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Identifying opportunities for sustainable behaviour

A proposal for circular solutions at ICA Special based on explorative user studies

Master of Science Thesis in the Master Degree Program Industrial Design Engineering

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CHALMERS UNIVERSITY OF TECHNOLOGY
Gothenburg, Sweden 2018

Department of Industrial and Materials Science
Division of Design & Human Factors

Master of Science Thesis

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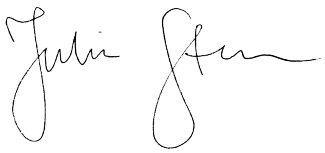

Julia Stensson

Abstract

As the sustainability interest of aware consumers continuously grows, large companies need to meet the increasing demands by offering products and services with low environmental impact. ICA is a large and well-known company in Sweden that aims to be leading in sustainability. With a wide range of product categories, there are several areas where ICA has the potential to make a difference. The initiator of this project was ICA Special, which is the part of the company that is responsible for the non-food assortment.

The purpose was to investigate how ICAs sustainability profile can be strengthened, which was addressed with an explorative approach. First, an extensive literature study was carried out to collect information about sustainable product development, where circularity, sustainable behaviours and user focus were three central areas. The main part of the project consisted however of user studies, which were conducted with customers of and employees at ICA.

A questionnaire in combination with focus groups gave insight into people's reasoning when purchasing new products as well as the process of recycling old ones. Some difficulties were identified, such as how to know where and in what way to recycle, and what can be considered as a sustainable product. Simplicity and explicitness seemed to be the most important motivators for people to make more sustainable choices. Interviews and workshops contributed in the collecting of information from employees at ICA Special. Some areas with improvment possibilities were identified, where the most promising was the position of the product managers since they decide the entire assortment.

Input from all user studies was analysed and became the basis for seven concept suggestions. The goal was to approach the challenges from different angles to cover as many of them as possible. Although they could all theoretically be implemented simultaneously, two of them were developed further to give more detailed examples of how the identified problems could be solved. In general, it has to be easier and/or in some way more attractive to choose sustainable options rather than conventional alternatives. This applies to both purchasing and recycling situations for customers as well as working strategies for the employees.

By transitioning one step at a time towards more circular business models or strategies, alternative material flows and profits can be found, which is necessary if the goal is to become leading in sustainability. Thanks to the wide customer group and broad range of product categories, ICA has the potential to implement solutions in various areas and thereby the chance of succeeding will increase.

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CONCEPT DEVELOPMENT

Definitions

Product development normally refers to the process of developing and designing a product. However, the expression can also include services, strategies, and systems, since the process itself often look more or less the same.

Sustainability can implicate various aspects such as economical or social perspectives, but in this report the term will always refer to ecological sustainability. A sustainable product is therefore referring to one with as low negative environmental impact as possible.

A **recycling central** is the place where discarded or broken products should be taken to. This should not be confused with a **recycling station**, which is where packaging should be recycled. The recycling stations are often smaller in size and can be found at many places in cities, while the recycling centrals are more scarce and are often located outside the city center.

1. Introduction

"The reason to why this report was written"

In this first chapter, the background of the project is explained, together with an explanation to why sustainability is an important aspect to consider. The purpose and research questions are presented, followed by an overview of the report distribution. Lastly, a section with information about ICA can be found, which also contains some examples of the company's sustainability goals, initiatives, and competitors.

1.1 Background

The interest in sustainability is growing in society and people become gradually more aware of the subject. As the awareness among customers increase, their demands on sustainable products get higher, which is something that companies need to take into consideration when running their businesses. If a company wants to keep its place on the market, these demands need to be fulfilled.

ICA is a company with a wide and large customer group and can thereby have potentially great impact on many users. Therefore, an opportunity to contribute to a more sustainable society could be done by strengthening the company's sustainability profile. Being a large company has its advantages and challenges. While having the possibility to reach out to many people, it can also be difficult to make an abrupt turn and make too many major changes at the same time. Although the sustainability interest is growing in general, all customers might not agree on the importance of the topic. The challenge for ICA is to offer sustainable products that fit the different product segments while also keeping the entire customer group satisfied.

Furthermore, as ICA does not have any in-house product development, the products that are sold in ICA stores are initially bought from different suppliers (this is further described in Chapter 4). The process of choosing products for the assortment looks different compared to companies that have their own designers for product development. Therefore, new strategies and different ways to approach the problem need to be found to make customers perceive ICA as a brand in the forefront of sustainability.

1.2 Purpose

The purpose of the project is to investigate possibilities to strengthen the sustainability profile of ICA. The aim is to create a product or service with a sustainable focus based on results from explorative user studies. The product or service should encourage customers to reflect upon their current behaviour, and also contribute with additional value other than the sustainability benefits in order to make people aware of the advantages with sustainable choices.

An additional purpose is to provide meaningful information to help ICA continue the work towards sustainability after the end of this project. The aim is to provide a solution that will make a lasting change in-house and make it easier for employees at ICA to continue using sustainable approaches.

1.3 Research questions

1. In what way do attitudes towards sustainability issues differ between different customer groups, and what is the relation between their attitudes and actual behaviours?

   Addressed by investigating different customer types based on their approach to sustainability questions. This to enable identifying if any of these groups needs to be prioritised in order to get a significant result, without excluding anyone. It should also be investigated if the customers' actual behaviours are in line with their alleged point of view.

2. How can employees at ICA contribute to the company's sustainability profile?

   By exploring different positions within ICA, possibilities to strengthen the company's sustainability profile can be identified. Changes that are made in-house could have an impact on how ICA is perceived by the customers.

3. What different channels can be used to strengthen ICAs sustainability profile?

   Being a large company, ICA has the possibility to approach the task by using different types of strategies. By ideation around identified problem areas it can be investigated if a product can contribute to an improved sustainable profile or if a solution on a different level needs to be implemented.

1.4 Report disposition

The report is divided into two major parts (see Figure 1), where the first describes the results from the data collection. It contains results from the user study with employees at ICA, and from the user study with customers. The second part of the report contains personas, ideation and evaluation of the first concept suggestions, and development and analysis of the final concepts. Before the first part a theory chapter is presented and all methods and the process are described in a separate chapter. After the second part follow a discussion chapter and conclusion.

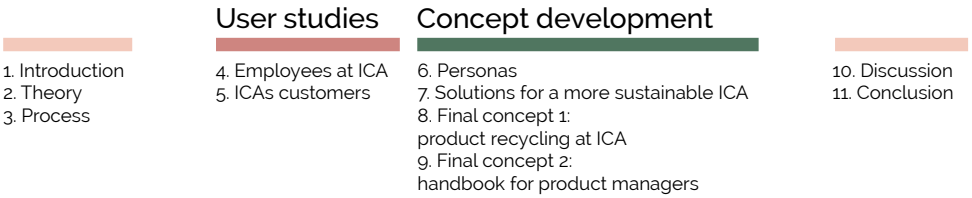


Figure 1. Report disposition

1.5 ICA and sustainability

About ICA

ICA Gruppen is a large company group in Sweden divided in multiple companies such as ICA Banken, ICA Fastigheter, and ICA Sverige. The vision is "to make everyday a little easier" and the entire company circles around the core values *simplicity*, *entrepreneurship*, and *commitment* (ICA Gruppen, 2018 A). ICA Sverige is one of the leading retailing companies in Sweden with a large focus on food. The company is a composition of retailers where everyone owns and is in charge of their own store. Each retailer decides exactly what they want to offer to their customers (ICA Gruppen, 2018 B).

ICA Sverige is further divided into four different store concepts: ICA Maxi, ICA Kvantum, ICA Supermarket, and ICA Nära. ICA Maxi offers a large supply of food as well as products for gardening and cooking. ICA Kvantum focuses mostly on food and strives to be the leading grocery store in a neighbourhood. ICA Supermarket should also offer a large supply of groceries but is not as big as a Kvantum store. ICA Nära is the smallest type, where the most basic groceries and a limited selection of necessary equipment are offered (ICA Gruppen, 2018 C).

Included in ICA Sverige is also ICA Special, which is the part that manages the non-food assortment. This includes both purchasing of products from suppliers that produce them, as well as selling the products to the retailers. In ICA Maxi stores, ICA Special is in charge of the non-food assortment but for the other store concepts the store owners buy the products they want through wholesale trade provided by ICA Special (ICA Gruppen, 2018 B). As mentioned earlier, this project is initiated by ICA Special and will focus on development of non-food products. In the continuation of this report the term ICA will refer to ICA Sverige where ICA Special is one part.

ICA Gruppen has two large goals connected to the environment and sustainability. The first is to be carbon neutral by 2020, and the second is to help customers make sustainable choices when buying ICAs products. The ambition is to be leading in sustainability. ICA sees this as a responsibility being one of the largest suppliers in Sweden that has the possibility to influence many consumers (ICA, 2018 A).

In 2017, ICA Gruppen launched the concept "*För en god morgondag*" (authors' translation: "*For a good tomorrow*"), in order to structure different areas of sustainability where ICA Gruppen works, and to clarify which areas that are the main priorities (ICA, 2018 A). The concept is connected to the sustainable development goals set by the UN. ICA focuses mainly on five of the 17 goals: *3. Good health and well-being, 5. Gender equality, 8. Decent work and economic growth, 12. Responsible consumption and production,* and *13. Climate action* (ICA Gruppen, 2018 D), see Figure 2.

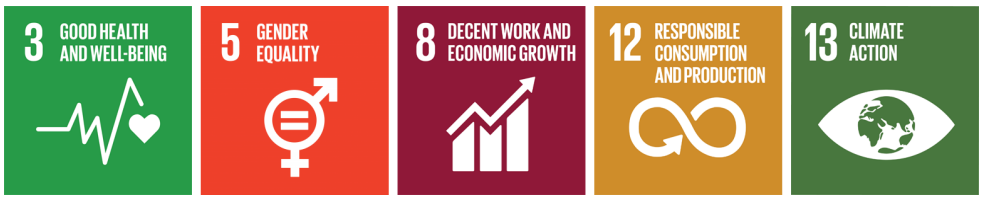


Figure 2. Five of the 17 UN goals.

ICA has carried out a number of initiatives. To mention a few, all plastic bags have been replaced with bags made of sugar canes (ICA, 2018 B), food waste has been reduced by donating leftover food to charity, and some stores cook meals from food with a short expiration date and sell as pre-cooked meals (ICA, 2018 C). Furthermore, during 2017 ICA tried a new method for labelling fruit and vegetables (see Figure 3). Instead of using stickers and plastic films the products are labelled with laser on the peel (ICA Gruppen, 2018 D).

Figure 3. Laser labelled fruit

Lastly, ICA has developed two eco-labels to guide customers and make it easier to find sustainable options in stores. The labels are called "*Välj eko*" (authors' translation: "*Choose organic"*), which is applied on all products that are organic, and "*Välj miljösmart*" (authors' translation: *"Choose sustainable"*), which is applied to products that have at least one of the eco-labels that ICA prioritises, see Figures 4 and 5 (ICA, 2018 D).

Figure 4. Choose organic

Figure 5. Choose sustainable

Competitors

ICA is active in several areas and therefore has a large number of competitors. The largest business is groceries, and other grocery stores can be seen as the main competitors. However, ICA is also a major player in the interior, kitchen, gardening, and clothing businesses and therefore has competitors in these areas as well. Due to the large amount of different products it is hard for ICA to be leading in any of the categories. However, a unique selling point is that ICA can offer a wide variety of products in several different categories to an affordable price.

From a sustainability point of view, ICA could be seen as a company that strives to be as environmentally friendly as possible. There is still a bit left to go to become leading in that area, but by laying more focus on the subject ICA has potential to succeed.

By keeping an eye on competitors it is easier to know what has already been done and thereby avoid replication of other companies' ideas. However, inspiration can still be found and used as a base for solutions that can be adapted and unique for ICA.

2. Theory

"Clarifications of some key topics that were present during the entire project"

To facilitate upcoming decisions and create a foundation for future solutions, a literature study was carried out with focus on the three areas *circularity*, *sustainable behaviour*, and *user focus.* A walkthrough of each theme is presented, followed by a summary of how they could be combined in a beneficial way. Since ICA Special is a company that sells products, the initial goal was to identify important aspects to consider in sustainable product development. However, the content of this chapter can also be applied on the case where a solution is a service or a system.

2.1 Circularity

Until recently, a product has been considered environmentally friendly as long as the negative impact of different parts of its life cycle are kept low (Wever, van Kuijk, & Boks, 2008). However, this traditional view is gradually becoming outdated and circular business models are getting more common. The possibility of "looping" or extending the life cycle various times is getting more attention (Moreno, de los Rios, Rowe, & Charnley, 2016).

Many companies are nowadays striving for a *Circular Economy*, which is a system where products' life cycles do not end when one user has finished using it. Products should be designed with the aim to minimise waste by being taken back into the system in order to loop the used materials, and postpone the end of life for as long as possible (Ellen MacArthur Foundation, 2018). According to Mestre and Cooper (2017), there are two different cycles for material flows. In the biological cycle, bio-based materials are taken back into the loop either as renewable resources or fuel for producing new materials. The technical cycle is where materials are reused in some way, by repairing or reusing them in new products.

If a product fulfills a number of requirements, it can achieve a *Cradle to Cradle* (C2C) certification, which indicates how environmentally friendly a product is based on assessment of five different categories (material health, material reutilisation, renewable energy, water stewardship, and social fairness). The categories give an indication of how well the product can be incorporated in a circular process. The certification can help companies get a more sustainable profile while also indicating to the customers which products they should choose (Cradle to Cradle, 2018).

Another circular approach, connected to C2C, is the concept of *Industrial Ecology*. The ambition is to strive for a system similar to nature, with an internal cycling of materials resembling an autonomous ecosystem. Taking inspiration from nature can be a way to reach a balance where output from one system can become input in another (Bocken, de Pauw, Bakker, & van der Grinten, 2016).

Challenges

There are some challenges with implementing the circular approach in a product development process, one being the question how to avoid stagnation and get a flow of materials and products. Moreover, it is important to learn to rethink, and realise that there can be a greater value in such a flow than letting a product pass from company to user and not move further (Bocken et al., 2016).

Another challenge is that it is not enough only considering the product itself to be able to make it circular. A systems perspective is necessary to understand the purpose of a product and its role in a context (Selvefors, Strömberg, & Renström, 2016), and according to Moreno et al. (2016) it is impossible to reach a Circular Economy without a systemic change. A structural improvement of strategies and services is required rather than a number of circular products, which might be a challenge for a designer that is specialised on product development (Moreno et al., 2016). This implies that a combination of other methods and strategies can be needed to implement first, in order to reach a Circular Economy.

It is important to remember that circularity in theory is not necessarily the same as in practice. Many times a product's low environmental impact will not show unless it is produced in a large volume, which can be difficult for a smaller company to implement. Another example is that a highly rated C2C-product may consist of very pure materials that are easy to recycle properly, but by mixing some materials a longer lifetime can be achieved, which can result in a smaller amount of materials used in total. It is therefore important to be aware of that labels and certifications can sometimes be misleading and it is a complex task to determine which option that is actually the best in the long run (Bjørn & Hauschild, 2012).

2.2 Sustainable Behaviour

Chapman (2009) claims that sustainability issues are actually a matter of changing behaviours rather than optimising other phases such as production and volumes (Chapman, 2009). Even though the manufacturing phase is often the focus when the aim is to decrease the environmental impact of a product, many products with relatively long lifetime (especially those that consume energy when used) will actually generate most impact during the use phase. Therefore, it is important to understand how products are used in order to have the possibility to influence the user behaviour in a more sustainable direction (Wever et al., 2008). *Design for Sustainable Behaviour* is a concept where the product is designed with the intention to enable a sustainable use (Lockton, Harrison, & Stanton, 2008). Selvefors, Rexfelt, Strömberg, & Renström, (2018) suggest that a product can be perfectly adapted for a circular system, but if the user treats it in another way than intended, the loop will not be closed and circularity is not achieved. In addition, to enable a sustainable behaviour, the user has to be given the opportunity to actually make sustainable choices, and not just information about what they should do. Allowing the user access to more information and environmentally friendly options will increase the possibility to achieve circularity (Selvefors et al., 2018).

A user's *mental model* of a product will affect the way it is used, and is therefore an important aspect to consider in order to avoid inaccurate behaviour. To allow for a sustainable use of a product it is preferable to enable information that will help the user to get a correct mental model, for example facts about environmental impact that will facilitate the understanding of the product's life cycle (Lockton et al., 2008).

Nudging is a concept with the purpose to guide individuals in a certain direction without forcing them to do anything. This could for example be done by offering information that enables a feeling of having made a well-informed decision, which can be applied on different levels of conscience. According to Mont, Lehner, & Heiskanen (2014), some argue that nudging works best if the affected individuals are not aware of it, and that subtle information can be used to have an impact on people's automatic behaviour. In any case, the goal is that small changes will lead to benefits on both individual and society level. Since different contexts will give different results, it is important to have a profound understanding of the current context to succeed with nudging (Mont, Lehner, & Heiskanen, 2014). There is often a gap between intention and actual behaviour that appears when people know what they should do in general but another option is more convenient in a specific situation and therefore is the one that is chosen. Nudging can be used to decrease this gap by making the desirable option attractive and easiest to choose (Olstad, Goonewardene, McCargar, & Raine, 2014).

Challenges

The rebound effect is a phenomenon that can occur when improvements are made in one area and the result is deterioration or an increase of consumption in another area (Bjørn & Hauschild, 2012). This is where the question of sustainable consumer behaviour comes in. As Selvefors et al. (2016) claim, it is not possible to design a behaviour and therefore the focus should be to design prerequisites for a behaviour, which can be done through a product. However, new products should not be developed for the sake of developing, even though a new product might be more sustainable than an old one. It is important that there is an everyday need that has to be fulfilled by the product. Otherwise it will likely not be used, which is not promoting a sustainable behaviour (Selvefors et al., 2016). In addition to this, needs can change over time, which means that the usefulness of a product might decrease. This often leads to inefficient use and prolonged storage (Selvefors et al., 2018).

A sustainable behaviour can occur and develop automatically if proper design strategies are implemented on a company level and thereby imply favourable conditions for the user (Moreno et al., 2016). Having this in mind, it might not be reasonable to lay the responsibility on the user, even though the use phase is where a loop usually breaks (Selvefors et al., 2018). If the problem can be solved by a product design, the user will never have to think about it and make difficult decisions.

2.3 User focus

In order to succeed with methods aiming to encourage a sustainable behaviour, products have to be designed with the user in focus. If a product is not adapted to the user, it will probably not be used at all (Phillips & Zhao, 1993). The fact that sustainable products are not a guarantee for sustainable behaviour can be managed with *User Centered Design* (Wever et al., 2008). Designing with the user in focus, taking many different kinds of individual prerequisites into account, the potential of reaching out to a wide range of customers will be large (Wilkinson & De Angeli, 2014). A product that people like has the possibility to be used for a long time, which can be considered as a sustainable product.

Challenges

One challenge with implementing User Centered Design in sustainable product development is that many users are not interested in buying a product if its main characteristic is its low environmental impact. Functionality and other aspects are more important and will be prioritised. This indicates a need of understanding these aspects to be able to fulfill them at the same time as making the product sustainable. Thereby, user studies can contribute to a better understanding of common everyday needs and the possibility to design products that will fulfill them while also being sustainable (Wever et al., 2008).

2.4 Combining the three areas

When discussing one of these areas it is difficult not to also touch upon one of the other two. They share some common topics that are all essential in sustainable product development, which indicates that there is a correlation between the areas. This is visualised in Figure 6 below, where each theme is represented by a circle that overlaps with the two others.

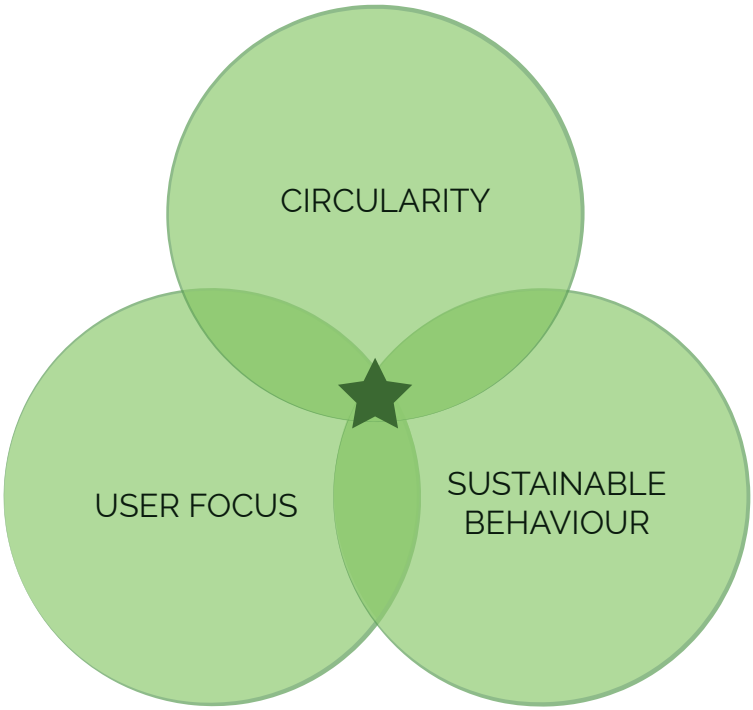


Figure 6. The relation between the main areas.

If a user focus is not implied in the product development process it can be difficult to accomplish a sustainable behaviour, which in turn can make it difficult to reach circularity. If the decision on how to use a product is in the hands of the user, the resulting behaviour can be either sustainable or not, but if the product is designed with a certain behaviour in mind the probability of a sustainable behaviour will increase. Even if designing with user focus does not require circular approaches, they still have some key aspects in common.

If two of the three main areas are combined (see Figure 7) in a product development process, the result will probably be better than if only one area at a time is considered. However, the absence of the third area will entail limitations, if the aim is to develop a product with as low negative environmental impact as possible during all parts of its life cycle while also being user friendly to facilitate the intended use.

	Positive outcome	Negative outcome
 CIRCULARITY + USER FOCUS	A product that is both user friendly and adapted for a circular business model.	Since the user behaviour has not been considered, it is possible that the product will not be taken back into the loop, which entails a non-circular product in practice.
 USER FOCUS + SUSTAINABLE BEHAVIOUR	A product that is both user friendly and has prerequisites for and/or encourages sustainable behaviour.	Since the product is not adapted for a circular business model, the result will still be linear, even if the use phase is relatively sustainable.
 CIRCULARITY + SUSTAINABLE BEHAVIOUR	A product that is both adapted for a circular business model and encourages a sustainable behaviour that will allow for circularity.	Since a user focus is not applied, the product might not be user friendly or adapted for the user's needs, which can result in an incorrect use or that it is not used at all. It might even be discarded even if it is still functioning, just because the user does not like it.

Figure 7. Outcome of combining two of the three areas

To conclude, the focus of sustainable product development should be in the middle of the model where the three areas overlap, in order to achieve a product that is both user friendly, encourages sustainable behaviour, and is adapted for a circular business model. It will increase the probability that the user likes the product and wants to keep it in good condition until it is time to discard it. By that time it will be both evident and simple to get the product back in the loop again.

2.5 ICAs perspective

Implementing circular strategies such as Circular Economy or Cradle to Cradle can be efficient for companies that have their own product development process. However, for ICA it can be difficult to take it all the way, since products first go via other suppliers and companies that might have their own strategies that they do not want to change. Controlling each product can be tedious and therefore a more holistic approach with alterations from a systems perspective could be more efficient for ICA.

One advantage that ICA has is the well-established position in the society and thereby familiarity among most Swedes. By conventionalising innovations and taking advantage of the possibility to spread them to many people, new ideas could be accepted quicker. This is a great opportunity for ICA and could be used to educate customers as well as nudging them towards more sustainable behaviours.

2.6 Takeaways

- A circular economy is worth striving for but can be difficult to adapt to overnight. Several methods and strategies can be needed to begin with, and material flows and other organisational alterations have to be considered from a systems perspective to make it work in practice.
- To achieve a lasting transformation, focusing on changing behaviours can be a good way to go. It is important to consider that people have different requisites and that might entail different results than what was planned for.
- Adapting products, services, or systems so that the user both is able and wants to use it, is necessary to be able to change behaviours.
- A combination of circular goals, striving for sustainable behaviours, and a user focus is essential to succeed with sustainable product development.
- ICA can use these insights to work more with sustainable products and review possibilities to implement circular strategies in-house as well as in collaboration with other companies. By taking advantage of the possibility to spread innovations to a large crowd, sustainable products can be more standardised and accessible for everyone.

3. Process

"The basics that will facilitate the understanding of the procedure"

The process and methods used for this project are described and motivated in this chapter, along with explanations to how some of them have been adapted to get the most out of each part of the project.

3.1 Project process

The assignment to strengthen the sustainability profile of ICA is quite wide, and was therefore approached broadly and kept open for as long as possible. This provided an opportunity to investigate further where the largest benefit could be found for ICA and the approach entailed a broad range of concepts.

To investigate where the largest impact could be made, a literature study, and user studies with both customers and employees at ICA, were carried out. The user studies constituted the majority of the project and therefore most time and effort was assigned that part. The second part of the project was smaller and contained development and evaluation of concepts. The entire process is illustrated in Figure 8.

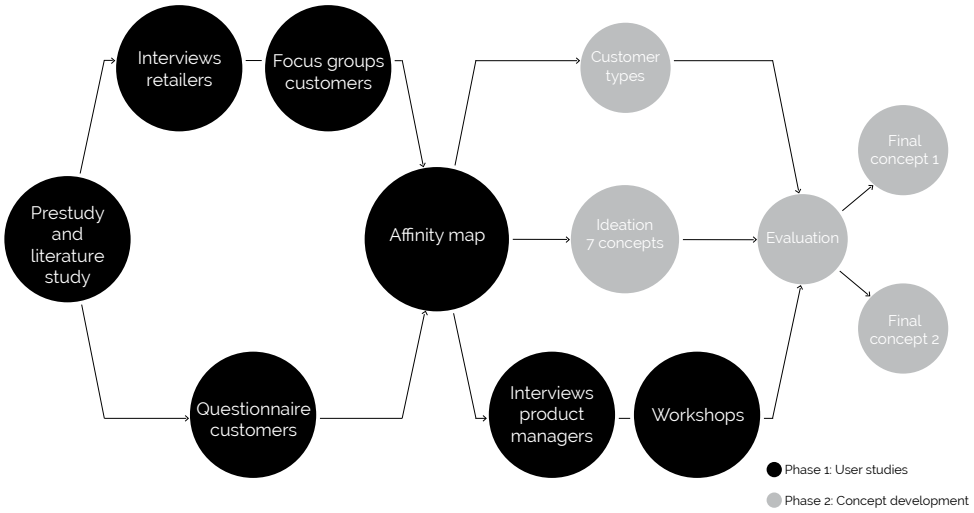


Figure 8. The project process

3.2 Theory

The literature study was initiated in the area of circularity, based on a great interest from ICA in the subject. Articles were gathered by searching in different databases, for example Chalmers library and Google Scholar, using different combinations of keywords like *circular economy, circular product development, sustainability, and sustainable design.* During the reading, other subjects were frequently mentioned, which became the basis for a second iteration. Some of the additional keywords were: *sustainable behaviour, cradle to cradle, and nudging.*

Relevant data from the articles was compiled and sorted in different categories based on the content. Three main categories were identified: *circularity, sustainable behaviour,* and *user focus.* These are described in chapter 2. The theory provided a broader understanding of the subject and was the entry for the project. Important relations between the topics were identified, which contributed to the upcoming work in the project.

3.3 User studies

The user studies were divided into two parts, one with employees at ICA and one with customers, to approach different users from different perspectives. Interviews were carried out with employees at ICA to get a broader understanding of how the company works and what role sustainability plays in different parts of the company. Store owners and product managers were the main focus as they have key roles in the decision of what products that can be found in the stores.

To investigate attitudes towards sustainability and how customers make decisions when buying products, a questionnaire was sent out and focus groups were carried out. This combination of methods was chosen in order to gather both quantitative and qualitative data, to get as much coverage as possible.

All user studies were performed in Swedish, and therefore all quotes are translated by the authors.

Interviews with store owners and product managers

Five store owners were approached with semi-structured interviews (Martin & Hanington, 2012). The approach was chosen since it provides opportunities for the participants to talk freely and add information, opinions, and ideas to the conversation. Thereby qualitative data can be provided to the study while still following a guide to collect all information needed. The goal was to understand which products the retailers decide to purchase for their stores and why. The interviews lasted 30-60 minutes, depending on the level of detail of the answers, and the full interview gudie can be found in Appendix 1. Three of the five retailers were owners of ICA Kvantum stores, one of an ICA Supermarket and one of an ICA Nära. The interviews were carried out in a location in connection to each store. ICA Maxi stores were not included since the purchasing part there is managed from ICA Special and not by the retailers themselves.

Semi-structured interviews were also carried out with product managers at ICA Special (see Appendix 2 for interview guide). The aim was to find out how they reason when choosing products, mainly from a sustainability perspective, and where difficulties and lack of knowledge could be found. Five product managers with responsibility for kitchen appliance, lingerie, toys, electronics, and napkins and candles were interviewed for 30-60 minutes each. They were chosen to represent multiple different areas and provide the project with a wide range of data. In addition, the category manager (head of a group of product managers) in charge of the kitchen segment was interviewed to get deeper knowledge about and another perspective on how products generally are selected.

Field studies

In connection with the interviews with retailers, visits in the stores were conducted. The approach of the field studies were open and the purpose was to collect data about the non-food assortment, the placement of products as well as the range of products in proportion to the rest of the store. In addition, information in stores and how it is communicated to the customers was investigated.

Apart from the stores owned by the interviewed retailers, two ICA Maxi stores were also visited. At ICA Maxi the entire non-food assortment that ICA Special offers can be found, and the visits were carried out to get an overview of all products as well as the structure and framing of them. The field study was documented by taking pictures in the stores, and also some notes were taken.

Workshop

19 employees from ICA Special with different positions participated in five workshops. The aim was to get a broader understanding about how the company works and to get a chance to talk to people from different parts of the company. The workshops were also a way to inspire the employees and show them what they can do to create a more sustainable company.

The workshops were centered around a future scenario that is presented in Appendix 3. The participants read the scenario and then discussed the content, their opinions and possible ways to reach a similar situation.

Inspiration for the scenario was taken from the BECE framework presented by Mendoza, Sharmina, Gallego-Schmid, Heyes, & Azapagic (2017). The framework combines backcasting with a sustainable approach which suited the project and the workshops well. As a support, an image board (presented in Appendix 4) was created to inspire the participants.

Obstacles for ICA to reach this vision were written by the participants on yellow sticky notes, and possible solutions to these were written on pink sticky notes. They were asked to think from their personal point of view to get suggestions from as many different perspectives as possible. As a last task the notes were placed in a two axes diagram. On the vertical axis the degree of difficulty was graded and on the horisontal axis the spectrum ranged from individual to organisational level based on which implementation level that would be appropriate to for this kind of change. The placement of the notes was then discussed together in the group. Notes about what the participants talked about were taken during the entire workshop.

