture. Following this perspective, Liebl & Schwarz (2010, p. 315) posited that today's "bizarre phenomena" may lay the groundwork for tomorrow's mainstream. As a trend begins to wane, it transitions from a social convention to a cliché, then to an icon, an archetype, and finally to oblivion (Matthews & Wacker, 2010). Eller et al., (2020) consider trend research a prerequisite when assessing the future context of consumers.

Trend reports are a typical output of trend research. They usually serve as source material for strategy formulation and identification of innovation opportunities. A global survey study among high-level corporate executives found trend reports to be the most valuable source of foresight information (Buder, 2021). In the survey, executives highlighted changing customer behaviour as one of the most critical challenges over the next 5-10 years. Hence, it is reasonable to conclude that trend reports focusing on shifts in consumption are both read and valued. Many such reports are publicly available. For instance, a report on global consumer trends by the market research company Ipsos (2023) indicates that the current societal "polycrisis" is fueling nostalgia and pessimism, and value-based consumption is waning. These insights are primarily derived from quantitative data.

Another example is 'Future 100' (Wunderman Thompson Intelligence, 2023), an annual report from a marketing consultancy highlighting consumer trends to watch in 2023. While trends like deep-sea tourism, indigenous innovation,

and psychodermatology grab interest and provoke thought, the report lacks a description of its methodology or the empirical data underpinning the findings. Consequently, while the content may serve as a source of inspiration, its application in robust corporate decision-making poses challenges: where do the findings come from, how have they been selected and prioritised for the report, and can the trends' distribution in the population be estimated? If trend research is not empirically grounded, it might only replicate what the trend researcher considers trendy. Trend reports are also often designed for the purposes of companies' content marketing, emphasising quirky and colourful findings instead of systematic and transparent research. Due to the broad and often free availability, trend information has also become a commodity (Daheim & Uerz, 2008). Despite their abundant nature and problematic tendencies, trend reports have become a fundamental element of foresight, strategy, and innovation.

2.5 Anticipation in consumption

This study proposes that anticipation is an important element in consumer trend formation. Prospection is a ubiquitous feature of the human mind, but human action has typically been understood as determined by the past (Poli, 2014). This prospection is guided not by the future itself but by present, evaluative representations of possible future states (Seligman et al., 2013). Consequently, and based on accumulating evidence in a broad range of research disciplines, navigation into the future can be seen as a core organising principle of human behaviour and living systems (Rosen, 2012; Seligman et al., 2013). This anticipation is not limited to humans, but it also characterises many types of systems: life in all its varieties can be seen as anticipatory (Poli, 2014). In futures studies, this direction of research has been termed the discipline of anticipation (Miller, 2018). Studying anticipation has become essential for understanding changes in consumption and its future orientations.

There is a profound link between futurity and social action (Mandich, 2019). The future is complex and socially produced through a variety of social practices (Mandich, 2019a), and in this sense, the future can be called "a cultural fact" (Appadurai, 2013). Daily lives are conducted projectively, and people operate in the action domains of planning and future-making (Adam, 2009). The future is "used" in everyday life to steer actions towards planned and possible futures. However, this agency regarding the future is often implicit, not explicit (Mandich, 2019a). Human action is constructed within an imaginative horizon of multiple possibilities and plans (Schutz, 1967). The human capacity to imagine is central in anticipation, and images of the future (e.g., Polak, 1973; Rubin, 2013) become an object of inquiry. According to Beckert (2013), images of the

future shape present decisions. Consumers possess these images, which have also been called imaginaries (e.g., Bazzani, 2022). Imaginaries are embedded in long-term temporalities, and can concern collective outcomes or personal goals (Bazzani, 2022).

In the context of the economy, imagined future states and fictional expectations motivate actions (Beckert, 2013). These expectations in the economy can take the narrative form of discourses, stories, and theories, and fictionality is also a source of creativity in the economy (Beckert, 2013). These fictional expectations are not limited to the economy but are relevant in all areas of human activity (Beckert, 2013). The notion of fictionality is not meant as a critique of actors but rather as a human characteristic to manage the uncertainty of the future. In addition to coping with uncertainty, imaginaries allow the de-routinising of actions and fostering of agency (Bazzani, 2022). Note that many of the authors mentioned above use several terms interchangeably, such as images of the future, imaginaries, and fictional expectations – even within a single article. Therefore, this study does not make a clear distinction between them either. However, the terms "imaginaries" and "images of the future" have been preferred in the articles of this thesis.

How does the anticipatory perspective change the conceptualisation of trends? Typically, trends have been considered something that can be observed in the operating environment, from the outside, by the expert. They can be detected when people start behaving differently, creating socio-cultural innovations (Liebl & Schwarz, 2010). However, in understanding anticipation as a critical element of trend formation, these socio-cultural innovations can already be identified in people's images of the future before they turn into actions. Moreover, the dynamics of the observed actions can be interpreted from the anticipatory viewpoint. In addition, they can be described using consumers' own language and meanings. However, it is uncertain whether the images may eventually manifest in actions, although they allow for the empirical study of multiple possible future trajectories in consumers' lives.

2.6 Consumers at the leading edge: lead users, early adopters, and other pioneering consumer groups

Certain consumer groups can change markets. Lead user studies have a long history dating back to the 1980s, and the field continues to evolve. Within the realm of consumer foresight, the primary justification for engaging with lead users is their status as individuals whose current needs are expected to become mainstream in future markets, potentially months or years later (von Hippel, 1986). They are at the forefront of marketplace trends, and they can also devise new solutions and innovations (Franke et al., 2006). As lead users are acquainted

with conditions that will only later become the norm for the majority, they serve as a "need-forecasting laboratory" (von Hippel, 1986, p. 791). Over three decades, it has been demonstrated that the lead user method is more likely to yield breakthrough innovations than traditional market research approaches (Brem et al., 2018; Franke et al., 2006).

Eller et al. (2020) have positioned lead user methods at the convergence of consumer research and foresight research. They argue that it is the sole method common to both fields. In a case study of the strategic foresight system of Deutsche Telekom, Rohrbeck et al. (2007, p. 7) position lead user analyses among the 'market-oriented' foresight methods used by the company. However, Hofmann (2015) argues that the lead user method's scope might be limited to modifying, improving, and inventing products, focusing primarily on the technical and functional aspects of product development. Consequently, lead users might not be as adept at long-term visioning as other consumer groups with different characteristics, even if their current needs may be groundbreaking. Nor are they the only concept within pioneering consumer segments. In Hofmann's (2015) typology of "agents of the new," 20 concepts were identified. This categorisation is threefold: inventors, who conceive and design new ideas, things, or behaviours; multipliers, who disseminate the new within the market; and trend observers, who simply follow new inventions. Lead users fall into the first category. For consumers with a distinct visionary capability, Hofmann (2015, 2023) has developed a novel concept called "trend receiver": individuals who perceive changes and trends in a specific domain in a highly sensitive and differentiated way, making them ideal discussion partners for future products and services. Whether functional innovativeness or visioning capacity is needed in customer foresight depends on the use case. In conclusion, multiple consumer profiles allow for the anticipation of futures.

Lead users constitute only a tiny fraction of the population, according to Roger's (2003) innovation diffusion curve and adopter categorisation. The number of lead users has been estimated to be 2.5% of the population, followed by early adopters (13.5%), the early majority (34%), the late majority (34%), and laggards (16%) (Rogers, 2003). The criterion in Roger's (2003) adopter categorisation is innovativeness – the extent to which an individual adopts new ideas earlier than others within a social system. These five categories are considered ideal types. While lead users are typically categorised as innovators, the early adopter category is also relevant to consumer foresight. Rogers (2003) notes that early adopters generally have the most significant opinion leadership in most systems. Their position, not being too far ahead, allows them to act as role models for others in a social system and to help trigger the critical mass (Rogers, 2003). This suggests that monitoring early adopters can be particularly valuable for short-term strategies in consumer foresight.

Lead users have so far played a marginal role as an external source in corporate foresight, even if research on open innovation has proven the value of external knowledge (Korreck, 2018). This can be partially caused by the expert-driven nature of foresight and its traditional methodology. On the other hand, lead user research may have been conducted separately without a link to foresight. Consumer research and foresight functions can be isolated silos in companies, without shared terminology or substantial communication. Therefore, the organisation's foresight system may have difficulties incorporating and interpreting the findings of the lead user research or even be unaware of it. Korreck (2018) has concluded that lead users are particularly qualified to engage in open foresight because they encounter needs significantly earlier than mainstream consumers. They can be involved in workshops, interviews, and online networks, for example (Korreck, 2018). The need for open foresight can be attributed to an increasingly networked and interconnected society and business environment (Daheim & Uerz, 2008).

3 RESEARCH OBJECTIVES, APPROACH, AND METHODS

People have a natural tendency to think about the future. An individual may wonder where he or she wants to live or work in a decade. People may make small or large changes to their lifestyle based on their future plans and ideas. Future life is seen differently than the present moment. These personal visions of the future have shaped people's present actions throughout their lives, even if these plans sometimes did not materialise. Consequently, one might argue that the future aspects of people's thoughts and practices are worth studying, but what exactly are they? What methods can be used for the study? Who should participate?

Understanding these elements is challenging, and there is a knowledge gap in integrating the findings into corporate foresight activities. According to Gouache (2021), the future has traditionally been considered too serious and strategic to be discussed with individuals who are not "experts". Consumers have been considered recipients of systemic changes rather than proactive actors in the systems (Osman & Nelson, 2019). However, this view has been increasingly challenged in the context of participatory foresight (Gouache, 2021; Nikolova, 2013). Attempts to integrate consumer research with strategic foresight are still rare, but the emerging field of customer foresight reflects the relevance of foresight in general and, on the other hand, emphasises the growing challenge of placing the customer at the centre of strategy, innovation, and foresight (Eller et al., 2020).

Consequently, this study aims to create a structured and integrative view of the use of empirical consumer research in corporate foresight. The study synthesises approaches from multiple fields, primarily consumer research, corporate foresight, and strategic management. It explores the possibilities of future-oriented consumer research as an integral part of corporate foresight while also addressing its challenges and limitations. This research intends to inform scholars and practitioners working at the intersection of these fields.

