DESIGNING FOR A CIRCULAR FUTURE

ENVISIONING AND ENABLING THE FUTURE OF REPAIR AND REFURBISHMENT FOR KITCHENS

MSc thesis

Strategic Product Design
Veerle Sonnemans
July 2025
TUDelft & IKEA

Master's Thesis
Strategic Product Design
Delft University of Technology,
Faculty of Industrial Design Engineering

Designing for a Circular Future
Envisioning and enabling the future of repair and refurbishment for kitchens

Author
Veerle Coco Sonnemans

Graduation committee
Chair Prof. dr. H.J. Hultink
Mentor Ir. S.S. Mulder

In collaboration with
IKEA B.V. (Ingka) Netherlands
Mentor A.A. Capetillo

The Netherlands, July 2025

ABSTRACT

This thesis investigates how design can support the development and adoption of repair and refurbishment services by bridging the gap between stakeholder priorities, operational systems, and user behaviour. The central challenge lies in creating sufficient added value for end users to activate sustainable behaviours and the uptake of circular service models. Through a strategic design lens, the project examines how interventions can bridge the gap between internal complexity and customer needs, enabling long-term product care.

Using the Vision in Product Design (VIP) method in combination with desk and literature research, as well as qualitative research and design, the study investigates how circular services work and how they can be improved. Through stakeholder interviews, internal observations, co-creation sessions, and service blueprinting, it identifies structural misalignments, service gaps, value tensions, and desires between stakeholders, which currently limit the scalability and effectiveness of upcoming circular initiatives.

The findings show that while customers are open to circular behaviour for kitchens, they require clear guidance, convenience, and clear benefits to take circular action. In response, the project introduces a concept: Kitchen+. This is a conceptual product-service system, designed to encourage the repair and refurbishment service by offering intuitive, low-effort tools and tailored support. It enables sustainable kitchen ownership through both self-service and professional support options while aligning with existing operational structures.

This thesis concludes that activating circular behaviour in a retail setting requires both customer-facing interventions and internal alignment and knowledge. In particular, including design practices and cross-collaboration within the organisation is essential to make new circular services reliable and scalable. Strategic design can serve as a lever to align organisational structures, user needs and system capabilities. It bridges gaps, translates customers' ambitions into practice and supports long-term behavioural change. Future research could further explore how circular services perform under real-world conditions, whether solutions like Kitchen+ translate user intent into actual behaviour, and how internal systems must adapt to support that change over time.

PREFACE

While these may be the first words you read, they are the last ones I write as a design student.

About eight months ago, I came across a project description that immediately felt like a perfect match. It offered the chance to explore how design could support and enable circularity. Not as a marketing message or distant impact ambition, but in a live pilot, inside a large organisation, with the potential to shape something tangible for customers. As someone who often looks for the most sustainable option in daily life, I know how difficult it is when mainstream services and brands don't make it easy. This project felt like a rare opportunity to challenge that and help change the narrative. It was an opportunity for design, circularity, and organisational change to come together.

Contributing to the development of a circular service from scratch and seeing the tangible impact of design unfold was incredibly rewarding and educational. The journey was more complex than expected, with many layers of systems and stakeholders to navigate. Yet it was also incredibly rewarding and energising. I witnessed how design input could shift conversations and influence the development of a circular service. The openness, creativity, and support I received from everyone involved at IKEA kept me going. Hearing that the final concept sparked interest across different levels of the organisation was truly the cherry on top

I explored how circular kitchen services can be made accessible and engaging for customers while working within the realities of a large organisation. The result is a product-service system concept that supports future repair and refurbishment services through intuitive tools and guided decision-making. But more than just a service concept, it's a response to a bigger gap I encountered: between departments, between strategy and execution, and between what users want and what systems offer.

This report captures that journey: from identifying structural barriers to imagining a future service and translating it into something actionable. It weaves together research, systems thinking, and design, but above all, it reflects a belief that circularity only works if it works for people. I hope this project adds to the ongoing conversation on how we can build circular services that are not only good for the planet, but also desirable, accessible, and most of all, human at heart.

ACKNOWLEDGEMENTS

This thesis would not have been possible without the support, guidance, and encouragement of many people.