Questionnaire

To explore what attitude customers have towards sustainability in general and what opinions they have of ICA, a questionnaire (Martin & Hanington, 2012) was conducted. It investigated what knowledge the participants had about sustainability as well as common kitchen habits. It also included questions regarding their opinion towards ICA and what they thought about the kitchen equipment available at ICA today (see all questions in Appendix 5).

As the target group of ICA is broad, one goal was to reach a wide group of people in different ages. The main site for spreading the questionnaire was through social media. Many responds from the age group 21-30 were gathered in a short time. Posters were placed on several public places around the city to broaden the range and to reach people that typically do not use computers as frequently, such as senior citizens. In addition, flyers and printed copies of the questionnaire were placed at public spaces and workplaces to broaden the range of participants even further (the posters and flyers can be found in Appendix XX). The age distribution of the participants is presented in Figure 9.

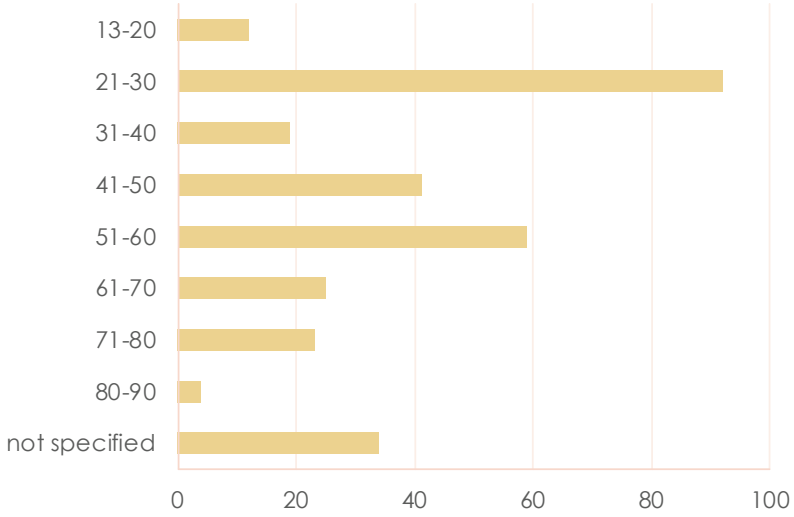


Figure 9. Age distribution in the questionnaire.

In total, 309 responds from different parts of Sweden were gathered from the questionnaire (see Figure 10). They were first analysed briefly to collect input to the focus groups. A second, more thorough, analysis was performed later.

Focus groups

Based on the results from the questionnaire, five focus groups (Martin & Hanington, 2012) were held to add a broader understanding and achieve deeper discussions of the most interesting findings. The participants in the groups discussed recycling, food waste, and what thoughts and preferences they have when buying new products. The latter was approached by presenting 2-3 products from the same product category to encourage the participants to discuss which one they would buy and why. In addition, a more creative exercise was performed where the participants got to combine a multi-tool and a dish with three random tools that they picked from a pile of pictures. The complete setup for the focus groups can be found in Appendix 7.

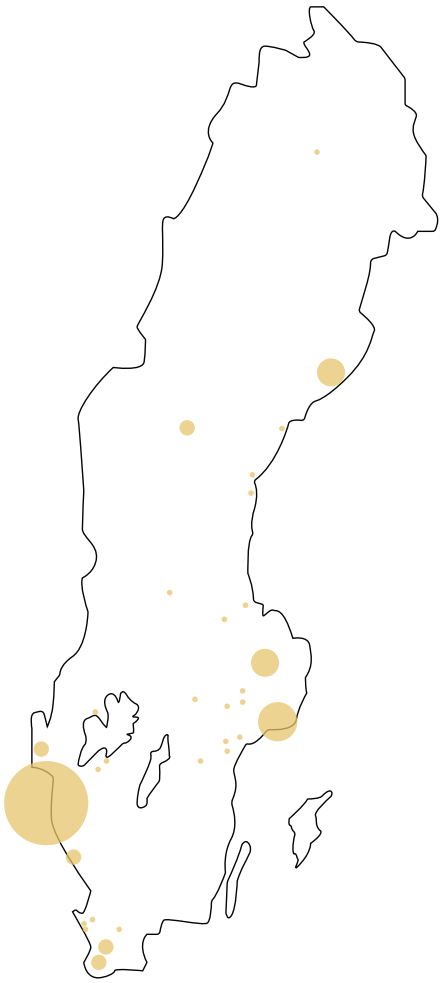


Figure 10. Geographical distribution

The 25 participants were collected mainly from the questionnaire, where it was possible to enter an email address to get more information about the focus groups. The participants were distributed according to age, gender and sustainability interest in an attempt to get interesting and meaningful discussions in all groups. The age and gender distribution can be found in Figures 11 and 12.

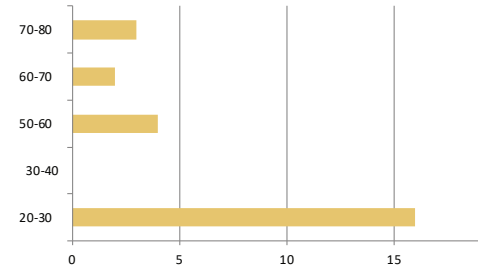


Figure 11. Age distribution in the focus groups

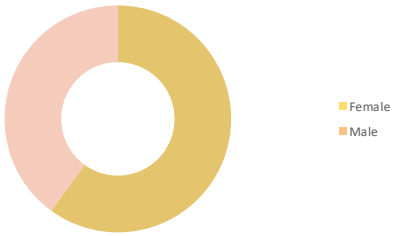


Figure 12. Gender distribution in the focus groups

3.4 Analysis

Statistics from the questionnaire

The results from the questionnaire were compiled in different diagrams (see Appendix 6) to get a clear overview of the answers from the different questions. Statistics that were relevant for the continuation of the project was used in the affinity map described below.

Affinity map

Two separate affinity maps (Martin & Hanington, 2012) were created to analyse the collected data from the user studies. The first contained data from the interviews with store retailers and the second from the questionnaire and the focus groups with customers.

Comments from the studies were written on sticky notes and placed on a wall. The notes were structured based on what subjects and areas they concerned, which formed categories that were modified during the work process. The method contributed to a good overview of all data and was an appropriate tool for combining the results in a comprehensive way.

The retailer affinity map clearly visualised what the store owners had in common and where their opinions parted. The customer affinity map (see Figure 13) provided, apart from a good compilation and categorisation of the data, material that was used to create the personas later in the project. It also constituted the basis for the parameters that are used in the concept evaluation, which is described in chapter 7.2.

Figure 13. The customer affinity map.

Complementary analysis

The product manager interviews and the workshops were discussed and analysed separately and in relation to each other. The placement of the notes from the workshops was analysed in relation to the participants' comments.

3.5 Identification of customer groups

Diagram

To identify different customer groups, comments from the affinity map that indicated different attitudes towards sustainability were placed in a diagram with two axes. "Knowledge" was rated on the vertical axis and "prioritising sustainability" on the horisontal. Based on where the notes were placed, five customer groups could be identified. The method was a tool that visualised the diversity and clearly defined the groups.

Personas

Based on the customer groups identified in the diagram, personas (Martin & Hanington, 2012) could be formulated. Five fictive people were created to cover a large portion of the customers of ICA as well as being comprehensible to overview. The tool was used to easier communicate what the target customers can look like and what needs and attitudes they might have.

Personas can be used to make it easier for designers to understand different customers and therby close the gap between them (Miaskiewicz & Kozar, 2011). In the absence of product designers, this applies to the product managers in the case of ICA.

Målgruppsarenan

To confirm that the personas covered a wide range of the population, the tool "Målgruppsarenan" (Green Leap KTH, 2017) was used (see Figure 14). The tool was used as a support in the identification of customer groups. By positioning the personas in the model based on their characteristics, it could be confirmed that a large portion of the spectrum was covered.

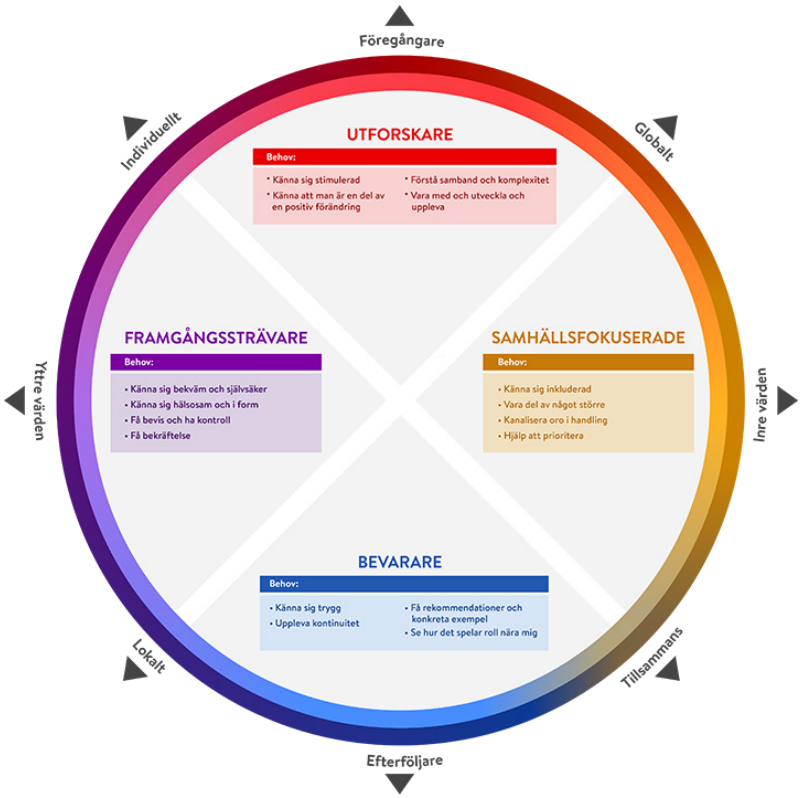


Figure 14 - Målgruppsarenan

3.6 Ideation and concept development

Brainstorming

Starting with the categories that were identified in the customer affinity map, a brainstorming session was performed. From each of the three categories, questions on how to solve different problems were formulated. Examples of the questions are "How can ICA inform customers in a good way?", "How can recycling be simple for the customers and also benefit ICA?", and "How can ICA help customers decrease their food waste?". Each question had its own part in the brainstorm, but the setup for all parts was the same. First, the question was brainstormed individually trying to create as many solutions to the problem as possible. The ideas were then discussed and the ones that seemed most applicable were further developed. The same procedure was followed for the data collected in the second user study. Here, the focus was on the product managers since they were identified as the area where solutions with the largest impact could be found.

Mindmap

The ideas with most potential were further developed and structured in mindmaps, one for each idea. The mindmaps were divided in four parts containing information of how the idea could work, advantages and challenges, and why it is relevant for ICA. They contributed with a good overview of the ideas and identified where some aspects might be missing. The method was appropriate to use as it made sure that all important parts were covered. The ideas from the mindmap constituted the basis for the first concepts.

Evaluation

To evaluate the concepts a matrix was created. It was used to structure important parameters and to clarify which of the concepts that was most suitable to continue working with. The parameters were based on the findings in the affinity map and included important aspects to consider for the final concepts. Being a part of the result, these parameters are further explained in Chapter 7.2.

The concepts were presented to supervisors and other employees at ICA during a part time presentation. Their opinions provided input to the concept evaluation and were taken into consideration when deciding the final concepts.

Development of the final concepts

The final concepts were of diverse character and the development of them followed different approaches. For the first final concept it was important to find the unique angle for ICA which therefore was a large part of the process. The concept was developed with the user in mind and results from the user study and the personas were continuously used to make sure that it would fit the majority of ICAs customers.

For the second concept the main focus was to gather and compile information in a comprehensive way. A first draft was evaluated with a product manager and supervisors at ICA to make sure that the information was easy to understand and would suit the target user.

The concept development is further described in Chapters 8 and 9.

USER STUDIES

The user study phase consisted of interviews and workshops with employees at ICA, and a questionnaire and focus groups with focus on the customers. Results from all user studies are presented in this phase, which contains the chapters 4 and 5. Relations between different user groups, as well as their attitudes towards and handling of products, are explained with the goal to enable understanding of the choices that are later described in the concept development phase.

Product managers

Decide products for the assortment.

Some products are sold as ICAs own brand

Some products are purchased from other brands

The ICA assortment

Retailers

Decide products for their stores

Retailers pick products from the ICA assortment and from other suppliers

Store assortment

Other suppliers

Customers

Buy products of their choice

The customer choose products they want to purchase

Relations between the different user groups

4. Employees at ICA

"What retailers and product managers do and their thoughts about sustainability"

The first part of the user study consisted of interviews with store owners and product managers at ICA. In this chapter, their working processes and sustainability interests are described to allow for an understanding of their choices and attitudes. This is followed by the results from the workshops with employees at ICA Special.

4.1 ICA retailers

All ICA stores are managed by independent retailers that own their stores and control all activities connected to them. They need to follow rules and guidelines from ICA Gruppen as they represent the ICA brand, but otherwise they can manage their store exactly as they prefer. If ICA Gruppen launches a new campaign or concept, the retailers can decide if they want to be a part of it or not. This entails that ICA can not force the retailers to follow an initiative and therefore it can be difficult to get everyone on board. However, following a campaign will generate free publicity and probably attract customers, advantages that the retailers are aware of. Thus, the personal preferences and priorities of each retailer affect the overall image ICA sends to the customers.

The products offered in stores are decided by each individual retailer. According to themselves, the assortment is established partly based on trends on the market, but the largest decision makers in are the customers. If they request something, it is very likely that the retailer will listen and make sure to offer that in their store, since it is important to offer products that people want to use.

Attitudes and approaches towards the sustainability aspect differ between the retailers. One important finding is that many retailers associate sustainability more with their use of renewable electricity and energy-efficient refrigerators than the products that they offer to their customers. Most retailers said that they do not reflect over the amount of eco-labelled products on their shelves; they strive to add more but do not have a specific goal that they try to reach. The retailers indicated that it is much easier to offer organic food than it is to have eco-labelled kitchen equipment or other non-food products. One reason might be that the number of eco-labelled products offered from ICA Special is still relatively small. A larger selection would make it easier for store owners to buy sustainable products directly from ICA instead of having to look for other suppliers for those.

It is evident that the retailers see the customers as the most important part of their business. They are committed to not exclude any customer and most of them argued that it is not their task to guide or steer anyone. If more eco-labelled products are asked for by the customers, the store will offer that. If the request is low, the retailers do not want to force the customers with a risk of losing them. To implement a large change, the retailers want proof that it will work and evidence that someone else already has succeeded. However, they are aware of the publicity it can generate to take the lead and be the first to offer a product or to take a stand against something. The goal should therefore be to find a balance where the retailers can be encouraged to try something new and still feel comfortable.

Lastly it should be mentioned that all store owners are aware of sustainability and agreed that the subject is important. However, it is unclear if they care on a personal level or if they simply see it as a growing trend among their customers that will be lucrative to follow.

4.2 Product managers

The purchasing process

Every product manager is responsible for their own product category, which can be for example kitchen appliance, toys, clothes, or garden equipment. Everyday tasks can be to plan and set up campaigns, monitor sales, update the assortment and have some communication with store owners. The purchasing process looks somewhat different depending on the category, however a general description follows below.

Based on the setup in an ICA Maxi store, each product manager has a number of sections where they can distribute their products as they want. The reason for this division of sections is to get the sizes of the different categories proportional to how lucrative they are.

Most products are not developed by anyone at ICA but are chosen for the assortment by the product managers. They are mainly produced in China, where ICA has a department for purchasing to allow for closer contact with the suppliers. The product managers in Sweden decide which products that should be added to the assortment based on trends, what other companies sell, and what they think will be popular among customers. When someone at the ICA department in China has contacted a number of possible suppliers for a certain product, the product managers choose which one they want to purchase from. They make calculations on the profitability and what amounts that can be sold, which is based on previous sales figures. The product managers are also responsible for questions regarding the packaging of the products, such as deciding dimensions, material, information and if there is a need for wrapping the product at all.Quality, materials, and working conditions in the industries are controlled by the Corporate Responsibility (CR) group.

If no supplier can offer exactly what the product managers desire, collaborations can be initiated with new suppliers. It is however a relatively long process and is therefore avoided for as long as possible. This entails that many products in ICAs assortment might not be exactly what was expected from the beginning, but a compromise that is considered good enough just to avoid the extra work of initiating a new collaboration. Products can either be marketed as ICAs own brand or the brand of the supplier, depending on the possibility of being able to offer a cheaper product for the customers. A certain revenue is required to start a new collaboration to make sure that it does not entail an economic loss for ICA. Also, the larger the volume, the greater possibilities the product managers have to make changes, regarding for example material properties or in what way parts of products are assembled.

The products in ICAs assortment are then ready to be purchased by the store owners. The retailers of ICA Kvantum, ICA Supermarket and ICA Nära can choose exactly which ones they want to purchase from ICAs assortment and which they prefer to buy directly from other companies. However, if the retailers want other products than those offered by ICA Special, they have to sign their own agreement with the new supplier and make sure themselves that all regulations are followed. By choosing products from ICA Specials assortment, the product managers and the CR group will take care of those questions, which requires less effort from the store owners.

Sustainability

At ICA Special there is no one that is specifically responsible for sustainable products. The product managers get recommendations like for example that they should always go for the most sustainable if they have different options to choose from, and that at least one product in each category should have some kind of eco-label. Further, a goal is to have sustainable packaging by for example only using FSC marked cardboard. The product managers should also consider the transport options and production countries from a sustainability perspective. However, the production cost from China is much cheaper than from Europe and the economical benefit often conquers the sustainability aspect.

The CR group assists the product managers in questions regarding material choices and other sustainability related questions. Despite this, one product manager expressed that it is sometimes difficult to apply the information from CR on specific everyday tasks and to know what demands that can and should be put on the suppliers. All of the interviewed product managers agreed that sustainability is an important topic, and that they need to include more products that are sustainable. Some thought that it can be difficult to know exactly what different labels mean, but that it is also getting easier to find environmentally friendly options since suppliers are getting better as a result of an increasing demand from the customers.

Even though all product managers are positive towards sustainability, it can be difficult to know where to begin and think that it is somebody else's responsibility. They argue that it is a complicated process to get an eco-label on every product but that they are doing everything they can, so the rest is up to someone else to do. This indicates that the product managers are not provided with enough tools or information on how to prioritise sustainability in every product. Being unaware of the possibilities, it is of course difficult to implement them in the development process. Many of the product managers mentioned the way they choose materials and that they are thorough in their selection. However, knowledge about material combinations and assembling parts of products is not a focus.

It is worth mentioning that different product categories face different problems. In some categories, eco-labels are more difficult to achieve than in others, and it is also a question of priorities. If it is uncertain whether most customers are ready to pay more for a sustainable version of a product, it might not be prioritised. Thereby the number of eco-labelled products depends both on the category and the personal interest and commitment of each product manager. Since the target numbers for the amount of sustainable products are the same for each category, it entails that they are easier to reach for some categories than for others. If the target number would vary between different product categories depending on the level of difficulty, all product managers would always have something to strive for and get better instead of being satisfied with less.

One difficulty identified during the user study was the challenge to include all customer groups when deciding products for the assortment. The customer group of ICA is large and diverse and the needs of the users vary. However, all customers are potential buyers of the products and need to be taken in to consideration when deciding products. Furthermore, the economical situation of the users differ and small changes in price can have a larger effect than expected. The interest for news and trends are also different between the customers. The same applies for sustainability; some customers want the most sustainable products and are willing to pay more for these while others are satisfied with the amount that is offered now. All aspects mentioned above need to be considered by the product managers.

4.3 Attitudes and responsibility

Overall, the participants in the workshops were positive towards the scenario presented and agreed that this is a future ICA should strive to reach and that it would be possible in a quite near future. However, many of the employees had problems to find possible solutions based on their own position and concrete examples of what they or their team could do to reach the described future. It was obvious that many did not believe that they personally could make a change and rather trusted someone else to take that responsibility. The reason might be that people are focused on their own tasks and experience that they do not have the time or the resources to start a change or start working with a new idea. It is easier to leave it for someone else to solve.

The employees talked about habits of the users. Many agreed that a package-free store (as the scenario proposed) can be hard to reach as it would be a too cumbersome task for the customers to bring their own bags and containers. This could however be solved partly by introducing the concept one step at a time, giving the customers time to get accustomed to it, and partly by making sure that ICA provides necessary equipment to avoid laying too much responsibility on the customers.

4.4 Takeaways

- Retailers have a large customer focus and are not inclined to do anything that the customers would not like. Their personal preferences do not show in their stores.
- The product managers decide the assortment of ICA and thereby have power over what is offered to the customers. Even if sustainability is important for them on a personal level, it can be difficult to always know how to prioritise.
- Employees at ICA need to realise that they have the possibility to influence what happens within the company, and that a small step in the right direction is better than doing nothing at all. The participants' positive attitudes towards sustainability is something that ICA as a employer should take advantage of and keep inspiring towards change.

5. ICAs customers

"The difficulties with being environmentally friendly"

The second part of the user study focused on the customers, whose perspective is an important input to consider when developing new sustainable solutions. Results from the questionnaire and focus groups were divided into the categories *purchasing*, *recycling*, and *motivation*, and are presented in this chapter.

5.1 Who is the customer of ICA?

More than half of the respondents of the questionnaire visit ICA at least once a week and 43% usually go to an ICA Maxi store. The main reasons to why people choose ICA are the wide and varied assortment, and having an ICA store close to home. Many of the stores offer some non-food products, something that people overall are positive towards. Many are willing to buy for example simple kitchen appliance and frying pans at an ICA store. However, some are more sceptical, believing that the quality can not be compared with other brands. Some of the respondents argued that ICA is a place to buy groceries, not products. Moreover, the customers experience that ICA has an average sustainability focus (see Figure 15): on a scale from 1 to 7 the mean value was 4.7. The complete result from the questionnaire can be found in Appendix 6.

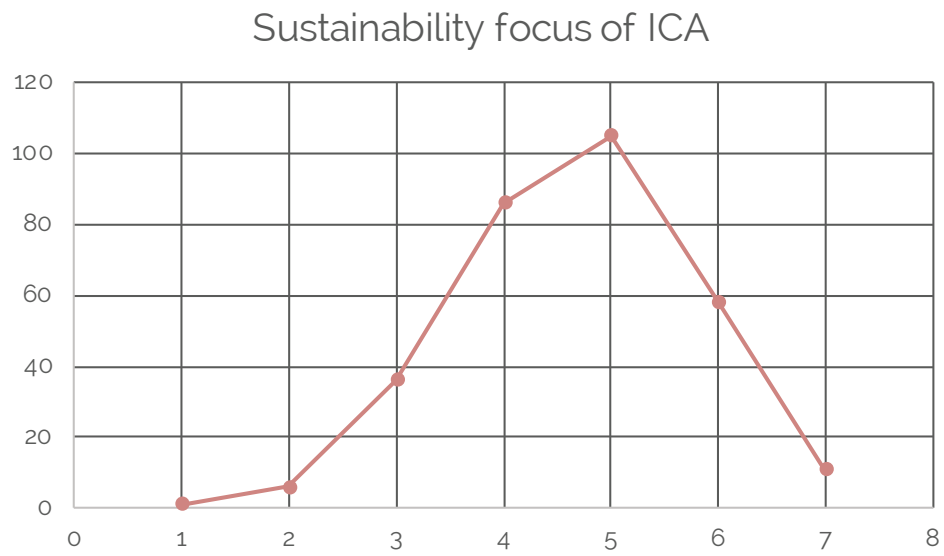


Figure 15. Customers' perception of ICAs sustainability focus.

5.2 Purchasing

"The best product from a sustainability perspective is the one that never has to be replaced"

There are various aspects to consider before purchasing a product, such as functionality, appearance, materials, and quality, which can result in a difficult choice for the customer. Adding an eco-label to this would not make it easier, and many focus group participants expressed a reluctance to adding more parameters to the already complex choice. They do not wish to have to think about what will happen to a product after they have finished using it before even purchasing it. There was rather a tendency to focus on quality, meaning that a product that lasts long is in any case more sustainable than a short-lived product with an eco-label.

The opinions about prices varied and seemed to depend a lot on the specific situation and product. According to the questionnaire, people perceive sustainable products as more expensive than regular ones, which sometimes can be the reason for them not buying it. For cheaper product types it can be easier to go for the sustainable option since the total cost is not that high anyway, but on the other hand the sustainability aspect could be more important for products that are made of a larger amount of material. From another perspective, the more expensive options might have a longer lifetime and could therefore be more affordable in the long run.

There were no clear main opinions about any specific material mentioned during the focus groups. Some participants would for example choose glass over plastic in lunch boxes, but otherwise the preferences were mainly based on functionality and depending on the product type. In general, quality was an important aspect, but there was variation in what different individuals perceived as high quality in different products.

5.3 Recycling

Recycling is an important part in the process towards sustainability, since it allows for materials to be taken back into the technical cycle (Mestre & Cooper, 2017). It can however be a complicated task, firstly because it is not always obvious which materials the product contains, Then comes the question of how to sort these materials. If they are combined, should they be separated, and if so, how? Will they be separated later in the process anyway, and if so, which material decides how the product should be sorted? These questions are tricky, and even customers that perceive themselves as very caring about the environment find it difficult to know.

This kind of uncertainties often lead to an incorrect placement of products. A common misunderstanding is that the boxes in the local recycling stations are not for packaging only, and that any product containing for example metal is supposed to be thrown in the box for metal packaging. Another scenario is that products are thrown with the combustible waste, either due to lack of knowledge or out of convenience. Almost all participants in the focus groups said that they would have chosen any of these two actions, which are both incorrect and should be avoided, (see chapter 8.1 for explanation).

"I would have thrown the frying pan in the metal packaging box and thought that I was really ambitious, I would have felt good doing it"

"I would have put it away in a cabinet somewhere until the next time I go to the recycling central"

The correct option, to bring worn out products to the recycle central, is often the last priority. Many prefer to donate somewhat still functioning products to second hand stores over recycling, probably because it is more convenient having someone else to do the sorting and decide what will happen with the products. The recycling centrals are often located outside the city, which requires too much effort for most people to go there, regardless of them having access to a car or not. Especially when the products are small or not so many, going to a recycling central feels too time consuming and not worth the effort. To make up for this, some try to collect as many old products as possible, since the willingness to make an effort to recycle seemed to increase with the amount of materials.

Some participants expressed that they are afraid of causing damage to the recycling process by sorting incorrectly. Others doubt that materials are actually reused and find the struggle unnecessary.

5.4 Motivation

Many of the earlier mentioned challenges regarding purchasing and recycling have in common that they could be solved with increased motivation. In general, insufficient information is a contributing factor to lowered motivation to make the extra effort. If the sustainable option on top of this is complicated and inaccessible, the customer will not get anything out of it and thereby probably choose another alternative.

"It has to be simple and accessible, otherwise it goes in the combustible waste"

The customer wants more information to be motivated

During the focus groups, many participants claimed that they would recycle more and better if they knew exactly what they were supposed to do and why. More information about what happens with products after recycling them seemed to be motivating, since more knowledge allows for a better understanding of the reasons to and benefits with recycling. Taking advantage of and encouraging the curiosity that many people might have can be a good way to motivate them.

"It has to be as easy as comparing prices. We all understand which product that is cheapest or most expensive, but sustainability aspects are more difficult to compare"

75% of the respondents in the questionnaire said that it is either difficult to know which product that is most environmentally friendly, or that they did not know that such products even exist. Once again, lack of, or ambiguous, information makes people confused and more prone to make a less sustainable choice. Even in the few cases where there actually is an eco-label, the customers might not understand what it means and it is still difficult to determine which option is the best when the available information is not comparable between products.

According to the questionnaire, around 57% would donate old but still working kitchen tools, and 25% would recycle them (see Figure 16). If the question would have been focused on broken or not functioning tools, the percentage choosing the recycling option would probably have been higher. Nevertheless, considering the recycling difficulties expressed during the focus groups, this information can still be interpreted as if many choose to donate because it is easier than recycling - most people have easier access to a second hand store than to a recycling central. Moreover, the question did not specify if "recycling" refers to going to the recycling station or recycling central. Regardless, this result shows that recycling correctly needs to be easier for the users, or they will choose another option.

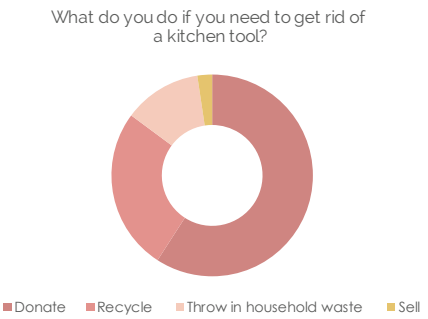


Figure 16. Statistics from the questionnaire.

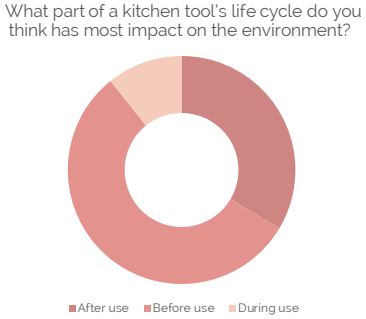


Figure 17. Statistics from the questionnaire.

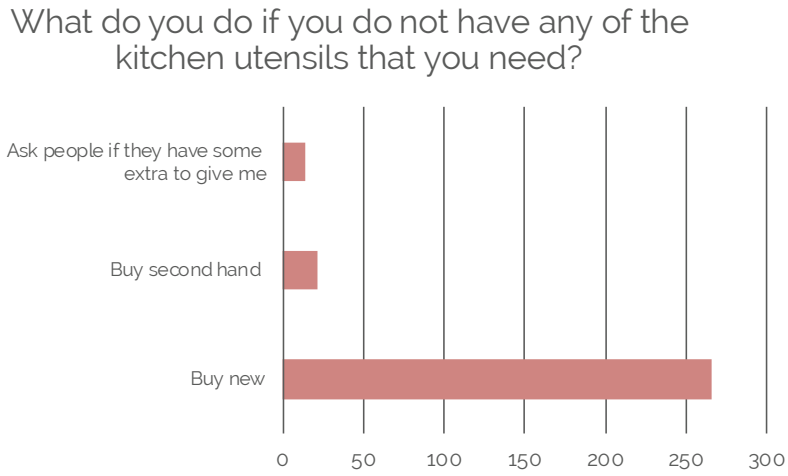


Figure 18. Statistics from the questionnaire.

86% of the respondents answered that they buy new tools instead of getting them second hand in some way when they need to add something to their kitchen (see Figure 18). Considering the fact that 56% think that a product's highest environmental impact is during the manufacturing (before the use phase, see Figure 17), this might not be a question of making a sustainable choice or not, but rather an indication that buying new products is by far the easiest option for the moment. It is therefore important to give customers the possibility to choose environmentally friendly products by offering such alternatives in the stores. Enabling sufficient information could help customers make more well-informed choices, and also have a positive effect on the amount of products that are recycled correctly.