3.1 Research questions and objectives

By examining futures thinking among consumers, this study seeks to interpret these insights within the context of corporate foresight. The exploration is structured around three core questions, each designed to focus on different aspects of consumers' future-oriented thinking and its relevance to corporate

foresight activities. The three principal questions are: 1) How do consumers think about the future? 2) How can consumers' futures thinking be interpreted? 3) How can consumers' futures thinking and its interpretations be utilised in corporate foresight? In the context of an article-based dissertation, these questions can be understood as "meta-questions" that influence the construction and selection of the articles and their inclusion in the thesis. All of the featured articles provide answers to these questions, and the papers have been summarised from the viewpoint of the research questions.

The first question examines consumers' thoughts, plans, ideas, and imaginings about the future. The study suggests that consumers' contemplation of futures establishes an orientation towards the future that is also reflected in their current practices. The second question goes into interpreting consumers' futures thinking. The nature of these thoughts is explored and interpreted through relevant theoretical approaches. The dynamic between futures thinking and current actions is investigated. The third question explores how this information can be applied in a corporate foresight context. Various methods of using and communicating information within organisational settings are analysed. The relationship between consumer research and a general foresight process is examined. The following section 3.2 explains the dissertation methodology in general terms and explains the rationale for the multimethod approach.

3.2 Research approach and methodology

The research approach of the individual consumer-focused studies included in the thesis (articles I, II, and III) can be characterised as multi-method participatory consumer foresight, utilising mostly qualitative but also quantitative data. The term "participatory" indicates that the conducted research on consumption extends beyond expert views, to involve consumers and citizens. A broader inclusion of external actors has been identified as critical for the overall success of foresight initiatives (Nikolova, 2013). Furthermore, the limitations of expert knowledge in explaining the complexities of social reality have become increasingly evident (Nikolova, 2013), and foresight practice is evolving into a more open direction, utilising new methods to gather future-related information from external sources (Korreck, 2018). Despite this development towards a more open direction, Barendregt et al. (2024) found in a review study that most participatory futuring includes only professionals and experts, and the processes are limited in their consideration of what makes the participant groups diverse.

Using qualitative methods is typical in participatory foresight projects. As Kaivo-oja (2017, p. 96) has suggested, "futures research should be based on rich appreciation of the meanings of human behaviour". Qualitative approaches are typically associated with rich and nuanced understandings, employing

multiple methods (Bettis et al., 2015). While the participatory approach has been more prevalent in public sector foresight initiatives (e.g., Inayatullah, 2011), the business domain has traditionally leaned toward expert-driven foresight. Nevertheless, external input is considered essential for companies seeking fresh, unbiased, and diverse perspectives (Hofmann, 2015). This dissertation involved several consumer segments: people with lead user and visionary characteristics, consumers identifying as early adopters, and balanced samples of consumers without a forerunner profile. The timing and data collection approaches of the individual articles are described in Table 1.

Table 1. The datasets of the articles

ARTICLE	TIME	APPROACH TO DATA COLLECTION
I	September – December 2020	Personal open-ended questions online (n=27) Shared open-ended questions online (n=27) Synchronous text-mediated online focus groups (n=24–27)
II	June 2022	Online open-ended questions (n=17) Face-to-face workshop (n=17) Semi-structured online in-depth interviews (n=5)
III	August 2020 – February 2021	Online survey (n=1,000) Synchronous text- and image-mediated online focus group (n=10)
IV	April – September 2022	Online survey (n=40) Semi-structured online interviews (43) Workshops (n=10-20)
V	June – September 2023	A secondary dataset consisting of 6 reports identified through online searches

Research that integrates methods within either quantitatively or qualitatively based studies has been termed multi-method research (Mik-Meyer, 2020). Mixed-method research has been defined by the use of two or more methods and data types within a single research project (Alexander et al., 2008). Articles I, II, III, and IV employ the multi- and mixed-method approaches and include 2-3 datasets. The use of different methods allows the identification of different nuances and angles in the data (Mik-Meyer, 2020). For example, diaries provide longitudinal insights without researcher presence, interviews provide situational insights with the researcher involved, and a quantitative survey allows for identifying population-level demand for a certain concept, for example. The multi-method approach also incorporated a multi-media dimension: visual materials such as photos and videos were collected. These visual elements primarily served to contextualise the respondent's life within their physical surroundings. Furthermore, video material obtained from online interviews

allowed for economic and logistical efficiency, while also enabling observation of bodily presence and non-verbal aspects of communication.

The timing of the study, particularly the constraints imposed by the COVID-19 pandemic, influenced the choice of research methods significantly. As face-to-face interactions in physical locations became severely restricted, online methods emerged as the most viable option. Online methods offer several advantages. Data collection costs are relatively low, and virtual meetings can facilitate engagement with a geographically diverse group of participants (Fielding et al., 2008). All participants can write simultaneously in a text-based online discussion, eliminating the need to wait for a turn to speak. This approach promotes greater equality among individuals with different personality types, as dominant individuals cannot as easily monopolise the conversation. On the negative side, the writing skills of individuals may vary. In addition to synchronous online discussions, individual open-ended questions were used. However, it is important to note that text-based interaction lacks the ability to capture non-verbal cues. Despite the digital focus, the dissertation is not exclusively limited to online approaches. As pandemic restrictions eased, a face-to-face futures visioning workshop was organised as part of Article II. In addition, several validation workshops were organised during the data collection of Article IV.

Articles IV and V are different in the sense that they do not engage with consumers. Article IV is primarily based on a qualitative-quantitative online survey (including Likert-scale and open questions) and semi-structured online interviews with corporate executives and managers, and the results stemming from these were discussed and validated in workshops with participants from the respective companies. Article V employs qualitative content analysis to examine secondary data in the form of scenario reports.

3.3 Methodological limitations

Determining an optimal sample size is a persistent question in qualitative research. In theory, the sample can always be expanded. However, at a certain point in the research process, data tends to saturate. New insights become harder to identify, and major themes begin to repeat. As noted by Sandelowski (1995), assessing an adequate sample size in qualitative research ultimately relies on judgment and experience, evaluating the quality of collected information in light of its intended use. The sample size may also depend on the research focus, type of research question, available resources, and the specific domain of inquiry and institutional requirements (Bekele & Ago, 2022). In this study, qualitative sample sizes have ranged from 10 to 40, which aligns with typical qualitative sample sizes reported by Boddy (2016) and Bekele & Ago (2022). However, it is

important to recognise that samples of this size do not fully represent the entire population and do not allow for socio-demographic segmentation.

Despite yielding multiple forms of data, multimethod data collection approaches do not always lead to significant enrichment, interaction, or complementarity between the datasets. For example, in Article II, respondents were asked to take a photo of the surroundings near their house. However, pictures of ordinary streets in London did not reveal any substantial new information, whereas the respondents' textual descriptions of how they used and moved through the surroundings provided a significantly more valuable perspective for the research objectives. In this sense, the role of the images was mostly illustrative. In another task, the respondents were requested to take a photograph of their favourite physical shopping location and explain this positive experience textually. In this task, the image and text were more closely linked, providing more coherent data for analysis. Moreover, the multimethod approach may not always be convenient or accessible for respondents. For instance, during the data collection phase of Article I, participants were instructed to respond using text, photographs, and video. However, most participants responded only in writing, resulting in a limited amount of audiovisual material without substantial added value to the overall data corpus. Additionally, multimethod approaches can introduce unnecessary complexity to the analysis process, as text, images, and video may require different coding techniques and interpretative frames.

In the study's co-creative data collection settings, utilising the approaches of speculative design (e.g., Auger, 2013) and experiential futures (e.g., Candy & Dunagan, 2017) more comprehensively could have enriched the findings to some extent. This enrichment could be achieved by allowing the participants to work with physical and tangible objects, which provoke thoughts and concretise future directions in a manner distinct from that of digital and virtual interaction. These methods could also have helped to mitigate certain tendencies towards linearity and reliance on current trends in the participants' future thinking. On the other hand, the goal was often not to provide assumptions or hints about what the future could look like.

The study relies mainly on consumer research methodology and does not use popular foresight methods such as scenario planning, Delphi panels, and literature reviews. This choice arises from the research questions and objectives. Given that the primary goal was to comprehend and interpret consumers' perspectives on the future, the dissertation prioritised collecting empirical primary consumer data related to the respective theme. Some of the individual studies were also linked to broader foresight initiatives, which involved the use of other methodologies, including trend scanning, expert interviews, and scenarios. Consequently, this setup allowed for an examination of the role of empirical consumer research within the complete foresight process while maintaining a focus on the consumer perspective.

3.4 Research ethics

Research ethics is fundamental to all research, particularly in studies involving human participants. This study involved adult-aged human participants in roles as consumers, citizens, and professionals. Ethical considerations in this study extended beyond mere regulatory compliance to include ensuring respectful treatment of the people involved. Researchers must respect the dignity and autonomy of human participants, ensuring that the research poses no risks or harm to them, as outlined by the Finnish National Board on Research Integrity TENK (2019). In addition, researchers have a responsibility to act truthfully and fairly toward the research community and the public.

Participants in the research project should be fully aware of their involvement. Informed consent is a central element of research participation, requiring an explanation of all necessary information about the research, including its purpose, duration, procedures, and applications. Participants must always have the right to withdraw from the research without penalty. Informed consent was provided to participants during all data collection related to this dissertation, ensuring it was understandable and of reasonable length to mitigate the risk of participants not properly reading the consent document, as recommended by Perrault & Nazione (2016). Participants were informed about the studies' purposes through a formal document and, additionally, by interactively discussing the major principles before data collection began.

Protecting participants' privacy is another crucial aspect of research ethics (Macnish, 2020). Participants received information on how their personal data would be processed and stored, with data processing consent aligning with the General Data Protection Regulation (GDPR) of the European Union. Data were stored on the highly secure systems of the VTT Technical Research Centre of Finland – designed for handling information on sensitive themes such as national nuclear safety and defence research. In online group settings, participants remained anonymous to each other, whereas in physical face-to-face workshops, the participants were physically in the same room and knew each other's first names. The setup was explained to the participants in both situations before the data collection started.

