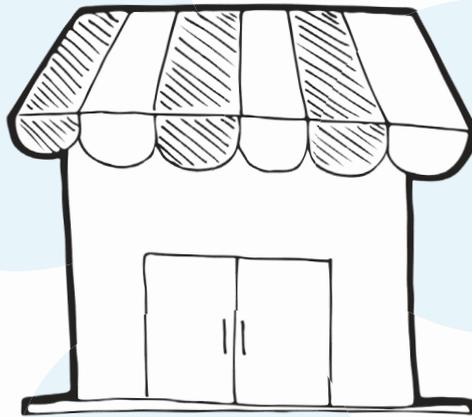


# Rethinking Retail

**A lead user approach for nudging strong sustainable consumption behaviors in shopping centers**



**Saga-Sofia Santala**

Master of Arts Thesis  
Aalto University School of Arts, Design and Architecture  
Collaborative and Industrial Design  
2019

Master of Arts Thesis  
Saga-Sofia Santala  
Collaborative and Industrial Design Program

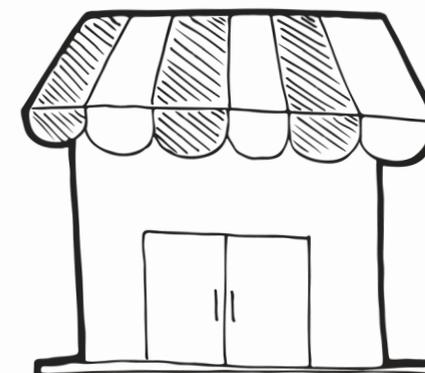
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2019  
Helsinki, Finland



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2019

# Abstract

**Author** Saga-Sofia Santala

**Title of thesis** Rethinking Retail: A lead user approach for nudging strong sustainable consumption behaviors in shopping centers

**Department** Department of Design

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A stark contradiction exists between the goal of sustainability and the current operations of shopping centers, which emphasize overconsumption: The environmental crisis is pushing businesses to make a change towards sustainability, while the shopping centers still operate on the basis of profit and growth-driven values, i.e. encouraging people to consume more than is necessary through the choice-architecture that they provide. Meanwhile, a considerable amount of consumers report being highly concerned about environmental issues but struggle to turn this concern into environmental-aware purchases. This thesis investigates the phenomenon of strong sustainable consumption from a behavioral and natural environment aspect. It examines the role that shopping centers could have in creating a change towards more sustainable consumption behaviors. In order to understand ways of creating successful behavioral change in shopping centers, the study focuses on the theory of nudging, which is investigated from a lead user approach.

Semi-structured interviews with four lead use experts and six lead users of strong sustainable consumption are conducted to 1) understand current trends in and the market needs of sustainable consumption in retail, 2) identify lead users of strong

sustainable consumption, and 3) gain a better understanding of the ways in which the current situation should and could be disrupted. The lead user ideologies, needs and solutions are investigated in order to provide a better understanding of ways to nudge sustainable consumption behaviors in shopping centers.

The interview findings show that the lead users have gone through an eight-step journey of adopting strong sustainable consumption behaviors. In addition, the findings provide tangible guidelines on how shopping centers should and could change, in order to serve more sustainable consumption and attract consumers also in the future. Together, the findings provide a comprehensive understanding of ways to nudge change towards more sustainable consumption behaviors through the choice architecture of shopping centers.

Based on the findings of the interviews, the study proposes a Retail Change-Makers Workshop informed by the findings and targeted at retail actors such as shopping center owners and retailers. The purpose of the proposed workshop is to enable a mindset change among the choice architects of retail and help them to nudge a change towards strong sustainable consumption through shopping centers and other retail environments. The thesis concludes by evaluating the contribution of a lead user approach in aiming to solve the contradiction between sustainability and consumption in retail, indicating that lead users provide a tangible framework for creating change towards more sustainable consumption in shopping centers.

## Key words

#strong sustainable consumption #shopping centers #consumption behavior #nudge theory #lead users

# Tiivistelmä

**Tekijä** Saga-Sofia Santala

**Työn nimi** Jälleenmyynnin tulevaisuus: Edelläkäyttäjien hyödyntäminen ostoskeskusten suunnittelussa ja kulutuskäyttäytymisen muovaamisessa kestävämmiksi

**Laitos** Muotoilun laitos

**Koulutusohjelma** Collaborative and Industrial Design

**Vuosi** 2019      **Sivumäärä** 110      **Kieli** englanti

Kestävän kehityksen tavoitteiden ja nykyisen ylikulutukseen kannustavan kauppakeskuskonseptin välillä vallitsee vahva ristiriita: Ympäristökriisin vuoksi yritykset ovat painostettuja muuttamaan toimintaansa kestävämmäksi samaan aikaan kun kauppakeskukset operoivat yhä tuotto- ja kasvukeskeisistä arvoista käsin, toisin sanoen kannustavat ihmisiä kuluttamaan yli tarpeidensa. Samaa aikaan huomattava määrä kuluttajista raportoi olevansa erittäin huolissaan ympäristön ongelmista, mutta kokee haastavaksi huolien muuttamisen konkreettisiksi teoiksi. Tämä lopputyö tutkii vahvan kestävä kuluttamisen ilmiötä käytöksellisestä ja ympäristöllisestä näkökulmasta, tarkastellen kauppakeskusten mahdollista roolia kestävämmän kulutuskäyttäytymisen mahdollistajana ja muutoksentehtäjänä. Jotta keinoja vahvan kestävä kulutuskäyttäytymisen edistämiseen voitaisiin ymmärtää paremmin, tutkimus keskittyy nudge-teoriaan, jota tutkitaan edelläkäyttäjien näkökulmasta.

Puolistrukturoitujen haastatteluiden kautta (neljän edelläkäyttäjä ekspertin ja kuuden edelläkäyttäjän kanssa) tutkimus pyrkii 1) ymmärtämään kestävä kuluttamisen nykyisiä trendejä ja markkinatarpeita, 2) identifioimaan vahvan kestävä kuluttamisen

edelläkäyttäjiä ja 3) saavuttamaan parempaa ymmärrystä nykyisen kulutustilanteen muuttamisen keinoista. Edelläkäyttäjien ideologioita, tarpeita ja ratkaisuja tutkitaan, jotta voidaan tarjota parempi ymmärrys keinoista, joilla voidaan töytäistä kestävä kulutuskäyttäytymistä kauppakeskuksissa.

Haastattelujen löydökset osoittavat, että edelläkäyttäjät ovat omaksuneet kestävämmän elämäntavan kahdeksanvaiheisen polun kautta. Lisäksi löydökset tarjoavat konkreettisia ohjeita keinoista, joilla kauppakeskusten tulisi muuttua, jotta ne voisivat palvella kestävämpää kulutuskäyttäytymistä ja asiakkaita myös jatkossa. Yhdessä nämä löydökset tarjoavat kattavan ymmärryksen kulutuskäyttäytymisen muokkaamisesta kestävämpään suuntaan kauppakeskusten valinta-arkkitehtuurin kautta.

Haastattelujen löydösten perusteella tutkimus ehdottaa Jälleenmyynnin muutoksentehtäjät -työpajakonseptia, joka perustuu tutkimuksen tuloksiin ja joka on suunnattu jälleenmyynnin toimijoille, kuten kauppakeskusten omistajille sekä jälleenmyyjille. Ehdotetun työpajan tarkoitus on mahdollistaa ajattelutavan muutos jälleenmyynnin valinta-arkkitehdeille ja auttaa heitä luomaan muutosta kohti vahvaa kestävä kuluttamista kauppakeskusten ja muiden jälleenmyyntiympäristöjen kautta. Työn lopussa arvioidaan edelläkäyttäjiä hyödyntävän lähestymistavan myötävai- kutusta kestävyuden ja kuluttamisen ristiriidan ratkaisemiseksi jälleenmyynnissä. Tulokset osoittavat, että edelläkäyttäjät tarjoavat konkreettisen viitekehysten kestävä kuluttamisen muutoksen luomiseksi kauppakeskuksissa.

## Avainsanat

#vahva kestävä kulutus #kauppakeskukset #kulutuskäyttäytymisen #nudge-teoria #edelläkäyttäjät

## Preface

The basis for this research originally stems from my enthusiasm for studying and solving significant systemic challenges. I have always been passionate about the wellbeing of people and nature: Simultaneously, I have continuously experienced a frustration over the manifold problems we are facing in our society. These experiences, as well as a faith in the possibility of creating a change, led me to study first industrial design and then service and collaborative design on a strategic level at Aalto University. During my studies, I have also had the chance to spend a semester in the Oslo School of Architecture and Design, deepening my knowledge in systems-oriented design and design management.

Acquainted with this background and knowledge, I approached my thesis with a desire to make a strategic contribution to a critical challenge of our time: unnecessary consumption. I see overconsumption as a bottleneck issue for achieving a bigger positive change. Over the course of my studies, I have experienced the great power of design in creating change that extends to cultural and structural levels of our daily life, living environment and even society. I hope that a change in our consumption behaviors creates a snowball effect leading to improving working habits, decreasing housing costs, having more time for meaningful social life and ultimately positively affecting our priorities and values. I believe this is the recipe towards sustainable wellbeing and happiness.

The thesis has provided me a special opportunity to get to know and build networks with pioneers in sustainability in Finland and Sweden. These fantastic people truly inspire me to do my own bit in creating a change for the better. The thesis process has also opened my eyes for new sustainable practices which I had

not recognized before. In one way it can be stated that I have gone through a similar journey as the lead users of this research have (described in the findings section). However, no truly big change is created alone, and therefore we need to collaborate for creating a just and meaningful future, all different actors together. The workshop proposal of the thesis is offering a tangible step towards this goal. I believe that through discussion and understanding significant and unprecedented positive change can be achieved for everyone.

Doing this thesis has been challenging, intense and rewarding, and many people have supported me on this journey. I want to thank Aalto University School of Arts, Design and Architecture Support Foundation for funding the research, Sampsa Hyysalo and Jaana Hyvärinen for your guidance, and Andres Lucero for supervising and proofreading the thesis. This thesis has also benefited greatly from generous feedback from Tarja Knuuttila and Laura Savolainen, you rock! I am grateful to the participants who took time for telling their stories and all the others who have helped me on the journey. Finally, I want to express my gratitude to my family, including Antti, and my thesis advisor, Nuria Solsona Caba. I thank you for your support, advice and endless encouragement. It made all the difference!

**Saga-Sofia Santala**

Helsinki, February 2019

## Terminology

**Choice architect** | any person who alters the environment where people make decisions and, thus, affects the choices they make

**Choice architecture** | the environment where people make decisions and that affects the choices that people make

**Circular economy** | an aim towards a production and consumption loop of renewable resources, where no waste is created

**Consumer** | a user of a product or a service, who makes a decision of consuming something, but may not be the one paying for it

**Customer** | a client of a seller or supplier, who pays for a good, product or service

**Lead user** | a user that discovers and creates solutions to needs that others will experience only in the future

**Lead use expert** | an expert, who knows a specific field and understands lead user needs related to the field better than others

**Nudge** | any aspect of the choice architecture that pushes one into better decision-making, while still offering an option of avoiding it

**Overconsumption** | consumption beyond needs that stresses the wellbeing of nature and people

**Retail** | the process of selling consumer goods or services to customers

**Shopping center** | a facility that has a joint management and marketing, and typically operates in a single commercial building. It has at least 10 or more outlets and one or more anchors, i.e. considerably larger tenants who are intended to attract a substantial amount of visitors to a shopping center

**Sustainable** | refers to ecological sustainability in this research, i.e. something that does not burden the natural environment

**Sustainable consumption** | the opposite of overconsumption or unsustainable consumption, consumption that takes into account the wellbeing of nature

**Strong sustainable consumption** | ecologically and socially sustainable consumption: refers to avoiding unnecessary consumption and focuses on social rather than material consumption

**Upcycling** | upgrading useless material into products with increased value

**Zero waste** | an ideology and lifestyle that aims at creating as little waste as possible. A countermovement for overconsumption, focusing on ethical, ecological and sustainable aspects of consumption

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# 1 Introduction

*The first section gives an introduction to the thesis topic and its context. First, the relevance of the research topic is addressed by presenting the contradiction between consumption and sustainability in retail from an environmental perspective. Second, the research is positioned to existing research and the research questions as well as the objectives of the thesis are presented. Finally, the structure of the thesis is explained.*

## 1.1 The contradiction between consumption and sustainability in retail

Overconsumption is one of the most critical environmental and social challenges of our time, which is highly impacting the current environmental crisis (see also Dauvergne, 2008, p. 5; Vezzoli, 2018, p.xvii). Currently, there are over 7.6 billion people living on planet Earth. By 2050, the population is estimated to grow to over 9.7 billion (United Nations, 2018). It goes without saying that not only the consumption patterns, but also the consumption levels need to change (Vezzoli, 2018, p. xvii). This will become even more critical as the population on earth continues to grow, further challenging the carrying capacity of our planet. For the resources to suffice for the whole humankind, a rapid change towards sustainable consumption is needed, characterized by significantly less consumption.

While the environmental crisis is pushing businesses to make a change towards sustainability, shopping centers are still operating based on profit and growth-driven values, i.e. encouraging people to consume more than is necessary (see also Braungart and McDonough, 2008, p. 26). Meanwhile, approximately 30% of consumers report being highly concerned about environmental issues but struggle to turn this concern into environmental-aware purchases (Young, Hwang, McDonald, and Oates, 2010; Hughner, McDonagh, Prothero, Shultz, and Stanton, 2007; Grunert, and Juhl,

1995). This so-called attitude-behavior gap indicates that there is a considerable amount of potential sustainable consumers but help with turning intentions into action is still required. This represents a great opportunity for positive intervention by the retail sector.

Shopping centers have shaped consumer behavior by encouraging unnecessary consumption through the platform, i.e. choice architecture, that they provide. This indicates that they could, similarly, harness their platform to shift consumption behavior towards a more sustainable direction. Consequently, this thesis sets out to investigate the role of shopping centers as enablers of unnecessary consumption and the opportunities that shopping centers and retail might possess in solving the challenge of unsustainable consumption. This research focuses on a behavioral and natural environment aspect of sustainable consumption while, nevertheless, noting the interlinkage between the social and economic aspects, which cannot be separated from the matter of sustainable consumption (Dauvergne, 2008, p. 5; Crocker, 2017). The environmental impact of shopping centers is viewed from a consumer decision-making and retail choice architecture perspective, focusing on sustainable consumption behavior and the factors affecting it.

**“ This environmental sustainability should be a must. Otherwise, we soon will not have a planet to live on. This should not be run away from. This cannot be run away from.**

Minna, lead use expert

## 1.2 Research statement and objectives

There is already plenty of empirical work that describes the value and process of lead user studies (e.g. Franke, Von Hippel, and Schreier, 2006; Urban and von Hippel, 1988). Similarly, there are many studies combining nudging and sustainable consumption in the literature (e.g. Torma, Aschemann-Witzel and Thøgersen, 2018; Lehner, Mont, and Heiskanen, 2016). However, the research literature seems to lack studies investigating the value of lead user involvement in nudging change towards more sustainable consumption. This thesis attempts to fill the aforementioned research gap, by exploring the contribution of a lead user approach for nudging change towards more sustainable consumption in shopping centers.

The thesis sets out to investigate the topic of creating change towards more sustainable consumption in retail, more precisely in shopping centers, through the theory of nudging and with a lead user approach (Figure 1). Data related to drivers for adopting sustainable consumption behaviors as well as needs and solutions for practicing sustainable consumption (in retail) is created through semi-structured interviews with lead users of strong sustainable consumption. The findings are then analyzed in order to understand the drivers for adopting sustainable consumption behaviors and possible change requirements for retail, i.e. the best practices for nudging sustainable consumption behaviors in retail. An understanding of ways of nudging sustainable consumption behaviors, in order to solve the contradiction between consumption and sustainability in retail, is valuable both in industry (as a competitive advantage and as knowledge enabling survival) and to the body of empirical knowledge in the design field (for understanding the implications of a lead user and nudge approach in future-focused projects aiming at societal and behavioral change-making), but even more to the future and wellbeing of our planet and its inhabitants.

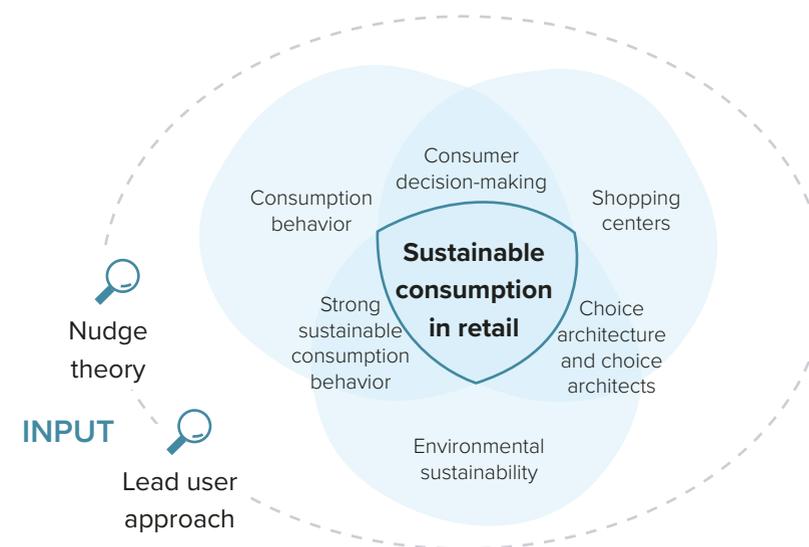


Figure 1. The theoretical framework of the study: three main themes and three sub-themes of the thesis, researched from a lead user perspective, aiming at a better understanding of ways of achieving more sustainable consumption in retail.