First, I want to thank the entire team at IKEA. Alejandro Aristi Capetillo, thank you for your amazing and kind guidance within the company and for showing me the fine skills of project management, from setting direction to tying up all the loose ends. To the rest of the Sustainability Team, thank you for your warm enthusiasm, your strategic perspectives, and for truly making me feel part of the team. To the R&R Pilot working group, thank you for teaching me the ins and outs of kitchen services, for sharing your knowledge so openly, and for your endless patience in answering my many questions. Your involvement and openness shaped this project.

I also want to thank my TU Delft supervisors, Erik-Jan Hultink and Sander Mulder, for their honest feedback, thoughtful insights and inspiration, and encouragement to keep pushing my vision further. Thank you for helping me sharpen both my academic voice and design direction, and for challenging me until the very end. Even in just a few months, your guidance helped me grow, not only as a designer but also in confidence and clarity (and hopefully as a writer).

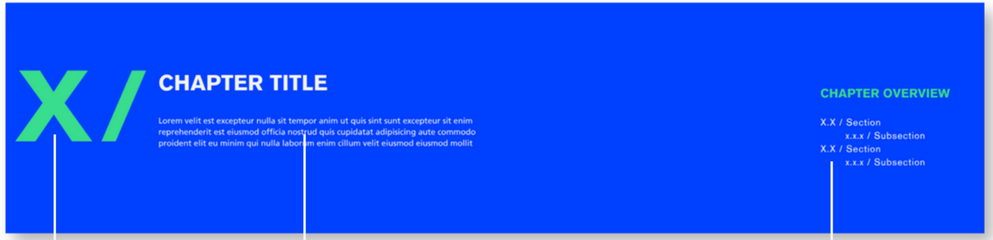
To my close friends, thank you for being there for me, not just during this project, but throughout the past six years in Delft, through ups and downs and creating unforgettable memories together. Harm, thank you for always keeping me calm and reminding me to believe in myself. You are the best.

Last but not least, I want to thank my parents. Thank you for always supporting me unconditionally, for thinking along with me when the project got complex, and for always providing the best and most honest advice I could wish for. Your encouragement throughout this process and the past six years means everything to me.

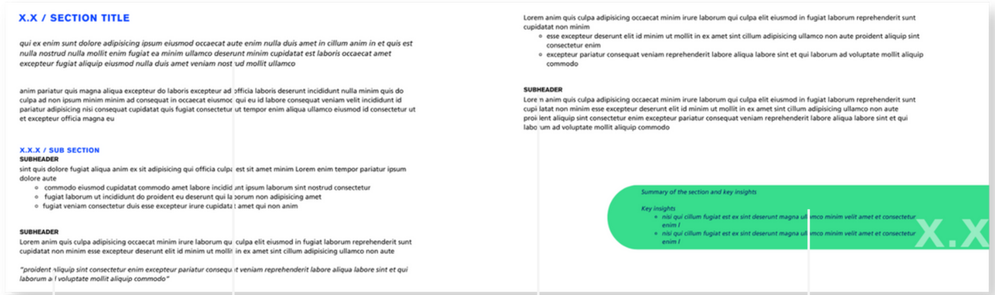
To each of you, thank you for being part of this journey and enjoy reading!

Veerle Sonnemans

READING GUIDE



CHAPTER NR. CHAPTER INTRODUCTION CHAPTER CONTENT



QUOTE SECTION INTRODUCTION SUBHEADER SECTION SUMMARY AND KEY INSIGHTS

GLOSSARY

Repair / A circular strategy that involves restoring a broken or malfunctioning product or component to its original functionality without using new components.

Refurbishment / A circular strategy that focuses on renewing or updating products that are still functional but may be worn or outdated, with the use of new components.

Repair and Refurbishment (R&R) Service / A proposed service concept that supports customers in repairing and refurbishing their kitchens instead of replacing them entirely.

VIP method / Vision in Product Design: a design methodology used to develop future-oriented concepts based on contextual and interaction shifts. (Hekkert & van Dijk, 2011).

Service blueprint / A visual tool used to describe and analyse the service process, including customer actions, and frontstage and backstage interactions.

Product-Service System (PSS) / A business model that delivers value through a combination of products and services rather than selling products alone.