The ethical implications of the lead user approach, employed extensively in the dissertation, deserve discussion – especially from the perspectives of diversity and inclusion. When involving lead users and other pioneering consumers, a select and specific group of individuals is offered the opportunity to express their perspectives on the future, potentially influencing decisions made by globally operating companies. Consequently, thorough consideration has been given to ensuring diversity among the socio-economic backgrounds and life situations of lead user participants. The participants have also been

comprehensively informed about the purposes of the study and the use of the information produced.

Positive participant feedback can be seen as an indicator of sound research. The opportunity to leave feedback was included in all data collection phases related to the dissertation. The responses ranged from enthusiastic to neutral. The research did not only collect information from the participants, but it also allowed them to reflect on their personal futures, which appeared to be a transformative experience for some. No complaints regarding research ethics or the experience in general were received.

4 FINDINGS

This dissertation comprises five sub-studies, each included as published or submitted scientific journal articles. These papers can be regarded as standalone studies, yet they collectively form a thematically cohesive whole. The initial three articles concentrate on the research questions concerning consumers' futures thinking and its interpretations. The fourth article introduces the perspective of organising corporate foresight, detailing how future-oriented information is utilised and communicated across various organisational settings. The fifth paper conducts a qualitative content analysis of future personas in existing scenario reports to aid in understanding the characteristics of personas created through expert-driven scenario processes. This chapter provides an overview of the individual articles, which are consequently summarised in chapter 5, Synthesis of the results. The articles have been summarised from the perspective of the research questions.

The articles operate on three different scopes. Articles I, II, and III focus primarily, but not exclusively, on the scope of consumption. Article IV has the scope of organisations. Article V examines fictional future individuals, partly as consumers but also as citizens and societal actors. These different perspectives are interlinked. Consumption is part of society (Bauman, 2013; Goodwin et al., 2008), and consumption is a complex social phenomenon in which goods and services are consumed beyond their use-value (Firat et al., 2013). In consumer societies, people are pervasively immersed in the culture of consumption, and a significant part of people's sense of identity and meaning is achieved through the purchase and use of consumer goods (Goodwin et al., 2008). Therefore, the scope of society is partially included in articles I and II as consumers' everyday lives and future expectations are examined from multiple perspectives beyond consumption. The scope of organisations is included because companies use consumer-related information in their corporate foresight activities, and the role of consumer foresight is to produce this kind of information for corporate decision-makers.

4.1 Article I: Consumers' futures thinking during a global health crisis

The study began during the early stages of the COVID-19 pandemic, a period marked by considerable uncertainty regarding the duration, impact, and consequences of the crisis. Consumers found themselves abruptly reorganising

their daily lives, resulting in shifts in consumption patterns and overall lifestyles. While daily routines transformed, a novel sense of ambiguity pervaded the future. Would we eventually return to normalcy, or would a new post-pandemic reality emerge? Were the changes in daily life temporary, permanent, or indicative of a transition toward novel forms of consumption and ways of living?

The multimethod data collection for the study spanned three months, from 17th September to 17th December 2020. The rationale behind this extended duration was to offer the participants an opportunity for reflection and introspection regarding their lives and future prospects from various angles, without the pressure to complete their responses in a single session. Additionally, this timeframe allowed for responsiveness to different phases of the pandemic situation and associated policies. The extended period facilitated experimentation with diverse approaches to online data collection. Qualitative open-ended questions and online chat rooms were the main approaches throughout the three months. A socioeconomically balanced sample of 27 adult individuals successfully completed the data collection process.

The study aimed to identify changes, stabilities, and future expectations in the respondents' consumption and lifestyle. These dimensions were identified from relatively extensive textual data (approximately 30,000 words) and visual data using inductive and deductive coding. The initial coding scheme was designed to identify changes, stabilities, and future expectations in the respondents' lives. In addition, open coding led to adding a few other codes to the scheme. This analytical approach allowed for an examination of the dynamics of change, stability, and future expectations in consumers' lives, interpreted through the theoretical perspectives of anticipation and imaginaries. The analysis revealed four essential contextual changes in consumers' lives: increased time spent at home, reduced commuting, restricted travel, and avoidance of public spaces. These contextual aspects were scrutinised in detail, considering experienced changes in consumption practices and future expectations.

The study participants reported both changes and stability in their consumption. Consumption was characterised by caution and consideration in general. As the crisis progressed, the participants adapted to the new situation, becoming less reactive and more resilient. Some of them described this as living a 'new normal'. A back-to-basics attitude typified the consumers in the study, with one participant expressing it as 'living in a smaller way'. This experience also inspired future intentions, creating an opportunity for a more sustainable and desirable lifestyle, as also noted by Korkman et al. (2020) during the early stages of the pandemic. These changes in behaviour influenced the participants' ideas about what would be possible in the future, giving rise to new imaginaries of everyday life.

Recognising personal lifestyle changes did not always appear as straightforward. In their responses, the participants often began by saying that

not much had changed. However, as their responses unfolded, they identified more and more changes. In the end, the transitions in everyday life appeared even more significant. The adaptivity of consumption is not always identified in everyday life but requires reflection and observing oneself from a distance. Consequently, future expectations were amplified by these ongoing changes. Therefore, the time of the pandemic became a potential catalyst and a pivotal moment in how people organised their lives. The two essential components of anticipation, a forward-looking attitude and its use for action (Poli, 2019), became critical for individuals trying to make sense of an uncertain future.

Societal macrostructures influenced the participants' futures thinking. Many respondents referred to climate change, digitalisation, and technological development in their long-term considerations and reflected on the impact of megatrends on their lives. Global futures, societal futures, and personal futures became intertwined, a phenomenon also noted by Ahvenharju et al. (2021). Concern for the environment was particularly evident. People anticipated sustainable and equitable futures after the pandemic but expressed skepticism about progressive futures as well, a tension also identified by Lewandowsky et al. (2021). Positive development trajectories, such as increased health awareness, societal resilience, and the increased valuation of ordinary everyday things, were seen as elements of lasting change. Despite the challenging situation, wary optimism framed personal futures thinking.

4.2 Article II: Visioning futures of everyday life in a global metropolis

Cities are subject to complex changes that affect their inhabitants' lifestyles. Urban living is under pressure to transform due to sustainability concerns, technological innovations, traffic congestion, and housing shortages, among other factors. The challenges experienced during the COVID-19 pandemic, such as difficulties in continuing with former everyday activities, have led to a radical rethinking of urban environments (Moreno et al., 2021). As a significant stakeholder group operating within cities, companies contribute to urban life by offering various products and services for urban consumers. To succeed in the future, companies must navigate the complexity and diversity of everyday life in future cities.

This sub-study aimed to comprehensively envision city life in 2040 from the citizens' perspectives. The study was part of the foresight activities of KONE, one of the leading global elevator and escalator companies. The citizens' visions focused on seven themes: climate change adaptation and mitigation; community, neighbourhood, and family; the extended home; physical and digital self; worldview and priorities; sustainable economics and alternative finance;

and mobility and logistics, thereby creating a holistic view of possible urban futures. The visions were analysed as images of the future, which have a long-standing theoretical tradition in the fields of futures studies and future-oriented sociology (Bell & Mau, 1971; Polak, 1973; Rubin, 2013). Images of the future are inherent in human life: people hold and develop images of the future, some of them personal and some socially shared (Rubin, 2013). These images are a product of an individual's expectations, experiences, and values, which can be both conscious and unconscious (Kaboli & Tapio, 2018).

Working co-creatively together with citizens has become popular because it can transcend hierarchies between businesses, citizens, and other stakeholders (Leino & Puumala, 2020). A broader inclusion of various actors has been considered critical for the overall success of any foresight initiative (Nikolova, 2013). Consequently, this sub-study employed a multimethod approach involving 17 citizens with a lead user profile. The rationale for engaging lead users was that they can identify emerging needs but also create solutions (von Hippel, 1986). The data collected encompassed online diary questions, a face-to-face futures imagining workshop, and five selected individual online interviews based on the former data collection phases. The study emphasised a socio-demographically diverse lead user sample in participant recruitment, as such individuals are considered creative, visionary, and innovative (Hofmann, 2015) – a suitable group for visioning exercises.

The study was conducted during the latter stages of the COVID-19 pandemic in London. Most restrictions had been lifted, but a general sense of caution still characterised everyday life. The two years of lockdowns and restrictions had prompted various forms of introspection and attempts at personal development, such as reconnecting with oneself, meditation, and personal growth. For many, this period was transformative, leaving a deep-rooted impact on personal values and goals. The most frequently mentioned theme was a redefined relationship with the city's green spaces and nature in general, fostering an expectation of living closer to these areas in the future. As observed in Article I, the current societal reality, decisions, behaviour, and people's images of the future reinforced each other, as also depicted in the feedback loop of Kaboli & Tapio (2018).

The lead user visions of 2040 emphasised sustainability as an integral part of future lifestyles. The visions focused particularly on environmental and social sustainability, though economic aspects were also considered. A distinct communal tone further characterised many of the visions. For instance, there was an expectation of increased options and space for co-living in the future. Living spaces were envisioned to become more shared, adaptable, and affordable in general. Conversely, physical communities were seen to be at risk as online communities flourished. Work was envisaged to become increasingly flexible, with a stronger emphasis on work-life balance and holistic well-being. The role of technology in everyday life was expected to intensify, and the visions blended

the promises of technological progress with the complexities and challenges of human adaptation. Altogether, the participants' visions were a synthesis of strongly sustainable, communal, and technological aspects of life existing simultaneously. The visions did not completely reimagine urban life, but many of its dimensions were perceived significantly differently. While mostly positive, the visions also hinted at potential challenges, emphasising the need to balance progress with individual and societal well-being. The images included both continuity and discontinuity.