### 1.3 Research questions

The main research question of this thesis is:

1. **How can a lead user approach contribute to nudging a behavioral change towards more sustainable consumption in mass consumption environments, such as shopping centers?**

The main research question is supported by the following sub-questions:

- a. **Who are the lead users of strong sustainable consumption?**
- b. **How have these lead users adopted sustainable consumption ideologies, and what are their current needs and solutions related to strong sustainable consumption from a retail perspective?**
- c. **How can strong sustainable consumption behaviors be nudged in retail environments, more precisely in shopping centers?**

The sub-questions above frame the scope of the research and are studied through data gathered in semi-structured interviews with lead users. The last sub-question (c) is addressed especially in the design proposal section. Based on the findings, the main research question is finally discussed at the end of the thesis.

### 1.4 Structure of the thesis

The introduction discusses shortly the current state of overconsumption and the contradiction between sustainability and consumption in retail for creating a better understanding of the area of research. The second chapter focuses on the academic discussion around shopping centers, sustainable consumption, consumption behavior, nudging and lead user research. Shopping centers are viewed as a platform and

enabler of sustainable consumption. Also, the theory of nudging is discussed by focusing on the role that nudging could have in creating change towards more sustainable consumption in shopping centers. The third chapter describes the methods of data gathering and the lead user research process: Identifying lead users of sustainable consumption, semi-structured interviews, and affinity diagramming are presented in more detail. In the fourth chapter, the results are presented by introducing the lead user journey of adopting strong sustainable consumption behaviors and the needs and solutions of lead users in relation to practicing sustainable consumption. The fifth chapter describes the design proposal: The Retail Change-Makers Workshop, which is informed by the research findings. In the sixth chapter, the research questions are discussed in a broader context based on the research findings. Finally, conclusions of the main research findings, limitations, and further research suggestions are provided.

## 2 Literature review

*This section presents the academic discussion around the topic of sustainable consumption and shopping centers in the current literature on consumer behavior and behavioral change. The literature review looks into strong sustainable consumption and the attitude-behavior gap present in current sustainable consumption behavior. In addition, the theory of nudging, its possible role in retail, and the lead user approach for creating change towards sustainable consumption in future retail are reviewed.*

### 2.1 Sustainable consumption and shopping centers

Shopping centers represent a mass consumption environment (Mate, 2012) which, over the course of its existence, has been a significant driver of overconsumption. Overconsumption, in the context of this research, refers to buying more products (such as clothes, accessories, cosmetics and electronics provided in shopping centers) than are necessary in a materialistic sense. In this research, overconsumption is viewed as a fundamental cause of environmental problems (see also Thøgersen, 1995; Kütting and Herman, 2018). Since shopping centers have enabled overconsumption (Mate, 2012) and therefore played a key role in affecting consumption patterns and levels, shopping centers are consequently a relevant target for the study in question.

The research chooses to address *sustainable consumption* as defined by The Oslo Symposium in 1994, which describes sustainable consumption as:

“the use of goods and services that respond to basic needs and bring a better quality of life, while minimising the use of natural resources, toxic materials and emissions of waste and pollutants over the life cycle, so as not to jeopardise the needs of future generations.” (Ofstad et al., 1994)

This description summarizes the relevant challenges and required actions for achieving the goals of sustainable consumption. It also highlights the reasons why sustainable consumption is so crucial by emphasizing the otherwise negative consequences for future generations. This research mainly focuses on the natural environment aspect of sustainable consumption, while nevertheless noting the interlinkage between the social and economic aspects, which cannot be separated from the matter of sustainable consumption (Dauvergne, 2008, p. 5; Crocker, 2017).

The shift from sustainable consumption to unsustainable consumption occurred around 1970, when the first Earth Overshoot Day was reached; i.e. the humanity had used the natural resources that the planet can renew in a year before the end of the year (Global Footprint Network, 2018). Until 1970 both the per capita and total footprint of mankind had been sustainable (Toth and Szigeti, 2016). The first enclosed shopping center was opened in 1956 in Southdale Minneapolis, U.S.A., as a result of retail moving from market places and bazaars to arcades, department stores and supermarkets (Mate, 2012). Shopping centers have only existed in their current form for roughly 60 years, and during these 60 years The Earth Overshoot Day first appeared, and has subsequently arisen earlier each year, occurring on the 1st of August in 2018 (Global Footprint Network, 2018). It is interesting how general consumption has moved to an unsustainable level after this change, and it can be assumed that shopping centers have affected this change by shaping consumption behaviors (Mate, 2012).

### 2.2 Strong sustainable consumption as a direction for future retail

Sustainable consumption is a term that can be interpreted in multiple ways (Mate, 2012). It is also an umbrella term addressing a variety of key issues relevant for achieving sustainable

consumption. Simultaneously, it represents an environmental, social and economic challenge. According to Hobson (2013), sustainable consumption can be divided into weak and strong approaches. Weak approaches to sustainable consumption are based on improving the efficiency of the production-consumption nexus through, for example, technological innovation to continue economic growth. By contrast, strong approaches to sustainable consumption question the “current foci of ‘growth’ and ‘the economy’ with nonconsumption concepts and practices” through grassroot movements and communities to achieve “multilevel socio-political transformation that brings nonconsumption-based well-being to the fore” (Hobson, 2013, p. 1083; see also Lorek and Fuchs, 2013). Thus, weak approaches focus on efficiency, to do more with less, in order to maintain growth and high levels of consumption, whereas strong approaches focus on actual consumption patterns and levels by aiming at less consumption while disrupting the current profit-driven economic values. According to Lorek and Fuchs (2013), “[d]egrowth is impossible to achieve without a turn towards strong sustainable consumption”. Since this research focuses on unnecessary consumption, it primarily emphasizes the strong approach.

Achieving strong sustainable consumption requires collaboration between different stakeholders. Krantz (2010) identifies three areas for creating a systemic change towards more sustainable consumption, preferably as a collaboration between different stakeholders across the value chain. These areas are consumers, businesses, and policy and landscape. He points out that all of these areas need to change in order for us to achieve more sustainable consumption: consumers should lead more sustainable lifestyles, businesses should be driven by new business models and values embracing sustainable consumption and delivering more with less, and governments and regulators should accelerate sustainable consumption on local, national and global levels (Krantz, 2010). According to Krantz, “consumers

are ultimate drivers of demand and consumption”, and therefore he finds exploring ways to lead consumers towards a more sustainable lifestyle a logical place to start (2010, p. 8). This thesis focuses on consumption patterns and more precisely on how to achieve *strong sustainable consumption*, i.e. less consumption by consumers. The research focuses on the behavioral aspect of consumption, and therefore other sustainability aspects, such as the sustainability of shopping center buildings, are not considered.

### 2.3 Attitude-behavior gap in consumption behavior

Mate (2012) suggests that consumption behavior has changed simultaneously with the change of retail environments: While retail changed from market places and bazaars to shopping centers, an attitudinal change towards consumption took place, moving from necessity to leisure (Mate, 2012). At the same time, overproduction and overconsumption grew massively, enabled partly by the industrial revolution (Braungart and McDonough, 2008, pp. 18–26). Currently, the consequences can be seen in the natural environment, carrying the heavy weight of our actions (Dauvergne, 2008, p. 5).

According to Thøgersen (1995), “A number of the environmental problems threatening our habitat are to a greater or lesser extent caused by present consumer lifestyles” and obtaining more sustainable lifestyles would require significant changes in the attitudes and behaviors of consumers (p. 345). Also, Jackson (2005) suggests that consumer behavior, i.e. the consumption related actions and choices taken by people, is the key to the environmental impact caused by the society (p. v). According to Hertwich and Peters (2009) “Globally, 72% of GHG emissions are related to household consumption; the rest of the emissions come from government consumption and investment”. This evidence indicates that changing consumption behavior possesses a

significant opportunity for creating change towards sustainability. There are also opinions against the impact of consumption behavior, but this research chooses to assume, based on the aforementioned statements, that consumption behavior in addition to other actions (such as sustainable production) is the key for a sustainable change. Consumption behavior also provides a good focus-point, when considering the role of shopping centers in creating change towards strong sustainable consumption.

In the field of sustainable consumption behavior, there is a strong *attitude-behavior gap* (Torma, Aschemann-Witzel and Thøgersen, 2018, p. 142); i.e. a difference between what people think and what they do is strongly present in the consumption behavior of people. Sometimes also the term attitude-intention-behavior gap or value-action gap is used (see Follows and Jobber, 2000; Gupta and Ogden, 2006; Darnton, 2008; Carrington et al., 2010; Terlau and Hirsch, 2015). According to Young et al. (2010, p. 18), the attitude-behavior gap is “where 30% of consumers report that they are very concerned about environmental issues but they are struggling to translate this into [environmental-aware] purchases”. Also, Torma et al. (2018) suggest that people perceiving sustainable consumption as a part of their self-identity, do sometimes behave counter to their quintessential intentions (p. 142). This indicates that there is a considerable amount of potential sustainable consumers out there but help with practicing it is still required. An ecological offering does not suffice: also help with making sustainable decisions is needed.

The attitude-behavior gap is seen to be derived partly from two distinguishable cognitive systems affecting our decision-making (Evans, 2003; Torma, Aschemann-Witzel and Thøgersen, 2018, p. 142). These two systems are often referred to as ‘system 1’ and ‘system 2’ in psychology. The ‘System 1’ operates quickly and

is both intuitive and emotional, whereas, ‘System 2’ is slow and conscious, often present in deliberate, effortful mental activities. (Kahneman, 2011, p. 21) According to the aforementioned, attitudes can be seen to stem from ‘System 2’, whereas, actual behavior is often the result of the automatic ‘System 1’. People make decisions every day, and according to Kahneman (2011), the majority of these decisions are made based on the effortless, automatic System 1. This shows that the majority of decisions are made based on emotions rather than rational thinking, meaning that in order for people to make rational sustainable consumption choices, situations and environments that support sustainable attitudes as well as attitude-based decision-making are required.

## 2.4 Behavioral change: The Nudge theory

Unsustainable consumption is a phenomenon driven by behavior, and therefore change towards more sustainable consumption requires a *behavioral change*. Since the literature on factors affecting human behavior is rather extensive, this thesis approaches behavioral change through the *theory of nudging*. Nudging is a theory of decision-making and changing human behavior (Thaler and Sunstein, 2009). The nudge theory draws from behavioral science and behavioral economics. It became known to the bigger public in 2008, when Richard Thaler and Cass Sunstein published their book *Nudge* (Kosters and Van der Heijden, 2015, p. 276; for the book see Thaler and Sunstein, 2009). The theory is constantly gaining more interest among people and policy, making it a current and relevant topic for further research. Also, according to Lehner, Mont and Heiskanen (2016), nudging is a “useful strategy for inducing changes in context-specific behaviour” (p. 166), which makes it an interesting theory to examine in this research due to its possible impact on creating behavioral change in the context of shopping centers.

The nudge theory builds upon the idea of nudges. According to Thaler and Sunstein (2009), a *nudge* is “any aspect of the *choice architecture* that alters people’s behaviour in a predictable way without forbidding any options or significantly changing their economic incentives” (p. 6). The theory forms around human fallibility and known cognitive biases (such as the status quo bias, the availability heuristic, framing, anchoring and inertia (Thaler and Sunstein, 2009; see also Tversky and Kahneman, 1974; Tversky and Kahneman, 1981), which are used for nudging people towards desired behaviors (Thaler and Sunstein, 2009). Many nudges are aimed at making people’s life more simple and safe through gently guiding people, nevertheless, still allowing people the option of avoiding these nudges (Sunstein, 2014, p. 584); i.e. Nudges are not mandates: Banning something or forcing a decision on someone does not count as a nudge (Thaler and Sunstein, 2009, p. 6). Examples of a nudge can be a text message reminding of a doctor’s appointment, the alarm clock, the “Food Plate” that presents a healthy meal in a simple way, or fruits in the beginning of a line instead of after more unhealthy food (Sunstein, 2014, p. 584; Thaler and Sunstein, 2009). Another nudge, that has gotten enormous attention in the past few years, is the fly sticker in men’s urinals. It has successfully shaped human behaviors, while also being low-cost and non-contentious: the urinal fly has been estimated to keep bathrooms up to 50-85% cleaner and, therefore, saving 8% of cleaning costs for public toilets, depending on the source of information (Evans-Pritchard, 2013). This shows the power of a nudge: it can be very affordable and easy to implement and still highly effective.

Nudging is based on libertarian paternalism; the idea that the choices of people can be influenced “in a way that will make choosers better off, as judged by themselves” (Thaler and Sunstein, 2009, p. 6; Thaler, Sunstein and Balz, 2014). The matter of libertarian paternalism in the nudge theory is a vividly debated concept, which has attracted both positive and negative

attention (Sunstein and Thaler, 2003; Hausman and Welch, 2010; Saghai, 2013, p. 488; Kusters and Van der Heijden, 2015, p. 276). Critics argue that limiting choices compromises the freedom of choice, and further question the ethics of utilizing flaws in human judgement to influence people’s behavior (Saghai, 2013, p. 488; Kusters and Van der Heijden, 2015, p. 276). Thaler and Sunstein (2009) justify the idea of influencing people’s decision-making by addressing that people often make bad decisions due to different kinds of limitations, i.e. cognitive biases, and therefore a well-designed choice architecture can guide their decision-making for their own good, while simultaneously maintaining the freedom of choice. They point out that “[l]ibertarian paternalism is a relatively weak, soft, and nonintrusive type of paternalism because choices are not blocked, fenced off, or significantly burdened” (Sunstein & Thaler, p. 6). Thaler and Sunstein (2009) state that the best protection against improper choice architecture is to preserve the freedom of choice (p. 12; see also Sunstein, 2015).

## 2.5 Retail and the future of shopping centers

In order to understand better the prospective role of shopping centers for nudging change towards more sustainable consumption, it is important to first understand the current state of shopping centers and their possible role in creating the required positive change. This chapter studies the prevalent circumstances of retail by shortly addressing how the role of shopping centers has evolved over the course of its existence and what the future of shopping centers entails.

Tauber (1995) states that marketplaces have traditionally served as a center of social activity. According to Mate (2012), also shopping centers were originally created as social meeting places besides shopping. The first shopping center in Southdale Minneapolis, designed by Victor Gruen, together with its surroundings, was intended to replicate a small version of a city center; replicating

markets and town squares and situating the concept of a shopping center with other services and activities such as offices and schools. (Leong, 2001; Mate, 2012) On the other hand, Lebow (1955) states that shopping centers were created as a response to the mass consumption approach of the time: people were demanded to make consumption their way of life, turn it into rituals and achieve satisfaction through consumption. This was a means for retailers to increase sales and compete with other retailers and optimally achieve a monopoly (Lebow, 1995). Finally, the profit-driven values of the economy turned shopping centers into bastions of mass consumption (Mate, 2012). Koolhaas (2000) summarizes the current social role of shopping centers: “[s]hopping has become one of the only means by which we experience public activity. It in many cases determines, sustains and defines the identity of an institution, or a city.”

In recent years, retail has been undergoing a significant change. Online retail has increasingly taken over sales activity from physical retail and changed the preferences as well as habits of consumers. As a result, traditional shopping centers are fighting for their existence (Glennen, 2017; Mate, 2012; Sanburn, 2017). A phenomenon of increasing empty shopping centers, called The Dead Mall Syndrome, has taken place in the past decade (Mate, 2012). It has been especially present in the US, where over 6400 retail stores closed in 2017 and another 3600 stores were expected to close in 2018 (Hanbury, 2018; Peterson, 2018; Mate, 2012). This significantly affects the success and the number of shopping centers, since the income of shopping centers depends on their tenants. According to a report done by Credit Suisse (2017), 20% to 25% of malls are expected to close by 2022. Simultaneously, they expect eCommerce to grow from 17% to 35% of industry sales (Credit Suisse, 2017). This will indisputably affect shopping centers, but experts believe that the need for physical retail environments beside the online retail will still be relevant in the future; Although, in another form. For example, the managing

director of Finnish Council of Shopping Centers, Johanna Aho, states that people have a need to come together and meet other people (Paakkanen, 2018). She also points out that “[t]he ongoing trend is to provide non-retail uses by increasing leisure in shopping centers and also in town centre regeneration” (Finnish Council of Shopping Centers, 2018, p. 6; see Finnish Council of Shopping Centers, 2018 also for more information about shopping centers in Finland and related statistics).

### Three case examples of current sustainable shopping center initiatives

Currently, the trend of sustainability can be seen in many new shopping center initiatives. For example, the world’s first zero carbon footprint shopping center is planned to open in Melbourne, Australia in 2020 (Frasers property Australia, 2018). Its developers aspire “to make it the first retail development in the world to achieve the Living Building Challenge (LBC) certification”, thus, “having zero carbon footprint; zero waste; produce more electricity and water than they use; grow agriculture on 20 per cent of the site; and are built using non-toxic and recycled materials” (Bliszczyk, 2018).