"The best option would be if the stores did not even offer products that are not environmentally friendly, then you do not have to think about it"

The customer needs simplicity and explicitness

There is a tendency to always go for the easiest option, regardless of whether it is about following habits or being guided by comprehensible information. Therefore, if a sustainable option is somewhat complicated, it will be overlooked. This is often the case, since sustainability aspects or an eco-label is only added on to other information, which makes the choice even more complex. It does not mean that customers are against sustainability, but rather that they would prefer the eco-friendliness to be a standard feature instead of another parameter to compare with others. The customers do not want to have to make difficult choices, they prefer a smaller amount of aspects or knowing that all options are good enough.

Figure 19. Statistics from the questionnaire.

This also applies to recycling, where *clear information* and *easy access to the recycling station or central* were the two most frequently selected alternatives in the questionnaire (see Figure 19).

Making sustainable products more accessible and correct recycling easier were recurring suggestions discussed during the focus groups. If there is no doubt which product is the most sustainable, and where and how a product should be recycled, most participants claimed they would make more of these sustainable choices. To do this, sustainable alternatives must be accessible and information about why they are environmentally friendly has to be clear.

The possibility to get some kind of economical compensation did not generate much positive response. Some said that the reward has to be quite large to be motivating, and others claimed that simplicity is reward enough. Even the less environmentally engaged would probably choose the sustainable option if it is easier than other alternatives, so aiming for simplicity seems to be a promising way to go.

The customer wants to get something out of their sustainable choice

To get most customers to make an extra effort and do something else than what is most convenient for them, there has to be some kind of additional value to sustainable options more than knowing that they have low environmental impact. The user study showed that people do not want to choose sustainable products at the expense of other features. This is also acknowledged by Wilkinson & De Angeli (2014), that state that most people will prioritise functionality and other aspects. Since low environmental impact is not always the highest priority for everyone, it should either be a standard feature in all or most products, or contribute with more benefits than other options.

"You should not have to choose between good functionality and sustainability"

As mentioned, information, simplicity, and explicitness are parameters that all lead to motivation, however the challenge is how to implement them. Going to the recycling central for example is time-consuming and not beneficial in any other aspect than that the user is getting rid of old products, which could have been achieved in some other way. Instead of trying to make people go there anyway, another option could be to consider how to offer an easier alternative closer to them.

5.5 Takeaways

- Purchasing products can be a complex task since there are many parameters to consider, and adding another aspect such as an eco-label does not make the choice easier. Therefore, aiming towards that all products should be sustainable by default, or making it easier to choose sustainable products, would be beneficial.
- Most people do not have sufficient knowledge about recycling, which can entail insecurity and fear of making mistakes. Even if they know that they should go to the recycling central, the extra effort required makes them ignore this and throw the products in the packaging recycling instead.
- To motivate people to make more sustainable choices, more information and simplicity are often needed. Not knowing how or why to do something will likely result in not doing it at all, and this applies to recycling as well as the purchasing situation.

CONCEPT DEVELOPMENT

The concept development phase contains the chapters 6 - 10 and starts with a presentation of five personas and seven concept suggestions that are based on the results from the user study phase. Two of the suggestions are developed further into final concepts, and in the end of the phase, aspects gathered during the entire project are discussed.

6. Personas

"Fictive customers that can facilitate development and adaption of concepts"

To visualise differences and give examples of how customers of ICA can reason when buying new and discarding old products, five personas were created. They are used to evaluate the concepts presented in chapter 7 and make sure that the concepts suit as many of ICAs customers as possible. The personas were created with sustainability interest in relation to products in mind, and can be found on the following pages.

6.1 Identification of the personas

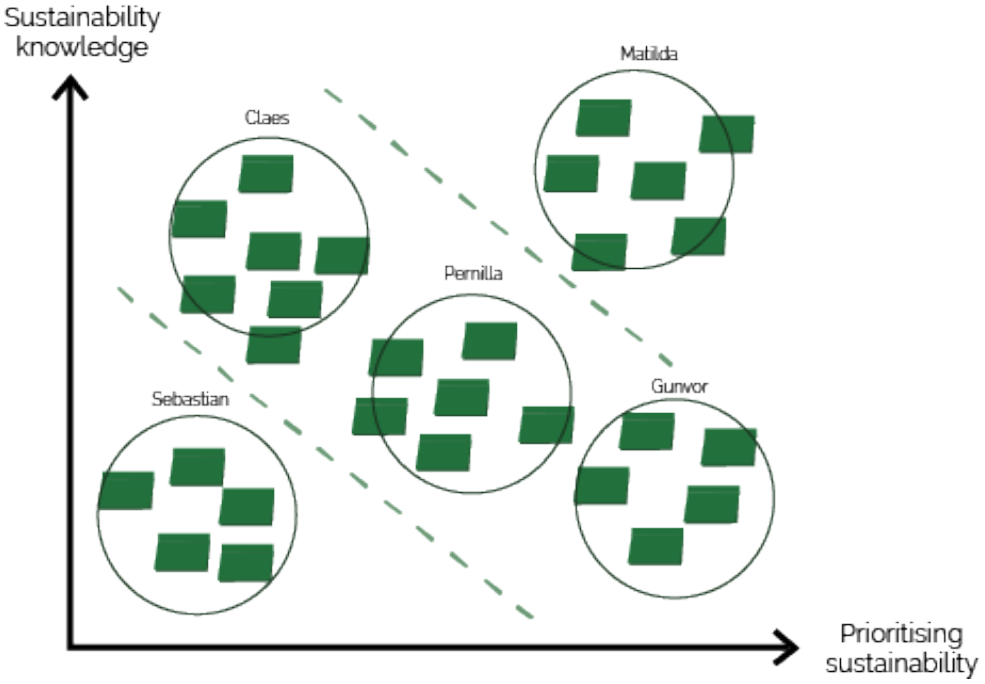


Figure 20. Visualisation of the diagram used to identify personas.

The diagram in Figure 20 was divided into three main parts to distinguish between the most and the least environmentally aware comments. The content on the sticky notes was evaluated and five groups could be formed. These became the base for five customer types, which are concretised by the personas that are described in the next subchapter.

Persona 1 and 5 were relatively easy to differentiate from the others since they were the most extreme. Since a person with high knowledge and low priority for the environment can be very different from a person with low knowledge but high priority for the environment, three personas were created in the middle section of the diagram. Based on the comments from the focus groups, most people seemed to be in the middle section and it was therefore relevant to distribute the number of personas accordingly.

How to approach the different personas

Persona number 1 has already come a long way, and even though there might be some areas that could be improved, customers like persona 1 probably already have the tools and the commitment to get there by themselves. A goal could be to help as many customers as possible to get into the highest section.

By either offering more information or encouraging the customer types in the middle section to prioritise the environment, all of the personas 2-4 have the possibility to get to the highest section. Since they constitute the largest part of the customers, focusing on them will entail an opportunity to achieve a noticeable impact.

Persona 5 is not the main priority, partly because there are not so many people in the lowest area, but also because customers from that group can be more difficult to approach since they might not be very prone to make changes. However, if the majority of the middle section is changing towards more sustainable behaviours, their habits could possibly have a positive effect on the lowest section as well. In any case, making a lot of people take a small step in the right direction will probably entail a larger impact than putting all effort on making just one group take a little larger step.

6.2 The personas

On the following pages the personas are described.

Matilda, 26

When Matilda was 23 years old she moved from her parents to study. As for many students the lack of money was a problem and she started eating more vegetarian food for economical reasons. It became the starting point for a growing sustainability interest, and she now tries to buy most of her clothes and home essentials second hand.

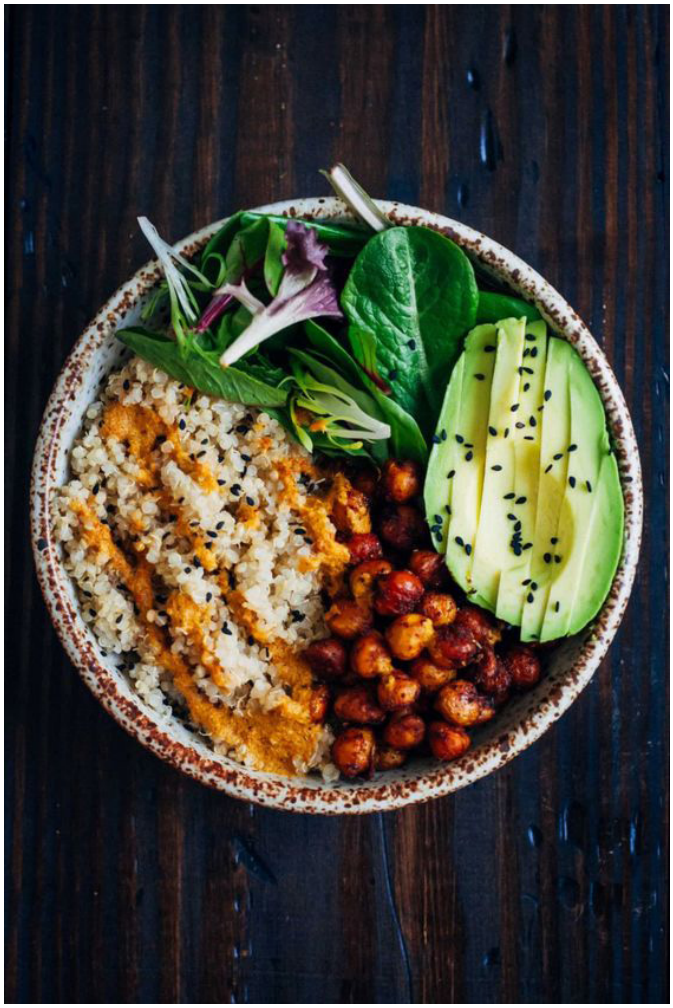
Matilda loves nature and always tries her best to make environmentally friendly choices when buying something new. She recycles all her food packaging and knows exactly how to sort plastic food wrap, metal cans, glass bottles, and cardboard boxes, but she actually does not know so much about what happens afterwards. Questions such as "which material is most important to recycle", "what happens with the products", and "what if everything just ends up on a large landfill?" circle in her head from time to time.

When Matilda moved she bought a set of cheap kitchen equipment. Her teflon frying pan is now in too bad condition to use anymore and she needs to find a new one. She has been reading about how durable and environmentally friendly cast iron pans are, and researches a lot of different options to be able to make a well-informed decision. She finds one at ICA Maxi that seems to be as good as any other one but a little bit cheaper, which suits her student budget well. She decides to buy it the next time she goes there.

Normally, Matilda would donate any unwanted item to a second hand store, but this teflon pan is too worn out so in this case it is a given that it should be recycled. However, it is difficult to know where to recycle since she can not discard it on the regular packaging station. The closest recycle central is 20 minutes away by bike. She decides to go there, hoping that someone there can tell her how to deal with the different materials.

"Which material is most important to recycle?"

"What happens with the product afterwards?"



Gunvor, 71

Since Gunvor retired a few years ago, she has had the opportunity to spend more time with her grandchildren. Every time she sees them they teach her something new that they have learned in school, and sustainability is a recurring topic. Gunvor can relate to many of the new tips and recommendations since they are similar to what her family had to do in her youth, but back then it was for economical reasons. In any case it feels natural for her to be thrifty, but recycling is a new phenomenon for her. She gets however motivated by the commitment of her grandchildren and does her best to keep up with them.

Gunvor wants to do the right thing and tries to apply the knowledge she has on her everyday life, but it is not always obvious what the best choice is. To be on the safe side, in the grocery store she always chooses products with some kind of label since they probably are better than those without one.

A couple of old cast iron frying pans have been lying in the back of Gunvor's cabinet for some time. With age her strength has decreased and she has switched to teflon pans since they tend to be more light weight. In addition, they are very cheap. When her most frequently used frying pan looks as if it will soon fall apart, she leaves it in the box for metal packaging at her local recycling station, and feels good afterwards thinking that she now has recycled properly.

Her goal is to buy a better frying pan than the old one, but at ICA Maxi she finds that they can be really expensive. Moreover, the only one with some kind of eco-label was too heavy for her. So she goes for a new teflon pan, because in the end she has to be able to use it. The price was somewhat higher than her old one, but Gunvor decides that it is worth it because it was prettier, and maybe a higher price means that it will last longer.

“Which one is most environmentally friendly?”

“Can all metal be thrown in the package recycling?”

Pernilla, 34

Ever since Pernilla got children, her stress level has increased. She does not regret having them because of course she loves her kids, but sometimes she just feels like she is not good enough. The other day for example, she overheard some other mothers talking about how bad plastic is both for the health and the environment and she felt ashamed that she still uses plastic lunch boxes from time to time.

Pernilla believes that she is caring about the environment but it is difficult to always do the right thing. In periods the family sorts garbage and leaves it on the stations for package recycling in the neighbourhood. Sometimes she tries to collect information about how to recycle to avoid common mistakes, but the information is difficult to find and it makes her unmotivated. She often lacks both time and energy to complete the search and mostly recycles to impress the neighbours.

The trend about getting rid of plastic seems to be growing stronger and Pernilla decides to be a part of it. She starts with deciding to get rid of a teflon frying pan that is well-worn anyway. Pernilla knows that she should go to the recycle station with it, but does not have the time today. She considers to throw it in the metal packaging bin but is worried that it will somehow mess up the entire process. Instead she puts it in the back of a closet and decides to go to the recycle station when she has found more things to get rid of.

When Pernilla goes grocery shopping at ICA Maxi she decides to look for a new frying pan. She is in a hurry and has a hard time separating the different characteristics of the many different pans. One pan is marked as a "sustainable choice" and has 5 years warranty. It has a ceramic non-stick coating that seems to be plastic free. Even though there might be an even better alternative, Pernilla does not have time to be indecisive so this one has to be good enough.

“What happens if I sort in the wrong way?”

“How bad is plastic really?”

Claes, 52

Claes is very interested in cooking and enjoys coming home after a long day at the office and resetting his mind in the kitchen. It is important for him to have good tools and equipment in order to get as pleasant experience as possible. Being aware of that he sometimes could make more sustainable choices, Claes also has a feeling that products that are promoted as environmentally friendly are not as good as regular ones. He does not want to choose between quality and sustainability and therefore argues that the best thing to do is to buy products of good quality that will last a long time.

When it comes to recycling, Claes does not trust that all materials are actually recycled properly and therefore he is not motivated to do it. In addition, he has heard that plastic is in any case not recycled but incinerated and used for district heating, and since most of his waste is plastic it does not matter if he separates it from the combustible waste or not.

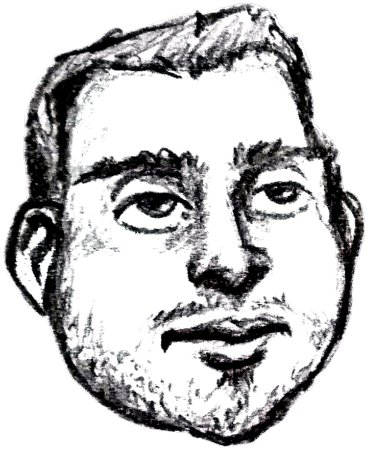
Money is mostly not an issue for Claes, since he has a well-paid job. However, he does not like to spend too much when not necessary. Frying pans for example, are in his eyes consumables since he has never seen one that has lasted longer than a couple of years. Therefore he tends to pick up a new pan every now and then when he is grocery shopping at ICA Maxi, where they have cheap ones. The old pans he just throws in the combustible waste bin from old habit.

By coincidence, Claes heard from a friend that had recently bought a new frying pan that the frying surface of the food now is so much better and more even than before. At first, he is sceptical that the type of pan can affect the result of the cooking, but decides that it is worth a try since he wants to cook as delicious food as possible. To be on the safe side, he buys the most expensive one at ICA Maxi, curious to see if he will notice any difference. It turns out he actually does, and decides it is time to get rid of all the cheap ones that lie around at home. He realises that there is a lot of material and for one moment he considers taking them to a recycling central, but has no desire to go there and stand in line for a couple of frying pans. Instead, he throws them in the metal packaging bin and thinks that someone else will make sure that they end up at the right place in the end.

"Eco-labelled products do not have the same quality"

"I have heard that everything is incinerated anyway, why should I sort my garbage?"

Sebastian, 33



Sebastian lives in a small apartment a couple of bus stations outside the city center. He has been living there for several years and even if the apartment is small he is too comfortable there to move somewhere else. Sebastian's days look quite the same: he goes to work, comes home, and eats while playing video games. He seldom cooks and often buys something semi-finished to eat on his way home.

The landlord has been sending out information about how to sort food waste in another bag than the rest. Sebastian read the information but did not feel that it was intended to him, since he barely does not have any food waste. Regardless, everything probably ends up in the same place anyway so he does not see the point of making an effort.

Since Sebastian does not cook very often he only owns one frying pan. Buying new pans is a frequently recurring event since they usually get battered and well-worn after about a year. When he feels like he can no longer get the semi-fabricated meatballs evenly heated he knows it is time to buy a new. He always chooses the cheapest one, because why spend money on something that breaks that quickly anyway?

At next visit to ICA Maxi, Sebastian notices that there are a lot of new frying pans compared to last year but he barely looks at them. He goes for the same as he had before without further consideration, it is not a big deal. As long as it is cheap and has a teflon coating, Sebastian is content. When he gets home he throws the old pan it in the combustible waste.

"Do I have to make an effort?"

"Why would I spend money on something that breaks quickly anyway?"

7. Solutions for a more sustainable ICA

"Suggestions on different tracks that can lead to an improved sustainability profile"

Ideation sessions were performed based on the identified problem areas, resulting in seven different concept suggestions. The idea was to develop a wide range of concepts to show different ways to reach the same goal and cover as many of the problem areas as possible. In this chapter, the seven idea tracks are presented individually. Each one is briefly described and has a summary of its main advantages and challenges. In the end of the chapter, an evaluation of the concept suggestions can be found.

7.1 The concepts

Information database

The starting point for this concept was the lack of information that was identified during the data collection. By providing information about the products, such as what material they are made of, manufacturing, CO_2-emission, and how to recycle, conscious consumers can make a well-informed decision before purchasing a new product (see Figure 21 for an example). The information will be provided through a phone application, which will be available for all customers that want to know more about the products they are buying. This can allow for people to perceive ICA as transparent and honest, since nothing is hidden. However, customers that have no interest in the information can decide to not use the application and will not be disturbed or annoyed by it.

The information is easiest accessed by scanning the barcode of the product in the store, or by searching directly in the application. This will make it possible for customers that are in a hurry in the store to make a well-informed decision as well, since they can read about the products at home. When the barcode has been scanned, information about the product will be visible to the customer. The application should also provide a comparison function to further ease the decision for the customer. To include additional customer groups, information regarding other aspects such as warranty and recommended usage should also be included.

Another feature that could be developed is the possibility to register and save products bought at ICA in the application to make it easier to access information on how to recycle them when they no longer work. An easy solution would be to include the database function in the already existing ICA-application to avoid that people will have to download an additional application for their phone.

Advantages

Customers can decide if they want to use the application or not, it is not a necessity to shop at ICA.

A sustainable behaviour is encouraged as customers have the opportunity to get more information about products in an easily accessible way.

Not dependent of the opinions of retailers and can therefore be implemented in all stores.

Unique - none of ICAs main competitors provide this kind of service.

Challenges

Large initial amount of work necessary to register all existing products to the system.

Difficult to reach out to people that are not interested in sustainability and make them use the application.

No feedback, difficult to know if customers are using the concept as intended.

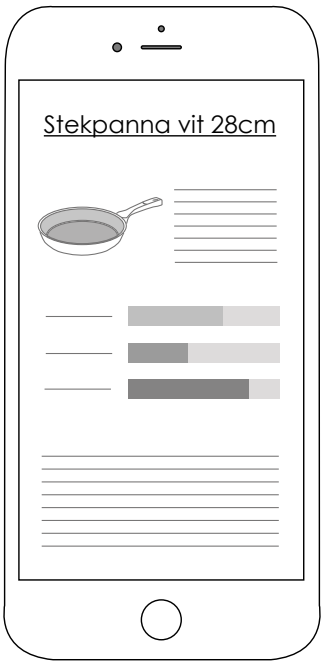


Figure 21 Information database

Information in stores

Another way to approach the problem with lack of information can be done in the stores. Today, the price and sometimes information about some of the materials used is provided to the customer in the stores, but it is often inconsistent and difficult to comprehend. Instead, it should be accessible and understandable, and help customers to make well-informed decisions. Information regarding sustainability aspects should be provided to facilitate the choosing of sustainable options and comparing different products with each other.

Information can be presented in different ways. To educate the customers, more information about sustainability aspects could be shown in a bar-chart on the price tag on the shelf. If more information is needed, an additional tag could be attached underneath the original price tag, see Figure 22.

Another way of giving information in stores today is through large posters hanging from the ceiling. A step in the right direction could be to revive the information presented here and change the focus from 'low prices' to 'sustainable prices', or make use of the opportunity to educate the customer in a fun and instructive manner. It is important that the information is communicated in a comprehensible way and easy to access, to allow for as many as possible to assimilate it.

Advantages

Easy to implement, can be introduced in several steps and on different levels of detail.

Will make it easier for the customer to compare different products.

Possibility to reach out with some information to uninterested customers as well.

Challenges

Difficult to make uninterested customers to actively assimilate the information.

Deciding which information that should be presented and where the information should be placed.

The customers might think that there is too much information or that it is difficult to overview and understand.

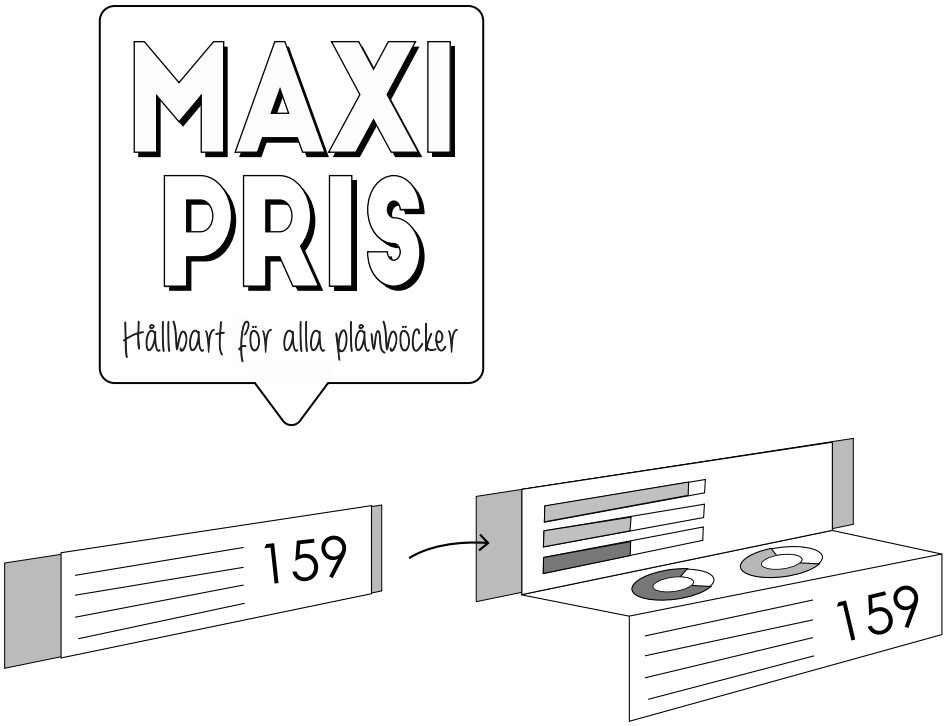


Figure 22. Information in stores

Kitchen collection for children

As mentioned in the literature study, sustainable behaviour is almost a prerequisite to reach a society with less negative environmental impact. During the focus groups, many participants expressed that it is difficult to make sustainable choices since they lack habits for it. By creating an environmentally friendly kitchen kollection for children (see Figure 23), sustainable habits can be encouraged and established in early ages, making it easier for children to stick to them as they grow older.

The collection should be entirely made of sustainable materials, be functional, and of high quality. Making it timeless will open up for the opportunity to combine products from different seasons and inherit products from siblings as well as passing them on to future generations. It increases the chance of the products being attractive for a longer time and also getting a high second hand value. The second hand market would perhaps not benefit ICA directly, however it would be a good statement that could generate publicity. The collection is a good way for ICA to exemplify how sustainable materials can be used in a kitchen environment without excluding any customer or affect the standard assortment. In addition, the collection will teach children about sustainability, to care for products, and how to act sustainably in the kitchen.

Advantages

Encourages sustainable habits from an early age.

People are more conscious about what kind of products they buy for their children than for themselves.

A statement for ICA.

Can be a permanent, classic collection that everyone knows about.

Challenges

Narrow target group, customers with no connection to children will probably miss it.

Difficult to find the unique angle for ICA since kitchen tools for children are already available on the market.

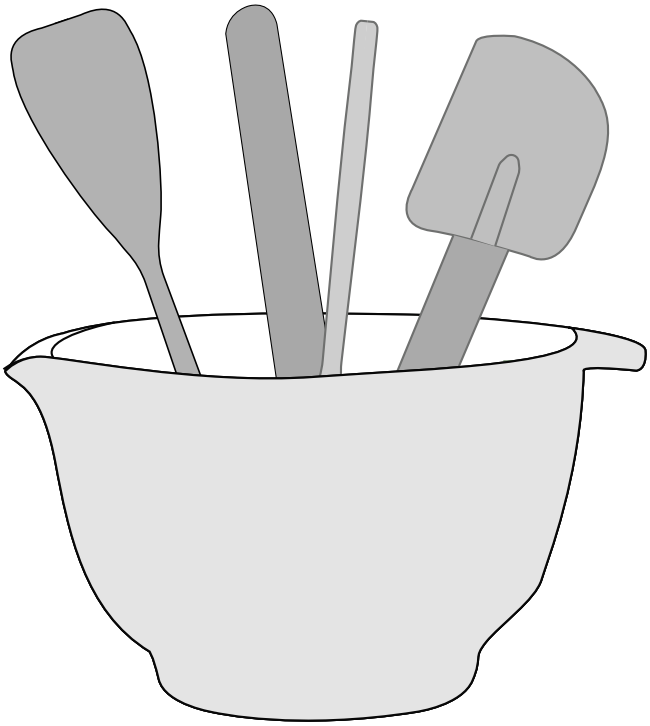


Figure 23. Kitchen collection for children.

Product recycling at ICA

During the user studies with customers, knowing where and how to recycle products was identified as a big problem. People are not informed enough about the topic and therefore experience that it is difficult to know where to throw things. The concept of collecting old products at ICA will make the recycling process easier for the customers as well as strengthening ICAs sustainability profile. It will also educate the customers, making them more motivated to recycle their old products instead of throwing them away.

The concept allows customers to leave old products in a box (see Figure 24) at ICA instead of going to the recycling central. For most people it is easier to bring them to the grocery store, a place they are frequently going to anyway, than having to go to a recycling central with the only purpose to leave a couple of products. The idea with the concept is to collect smaller objects that most people would otherwise throw in the combustible waste or at the packaging recycling station. Larger products such as old sofas and electronics should still be taken to the recycling central.

Similar systems can be found in other stores in Sweden today. However, being a large company, the possibility to adapt the concept to ICA and take it a step further is an advantage. One idea is to investigate opportunities to circulate materials within the company, and another is to adapt the solution to be unique for ICA.

Advantages

Will make it easier for the customer to recycle.

A statement for ICA that can help in becoming leading in sustainability.

Can generate new, more circular profits for ICA, which is an appropriate first step towards becoming more circular.

Educates the customers in a fun way, by providing easy accessible information to them.

Challenges

The retailers are responsible for their own stores and thereby decide if they want the box or not.

Collaborations with other companies that can sort and reuse the material need to be investigated and initiated.

Might take up a lot of space in the stores.

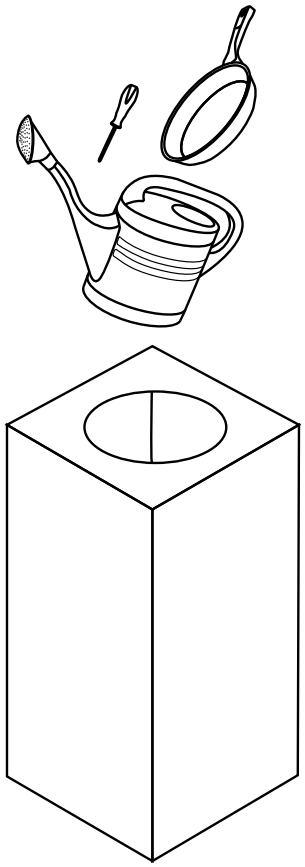


Figure 24. Product recycling at ICA.

The zero waste-box

Food waste is a big inhibitor in reaching a sustainable society. The purpose of the zero waste-box concept is to inform and acknowledge the problem and to nudge customers to develop more sustainable behaviours. Inspired by the grocery subscription services that are available today, the zero waste-box will provide ingredients for a couple of dishes, combined with some sustainable products that can show the customers possible ways to reduce their waste (see Figure 25). This would be a unique opportunity for ICA as both food and products are offered in stores today.

The box could be delivered for example once a month and the dishes that are included should be combined to show the customers that it is possible to cook without food waste and that it does not have to be complicated process. The products that are included should also encourage the user to reduce their waste, for example a reusable take-away coffee mug or non-plastic bags for fruit and vegetables in the grocery store. The goal is to avoid packaging for as long as possible. If packaging really is needed it can be returned in the store when picking up the next box.

The main purpose with the box is to inspire the customer rather than offering a replacement for weekly grocery shopping. Additional features could be a discount for groceries with short expiration dates, or suggestions of general things to do at home to reduce waste.

Advantages

Easy to implement at ICA as grocery description services already exist in the company.

Will promote the non-food assortment at ICA for customers that usually do not look at that part of the store.

Inspires the customer to a more sustainable behaviour.

Challenges

Creating recipes that will not generate any waste.

Make the system package-free or include a return or deposit system for the packaging.

Customers might not understand what the point is or why they should buy it.

Figure 25. The zero waste-box.

Renting products at ICA

Shared ownership of products is a contemporary subject and the interest among customers is continuously increasing. A large company like ICA has a good opportunity to develop and adapt its business to offer a renting system for products. By offering customers the possibility to rent products instead of buying them, ICA will be seen as a sustainable company and the system could thus be beneficial for both parties. Seeing profit in circular business models such as a renting system is important for companies today since it is where the market is heading.

Many products are not used very often and most of the time they are standing in a closet collecting dust. Offering a renting service would be a great statement for ICA that could strengthen the sustainability profile, and would also simplify for the customers. Products can be rented over the weekend for example, and the price needs to be relatively low to make it worth renting the product instead of purchasing it. Examples of products that could be suitable for renting are sewing machines, tents, rollerblades, barbecues, tools, outdoor games such as kubb, and board games (see Figure 26).

To achieve a system that works correctly and avoid putting a lot of extra work on each individual retailer, collaborations with other companies should be looked into. To make the system work, companies that can take care of service of each product after use and that can deliver and pick up products need to be found.