Images of the future typically have the dimensions of essence and influence, as noted by Polak in his seminal work, *The Image of the Future* (1973). Essence refers to courses of events that are unchangeable, while influence indicates people's power over their futures. People have optimistic and pessimistic attitudes towards essence and influence. These dimensions were identifiable in this study as well. While certain change factors, such as technological progress, were mostly seen to be outside the reach of personal influence, neighbourhood-level activities were within the limits of personal agency. These images are typically influenced by the social and political concerns of their times (Kaboli & Tapio, 2018). Within these dynamics, social change is a push-pull process in which magnetic images of the future pull things forward, while a realised past pushes society from behind (Polak, 1973). This perspective aligns with the futures triangle of Inayatullah (2008), in which the images of the future pull people forward, current trends are pushes of the present, and the weight of the past acts as a constraint on the images. In this study, the current crises encouraged imagining better futures in which the problems would be at least partially solved. The article's perspective on visioning was broad, but consumers can be engaged in product- and service-specific foresight work as well.

4.3 Article III: The involvement of early adopter consumers in last-mile logistics service innovation

Innovating last-mile logistics has become critical as consumers increasingly shop online. As the volume of last-mile deliveries is forecast to grow in the foreseeable future, cities face challenges in managing the increasing number of delivery vehicles in their neighbourhoods. Consequently, industry stakeholders are eager to implement efficient, sustainable, and innovative last-mile concepts. As Araújo et al. (2020) have observed, logistics companies are evolving from cost-conscious enablers into innovative players. The major trends of sustainability and digitalisation require a more nuanced service portfolio from last-mile service providers (Peppel et al., 2022), and the COVID-19 period also created a surge in online commerce. From the consumer's perspective, the last-mile delivery

experience significantly influences overall customer satisfaction (Vakulenko et al., 2019).

What role do consumers play in the renewal of last-mile services? Consumers have expectations, preferences, and experiences of using online stores and their multiple delivery options. Furthermore, they can actively contribute to service innovation as co-developers. These were the initial hypotheses of this sub-study, conducted in collaboration with an SME (small- and medium-sized enterprise) logistics company innovating its offerings. The company had identified sustainability and access-based consumption as significant trends in consumption, steering its innovation activities towards concepts based on "as-a-service" models. The new service ideas were focused especially on large household products (e.g., "washing machine as a service", "home office as a service"). This kind of service strategy had not yet been executed in the last-mile market, outlining the importance of investigating its potential.

The study included two main data collection phases. The first was a quantitative online survey aiming to identify general demand within a relevant sociodemographic group interested in future-oriented last-mile services initially ideated by the company. The survey collected responses from 1,000 individuals residing in the Helsinki metropolitan area. The second phase was a synchronous online focus group discussion to co-develop potential service ideas with early adopter consumers from a relevant sociodemographic group identified in the survey. The focus group involved 10 early adopter consumers aged 27-42 residing in central Helsinki or nearby areas. These individuals self-identified as early adopters of new products and services and also had former experience of using online stores and home delivery services.

The results demonstrated that the participants generally held neutral views on ownership versus renting goods. The principal factors influencing decision-making were typically based on practical considerations such as price, frequency of usage, maintenance features, and current living conditions. Consumers sought flexibility in the service models but also exhibited self-sufficiency in relation to additional services. The greatest demand for new access-based services was identified amongst younger age groups residing in the city centre. Income level, life stage, and living conditions influenced these preferences. A high level of price sensitivity was apparent throughout the study. Regarding the consumers' future orientation, younger participants were also more inclined to utilise shared goods and rent products in the future.

Godelnik (2017) has observed that there may be no great shift towards access-based consumption in consumer culture, an observation supported by this study as well. However, certain indications of change were detectable. In particular, young consumer groups were receptive to new forms of consumption and ownership. This receptiveness can be attributed to their life stage. Young individuals more frequently reside in rented apartments, have a comparatively

lower income level, and often lack access to a private car for transporting goods. They also do not possess the same long-established consumption practices, norms, and habits as older generations. However, a specific kind of consumption during a certain life stage does not necessarily predict future behaviour, as individuals' behaviour changes over their lifetimes. If a shift towards access-based and shared consumption models is to occur, younger age groups are likely to be the early adopters driving change.

Access-based services did not appear to be "trendy" or distinctly desirable in consumer culture, even if earlier research (Bardhi & Eckhardt, 2012; Catulli et al., 2013) has indicated that access-based consumption can carry symbolic capital. In addition, Caldwell & Henry (2020) have noted that the overall flexibility in consumer culture has increased, potentially supporting the adoption of access-based consumption models. The symbolic and practical implications of access-based consumption seem to depend on the product category. Consumers have adopted access-based goods in certain categories, such as clothing, tools, and bicycles, but also rejected them in some other categories, such as smartphones (Lawson et al., 2016). For example, in the study of Bardhi & Eckhardt (2012), young urban consumers considered access to car-sharing as cheaper, more convenient, and more flexible than car ownership. However, these considerations did not appear to be essential to the participants of this study. Home appliances do not have the same visibility in social life as cars, being more utilitarian by nature.

The participants' future expectations supported the current business model of the logistics company. They anticipated an increase in their use of online stores, home delivery services, and also removal and recycling services. On the other hand, the participants' expectations regarding the use of shared and rented goods in the future were largely negative. There appeared to be only modest interest in the company's entirely new possible initiatives, such as home repair services and warehousing services. Nevertheless, logistics companies should not disregard the phenomenon of access-based consumption and the product-service systems that enable it. The relatively higher levels of interest among young consumer groups suggest an openness and perhaps a gradual transition towards new forms of consumption. Pressing sustainability concerns may lead to new consumer preferences and industry regulations that will drive the adoption of access-based consumption. In conclusion, monitoring changes in consumption frequently appeared to be critical, and corporate foresight systems must build capabilities to support this goal.

4.4 Article IV: Using futures knowledge in large companies of intermediate foresight maturity

Corporate foresight is an essential capability for companies operating in dynamic and complex business environments (Schwarz et al., 2020), but many enterprises have difficulty integrating it into decision-making. In this article, a corporate foresight system is conceptualised as consisting of structures, roles, and activities for managing futures knowledge. Foresight not only absorbs future-oriented knowledge, it also generates new knowledge that must be managed to benefit the organisation (Nascimento et al., 2021). A corporate foresight system is understood as a socio-technical construction, including explicit and implicit processes and practises, supported by various technologies, structures, and human and social capital. The system's purpose is to ensure a productive flow of futures knowledge in an organisation. However, previous research has paid little attention to *various* ways to develop these capabilities as there has been a tendency to identify an ideal one-size-fits-all model of organising foresight at a high maturity level (e.g., Fergnani, 2022; Marinković et al., 2022).

A corporate foresight system includes the elements of knowledge acquisition, manipulation, and application. These elements involve interactions throughout an organisation. Knowledge acquisition means developing new futures knowledge by creating or accessing knowledge. Knowledge manipulation covers activities that increase the usability and accessibility of futures knowledge. Knowledge application is critical for futures knowledge to influence decisions and actions. Corporate foresight systems vary in how futures knowledge is integrated into the work of various actors and stakeholders, and limited organisational resources lead to diverse corporate foresight configurations with distinct characteristics. In the article, these configurations are understood as "archetypes", a term originating from organisational theory (e.g., Greenwood & Hinings, 2017). An archetype includes a distinct interpretative scheme reflecting specific ideas, beliefs, values, and aspirations, which guide organisations in developing specific systems.

The study is based on a survey with 40 responses and 43 semi-structured one-hour interviews across 11 internationally operating Finnish companies. In addition, frequent meetings and four workshops were held with the companies to validate and elaborate on the findings. The companies considered themselves to be at an intermediate stage of foresight maturity: they faced significant development needs and resource constraints in developing their foresight activities and faced challenges in meeting the company's decision-making needs. On the other hand, the companies practiced foresight frequently. Among the companies, four distinct archetypes of corporate foresight systems were identified: a function-driven model, an independent foresight unit model, an executive team-led model, and a platform-based model.

In the function-driven model, foresight is closely linked to a particular company function, such as innovation or strategy. Foresight responsibilities are typically added to existing roles. The futures knowledge generated is embedded within the specific functions and their needs, making it immediately applicable and actionable. The value of foresight lies in stimulating and supporting innovation and business development. However, interviewees also reported that the foresight knowledge was not always distributed or utilised effectively, and knowledge sharing relied on personal networks, limiting cross-functional collaboration. The foresight knowledge generated can also be context-specific, limiting its use in other functions of the organisation.

The independent foresight unit model organises foresight activities within a distinct unit or team. This model is predicated on specialisation, wherein dedicated individuals focus on developing their foresight skills instead of integrating foresight tasks with other responsibilities. This approach enables the organisation to develop internal capabilities for foresight activities, reducing its reliance on external consultants. Foresight as an internal, specialised function also facilitates a comprehensive understanding of the entire organisation and its processes. On the other hand, intra-organisational collaboration can be a challenge for the unit model. If foresight activities are relatively new to the rest of the organisation, the unit may also need to justify its existence and build collaboration with other relevant functions of the company.

The executive team-driven model is characterised by centralisation, which entails disseminating and using futures knowledge in decision-making at the organisation's highest levels and selectively distributing it to other levels. The executive leadership team bears the primary responsibility for conducting foresight, and foresight is connected to the company's strategic planning. This approach ensures that the foresight information is readily usable and applicable to the company's top executives, and the information can also be communicated directly to the board of directors. One of the challenges of this model is the dissemination of the foresight information, as the executive team remains distant from various parts of the organisation. Efficiency and strategic relevance appeared to be the model's core strengths. In one of the organisations studied, the company's scenario process was driven by the CEO, which ensured that the executive team's limited mutual time could be allocated to foresight activities – a rare case seen only in very few organisations.

A platform-based organising model cultivates a collective repository of foresight information. Technological platforms are utilised in gathering and disseminating the information. This model's benefit lies in decentralisation, which allows employees from different parts of the organisation to engage in foresight activities. Ideally, establishing a dedicated space for foresight information fosters clarity, as employees are aware of the channels for sharing and accessing such information. While only fully implemented in a single instance in our dataset,

the platform model was widely regarded as an ideal organising model across companies. However, cultural and technical challenges may hinder the model's applicability. Technically, the abundance and heterogeneity of the information can create difficulties in using the information effectively in decision-making at different levels of the organisation. The platform's value depends on the quality of the insights and their effective communication, but the platform can also become a dump of randomly collected, future-related information snippets. While the platform enables the organisation to gather multiple perspectives, it may require additional effort to synthesise the insights and align them with its strategic goals. Consequently, combining the platform model with some other organising logic may achieve the best results.