Another interesting example of the current direction of shopping centers is the world’s first recycling shopping center ReTuna in Eskilstuna, Sweden, opened in 2015. It is a shopping center that sells only ecological, recycled or upcycled products (Figures 2, 3 and 4). The shopping center collaborates closely with the local recycling center, which provides the materials for the businesses selling products in ReTuna. A significant amount of the products is upcycled (recycled by increasing the quality of the original product) from products given away by their previous owners. ReTuna is a great example of a shopping center implementing circular economy and environmental values in their core functions and business model.

A third interesting example is the shopping center Redi, which opened in Helsinki, the capital of Finland, in September 2018. Redi has some fascinating sustainable initiatives: there is Wefood, the first supermarket in Finland to sell surplus food (with cheaper prices), operated by the Finn Church Aid and volunteers (Figure 5); a recycling point, where people can recycle resources such as plastic, textiles and glass; as well as the Rakkaudesta Kaupunkiin shop, where people could buy goods with kind deeds during the opening week of Redi and possibly again in the future (Figure 6) (“REDIn vetonaula,” 2018; [www.redi.fi](http://www.redi.fi)). The aforementioned examples show a trend towards more sustainable consumption in retail through initiatives that enable sustainable consumption behaviors rather than focusing only on encouraging more unnecessary consumption.

*Continued on page 23.*



*Figure 2.* The corridors of ReTuna, the recycling shopping center in Eskilstuna, Sweden, are decorated with recycled furniture, artifacts and materials provided by local people.



*Figure 3.* The shop owners sell only ecological, recycled or upcycled products in their shops in ReTuna. This shop owner sells new but ecological plants, while most of the rest of her assortment is recycled.



*Figure 4.* Also, the cafeteria in ReTuna is decorated with recycled material. An old bicycle has been turned into a trendy decorative item that blends in with the rest of the decoration. In the background, there is an example of a shop name (ReModa) that reflects the recycled assortment.



Figure 5. The surplus food sold in Wefood at Redi depends on the excess food generated in other food shops in Helsinki.



Figure 6. The Rakkaudesta Kaupunkiin shop, where buying goods occurs through kind deeds, was open in Redi in September 2018. The products offered in the store were donated by different retailers in Redi.

## 2.6 Nudging sustainable consumption behaviors in shopping centers

Shopping centers provide an environment for consumption related decision-making; Consumers make consumption decisions based on the choices that are provided for them in a shopping center. According to Young, Hwang, McDonald & Oates (2010), every time a purchase decision is made, or not made, it will contribute to more or less sustainable consumption: This is due to the “ethical, resource, waste and community impact implications” of buying something. This indicates that shopping centers possess great potential for shaping sustainable consumption behaviors. However, more knowledge of the choice-making environment of shopping centers as well as the shopping motives of consumers is still required in order to understand ways of nudging sustainable consumption behaviors in shopping centers.

According to Tauber (1995) people may shop for several reasons other than a need for a product or a service. He categorizes the shopping motives identified through his research into personal and social motives. The personal motives include matters such as fulfilling the expectations deriving from the role one has in the society, diversifying daily routines and achieving a form of recreation, and achieving self-gratification through the process of buying. In addition, learning about new trends, physical activity and sensory stimulation are mentioned as personal motives. The social motives include social experiences, communicating with others, peer group attraction, status and authority stemming from being served, and the pleasure of bargaining (Tauber, 1995). Also, Hirschman and Holbrook (1982) state that consumers do not shop merely for goods and services but also for reasons related to experiences and emotions. Applying this evidence to the context of shopping centers, it can be concluded that people visit shopping centers for many reasons. The evidence also suggests that at least part of the purchase-decisions is made based on a

want rather than a true need which also leads to unnecessary consumption of valuable natural resources as a result of unsustainable consumption behavior.

Shopping centers shape consumption behavior through the choice architecture that they provide. This means that the shopping center environment leads the consumption decisions of people by different nudges; intended or unintended ones (see also Langrehr, 1991). Sunstein (2014) emphasizes that generally “some kind of social environment (or “choice architecture”), influencing people’s choices” is always present (see also Thaler & Sunstein, 2009, p. 11). Interesting examples of existing nudges from the retail field are, for example, the nudges provided by Alko and S-market. They have recently provided signs that highlight the sustainable and/or ecological options in their shelves (Figures 7 and 8). These signs simplify sustainable decision-making by bringing relevant information to the fore; simultaneously, decreasing effort required for searching for sustainable choices.

The choice architecture where decisions are being made is provided by different retail actors operating in a shopping center. In the context of this study, these actors, such as retailers and shopping center owners, can be called *choice architects*. A choice architect is any person, who creates something that affects the decisions people make (Thaler, Sunstein and Balz, 2014), i.e. nudges are created by choice architects. This allows a stark power to the retail actors, who create the environment for decision-making in shopping centers. In addition, Chkanikova et al. (2013, p. 9) point out that “[r]etailers have a key role to play in the transition towards sustainable consumption and production” (see also Jones, Hillier and Comfort, 2011). The argument is supported by factors such as “size, consolidated bargaining power, global outreach associated with transnational structure of procurement chains, and strategic positioning at the intersection between supply chain players, especially between producers and



Figure 7. S-market nudges people into buying organic products by highlighting the organic options in their stores.



Figure 8. Alko provides additional information about e.g. sustainability related qualities of a product. By this, they ease sustainable decision-making and, therefore, nudge people towards more sustainable choices and behavior.

consumers” (Chkanikova et al., 2013; see also Jones et al., 2011). Based on the aforementioned, it can be argued that shopping centers provide a relevant and powerful context for nudging sustainable consumption behaviors. Similarly, being a relevant link in the supply chain, changing shopping centers to enable more sustainable consumption could highly contribute to solving the environmental problems by changing the way we consume.

## 2.7 Lead users as a source for creating change

In order to understand how to nudge change towards more sustainable consumption in the context of shopping centers, there is a need to first understand the future outlooks of (sustainable) consumption behavior. This includes an understanding about consumer needs as well as ways in which shopping centers possibly need to change in order to respond to these needs. In order to create a change towards sustainability, a vision about ways to get there is required. Thus, people who have already solved these issues in their own lives possess an interesting target group for further research. This is where a *lead user approach* appears promising. The following paragraphs describe the special characteristics of lead users and look at the value of lead user involvement in future-focused projects.

Von Hippel (1986) defines lead users as individuals or firms who display two specific characteristics:

- They face new product, process or service needs months or even years before they become general in a marketplace, and
- They are expected to benefit significantly from a solution to their needs, and therefore they also often develop solutions to their own needs which the markets have yet to satisfy (p.796).

According to Churchill, von Hippel, & Sonnack (2009) it is important to understand that lead users do not equal *early*

*adopters* (p. 7). Early adopters are among the first people to purchase an existing product or service, whereas lead users face needs that are yet to be satisfied by the market (Churchill et al., 2009). Figure 9 clarifies the leading edge position of lead users in relation to other categories of users.

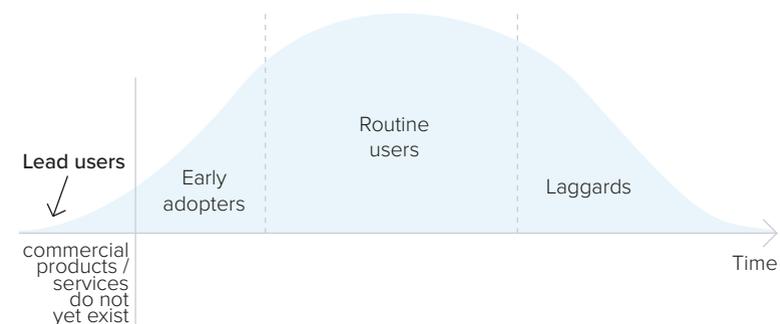


Figure 9. The position of lead users in relation to other categories of users (Churchill et al., 2009, p. 7).

Churchill et al. (2009) suggest that lead users “live in the future”: They face challenges that the markets are not yet satisfying, which leads them to aiming at solving these challenges by themselves. In other words, instead of having to imagine the future needs of people, they actually understand the future by having “real-world experience with future market ‘conditions’” (Churchill et al., 2009, p. 8). This makes it easy and meaningful for lead users to innovate solutions, while these solutions can be highly attractive to the majority of people facing the same challenges much later (Von Hippel, 2006, p. 23). According to Churchill et al. (2009), average users are not usually able to identify their future needs or desires with any accuracy (p. 5). Thus, the lead users possess unique information about the future market conditions (Herstatt and Von Hippel, 1992, p. 8).

Currently, retail and shopping centers are facing great challenges that challenge their existence and role, putting them under the pressure of change. Since there is no evidence of the current practices leading to a sustainable future fast enough, novel and tangible solutions are needed for creating and achieving an urgently needed change towards sustainable consumption in retail. According to von Hippel (1986), especially, when novel and innovative ideas are sought, lead users are a valuable asset, because of their typicality to aim to solve the need they experience. Thus, when conducting research on lead users, both the need information and solution data is relevant (Churchill et al., 2009, p. 6). This research is interested in the consumption-related ideology formation, needs, and solutions of lead users of strong sustainable consumption, in order to create a vision for sustainable consumption in retail and to understand ways in which a behavioral change towards more sustainable consumption can be created. This information is also expected to help with understanding the possible role of shopping centers both in building this future of sustainable consumption as well as serving the changing consumer needs. From a business perspective, this could serve as risk management and preparation or even forming of the future of retail.

## 3 Research and methodology

*In this section, the methods and techniques used in the data collection and analysis are explained. First, the process of identifying and involving lead users in the research are addressed. Second, the research methods (semi-structured interviews using design probes) and process are presented and argued for. Finally, the data analysis technique (affinity diagramming) is discussed.*

### 3.1 A lead user approach for nudging strong sustainable consumption behaviors in shopping centers

The literature review addressed the role of overconsumption in causing an environmental crisis, hence, creating a need for more sustainable consumption. The trend of strong sustainable consumption was identified. Similarly, shopping centers were identified as a relevant and possibly powerful context for nudging sustainable consumption behaviors, and therefore relevant in creating change towards more sustainable consumption. In order to understand ways for nudging strong sustainable consumption behaviors in shopping centers, lead users were identified as a promising source for providing tangible ideas of how to get there. Thus, a qualitative lead user approach was chosen for investigating the main research question: How can a lead user approach contribute to nudging a behavioral change towards more sustainable consumption in mass consumption environments, such as shopping centers?

Von Hippel (1986, p. 797) suggests the following four-step process for a lead user research:

1. Identify an important market or technical trend;
2. Identify lead users who lead that trend in terms of  
a.) experience and b.) intensity of need;
3. Analyze lead user need data;
4. Project lead user data onto the general market of interest.

This process, suggested by von Hippel, starts with identifying important trends as well as key customer needs, and then moves from identifying relevant lead users to understanding their needs and solutions, finally projecting the gathered data onto the general market of interest (von Hippel, 1986; Hyysalo et al., 2014, p. 4; Churchill et al., 2009, pp. 27–46). Often in lead user research and projects, also improving or generating innovative concepts with lead users in the form of a workshop takes place (Hyysalo et al., 2014, p. 4; Churchill et al., 2009, pp. 27–46). However, due to the nature of the topic in question as well as limited time-resources, the main focus of this study is in creating an understanding about the lead user needs and solutions, thus creating a vision for strong sustainable consumption in shopping centers.

The aforementioned structure is applied in the context of this research roughly as follows: First, a literature review and *lead use expert* interviews are conducted. Second, the main data gathering, i.e. interviews with *lead users*, take place. Third, the lead user interview data is analyzed (findings are presented in section 4), and finally the lead user data is applied (in a design proposal in section 5) and discussed in a broader context (in section 6). The research followed the aforementioned structure, but in this methodology section the research is presented in a thematic order for avoiding excessive repetition of the many rather identical procedures of the research process.

### 3.2 Sampling: Identifying lead users of strong sustainable consumption

Many experts highlight the importance of identifying the right individuals in a lead user research (von Hippel, 1986; Churchill et al., 1992; Hyysalo et al., 2014). According to Churchill et al. (1992, p.25), “[t]he best lead users are usually too rare to be efficiently found through questionnaire screening” and “lead users with very valuable information are often found in advanced

analog industries or in totally different fields.” This suggests that identifying lead users is a challenging and crucial task, which will highly affect the quality of a lead user research (see also Hyysalo et al., 2014). Therefore, great emphasis was placed on identifying the relevant lead users.

The lead use experts of this study were identified through multiple methods (Mäkinen et al., 2013; Hyysalo et al., 2015): discussions with people, through web searches, and by snowball sampling. Snowball sampling is a type of purposive sampling which relies on finding and recruiting interviewees, who possess specific qualities, through other people and/or interviewees (for snowball sampling see e.g. Goodman, 1961; for purposive sampling see e.g. Tongco, 2007). The focus was on selecting interviewees who had specific knowledge about physical retail, online retail, sustainable consumption and production, and/or shopping centers. A prompt background research on the participants was conducted before the interviews, in order to ensure that the participants were suitable for the purposes of the study. The background research also guided the focus and the forming of more precise themes and questions for each interview based on the interviewees’ special knowledge and expertise. The chosen lead use experts were a retail consultant, a professor of sustainable consumption and production, a global growth hacker from a popular online second hand clothing app and a mall manager from a Swedish recycling shopping center.

The lead users of this study were also identified through multiple methods: the lead use expert interviews, discussions with people, through searches on the web and by snowball sampling. The eventual participants were chosen using criteria formulated according to von Hippel’s (1986) guidelines for identifying lead users. In order to be counted as lead users of strong sustainable consumption, the potential interviewees needed to meet the following two criteria:

- They should aim to decrease their own level of consumption and show some concrete success in it, and
- They should significantly affect others’ levels of consumption by providing solutions to the challenge of consuming sustainably.

The lead users identified and recruited for the study were so-called influencers. They were actively present in social media, promoting strong sustainable consumption, founding sustainable initiatives, leading social movements and visibly discussing or questioning the current state of the planet and actively disrupting current consumption patterns. Half of the lead users represented their private self, and the other half provided also business perspective to the topic. They provided insights from different perspectives, such as: male, female, single, parent, single parent, lifestyle, business, company, social movement, association, novice and expert perspectives (see Table 1 for interviewee details). This variety of perspectives, i.e. a heterogenous research sample, was achieved through purposive sampling. The variation was used for covering the topic of strong sustainable consumption as comprehensively as possible as well as for producing more generalizable insights based on the collected data (Eskola and Suoranta, 1998, pp. 272–273). In order to create change towards strong sustainable consumption more widely in the society, considering different life situations and needs and requirements of a more general population plays a critical role in a successful implementation of a change, since the targeted consumers for future strong sustainable consumption are also from all kinds of backgrounds.

### **3.4 Data collection methods and process: Semi-structured interviews using design probes**

Semi-structured interviews were used as the method for data collection, providing a powerful and flexible tool for capturing

**Table 1.**  
*Interviewee details*

<i>Name</i>	<i>Relevant title/occupation</i>	<i>Main area of knowledge</i>	<i>Location</i>
Minna Pyötiä*	Retail Consultant	Lead use expert Retail development and sustainability in retail	Helsinki, Finland
Miikka Virtanen	Global Growth Hacker (Zadaa)	Lead use expert Online retail, second hand clothing, circular economy	Helsinki, Finland
Jouni Juntunen	Professor of sustainable consumption and production (Aalto University)	Lead use expert Sustainable consumption and production, sociology of consumption	Helsinki, Finland
Anna Bergström	Mall manager and co-founder (ReTuna Återbruksgalleria)	Lead use expert Second hand shopping center business models, circular economy	Eskilstuna, Sweden
Otso Sillanaukee	Blogger (Nollahukka), author of <i>Zero Waste - Jäähvyäiset jätteelle</i>	Lead user Zero waste, strong sustainable consumption, slow living	Tampere, Finland
Aino Kämäräinen	Blogger (Kokonainen elämä edessä, Nollahukka)	Lead user Zero waste, strong sustainable consumption	Espoo, Finland
Susanna Luukinen	Vice-Chairman (Zero Waste Finland ry), blogger (Ekoeleganssi)	Lead user Zero waste, strong sustainable consumption, minimalism	Helsinki, Finland
Johanna Kohvakka	Chairman, (From Waste to Taste ry), founder (e.g. Restaurant Loop, Cleaning Day)	Lead user Circular economy, social movements, sustainable initiatives and businesses	Helsinki, Finland
Pauliina Seppälä	Producer and founder (e.g. Yhteismaa, Cleaning Day, Nappi Naapuri, mesenaatti.me)	Lead user Sharing economy, social movements, sustainable initiatives	Helsinki, Finland
Noora Shingler	Journalist, blogger (Kemikaalicocktail), host (Kuningas-kuluttaja in 2005-2008)	Lead user Toxic chemicals, sustainable consumption behavior, media production	Helsinki, Finland

(\*name is changed)

the meaning people make of their experiences (Rabionet, 2011, p. 563). This meant interviews that had predefined themes and beforehand prepared interview questions but were not limited to these questions. First, four lead use expert interviews were conducted in order to gain a more holistic understanding about sustainability in retail. The interviews were conducted face-to-face (in Finnish), apart from one that took place over the phone (and was conducted in English), and they lasted for approximately 60 minutes. The interviewees provided specialized information about matters such as retail, circular economy, sustainability and/or consumption behavior. The data from the interviews was analyzed along the interview process, and new interviewees were recruited based on missing information, in order to fill in gaps, for achieving a coherent and balanced understanding of the bigger picture of consumption, retail and sustainability. Achieving saturation, i.e. gaining a comprehensive understanding about the research topic of this thesis, guided the amount of lead use expert interviews.