Advantages

Encourages the user to more sustainable consumption.

ICA will be one of the first large companies to offer this kind of service.

The renting system can be applied to several products in the assortment, and thereby the system can be introduced with a few products and grow larger with time.

Challenges

Find collaborations to solve logistic problems.

Identify which products that are suitable for shared ownership.

Make customers see the value in renting at ICA instead of buying.

Extra storage and administration will be needed in stores

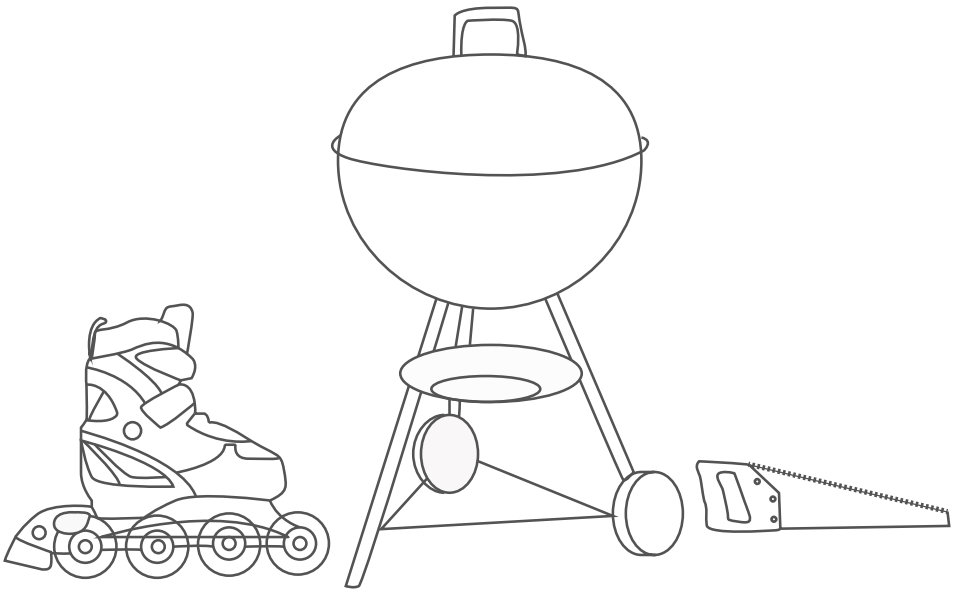


Figure 26. Renting products at ICA.

Handbook for product managers

The product managers are responsible for the assortment and thereby for what the customers can find and buy in the stores. Their power to decide this makes them an important part to consider to make ICA more sustainable. However, it can be difficult to know what a sustainable product is and what aspects to prioritise.

By offering a handbook (see Figure 27) with tools, tips, strategies, and inspiration that simplify the purchase process for the product managers, the amount of sustainable products in the assortment can increase. This will make it easier for the retailers to purchase sustainable products for their stores, making the selection larger for the customers.

The aim of the handbook is to help and inspire the product managers to add more sustainable products to the assortment. It is important that the handbook is perceived as a help rather than being an additional task.

Advantages

By offering more sustainable products, it is more likely that customers will buy them.

Easier to implement more sustainable products if there are clear guidelines on how to do so.

Increases the knowledge and awareness of the product managers.

The product managers can put higher demands on the suppliers if they have a broader knowledge.

Challenges

Adapting the handbook for several different product categories.

Offer relevant information so that it is perceived as a helpful tool and actually is used.

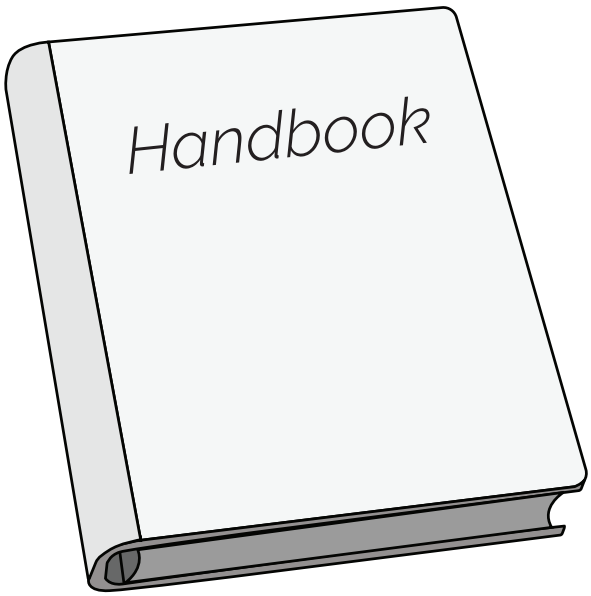


Figure 27. The handbook for product managers.

7.2 Evaluation

All advantages and challenges with each concept were considered and compared with each other. To evaluate more in detail, an evaluation matrix, presented in Figure 28, was also carried out. The handbook for product managers was not included in the matrix since the chosen parameters did not really apply, and it could therefore not be compared properly. The remaining concepts were however filled in the evaluation matrix to be weighed against seven parameters which are described below. Each parameter could have a value between 1 and 5 for each concept, where the fulfillment of a more desired result is shown with a higher score.

The parameters were chosen based on results from the user studies. Desires from customers have to be considered as well as possibilities to actually realise the concepts. Therefore, the higher the total score, the higher possibility the concept has to be implemented.

Implementation from ICAs perspective

The possibility for a concept to be implemented at ICA relies on that the idea is approved to be developed further. To achieve this, the employees at ICA Special need to believe that the concept is beneficial for the company. It also has to be feasible to actually be carried out.

ICA will probably not want to, or can not, implement the concept

1 2 3 4 5

There are almost no difficulties or disadvantages from ICAs perspective to implement the concept

Implementation from the retailers' perspective

If the concept will affect the retailers and their stores, the implementation of the concept depends on the approval of them as well. They can choose to not adopt anything they do not like or believe in, and thereby have the power to decide if the concept will be successful or not.

The retailers probably do not want to implement the concept

1 2 3 4 5

The retailers will probably want to implement the concept

Time perspective

Some concepts may be more prospective than others, and for this project a short implementation time is relevant.

The concept would probably take more than five years of preparation and development to be implemented

1 2 3 4 5

The development and implementation of the concept could be started more or less today

Uniqueness
The more innovative a concept is, the larger impact it will have and people will notice it more. It is more likely that a less unique concept will be used by various companies instead of being something that only ICA has.

The concept or something similar already exists — 1 2 3 4 5 — *The concept is very unique*

Signalling sustainability investment
ICA wants to be perceived as a sustainable company in order to attract more environmentally aware customers.

The concept will not help strengthen ICAs sustainability profile at all — 1 2 3 4 5 — *The concept will help strengthen ICAs sustainability profile*

Contribution to sustainable behaviour
One way to encourage the customers to make more sustainable choices is to aim for a sustainable behaviour, which will more or less automatically lead to continued sustainable choices.

The concept will not contribute with anything to promote a sustainable behaviour — 1 2 3 4 5 — *The concept will encourage people to a sustainable behaviour*

Simplifies for the customer
Since one of the recurring topics during the user studies was the difficulty of knowing what is the most environmentally friendly option in all situations, a concept that simplifies choices for the customer is preferable.

The concept does not simplify or change anything for the customer — 1 2 3 4 5 — *The concept simplifies a lot for the customer*

Persona suitability
To get an idea of how well the concepts would be received by the customers, they also got a score based on an estimation of what the five personas would think of them. The individual scores can be found in Appendix 8, and in the matrix the average score for all personas is presented for each concept.

Most personas would not like or appreciate the concept — 1 2 3 4 5 — *Most personas would like or appreciate the concept*

	Information database	*Information in stores*	*Kitchen collection for children*	*Product recycling at ICA*	*The zero waste-box*	*Renting products at ICA*
Implementation from ICAs perspective	2	3	3	4	5	2
Implementation from the retailers' perspective	5	3	3	3	5	3
Time perspective	4	5	5	5	4	3
Uniqueness	5	4	3	3	4	3
Signalling sustainability investment	3	4	3	5	4	4
Contribution to sustainable behaviour	3	3	3	4	4	4
Simplifies for the customer	4	4	1	5	3	3
Persona suitability	2,4	3,2	1,4	3,6	2,8	3,2
Total	**28,4**	**29,2**	**22,4**	**32,6**	**31,8**	**25,2**

Figure 28. Evaluation matrix

The choice of final concepts

Although the handbook was not included in the evaluation matrix, its advantages made it stand out and go through as the first final concept. Having impact on what products that are sold in the stores can lead to a positive spiral where an increased amount of sustainable products lead to more customers purchasing them, which will encourage the retailers to add even more to their stores.

All concepts were given positive feedback from employees at ICA, however the product recycling concept was one of the favourites. This, in combination with achieving the highest score in the matrix, became the base for it being chosen as the second final concept.

The two final concepts are further developed in chapter 8 and 9.

As is shown in the evaluation matrix, all concepts got rather high scores given that the maximum score was 40 points. The relatively similar results are probably a consequence of the fact that they all were based on the same problems and thereby complement instead of replace each other. All seven concepts could theoretically have been developed and implemented simultaneously without interfering with one another, and all of them have good potential. However, some had to be left at the idea stage given the time frame of the project, The concepts that were a little more adapted for some specific customer type or that needed more time and effort to implement than others were therefore given lower scores. The same happened to those who did not simplify enough for the user, or that were not sufficiently unique.

The scores contribute with an indication of which concepts that are probably more suitable given the current prerequisites, but a part of the decision was also based on estimations of the company's preferences.

7.3 Coverage of the problem areas

The most recurring problem areas are more or less covered by four of the concepts: the information database, information in stores, product recycling at ICA and rent at ICA. All of them enable more information for the customer and make it easier to make the most sustainable choices when both purchasing new and recycling old products. The kitchen collection for children and the zero waste-box are both possible ways for ICA to show how products can be used sustainably, and also inspire customers to create sustainable habits.

By choosing the handbook and the product recycling concept, problem areas can be approached from two directions. The handbook will be a help for the company while the recycling can reach out to the customers, both aiming to simplify for the user of each concept. This will probably entail a greater chance of solving some difficulties since two different approaches can increase the possibility of a noticeable impact.

In reality, the handbook might have more potential to cover a larger area since it can affect the assortment in all different product categories. The recycling concept will however probably be more prominent due to its size and the fact that it is not only a product but a system that can be used by all customers, so it still has an important role. Nevertheless, the development of the handbook will have the most focus while the recycling will be held on a more conceptual level.

8. Final concept 1: product recycling at ICA

"A way to simplify recycling and promote circularity"

The first final concept is a product recycling system at ICA, where customers can leave discarded products to make sure they get recycled properly. The development of the concept is presented in this chapter, along with an example of how it could look like and work in practice. Finally, the advantages and challenges are analysed and some suggestions on further work are proposed.

8.1 Development and description of the product recycling at ICA

About recycling

In Sweden, recycling of packaging and products are separate processes. Package recycling stations are placed on many places in the cities and are divided into five different categories: plastic, metal, glass, paper, and newspapers. At these stations, consumers are only allowed to throw packages (FTI AB, 2018 A). Companies that produce packaging for their products are obligated to follow the law of producers responsibility. The law states that the companies are responsible for packaging they place on the market and need to make sure that it is collected and recycled properly. The companies pay a packaging-fee based on the amount of material they use, to fund the recycling stations (FTI AB, 2018 B).

Other products that are to be discarded should be taken to a recycling central provided by the municipality, and are in other words not allowed to be left at a package recycling station (FTI AB, 2018 C). By recycling old products a lot of energy can be saved. This applies to various materials, where metals are among the most valuable. For example, over 90% of the energy can be saved by recycling aluminium instead of using new raw material (Återvinning Stockholm, 2018). Plastic is also important to recycle, in order to reduce the amount of new raw material used (FTI AB, 2018 D). In the case where a product consists of more than one material, the first priority is to separate the different parts and recycle them separately. If that is not possible, a thumb rule could for example be to prioritise metal to save as much energy as possible (Karlstads kommun, 2018).

Taking the concept a step further than existing solutions

As was mentioned in chapter 7.1, this concept consists of a collecting station that should be placed in ICA stores to allow for customers bringing discarded products there instead of having to go to a recycling central. By making it easy to recycle, more people will hopefully do it and more material can come to use again.

The idea of circulating materials were partly based on ICAs large assortment and the size of the company. With a large variety of products and many different suppliers, the chance of finding a way to produce a new product out of collected material could be quite high. To investigate this possibility, a search for companies that could close the loop by collecting materials and produce something new out of them was performed. By finding information at companies' webpages and discussing with some employees at ICA, some possible paths were identified.

One challenge is that since ICA stores are spread out all over Sweden, circulating materials can entail a lot of transports which is not desirable. To minimise these transports, finding collaboration companies in different parts of the country is preferable. Depending on which areas these companies work, the number of steps from emptying the boxes in the station to introducing new products in ICA stores can vary. Another issue is that according to the constitution EG (SFS 2008:282), some recycled materials are not approved to be used in contact with food. However, by making sure to produce other kinds of products, or investigating the possibility to get a permission for a specific recycling process, this does not necessarily have to be a problem.

According to Avfallsdirektivet (SFS 2011:927), which is a waste management law, waste has to be collected and transported by a company with a certain permission. Most companies with this permission do take care of and process the materials in some ways, but they are later sold to other companies that produce new products out of them. By initiating a cooperation with such companies, ICA could then sell these products made from the collected materials, and thereby close the loop.

Based on these mentioned aspects, a flow chart of how the product recycling process could look like was developed. It is further described in chapter 8.2.

Another way to take product recycling at ICA a step further than other companies is to offer more information to the customers. By making the process as easy as possible, the chance that they will actually recycle increases. To allow for this, information about where to put different materials, how to prioritise when a product is made of more than one material, and what happens with the products after they have been left in the box was researched. It was then summarised and compiled so that it should be easy for the customer to assimilate.

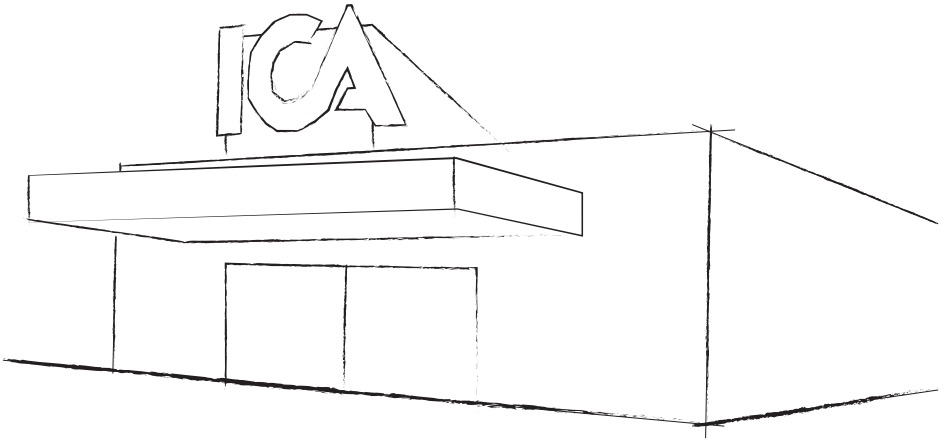
Development of the collecting station

The station consists of a number of modules, one for each of the following materials: plastic, metal, textile, and glass/ceramics. These materials were chosen based on what is most commonly used in everyday products. More modules can however be added if desired, such as one for still functioning products that can be donated to second hand stores, or one for seasonal products like christmas or easter decorations. Some tools to facilitate separation of different materials could also be provided for the customer.

The design of the recycling station was based on criteria that would make it accessible and easy to use for as many people as possible. The height and angle were developed to allow for both short, long, and wheelchair-bound people to reach the opening at the top, and also read the information that is placed on the lids over the openings. It allows for people to easily put products into the station while also avoiding that someone picks something up. The width was based on a brief research of measurements of common products that people might want to discard. It should allow for most small products but not very large ones. The reason for this is partly to avoid the need to empty the station too often, and also because people are more likely to find it worth the effort to go to a recycling central with larger objects. The dimensions were tested by building a cardboard mockup to get a feeling of how the final product would be perceived, and to make sure that everyone would be able to use it. Inside each module there is a box to collect the products. They are easily accessed through openings at the front. The person that empties the station opens these doors with a key and can take out the boxes, which have wheels for easy transport.

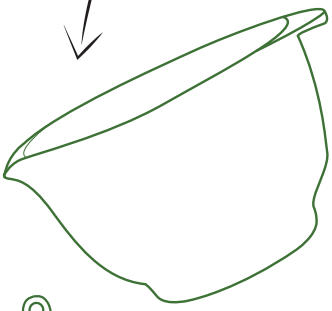
Regarding the appearance of the recycling station, the aim was that it should look both permanent and sustainable to give a stable and serious impression. The surfaces that people will interact with should be clearly marked, and the station should fit into all ICA stores while being a positive experience. To meet all requirements mentioned above, the modules were decided to be made of wood as it is a natural material that people tend to perceive as sustainable. The openings are painted in different colors to clearly separate the different modules.

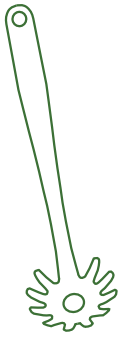
The concept is described and visualised on the next spread. The information sheets, the flow chart, and a drawing with measurements can be found in Appendix 9.

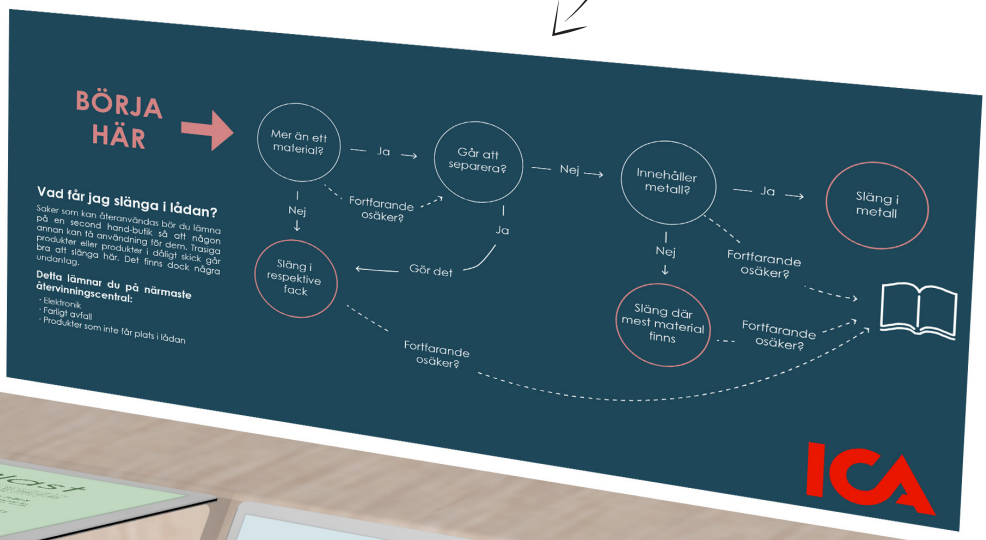


The customers come to ICA and can leave their old products in the entrance before they start grocery shopping.

If it is not obvious how to sort some products, information is available both on the lids of each box, as well as above the station where a flow chart guides the customers how to proceed and prioritise.

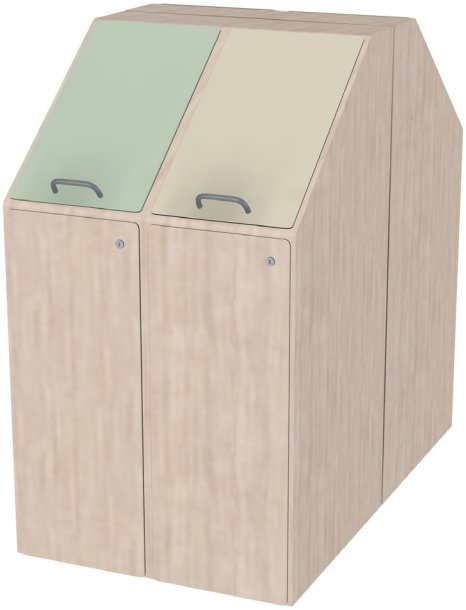






At some point, a representative from a waste collecting company comes to ICA and empties the boxes. The company takes care of the material and prepares it for reuse. The same or another company then produces new products of the old material, which ICA can purchase and sell in the stores once more.

The modularity allows the retailers to choose which modules they want, and put them in a constellation that suits their respective stores.



8.2 Material flow

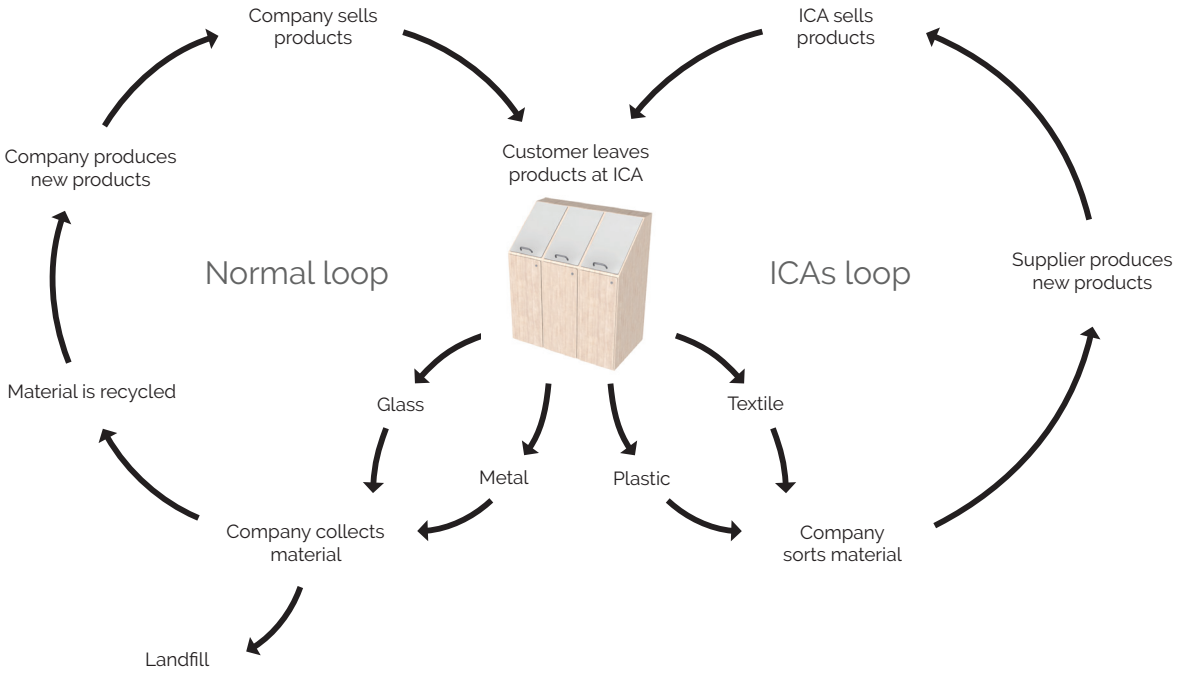


Figure 29. Material flow chart

The flow chart presented in Figure 29 is an example of how different materials can be circulated. The reason to why only the materials plastic and textile are circulated within ICA is that metal is already recycled to a high grade today and the glass volumes are probably not big enough to motivate material recycling. Therefore, the focus for ICA should be to start with textile and plastic, where there are not really any good systems for recycling today. Solving those areas could both entail a positive impact for the environment and be a statement for ICA as a company. Starting with those two materials, ICA could then continue making a loop for metal as well, and later review if something could be done with the glass.

If the volumes turn out to be too small to use for production of new specific products to sell at ICA, other ways to circulate materials could be aimed for. As long as the old products are taken care of and the material is reused for something else, it is a better alternative than just letting them be incinerated. Therefore, a middle way could be to make sure that the materials are being reused in some way, maybe by some other company, and then make an effort to use as much recycled materials as possible in the products that are sold by ICA. In that way, ICA is at least contributing to more circulation of materials instead of overlooking the problem.

8.3 Analysis of the product recycling concept

Advantages

Based on results from the user study, the product recycling concept is highly desired by ICAs customers and would therefore probably be used. At least by those who live close to an ICA store that has a collecting station, since simplicity was an important factor to motivate people to recycle. Although other stores have similar solutions today, ICA has an advantage in being a large grocery store that people visit often. People might be more prone to bring old products when doing their weekly grocery shopping in contrast to bringing them when going shopping in the city center. ICA is more accessible and a place people visit on a more regular basis than other stores that provide this kind of service today.

The concept encourages customers to more sustainable habits since it facilitates sustainable discarding of old products, which also contributes to making people aware of their behaviour. By also educating the customers by offering information about how to recycle and why is it important to do it, the concept gives additional value both from the customers' and ICAs points of view. The concept is in line with the vision "To make every day a little easier", and could also help strengthen ICAs sustainability profile, which was the purpose of this project.

Challenges

There are some challenges with the concept as well. The fact that it might not be an immediate source of income for ICA can entail a delay of the development if it is not considered a high priority. The retailers might hesitate before implementing anything that in short term only means more occupied space and one more task to take care of. If some long term benefits can be shown, the probability that the retailers will adopt the concept will increase. The challenge is to show that introducing this kind of initiative is a statement that probably will be beneficial for ICA and all retailers in the long run. Showing people that the company is ready to invest in these kinds of initiatives is a step towards reaching that sustainable profile and leading position that are aimed for.

Even if the concept gets positive response from and seems to be used by the customers, products are not thrown away with the same frequency as packaging. On one hand, this is an advantage since the boxes do not have to be emptied too often, but on the other hand it also means that there will not be a very large amount of material that directly can be used for new products. However, this needs to be investigated further in order to find out what the volumes will be like. Only then it will be clear if the sizes of the boxes need to be altered or if it is only a matter of modifying the agreement with the company that collects the old products.

Next step

After finding companies that are willing to collaborate, a pilot version of the concept should be introduced, to identify and solve potential problems before implementing the station in more stores. Since it will potentially affect a large number of people, it should be evaluated and adapted to fit as many as possible, which is preferably done with some kind of user studies. Deciding on dimensions and materials of the station should be looked into as well as placement of it.

Investigating how large volumes that will have to be taken care of and thereby how often the station will be emptied is one step to full implementation of the concept. Also, calculating how much material that is needed to allow for circulation is necessary to be able to start collaborations with other companies.

Minor issues such as people misplacing products or laying them outside the boxes because they do not fit inside them can always occur. This will have to be looked into along with the matter of finding appropriate dimensions of the station.

It will probably not be feasible to implement a product recycling station in all ICA stores, but a goal could be to have one at each ICA Maxi store. To optimise the result of the concept, finding collaboration companies as geographically close as possible is preferable. Finding these and solving any problem that occurs is a first step before implementing the concept in more stores. Calculations for finding a balance where the positive aspects of recycling make up for the transports between different companies and processing of the materials, is another task that has to be done..

If this turns out to work well, a future goal could be to strive for circulating as many materials as possible within ICA, and modules for other or more specific material types could be added to the collecting station. Also, ICA Kvantum, ICA Supermarket, and ICA Nära retailers might be more eager to adopt the concept into their stores as well.

9. Final concept 2: handbook for product managers

"Minimising the effort needed to get maximal impact on the assortment"

The second final concept is a handbook that was developed to make it easier for the product managers to find and choose more sustainable products. In this chapter the development process is described and a presentation with some examples from the layout can be found. The handbook is analysed by discussing its advantages and challenges, followed by examples on what could be a suitable way to proceed to implement it at ICA.

9.1 Development and description of the handbook

To fulfill the goal of the handbook, which was described in chapter 7.1. the information in it is based on data that has been collected during the entire project, from the user studies as well as the literature study. The challenge was to find information that would suit the product managers' current level of knowledge and thereby actually facilitates the process of finding sustainable products. The information presented should not be too advanced, to minimise the risk of the handbook not being used. However, at the same time the information needs to be meaningful since the handbook should be an educational tool. It should also help the product managers to put higher and more specific demands on suppliers in order to get the products they want. To keep the information on a relevant level it was compiled and sorted based on results from the user study. The handbook is divided into two parts.

Part 1

The first part includes shorter texts, lists, and models of important processes to make it easy to comprehend the information. It is made to be a natural part of the product development phase and should be a supporting tool for the product managers so that they take all important aspects into consideration when looking for new products.

To make the information easy to understand it should be perspicuous and summarise the most important information. Two models were created to simplify and explain important parts. The first illustrates a product lifecycle and describes where the product managers have the power to change the usage and end of life of products. It is meant to inspire and explain how much the product managers can affect the environmental impact of a product. The second model illustrates the recycling process and what happens after the user has left a product at the recycling central. It was developed to explain how a product needs to be assembled to make it recyclable. The two models replace long texts to make the first part easy to comprehend and to make sure that it does not feel like an obligation or an additional task in the development process.

To further keep the handbook on a relevant level and create a simple overview, some parts are presented in bullet format. There is also a checklist that summarises the most important aspects of the book and could be used as a recap if the product managers do not have the time to go through the entire handbook.

Part 2

The second part of the handbook is more in-depth and can be used if the product manager thinks that the information in the first part is not enough to make an accurate decision or if there is simply an interest in gathering more information in the subject. This part contains information about materials and different customer groups.

Layout

The purpose of the layout was to group the information in a comprehensible way making it easy to overview. In the middle spread the main checklist is placed to make it easy to find. All chapters are separated by using different background colours.

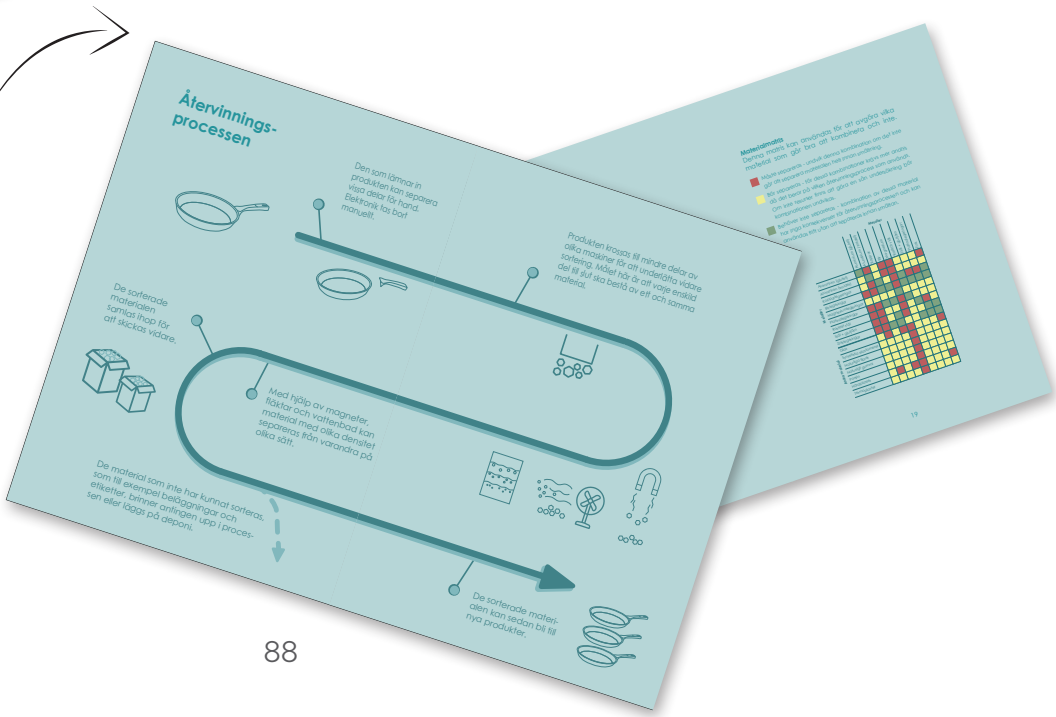
To make the handbook an interactive tool, there are some pages for personal notes. The idea is to allow the product managers to adapt it according to their specific product category.