Within the companies investigated, an overall trajectory towards more comprehensive corporate foresight systems was identified, but initial approaches to systematising foresight varied. The four archetypes identified appeared to be potential building blocks for more mature corporate foresight systems. Each archetype possesses a unique logic, and the suitability of a specific organising model is contingent upon a company's particular needs. As foresight maturity can be developed through multiple routes, a certain model cannot be initially considered superior. The archetypes have complementarities, which allow the addition of new elements to an initial corporate foresight system, reflecting the process of developing dynamic capabilities (Fergnani, 2022; Marinković et al., 2022). When systematising foresight, managers should first assess where foresight knowledge originates within the organisation, who uses it, and how the knowledge is formatted and disseminated. Viewing the organisation as a system for managing futures knowledge can help identify gaps in the knowledge flows that reduce the value of foresight activities. When looking at a common result of foresight processes in an organisation, scenario reports, certain characteristics of expert-driven knowledge flows become evident.

4.5 Article V: A qualitative content analysis of future personas created within expert-driven scenario processes

Scenario reports are an essential outcome of corporate foresight and futures studies. In scenario processes, various forms of knowledge interact. The process of constructing scenarios can be understood as "future-making", an approach originating from organisational studies (Kleist & Jansen, 2016; Pettit et al., 2023). In these processes, various actors generate scenarios and imagined futures, using a broad range of methodologies (Bishop et al., 2007; Bradfield et al., 2005). The outcomes of these future-making activities, typically in the form of scenario reports, can be seen as non-human actors capable of shaping

certain futures. However, content analysis of these outcomes has been nearly non-existent in the former literature.

Scenarios are expected to contain plausible, analytically coherent, and imaginative stories of multiple futures (Bishop et al., 2007). Typical scenario processes, such as scenario techniques in intuitive-logics and *La Prospective* schools, typically engage with internal and external experts in organisations (Bradfield et al., 2005). Scenario development is a group technique, and includes the collective participation of a variety of people. Even if broader participation in scenario processes is on the rise, the voices of citizens and marginalised people are often under-represented or lacking (Andersen et al., 2021). Some persons, typically socialised in academia, large companies, and other powerful institutions, may be able to contribute to future-making and anticipatory practices more effectively than others (Stephan & Flaherty, 2019). The content of the scenarios influences the futures thinking of the individuals taking part in the scenario processes, and the impact and outreach are even broader in publicly-distributed scenario reports.

Future personas are a relatively new element in scenarios. Fergnani (2019b, p. 448) has defined them as "scenario-specific individual[s] living in the future scenario". These personas are typically derived from the scenario itself. They can be characterised by attributes such as age, ethnicity, professional background, and family status, and they are supposed to offer a richer and more diverse portrayal of the scenarios from a first-person perspective. What are these personas like, and what can they tell us about the futures of everyday life? Drawing from ethnographic foresighting (Pink et al., 2023), it is assumed that these personas offer insights into the subjectivities, cultural contexts, actors, and agendas of the scenario processes.

This sub-study employed a dataset consisting of 29 future personas from six different publications produced by various organisations, such as consultancies, an NGO, and an educational institution. The material was processed through qualitative content analysis following the approach of Mayring (2022) and using both inductive and deductive analysis. The deductive coding utilised four initial categories developed by anthropologist Ulf Hannerz (2016), which structure being in the world: market, state, movements, and consociality. Two additional categories, environment and technology, were inductively added during the analysis. After examining the empirical data consisting of the future persona reports, followed by discussion, validation, and reflection amongst the research team, several dimensions emerged that characterise and influence how future personas, along with the environments and life contexts in which they reside, are constructed in the reports. The six main dimensions in the data were elitist and privileged positions, technologically augmented and simulated life, personal data as a commodity, technological optimism, dynamics of local and global, and living with the consequences of climate change.

Many of the future personas were described as individuals who were part of the societal elite, having privileges not currently available to most of the world's population. The personas had highly developed capabilities and were able to manage multiple occupations simultaneously. This could include international entrepreneurship, creative pursuits, and consulting work, while raising a family. Although career flexibility and diverse skill sets are common themes in discussions related to the future of work, the representativeness of such personas is debatable. Nevertheless, extraordinary individuals may also have been created to inspire and broaden thoughts about the future.

Another important theme in the data was the fusion of the physical and the technological. Future human bodies were projected to be increasingly enhanced by technologies, resulting in a harmony between humans and machines. Technologies that intervened in the human body and mind seemed normal. Various aspects of daily life were virtually influenced and imitated by different electronic devices. The entire living environment could be artificially made to resist and conceal the effects of climate change. Biotechnological improvements could eliminate worries about ageing and disease, and boost senses and abilities beyond human levels, matching the transhumanist thinking that has been common over the past decades (Cordeiro, 2015; Kurzweil, 2014). One prominent dimension and another illustration of the interwoven role of technologies in everyday life was personal data as a commodity. Data was seen as a new resource that created a market for personalised services using sensory systems. Various types of data were gathered continually, and this data could be traded with commercial partners without worries. The advantages of data-trading were presented as normal, while cyber-security risks were less apparent. On the other hand, one persona also showed an opposite trend: increasingly wary of implants connected to the internet, he becomes annoyed, and the scenario imagines a new market of cyber camouflage - a whole new industry emerging from people's fear of trading private data.

The reports showed a common theme of technological optimism, which was linked to the previous themes of human-machine integration and data-sharing generosity. Technology was a key factor in many persona narratives, as it helped to overcome the world's challenges, such as climate and energy issues. Most future personas had high skills to benefit from the technological innovations. Technology could even enable leaving Earth for a better life on another planet or creating a sense of divine prediction in consumer interactions. The findings are consistent with Taffel (2018), who has observed that imaginary planetary futures often feature a metanarrative of technological progress and an apocalyptic discourse of the Anthropocene. The data also displayed the dynamics of local and global, and their convergence into a single "glocal" entity. The focus on local perspectives created conflicts with global developments. These dynamics were also evident in digital ecosystems, where local community networks were formed

as a response to global cyber threats and corporate control. In entrepreneurship, locally-based ventures were depicted as competitors to global mega-corporations.

Climate change, biodiversity, loss and resource scarcity were portrayed as existential threats in numerous persona narratives, setting the stage for stories in which protagonists navigated a new reality characterised by environmental challenges. The new reality necessitated substantial societal changes, often highlighting the importance of technological interventions. Concern for a looming ecological catastrophe had evidently shaped the persona creation processes. However, the persona narratives varied in their optimism regarding the outcome. The personas adopted various survival strategies in their everyday life, and the environmental crisis led to constraints in consumption, professional activities, and air quality. The trend towards diversified livelihoods and multi-occupational lifestyles reflected a personal strategy of resilience and adaptability in the face of uncertainty.

The data and its analysis showed that most future personas displayed continuity with the current global situation. This continuity was visible in aspects such as the power of global elites, a Western-focused perspective on demographics and lifestyles, the dominance of technology in daily life, and concerns about climate issues. A conclusion, which requires more research, is that the commonness of privileged positions comes from the expert-led nature of scenario processes. Therefore, a significant methodological improvement would be to include the views of people from different socioeconomic backgrounds in the scenario-creation process.

5 SYNTHESIS OF THE RESULTS

This chapter synthesises the key findings of the five original articles included in the dissertation. Sub-chapters 5.1. and 5.2. answer the dissertation's research questions: "How do consumers think about the future?" and "How can consumers' future thinking be interpreted?" Sub-chapters 5.3. and 5.4. address the research question "How can consumers' futures thinking and its interpretations be utilised in corporate foresight?", linking the two former questions to organisational foresight practices.

5.1 The dynamics of consumers' futures thinking

The consumers in the study showed adaptability, resilience, and capability to look forward in changing circumstances, such as the COVID-19 pandemic, technological advancements, and ecological issues. This adaptability challenged consumption practices and lifestyles, but also reformed post-crisis horizons in futures thinking. The sudden crises brought new routines, practices, and experiments to daily life, which opened up novel anticipations regarding personal futures. The daily actions and future imaginaries interacted. The participants demonstrated creativity in re-organising their everyday life in changing contexts. Nevertheless, the personal futures were frequently rather ordinary and humble, emphasising family, health, work, housing, and moving into new phases of life, such as from work life to retirement. The imaginaries were rooted in practical everyday contexts, largely lacking utopian or dystopian elements. Only some of the individuals showed the capability to imagine radical and disruptive future possibilities that would fundamentally challenge their current way of life. This can be a limitation of consumer-based approaches if the aim of foresight is to explore radical far-future opportunities and detect discontinuities. In these settings, combining empirical consumer research and expert-driven foresight can be a viable solution. While empirical consumer insights can provide plausibility, credibility, and diversity, experts may be more capable of identifying weak signals which can be interpreted as seeds of radical futures. Therefore, fusing the consumer-based approaches of Articles I, II, and II with the expert-based future personas of Article V could be a methodological combination that addresses the shortcomings of each approach.

"What-if" imagining becomes central when conditions change, as Miller (2007) has noted. In this sense, the future appears as a dynamic space of possibilities that present actions and decisions can shape. In this space,

imaginaries and current courses of action emerge as a reciprocal process, as described by Beckert (2013). Imaginaries can also align with experiences in the past, allowing the subject to overcome sudden changes by constructing the future horizon of familiar elements from the past, leading essentially to nostalgia. In addition, the elements from the past may be the only tangible thing that the individual can rely on in changing conditions when new imaginaries are still in formation. The individuals appeared as agents capable of shaping personal and communal futures and were also able to take part in corporate activities as external contributors. Global factors, such as climate change and economic crises, affected personal trajectories and views of the future. Optimistic and progressive futures could face doubt and criticism, but not necessarily on an individual level. During times of societal challenges, individuals seem to preserve a sense of personal agency and optimism, while their views of collective futures can be more negative (Hazan et al., 2024). While this relationship between personal optimism and collective pessimism may appear contradictory and paradoxical, the individual may feel that there is no other choice than to preserve agency among societal challenges. This same dynamic characterised many of the future personas analysed in Article V, as they proactively navigated future circumstances characterised by extreme climate issues, pervasive technology, and societal inequality.