In the end of each lead use expert interview, except for one phone interview, a card sorting exercise was conducted in order to identify relevant megatrends affecting the future of retail and to inspire discussion (for card sorting see Conrad and Tucker, 2019). This so-called design probing was used as a method for achieving a better understanding of the complex phenomenon of sustainable consumption in retail and trends related to it, highlighting the personal perceptions of the lead use experts (Mattelmäki, 2008; Lucero et al., 2007). The participants were asked to select from 50 megatrend cards the ones they found most relevant when considering the future of retail (Figure 10). These cards were prepared beforehand, and the megatrends were identified based on web searches and publications related to the future of retail and global megatrends, such as the work of Sitra (Sitra, n.d.). The cards were in four different colors in order to ease the selection from four different categories: economic,

social, environmental, and technical (see Appendix A for an example of the megatrend cards). In addition, there were grey empty cards that the participants could use for adding possible missing megatrends. The exercise was placed in the end of the interview in order to avoid leading the interviewees during the interviews.

When a comprehensive understanding about the research topic was gained through the lead use expert interviews (i.e. a saturation was achieved) the research moved to the next part: the lead user interviews. This saturation was noticed by the same aspects starting to repeat themselves (Eskola and Suoranta, 1998). Together with the literature review, the lead use expert interviews provided a deeper and a more systemic understanding of sustainable consumption and retail in general. Simultaneously, they formed the basis and the focus for the lead user interviews (i.e. the gathering of the main research data) by highlighting the interesting area and trend of strong sustainable consumption behaviors among consumers.

After the lead use expert interviews, lead user interview invitations were sent through email or Instagram to eight lead users, of which six participated in an interview. The six lead user interviews were conducted (in Finnish and) either on the phone, on Skype or face-to-face, depending on what was convenient for the interviewees. The interviews lasted for approximately 45–75 minutes and focused on investigating the consumption ideology journeys, needs and solutions of the lead users in order to examine opportunities for nudging change towards strong sustainable consumption in retail, more precisely shopping centers. Another purpose was to gain an understanding about possible needs of future consumers (see Appendix B for an example of lead user interview questions).



*Figure 10. Card sorting with lead use experts: addressing relevant (mega)trends affecting the future of sustainable consumption in retail and visioning probable, undesirable and desirable future scenarios for retail from a consumption behavior and sustainability perspective with megatrend cards.*

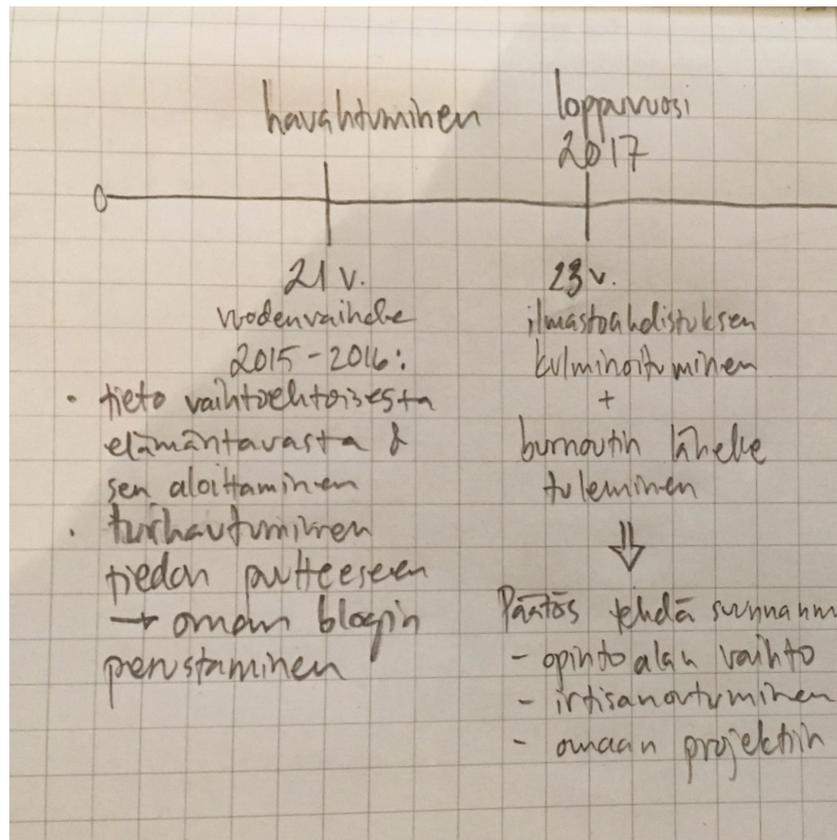


Figure 11. Timeline probing: consumption ideology journeys of lead users. A majority of the lead user interviews were conducted as phone interviews and therefore participants sketched a timeline during the interview and sent a picture of it afterwards.

Before or during the interviews, lead users were asked to draw a timeline of the critical moments that have shaped their consumption ideology and/or behavior (Figure 11). The timelines enabled gaining a better understanding about how the lead users had adopted a sustainable mindset and lifestyle as well as deeper discussions about change-making moments. In the interviews, these moments were elaborated on and the current needs, challenges and solutions related to strong sustainable consumption were discussed. In the end of the interviews, the role of retail and shopping centers was discussed and preliminary ideas for change were addressed. The interviews were documented by pictures and voice recordings, for which an informed consent form was signed (or in the cases of remote interviews, a spoken permission was recorded) before each interview (see Appendix C for Informed consent form). The interviews were transcribed right after each interview in order to increase the reliability of the findings and to go through all the nuances of the answers afterwards.

### 3.5 Data analysis technique: Affinity diagramming

A vast amount of data was gathered through the interviews, and therefore affinity diagramming was chosen as the data analysis technique. Affinity diagramming is a technique used for organizing and making sense of large amounts of unstructured qualitative data, thus making it a relevant analysis technique for this research (Lucero, 2015). Before clustering the insights, the interview transcriptions were read through and important findings were highlighted. After this, the findings were written on sticky notes and clustered based on repeating patterns into smaller themes. The affinity diagramming was performed first for the lead use expert interviews and later for the lead user interviews.

The lead use expert interviews produced 382 sticky notes with findings, which were clustered into themes based on similarity and

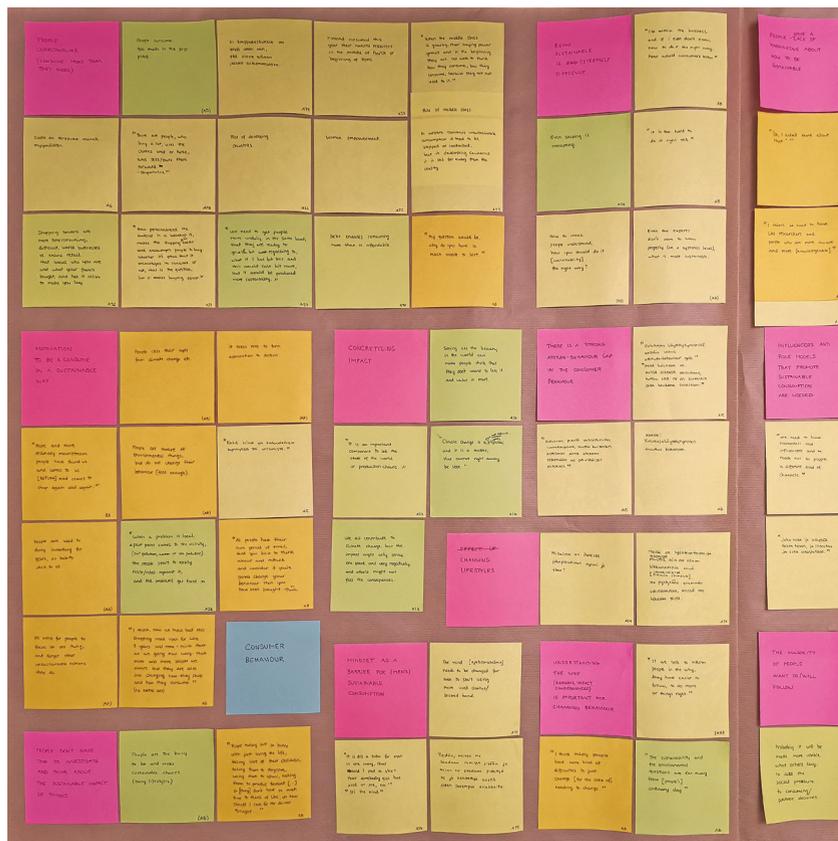


Figure 12. Affinity diagramming for the lead use expert findings, round 2.



Figure 13. Affinity notes of the lead user interviews. A4 papers helped in having control over the magnitude of notes.

repeating patterns. The clustering was performed in two rounds, finally leading to 79 sub-themes and six (6) main categories related to sustainable consumption in retail. These main categories were consumer behavior, laws of retail, sustainability in retail, role of businesses, role of policy, and the effects of digitalization. The insights provided a holistic understanding about the phenomenon of sustainable consumption in retail as well as knowledge about trends and factors affecting it. They also provided understanding about challenges and requirements related to achieving sustainable consumption in shopping centers. Based on these findings, the focus on consumption behavior and the role of business actors in creating change towards strong sustainable consumption in retail was chosen. These insights also informed the lead user interviews: They helped with identifying the essential lead users as well as with forming relevant interview questions for the lead user interviews.

The lead user interviews produced 440 sticky notes with findings, which were then clustered. During the clustering, repeating patterns related to the ideological journeys of the lead users as well as their needs and solutions connected to strong sustainable consumption were identified. Also, the role of shopping centers in serving these needs was addressed from a lead user perspective. The next chapter elaborates on these findings.

## 4 Findings and analysis

*In this section, the research findings are presented and analysed in order to describe the phenomenon of strong sustainable consumption from a lead user perspective. The section starts with describing the background and characteristics of the interviewed lead users of strong sustainable consumption in order to shed light on the factors that might have affected their journey towards sustainable consumption. After this, the lead user journey of adopting strong sustainable consumption behaviors as well as the needs and solutions of the lead users for practicing sustainable consumption are addressed. In the end of this section, the future aspect of consumption with a focus on shopping centers is addressed from a lead user expert and lead user perspective. Most of the extracts in this section are paraphrased from Finnish to English, in order to maintain the voice and feelings of the interviewees.*

### 4.1 Lead users of strong sustainable consumption: Background and characteristics

Even though today the lead users are highly aware of matters related to strong sustainable consumption, this has not always been the situation. The lead users come from rather different backgrounds and the role of consumption has varied in their families. Sustainable consumption has not been an interest or translated into action of all of the lead users originally. One lead user described his background as follows:

Extract 1.

*I come from a traditional family, upper middle class. Consumption was a central part of our family life, we traveled a lot. (Otso, lead user)*

This gives a reason to assume that in order to become a lead user of strong sustainable consumption, a sustainable background is not required. Despite the differences in their background, all the

lead users are highly educated. Most of them have studied or are currently studying either social sciences or business.

Extract 2.

*I was first studying business, but then ended up studying social policy and graduated from there. (Pauliina, lead user)*

Maybe due to their academic background, a common characteristic among the lead users is that they seek for knowledge in order to understand better matters that perplex them. All the participants mentioned reading as a significant means for getting information. Both academic articles and social media links provided by social networks were identified as sources for information. Also, all the lead users expressed characteristics of being critical towards knowledge. The lead users question matters and search for information in order to find correct answers.

Extract 3.

*I question and do research on these matters. (Johanna, lead user)*

The interviews show that the lead users are proactive by their nature. They are visionary and not afraid to pursue their visions. One lead user talked about having a vision and pursuing it as follows:

Extract 4.

*I see what the digitalization could do, so then it is kind of about pursuing a vision and about this kind of drive that is a part of seeing how things could be and then you try to get there. Maybe it is something like, that you have created something and then you just want to create beautiful things in this world and you believe in it. (Pauliina, lead user)*

In addition to being proactive and visionary, the lead users show empathy towards the nature and other people. They show a

sense of duty for the nature and others, which drives them to create change in the world. They see defects in the world and have visions about what the change should look like.

#### Extract 5.

*I have always been interested in how our planet is doing. I see that the mankind is one fauna that has just happened to get this high in the hierarchical structure during the evolution and basically taken over this planet. Thus, I think that we have a responsibility to treat this planet bit better. (Johanna, lead user)*

It seems that in order to become a lead user of sustainable consumption one does not have to have a sustainable background. Instead, it seems that knowledge is more relevant in adopting sustainable values and behaviors. The next chapter elaborates on the journey that has led the lead users towards adopting strong sustainable consumption behaviors.

## 4.2 Lead user journey of adopting strong sustainable consumption behaviors: Triggers and motivations

The participants show that behavioral change does not occur overnight; there is a process: Several factors have nudged the lead users towards adopting an ideology and lifestyle of strong sustainable consumption. Most of the participants have experienced the following eight stages as part of their change process: 1) experiencing an awakening, 2) recognizing other ways, 3) reflecting on own role, 4) making a change, 5) sharing and getting support, 6) learning more, 7) nudging others, and 8) continuing the process of change (Figure 14). This chapter addresses the aforementioned stages in more detail from a lead user perspective, focusing on the triggers and motivations that have created a change in the mindset and behaviors of lead users of strong sustainable consumption.

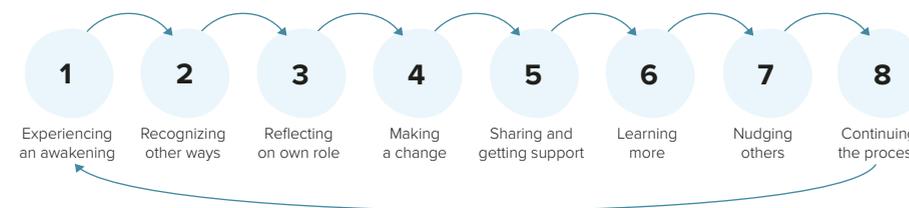


Figure 14. The eight-step lead user journey of adopting strong sustainable consumption behaviors.

### Stage 1. Experiencing an awakening

Most of the lead users talk about a moment of awakening: Being exposed to something that challenges one's current lifestyle and habits. For many, it has been about seeing an example of another way of doing things. Many of the lead users named Bea Johnson, the so-called mother of zero-waste (an ideology and lifestyle that builds on not creating waste), as an eye opener towards a sustainable way of living. Johnson is an influencer, who became known for a small glass jar that contained all the non-recyclable rubbish that her family created in a year.

#### Extract 6.

*I experienced an awakening towards the amount of rubbish that we create, when I saw the rubbish can of Bea Johnson's family. (Otso, lead user)*

Knowledge about the amount of rubbish as well as the state of the natural environment were mentioned as critical factors leading to an awakening. All of the lead users had been exposed to information about the critical state of the natural environment and the impact of human behavior on it. This information had reached them through different channels such as news, studies, literature and own experiences.

#### Extract 7.

*For example, when about two years ago there was a notice in the news that the bulk of produced plastic has ended up in nature, it shocked me. (Johanna, lead user)*

Also, health concerns were mentioned as an eye opener. Noticing that health issues were caused or emphasized by diets or unnecessary medication created an awakening. Some of the lead users mentioned having children as a moment that opened their eyes for the ecological matters. One of the lead users told, that it started with a worry for the wellbeing of her baby and moved from food towards exploring the surroundings and detergents used for cleaning.

#### Extract 8.

*It all actually started from an awakening to how much rubbish we put in ourselves. (Aino, lead user)*

An awareness of the state of the natural environment as well as human wellbeing has created worry and frustration among the lead users and, thus, led to a shared concern about harmful consumption behaviors. This has opened doors for a mindset change.

## Stage 2. Recognizing other ways

As a result of an awakening, the lead users talk about having started to question the current unsustainable norms and practices in the society, i.e. the status quo and expectations built by the society. One lead user talked about realizing that many of the current practices are not necessary and that they do not serve one's actual needs:

#### Extract 9.

*I started to think that okay, there are these foods that a pregnant woman and a child need to avoid, but wait a minute, what do these diapers consist of. What does my hair dye contain, and the cleaning agents. And then I started to think, that come on, first of all, we do not need these for anything, and I also do not want to clean my floors with a cleaning agent that my soon to be born child will lick on the floor. I want to keep things simple and clean as well as avoid harmful chemicals. (Aino, lead user)*

Many of the lead users talk about noticing hindrances that keep us away from having time to question the current practices and the true needs of one. The lead users point out that the lack of time for reflecting on matters and questioning current practices is one of the critical reasons for people to continue following the current practices even when not being satisfied with the outcome. One lead user talked about the role of advertising and marketing in creating needs that were not there before and how these constant marketing messages are taking away the capacity of noticing and thinking about the current issues.

#### Extract 10.

*We are continuously burdened with different kinds of marketing messages and we are increasingly spending time in the internet and social media, or consuming some services, and all of that is burdening the brain's bandwidth that would be free for noticing and thinking about these matters. (Otso, lead user)*

As a result of questioning the status quo, the eyes of the lead users have opened towards recognizing other ways of doing.

### Stage 3. Reflecting on own role

The questioning of the status quo and recognizing other ways of doing has led many lead users to reflect on their own role in the environmental matters as well as their own wellbeing. Many of them talked about experiencing a conflict between their changed values and remaining practices. This was something common to many of the lead users.