Modularity / A principle where components can be independently created, modified, replaced, or exchanged, enabling flexibility, personalisation, and operational standardisation.

Values / Deeply held beliefs and guiding principles that shape individual or organisational behaviour, such as affordability, quality, sustainability, or convenience.

Value tensions / Situations where competing values, e.g., affordability vs. durability, standardisation vs. personalisation, create friction in decision-making, development or implementation.

Sustainable behaviour / Consumer actions that contribute to environmental, social, and economic sustainability, such as repairing instead of replacing, or reducing material consumption.

Touchpoints / Any moment where the customer interacts with IKEA during their Kitchen or R&R journey, e.g. online tools, in-store advice, or technician visits.

EXECUTIVE SUMMARY

This master's thesis explores how kitchen repair and refurbishment services can be designed to extend product lifespans and support circular transitions in everyday living environments. Conducted in collaboration with IKEA Netherlands and supported by TU Delft, the project applies the Vision in Product Design (VIP) methodology to develop a future-oriented concept that addresses behavioural, operational, and organisational challenges.

CONTEXT AND OBJECTIVE

As the urgency for circular transitions grows, the need to extend the lifespan of products, particularly in high-impact domains like kitchens, becomes increasingly critical. Repair and refurbishment services offer a promising pathway, yet implementing them at scale remains challenging. Misalignment between operational processes, stakeholder priorities, and user behaviour often hinders their uptake.

This thesis explores how design can act as a strategic tool to navigate these challenges and enable the successful implementation of circular kitchen services. The central question that guided this project is:

How can design support a kitchen repair and refurbishment service that aligns operational, stakeholder, and user needs?

The objective is to develop a scalable, tangible, and user-friendly design that supports sustainable behaviour while fitting within real-world organisational constraints.

METHODOLOGICAL APPROACH

The project applies a strategic design methodology, combining:

- Vision in Product Design (VIP): to formulate a future-oriented vision based on shifts in internal values and behavioural drivers.
- Qualitative research and ethnographic inquiry: including stakeholder interviews, observational studies, and customer conversations to understand barriers and opportunities across the system.
- Participatory design: through collaborative sprints with employees, service, and operational teams to co-create a feasible service.

This layered approach enables a systemic understanding of the design space and supports the development of interventions that are both visionary and grounded.

KEY OUTCOMES

Gap analysis: A synthesis of insights from internal and external research, qualitative research, and customer journeys revealed key misalignments between circular ambition and practical execution. These gaps were mapped across operational structures, user behaviour, and service opportunities, informing the strategic direction of the project.

Strategic vision / A vision that moves away from full replacement toward long-term care, ownership, and circular behaviours. Kitchens are reframed as adaptable and growing systems, reparable, modular, and personally meaningful.

Service Blueprint / A mapped journey based on existing processes and ways of working, outlining ideal user actions and internal processes, facilitating alignment between touchpoints, roles, and digital infrastructure, necessary to execute the R&R service.

Design concept / Kitchen +, a product-service system developed to support repair and refurbishment journeys and create post-purchase, sustainable engagement with IKEA through:

- **MY KITCHEN ID /** a personalised hybrid kitchen passport storing product, material, and service data.
- **FIXIT Lens /** an AI-powered digital diagnostic and solution-providing feature.

CONCLUSION

This thesis demonstrates how design can play a pivotal role in translating circular ambitions into implementable service systems. By aligning user experience with operational realities and stakeholder dynamics, Kitchen+ offers a scalable and human-centred approach to product longevity. While the case context focused on kitchens, the findings and approach are broadly applicable to other sectors navigating the transition toward human-centred, circular service models.

TABLE OF CONTENTS

1/ INTRODUCTION & SCOPE

This chapter presents an introduction to the project. Next, the chapter introduces and defines the project goal and scope of this exploratory research and design project.

CHAPTER OVERVIEW

1.1 / INTRODUCTION

People typically buy furniture for long-term use, since it has an expected lifespan of five to twenty years. However, in reality, users often discard furniture earlier than intended upfront (Ministerie van Algemene Zaken, 2024). This premature disposal contributes significantly to the environmental impact of the home furnishing and retail industry. It influences global resource consumption, carbon emissions from deforestation, and waste generation. As the second-largest category in furniture consumption, kitchens have a significant impact and therefore present an urgent challenge (Forrest et al., 2017).