Megatrends such as digitalisation were used as mental signposts to reflect on long-term personal futures and the impact of technologies on them. Miller (2007) has observed that everyday futures thinking is usually about the short term, from days to months. However, the individuals involved also showed an ability to think and imagine long-term. The distant-future reflections were not always easy or fluent but needed a specific orientation. Therefore, choosing the appropriate method for consumer involvement is crucial. In addition, people differ in their ways of thinking and communicating, which influences the research sample selection. However, this study suggests that there is no reason to exclude any group of people from future-related reflections, even if some people may appear to be more visionary and future-oriented than others. People "use the future" in different ways, and the aim in engaging consumers is not to codify who is "futures literate" and who is not (Facer & Sriprakash, 2021), but instead allow the participants to reflect on their futures from their own perspectices. However, facilitating this reflection requires reflexivity amongst the researchers about their own normativity and assumptions (Facer & Sriprakash, 2021). Taffel (2018) has noted that stories about the future have a performative function that calls certain futures into view while foreclosing other possibilities, and this performativity is modulated through material constraints. Consumers carry out journeys in pursuit of life goals, and some of the journeys anticipate consumption experiences while some of them do not have consumption as the primary goal

but nonetheless involve products, services, brands, and technologies (Hamilton & Price, 2019; Warde, 2005).

Figure 1 describes the main elements and dynamics of consumers' futures thinking based on the data of Articles I, II, and III and their analysis. The figure consists of six key elements: social structures, past experiences, current actions, anticipation, imaginaries, and technologies and materialities. These elements interact with each other. The core process in consumers' futures thinking is constructed by current actions and imaginaries, which create anticipation. Current actions can be influenced by past experiences. The model is framed by two contextual forces – social structures, and technologies and materialities – which interact with each stage of the core process. Social structures refer to social, cultural, and institutional contexts that influence consumers' futures thinking. These structures affect how individuals act and imagine future possibilities. Technologies and materialities are physical realities that shape, expand, and constrain futures thinking. The figure aims at capturing the non-linear and interconnected nature of how consumers think about the future.

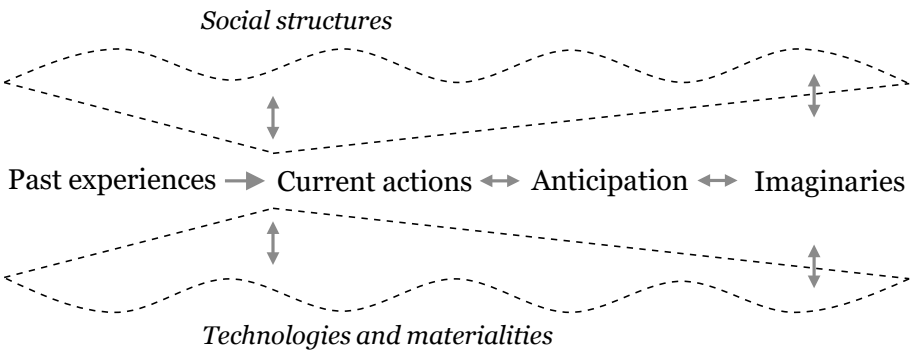

Figure 1. The dynamics of consumers' futures thinking

The levels of social structures, technologies, and material conditions are depicted with a fluctuating line as they evolve constantly. However, the direction and characteristics of this evolution may change. Contextual societal factors, such as changes in the macroeconomic situation, political institutions, or family structures, affect how consumers think about the future. During this research, the polycrisis context (Henig & Knight, 2023) created exceptional fluctuation in social structures but also changed technological conditions in consumers' lives, by increasing the use of virtual technologies and online shopping platforms, for example. Kurki (2020) has noted that all forward-looking is societal, and futures are explored in the context of making decisions in the present. For instance, the shock of the pandemic made consumers more careful about their long-term plans, and the climate crisis provoked them to rethink the material aspects

of their lifestyles. The same kind of fluctuating dynamic appeared relevant to changes in the technological landscape. New technologies are constantly introduced to consumers' lives, often in a top-down manner, to solve problems primarily defined by actors like the technology industry, business consultancies, and policymakers (Pink et al., 2023). Emerging technologies, such as electric vehicles, can become "objects of the future" by being already visible and tangible, but consumers forecast them to be increasingly prevalent in the future – they represent the future in the current moment. However, consumers may not adopt or use the technologies for their intended purposes, and not every dominant technological vision succeeds in the market. Therefore, the change in the consumer-technology relationship is dynamic and includes tensions.

To understand technology-related improvisation, adaptation, and also rejection in consumption, the idea of rooting future imaginaries in social practices has been proposed, and these imaginaries can be used to develop alternative future scenarios grounded in changing everyday life (Strengers et al., 2019). As Mandich (2019a) has noted, futures are socially produced through social practices. In this dissertation, consumption is understood as a set of practices that emerge, change, and develop (Warde, 2005). This emergence in the practices is influenced by the imaginaries, forming the anticipation in consumption. According to Mandich (2019), the link between social action and future has always been present in social theory, but it has not been sufficiently developed. In Figure 1, the cone widens from actions towards imaginaries, as possible futures are multiple and the number of imaginaries is theoretically infinite. In contrast, the present is more restricted by different boundary conditions. In the same sense, the role of the recent past is more deterministic, while older experiences and memories do not have the same impact. In Figure 1, the dynamic relationship between the different factors, especially technology, actions, and social structures, may also help avoid or overcome a tension in futures thinking noted by Strengers et al. (2019): technology-driven understandings of possible futures are often represented as "facts", while futures premised on everyday practices are considered "fiction". Examining social and technological factors can simultaneously provide insights into technological developments that are grounded in everyday realities.

Figure 1 on the anticipatory dynamic of current actions, imaginaries, societal change, and technological transformation partially aligns with the feedback loop of images of the future depicted by Kaboli & Tapio (2018), but also expands it by adding the technological and material viewpoint. In addition, the past is considered an element in the formation of the images. In particular, the increasing prevalence of digital technologies and climate change framed the studied consumers' futures thinking but also led to evaluation and adjustments in the current lifestyle. For example, consumers' technological visions in Article II encompassed themes such as digital currencies, virtual pharmacies, drone

delivery, and the simultaneously integral and isolating nature of technology. In the participants' futures thinking, technology was not necessarily always something digital or virtual; they also emphasised physical technologies and infrastructures like cycling highways, decompression spaces, and rooftop gardens. The limitations of the current living environment and its material reality led to envisioning new elements in future lifestyles. In addition, migration patterns and the development of international relations were typical macro-level factors influencing personal imaginaries. The relationship with envisioned future technologies was often twofold: while technologies were seen to solve many pressing issues, like replacing fossil-based energy systems with renewable solutions, the dominant and invasive role of technology also raised doubts, challenging the apolitical technological determinism often present in the public discourse of digital capitalism (Taffel, 2018). Plans for change are regularly met with resistance from the mainstream public (McKenzie, 2024), and individual actions form a dynamic relationship with social, technological, and economic conditions. Therefore, it is crucial to understand both consumers' everyday lives and the general characteristics and trajectories of the contemporary era for a balanced view of technological development.

5.2 Trends in consumption and their relation to anticipation

Consumers and experts do not always agree on the significance and direction of trends in the marketplace. The sharing economy and access-based consumption have been prominent themes in expert discussions over the past decade. This phenomenon has received significant attention from scholars, policymakers, entrepreneurs, and also consumers, who have widely adopted successful sharing economy concepts such as Airbnb and Uber (Hossain, 2020). Furthermore, sharing- and access-based consumption models can contribute positively to sustainability and efficiency (Boar et al., 2020), making their use tempting. Therefore, utilising access-based models in new contexts, such as household goods, would be logical. However, based on consumer reception in Article III, this approach had only limited potential. Consumers did not recognise the value of the proposed access-based services and actually expected to *decrease* their use of shared goods in the future. No significant transition towards access-based consumption seemed to be happening, and using access-based models did not appear 'trendy' in consumer culture. Should the phenomenon of access-based consumption therefore be discounted by businesses and other stakeholders? No, but applying it straightforwardly without engaging in consumer dialogue can be problematic.

To avoid this challenge in trend forecasting, this study proposes an understanding of consumer trends as anticipation in consumption, which is

empirically identified and validated. This anticipation consists of the relationship between the present and the future and consequently forms a future orientation in consumption practices. The anticipation can be identified by researching consumers' current actions and their future imaginaries. Futures are constituted at the level of the individual, family, social groups, and organisations, and the shaped futures extend temporally from the very short-term to the enormously long-term (Adam, 2009). The consumer, as an individual and as a part of social groups and organisations, imagines and acts on short- and long-term future imaginaries. The individual- and family-level perspectives were visible in Article I, in which individuals and their families had to suddenly reorganise their living and social interaction due to the rapid spread of the COVID-19 virus. In many participants' lives, the increased time spent with the family led to a positive future expectation and a value adjustment. On the other hand, some people living alone experienced increasing loneliness and detachment from their social circles. In this situation, the pandemic crisis created uncertain societal futures and reorganised daily experiences, which ultimately led to a variety of individual-level future imaginaries.

What is the anticipatory dynamic of a trend like? According to Mandich (2019b, p. 698), various possible future narratives coexist in daily life in "a bumpy, semi-conscious and occasionally tense dialogue with one another". To understand this variety, a relationship between these modalities of social actions has to be detailed, together with empirical analysis (Mandich, 2019b). Individuals, both as consumers and in other areas of life, can be studied by examining present behaviours and considering future possibilities. Consumption can often be mundane and routinised, yet it is also connected to broader life trajectories. This dynamic between the present and future is illustrated by the rapid switch to remote work, which happened right before Article I's data collection. As the change was sudden, it was hard to make long-term predictions on how lasting it would be. However, in people's daily lives, the opportunity to do remote work was so positive, meaningful, and full of optimistic future expectations shared across different groups of people that returning to mostly office work seemed improbable even in the early months of the pandemic. Work-life did not return to the old normal after the pandemic; hybrid work became the standard for those whose work can be conducted remotely, and the office occupancy rate has fallen by about half that of the pre-pandemic times (Fulford, 2023). The seeds of work flexibility and employee autonomy were planted in the early days of the pandemic, and they could be identified and interpreted as emerging trends.