#### Extract 11.

*My job was to get people to buy as much as possible, since the goal of the company was to sell as much as possible in order to make more profit. This was in conflict with my realization about disposability and overconsumption being the fundamental issues causing environmental problems. (Otso, lead user)*

#### Extract 12.

*That was maybe a time of an environmental anxiety and a kind of inner conflict. There was a lot of will to act differently, but I did not know how to do it. And I did not know how to make my family act differently. (Aino, lead user)*

As a result of a conflict between one's values and actions, many lead user talked about beginning to question their own habits.

#### Extract 13.

*I started to think that why on earth would I use more time and energy on recycling, when I can per se decrease the amount of waste that I produce through my lifestyle. (Otso, lead user)*

One lead user summarizes the process of becoming aware of the global environmental challenge and realizing the problem of current harmful practices as following:

#### Extract 14.

*If you familiarize yourself with these environmental issues, you cannot simply ignore them anymore. It is such a big global question. (Pauliina, lead user)*

This was a matter that many of the lead users repeated. After becoming aware of the current environmental problems, they could not forget or avoid reacting to the issues anymore. Thus, they began to reflect on their own role in affecting the environmental situation.

### Stage 4. Making a change

The self-reflection led many of the lead users towards making a change towards more sustainable consumption. For many, the first step towards adopting more sustainable consumption behaviors was related to food. The reasons varied from health to ethical and environmental issues.

#### Extract 15.

*I became a vegan. This was due to both environmental, health and ethical reasons. (Aino, lead user)*

The pace of making a change varied between the lead users: Some began with a more incremental change, e.g. short test periods, when for others it was about a more permanent decision. One lead user pointed out how an awakening related to the plastic rubbish problem led her to try another lifestyle in order to learn more about the plastic matter; Another lead user talked about making a permanent decision that led to a lifestyle change:

#### Extract 16.

*I decided to spend a zero waste month, where I do not produce any waste. Thus, I learned more about the plastic and waste problem. (Johanna, lead user)*

Extract 17.

*That day I made a decision not to buy any new plastic bags, plastic bottles or take away cups, since I already had textile bags, a reusable drinking bottle and thermos mugs that were only laying in the cupboard. I decided to start to use them. (Otso, lead user)*

The majority of the lead users have adopted a zero-waste lifestyle or at least tried it. Many lead users mentioned minimalism as the first step towards this change. According to some lead users, a zero-waste lifestyle has enabled them to focus on noticing and thinking about more meaningful matters; the lead users reported that the change made them feel better while also freeing more time for thinking. Thinking enabled them to abandon even more unnecessary practices and material consumption.

Extract 18.

*The zero-waste lifestyle has freed my brain's bandwidth due to not having to spend as much time as before shopping for cleaning and hygiene products, recycling loads of stuff and surfing every day in online shops trying to find best deals on things that I do not really need. My brain's bandwidth was freed since unnecessary acts and other things just fell away. They did not take so much time away from everyday life, which was actually calming, and it gave more space for these thoughts to arise. (Otso, lead user)*

Extract 19.

*I noticed that owning less made me relax. (Aino, lead user)*

Making a change and relinquishing from unnecessary consumption was identified as a source of increased wellbeing. The lead users also mentioned that the change enabled them to reflect on what was actually important, which led to a comprehensive change in their mindset, values, and lifestyles.

## Stage 5. Sharing and getting support

After experiencing an awakening and making a change towards more sustainable behaviors, many of the lead users initiated a blog or other kinds of sustainable initiatives related to sustainable consumption. This was due to different reasons. One lead user talked about a desire to write about topics related to sustainability and about learning along the process as follows:

Extract 20.

*I established my blog. I was interested in writing about these [chemical, wellbeing and sustainability related] topics, and the blog was a source for me to deepen my knowledge. Through the blog, I started to learn more about these topics. (Noora, lead user)*

Another lead user talked about feeling frustrated about being so alone with sustainability-related thoughts and challenges. She identified blogging also as a means to find like-minded people whom to share thoughts with:

Extract 21.

*I started to write my own blog in 2016, which was maybe even because I wanted to find my kind of people, thinking where are all the people, who think like I do. In 2016, or bit before, I got tired of feeling so alone with these matters. (Aino, lead user)*

Social media has possessed a special role in the lead user journeys: It has provided a platform for finding like-minded people and building communities. Sharing and social networks have encouraged the change towards sustainable consumption behaviors by providing support and advice for sustainable practices.

Extract 22.

*There is a strong web community, and especially social media community, around sustainable consumption. There*

*are blogs, and people are on Instagram, and associations and companies are present in the web and social media. So people get inspired and share their sustainable lifestyle in the communities, since support from the offline world is often missing. The lack of support derives from the sustainable lifestyle not being a mainstream phenomenon. Thus, the community brings inspiration and support. (Susanna, lead user)*

Many of the lead users mentioned that the support from social media has also worked as a motivation for continuing the process of change.

## Stage 6. Learning more

Through sharing, the lead users have familiarized themselves with more knowledge and, thus, kept educating themselves. One lead user mentioned establishing the Cleaning Day (a day when people sell their unnecessary belongings in a flea market style on the streets around the city) without bigger considerations and, thereby, becoming acknowledged as an environmental actor. This social aspect nudged a dive deeper into the topic of sustainable consumption.

### Extract 23.

*Due to having established the Cleaning Day together with others, I have gotten acquainted with all kinds of environmental questions. The Cleaning Day has taught me to follow up more on environmental matters, and simultaneously we constantly post on environmental matters in the Cleaning Day community. In addition to the flea market thing, it has become a kind of environmental media or a community for people who are interested in environmental and sustainability matters. I have learned a lot, and, simultaneously, I share everything that I learn. Together with the community you kind of grow to understand consumption. (Pauliina, lead user)*

The lead users also pointed out that a sustainable lifestyle becomes easier in time: In the beginning, it requires more effort, but later it becomes a normal part of life; a norm. One lead user talked about the steps after making a change as follows:

### Extract 24.

*When you start with a change like this, it requires more effort and energy in the beginning, when you are learning new habits. But so do all hobbies and everything else before they become just a normal part of your life. When you approach making a change with small steps, the small success moments also encourage you to continue. (Otso, lead user)*

Along the process, all the lead users have read enormous amounts of articles and texts about matters of sustainability. One lead users highlighted how the journey and knowledge is also taking one deeper.

### Extract 25.

*The more I read about the sustainability matters, searched for information, wrote about it and shared with others, the deeper the path was taking me. (Aino, lead user)*

Learning more about the environmental matters has been an important part of the journey towards adopting sustainable consumption behaviors. The social aspect and literature has supported the learning process. Through the process of learning, the lead users have become more knowledgeable in the field.

## Stage 7. Nudging others

Another reason for taking over blogging or other sustainable initiatives was the aspect of scaling the impact of a personal change through inspiring also other people to adopt sustainable consumption behaviors. One lead user talked about a desire to

provide others a possibility to become aware of the environmental challenges by providing them related knowledge:

**Extract 26.**

*I wanted to do what I could in my life situation which was to start writing a free blog and, thus, provide others the opportunity to become aware of these environmental and sustainable consumption matters. (Otso, lead user)*

The same lead user mentioned having faith in nudging others towards sustainable consumption behaviors by inspiring people rather than pointing fingers:

**Extract 27.**

*I wrote my blog, because I believed from the start that pointing fingers or commanding people are not the right ways to achieve a sustainable change. I believe in inspiring others by my own example, instead of pointing out mistakes and blaming others. (Otso, lead user)*

Many lead users shared this view: Most of them believe in positive inspiring rather than accusing. One lead user described their view as follows:

**Extract 28.**

*I always try to find angles that inspire people. Pointing fingers and telling what one has to do might not work for the majority of people. Thus, we established Wasted Oats along the rescued food restaurant Loop. Wasted Oats is a beer that is made out of rescued bread. And then there was this ice cream campaign Jätelö [it is a Finnish word for ice cream but with a twist highlighting that it is made of surplus ingredients]. So we talk about surplus food in a delicious way. Different target groups get interested about different things. (Johanna, lead user)*

The examples show that the lead users also think strategically: They utilize their initiatives as a means to convey the message and importance of sustainable consumption to others. Thus, they nudge others towards strong sustainable consumption behaviors in addition to their own interest in consuming sustainably.

## Stage 8. Continuing the process

According to the lead users, changing one's own consumption habits and behavior is a process. Many of the lead users talked about how originally a lifestyle characterised by unnecessary consumption is learned. One lead user described it as follows:

**Extract 29.**

*I learned to be a part of the consuming culture. I learned to consume fast fashion. I learned to spend a lot of money in traveling, etc. Those are all learned habits. (Otso, lead user)*

Similarly, the lead users pointed out that one can also learn away from this unsustainable lifestyle. The majority of the lead users had moved from experiencing an awakening to making a change, and they are currently continuing the process of change. For many, the process has moved from reducing unnecessary consumption and their environmental impact to focusing on social responsibility and the wellbeing of others. One lead user reported how the path is taking deeper from material to non-material, bigger questions, and meaningfulness:

**Extract 30.**

*Suddenly I realized that it was actually not about zero-waste or what is a better straw than a plastic straw. Those are so insignificant matters. The question is rather about the meaningfulness in one's life. It is about how we treat each other and this planet. It all culminates in caring: in responsibility and caring for others. (Aino, lead user)*

The lead users talked about opening up for the suffering of others and the ethical questions of consumption. They highlight the role of empathy in guiding their consumption decisions and behavior. Similarly, they report that the process captivates one: once having started one cannot stop. The lead users wish to also highlight that they have not experienced losing anything by abandoning unsustainable consumption behaviors; instead, they have gained much. Also, the environmental anxiety has become less burdening.

**Extract 31.**

*Today, I do not actually even think about my lifestyle that much anymore, it is just the way I live. But I have got rid of the environmental anxiety in principle, the one that is related to me and my life, because I know that I have managed to decrease my carbon footprint significantly, and I live in a way that at least mostly is environmentally friendly, responsible, and such that I try to cause as little suffering as possible to the animals and people around me. I feel that I am living a happy life, because my lifestyle and values meet. (Otso, lead user)*

Experiencing an awakening and making a change in one's own consumption behavior and lifestyle have led the lead users from experiencing anxiety about the state of the environment to feeling empowered to make a difference in the current environmental challenges. The process has led to a more fundamental change in the mindset, values, and habits of the lead users and is still continuing.

### **4.3 Barriers for practicing strong sustainable consumption: Needs and solutions**

Based on the interviews, six barriers for practicing strong sustainable consumption in retail (formed into needs) were identified from a lead user perspective: These were needs for 1)

rapid change towards strong sustainable consumption, 2) making ecological buying easier, 3) improving material flow, 4) substituting material consumption with socially meaningful experiences, 5) creating systemic change towards increased wellbeing, as well as 6) collaboration between consumers, businesses, and policy. This chapter elaborates on these matters by simultaneously articulating the values, motives and desires of the lead users.

### **Creating a rapid change towards strong sustainable consumption**

The interviews show that lead users addressed unnecessary consumption as a core problem and they aim to personally consume as little as possible. They are willing to walk an extra mile in order to behave sustainably, respecting the natural environment and the natural resources. In addition, the lead users desire to get also others to participate in consuming more sustainably.

**Extract 32.**

*I aim to consume as little as possible. (Johanna, lead user)*

**Extract 33.**

*I realized that the problem is actually the disposability and excessive consumption, and recycling and increasement of recycling are only part of the solution, but a bigger effect comes from decreasing consumption. (Otso, lead user)*

The research findings indicate that there is a strong need for (strong) sustainable consumption in retail today from an environmental and human wellbeing aspect. This is supported by both the lead user experts and the lead users.

**Extract 34.**

*This environmental sustainability should be a must. Otherwise*

*we will not soon have a planet to live on. This should not be run away from. This cannot be run away from. (Minna, lead user expert)*

Extract 35.

*We cannot continue in this way, consuming in the current pace. And the current way of consuming creates a lot of illbeing, we live in a rat race, constantly going to work and commuting in traffic. (Aino, lead user)*

Lead users share the worry for the natural environment and our planet. In addition, they worry for the wellbeing of both human and animals, which they see threatened by the profit-driven motives of business. Sustainable consumption is also addressed as a must and even as a competitive advantage for businesses.

Extract 36.

*Continuing in the existing pace, even companies don't have a sustainable business, if they don't act sustainably. (Otso, lead user)*

Lead users see it as a necessity for businesses to have a sustainable business in order to survive in the competition. They also point out that a transformation towards strong sustainable consumption is in many ways about going back in time and adopting again good old practices.

Extract 37.

*There is nothing new about all this [change towards sustainability], many of these things have been done already back in time. (Susanna, lead user)*

The lead users also point out that the time seems to be ready for people to adopt a more sustainable mindset. As a conclusion, in the lead users opinion strong sustainable consumption is a necessary direction of the future, also in retail.

## Making ecological buying easier

Lead users see the lack of receiving proper knowledge as one of the main barriers for practicing sustainable consumption. They point out how difficult and troublesome finding correct information is. Many of them also mention hurry as a barrier for searching for correct information.

Extract 38.

*Maybe getting information is the biggest barrier for sustainable consuming from the consumer perspective. One has to be rather conscious, in order to actively gather information about where the clothes and products come from, what to buy, one has to genuinely care, it is hard, even if you ask the salesperson, they don't necessarily know. So there you are without knowing whether to buy the product or not, and pretty few probably start to ask more about it, so maybe that is the biggest problem. In the busy everyday life, it is just easier to buy a product without thinking more about it. (Johanna, lead user)*

In addition to lack of proper knowledge and hurry, greenwashing is also mentioned by all of the lead users as a barrier for practicing sustainable consumption. They strongly disapprove the current market trend of greenwashing, i.e. providing people false information about the sustainable or ecological aspects of a product, and wish for businesses to stop this.

Extract 39.

*The "greenwashing" bothers me the most, that something is biodegradable or in some way ecologically produced and then a consumer buys a clean conscious with those attributes, that now we consume something that is ecological. But often the satisfaction is only a marketing illusion about something being ecological. (Johanna, lead user)*

Instead, they wish for transparency in the current practices of retail. The lead users also desire for improved accessibility, i.e. better sustainable supply and easiness of sustainable practices. They hope that, consequently, sustainable consumption would become a norm in retail as well as in the society.

**Extract 40.**

*None of us want to use a lot of brain capacity in searching and thinking and stuff, instead all just want to make easy and quick choices. If there was a store, that you know that when you walk in the store and whatever you choose, someone else has confirmed that everything there is an environmentally sustainable choice. (Otso, lead user)*

Also, making sustainable choices more apparent is wished for. The lead users point out a need for highlighting sustainable options by providing more tangible knowledge of the benefits of sustainable choices and help for making more ethical decisions.

**Extract 41.**

*I would hope that sustainable choices were more evident and easy. Like how Satokausikalenteri (seasonal food calendar) started once, providing people ease for choosing seasonal food. Currently, many stores, or at least S-group's stores, are sorted in a way that "hey, this is seasonal food", and in that way it is easier to eat more sustainably. Providing help and knowledge to the consumers to make ecological choices. (Susanna, lead user)*

The lead users wish for support and help from the producers and retailers in practicing sustainable consumption. They see that through knowledge, enabling, and transparency, being a more sustainable consumer would become easier.

## Improving material flow

Many of the lead users criticize the current short life cycles of products. They disapprove the current trends of, for example, fast fashion, i.e. a combination of cheap prices, brief trends and disposability in the clothing retail. The lead users think that products should be per se made to tolerate.

**Extract 42.**

*A products should not be made to break, instead it should last and the materials should circulate rather than break. (Johanna, lead user)*

The lead users believe in circular economy, i.e. closed energy and material loops, and recycling. The interviews show that they often prefer purchasing used instead of new products. Similarly, the search for desirable recycled products was identified even as a joyful activity.

**Extract 43.**

*I mainly want to buy only used clothes, because there are such huge amounts of textile waste in the world today. So, if even a part of those textiles' mileage can be prolonged, it is already a win for me. Plus, it is a fun challenge for me to look for used clothes. (Otso, lead user)*

Some of the lead users also pointed out that they would like to have support in repairing old items. As a solution to this, one trend that a lead use expert pointed out to become more and more popular is the practicing of upcycling. This lead use expert talked about the practices of the recycling shopping center, ReTuna, where she is a mall manager as follows:

**Extract 44.**

*Everything is second hand, or upcycled, or repaired in a way that you will feel like the things are new, but they are already used, at least once. (Anna, lead use expert)*

In addition to taking care of existing products, the lead users talk about per se owning less and sharing. Owning was often addressed as a burden, when again clothes as a service woke both interest and scepticism in the lead users.

**Extract 45.**

*In consuming, I always strive to begin with the question: do I really need this. In zero-waste there are the 5 R's: refuse, reduce, reuse, recycle, and rot. In the beginning, there is always the refusing and reducing. I start with considering: Do I really need this? Do I really want this? Do I still want to use this piece of clothing after three years? Could I borrow this, instead of buying it? I do this to a large extent for ecological reasons, but also I do not want to own useless junk. And it is also important to check the quality of a product. (Susanna, lead user)*

In general, the lead users were still interested in different types of sharing and renting options. As a conclusion, the lead users reported a more general need for appreciating natural resources and utilizing them both respectfully as well as thoroughly, avoiding turning them into waste.