The concept is described and visualised on the next spread. The entire handbook can be found in Appendix 10.

Before the product managers identify a need for a new product, the handbook should be used to make sure that the final product is as sustainable as possible.

The first part of the handbook includes a descriptive model of a typical lifecycle of a product, and some information about sustainable products and why they are important.

Another model shows an example of a recycling process to make it easier to understand what kind of alterations that should be made to products to facilitate recycling of them. A matrix that shows some good and bad material combinations is a useful tool when choosing materials.



Checklista

Denna checklista är en sammanfattning av det viktigaste som har tagits upp i handboken. Den är till för att du snabbt ska kunna stämma av om produkten du vill ta in är ett bra alternativ eller inte. Utifrån listan kan du ställa krav på leverantörerna så att du får en så bra produkt som möjligt.

- ☑ Finns behov av produkten? Kommer den att användas, och i så fall hur?
- ☑ Se till att alla material är återvinningsbara - har produkten möjlighet att cirkuleras?
- ☑ Se till att sammansatta material går att separera i återvinningsprocessen
- ☑ Undvik röda materialkombinationer i materialmatrisen
- ☑ Om förpackning behövs - gör den så liten som möjligt och se till att den går att återvinna
- ☑ Utnyttja möjligheten att ge information om hantering och återvinning till kunden - antingen på förpackningen eller själva produkten
- ☑ Se till att produkten passar för olika kundtyper

Mer plats för egna punkter finns på nästa uppslag!

In the middle of the handbook, a main checklist can be found. The product managers should make sure to go through and try to fulfill the bullets for each product before adding it to the assortment.

There are also some pages for personal notes!

In the second part of the handbook, the five personas are presented. In addition, more in-depth information about some materials is offered for those who want to learn more.

9.2 Analysis of the handbook

The handbook is created for the product managers and is meant to be used in-house at ICA. The concept will not be something that is advertised to the customers. However, in the long run it will affect the range of sustainable products available and thereby the image of ICAs brand. Thus it will in the end also affect the customers and how they purchase products at ICA.

Advantages

The concept has great potential to create a noticeable transformation towards sustainability, with the product managers as a starting point. If the process of choosing more sustainable products is simplified it will also become easier for the customers to purchase these products. With more sustainable options to choose from, requests from the customers on these kinds of products can increase, and the demand on the retailers to purchase more sustainable products to their store gets higher. In the long run this will hopefully make it possible to decrease the amount of less sustainable products in the assortment. Increasing the proportion of sustainable products is a good way to show and prove for the customers that ICA cares for the environment.

Creating circular solutions is important for a company that wants to be in the forefront of sustainability. To make it easier to circulate products within ICA (as the concept of product recycling proposes), the products first of all need to be recyclable. A requisite is therefore that all products developed for ICA should be adapted for recycling, something that the handbook can help out with. The handbook is a good starting point for sustainable and circular solutions that can gradually be more frequently included at ICA.

Challenges

One challenge with the concept is how to adapt and present the content included in the handbook. The information needs to be easy to comprehend and should not be too extensive and detailed to read. However, the information still needs to be interesting and educational to make sure that the tool provides something to the process. It is difficult to meet the existing knowledge level of the product managers and estimate how much new information that can be assimilated.

Even if the information is at a useful level it does not assure that the handbook is actually used. Also, the product managers should not perceive it as an additional task they need to complete before choosing products. The handbook should not add workload, but rather make the process easier and help the product managers in their daily work.

Next step

The handbook needs to be evaluated with several product managers to make sure that the content is desirable and useful. Further knowledge in the work process needs to be collected to adapt the content even more. One way of developing it is to let some product managers use the book during some time and encourage them to use pages for personal notes and make suggestions on how it could be altered. The data provided can then be evaluated to further understand what needs to be included and if any parts can be reduced or removed. Several iterations need to be completed before an updated handbook can be printed and used.

The content needs to be adapted to include several product categories, since this first draft is aimed for the kitchen segment. Currently the content is on a basic knowledge level, to allow for as many product managers as possible to use it. A next step could be to develop the handbook to several volumes that include information on more advanced levels, as the product managers become gradually more informed.

In the future, examples of products that meet all bullets on the checklist can be included to inspire the product managers and to show that it is possible to offer functional, aesthetic products with good performance that still are sustainable. This will give leverage for the handbook showing that it is a good tool to use.

10. Discussion

"A deep dive into the most interesting aspects of the project"

Some of the most frequently recurring issues are discussed in this chapter, such as how to strengthening a sustainability profile without excluding anyone, dilemmas regarding how to prioritise, and difficulties that come from the fact that all ICA stores are owned by individual retailers. However, some positive aspects and areas with great potential have also been identified and are discussed as well. The process, the selection of participants to user studies, and the concept suggestions are also considered, and finally some possible future scenarios are touched upon.

Aim

The first aim of this project was to create a product or service with a sustainable focus based on the results from explorative user studies, and the second was to provide a solution that will make a lasting change in-house and make it easier for employees at ICA to continue using sustainable approaches. Both aims have been fulfilled by the solutions presented in this report. During the user studies many different difficulties were identified, and the concepts were developed to solve a broad range of problems areas by approaching them from multiple directions. This contributed to a large variety of ideas and even though two final concepts were chosen and developed further, all concept suggestions could possibly be implemented at ICA at the same time without conflicting with one another.

Strengthening the sustainability profile of ICA

The task to strengthen the sustainability profile of a large company that already has a well-established image on the market is more complex than simply developing a new product or keeping up with the changes of other companies and the society. Mentalities and strategies need to be adjusted on different levels, and active actions need to be made. It is not defendable to sit around and wait for someone else to do their job or change their mindset. Implementing new solutions takes time and to be in the forefront of sustainable development, solutions that will be big trends in five years need to be developed now. In the case of ICA there are several areas to address, where the retailers, the customers, and employees at ICA Special are some examples. However, it is not enough to focus on only one of these parameters; to get a significant outcome more than one intervention need to be made. While the product managers have great potential to affect what the retailers offer in their stores, the customers in their turn can influence the assortment through their purchasing. If only one group at a time is managed, there is a risk that the other ones do not keep up. By approaching all of these levels simultaneously they can develop together.

There is a contradiction in the desire to be a leading company in the question of sustainability while at the same time wanting to include everyone and also be a lucrative business. To be able to continue selling products while encouraging people to be more sustainable, all products need to be as environmentally friendly as possible. The terms *sustainability* and *consumption* do not directly belong together, but they could if alternative ways to consume products can be found. By rethinking, trying out more circular approaches and introducing more collaborations, ICA can quickly make big changes and be perceived as more sustainable. Altering a very well-tried strategy can be difficult, but it is important to accept the fact that it is not possible for a company to be at the forefront in every aspect. By instead collaborating with other companies and be able to benefit from each other's expert areas, the average competence within each organisation will increase and generate a better result.

Another issue that should be considered is the question of including everyone. While being preoccupied by worrying about people that might not afford even the cheapest options, it can be easy to oversee the customers that do want to make more sustainable choices and are willing to pay more for that. Even if it might seem less important than the question of pricing, it still entails that some people might go to other stores to find what they want, and thereby one customer group is excluded anyway. If ICA really wants to avoid this, fulfilling those wishes is needed as well.

For many retailers it is important to not make any too radical changes or implement something that is not well-tried and proven to be lucrative. Waiting for the customers to start asking for better products is not an effective way to go, since it is difficult for them to know what to ask for if they have not already seen an option for it. Since the retailers will probably not start offering sustainable products by their own initiative, starting with facilitating to choose those kinds of products could be an option for ICA Special.

Despite these challenges, ICA also has a lot of potential. Only by setting this kind of goal and making it official, a first step is taken in the right direction. A large company with a wide range of products has a lot of opportunities to make changes that actually can make an impact, and being as well-established as ICA entails a large amount of people that are already convinced that it is a reliable company. Taking advantage of this and making sure that new initiatives are promoted and marketed in the right way, most people will probably accept them at some point.

The process

The intention with the process was to keep the project broad with an explorative approach for as long as possible. Since the aim was not necessarily to end up with a product but rather identify problem areas and how to solve them, keeping the focus in the beginning of a typical product development process was relevant. The literature study was quite extensive to allow for a more scientific approach. Based on ICAs interest in circular economy, reading about it and similar topics was necessary to be able to identify possibilities and challenges.

Since ICAs customer group is very wide, a large user study was significant to cover as much of it as possible. Analysing the opinions of retailers, customers, and employees at ICA Special generated insights from different angles which resulted in a lot of data to base choices on. To investigate several user groups can be beneficial for similar projects with explorative approaches since a lot of new areas for possible solutions can be identified. Introducing new strategies in a large company can be difficult, and therefore proposals are more likely to be accepted if they are well-grounded and can be motivated. All of these aspects mentioned above motivated a broad approach.

In the beginning of the project, most focus was on getting information from retailers and customers and learn how things work in the stores. The idea to also investigate strategies in-house at ICA Special came up relatively late in the project, mainly because the expectation was to find most problems during the purchasing process and not at the office. If this in-house research had started earlier in the project, some valuable insights could have had more impact on the final result.

Selection of participants to user studies

The main distribution channel for the questionnaire was social media, which may have influenced the selection of participants. The age group 20-30 was clearly more represented than the others. To adjust this, some time was spent on getting a broader age distribution on participants and in the end all age categories were well-represented in the final data summary. The amount of answers were too few to be a representation of the entire population. However, the goal with the questionnaire was to get an indication on people's attitudes towards sustainability and not detailed answers. Therefore, the age distribution was acceptable for the purpose of the questionnaire.

People might be more willing to answer this kind of questionnaire if they have a sustainability interest and care about the topic. Customers of ICA that have a more negative attitude towards sustainability probably chose to not be a part of the study. Therefore the result can have turned out to be more positive than if the selection of participants would have been more evenly distributed. However, people not interested in the subject would be hard to reach with other distribution channels as well.

Participants in the focus groups were collected partly through the questionnaire and partly via personal contacts. All were living in the Gothenburg region, which may have entailed a geographic bias of the focus groups. But since the groups were mixed based on age, sustainability interest, and gender, a relatively large diversity was achieved nevertheless. This resulted in interesting discussions and the result from the focus groups contributed a lot to the project. The age span in the focus groups ranged from 20-70+, but there was no participant in the age between 30-40, something that can have affected the results. However, since both younger and older age groups were represented, the missing gap might have been covered somewhat and the results can still be trustworthy. In any case, the fact that the result might be biased is something that was taken into account in the analysis of the user study.

The user study that included store owners was limited as it was hard to gather participants to the interviews. However, the answers from different retailers did not differ a lot as the questions mostly focused on their daily tasks and how they reasoned. Therefore the result quickly felt saturated. Retailers without any sustainability interest were probably not interested in participating in the interviews which can have made the result biased in the same way as for the questionnaire. The possible deficiencies have however been considered in the analysis. The interviews contributed a lot to the project and was an important part in learning about ICA as a company.

If more than five product managers had been interviewed, broader insights regarding difficulties and attitude could have been gathered. Nevertheless, they are all responsible for different categories and represented a broad range of products. Thereby the interviews complemented each other in a beneficial way.

The user study included a majority of environmentally aware people as it was difficult to get uninterested and doubtful people to participate. This made the result of the study more positive than if a broader mix of people would participate. A consequence may be that the concepts proposed are more adapted for an environmentally aware target group.The concepts might have been broader if a wider range of people would have participated. An attempt to include as many target groups as possible was made by creating five personas with different sustainability interest that were used to evaluate the concepts.

The decision to keep the user study broad came at the expense of not making it as in-depth as it could have been. Even though the study was extensive, each separate part only investigated each group on the surface. For future work with the study, a more in-depth approach could contribute with more dimensions to the results. However, as the purpose of the study was to investigate broadly, the setup of this project was in line with the expected outcome.

The concepts

In order to keep the project as broad as possible, a number of different types of concepts were developed. The idea was to show various ways to solve the identified problems to give ICA some examples on how to approach the same issues from different angles. Therefore the focus was to find possibilities to implement solutions on different levels of impact, and making sure that they actually solved some of the identified problems.

Since ICA does not have an actual product development process, it seemed most relevant for the concepts to not be a specific product. Even if a sustainable, useful product would have been developed for ICA, it would be difficult to actually produce it. Someone would have to find a factory that could compile a production process for it, which would entail an unnecessarily large effort. Furthermore, even if it would be very sustainable and finally end up in the stores, adding one product to ICAs large assortment would not affect the overall sustainability profile at all. Based on this, the concepts were mainly services, systems, or strategies, to have the possibility to achieve a larger impact than one single product could have.

All concepts are developed with ICAs current prerequisites in mind, and therefore all of them are feasible to implement. They do take different amount of time and effort to introduce, but none of them would be impossible. However, the time aspect played an important role in the choosing of concepts since it seemed most relevant to develop something that could possibly be implemented within a reasonable time frame.

Based on results from the user studies and research within ICA there are no obstacles for all concepts to exist at the same time: none of them excludes the other. It is more important that they are possible to implement and that people actually would use them than making them extravagant and standing out. However, to avoid copying of other companies' existing ideas and keeping some unique features, the characteristics of all concepts are adapted to suit ICA and as many as possible of the customers. For example, both the zero waste-box and the product collecting station are based on systems that already exist, but these concepts are developed and adapted based on information collected with ICA in mind.

Sustainability or profit, what is most important?

As mentioned earlier, ICA has stated that a goal is to be in the forefront of sustainability. One question is then: for what reason was this goal set? Does the company actually care for the environment or is it just a smart business move that can increase market shares? If the environmental interest is genuine, a temporary economical loss could maybe be acceptable. It is hard to make large changes without losing in other areas.

By all means, a company of course needs to make profit to survive. However, already today a growing trend is that people buy less products and become more aware of how products affect the environment. Regardless if a company wants to be in the forefront of sustainability or not, new income streams need to be created. Companies that do not follow the trend will have a hard time surviving. Furthermore, with the expressing of the wish to be a leading company within sustainability, ICA has a fantastic opportunity to find new income streams that in the same time contribute to a more sustainable profile. To do this, ICA might need to sacrifice something else. like losing profit in some areas or excluding certain customer groups, to accomplish this goal. If it is worth it is something only ICA can decide.

The concepts' connections to theory

The *rebound effect* mentioned in chapter 2.2 could possibly be an issue with some of the concepts. For example, a simplified recycling process might entail that people discard unnecessarily many products just because it is easy to bring them to the grocery store. However, by explicitly communicate to the customer that it is preferable to donate still functioning products to a second hand store, and also maybe adding another module dedicated to this, it does not have to be a problem. The kitchen collection for children could also be affected by the rebound effect. If it is promoted as environmentally friendly, some people might buy more parts than necessary and they end up not being used. In this case there is no obvious solution to prevent this, but the timelessness and good quality can open up for a second hand-market and the products can be passed on to other children. By being aware of the possible risks with sustainable solutions, there is a larger chance that they can be prevented in order to minimise unwanted effects.

The advantages with *nudging*, which were also mentioned in chapter 2.2, can be achieved by considering the way information is presented. This applies to all seven concepts, since all of them contain some kind of information. For the concepts that are directed to the customers, nudging can be used to affect behaviour on a less conscious level, since they are not necessarily aware of ICAs intention of being more environmentally friendly and aim for more sustainable behaviours. The product managers are on the other hand very aware of this and thereby the nudging might be more obvious for them. In any case, as long as the result is positive, the level of consciousness should not be of importance.

The following paragraphs are a description of the final concepts' connections to the model presented in chapter 2.4 (see Figure 30).

The product collecting station could be a first step for ICA towards becoming more *circular* by taking care of old products and at best recycling them into new products that can be sold again at ICA. One prerequisite to fulfill this goal is that people actually bring their discarded products and leave them at the collecting station. To encourage people to adopt this *sustainable behaviour*, information about how and why products should be reused or recycled is provided, which was one of the main desires expressed during the user studies. This increases the chance that people will actually use the station, and thereby *user focus* was the last puzzle piece that was needed to have the possibility to complete the goal.

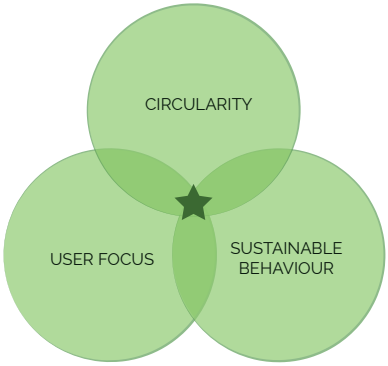


Figure 30. A reminder of the model presented in chapter 2.4

The goal with the handbook was to enable a tool for product managers to facilitate finding sustainable products with a high chance of being *circulated*. *Sustainable behaviours* can then be improved on many levels: the product managers can make it a habit to choose environmentally friendly and recyclable products, the retailers can get better at adding them to their assortment, and finally this allows for the customers to make it a habit to purchase more sustainable products. This is achieved by applying a *user focus* based on results from the user studies and give the necessary information and inspiration to the product managers.

The future

Changes in society occur in a rapid pace. Technology is evolving fast and new solutions are released on the market. For companies like ICA it is important to keep up with this. One large trend is the shift towards more online purchasing. How companies can keep their customers, what they need to offer, and where they can create new income streams are challenges that need to be looked into. A renting system is an alternative source of income and a possibility to adapt as the shift towards online shopping grows larger. It is also a good starting point in becoming more circular, which is another upcoming trend. Several initiatives need to be introduced to keep up with the development of the market.

As the market evolves, companies need to adapt to the new situation to continue being relevant for their customers. It is important to always strive for continuous development to make sure not to fall behind other actors on the market. Something that was considered a sustainable solution a couple of years ago is a basic precondition today, Situations change and companies need to follow. However, for a company that strives to be in the forefront of sustainability it is not good enough to only follow others. Customers become more aware and for them it is obvious that companies offer at least what others do. To be perceived as more sustainable than other companies, ICA needs to be one step ahead at all times and make sure to offer unique solutions to stand out on the market.

Next step for ICA

Before implementing a new concept in a large company, it is reasonable to evaluate possible results to get an idea of how they can turn out. For the product collecting concept, material streams must be further investigated and companies that could help and ease the workload for the retailers need to be contacted to initiate collaborations. Further, additional input from both customers and retailers are of interest. For the handbook concept, more iterations with product managers should be done before a final version can be printed. As the handbook contains several pages where personal notes can be added, the development can be made in close collaboration with the users and they can add things that they are missing on the additional pages.

11. Conclusion

"A summary and evaluation of how well the aim was fulfilled"

Taking advantage of the great position on the market, ICA wants to make a positive change for the environment, and therefore initiated this project. To explore possible ways to improve the company's sustainability profile, the project consisted of a variety of user studies. Based on the results from these, seven concepts were suggested, and two of those were developed further. Some of the main findings are summarised on the following page to answer the research questions presented in the first chapter.

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Many of ICAs customers see themselves as, or want to be, environmentally conscious, but different obstacles stand in their way. The lack of information and simplicity makes it unnecessarily cumbersome to adopt a sustainable behaviour, which applies in various situations such as when purchasing new products and recycling discarded items. Most people want to make as low negative environmental impact as possible, but how eager they are to make an effort to reach their goals seems to be individual. A common characteristic for many is that their actual behaviour is not entirely in line with their point of view.

Retailers and product managers were identified as roles with large impact possibilities over what products that are offered to the customers. The product managers decide what products that should be offered by ICA and the retailers decide what they want to have in their stores. The biggest potential to have an impact on the sustainability profile of ICA seemed to be with the product managers since they affect the assortment on a higher level than the retailers. Taking advantage of this, an effort made in-house could have a large effect on the customer level. By also making sure to enable a working climate with an environmental focus where it is easy to make sustainable choices, employees are likely to get motivated and take more responsibility in those areas.

Developing a new, sustainable product might work as an eye-opener for some customers, but to really strengthen ICAs sustainability profile, approaching the goal at different levels is a good idea. In that way the task can not only be solved more efficiently but also has a larger possibility to reach out to more people. Therefore, two different final concepts were chosen, with the purpose to cover as many customer groups and implementation levels as possible. The handbook will help ICAs employees by encouraging and informing them about sustainability. It will make it easier to find and choose sustainable products, and is a first step to apply in-house. The product recycling concept will reach out to many people, promote a sustainable behaviour and make every day a bit easier for ICAs customers. The two final concepts will together approach the initial assignment from two directions: from the customer perspective and from ICAs perspective. They are easy to implement and therefore a great first step in the right direction. The remaining concepts can in the future be developed and implemented at ICA to further strengthen the sustainability profile.

12. References

"The sources from which all theoretical information was gathered"

In this chapter, all references that have been mentioned throughout the report are listed. They are divided into categories based on the type of source, and thereafter sorted in alphabetical order.

12

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Personas

Illustrations of the personas are created by Alma Stensson

Persona 1 - Matilda

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Persona 2 - Gunvor

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Persona 3 - Pernilla

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Persona 4 - Claes

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Persona 5 - Sebastian

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Figure 2

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Figure 3

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Figure 4 and 5

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Appendix

"Information and tools that were too extensive to fit into the report but too interesting to not include"

The user studies were performed in Swedish, which is the reason to that some of the appendices, and the handbook, have not been translated into English.

Appendix 1: Interview guide - Retailers

Arbetsuppgifter

- Beskriv ditt jobb - vanliga uppgifter
    - Är du ansvarig för alla inköp?
- Hur mycket bestämmer du själv och hur mycket bestäms av ICA centralt?
    - Kan de bestämma vad du ska ta in/vad du inte får ta in?

Inköp + i butik

- Hur tänker du med inköp, vad har du för strategi för vad som ska köpas in?
    - Vad vill kunderna ha? Hur vet du det? Styr det mycket av vad som köps in?
- Vad kan påverka sortimentet (utöver säsongsspecifika produkter)? Ex:
    - Kundernas åsikter
    - Kundernas köpvanor
    - Generella trender
    - Inget - har alltid standardsortiment
- Ändras sortimentet ofta?
- Hur skiljer sig inköpsstrategier för livsmedel jämfört med non-food?
- Placering av varor i butik
    - Tänker ni mycket på det och i så fall hur? Utifrån vad olika kundtyper kan tänkas köpa t.ex?
    - Har placeringen stor påverkan på försäljning?
    - Hur märker ni det, testar ni olika?
- Hur mycket kan personalen om sortimentet? Ger du personalen information om produkterna eller är det upp till dem själva att ta reda på?

Hållbarhet

- Vad är din personliga inställning till hållbarhet?
- Hur miljömedveten skulle du säga att du är? (på en skala från 1-7)
- Hur påverkar din miljömässiga inställning sortimentet i din butik?
- Har du någon uppfattning om de anställdas inställning? Är det viktigt att de tycker samma som du?
- Tänker du på att du har makt att "styra" kundernas val? Hur i så fall?
- Andel miljömärkta vs vanliga produkter
    - Någon tanke bakom?
    - Olika (proportion) inom olika segment?
    - Saknas något tycker du?
- Hade du kunnat göra något mer extremt som t.ex att bara ta in miljömärkta produkter eller starta ett initiativ som att börja ta emot förbrukade produkter och se till att de återvinns på rätt sätt?
    - Hade det hjälpt om du fått stöd från ICA centralt på något sätt?

Appendix 2: Interview guide - Product managers

Allmänt

- Hur länge har du jobbat på ICA?
- Har du haft några andra positioner på ICA tidigare?
- Vilka varor är du ansvarig över?
    - Andel ICAs egna varor jämfört med varor från andra leverantörer?
    - Har du olika strategier beroende på om det är ICAs varor eller andra? Är det någon svårighetsskillnad?
- Har du varit ansvarig för andra varor tidigare?
- Vilka är dina arbetsuppgifter?
- Hur ser en vanlig dag ut?

Process

- Hur ser din inköpsprocess ut?
    - Hur lägger du upp arbetet, vad är viktigt att tänka på?
- Hur identifierar du vilken typ av produkt som behöver köpas in?
    - Om det redan finns ett antal av den produkttypen, vad är det som avgör om det behöver köpas in ytterligare en sort?
- Hur hittar du dessa?
- Hur bestämmer du vilka produkter som går igenom, kriterier, tester?
- Hur bestäms det vilka varor som blir ICA basic, ICA cook & eat osv?
- Har du samma strategi för alla produkter eller beror det på vilken produkt det är?
- Tidsaspekt - ser det olika ut över året, har du flera produkter på gång samtidigt, hur lång tid tar det från att ett behov är identifierat till att produkten finns i sortimentet?
- Vad finns det för svårigheter?

Hållbarhet

- Vad är din personliga inställning till ICAs hållbarhetsfokus?
- Vad gör du för att hjälpa ICA nå sina mål?
- Hur bra koll har du på specifika produkter, hur de är tillverkade och ihopsatta, exakta material osv?
    - Tänker du på hur produkten ska återvinnas när du köper in den?
    - Tänker du på vilka material produkter är gjorda av och ser till att de är så miljövänliga som möjligt?
- Tycker du att det är svårt att få in hållbarhetsaspekten vid inköp?
- Vad är svårt inom just din kategori?
- Vad hade underlättat ditt arbete?
- Har ni haft någon utbildning i design för återvinning/disassembly eller liknande?

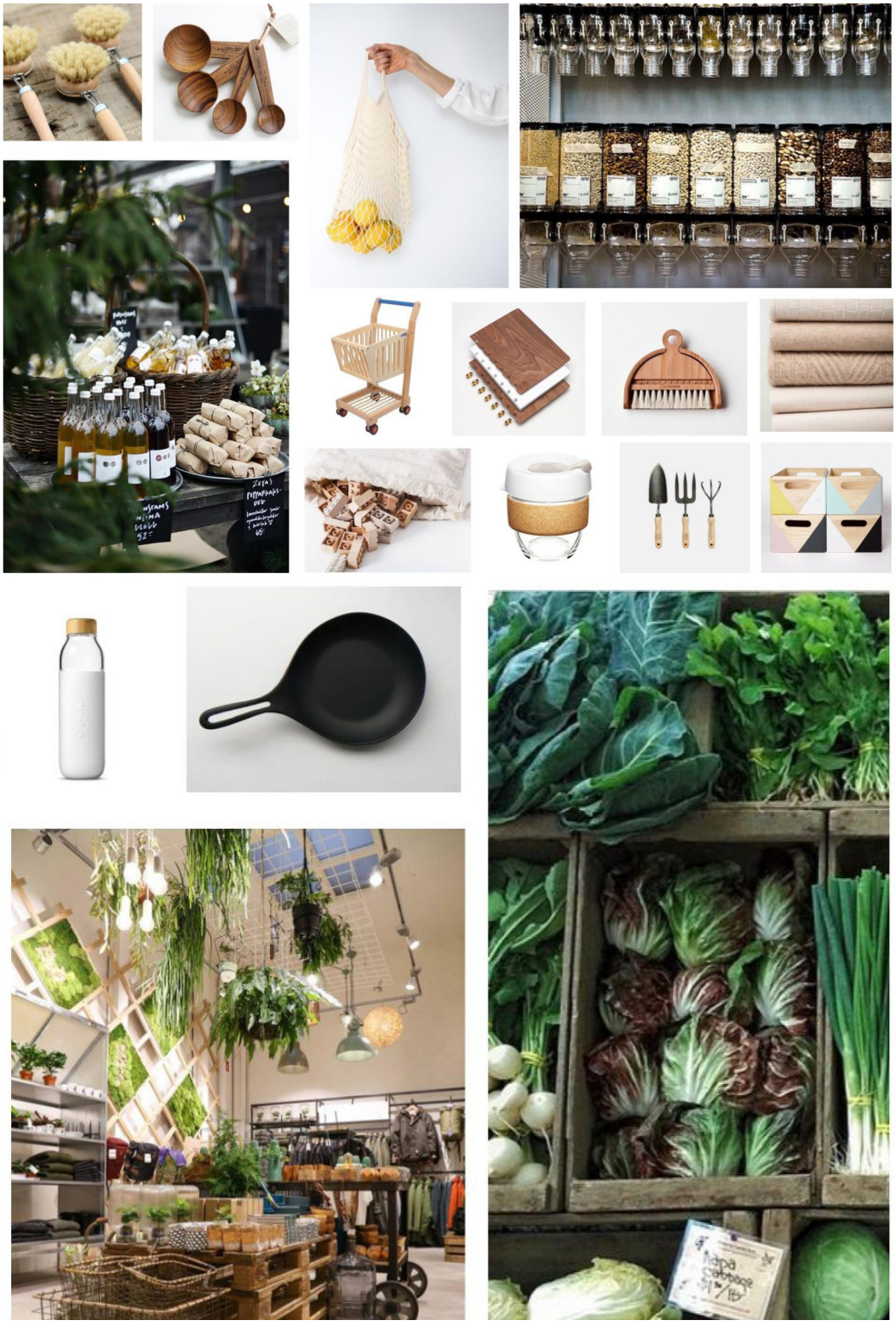
Appendix 3: Workshop scenario

Du har åkt till ICA Maxi för att veckohandla. Innan du går in i butiken passar du på att lämna en trasig stekpanna i deras insamlingsbox. Du fortsätter in i butiken som är fylld av växter och naturliga material. Du funderar en stund på om du ska passa på att hyra verktyg till hyllan du ska sätta upp hemma, men det får vänta till en annan gång.

Du tänker på vad skönt det är att ICA har tagit bort alla sina miljömärkningar, det var så mycket att hålla reda på förut men nu behöver man inte tänka på sådant längre eftersom allt på ICA är miljöklassat. Du tar en sväng förbi trädgårdsredskapen och kontorsmaterialen innan du stannar vid stekpannorna för att hitta en ersättare till din gamla. Det finns lite information om återvinning och koldioxidutsläpp på hyllkanten, men du vill veta mer om materialen som har använts, så du scannar streckkoden med din telefon. I ICA Handla-appen hittar du mer information som gör det lättare att jämföra alternativen och känner att du nu kan göra ett välinformerat val.

Du plockar på dig lite grönsaker som du lägger i tygpåsar du haft med dig, och bönorna och havregrynen häller du upp i glasburkar. På väg ut ur affären hämtar du månadens zero waste-box, det ska bli spännande att se vilka maträtter och produkter du får prova på den här gången. Det sista du gör är att köpa en kaffe att ta med i din termosmugg. Tänk vad mycket material som måste ha sparats sedan engångsmuggarna försvann!