The relationship between future imaginaries and present actions is not always symmetrical, challenging straightforward assumptions about consumption and its future. For instance, Article 1 exemplified a conflict between personal satisfaction and environmental values in future travel preferences. While the COVID-19 pandemic had brought many changes to everyday life, with

consumers expecting some of these changes to become permanent due to their positive impacts, there remained a strong desire for travel to return to 'normal' despite awareness of its environmental consequences. In this contradictory consumption dynamic, companies can continue offering traditional travel options while adopting sustainability as a long-term strategy. This requires gradually transitioning towards new offerings while ensuring availability and reasonable prices for familiar services.

5.3 Consumers in foresight information networks

Previous literature has pointed out that there are substantial differences in how foresight activities are organised (e.g., Becker, 2002; Mietzner & Reger, 2009). The existing research has often outlined an ideal model for organising foresight, which evolves through different stages of maturity (e.g., Haarhaus & Liening, 2020), and variation in organising has been addressed based on how closely companies align with this ideal model (Rohrbeck & Kum, 2018). However, this dissertation and its featured Article IV argue that there is no one-size-fits-all model for organising foresight. Companies may have to settle on imperfect and combinatory models of conducting foresight, including various defining characteristics and organising logics. Moreover, the suitability of each model is contingent on the company's needs and goals, and addresses environmental dynamism and complexity in different ways. This research identified four archetypical organising logics: a function-driven model, an executive team-led model, a foresight unit model, and a platform-based model.

When building up and seeking legitimacy for their foresight efforts, companies should choose the organising logic that best suits their priorities. However, companies' foresight actions are not limited to these models, and acquiring futures knowledge is often extended beyond organisational borders. Consultants and industry intelligence sources are typically used to support companies' foresight work. In addition, internal market and business intelligence units typically collect information relevant to foresight activities. The various knowledge creation actors form networks in which foresight information is acquired, manipulated, and applied, and involves interactions throughout an organisation. Open, collaborative, and networked corporate foresight has been a growing paradigm over the past decade (e.g., Van der Duin et al., 2014; Wiener et al., 2020). However, consumers have not typically been identified as key collaborators or network nodes; cooperation has focused on relationships between organisations and experts. Future-oriented consumer insights can nevertheless be a valuable asset for legitimising the value of foresight in different organising logics, as they may validate, enrich, and even challenge internal expert views. In Article II, the consumer study uncovered phenomena that the

company had not thought of before but also enriched the company's internal assumptions through vivid audiovisual material and its analysis. In Article III, the results of the consumer foresight study partially challenged the company's future service concept ideas but also verified the value of its current strategic priorities.

A practical boundary condition in consumer involvement is its time- and cost-intensive nature. Building an appropriate consumer sample is challenging, data collection is expensive, in-depth analysis takes time, and communicating and applying the results requires effort. Even after all the steps have been completed, business success is not guaranteed. Therefore, utilising secondary sources or expert views can be tempting. These might also be the only possibility for companies without substantial financial resources, such as small- and medium-sized enterprises. Moreover, fairly large companies can be very cost-conscious when it comes to investing in foresight and consumer research. However, among the 11 companies of intermediate foresight maturity studied in Article IV, customers and end-users were considered one of the primary themes of foresight. The customer interface, where interactions with customers occur, was considered a customer-specific information source. Even if most of the companies operated in the business-to-business domain, they also considered end-users and the end of the value chain. Customer-centricity was a strategic priority for many of the companies. However, specific consumer foresight activities were rare. Consumer foresight was typically identified as an element of market research or customer discussions within sales activities. However, many of the companies admitted that this was not done very systematically. Nevertheless, consumers potentially play a role in all parts of the foresight process.

5.4 Four orientations of participatory consumer foresight

The previous chapters have described the anticipatory characteristics of consumption, a redefinition of consumer trends, and the need for consumer foresight as part of corporate foresight organisations. By utilising empirical consumer research methods, companies can gain a more nuanced understanding of consumption than by relying solely on secondary data and expert opinions. Consumers can also be co-creators and co-developers in corporate initiatives. Their visionary capabilities can also be leveraged. Despite this potential, engaging customers and critical target groups in foresight processes has been identified as the least developed foresight capability among companies (Boardman, 2021), and customer foresight is considered a fairly new research field (Eller et al., 2020). However, consumer insights enable the creation of consumer-based strategies (Hamilton, 2016), and a future-oriented consumer understanding can make these strategies more resilient over time.

As Rohrbeck et al. (2015, p. 2) outlined in their definition of the field, "[c]orporate foresight involves multiple stakeholders" and "is identifying, observing and interpreting factors that induce change". Consumers are an essential stakeholder group for business-to-consumer enterprises, as well as for business-to-business companies that indirectly face consumers at some point in their value chain. While market research and consumer insight functions within companies have focused on current consumer behaviour, these analyses may have lacked the future orientation typical of foresight information. Quantitative statistical forecasts may have been made based on longitudinal consumer surveys, but they struggle to address discontinuities in the same way that foresight methods do. To formulate empirical consumer research data in the form of foresight terminology, such as trends and weak signals, the future orientation must be recognised in the data.

Based on the data collected and the methods used in this dissertation, four orientations of consumer involvement could be demonstrated: interpretative, visionary, co-creative, and validating. The choice of consumer sample and appropriate methods depends on the goals of the involvement. Is it necessary to primarily interpret changes and anticipations in consumer culture, or is there a need to envision futures together with consumers? Is collaboration with consumers required, or is it necessary to validate and generalise findings? Each approach calls for different data and methodologies. Within the articles of this dissertation, several consumer groups were involved: a socio-demographically balanced qualitative sample (Article I), a sample combining lead user and visionary consumer characteristics (Article II), and a representative quantitative sample from a specific region alongside a qualitative early adopter sample (Article III). The four orientations are also informed by methodology-related insights collected through executive- and manager-level company interviews and a survey in Article IV. Table 2 presents these orientations of consumer involvement, demonstrated within the dissertation's articles and their links to the generic foresight process described by Rohrbeck & Kum (2018). The table links the two scopes of the study, consumers and organisations.

Table 2. The consumer involvement orientations in corporate foresight

Orientation	Sample	Methodology	Foresight use context
Interpretative	Early adopters Socio-demographically balanced qualitative samples	Interviews Ethnography Online communities	Perceiving
Visionary	Visionary consumers	Visioning Scenarios Future personas Design fiction	Prospecting
Co-creative	Lead users	Co-creative ideation, modification and prototyping Contextual observation	Probing
Validating	Representative quantitative samples	Surveys	Probing

The interpretative orientation aims at understanding the consumer, and qualitative methods such as in-depth interviews, online diaries, and ethnography allow for a perception of the consumer and the context in which they live. This understanding can focus on the past, present, or future. Consumers can discuss their former experiences, current lives, daily practices, consumption routines, and so forth, but also their future imaginaries, consisting of thoughts related to personal futures. The ability to anticipate and envision futures is not restricted to forerunner consumer groups, although early adopters' current ways of living may presage changes in the mainstream population. However, early adopter behaviours may not always spread to mainstream consumer culture and can remain niche phenomena. If consumer involvement is limited only to leading-edge segments, the anticipations of the larger population cannot be known. Nevertheless, these anticipations can be strategically and financially critical to companies and societally meaningful in general.

Visionary work with consumers can utilise tools such as scenarios, visioning exercises, and design fiction methods. Various media and objects, such as scenario narratives, future artefacts, and visualised trend descriptions, can be used to stimulate consumers' futures thinking. Moreover, consumers can conduct visioning without input or boundary conditions set by experts, although this may lead to generic outcomes. Article II demonstrates that certain visionary consumer profile characteristics can also be mixed. The recruitment brief can include screening questions related to visionary, early adopter, and lead user characteristics, and the individuals involved represent these dimensions to varying extents. People's capability profiles are complex, diverse, and not confined to the researcher's predefined categories. In using future personas, this study suggests complementing scenario-based personas with empirical future

imaginaries of consumers, which helps avoid biases related to solely expert-driven persona creation. As noted in Article V, future personas created solely by experts, including future consumer profiles, tended to emphasise privileged positions and capabilities that represent only a fraction of the population.

Co-creative lead user involvement can take many forms, from field observation and workshops to user-driven entrepreneurship (Hyysalo et al., 2016), and it engages consumers who can modify, construct, and prototype products. As Korreck (2018) has noted, lead user involvement in foresight processes has so far been limited, but it has potential in the context of open innovation. Lead users have typically focused on working on new product concepts (Brem et al., 2018), but Article II exemplified that the approach can be extended to a broader context, such as the city environment and urban lifestyle. The lead users involved in the study demonstrated innovative relationships with their living environment and devised new ways of using the environment. For example, this could be seen in the variety of "life hacks" that the lead users documented in their online diaries.

The validating orientation typically utilises quantitative approaches, such as surveys, to generalise qualitative findings. The distribution of a certain trend or novel consumer practice within the population can be verified, and the validation may concern the potential of a specific product or service. Consumers' future expectations can also be studied through future-oriented statements. Typically, this quantitative phase follows the collection of qualitative insights. In Article III, the company involved had internally identified certain strategic trends and created service concepts based on them. The potential of these concepts was then validated in a representative survey study, which was followed by a co-creative phase with selected early adopter consumers. However, this process can also be conducted in reverse. In the strategic customer foresight study by Schweitzer et al. (2019), groups of visionary consumers in three markets first identified three innovative use cases for automated vehicles in the future, and the relevance of these use cases to the larger population was subsequently confirmed in survey studies.

The use of consumer insights throughout a corporate foresight process can be demonstrated through a generic foresight process model described by Rohrbeck & Kum (2018), which is comparable to other documented foresight processes, such as the framework foresight developed by Hines (2020) or the strategic foresight framework of the thesis author's organisation (Komonen & Kurki, 2021). The use of the formerly mentioned model stems from its origin in the corporate foresight context instead of strategic foresight applicable to all kinds of organisations. In addition, its relatively common use in the corporate foresight literature increases its validity: the process has been evaluated from many perspectives. The process includes three main parts: perceiving, prospecting, and probing (Gordon et al., 2019; Rohrbeck & Kum, 2018). *Perceiving* means identifying and interpreting change in the organisation's external environment.