## **Substituting material consumption with socially meaningful experiences**

Many of the lead users also pointed out a need for substituting material consumption with socially meaningful activities. They reported a need for a cultural change enabling meaningfulness and activities based on social experiences rather than consuming.

**Extract 46.**

*Creating locally sustainable solutions, and the participation would substitute the material consumption. We have all the time had this slogan "from the culture of consumption to a*

*culture of participation", so that the way of affiliating with other people and expressing oneself would change from consuming to participating. That people would find something more meaningful and stronger and more interesting and addictive. (Pauliina, lead user)*

The lead users also communicate a wish for enabling and improving encounters between people through strengthening a sense of community. In addition, many of the lead users mention enjoying doing things by themselves. One lead user highlighted how this can also be empowering:

**Extract 47.**

*It was actually pretty empowering, as a business student, to realize that I am not at the mercy of these big companies in the sense that I would need to settle for poorly functioning products, that exist on all the shop's shelves. Instead, I can try to make myself better products on my own. (Otso, lead user)*

Many of the lead users addressed the importance of supporting the active role of people. One lead user also highlighted how the crowd intelligence is often not properly utilized which leads to losing many significant potential initiatives as well as the momentum for specific new innovations. Thus, she emphasized the importance of supporting citizen innovation by funding, instead of expecting good things to occur mostly based on voluntary work:

**Extract 48.**

*As long as the big matters are led through different channels, the civil society does not strengthen that much. And now there are also thoughts that whenever things here are organically generated, it is seen as voluntary work, or there has been this concept of citizen activism, like it would be practices on and on. In my opinion, these should also be supported with*

*resources, so that if citizens come up with good ways to solve problems, then these should also be funded. (Pauliina, lead user)*

The lead users also addressed the significance of social media as an enabling platform for citizen participation and people's own active role. However, the current operation culture is seen as a challenge for achieving strong sustainable consumption in the form of social initiatives. The lead users wish to see a change in this, and therefore all of them participate in building a new operation culture for people: They lead by example and start initiatives that they provide also for the joy of others.

Extract 49.

*We in Yhteismaa aim at building a new kind of operating culture for people, and for that we have this "nappinaapuri.fi", which we also use for establishing various undertakings. For example, now we have put there a reserve granny possibility, which we use for encouraging people to this kind of specific activities. And now we try to also develop a pilot model, for ways to engage the neighbourhood in home care services and other similar things, and offer it to municipalities or potential care work companies. So what kind of benefit we could get from each other. (Pauliina, lead user)*

The lead users believe that great things can be achieved when people collaborate. Many of the lead users also addressed social media as an important enabler in their efforts of changing the current consumption-based operation culture of our society, which passivates people in their opinion. The lead users hope for a future where meaningfulness is build on social experiences and where people actively participate in building their community, while also being supported in these activities.

## Creating systemic change towards wellbeing

Many of the lead users see the society as a highly binding one, causing illbeing. They report that the society encourages people into adopting a passive role: it takes the time away from people and does not leave them with space for questioning the norms nor the expectations put on citizens and their everyday life. The lead users highlight that the role of money and profit-making should become smaller in the society and instead the focus should be put on achieving wellbeing.

Extract 50.

*In my opinion, the world cannot only revolve around economic growth. The society should move towards a direction where also other things than economic growth, centering on unsustainable consumption, would create wellbeing. (Aino, lead user)*

While questioning the profit-making-focus for achieving a sustainable economy, the lead users instead highlight the importance of ecological and social aspects of consumption. They highlight the demand for a change in the operational culture of the society, i.e. building a novel operational culture for the people. One lead user promotes the peer-to-peer economy (vertaistalous in Finnish) as a solution for achieving an environmentally and socially sustainable economy and future.

Extract 51.

*We aim at the peer-side of economy, because we think that it is a better thing. It has so many benefits. First, providing people meaningful activities. They can all be creative and active actors in the world and not only consumers. And it also potentially creates a more sustainable economy when people, instead of consuming, build and come together and act and innovate and do stuff together and in a way also create solutions to their own problems. (Pauliina, lead user)*

Many of the lead users view consumption as a symptom of illbeing, and emphasizing the importance of caring and responsibility are seen as a fundamental solution for achieving strong sustainable consumption in the society. One lead user talked about how by easing the illbeing of people also unsustainable consumption can be reduced:

**Extract 52.**

*When the illbeing of people is eased, they do not have a need to shop themselves an identity anymore or try to impress people, who they do not care about, with money that they do not have. (Aino, lead user)*

The lead users see a change moving from profit-making to values of wellbeing as a core matter in creating change towards sustainability. They think that current values of the society should change in order for us to achieve more wellbeing, and thus less unnecessary consumption.

### **Encouraging collaboration between consumers, business, and policy**

Three areas for nudging change towards sustainable consumption in retail and shopping centers were discussed with the lead users: consumers, businesses, and policy. The lead users possessed different opinions about which of the three areas is the most relevant in achieving a change, however, they were mostly in concordance with the strengths and weaknesses of these three. One lead user talked about the role of consumers as follows:

**Extract 53.**

*Citizens and businesses must first act, so that policy can react. All the three sectors, the private persons, companies, and policy, need to act. After all, we are all separate people in this world, and the change needs to happen in all of us,*

*inside. One can increase their own impact by inspiring others to act in the same way. (Otso, lead user)*

The lead users see that by being profit-driven and short-term based, the businesses contribute to the problem, but also stand in the position of creating change. They highlight that businesses have the resources for coming up with ecological solutions.

**Extract 54.**

*Since our society is centered around money, the companies have an opportunity to find ways to drive their business that create value and income and work to people, while simultaneously doing things that enable a more environmentally sustainable life, that enable circular economy, and that enable also my current lifestyle of avoiding creating waste. (Otso, lead user)*

Businesses are also seen as more rapid than, for example, policy in creating change. The lead users point out that businesses have the necessities that are required for action, whereas smaller actors must first go through necessary procedures to reach the same opportunities.

**Extract 55.**

*Companies are more agile. Or in our case of establishing sustainable initiatives, everything has started organically and in collaboration with people. We first need an enterprise and an association in order to get any funding at all. (Pauliina, lead user)*

**Extract 56.**

*The role of business is very important here also because of the fact that they can operate much faster than policy can. (Otso, lead user)*

On the other hand, some of the lead users and many of the lead use experts lack trust in achieving change by affecting only consumers. Instead, they highlight the importance of political decision-making for achieving change.

**Extract 57.**

*I do not believe too much in achieving sustainable consumption by affecting individuals. I rather think that the political decision-making is very important. (Pauliina, lead user)*

In addition to the three areas addressed here, also associations, institutions and the public sector, like the actors of the city, were indicated as desirable actors for collaboration for creating a change towards sustainable consumption. Overall, collaboration between the different actors, mentioned in this chapter, was seen as the best means for creating a change.

#### **4.4 From platforms of mass consumption to enablers of a sustainable lifestyle: The new role of shopping centers**

The interviews also investigated the role of shopping centers in the life and sustainable consumption practices of the lead users in order to examine opportunities for serving lead user needs as well as for finding ways to understand how this change could look like in shopping centers. Simultaneously, a vision towards strong sustainable consumption in retail and shopping centers is being built.

The interviews showed that shopping centers do not serve the needs of the lead users, i.e. practicing strong sustainable consumption, in their current form. Thus, many of the lead users do not visit shopping centers nor find them interesting. One lead user described this as follows:

**Extract 58.**

*There is nothing for me in the shopping centers. I do not charge*

*there. As a milieu, it is not pleasant for me, I rather go to the woods. I do thinking work and writing work, and sometimes I conduct meetings or something else in a shopping center due to their good location and because people know where they are, and so on, but that is it. But since I do not actually buy anything, I do not shop either anywhere. (Aino, lead user)*

According to the aforementioned, the shopping center environment was identified as boring by most of the lead users. However, the main challenge according to the lead users is the fundamentals of the concept of a shopping center, i.e. the operation culture which is based on profit-making instead of wellbeing-related values. Simultaneously, some of the lead users question, whether the shopping centers can manage to change as drastically as would be required in order for them to feel a desire to visit a shopping center.

**Extract 59.**

*I do not know if the core of a shopping center can change, the fundamentals for the existence of the building or the physical space, will it change at all, since its meaning is to just sell more. (Aino, lead user)*

One lead user also discussed that in order to change towards a desired direction, the name “shopping center” should also change to something more valid:

**Extract 60.**

*I do not think it could be called a shopping center. The name should be changed, the same way as I do not like to call anybody a consumer, but at most talk about our role as a consumer. (Otso, lead user)*

In addition to a more fundamental change, the lead users also addressed other slightly smaller weaknesses. Here the main weaknesses were related to a lack of desired supply or activity

possibilities. One lead user reported a desire to find everything from one place:

**Extract 61.**

*In order to shop sustainably, one has to go through many specialized small shops, which is time-consuming and tiresome. My time also has a price tag. I dream about going to one place and buying everything from there. (Aino, lead user)*

Many of the lead users also addressed a desire to see and touch products before making a purchase decision. This can be seen as a strength of shopping centers compared to online retail. One lead user describes the aforementioned as follows:

**Extract 62.**

*I do not buy actually anything through the internet, only something like tickets. I want to touch a product. And see it. Then you also see if something is of good quality and I know if I really like it. And it does not end up to be burned somewhere, resulting from a risk of me returning the product. (Susanna, lead user)*

The lead users also communicated a desire to find products that are recycled and that create less harmful waste. Many lead users suggested having a combination of old and new supply, providing the consumer an opportunity to choose which one they desire to consume. Here the role of transparency and providing correct information to support sustainable decision-making were also addressed. In addition, the lead users discussed a mix of different services: from providing opportunities for fixing one's clothes to having different kinds of lending and renting services.

**Extract 63.**

*In my opinion, shopping centers should be a combination of different kinds of services. They should enhance matters such as circular economy and sharing economy. There could*

*be points for lending stuff. There could also be clear recycling points. This could also serve housing cooperatives that do not have their own recycling points. (Otso, lead user)*

Here the lead users with provider experience highlight that in order to, for example, non-profit organizations to be able to operate in a shopping center the current rent system should change. Currently, many non-profit organizations are not able to be present in a shopping center due to the high rents. Also, the current oversupply of fast fashion stores was criticized and disapproved by the lead users. Rather, they seem to look for a more cosy atmosphere. The lead users communicate a desire to experience empowering encounters and activities, while not being forced to consume for the sake of consuming. Also, social, health, and culture services, were mentioned as a desirable supply. One lead user communicated their desire as follows:

**Extract 64.**

*Shopping centers have potential to be a kind of living room for people and communities, which they maybe partly are also at the moment. I prefer to go to a place, where I can find vegetarian restaurants and ecological shops and that would be more like a living room, like "come and spend a good time here" type of place, rather than a place where there is fast fashion shops after fast fashion shops. (Susanna, lead user)*

Many of the lead use experts also identified a trend towards the desires communicated by the lead users. They identified making entertainment and experience services accessible for people as a current challenge of many shopping centers.

**Extract 65.**

*This is maybe the hot potato at the moment, how to bring these entertainment and experience services into shopping centers and make them accessible for people. (Minna, lead use expert)*

One lead use expert communicated the following desire, simultaneously summarizing the thoughts of the other lead users:

Extract 66.

*Hopefully, there comes something that shows and shakes the retail field. This field is changed from the inside. Thus, an actor, who in an unprejudiced manner starts to carry out their vision, is needed. Somebody, who comes and shows, does things in a new way and thereby inspires others. And others get inspired by it. I would definitely like to see somebody, who comes up with a new way of doing things. Somebody, who would maybe even come up with a new form of exchange. (Minna, lead use expert)*

Even though the shopping centers fail to attract the lead users in their current form, the lead users showed that the centers have potential to serve strong sustainable consumption-related needs in case they succeed to change rather drastically. This chapter has addressed the problem areas in shopping centers as well as provided concrete suggestions for how a change could look like. The following section provides a proposal for how the change could be approached by involving retail actors in ideating and implementing a change based on the lead user findings.

## 5 Design proposal

*In this section, a Retail Change-Makers Workshop proposal is presented. First, the justification and the idea for the workshop is presented. Second, the workshop objectives and intended outcomes are addressed. Third, the structure of the workshop is explained, presenting also support material for the workshop. Finally, three use case scenarios for implementation are discussed.*

### 5.1 The Retail Change-Makers Workshop

The findings of this thesis show that an extensive change towards sustainable consumption behaviors in retail is required, both from an environmental, consumer and business perspective. Similarly, retail choice architects were identified as a relevant and effective target group for creating the required change in consumption behaviors due to their strategic position between different supply chain players and their operational structures. In addition, creating change towards more sustainable consumption was addressed both as a requirement as well as an opportunity for the retailers: it provides companies to have a sustainable business also in the future, while it also enables a competitive advantage for businesses. The research also showed that in order to nudge others towards sustainable consumption, one needs to first go through a mindset change themselves. This indicates that in order to nudge strong sustainable consumption behaviors, retail actors must first change their own mindset. Thus, a Retail Change-Makers Workshop for the choice architects of retail is proposed.

The Retail Change-Makers Workshop is a workshop targeted at retail actors, such as shopping center owners and retailers, who possess the role of a choice architect in retail, i.e. affect the consumption related decision-making of consumers. The workshop is a combination of seminar-style and group sessions. It

builds around the lead user journey of adopting strong sustainable consumption behaviors, by providing retail choice architects an opportunity to reflect on their own relationship towards the wellbeing of nature and sustainable consumption. The workshop participants also get first hand experiences of consumption and retail from a lead user perspective. Thus, the workshop provides retail actors an opportunity to learn about future consumer needs and sustainability requirements of future businesses. In the end of the workshop, the participants ideate ways to nudge customers towards strong sustainable consumption through their own business.

**“Hopefully, there comes something that shows and shakes the retail field. This field is changed from the inside. Thus, an actor, who in an unprejudiced manner starts to carry out their vision, is needed. Somebody, who comes and shows, does things in a new way and thereby inspires others. And others get inspired by it.**

Minna, lead use expert

### 5.2 Objectives and intended outcomes

Before retail and shopping centers can address the changes that are required for more sustainable consumption among consumers, choice architects of retail have to change first. This workshop aims at changing mindsets and showing the business benefits of doing so, in order to engage retailers in being a part of creating solutions for a future of more sustainable consumption.

By being exposed to the lead user journey of adopting strong sustainable consumption behaviors and learning about the needs of future consumers as well as the effect of their behaviors on the environment, an opportunity for a mindset shift is created. This is enabled by building empathy towards the nature and consumers, and thus provoking a feeling of responsibility. The aim is to offer the retailers an understanding that retail is the platform that can either enable or prevent sustainable consumption as well as provide them guidelines and tools for creating the required change in their own business. By these actions, the retailers can acquire a role of a responsible sustainability pioneer, and thus contribute to creating a more sustainable future for all, while staying competitive by engaging consumers also in the future.

After the workshop, the participants are expected to understand the importance of change and nudging consumers towards sustainable consumption behaviors, both from an environmental and business aspect. They understand that in order for a company to stay relevant and interesting in the future, it has to acknowledge that future consumers demand more sustainable solutions and ethical responsibility from companies. A sustainable change can be expected due to highlighting that a change is required in order to the businesses to engage consumers also in the future, and thus staying competitive. The workshop also prepares the participants for the future and matters such as possible upcoming sustainability regulations and bans, by anticipating the directions of future change. In addition, the importance of an ongoing process of change is emphasized in the workshop and tools for achieving this are provided. By aiming at a continuing process, the effects of a change can be more powerful: if change is not a continuum contributing to sustainable consumption in the future, it does not have any value in the present. When change is based on understanding rather than following e.g. temporary trends, it can become more permanent.

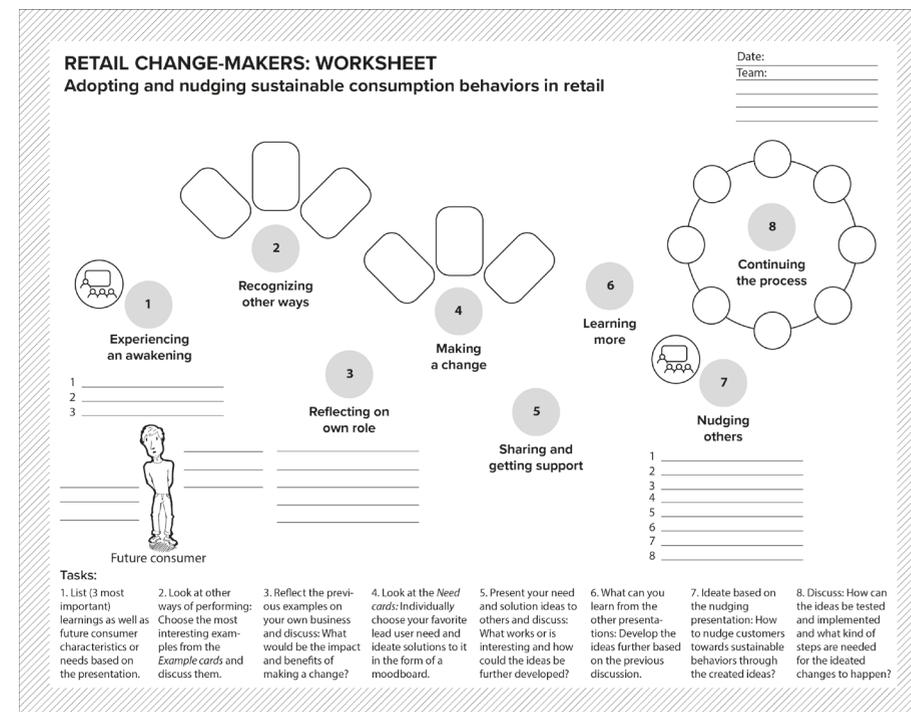


Figure 15. The Retail Change-Makers Worksheet facilitates the different steps as well as discussion, learning and ideation in the workshop amongst the participants. Simultaneously, it gathers and documents the generated ideas and learnings from the workshop.