The traditional linear 'take, make, use, waste' consumption model increases pressure on natural resources and the environment (Circular Economy Introduction, n.d.). In recent years, academics, policymakers, and businesses have increasingly recognised the importance of transitioning to a circular economy. The circular economy framework aims to decouple economic growth from environmental degradation by rethinking resource use, product design, and waste management (Ghosh, 2019; Ministerie van Algemene Zaken, 2023). This transition promises environmental benefits and economic advantages (McGinty, n.d.). Design plays a significant role in this transition by shaping new circular services, systems, and products that encourage circular behaviour and make them more accessible and appealing to the public (Design and the Circular Economy, 2019).

Global home furnishing retailers acknowledge their responsibility to shift toward more sustainable and circular business practices (SDGs ESG ACTION, n.d.; Steelcase, 2023; Topic: IKEA, 2025). As one of the largest home furnishing retailers worldwide, IKEA aims to reduce total value chain emissions by 50 per cent before 2030 and achieve net-zero emissions by 2050. The company commits to regenerating resources, protecting ecosystems, and enhancing biodiversity (Our Sustainability Focus Areas – IKEA Global, n.d.). The company transitions toward more sustainable, circular practices through dedicated initiatives, presented in Figure 1. To support this, the company launched a team to design and pilot new circular services that allow customers to acquire second-hand furnishings, pass on used products, and repair existing ones (Going Circular: A Future With Zero Waste, n.d.). The initiative focuses particularly on reuse and repair strategies, which gain importance in the context of upcoming EU legislation such as the Right to Repair and the Ecodesign for Sustainable Products Regulation (R-Strategies for a Circular Economy, n.d.).

Kitchens emerge as a strategic focus in this transition due to their high environmental and commercial impact. Intensive usage and renewing kitchens cause the ecological impact (Hagejärd et al., 2020). Each year, the EU discards approximately 10 million tonnes of furniture, most of which ends up in landfills or is incinerated. Kitchen-related waste accounts for almost one-fourth of this total (Forrest et al., 2017). With projections estimating the Dutch kitchen repair and refurbishment market worth €50 million by 2030, the market shows growing potential. Many independent businesses already offer refurbishment kitchen services for IKEA products, highlighting the commercial opportunities in this sector (Confidential Appendix A).

Despite their potential, kitchens also pose several challenges. Kitchens are high-value and emotionally significant purchases that involve complex systems, including plumbing, electricity, appliances, and finishes, that cause interdependencies. Even small modifications trigger cascading effects, complicating repair or refurbishment efforts. Furthermore, the existing kitchen services, such as those for installation, encounter challenges that hinder their ability to provide a reliable and consistent circular service experience in the future (Confidential Appendix C). These structural and service limitations reveal a critical gap between circular ambitions and existing capabilities in IKEA kitchen services.

These insights underscore the necessity to reconsider the design and delivery of circular kitchen services. Merely adding repair options to the current systems is not sufficient. The transition requires a fundamental shift toward long-term product relationships, flexible service models, and stronger stakeholder collaboration. Strategic design plays a pivotal role in accelerating this transition (Huang et al., n.d.; Pineda et al., 2024). Especially within large companies that possess the scale and resources to drive change, design can act as a catalyst for innovation and systemic change (Beyond Efficiency: The Roles of Large Corporates in Driving Sustainability Transitions - VU Center for Business & Society, n.d.). It serves as a bridge between technological innovation and societal transformation (Gaziulusoy & Öztekin, 2019). However, we also need to create impact at the product-consumer level. While company-level strategies can scale impact and enable systemic innovation (Bocken et al., 2013; Schaltegger & Burritt, 2015), product-consumer-level strategies and design interventions directly shape sustainable user behaviour, foster long-term engagement, and build brand trust and loyalty (De Hooge et al., 2024; Niedderer et al., 2017).

Within the context of kitchen services, the strategic and product-consumer levels of design come together. As kitchens involve long-term ownership and infrequent but significant interventions, there is a critical need to rethink how customers engage with them over time. Design thinking is essential for rethinking and envisioning new possibilities when it comes to sustainability (Filho et al., 2024; Maher et al., 2018).