Through *prospecting*, firms engage in sensemaking and strategising based on signals identified in the external environment. *Probing* aims to explore new markets through experimentation and start new courses of action. Based on this dissertation, consumer involvement is relevant to all these phases.

Consumer research allows the perception of emerging trends and weak signals. This can be done by observing new consumer phenomena and identifying elements of anticipation, the dynamic interplay between the future and the present in consumers' thinking and behaviour. Socio-cultural innovations and novel consumption practices are more commonly observed among early adopter consumer segments, while anticipation is universal across all consumer groups. Consumers can also participate in prospecting: they can interpret and make sense of signals identified by a company and also proactively envision novel ideas. Engaging lead users is particularly beneficial when progressing towards concrete products and services through experimentation during the probing phase. A vast potential for consumer touchpoints exists across the foresight process.

6 DISCUSSION

The influential foresight practitioner and cultural analyst Matt Klein (2023) has claimed that consumer trends have lost all meaning. In a survey study, consumers did not recognise trends identified by trend forecasting specialists (Klein, 2023), and experts mixed consumer trends from 2018 with trend forecasts for 2024 (Klein, 2024). The consumers' inability to recognise the trends most discussed by the experts is a critical insight for the empirical orientation of this dissertation. One reason for this asymmetry can be that consumer foresight specialists often name trends distinctly and creatively (in the aforementioned case, e.g., "cottagecore", "indie sleaze", and "permacrisis"), which makes it difficult for the consumers to interpret them. The experts may monitor and interpret emerging signals in consumer culture through their own mental models and vocabulary, which do not align with those of the consumers. There can be stagnation in consumer culture, and certain trends can dominate expert discussions throughout the years. For example, sustainability- and convenience-related trends may even cause *trend fatigue* among experts because of their long-standing, dominant role in consumer trend analyses. In this sense, trends become empty signifiers as they provide an abstract, generic, and determinist meaning that is difficult for users, such as corporate management, to interpret (Groddeck & Schwarz, 2012).

However, another, and even more important, reason may be that the trends do not empirically originate in consumer culture but are created through expert discussions in companies' marketing and innovation departments based on a selective use of secondary data and filtered through the mental models of experts. The marketing world demands constant novelty, and annually published trend forecasts have become a form of commercial foresight entertainment, creating an echo chamber of their own. Consequently, consumers and experts seem to live in two separate worlds. The challenges of depicting future individuals through expert-driven methods were exemplified in Article V, in which many of the future personas analysed originated from privileged social backgrounds and held positions in academia or lucrative commercial sectors. Subsequently, one may assume that highly educated foresight specialists may find it easier to relate to and build narratives about future personas with skills and wealth, allowing a prosperous life. Even personas in underprivileged positions exhibited a degree of optimism that compromised the plausibility and consistency of the scenario narratives. Issues of representation, inclusion, and the appropriate portrayal of future generations are gaining attention in foresight, and debiasing techniques that counteract biases in anticipatory assumptions have been developed as a

solution (Winter, 2024). The empirical approaches presented in this dissertation can be a debiasing technique for consumer-focused foresight studies.

The future-oriented thinking and activities of individuals can and should be empirically investigated, but they may not always reveal the same dramatic and energetic trend dynamics as consumer foresight reports created through expert-driven methods. Daheim & Uerz (2008) have argued that there are only a limited number of trends to be observed and analysed if they are based on empirical evidence and monitored over time. However, this view can be challenged based on the anticipatory dynamics of consumers' future orientation. While a corporate strategy may need to rely on selected and prioritised consumer trends, the landscape of change in consumption practices is broader and also influenced by macro-level societal changes, emerging technologies, and material conditions. Therefore, both systematic consumer trend management and analysis are required in corporate settings. The trend management system should consider the various elements of Figure 1 on consumers' futures thinking, essentially identifying macro-level changes, changes in material reality such as emerging technologies, and consumers' current practices and imaginaries. The empirical approach to consumer trends also allows describing trends as they manifest in consumer behaviour and speech, and consequently the vocabulary used for defining and depicting the trends originates in consumer culture instead of expert jargon. The trends are not solely consumer-driven in the sense that contextual factors would not influence them. The cultural zeitgeist influences people, and only a tiny fraction of consumers typically act as trend creators and initiators. Consumers' lives and the external environment interact with and influence each other, as described by Liebl & Schwarz (2010). However, this should not undermine the importance of identifying leading-edge consumers who can challenge the status quo by inventing new practices and modifying existing ones.

This dissertation is one of the first attempts to apply the theory of anticipation in the context of corporate foresight. While anticipation has been used as a general term to describe forward-looking corporate activities and as a synonym for foresight (De Toni et al., 2021), the understanding of anticipation as a dynamic interplay between images of the future and current actions has not yet gained significant traction in the corporate foresight domain, despite its growing popularity in futures studies more broadly. Nevertheless, both consumers and organisations can be viewed as anticipatory actors. Consumers' images of the future influence their current actions, and corporate organisations function as anticipatory systems, absorbing, creating, using, and communicating consumer-related information. Figure 1, which depicts the dynamics of consumers' futures thinking, allows an understanding of changes and future trajectories in consumption in a non-linear, interconnected, and structural manner instead of examining individual consumer trends without a systemic view of

their development. As Liebl & Schwarz (2010) have proposed in their strategy-making framework, consumers' imaginings, experiences, and perceptions can be a starting point for strategy formulation and allow understanding of the nature of the firm's competitive advantage. Additionally, companies develop visions of the future that not only shape consumers' futures thinking but also impact society at large. For instance, the metaverse, general artificial intelligence, and space colonisation are recent examples of future visions strongly driven by private actors, receiving mixed public reactions. Examining these images of the future from various perspectives helps uncover critical contemporary anticipations.

In their customer foresight journey, Eller et al. (2020) have proposed that consumer interaction should follow an expert-driven understanding of change dynamics and future realities. In other words, consumers are expected to discuss and evaluate inputs created by experts. According to Repo & Matschoss (2018), citizen involvement has been increasingly recognised as a complementary source to expert-based foresight. Democratising futures in the form of increasingly participatory processes has been identified as a tendency in the field of futures studies (Barendregt et al., 2024), but is the development relevant to the sub-field of corporate foresight? This dissertation does not outline a single step-by-step process for consumer foresight or claim whether empirical consumer research should be a primary or complementary source of insights. In terms of democratisation and participation, the author is aware that companies may be more interested in engaging consumers with high purchasing power than consumers in marginalised positions and does not take a normative stance on whether this should remain the case in the future. Instead, the emphasis is on the *flexibility* of future-oriented consumer insights.

So far, foresight has rarely been a top priority or a leading function in companies. Foresight is conducted under resource constraints, and only a few firms have long-standing foresight units that have evolved over decades, surviving economic cycles, internal restructurings, and business portfolio changes (Ruff, 2015; Wilkinson & Kupers, 2013). According to an estimate, 25% of the largest United States corporations practice foresight in some capacity (University of Houston Foresight Department, 2019). On the other hand, empirical evidence has increasingly proven the value of foresight (Buder, 2021; Rohrbeck & Kum, 2018; Rohrbeck & Schwarz, 2013), and recent crises have provoked an intensified focus on the future within firms (Schropp et al., 2024). Consumer foresight can uncover multifaceted and interconnected issues that other methodologies may not be able to identify (Article II), and it can create business value (Article III). Foresight is considered an element of an organisation's dynamic capabilities (Fergnani, 2022; Schwarz et al., 2020), making it valuable in dynamic and complex environments. As an emerging and relatively novel capability (Eller et al., 2020), consumer-focused foresight can be a unique resource, allowing differentiation in competition.

7 CONCLUSIONS AND FUTURE RESEARCH AVENUES

The starting point of this dissertation was the recognition that research on participatory consumer foresight is scarce and that links between consumer research and corporate foresight are weak. From a practical and managerial perspective, the hypothesis was that integrating consumers into corporate foresight processes can benefit companies. In the five articles and the dissertation summary, various consumer research methodologies have been integrated into foresight processes in theory and practice. A theoretical common ground for consumer research and corporate foresight has been identified in the anticipatory dynamics of consumers' futures thinking and current actions. Consumer trends, a critical component of consumer-related environmental scanning, have been redefined from the perspective of anticipation. It has been demonstrated that consumer research can add value throughout all the essential phases of a typical foresight process, and four orientations of consumer foresight have been identified. The challenges of relying solely on expert views have been highlighted.

However, the story should not end here. Although this dissertation has employed various data and methods, it has relied primarily on qualitative approaches. As the amount of data available increases and quantitative analysis techniques become increasingly sophisticated, it is expected that the roles of large datasets, advanced analytics, and artificial intelligence will gradually become more significant in consumer foresight. Social media is an important sphere of consumer trend formation (e.g., Haenlein et al., 2020), and the former approaches can be valuable in analysing vast amounts of social media data. The lightning-fast consumer trend formation on platforms like TikTok can be difficult to address through traditional methods, requiring new approaches. In addition to the limitations related to quantitative approaches, the study did not engage in substantial ethnographic fieldwork, although this limitation was partly due to restrictions caused by the COVID-19 pandemic. Nonetheless, applied anthropology has increasingly been recognised as a valuable consumer research approach, and ethnographic methods can potentially provide nuanced and contextual consumer insights. Integrating both quantitative and ethnographic approaches into consumer foresight requires further research.

The theoretical approach of anticipation has been central to this dissertation. According to the theory and an increasing body of evidence, navigating into the future is a central organising principle of human behaviour – as opposed to focusing on the past (e.g., Seligman et al., 2013). Although this dissertation has focused on consumers' future imaginaries and current changes in consumption,

it lacks a longitudinal analysis of the development of consumption. A potential future research avenue would be to include multiple data collection points to examine how imaginaries change over time and manifest in behaviour. This approach could provide a detailed and long-term understanding of the anticipatory dynamics of consumption.

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