### 5.3 The workshop structure and activities

The Retail Change-Makers Workshop builds around seminar-style teaching sessions as well as discussion and ideation sessions in groups and individually. The number of participants can vary, however requiring ideally 3-4 people per group for enabling insightful discussions. The tasks of the workshop, which are strongly based on the lead user insights from this research, are facilitated by a worksheet (Figure 15, see Appendix D for a larger

image) shared for each participant group in the beginning of the workshop. The worksheet serves as a guide through the different steps of the workshop, while simultaneously the different insights can be gathered in the worksheet during the workshop, providing documentation and a ready action plan for the participants after the workshop. In addition, some of tasks are supported by inspiration cards (Figure 16, see Appendix E for a larger image), which are discussed in more detail later in the chapter.

The workshop consists of eight steps, which build around the steps that the lead users have gone through in their journey of adopting strong sustainable consumption behaviors. The structure and activities of the workshop are in addition inspired by the dialogue-lab method (see Lucero, Vaajakallio and Dalsgaard, 2011 for more information about the dialogue-lab method). The workshop starts with a seminar-style beginning (Task 1, referred to the worksheet): The lead user journey of adopting strong sustainable consumption behaviors is introduced to the participants in the form of a presentation. During the presentation, also the environmental as well as the future consumer need aspects for making a change in retail are highlighted: Statistics and examples about the state of the environment as well as the effects of retail and consumption behaviors on nature are shown. The first step aims at creating an understanding of both the required and already occurring change towards sustainability in consumer behavior and in retail. After the presentation, the workshop participants discuss the presented matters and write down the most important insights on their worksheet.

In the second task (Task 2), the participants look at other ways of performing through exploring *Example cards*, which contain inspirational examples of successful and innovative sustainable initiatives and ways of practicing sustainable retail (Figure 16). The participants choose the most interesting examples and discuss them in their team. Here utilizing smart phones is encouraged

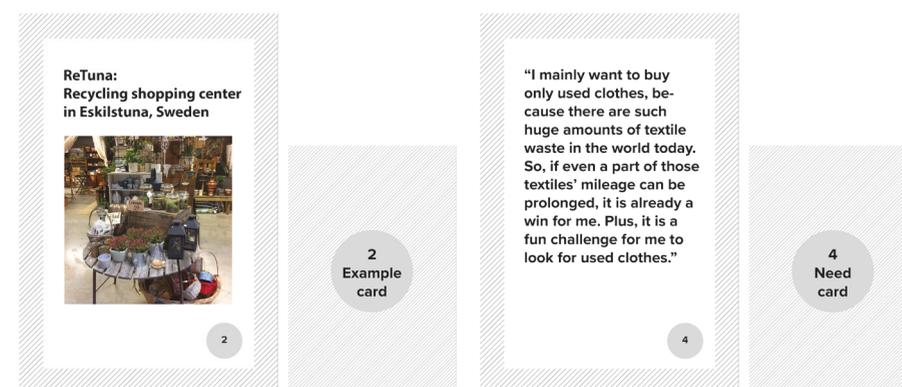


Figure 16. Examples of inspiration cards: Example card and Need card (front and back of the cards).

for finding more individually interesting information about the examples. The purpose of this task is to inspire and expose the participants to other ways of operating in retail with a strong focus on sustainability. The third task (Task 3) encourages the participants to think about reasons for making a change, by encouraging reflection on their own impact on the wellbeing of nature and people as well as reasons for making a change, i.e. seeing the benefits and impact of changing. The idea here is to find motivation for making a change, supported by an understanding of its business benefits.

In the fourth task (Task 4), the participants look at *Need cards*, which contain quotes from the lead users of strong sustainable consumption (interviewed in this study) about their sustainable consumption-related needs (Figure 16). They individually choose their favorite card, i.e. lead user need, and start to ideate ways for making a change by ideating solutions to their chosen needs in the form of a moodboard, i.e. a picture collage representing their ideas (see Lucero and Vaajakallio, 2008 for more information about the moodboard method). The task is supported by rich

visual materials such as good quality magazines with a wide variety of pictures and visuals to be used for cutting and building the moodboards. This material is meant to serve as a prompt and inspiration for ideation. In addition, the workshop facilitator or facilitators are circling around to help with idea generation and building the moodboards, thus encouraging thoughts about what a change could look like and how it could be achieved.

The fifth task (Task 5) encourages the participant to share their ideas to others. With the help of the moodboards, the participants present their thoughts and ideas to the other team members and discuss about matters that make the ideas interesting and ideas for ways to develop the solutions or ideas further. After the fifth task, the participants continue developing the ideas further based on the discussions, still utilizing the method of moodboarding (Task 6). Here the participants might proceed idea development by themselves or in groups, depending on whether they desire to continue with individual idea development or to choose specific ideas for further development in groups. The aim of tasks 5 and 6 is to build empathy towards the (future) consumers and understand their concrete needs, thus enabling viewing the retail experience from the consumer perspective. Sharing ideas also supports developing more innovative and interesting solutions, which is also supported by the examples of innovative sustainable initiatives presented in task 2.

After this, the workshop participants are provided with a second presentation. This presentation introduces the participants to the theory of nudging, focusing on the practical implications of nudging. Here the research-based value of nudging is highlighted and practical examples of ways of nudging people towards better decision-making are presented for inspiration. After the presentation, the participants ideate together ways to nudge their own customers towards sustainable behaviors through the ideas developed in tasks 4, 5 and 6. Sticky notes are provided

for documenting the ideas. Also, the worksheet serves as a canvas for drawing ideas and making notes. The purpose here is especially to wake up thoughts and start a thinking process, i.e. a mindset shift, rather than coming up with refined ideas for implementation.

In the last task (Task 8), the participants are encouraged to discuss and think about ways to test and implement their ideas. With the support of the worksheet, the participants consider steps that are needed for the ideated changes to take place. They also think about ways to make change into an ongoing process in their practice, planning ways to measure and review the success of their implemented changes. Also, thinking about ways to continue the process of nudging more sustainable consumption behaviors and change towards enabling more sustainable consumption. Here too, sticky notes are provided for documenting the ideas on the canvas. In the end of the workshop, the participants have learned about nudging and future sustainable requirements for their business. They have ideated solutions for making a change and ways to nudge consumers towards more sustainable consumption through their business. In addition, they have been exposed to a mindset shift and they have ideated a preliminary change plan. These are expected to start a greater process of reflection and awareness, thus leading to a more comprehensive (mindset) change as well as more ethical and responsible actions.

In order to further elaborate on the inspiration cards (i.e. the Example and Need cards presented in tasks 2 and 4), the cards serve as a prompt for thinking, tool for goal-directed discussions and ideation, as well as inspiration for out-of-the-box thinking (Halskov and Dalsgård, 2016). The cards also highlight the voice of the lead users, i.e. possible future consumers, putting the needs of consumers in the focus of creating change, and thus building empathy towards them and their needs. Building empathy is important for achieving a more human-centered

change (i.e. change where human perspective is put in the core of each step of problem-solving), highlighting the many aspects that are required to be taken into account in creating a change of this scale (Mattelmäki, Vaajakallio, and Koskinen, 2014). The cards also enable involving the lead user perspective in a workshop like the one just presented: The lead users represent a rare group of people, which are often challenging and laborious to identify and recruit. Thus, involving them in many workshops would be laborious and contain uncertainties. This is where the inspiration cards enable providing the lead user insights to an extensive group of retail actors, consequently enabling a more extensive impact.

#### 5.4 Three scenarios for implementation

Next, three possible scenarios for implementing the Retail Change-Makers Workshop are presented: The workshop could either 1) be a part of a retail conference, or 2) be facilitated by retail consultants for their clients, or 3) it could be provided for retailers through a network, where materials could be shared (freely) for retailers to utilize on their own.

The first scenario offers an opportunity to involve a number of retail actors as well as other relevant stakeholders simultaneously in a shared ideation for creating a common vision towards more sustainable consumption in retail through e.g. a retail conference. The workshop could be a part of the conference and provide a future consumption and sustainability aspect for retail development. People could register to the workshop in advance when necessary. This would ease the recruiting of workshop participants and required marketing efforts. In this scenario, also policy-makers could be involved in order to create a more holistic understanding of creating change. The lead user expert and lead user interviews showed that often the regulations slow down or even prevent sustainable initiatives. Involving policy-makers

in the workshop could optimally lead to some form of greater collaboration on a more systemic level affecting the policy-landscape where retailers operate, and thus enabling support for the retailers from the government in the process of shifting towards more sustainable practices.

The second scenario, a smaller workshop facilitated by retail consultants to their clients, provides a tool for more detailed retail development projects. The lead user expert interviews showed that the communication in retail development projects is often abrupt which leads to a lack of holistic development. Consequently, e.g. shopping centers often fail to serve properly the different needs of different stakeholders such as consumers or retailers. The workshop could serve e.g. the setting of principles for development in the beginning of a project or as a kick-off for a bigger project, providing inspiration and a tool for early communication, thus encouraging mutual understanding between project stakeholders.

The third scenario builds around the idea of sharing the workshop material with retail choice architects through a network. The material could be provided by a retail development company, and it could be free for retailers to download and print from a webpage. The webpage could also contain videos of the two presentations belonging to the workshop. This platform would also enable building a community, where ideas, support and best practices could be shared and promoted, thus resembling with the lead user experiences of sharing, getting support, and learning from others, described in the lead user journey of adopting strong sustainable consumption behaviors. The network could be strictly supervised, or it could be more of an open access community taking shape based on the actions of its members.

The three presented scenarios vary in their ways for reaching people as well as the roles and effort required from different

actors. The first scenario requires a significant effort from the workshop providers and facilitators, whereas, the third option would possibly require less effort from the providers after the network would be set up. A common trait for the three scenarios is that all of them would provide retail choice architects the opportunity to better understand the future needs of sustainable consumers and retailers' possible role in creating the required change towards more sustainable consumption through retail. All the scenarios provide retail actors a leading edge position in serving consumer needs also in the future, while simultaneously nudging consumers towards more sustainable consumption behaviors. The workshop is the beginning of a longer journey towards enabling strong sustainable consumption in retail.

## 6 Discussion and conclusions

In this section, the research findings are discussed in relation to a broader context and reflected on the future of consumption and retail. First, the findings are summarized and then the implications are discussed in greater detail. Second, the reliability and limitations of the research are further elaborated. Third, opportunities for further research are presented. Finally, conclusion on the contribution of a lead user approach for nudging strong sustainable consumption behaviors in shopping centers, as well as achieving a change towards more sustainable consumption, are drawn.

### 6.1 Implications

Previous research shows that overconsumption represents a critical environmental challenge and that unnecessary consumption should be reduced. Correspondingly, shaping consumption behaviors through shopping centers was identified as a potential means for creating change towards more sustainable consumption (in retail). The aim of the thesis was to investigate the contribution of a lead user approach for nudging strong sustainable consumption behaviors in shopping centers. Thus, semi-structured interviews with four (4) lead use experts and six (6) lead users were conducted. The ideologies, needs and solutions of the lead users of strong sustainable consumption were investigated in order to understand ways to create a behavioral change towards more sustainable consumption through the choice architecture of shopping centers. Figure 17 shows the theoretical framework of the study and highlights the outcome of the research.

Based on the interviews, a lead user journey of adopting strong sustainable consumption behaviors was identified. This journey consists of eight stages: 1) experiencing an awakening, 2) recognizing other ways, 3) reflecting on own role, 4) making a change, 5) sharing and getting support, 6) learning more, 7) nudging others, and

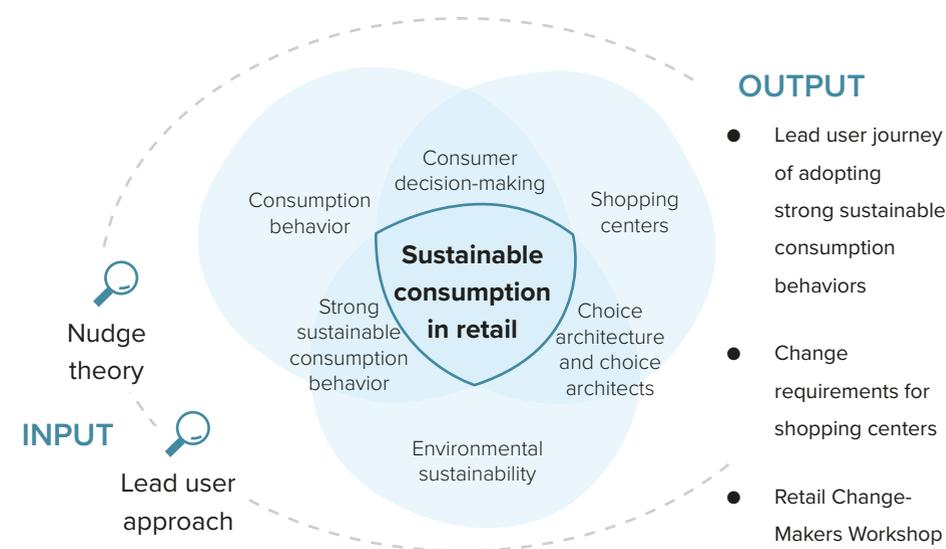


Figure 17. The theoretical framework and outcomes of the study.

8) continuing the process. According to the findings of this study, changing one's consumption behavior is a process, and in order to nudge others, we need to first change ourselves. The findings suggest that a change towards strong sustainable consumption is primarily an ideological change: It is about a change in matters such as mindset, values, and priorities. In this study, these changes were shown to lead to a change in one's own lifestyle and behaviors. Based on the findings, it seems that adopting sustainable consumption behaviors is above all about thinking about others, caring for them, and taking responsibility about the wellbeing of others and the nature rather than about making a decision to consume less: When we trust that there is enough for all and we have empathy towards others, we make automatically sustainable decisions. Based on the evidence of this study, it can be assumed that sustainable consumption behavior follows an ideological change.

The findings show that along their change process, the lead users have nudged also others in the direction of sustainable consumption: This has happened through different kinds of initiatives such as writing a blog or establishing a sustainable business. Many of the blogs or Instagram profiles provided by the lead users contain tips for e.g. preparing non-toxic cleaning agents from scratch, avoiding creating waste in one's everyday life, or utilizing every part of a food ingredient in cooking. A common message that they highlight is encouraging people to avoid unnecessary consumption and enjoying simplicity. The sustainable businesses and social movements founded by the lead users build around the idea of utilizing unexploited resources such as surplus food or neighborhood communities: The rescued food restaurant Loop serves delicious food made from surplus food provided by merchants and producers. The Cleaning Day encourages citizen to sell their useless belongings. Nappinaapuri provides people a platform for helping their neighbors. These initiatives introduce people to new ways of thinking and doing as well as decrease unnecessary consumption and loss of resources. What makes these initiatives nudges, is that they have enabled others to obtain knowledge and inspiration towards changing their mindset and lifestyle, as well as provided alternative ways for practicing consumption.

Although, many of the lead users believe in the power of nudging for achieving change, i.e. inspiring people instead of practicing inculpatory actions, still some of the lead users question the power and efficacy of shaping consumer behaviors through nudging. They are skeptical about achieving a prompt enough change towards sustainable consumption through nudging and instead believe in creating change through restrictions and bans suggested by the policymakers. Based on the current societal discussion, a change towards sustainability is required to occur even faster as estimated before, in order to preserve the natural environment for future generations. This shows that

the concern about achieving a rapid enough change is relevant. This also further highlights the importance of a change in the current consumption practices and behaviors that this study has addressed. The study suggests that in order to achieve an effective and far-reaching change towards sustainable consumption, a combination of shaping consumption behaviors through nudging, as well as education, directives, and restrictions is required.

The study also investigated the barriers as well as lead user needs and solutions for practicing strong sustainable consumption. The needs of the lead users were identified as 1) creating a rapid change towards sustainable consumption, 2) making ecological buying easier, 3) improving material flow, 4) substituting material consumption with socially meaningful experiences, 5) creating systemic change towards wellbeing, as well as 6) encouraging collaboration between consumers, businesses, and policy. For example, the importance of having a more sustainable supply, providing consumers with proper information about the sustainable impact of available products, as well as offering more services instead of products were highlighted. The needs and solutions, expressed by the lead users, can be assumed to provide an understanding of sustainable consumption needs of future consumers, as well as of the changes required for satisfying these needs, i.e. enabling more sustainable consumption. In addition, they provide concrete understanding about what should change and how this change could be created. These serve as practical guidelines for the retail actors to follow.