Appendix 4: Workshop image board



Appendix 5: The questionnaire

Hej!

Vi är två studenter som läser Teknisk Design på Chalmers Tekniska Högskola. Vi går mastern Industrial Design Engineering och skriver vårt examensarbete med inriktning på miljömässigt hållbara köksprodukter. Syftet med denna enkät är att få en bild av människors köksvanor och inställning till hållbarhet. Resultaten kommer att användas som underlag till vårt fortsatta arbete.

Alla svar är helt anonyma, så försök att svara så sanningsenligt som möjligt.
Enkäten tar ungefär 5-10 minuter och vi är väldigt tacksamma för din tid!

Vänliga hälsningar, Sara Bolin och Julia Stensson

☐ ***Jag accepterar att mina svar lagras, hanteras och analyseras inom ramen för detta projekt. Svaren kommer inte kunna kopplas till mig personligen.***

Bakgrundsinformation

Ålder: _____

Kön

☐ Kvinna

☐ Man

☐ Annat / vill ej ange

Bostadsort: _____

Bostadstyp

☐ Villa

☐ Radhus

☐ Lägenhet

☐ Annat: _____

Familjesituation

☐ Bor ensam

☐ Bor med partner

☐ Bor med vänner

☐ Bor ensam med barn

☐ Bor med partner och barn

☐ Bor hos föräldrar

☐ Annat: _____

Köksvanor

Observera att följande alternativ endast är ett urval av produkter som kan finnas i ett kök, samt att de flesta produkter inte är maskiner som förbrukar energi.

Vilka av följande köksredskap använder du oftast? (välj upp till 10 st)

- ☐ Bunkar
- ☐ Burkar / flaskor för förvaring
- ☐ Citruspress
- ☐ Grytor
- ☐ Hålslev
- ☐ Kastruller
- ☐ Kaffebryggare / kaffepress / annat för att göra kaffe
- ☐ Kavel
- ☐ Kniv
- ☐ Konservöppnare
- ☐ Korkskruv / vinöppnare / kapsylöppnare
- ☐ Kryddkvarn
- ☐ Köksvåg
- ☐ Matlådor av glas / plast / metall
- ☐ Måttsatser
- ☐ Osthyvel
- ☐ Pajform
- ☐ Potatisskalare
- ☐ Potatisstöt
- ☐ Sil / durkslag
- ☐ Skärbräda
- ☐ Slev / gaffel av plast / trä / metall
- ☐ Slickepott
- ☐ Smörkniv
- ☐ Springform
- ☐ Stekpanna
- ☐ Stekspade
- ☐ Stektermometer
- ☐ Termos
- ☐ Tesil
- ☐ Tratt
- ☐ Tång
- ☐ Tårtspade
- ☐ Ugnsform
- ☐ Vattenkokare
- ☐ Visp
- ☐ Vitlökspress
- ☐ Äggskivare
- ☐ Annat: _____

Miljömedvetenhet

Kom ihåg att vi med köksredskap främst fokuserar på produkter som inte förbrukar energi under användning.

Vilken del av ett köksredskaps livscykel tror du generellt har mest påverkan på miljön? (Exempel på redskap: stekspade, skärbräda, kastrull, vitlökspress etc.)

- ☐ Innan användning: vilket material och vilka metoder som har använts
- ☐ Under användning: produktens livslängd påverkas av om man använder den varsamt eller vårdslöst
- ☐ Efter användning: hur produkten tas om hand när den har använts färdigt (slängs, återvinns etc)

Om du skulle satsa på en av följande aktiviteter för att göra en insats för miljön, vilken skulle det då vara?

- ☐ Sopsortera och återvinna mer
- ☐ Äta mer närproducerade grönsaker och mindre kött
- ☐ Handla mer ekologiskt
- ☐ Minska matsvinnet
- ☐ Minska energianvändningen hemma
- ☐ Bara köpa begagnade köksredskap
- ☐ Inget, jag vill inte göra en insats för miljön
- ☐ Bli bättre på att låna / hyra / dela ägande
- ☐ Annat: _____

Hur miljömedveten tycker du att du är?

	1	2	3	4	5	6	7	
Inte alls miljömedveten	☐	☐	☐	☐	☐	☐	☐	Väldigt miljömedveten

Vad skulle öka sannolikheten för att du skulle se till att en produkt återvinns på rätt sätt när det är dags att kassera den? Flera svar är möjliga.

- ☐ Att delarna är lätta att plocka isär
- ☐ Att det finns tydlig information om var och hur delarna ska sorteras
- ☐ Att jag kan lämna in den där jag köpte den
- ☐ Att jag kan få någon ersättning för den (pengar, värdecheck etc.)
- ☐ Att någon kommer och hämtar den
- ☐ Spelar ingen roll, jag försöker alltid se till att produkter återvinns på rätt sätt
- ☐ Spelar ingen roll, jag kommer kasta den i blandade sopor oavsett
- ☐ Att jag kan återvinna den i mitt soprum / närmaste sopstation
- ☐ Annat: _____

Vad gör du om du av någon anledning måste göra dig av med köksredskap som fortfarande fungerar?

- ☐ Skänker
- ☐ Säljer
- ☐ Slänger i hushållsavfall
- ☐ Återvinner
- ☐ Annat: _____

Vad gör du om du saknar något köksredskap som du måste skaffa?

- ☐ Köper nytt
- ☐ Köper begagnat
- ☐ Frågar runt om det är någon som har något över jag kan få eller byta till
- ☐ Annat: _____

Vad är viktigast när du köper ett nytt köksredskap? Välj upp till tre alternativ.

- ☐ Pris
- ☐ Garanti
- ☐ Kvalitet
- ☐ Att andra har rekommenderat det
- ☐ Att jag får något mer på köpet
- ☐ Utseende
- ☐ Jag tar första bästa
- ☐ Produktens funktion
- ☐ Att den är miljömärkt
- ☐ Annat: _____

Varför handlar du inte mer miljömärkta köksredskap?

- ☐ De är ofta dyrare
- ☐ De har ofta ett mindre attraktivt utseende
- ☐ Det är svårt att veta vilka som faktiskt är bäst för miljön
- ☐ De är svåra att få tag i
- ☐ Jag bryr mig inte om miljön
- ☐ Jag handlar redan bara miljömärkta köksredskap
- ☐ Annat: _____

Vilka av följande livsmedelsbutiker upplever du som mest miljömedvetna? Ranka de tre mest miljömedvetna från 1 till 3.

	Hemköp	Lidl	ICA	Willys	Netto	Coop	Citygross	Tempo
1	☐	☐	☐	☐	☐	☐	☐	☐
2	☐	☐	☐	☐	☐	☐	☐	☐
3	☐	☐	☐	☐	☐	☐	☐	☐

Snart klar!

I vårt arbete ska vi utveckla en köksprodukt för ICA. Den sista delen av enkäten kommer därför bestå av några snabba frågor om ICA och din uppfattning om dem.

Hur ofta handlar du på ICA?

- ☐ Minst en gång i veckan
- ☐ Några gånger per månad
- ☐ Några gånger per halvår
- ☐ Några gånger per år
- ☐ Mer sällan

Vilken typ av ICA-butik handlar du oftast i?

- ☐ ICA Maxi
- ☐ ICA Kvantum
- ☐ ICA Supermarket
- ☐ ICA Nära
- ☐ Vet inte

Varför handlar du på ICA? (flera svar är möjliga)

- ☐ Det är nära där jag bor
- ☐ De har prisvärda produkter
- ☐ De har många miljömärkta produkter
- ☐ De har bra erbjudanden
- ☐ De har bra utbud/sortiment
- ☐ Jag handlar inte på ICA
- ☐ Annat: _____

Hur stort miljöfokus upplever du att ICA som företag har?

	1	2	3	4	5	6	7	
Inget miljöfokus	☐	☐	☐	☐	☐	☐	☐	Stort miljöfokus

Vilken typ av ICAs egna köksredskap hade du kunnat tänka dig att köpa? Flera svar är möjliga.

- ☐ Stekpannor
- ☐ Grytor/kastruller
- ☐ Enkla redskap (slevar, tesilar, vitlökspress etc.)
- ☐ Skärbräda
- ☐ Kniv
- ☐ Bak- / ugnsformar
- ☐ Burkar / flaskor / annan köksförvaring
- ☐ Inga
- ☐ Annat: _____

Om du inte kan tänka dig att köpa något ur ICAs kökssortiment, varför?

_____

_____

_____

Vad stämmer överens med din uppfattning om ICAs köksprodukter?

	1	2	3	4	5	
Billiga	☐	☐	☐	☐	☐	Dyra
Dålig kvalitet	☐	☐	☐	☐	☐	Bra kvalitet
Fula	☐	☐	☐	☐	☐	Fina
Sticker inte ut / känns vanliga	☐	☐	☐	☐	☐	Sticker ut / känns ovanliga
Icke miljövänliga	☐	☐	☐	☐	☐	Miljövänliga

Tack för ditt deltagande!

Om du vill komma i kontakt med oss kan du maila oss på:
sarabol@student.chalmers.se eller stjulia@student.chalmers.se

Under februari och mars kommer vi ha ett antal fokusgrupper i Göteborg, där vi kommer prata mer om den här typen av frågor. Fyll gärna i din mailadress om du kan tänka dig att delta! Det blir en trevlig pratstund och vi bjuder på fika :)

Mailadress: _____

Om du har några andra tankar kring hållbarhet och köksprodukter eller övriga synpunkter angående enkäten får du gärna dela med dig av dessa nedan.

_____

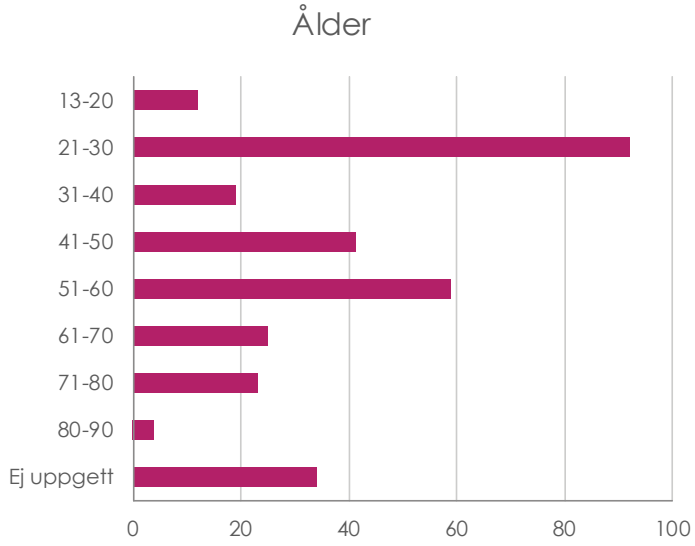
_____

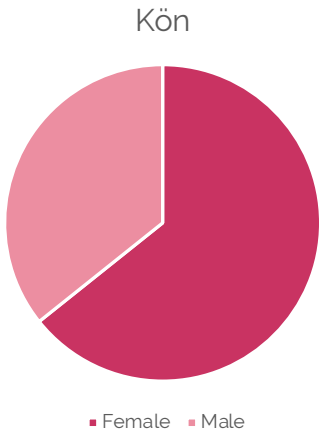
_____

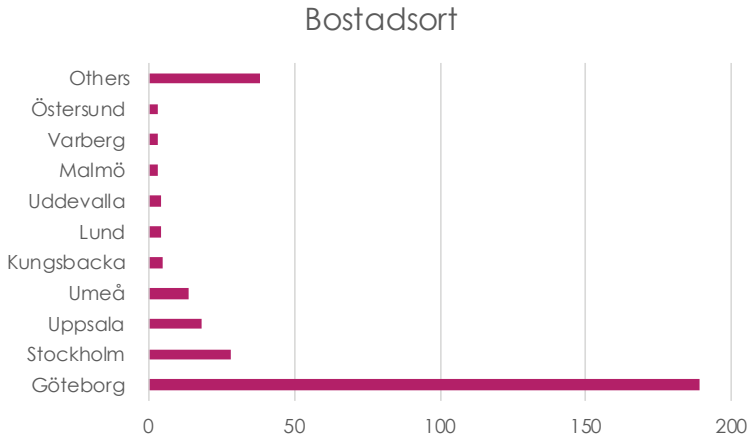
_____

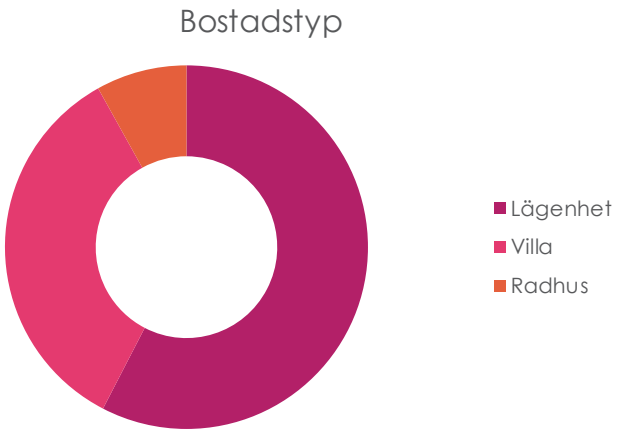
_____

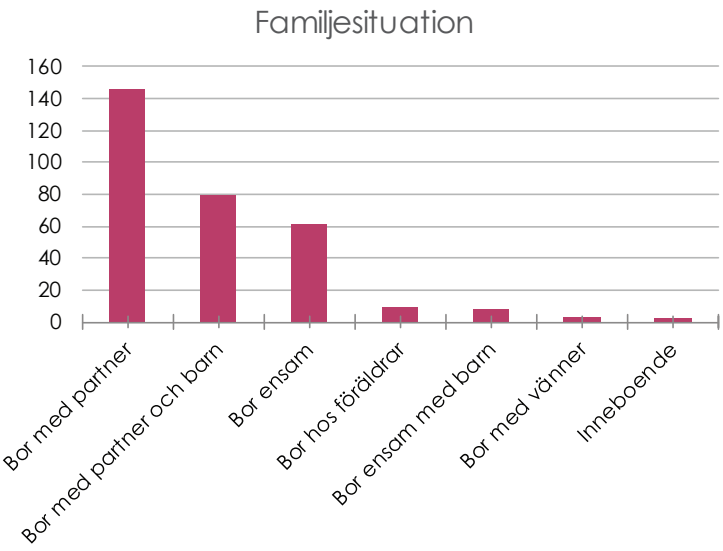
Appendix 6: Questionnaire results

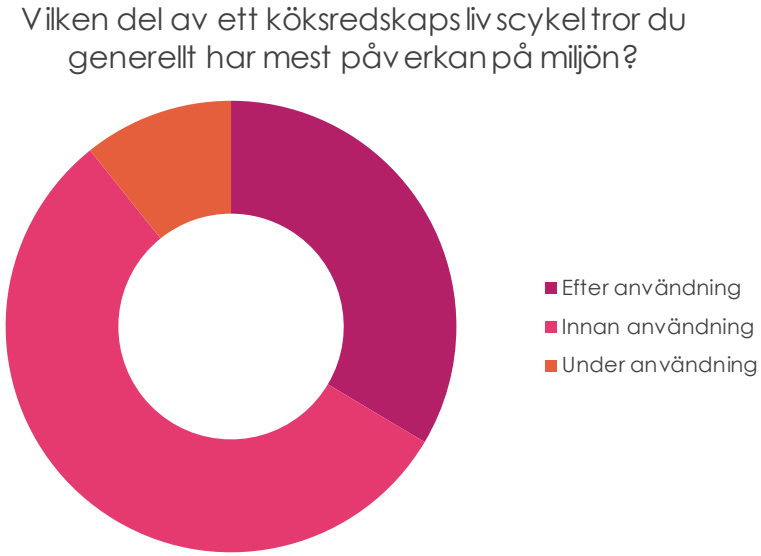


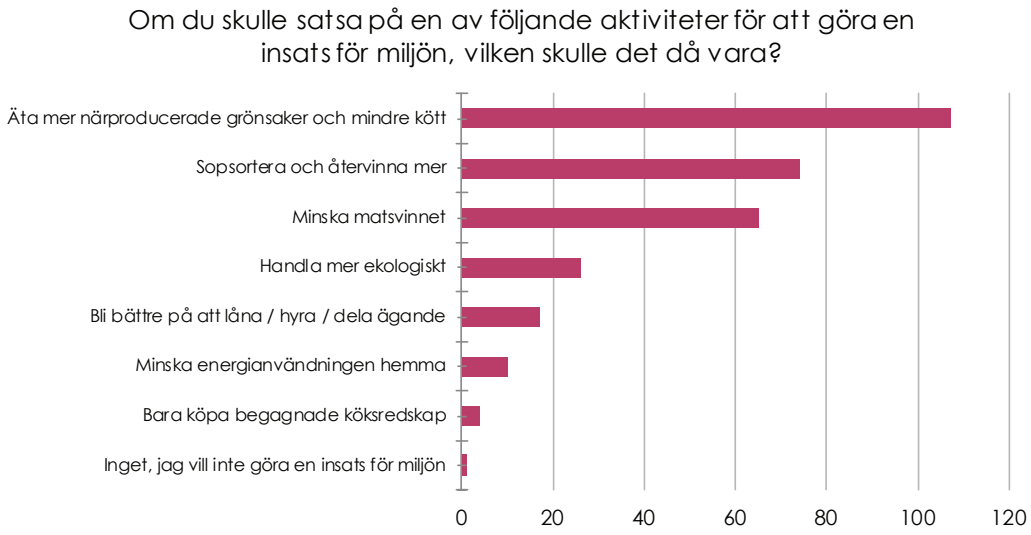


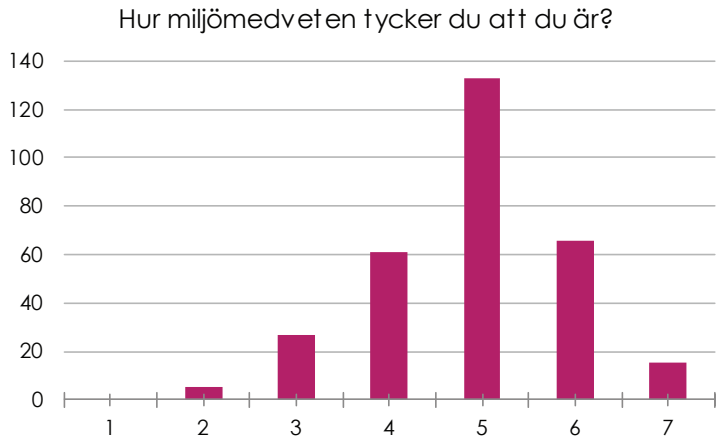


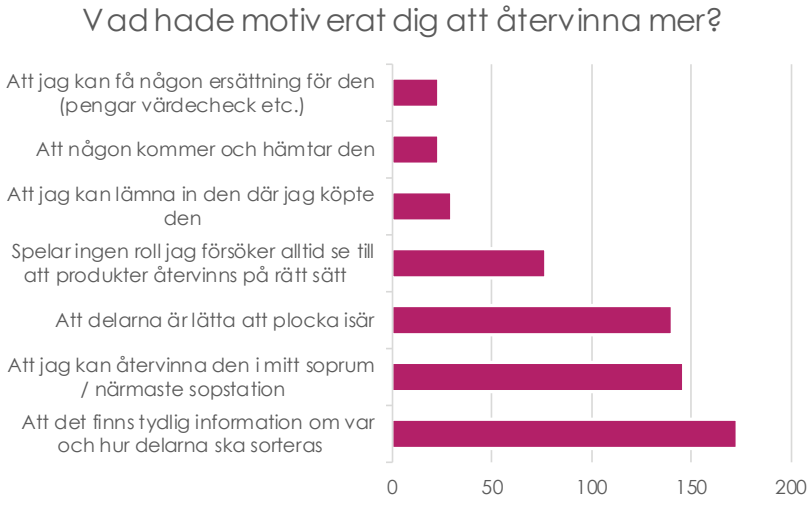

Bostadstyp
Lägenhet
Villa
Radhus


Familjesituation
160
140
120
100
80
60
40
20
0
Bor med partner
Bor med partner och barn
Bor ensam
Bor hos föräldrar
Bor ensam med barn
Bor med vänner
Inneboende

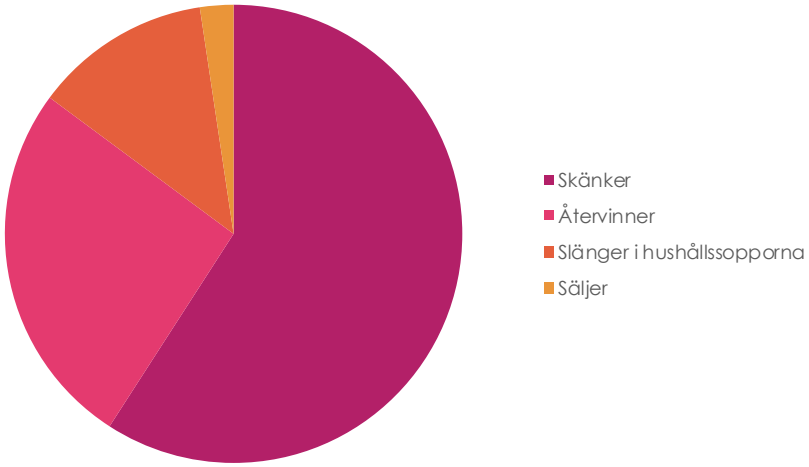

Vilken del av ett köksredskaps livscykel tror du generellt har mest påverkan på miljön?
Efter användning
Innan användning
Under användning


Om du skulle satsa på en av följande aktiviteter för att göra en insats för miljön, vilken skulle det då vara?
Äta mer närproducerade grönsaker och mindre kött
Sopsortera och återvinna mer
Minska matsvinnet
Handla mer ekologiskt
Bli bättre på att låna / hyra / dela ägande
Minska energianvändningen hemma
Bara köpa begagnade köksredskap
Inget, jag vill inte göra en insats för miljön
0
20
40
60
80
100
120

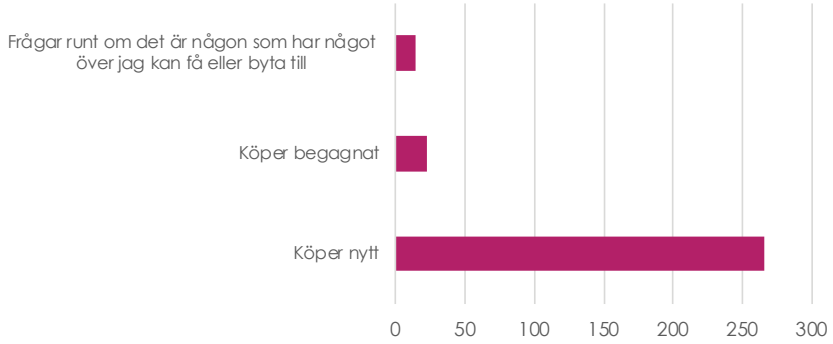

Hur miljömedveten tycker du att du är?
140
120
100
80
60
40
20
0
1
2
3
4
5
6
7


Vad hade motiverat dig att återvinna mer?
Att jag kan få någon ersättning för den (pengar värdecheck etc.)
Att någon kommer och hämtar den
Att jag kan lämna in den där jag köpte den
Spelar ingen roll jag försöker alltid se till att produkter återvinns på rätt sätt
Att delarna är lätta att plocka isär
Att jag kan återvinna den i mitt soprum / närmaste sopstation
Att det finns tydlig information om var och hur delarna ska sorteras
0
50
100
150
200

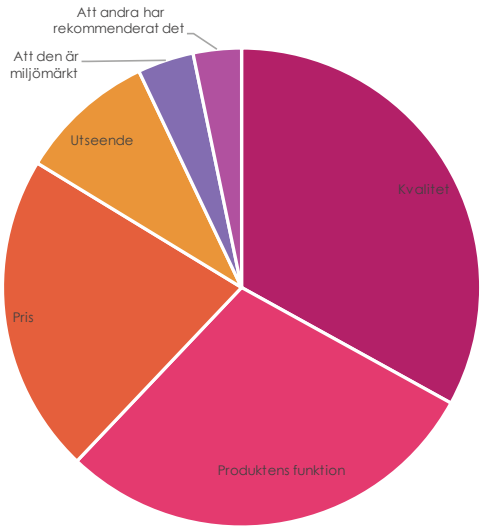
Vad gör du om du av någon anledning måste göra dig av med köksredskap som fortfarande fungerar?

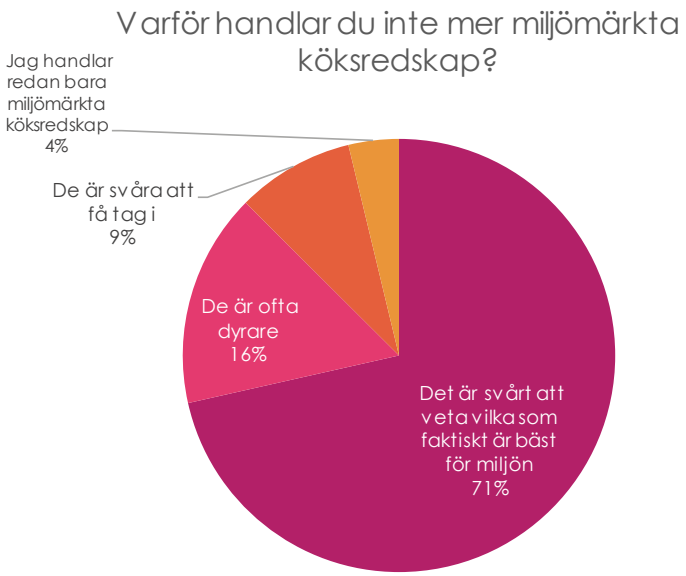


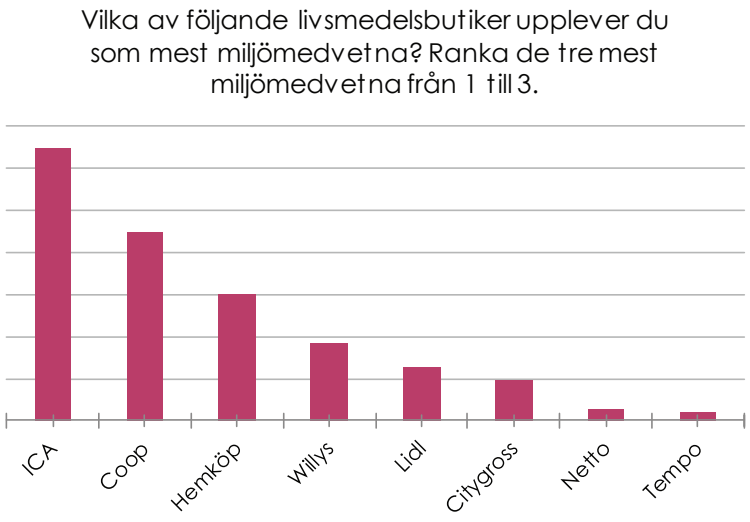
Vad gör du om du saknar något köksredskap som du måste skaffa?

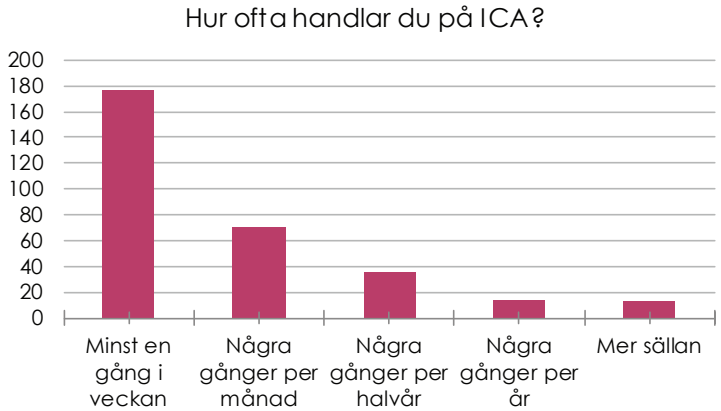


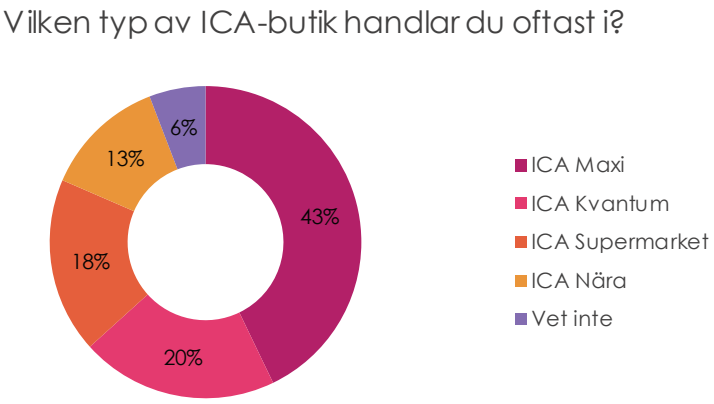
Vad är viktigast när du köper ett nytt köksredskap?

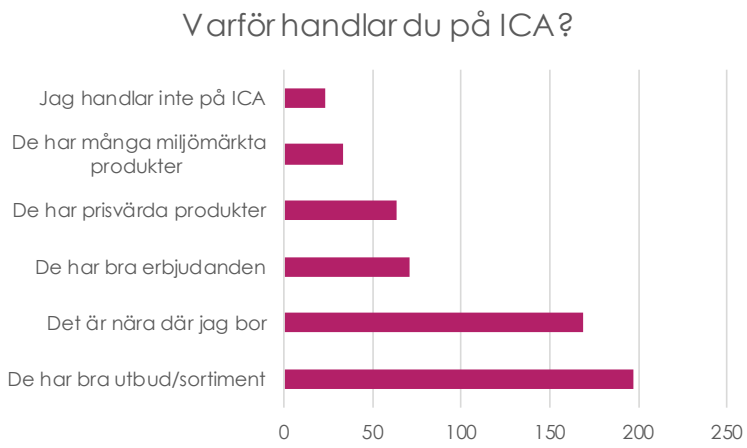



Varför handlar du inte mer miljömärkta köksredskap?
Jag handlar redan bara miljömärkta köksredskap 4%
De är svåra att få tag i 9%
De är ofta dyrare 16%
Det är svårt att veta vilka som faktiskt är bäst för miljön 71%

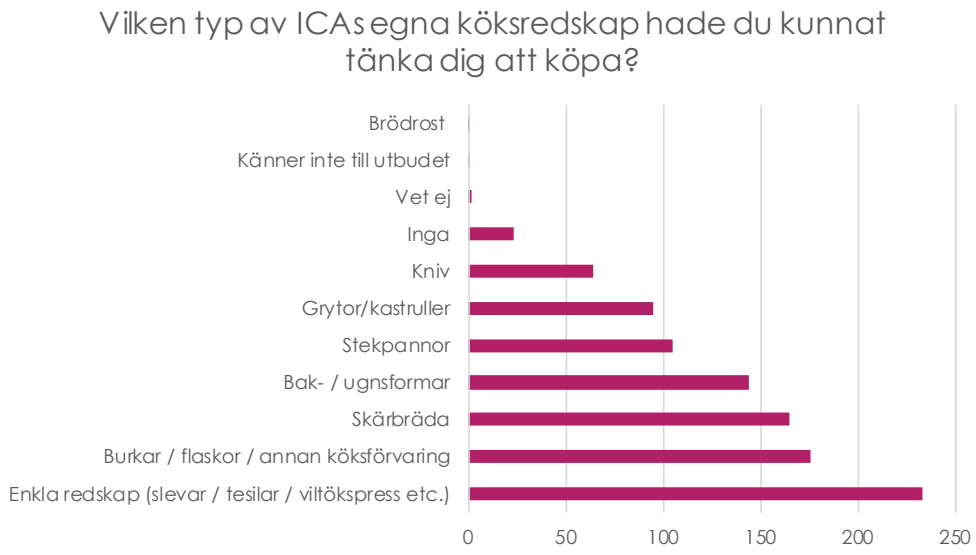

Vilka av följande livsmedelsbutiker upplever du som mest miljömedvetna? Ranka de tre mest miljömedvetna från 1 till 3.
ICA
Coop
Hemköp
Willys
Lidl
Citygross
Netto
Tempo

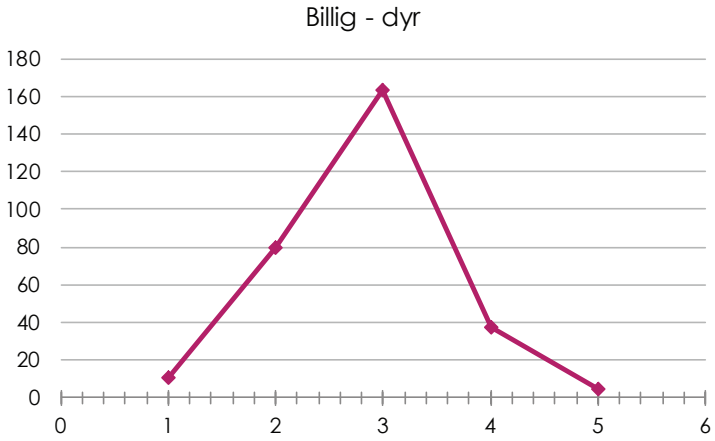

Hur ofta handlar du på ICA?
200
180
160
140
120
100
80
60
40
20
0
Minst en gång i veckan
Några gånger per månad
Några gånger per halvår
Några gånger per år
Mer sällan


Vilken typ av ICA-butik handlar du oftast i?
43%
20%
18%
13%
6%
ICA Maxi
ICA Kvantum
ICA Supermarket
ICA Nära
Vet inte

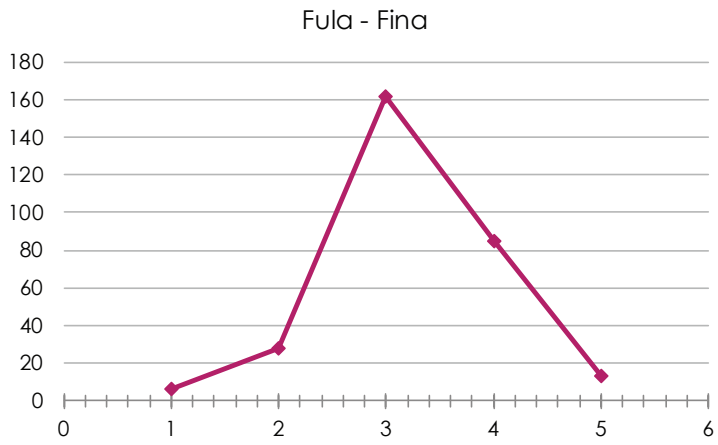

Varför handlar du på ICA?
Jag handlar inte på ICA
De har många miljömärkta produkter
De har prisvärda produkter
De har bra erbjudanden
Det är nära där jag bor
De har bra utbud/sortiment
0
50
100
150
200
250


Hur stort miljöfokus upplever du att ICA som företag har?
120
100
80
60
40
20
0
0
1
2
3
4
5
6
7
8


Vilken typ av ICAs egna köksredskap hade du kunnat tänka dig att köpa?
Brödrost
Känner inte till utbudet
Vet ej
Inga
Kniv
Grytor/kastruller
Stekpannor
Bak- / ugnsformar
Skärbräda
Burkar / flaskor / annan köksförvaring
Enkla redskap (slevar / tesilar / viltökspress etc.)
0
50
100
150
200
250


Billig - dyr
180
160
140
120
100
80
60
40
20
0
0
1
2
3
4
5
6


Dålig kvalitet - Bra kvalitet
180
160
140
120
100
80
60
40
20
0
0
1
2
3
4
5
6


Fula - Fina
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160
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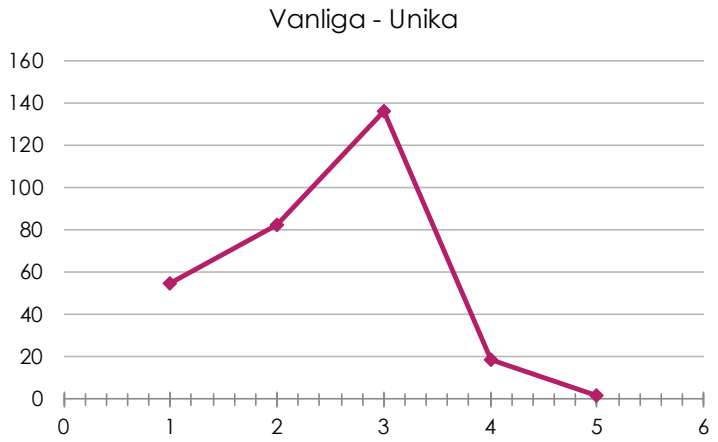
Vanliga - Unika
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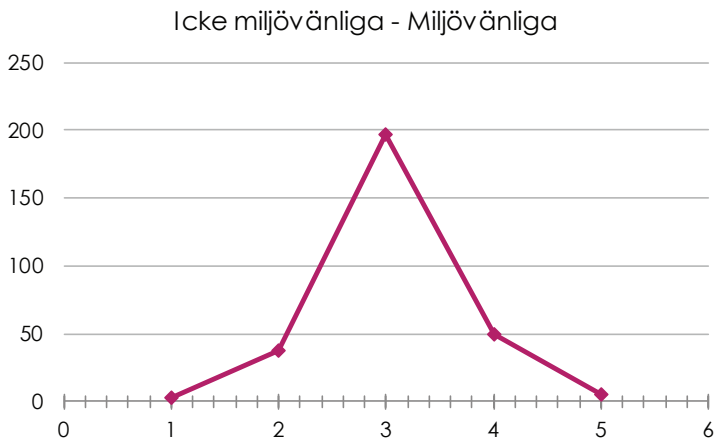

Icke miljövänliga - Miljövänliga
250
200
150
100
50
0
0
1
2
3
4
5
6

Appendix 7: Focus group guide

Intro

- Berätta om upplägg
    - Vi kommer ge er lite olika ämnen och uppgifter att prata om. Det kommer handla om hur ni tänker när ni ska köpa nya produkter, lite vanor hemma i köket och om återvinning.
    - Om det är något ni inte känner er bekväma med att prata om så är det helt okej, man behöver inte svara på allt om man inte vill. Det är också fritt fram att lämna när man vill, ingen kommer tvingas till något.
    - Allmänt: tänk gärna högt, allt är okej och det finns inga rätt och fel. Vi är inte ute efter att döma någon och alla idéer är bra så var kreativa!
- Fråga om vi får spela in
- Vi kommer nämna ordet "hållbarhet" flera gånger så vi tänkte bara förtydliga att vi då menar miljömässigt hållbar. En hållbar produkt har alltså låg negativ påverkan på miljön, gärna så låg som möjligt under både tillverkning, användning och när den kasseras.
- Presentationsrunda - Vi tänkte köra en runda där alla kan presentera sig själva, så bara säg ert namn och något ni tycker om att göra i köket. Det kan vara precis vad som helst - inga prestationskrav.

Uppvärmning

- Vi tänkte börja med att prata lite om köksvanor
    - Hur ofta ni lagar mat, är det varje dag eller lagar ni för flera dagar samtidigt eller köper ni kanske oftast hämtmat? (I så fall, hur ofta)
    - Vad tycker ni om att laga mat - kul, svårt, jobbigt?
    - Något särskilt ni tycker om att laga? Veg, husman, asiatiskt… Frukost, lunch, middag, matlådor, efterrätter, sallader, smoothies…
- Om hållbarhet
    - Vad är er nställning till hållbarhet - hur medvetna är ni?
    - Gör ni något hållbart i köket? Varför/varför inte? Är det svårare i köket än någon annanstans? Använder ni produkter på något särskilt sätt, är ni noga med att inte slänga mat eller köper ni mycket ekologiskt?
    - Något ni hade velat ändra på - göra mer eller mindre?
    - Tankar om matsvinn - är ni medvetna om det? Är det viktigt att minska? Vad är svårt, varför blir det matsvinn?

I butik

Ni kommer få några olika redskap att välja mellan. Tänk att ni står i en butik och ska köpa ett av alternativen, där de har lite olika egenskaper. Diskutera lite kring hur ni hade resonerat utifrån vad som är viktigt för er - t.ex utseende, material eller något annat, men också vilken som kan tänkas vara bäst hur ett hållbarhetsperspektiv. Kom ihåg att det inte finns några rätta eller fel svar här utan olika produkter kan vara bra från olika perspektiv. Produkttyperna är:

- Stekspadar
    - Helt i plast / trä + metall / trä + plast / plast + metall
- Stekpannor
    - Dyr / billig
    - Ur ett återvinningsperspektiv - skillnad? Hur hade ni gjort?
    - Vad tror ni händer efter man har lämnat in den?
- "Bionedbrytbara" plastpåsar / vanliga plastpåsar.
- Smörkniv vanlig plast (som vi låtsas är bioplast) / trä
    - Sen säga att den i trä är miljömärkt - gör det någon skillnad?
    - Kommentarer: material - vad är det egentligen för material? Vad innebär bioplast? hållbarhet - vilket material är verkligen bäst? Vilket håller längst? Kvalitetskänsla?
- Matlådor
    - glas / metall / plast
    - Kommentarer: hur länge håller de? Är prisskillnaden befogad? Vad är mest praktiskt? Mer material i glas, kan det vara bättre för miljön ändå?
- Allmänt: Tänker ni olika när det gäller produkter med olika lång livslängd? Är det viktigare att göra ett miljösmart val när produkten ska användas länge eller kortare?

--- gå och ta lite fika så preppar vi nästa uppgift ---

Hållbarhet / i hemmet

- Plocka tre kort, kom på något att laga av det
- Ta tre nya kort - hur kan dessa kombineras till multiverktyg?
- (Återkoppla till matsvinnsdiskussionen i uppvärmningen) hur kan en köksprodukt hjälpa till att minska matsvinnet?

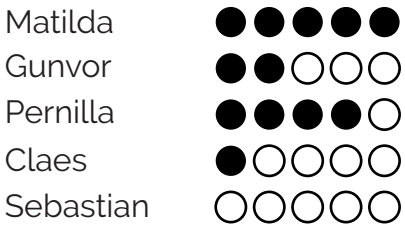
Återvinning

Scenario: Du har precis köpt ny spis och bytt till en med induktionshäll. Du inser att du nog inte kan använda alla dina gamla kastruller och stekpannor och går därför igenom de du har. Du har tur för det mesta funkar fortfarande, men du hittar en kastrull som inte funkar på induktion, men den är i gott skick. Och en kastrull som funkar på induktion men den är väldigt sliten. Vad gör du med dem?

- Börja med den som inte funkar men är i gott skick
    - Behåller du dem till något annat? Skänker till någon du känner eller till välgörenhet? Säljer - i så fall hur? Slänger - i så fall var? Försöker hitta något ställe där du kan lämna in? Byter med någon?
- Sen den som är sliten men funkar på induktion (såpass sliten att man kanske inte vill använda den, eller iallafall inte ge den vidare till någon annan)
    - Slänger - i så fall hur och var? Tänker du på de olika delarna? Lämnar in någonstans? Försöker laga/rusta upp? Vad hade motiverat dig att göra en extra insats för att återvinna den på rätt sätt?
- Vad hade motiverat dig att återvinna mer?

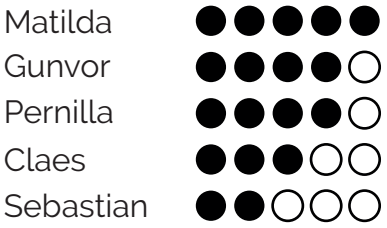
Appendix 8: Persona Suitability

Information database



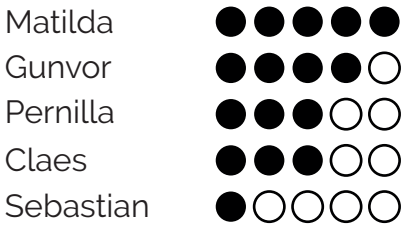
Mean value: 2,4

Product recycling at ICA



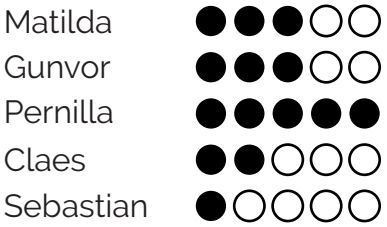
Mean value: 3,6

Information in stores



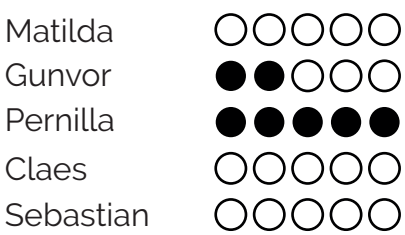
Mean value: 3,2

The zero waste-box



Mean value: 2,8

Kitchen collection for children



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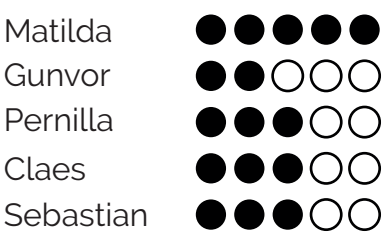
Renting products at ICA



Mean value: 3,2

Appendix 9: Final concept 1, product recycling at ICA

This appendix includes the infomation sheets that are placed on the openings, the flow chart that should be above the box, and a drawing of one module with measurements.

Plast

Ny teknik gör det möjligt att separera olika typer av plast i återvinningsprocessen. ICA samarbetar med företag som separerar plast och maler ner den. Materialet kan sedan skickas vidare till andra företag som gör nya produkter av det, smart va?

Vad får jag slänga här?

Några exempel på vad du kan slänga här är:

Bunkar, matlådor, skärbrädor, vattenflaskor, slevar, stekspadar och andra redskap i plast.

Metall

Metall går att återvinna i princip hur många gånger som helst. Genom att använda återvunnen metall istället för ny råvara kan mycket energi sparas under tillverkningen. Metall är inte en oändlig resurs, därför är det jättebra att du återvinner den. Heja dig!

Vad får jag slänga här?

Några exempel på vad du kan slänga här är:

Stekpannor, bunkar av rostfritt stål, redskap i metall, kastruller, bestick och verktyg.

Glas

De flesta produkter av glas och keramik återvinns inte utan läggs på deponi. Därför bör du endast slänga glasprodukter som är trasiga. Hela saker är bättre att lämna till second hand så de kan användas av någon annan!

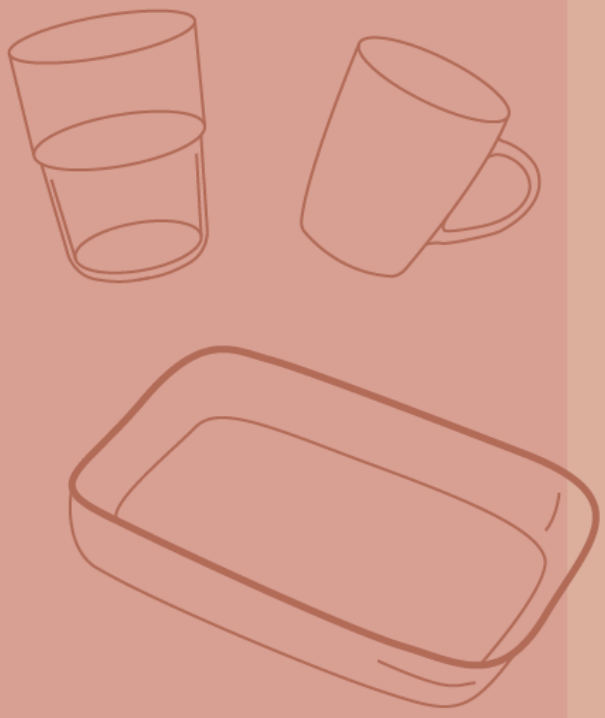
Textil

ICA samarbetar med företag som tar tillvara på trasiga textilier. Det du slänger här kan användas till att skapa nya produkter, och materialet kan komma till användning igen.

Vad får jag slänga här?

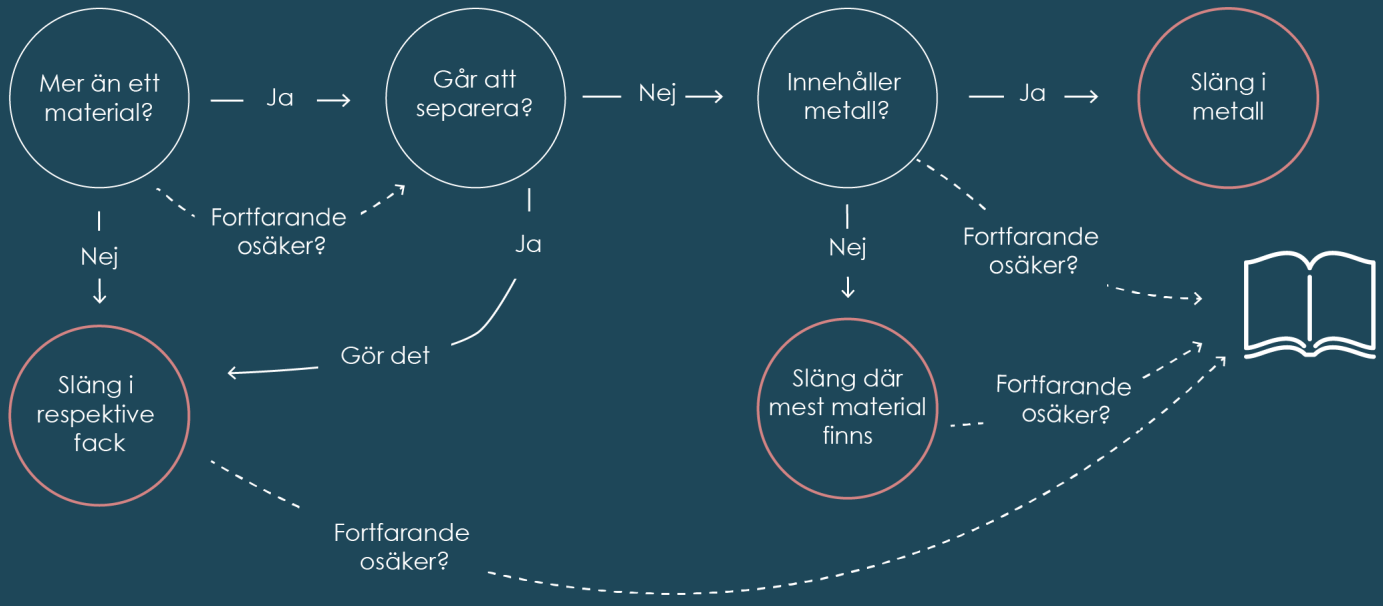
Några exempel på vad du kan slänga här är:

Dricksglas, vaser och ugnsformar.



Trasiga kläder, kökshanddukar och lakan.

BÖRJA HÄR

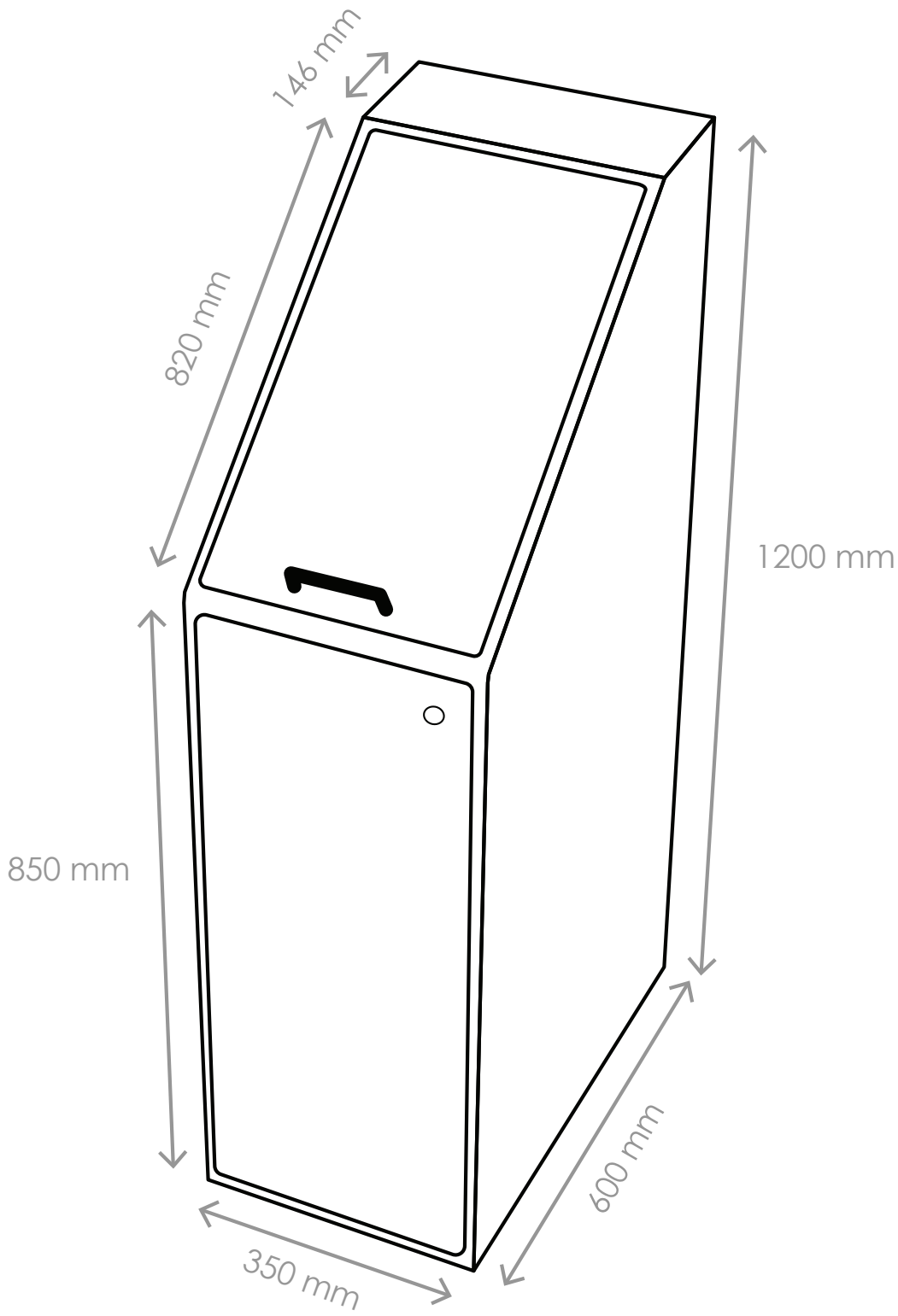


Vad får jag slänga i lådan?

Saker som kan återanvändas bör du lämna på en second hand-butik så att någon annan kan få användning för dem. Trasiga produkter eller produkter i dåligt skick går bra att slänga här. Det finns dock några undantag.

Detta lämnar du på närmaste återvinningscentral:

- Elektronik
- Farligt avfall
- Produkter som inte får plats i lådan


146 mm
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1200 mm
850 mm
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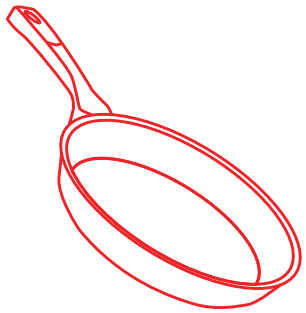
350 mm

Appendix 10: Final concept 2, the handbook

IXXX



Denna handbok är en del av
ett examensarbete vid
Chalmers Tekniska Högskola.

Sara Bolin och Julia Stensson

Juni 2018

Innehållsförteckning

IIXXX

Hållbarhet

Hållbarhet blir en allt viktigare fråga för både konsumenter och företag. I takt med att konsumenter blir mer medvetna måste företagen hänga med för att behålla sin plats på marknaden. För ICA räcker det inte att endast svara på efterfrågan om målet är att vara ledande inom hållbarhet. Man måste ligga steget före och erbjuda hållbara alternativ redan innan kunderna vet att de finns. Med fler hållbara produkter i sortimentet kan fler kunder få upp ögonen för dem vilket kan leda till en ökad efterfrågan som är positiv både för ICA och miljön!

Hållbarhet är ett komplext ämne med många faktorer som spelar in, och det är inte alltid så lätt att veta vad en hållbar produkt är. Genom att bidra med riktlinjer och tips är tanken med denna handbok att vara ett hjälpmedel som kan göra det enklare för dig som produktchef att ta in hållbara produkter och ställa vissa krav på leverantörerna. Det finns även utrymme att göra egna anteckningar så att handboken kan vara ett personligt verktyg som uppdateras efter behov.

Lycka till!

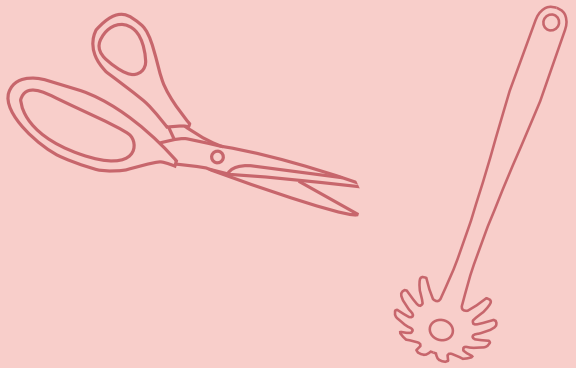
Om hållbara produkter

Vad är en hållbar produkt?
Det finns ingen tydlig gräns eller konkreta regler för när en produkt är hållbar eller inte, men ett riktmärke kan vara att den ska ha så låg miljöpåverkan som möjligt under alla delar av sin livscykel (se sida 8). Det kan både betyda att den kan användas under en lång tid utan att behöva bytas ut, eller att material, tillverkningsmetoder och återvinningsmöjligheter har tagits hänsyn till ur ett miljöperspektiv. Även på vilket sätt en produkt används har betydelse, och beroende på vilken produkt det är så kan miljöpåverkan vara olika stor i olika faser.

Varför ska man sälja hållbara produkter?
Det kan verka som en förlustaffär att sälja produkter som håller länge, men det gäller att tänka ett steg längre. Kanske kan kunder tänka sig att betala mer för en hållbar produkt, eller kan ICA erbjuda tjänster för att ta hand om produkterna så de håller längre? De miljömedvetna kunderna kommer kanske börja välja ICA över andra butiker, vilket kan inspirera deras bekanta att göra detsamma. Genom att se till att varje produkt är så bra det bara går ökar chansen att kunderna blir riktigt nöjda, vilket inte kan vara annat än positivt för ett företag!

Mervärde för kunden
En produkt som erbjuder något mer än bara att den uppfyller ett specifikt behov kan ge ett mervärde till kunden. Faktorer som att produkten kan användas till flera saker, har en garanti eller bara är extra snygg kan vara just det som avgör om kunden köper den eller inte. Genom att identifiera dessa mervärden kan kunden få en känsla av att ha gjort en extra bra affär utan att det egentligen behöver kosta något extra för ICA.

Hitta värde i flöden
Genom att hitta alternativa sätt att konsumera produkter kan lönsamhet uppnås på andra sätt än att bara satsa på att sälja så många produkter som möjligt. Att sträva mot att cirkulera material, erbjuda hållbart framtagna produkter eller uppmuntra till återvinning kan vara ovant till en början, men se det som en chans att få tänka kreativt och bli först med något!

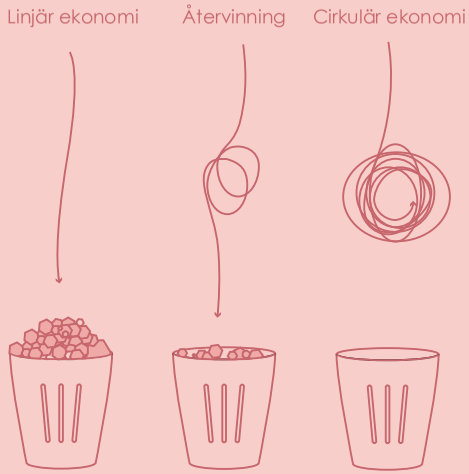


Linjära och cirkulära flöden

Linjära flöden, där en produkt tillverkas, används och sedan kasseras, är idag ett utdaterat sätt att jobba med produkter. För att kunna ha något att säga till om inom miljöfrågor är cirkulära modeller i princip ett måste.

Vad är en cirkulär produkt?
En produkt där hela eller delar av den kan återanvändas på något sätt kan kallas cirkulär, eftersom materialet kan användas igen. Oftast används materialet från en produkt kanske inte till att göra en ny precis likadan, men så länge materialet inte bränns upp eller deponeras så kan det komma till användning igen. Det krävs dock att produkten faktiskt samlas in och återvinns för att den ska kunna kallas cirkulär. Tyvärr hamnar många återvinningsbara produkter på deponi eller bränns på grund av okunskap och lathet, vilket är slöseri med resurser.

Cirkulär ekonomi
En produkt kan också cirkuleras inom ett företag, vilket kan vara en möjlighet att göra en insats för miljön samtidigt som samma material kan utnyttjas flera gånger. Detta kräver dock lite mer förarbete eftersom strukturella förändringar inom företaget kan behöva göras. I många fall kan det krävas vissa volymer för att produkter ska kunna cirkuleras inom organisationen över huvud taget. Även samarbeten med andra företag som kan samla in och ta hand om materialen kan behöva inledas, så att nya produkter kan tillverkas av materialen. Särskilt för ett stort företag som ICA kan det vara relevant att samarbeta med andra eftersom det är svårt att vara bäst på allt, och genom att överlåta vissa uppgifter till andra kan man koncentrera sig på det man själv är bra på och bli ännu bättre!