In addition to investigating the requirements for practicing more sustainable consumption in retail, the role of shopping centers in serving this future was studied. Based on the lead user interviews, ways in which the current concept of a shopping center should and could change (in order to serve the changing consumption needs both from a consumer as well as natural

environment perspective) were discussed. The interviewees highlighted that the current concept of a shopping center should change drastically in order to serve a more sustainable future as well as the changing consumption needs. According to the lead users, a change from profit-driven values to wellbeing-driven values as well as a change in the supply and practices is required, thus enabling more sustainable and ethical consumption. They suggest that even the name “shopping center” should change. One lead user expert suggested the name and role of an “activity center” for replacing the current shopping center concept. Based on the findings, these centers could build around the value of wellbeing by emphasizing socially meaningful experiences, providing essential services (such as health and education-related services), offering entertainment, and providing help with practicing a more sustainable lifestyle. Thus, shopping centers could enable a change towards more sustainable consumption instead of encouraging unsustainable behaviors and practices.

**“In my opinion, shopping centers should be a combination of different kinds of services. They should enhance matters such as circular economy and sharing economy. There could be points for lending stuff. There could also be clear recycling points. This could also serve housing cooperatives that do not have their own recycling points.**

Otso, lead user

It can be questioned, whether a change this drastic can take place in the current operations and the fundamental concept of shopping centers. However, existing examples of sustainable shopping center initiatives such as the one's provided in the literature review (see Chapter 2.5) give a reason to assume that a change towards strong sustainable consumption is already occurring. Simultaneously, e.g. the SEK 10,2 million turnover of the recycling shopping center ReTuna in 2017 shows that a business model based on circular economy is possible and that it can be profitable (Raconteur, 2018). In addition, reflecting on the current environmental and retail situation, it seems that shopping centers do not really have an option. In order to take responsibility of the environmental and social impact, as well as to survive concurrently with online retail, shopping centers are forced to change.

As a result of the research findings, a Retail Change-Makers Workshop was proposed for enabling retail choice architects an opportunity for a mindset change as well as utilizing the lead user insights for creating a more sustainable change towards strong sustainable consumption in their own practices. The workshop builds around the identified lead user journey of adopting strong sustainable consumption behaviors by guiding the participants through a similar journey as the one that the lead users have experienced. It combines a seminar-style as well as individual and group work into an entity of educating and nudging retail actors, such as shopping center owners and retailers, towards more sustainable practices. The workshop also emphasizes discussion between different retail actors in order to enable a more holistic perspective on retail development. The interviews showed that many retail development projects fail to consider and satisfy the true needs of consumers. By bringing the voice of the sustainable consumers into the core of the workshop (through the lead user journey, presentations and inspiration cards), the focus is directed especially at sustainability and the end users of future shopping centers.

The workshop idea has been evaluated with a Finnish company, who operates with retail consulting on a global scale. Thus, this company represented a potential workshop user, who could e.g. provide the workshop for their own clients. The workshop idea was met with great interest. Based on the evaluation, the idea was further developed, and also three scenarios for implementing the workshop were proposed. However, it is important to note, that due to limited time-resources for the thesis project, the design proposal has not yet been tested with potential workshop participants. Testing the desirability, structure details and usability of the workshop proposal from a participant perspective is highly relevant before implementing the workshop. The testing could also provide ideas for further development which could complement the value of the workshop-tool for creating change.

Currently, the field of retail is experiencing rapid changes, and trends related to strong sustainable consumption push businesses to change. However, not all businesses manage to change. It seems that many businesses struggle to change due to a lack of understanding on what should change (i.e. current and future consumer needs) and how this change could be achieved, or because of a resistance towards changing. The workshop offers concrete tools for retailers to make a change, by providing understanding about future sustainable consumption needs from a lead user perspective, i.e. what needs to change, as well as ideas for how the change can be achieved by showing examples of successful sustainable initiatives and providing an opportunity for ideation and planning implementation. By simultaneously nudging a mindset shift on the retail choice architects, the workshop can also reduce resistance towards making a change. By harnessing retail choice architects in changing the retail choice architecture, and thus consumption patterns of consumers, an effective and far-reaching change can be created.

However, the research findings show that sometimes also the policy is preventing businesses from changing to be more sustainable. For example, the hygiene regulations might prevent businesses from serving food or drinks into consumers' own reusable containers instead of using disposable food serving items. Another example is the taxation of used goods, which e.g. in Sweden results in a double taxation for a second hand product. Thus, retailers are often left with a surplus so small, that it is not desirable nor profitable to sell second hand products. The legal barriers for ideating or applying any sustainable changes represents a potential and relevant challenge that might prevent businesses from applying their workshop outcomes. This is a matter that requires further investigation for enabling a change to take place, i.e. achieving a future of sustainable consumption.

The findings of this research can be applied for nudging sustainable consumption behaviors in shopping centers as well as in other mass retail environments: The motivations and needs of the interviewed lead users provide an understanding for the form of required change and the path and methods for shaping sustainable consumption behaviors through the retail choice architecture. The lead user journey can be utilized as a step-by-step guide for shaping consumer behavior. It also allows businesses to create solutions for people in different stages of the behavioral change journey, therefore targeting a wider group of consumers. This study suggests, that by nudging sustainable consumption behaviors by businesses and retail actors through the choice architecture of shopping centers, a wider change towards sustainability can be achieved.

## 6.2 Reliability and limitations

The empiric research of this study followed a lead user research process in order to identify current trends and market needs in retail as well as the relevant lead users. The research

identified the relevant lead use experts and lead users of strong sustainable consumption: The sample of the research consisted of the pioneering sustainability actors in the field of sustainable consumption in retail in Finland and Sweden. These were people who are leading experts in the field of sustainable consumption and retail, who consume sustainably, who have established successful sustainable initiatives and influence others by providing them solutions for practicing more sustainable consumption behaviors.

In addition, the profile of the lead user participants was rather heterogeneous, achieved by a carefully chosen mix of purposive sampling techniques, and thus represented a wide group of people with different ages, backgrounds and life situations. Meanwhile, the participants possessed similar experiences, personal knowledge about the area of the research and great interest towards the topic of the research, which enables drawing more generalisable conclusions from the research findings (Eskola and Suoranta, 1998, pp. 272–273). Thus, the aforementioned matters enabled considering the needs and requirements of a more general population in terms of creating change towards more sustainable consumption behaviors in retail. The successful sample of the research increases the quality and, therefore, the reliability of the research (Eskola and Suoranta, 1998, p. 66; Hyysalo et al., 2014).

The research focused on Finland and Sweden. Originally, this decision was affected by an aim to conduct a co-design workshop with lead users in order to create a future vision for sustainable retail. However, due to limited time-resources, the plan changed, and focus was put on the interviews and the insights that they provide. Since the research concentrates on a future aspect of sustainable consumption and retail, a focus on the Northern countries (which are in many ways pioneers in sustainability) is justifiable and can be perceived to increase the reliability of

the research. In addition, the findings gathered through the interviews show to be valid in a broader context when compared to the current societal and global discussion and trends related to consumption, sustainability and retail. This suggests that the findings of this study are applicable also outside the Nordic context.

The data was gathered through semi-structured interviews and analyzed by affinity diagramming based on interview transcriptions. Thus, the reliability of the findings relies highly on the research conductor's skills, such as ability to format good interview questions (to avoid leading the interviewee), create a feeling of trust between the interviewee and the interviewer (to achieve honest and comprehensive answers and discussion), as well as interpret research data (to identify the most relevant insights). According to Eskola and Suoranta there are no ultimate truths when studying people (1998, p. 251). Correspondingly, the findings of this study should be viewed as generalizable guidelines for achieving change towards more sustainable consumption, but not as ultimate insights about e.g. future consumer needs. The fields of consumption and retail are experiencing rapid changes at the moment due to increased knowledge about the environmental situation as well as e.g. digitalization-related matters. This implies that the topics addressed in this study require continuous attention. In addition, more knowledge and research about sustainability and ways of achieving it is required.

### 6.3 Further research

This thesis has focused especially on the behavioral and consumer aspect of sustainable consumption. Also, the role of businesses in altering the retail choice architecture has been highlighted. However, as stated in the literature review and research findings, change towards sustainable consumption can be approached from consumer, business, and policy perspectives. Thus, another possible and interesting way to approach the topic of creating

change towards strong sustainable consumption (in retail) would be the role of policy in enabling and creating the required change. Also, the possible barriers for practicing sustainable business created by the policy would be an interesting area for further research. Many of the interviewees of this research stated that policy is the most powerful approach for changing consumption patterns. This gives a reason to believe that this approach could have a great impact on the current consumption practices and levels.

In addition, this thesis has addressed some sustainable initiatives that challenge the current norms and ways of thinking. It would be interesting to conduct further research on innovations that disrupt the current business models of retail and challenge the way we currently measure success (i.e. profit-making). Degrowth as well as sharing economy and social movements providing new forms of consumption were also highlighted in the academic discussion and by the interviewees. These trends provide ways for even rethinking exchange, which might become critical as the societal structures are changing due to matters such as digitalization, automation, change in work life, and demographic change. The above suggested further research areas benefit of the knowledge base provided in this study and would contribute to achieving a more comprehensive understanding about ways of achieving a change towards strong sustainable consumption.

## 6.4 Conclusions

The main purpose of this research was to investigate the contribution of a lead user approach for nudging behavioral change towards more sustainable consumption in mass consumption environments. Moreover, nudging was studied in the context of shopping centers, whose choice architecture was identified as an important channel in shaping consumption behaviors. There are several important areas where this study

makes an original contribution to understanding sustainable consumption behaviors and the future of retail and sustainable consumption from a lead user perspective. First, the research provides an understanding of drivers for adopting strong sustainable consumption behaviors. Second, it provides an understanding of requirements for practicing more sustainable consumption in retail. Third, the research addresses ways for nudging sustainable consumption behaviors through the choice architecture of mass retail environments, such as shopping centers, in order to create a far-reaching change towards more sustainable consumption. Based on the findings of this study, a conclusion can be made that the lead users of strong sustainable consumption indeed do contribute to nudging change towards more sustainable consumption in retail, by providing a vision and understanding of ways to create a behavioral change towards strong sustainable consumption.

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## Images

All photographs are taken by the author.

# Appendices

## Appendix A

Examples of megatrend cards used in card sorting with lead use experts

- Environmental trends
- Technological trends
- Social trends
- Economical trends
- Other important trends

Resource Scarcity	Digitalization
Green Consumption	Mobility
Climate Change	Interconnectivity
Zero (Waste)	Augmented Reality

Demographic Change	New Business Models
Rise of Middle Class	New Ways of Measuring Success
Sharing	Life Cycle Thinking
Local	_____

## Appendix B

An example of the structure and questions for the lead user interviews

**Interview questions**  
**Lead user interviews**

<b>Interviewee background</b> X	<b>Themes for interview</b> <ul style="list-style-type: none"><li>• Strong sustainable consumption</li><li>• Ideology (values, mindset, lifestyle...)</li><li>• Change in consumer behaviour</li><li>• Needs</li><li>• Solutions</li><li>• Role of shopping center and other forms of retail</li></ul>
<b>Place and time</b> X	
<b>Materials</b> Lead user interview questions Voice recorder	

**LEAD USER QUESTIONS**  
Input: ideology, needs, solutions

**Sustainable consumption ideology, needs & solutions**

- Who are you? Could you tell shortly about yourself (focus on sust. cons.), (*lifestyle, mindset*)
- What does sustainable consumption mean to you?
- How do you practice sustainable consumption?
- What is it like? (*challenges*)
- What kind of emotions does it wake in you?
- What do you see as the biggest obstacles for sustainable consumption from a consumer perspective?

**Behavioural change**

- Why did you decide to consume less / more sustainably? (*values*)
- Have you always been like that? If not, when and what changed it? (*ideology & journey*)
  - What are the critical moments, thoughts and realisations?
- Why did you decide to blog etc. about it? (*influential person*)
- How have you solved the challenge of sustainable consumption in your (daily) life? (*concrete solutions*)
- What would still help your sustainable consumption?
- (How could unsustainable consumers be helped to consume more sustainably in your opinion?)

**Purchasing & consuming**

- How do you consume or shop?
- What are the things (products & services) that you purchase?
- When do you purchase or consume something? (*needs & moments*)

**Shopping centers & retail**

- What is the role of shopping centers in your sustainable consumption or life in general?
- What is the role and experience of brick-and-mortar, online retail and other means for obtaining a product (such as clothing as a service) in your purchasing behavior?
- How do you perceive shopping centers?
  - (How should shopping centers change in order to...?)
  - (How should shopping centers change in order to **enable** more sustainable consumption?)
  - (How should shopping centers change in order to **attract** you (as a sustainable consumers and sustainable brands)?)
- (What does a dystopia and utopia of future shopping centers & retail look like to you?)
- (How do you see that a radical change towards more sustainable consumption could be achieved?)
- How could businesses, brands and shopping centers help you consume sustainably?

**In the end**

- Who would still be a relevant person to be interviewed?

## Appendix C

Informed consent form for the lead use expert interviews

**Informed Consent Form**  
**Expert interview**

This study is conducted by Saga-Sofia Santala, a master's student from *Aalto University, School of Arts, Design and Architecture*, as a part of a master's thesis for the program of *Collaborative and Industrial Design*.

The research "*Rethinking Retail Flow - Co-Designing a Sustainable Future Vision for Retail (in Shopping Centers)*" studies the current and future state of retail and user experiences related to it with a focus on sustainability and co-design. The study includes expert and lead user interviews and possible workshops. The purpose of the study is to gain understanding of retail and in creating a future vision for sustainable retail in collaboration with retail experts and lead users of sustainable retail or other relevant topics related to retail.

This consent is for the expert interviews. The interview will be audio taped and photographed. These tapes and photographs will be used for the thesis purposes. The photographs will be modified to retain the participant anonymous, when necessary. The participant can decline participation or withdraw from the study at any time and without any prejudice or consequence. By signing the form, the participant agrees to the aforementioned. One copy is handed to the participant and another copy stays with the researcher.

Please check off one of the statements below, then sign and date.

I want to stay anonymous  
 My name and title can be used when presenting the findings

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Name: \_\_\_\_\_

Date & place: \_\_\_\_\_

  
Aalto University  
School of Arts, Design  
and Architecture

**Appendix D**

Retail Change-Makers: Worksheet

## RETAIL CHANGE-MAKERS: WORKSHEET

**Adopting and nudging sustainable consumption behaviors in retail**

Date: \_\_\_\_\_

Team: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



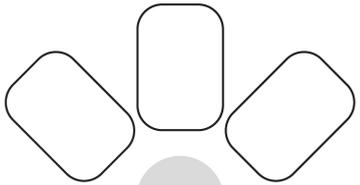
**1**

**Experiencing an awakening**

1 \_\_\_\_\_

2 \_\_\_\_\_

3 \_\_\_\_\_



**2**

**Recognizing other ways**

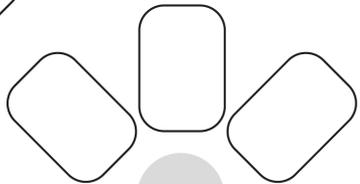


**Future consumer**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



**4**

**Making a change**



**3**

**Reflecting on own role**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



**5**

**Sharing and getting support**



**6**

**Learning more**



**7**

**Nudging others**

1 \_\_\_\_\_

2 \_\_\_\_\_

3 \_\_\_\_\_

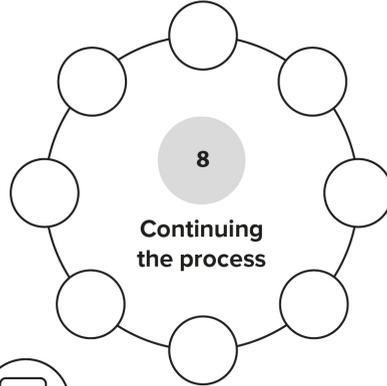
4 \_\_\_\_\_

5 \_\_\_\_\_

6 \_\_\_\_\_

7 \_\_\_\_\_

8 \_\_\_\_\_



**8**

**Continuing the process**

**Tasks:**

<p>1. List (3 most important)</p> <p>learnings as well as future consumer characteristics or needs based on the presentation.</p>	<p>2. Look at other ways of performing: Choose the most interesting examples from the <i>Example cards</i> and discuss them.</p>	<p>3. Reflect the previous examples on your own business and discuss: What would be the impact and benefits of making a change?</p>	<p>4. Look at the <i>Need cards</i>: Individually choose your favorite lead user need and ideate solutions to it in the form of a moodboard.</p>	<p>5. Present your need and solution ideas to others and discuss: What works or is interesting and how could the ideas be further developed?</p>	<p>6. What can you learn from the other presentations: Develop the ideas further based on the previous discussion.</p>	<p>7. Ideate based on the nudging presentation: How to nudge customers towards sustainable behaviors through the created ideas?</p>	<p>8. Discuss: How can the ideas be tested and implemented and what kind of steps are needed for the ideated changes to happen?</p>
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## Appendix E

Retail Change-Makers: Example card and Need card examples

### ReTuna: Recycling shopping center in Eskilstuna, Sweden



2

2  
Example  
card

“I mainly want to buy only used clothes, because there are such huge amounts of textile waste in the world today. So, if even a part of those textiles’ mileage can be prolonged, it is already a win for me. Plus, it is a fun challenge for me to look for used clothes.”

4

4  
Need  
card

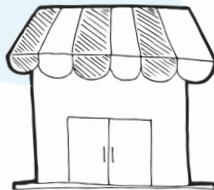
VII

VIII

Saga-Sofia Santala

# Rethinking Retail

A lead user approach for nudging strong sustainable  
consumption behaviors in shopping centers



Aalto University  
2019