Steg mot en cirkulär ekonomi

1. Se till att så många produkter som möjligt är återvinningsbara

2. Uppmuntra kunder till att återvinna produkter. Förklara hur det görs på rätt sätt och berätta varför det är viktigt

3. Se över möjligheter att cirkulera produkter inom företaget (samarbeten, strukturella förändringar osv)

Det är absolut värt att sträva mot en cirkulär ekonomi även om det kan vara svårt att hoppa direkt till steg 3. Särskilt för ett företag som ICA som lever på att sälja produkter är det kanske inte helt naturligt att ändra affärsmodell och bli helt cirkulära direkt. Det är en bit att gå och det viktigaste för att nå dit är att se till att steg 1 och 2 först är uppfyllda, för annars kommer inte heller steg 3 kunna genomföras. Det spelar ingen roll hur anpassat ICA är för en cirkulär ekonomi om inte produkterna och kunderna är med på banan först.

Det är dock viktigt att inte ge upp och tänka att det är omöjligt, för varje steg räknas! Genom att satsa på att erbjuda produkter som har förutsättningar för att kunna cirkuleras, samt att erbjuda kunderna möjlighet och information om hur och varför man ska återvinna, så har ICA goda möjligheter att åtminstone komma en bit på vägen mot en cirkulär ekonomi. Kom ihåg att lite är bättre än inget, så att börja med att anpassa produkterna för och informera kunderna om återvinning är ett bra första steg som sedan kan utvecklas vidare!

En produkts livscykel

Modellen visar hur en produkts livscykel kan se ut. Även om det jobb produktchefer gör inte direkt ingår i livscykeln kan ni påverka mycket av det som händer i de olika faserna. Därför är det viktigt att tänka på helheten redan från början så att produktens livscykel blir så optimal som möjligt.

Produktchef

Energiutvinning & deponi

Material som inte går att återvinna läggs antingen på deponi eller bränns och blir fjärrvärme. Dessa material kommer inte till användning igen, de är förbrukade.

Slänga produkt

Om produkten är anpassad för återvinning (se nästa kapitel) kan materialen användas igen och komma tillbaka in i loopen, som nya produkter.

Återanvändning

En produkt som fortfarande fungerar och är i bra skick kan skänkas till någon annan och få en längre livslängd.

Användning

Hur länge en produkt kan användas beror mycket på vilken kvalitet den har och hur väl den sköts om. Om produkten är trendig eller tidlös påverkar också hur länge kunden vill använda produkten .

Försäljning i butik

Efterfrågan från kund styr vad som kommer sälja bra, därför är det viktigt att ta reda på om behov finns av en produkt innan man köper in den. Det är även viktigt att tänka på vilken information som erbjuds till kunden så att de kan göra ett medvetna val.

Transport

Hur produkten transporteras från fabrik till butik har effekt på dess totala miljöpåverkan. Produkter som tillverkats i Sverige eller Europa kan därför vara ett bättre val än till exempel Kina.

Tillverkning

Val av material och sammansättnings-metoder lägger grunden för vilka återvinningsmöjligheter produkten har i slutet av livscykeln. Strategiska val i den här fasen kan öppna möjlig-heter för att få tillbaka material in i loopen igen.

Mer information om de olika områdena finns i kommande avsnitt.

Användaranpassning

Användaranpassning → hållbara beteenden
Ett företag har störst möjlighet att påverka en produkts miljöpåverkan innan den köps av kund, genom till exempel val av tillverkningsmetod och material. Men det finns mer att göra!

Även om ICA som företag förser kunden med en produkt som är gjord av hållbara, återvinningsbara material garanterar inte det att kunden kommer använda eller återvinna den som det är tänkt. Genom att anpassa produkten för dess kommande användare ökar sannolikheten att den får ett långt liv och tas hand om på ett bra sätt.

Att ta fram en produkt som är anpassad för återvinning är jätteviktigt, men om användaren inte återvinner den spelar det ingen roll. Därför är användaranpassning något som ICA kan jobba med för att bidra till mer hållbara beteenden. Det i sin tur kan leda till att fler produkter återvinns så att materialen kommer till nytta flera gånger.

Utgå från användarens behov
Många produkter som köps kommer knappt hinna användas innan de hamnar i ett skåp och glöms bort. För att undvika detta är det viktigt att ta fram produkter som folk faktiskt vill ha och som de kommer att vilja använda länge. ICA har en väldigt bred målgrupp där olika kunder har olika prioriteringar och preferenser. Produkterna ska självklart passa så många som möjligt då det genererar fler potentiella köpare. I fördjupningsdelen (s. 40 och framåt) finns fem stycken kundtyper som är framtagna för att ge exempel på olika inställningar till hållbarhet hos kunder. De kan användas som ett hjälpmedel för att sätta sig in i och förstå olika individers preferenser och förutsättningar. Kundtyperna i handboken har mer fokus på hållbarhet inom specialsortimentet och bör ses som ett komplement till ICAs kundtyper.

Gör det enkelt!
Genom att öka antalet hållbara produkter blir det enklare för handlarna att ta in dem i sitt sortiment, och därmed enklare för kunderna att köpa dem. Ju fler hållbara produkter som finns att välja på, desto större är chansen att folk väljer dessa framför vanliga. Detta kan leda till en ökad efterfrågan vilket är starten på en positiv spiral som leder till att fler hållbara produkter kan tas in i sortimentet. Även de kunder som kanske inte är de mest miljömedvetna kan köpa hållbara produkter om de visar sig vara lika bra som vanliga produkter.

Egna anteckningar

Återvinning

Genom att anpassa produkten för återvinningsprocessen kan materialen komma till användning igen. Därför är det viktigt att tänka på hur delar av olika material sätts samman för att separationen i kvarnen ska bli så bra som möjligt. Att ta hänsyn till detta kommer innebära att material kan återvinnas och återanvändas inte går till spillo.

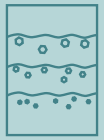
Återvinnings-processen

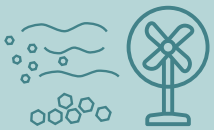
Den som lämnar in produkten kan separera vissa delar för hand. Elektronik tas bort manuellt.

Produkten krossas till mindre delar av olika maskiner för att underlätta vidare sortering. Målet här är att varje enskild del till slut ska bestå av ett och samma material.

De sorterade materialen samlas ihop för att skickas vidare.

Med hjälp av magneter, fläktar och vattenbad kan material med olika densitet separeras från varandra på olika sätt.





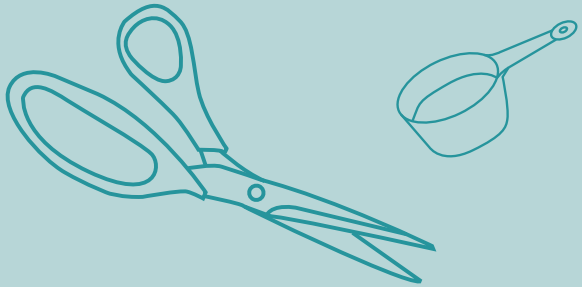
De material som inte har kunnat sorteras, som till exempel beläggningar och etiketter, brinner antingen upp i processen eller läggs på deponi.

De sorterade materialen kan sedan bli till nya produkter.

Anpassa för återvinning

Bra att veta

- Metall prioriteras över andra material eftersom det går åt mycket energi att tillverka ny.
- Allt som inte kan separeras från metall kommer brinna upp vid de höga temperaturer som används vid metallsmältning.
- Glas och keramik återvinns oftast inte utan läggs på deponi eftersom det inte är lika stora volymer som andra material.
- Många plastblandningar har inga egna återvinningsprocesser och används därför mer till energiutvinning än till nya produkter.
- Biobaserade plaster är fortfarande plaster och bör därför inte marknadsföras som komposterbara. Fördelen med dem jämfört med oljebaserad plast är att de är gjorda av förnybara råvaror och är eventuellt mindre farliga att bränna upp.



Checklista

- Minimera antalet...
  - *olika material*
  - *delar*
  - *olika skruvar*
- Limma, löd eller nita inte ihop olika material

  eftersom det är svårt att separera helt i kvarnen.
- Undvik att kapsla in material

  Vid ihopsättning med skruv och fästen, använd samma material i dessa.
- Undvik metallskruvar i plastytor

  Delar av plasten kommer att sitta kvar runt skruven efter kvarnen. Plasten kan då inte återvinnas, och kommer även försvåra resten av processen.
- Undvik att ändra materialets densitet
  - *Undvik målarfärg*
  - *Undvik klistermärken och etiketter, främst på plast*

Materialkombinationer

Vissa kombinationer av material kan försvåra återvinningsprocessen och bör därför undvikas. Genom att i första hand se till att alla ingående material kan återvinnas var för sig, och sedan möjliggöra att materialen kan separeras från varandra, underlättas återvinningsprocessen och så mycket material som möjligt kan komma till användning igen.

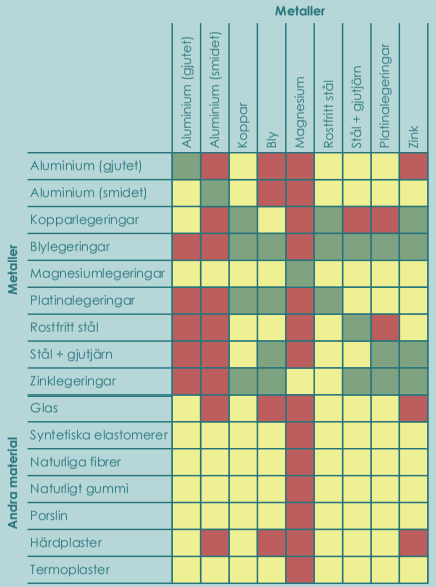
Checklista

- Använd endast material som säkert kan återvinnas - helst så rena som möjligt
- Om det är möjligt, undvik att kombinera flera material
- Om det är nödvändigt att använda flera material, se till att de kan separeras från varandra enligt checklistan på föregående sida
- I de fall beläggningar behövs, se till att dessa inte förstör återvinningen av andra material
- Stäm av med matrisen på nästa sida så att inga röda materialkombinationer används

Materialmatris

Denna matris kan användas för att avgöra vilka material som går bra att kombinera och inte.

- Måste separeras - undvik denna kombination om det inte går att separera materialen helt innan smältning.
- Bör separeras - för dessa kombinationer krävs mer analys då det beror på vilken återvinningsprocess som används. Om inte resurser finns att göra en sådan undersökning bör kombinationen undvikas.
- Behöver inte separeras - kombination av dessa material har inga konsekvenser för återvinningsprocessen och kan användas fritt utan att separeras innan smältan.

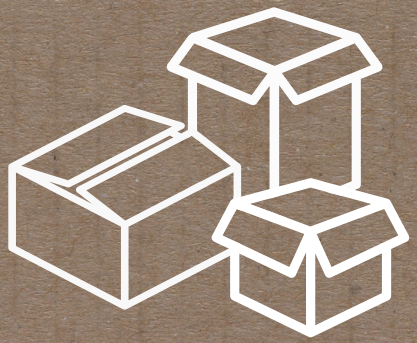


Egna anteckningar

Förpackningar

Förpackningens huvuduppgift är att skydda produkten så att den är hel och i bra skick när den når kunden. Det är också ett sätt att nå ut med relevant information, och ger kunden ett första intryck av en produkt i butik. En förpackning innebär dock en ökad mängd material som oftast bara kasseras, så det är viktigt att tänka över vad syftet med den är. Ofta kan förpackningen minimeras eller till och med uteslutas helt.

Plast är ett väldigt flexibelt material som är smidigt att ha som förpackning eftersom det kan göras tunt och är formbart. Men eftersom kartong är gjort av förnyelsebar råvara och dessutom går bra att återvinna är det ofta bättre ur ett miljöperspektiv. Om plast är svårt att undvika så är det bästa att åtminstone använda återvunnen sådan.



Checklista

Om förpackningen

- Ifrågasätt om förpackningen alls behövs
  Kan produkter staplas eller kan förpackningen förminskas?
- Ta reda på vad standardalternativet är
  Om det leverantören har som standard inte passar eller är optimalt, ta fram en ny lösning. Annars vill man undvika att göra små ändringar i onödan.
- Underlätta återvinning
  - *Använd helst samma material i hela förpackningen*
  - *Se till att materialet är återvinningsbart*
- Använd i första hand kartong. Men om plast är det mest lämpliga materialet, försök se till att den är återvunnen

Information som bör erbjudas till kunden

- Hur både produkten och förpackningen ska återvinnas
- Skötsel och användning av produkten
- Om förpackningen inte behövs, tryck den viktigaste information på produkten istället

Checklista

Denna checklista är en sammanfattning av det viktigaste som har tagits upp i handboken. Den är till för att du snabbt ska kunna stämma av om produkten du vill ta in är ett bra alternativ eller inte. Utifrån listan kan du ställa krav på leverantörerna så att du får en så bra produkt som möjligt.

- ☑ Finns behov av produkten? Kommer den att användas, och i så fall hur?
- ☑ Se till att alla material är återvinningsbara - har produkten möjlighet att cirkuleras?
- ☑ Se till att sammansatta material går att separera i återvinningsprocessen
- ☑ Undvik röda materialkombinationer i materialmatrisen
- ☑ Om förpackning behövs - gör den så liten som möjligt och se till att den går att återvinna
- ☑ Utnyttja möjligheten att ge information om hantering och återvinning till kunden - antingen på förpackningen eller själva produkten
- ☑ Se till att produkten passar för olika kundtyper

Mer plats för egna punkter finns på nästa uppslag!

Min checklista

Här kan du fylla på med punkter som är extra viktiga för just dig.

Fördjupning

Material
Val av material kan påverka många delar av en produkts livscykel. Det är viktigt att se till att de material en produkt består av passar dess ändamål och inte försvårar användning eller återvinning.

Första delen av fördjupningskapitlet innehåller information om några av de vanligaste materialen och vad som är viktigt att tänka på när det gäller materialval ur miljösynpunkt.

Kundtyper
För att göra det enklare att sätta sig in i olika personers resonemang, tankar och preferenser är kundtyper ett bra verktyg att använda sig av. Kundtyperna som presenteras i andra delen av fördjupningen är mer anpassade för specialsortimentet ur ett hållbarhetsperspektiv än vad ICAs nuvarande är.

Kundtyperna är tänkta att användas som ett komplement i inköpsprocessen för att stämma av och utvärdera produkterna så att de kan passa så många som möjligt.

Plast

Eftersom plast är både billigt, praktiskt att använda och enkelt att forma på många olika sätt finns det många användningsområden och gör det till ett mycket populärt material. Det finns inte bara många olika sorters plast utan man kan också få väldigt varierade egenskaper genom att tillsätta olika ämnen. De flesta plaster är även återvinningsbara i teorin, vilket låter bra ur hållbarhetssynpunkt.

Det finns dock en del nackdelar med plast som är bra att känna till. För att uppnå de många olika egenskaperna krävs ofta en hel del tillsatser. Dessa kemikalier sprids sedan ut i miljön genom att produkter hamnar i naturen och bryts ned till mikroplaster, eller via människor som får i sig dem antingen i maten eller genom huden. Läckage ökar bland annat om produkten hettas upp eller kommer i kontakt med fett, vilket gör att många människor undviker plast i kombination med mat. Även om plasten är livsmedelsgodkänd kan den innehålla kemikalier som inte har blivit förbjudna ännu men ändå kan visa sig vara skadliga på något sätt. Dessutom finns inte någon ordentlig forskning på den så kallade cocktaileffekten, som kan uppstå när man får i sig många olika kemikalier i kombination med varandra.

En stor del av all plast är oljebaserad, vilket betyder att den både innebär en förbrukning av icke förnyelsebara resurser och släpper ut mycket koldioxid när den bränns. Många plaster är svåra att återvinna i praktiken om de är förorenade eller har blandats ut med ämnen för att få produktspecifika egenskaper, vilket resulterar i att mycket plast går till förbränning. Om det är möjligt är det bra om man på något sätt kan uppmuntra kunden till att återvinna plastprodukter, så att materialet dels kan användas igen och dels undvika att hamna i naturen.

Metall

Metaller har hög hållfasthet vilket bidrar till en lång livslängd. De är oftast väldigt formbara och genom att blanda dem på olika sätt kan specifika egenskaper uppnås som exempelvis högre kvalitet. Jungfrumaterialet utvinns ur naturen men det kan återvinnas i princip hur många gånger som helst, vilket besparar väldigt mycket energi. Därför är det bra att i så stor utsträckning som möjligt använda återvunnen metall, och om det inte går, se till att använda så lite material som möjligt.

Eftersom metaller är grundämnen kan de inte brytas ned i naturen. Även om de i små mängder är livsnödvändiga för både människor och djur kan de i för stora mängder bli giftiga. Därför är det viktigt att se till att de inte kan läcka ut i produkter som kommer i kontakt med mat.

Metaller är inte en oändlig resurs och den negativa miljöpåverkan är relativt stor under framställningen. Om metaller är blandade med varandra kan det vara svårt att separera dem (se sida 16), och därmed blir de svåra att återvinna, så där får fördelarna med de nya egenskaperna vägas mot återvinningsmöjligheterna.

Några övriga material

Bambu
Kan vara ett likvärdigt alternativ till såväl plast som textil. Det växer snabbt och kräver inga bekämpningsmedel, så det är miljövänligt vid framtagning av råvaran. Vissa varianter av bambu är dock behandlade med kemikalier och andra ämnen i efterhand för att åstadkomma vissa specifika egenskaper. Textil gjord på bambu kan exempelvis antingen vara framställd med naturliga fibrer eller med bambuviskos, där det senare alternativet kräver kemisk bearbetning och därmed inte har samma miljömässiga fördelar som den naturliga varianten. Detta kan vara bra att kolla upp! Billig bambu är ofta inte den mest miljövänliga, och vissa bambuprodukter kan innehålla tillsatser av plast eller melamin vilket bör undvikas.

Textil
Kan bestå av naturfibrer, syntetiska fibrer eller en blandning av båda. Oavsett råvara används ofta mycket kemikalier till framställningen, vilket får stora effekter både på miljön och de människor som använder kläderna. Idag är textilåtervinning inte så stort, så tyger samlas oftast in för återanvändning och vidare förädling. Men i vissa fall kan textilfibrerna tas om hand och bearbetas för att användas till nya produkter.

Trä, papper och kartong
Material gjorda av förnyelsebar råvara som det finns mycket av i Sverige. Trots detta kostar det mer energi att göra nytt än att återvinna, så använd återvunna pappersfiber i så stor utsträckning som möjligt - de kan återvinnas 7-8 gånger! Återvunnet kontorspapper blir ofta till hygienpapper. För att minimera risk för kemikalier och ohållbar odling, välj alltid FSC-märkt!

Kork
Ett förnyelsebart material som kommer från korkeken. Den kan leva flera hundra år, och det skadar inte träden att barken skördas vart nionde år. Ett mycket flexibelt material som har många användningsområden. Det är både allergivänligt, dämpande, formbart och miljövänligt!

Glas och keramik
Ju mer naturligt råmaterial som används, desto mindre negativ miljöpåverkan blir det under tillverkningen. Glas och keramik släpper inte ut några farliga kemikalier och påverkar inte innehållet under användning. Idag finns inga återvinningssystem för glas och keramik som inte är förpackningar, så förbrukade produkter läggs på deponi.

Biobaserad plast
För att minska användning av icke förnybara resurser blir det allt vanligare att ersätta råolja med alternativa, förnybara råvaror. Dessa förbrukar inte jordens resurser på samma sätt och är dessutom inte lika farliga att bränna. Se dock till att råvarorna är en restprodukt och inte hade kunnat användas till något viktigare som till exempel mat. Bionedbrytbar eller komposterbar plast kan låta bra men innebär i praktiken att den bara bryts ned i mindre bitar, vilket leder till en ökning av mikroplaster i naturen. Se hellre till att plastens goda egenskaper utnyttjas på ett bra sätt.

Gummi
Naturgummi utvinns från gummiträd och är en förnyelsebar råvara. Det kan dock precis som bambu bearbetas med olika ämnen och tillsatser för att få vissa egenskaper. Syntetiskt gummi är baserat på råolja och är alltså inte en förnyelsebar resurs. Det innehåller dessutom ofta kemikalier. Processer för återvinning av gummi är under utveckling, men än så länge ska konsumenten sortera det som brännbart.

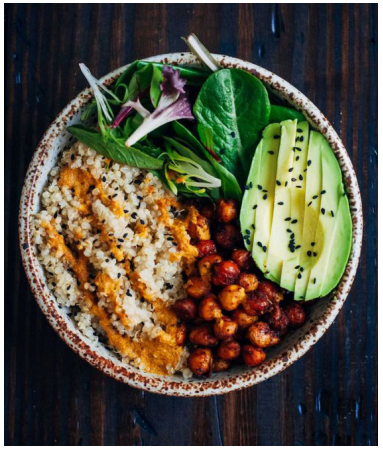
Egna anteckningar

Matilda, 26 år

- Student
- Äter mest vegetariskt
- Stort hållbarhetsinteresse
- Gillar naturen
- Köper miljömärkta produkter
- Källsorterar förpackningar

"Vilket material är viktigast att återvinna?"

"Vad händer med produkten sen?"



För tre år sedan flyttade Matilda hemifrån för att plugga. Studentbudgeten fick henne att börja äta mer vegetariskt, och hon fick sedan upp ögonen mer och mer för miljöfrågor. Numera försöker hon köpa både kläder och saker till hemmet begagnat.

Matilda älskar naturen och försöker alltid välja miljövänliga alternativ när hon behöver köpa något nytt. Hon har stenkoll på hur hon ska återvinna förpackningar, men vet inte lika mycket om vad som händer efter hon har sorterat dem. Frågor som 'vilket material är viktigast att återvinna' och 'tänk om allt bara hamnar på deponi ändå' snurrar ofta i hennes huvud.

. . . . . .

När Matilda flyttade köpte hon av praktiska skäl ett gäng med billiga köksredskap, men nu är hennes teflonstekpanna i så dåligt skick att hon måste byta ut den. Hon har läst att gjutjärnspannor är både miljövänliga och håller väldigt länge, och undersöker många alternativ innan hon bestämmer sig. Hon hittar en på ICA Maxi som verkar vara lika bra som vilken annan gjutjärnspanna som helst men är lite billigare, vilket passar hennes plånbok. Hon bestämmer sig för att köpa den nästa gång hon ska handla mat.

I vanliga fall brukar Matilda skänka sina gamla saker till någon second hand-affär, men teflonpannan är för sliten för att någon ska vilja ha den. Hon vet att hon borde återvinna den, men är lite osäker på hur eftersom man inte får slänga annat än förpackningar på hennes närmaste återvinningsstation och det är olika material i olika delar av stekpannan. Den närmaste återvinningscentralen tar 20 minuter att cykla till, men hon bestämmer sig ändå för att åka dit och hoppas på att någon där kan berätta hur hon ska göra med stekpannan.

Gunvor, 71 år

- Sparsam pensionär
- Återvinning är ett nytt fenomen
- Försöker köpa hållbart
- Svårt att veta vad det bästa alternativet är

"Får man slänga all metall i förpackningsåtervinningen?"

"Vilken produkt är mest miljövänlig?"

Sedan Gunvor gick i pension för några år sedan har hon haft möjligheten att spendera mer tid med sina barnbarn. Varje gång hon träffar dem lär de henne något nytt de har fått lära sig i skolan, och hållbarhet är ett återkommande tema. Gunvor kan relatera till många av barnbarnens tips eftersom de liknar det hennes familj gjorde när hon själv var liten, men då av ekonomiska skäl. Det känns naturligt för henne att leva sparsamt, men återvinning är något nytt. Barnbarnens engagemang gör henne dock motiverad att hänga med och göra sitt bästa.

Gunvor vill och försöker göra rätt i sin vardag, men det är inte alltid uppenbart vilket de mest miljövänliga valen är. För att vara på den säkra sidan väljer hon alltid produkter med någon typ av märkning när hon handlar, eftersom de förmodligen är bättre än de utan märkning.

. . . . . .

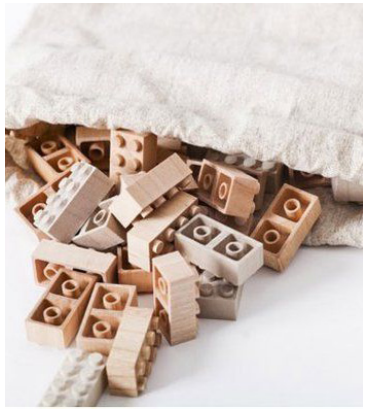
Längst in i ett skåp har ett par gamla gjutjärnspannor legat ett bra tag, eftersom Gunvor med tiden har blivit svagare och inte längre orkar lyfta dem. Hon har bytt till lättare teflonpannor som är mer populärt nu för tiden och dessutom är väldigt billiga. När hennes mest använda teflonpanna ser ut som att den snart ska falla i bitar går hon till förpackningsåtervinningen. Hon lägger den bland metallförpackningar och känner sig nöjd efteråt.

Målet är nu att köpa en ny stekpanna som är bättre än den gamla, men på ICA Maxi inser hon att de kan vara ganska dyra. Dessutom är den enda med någon typ av miljömärkning för tung för henne. Hon köper därför en ny teflonpanna så att hon ska kunna använda den. Den är något dyrare än hennes förra, men Gunvor tycker att det är värt det eftersom den nya var lite snyggare och ett högre pris kanske innebär att den håller längre.

Pernilla, 34 år

- Tvåbarnsmamma
- Känner att hon inte räcker till
- Försöker källsortera
- Svårt att veta vad som är rätt
- Har lite tid

"Vad händer om jag slänger fel?"



"Hur dåligt är plast egentligen?"

Sedan Pernilla fick barn har hennes stressnivåer ökat. Hon ångrar ingenting, självklart älskar hon sina barn, men ibland känner hon bara att hon inte räcker till. Här om dagen hörde hon till exempel några andra mammor prata om hur dåligt plast är för hälsan, och fick dåligt samvete över att hon fortfarande använder plastmatlådor då och då.

Pernilla ser sig själv som miljömedveten men det är svårt att alltid göra det rätta. Familjen sopsorterar i perioder och lämnar då skräpet på den närmaste förpackningsåtervinningen. Ibland försöker hon leta information om hur man ska återvinna och undvika vanliga misstag, men det är ofta svårt att hitta vilket gör henne omotiverad. Hon saknar ofta både tid och energi att ta tag i det ordentligt och återvinner mest för att det ser bra ut inför grannarna.

. . . . . .

Plastbantartrenden verkar växa och Pernilla bestämmer sig för att ta del av den. Hon börjar med att göra sig av med en teflonpanna som ändå börjar bli sliten. Pernilla vet att hon borde åka till återvinningscentralen med den men har inte tid idag och överväger därför att slänga den bland metallförpackningar. Hon är dock orolig att om hon gör fel kommer det förstöra återvinningsprocessen och vill inte vara den som orsakar det. Därför lägger hon undan stekpannan i en garderob och tänker att hon kan åka till återvinningscentralen när hon har hittat lite fler grejer att göra sig av med.

När Pernilla åker för att handla mat passar hon på att titta efter en ny stekpanna. Hon har som vanligt bråttom och tycker det är svårt att avgöra vilken av alla stekpannor som är bäst. En är märkt med "miljösmart val" och har en garanti på fem år. Den har en keramisk non stick-beläggning som verkar vara plastfri. Även om det kanske finns ett bättre alternativ har Pernilla inte tid att stå och vela, så den får vara tillräckligt bra för nu.

Claes, 52 år

- Matlagningsintresserad
- Gillar prylar
- Anser att produkter som håller länge är de mest miljövänliga
- Litar inte på att saker återvinns
- Slänger det mesta i brännbart

"Jag har hört att allt bränns ändå, varför ska jag sopsortera?"

"Miljömärkta produkter har inte lika bra kvalitet"

Claes är väldigt matlagningsintresserad och uppskattar att komma hem efter en lång dag på kontoret och varva ned i köket. Det är viktigt för honom att ha bra köksredskap för att få en behaglig upplevelse. Claes vet att han ofta hade kunnat göra mer miljövänliga val, men han är också lite skeptisk till miljömärkta produkter. Han vill inte behöva välja hållbarhet på bekostnad av andra faktorer, och hävdar därför att det bästa man kan göra är att köpa produkter som håller länge.

Claes litar inte riktigt på att material faktiskt återvinns och är därför inte så motiverad att sopsortera. Han har dessutom hört att plast alltid bränns ändå, och eftersom det mesta av hans skräp är plast spelar det ingen roll om han sorterar ut det från brännbart eller inte.

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Pengar är oftast inget problem för Claes eftersom han har ett välbetalt jobb. Han gillar dock inte att spendera mer än nödvändigt. Stekpannor ser han till exempel som en förbrukningsvara eftersom han aldrig har haft någon som har hållit längre än ett par år. Därför brukar han köpa en ny då och då när han handlar mat på ICA Maxi, eftersom de är billiga där. De gamla slänger han i brännbart av gammal vana.

En vän berättade nyligen om en ny stekpanna som gav så mycket bättre resultat på stekytan än andra. Till en början var. Till en början var Claes skeptisk till att stekpannan kan ha någon påverkan på maten, men eftersom han vill laga så god mat som möjligt bestämmer han sig för att göra ett försök. ICA Maxis dyraste stekpanna visar sig faktiskt vara bättre och nu är det dags för alla gamla billiga teflonpannor att kasseras. Claes inser att det är ganska mycket material som kommer slängas och funderar en sekund på att ta dem till återvinningscentralen. Det känns dock som slöseri med tid och han slänger dem istället bland metallförpackningar som en kompromiss. Någon annan kommer väl se till att de hamnar på rätt ställe till slut.

Sebastian, 33 år

- Bor i liten lägenhet
- Bekväm
- Lagar sällan mat
- Gillar TV-spel
- Tror att allt bränns

"Varför ska jag spendera pengar på något som går sönder snabbt ändå?"

"Behöver jag anstränga mig när allt ändå bränns?"

Sebastian bor i en liten lägenhet några hållplatser utanför centrum. Han har bott där många år nu och även om lägenheten är liten är han för bekväm för att orka flytta. Sebastians dagar ser ganska likadana ut: han jobbar, kommer hem och äter medan han spelar tv-spel. Oftast lagar han inte mat själv utan köper något halvfärdigt på väg hem.

Hyresvärden har skickat ut information om hur alla i huset ska sortera matavfall i en särskild påse. Sebastian läste informationen men tänkte att det inte rör honom eftersom han knappt har något matavfall. Allt bränns väl ändå i slutändan, så han ser inte poängen med att göra en extra ansträngning.

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Eftersom Sebastian lagar mat väldigt sällan äger han bara en enda stekpanna. Han får dock köpa nya med jämna mellanrum eftersom de ofta blir ojämna i botten och nötta efter något år. När de halvfabricerade kött-bullarna inte längre blir jämnvarma vet Sebastian att det är dags att skaffa en ny stekpanna. Han väljer alltid den billigaste, varför skulle han lägga mer pengar på något som ändå går sönder så snabbt?

Nästa gång Sebastian är på ICA Maxi noterar han att de har tagit in fler sorters stekpannor än sist han var där, men han kollar knappt på dem. Han går rakt på samma sort han hade förut utan att tänka så mycket på det. Så länge den är billig och har non stick-beläggning är Sebastian nöjd. När han kommer hem slänger han den gamla stek-pannan i brännbart.

Egna anteckningar