This project researches operational challenges and customer needs to envision and enable a more circular and sustainable future for the kitchens. It proposes a new strategic perspective and design that enables circular kitchen services. It tackles operational barriers, caters to customer requirements and enables long-term effect and impact.

Figure 1 - Circular initiatives of IKEA

1.2 / PROJECT GOAL AND SCOPE

This graduation project addresses these challenges by designing a solution for a new kitchen repair and refurbishment service. It aims to balance customer needs, stakeholder capabilities, and organisational constraints. In addition to defining the operations of the new service, this project also develops a new design solution that can be used to improve the service and implemented, scaled, and delivered consistently across the Dutch market, with the potential for future international expansion.

The project was carried out in collaboration with IKEA Netherlands, working closely with the team responsible for sustainability initiatives in the Dutch market. The Dutch team focuses on advancing circularity by creating and managing strategies that extend product life cycles and minimise waste. This thesis project contributes insights to a broader international team that tests circular service concepts across local markets. The team´s goal is to provide insights and solutions that enable long-term, sustainable furniture ownership by allowing customers to restore, adapt, or upgrade their furniture instead of replacing it entirely.

The central question that guided this project is

How can design support a repair and refurbishment service for kitchens and align operational, stakeholder, and user needs?

Three formulated research questions guide the exploratory and qualitative research that addresses the central challenge. Each question focuses on a key area of the central question: current operations, stakeholders, and customers. Together, they investigate how the existing IKEA system accommodates the new service, how internal and external actors collaborate, and how to motivate customers to engage in circular behaviours. The questions uncover the organisational conditions, stakeholder dynamics, and behavioural factors essential for a successful design.

RESEARCH QUESTION 1

Which organisational, operational, and infrastructural conditions facilitate or hinder the integration of a kitchen repair and refurbishment service into the existing product-service system?

RESEARCH QUESTION 2

How can IKEA balance operational standardisation with the need for customer-specific solutions to deliver circular kitchen services?

RESEARCH QUESTION 3

What stimulates active customer participation in circular behaviours such as repair, refurbishment, and reuse?

This research helps explain how stakeholder alignment and strategic design support circular service development in a complex retail system. It also provides an example of how a design solution increases the value of a circular service. At the start of this project, the team collaboratively defined three requirements to ensure a desirable outcome for the company, formulated as follows:

BALANCE STANDARDISATION AND CUSTOMISATION

The service must be standardised to reduce costs, streamline operations, and offer a clear, scalable value proposition. It also allows for customisation to ensure that each customer's kitchen is uniquely cared for and adapted to their needs.

ALIGN STAKEHOLDER NEEDS

The service aligns the capacities and needs of a diverse and complex group of stakeholders, including employees, the head office, and external partners, to establish effective collaboration and successful implementation on a larger scale.

CONSISTENCY AND FLEXIBILITY

The service offers customers a seamless and easily understandable journey across different touchpoints. Customers can choose between flexible options that suit their budget, preferences, and existing kitchen setup.

2/ PROJECT & DESIGN APPROACH

This chapter outlines the design method and project approach used to explore and develop a solution for a new kitchen service. First, it introduces the design methods that guided the project. Secondly, it explains the four phases that combine research with design.

CHAPTER OVERVIEW

2.1 / DESIGN METHODS AND STRUCTURE

This project combines the Vision in Product Design (VIP) method with the Double Diamond framework. This combination of methods allows for a structured design process, management, and visionary thinking. Using these methods helps to navigate this complex innovation challenge and imagine meaningful (circular) futures.

The Double Diamond method (Design Council, n.d.) provided this project with a clear and iterative structure for managing the design process and time frame. The framework consists of four distinct phases: Discover, Define, Develop, and Deliver. It is a common and intuitive design process model. These phases form the base of the project, from broad exploration to focused implementation and enable divergence and convergence. In parallel, the VIP method (Hekkert & Van Dijk, 2010) provides a structured way to design for the future by challenging and reframing today's context. The method unfolds across two phases, deconstruction and design. It operates on three analytical layers: context, interaction, and product. The VIP approach centres on the belief that products and services reflect underlying values, and positions designers as both capable and responsible for shaping alternative futures. This approach gives the project a visionary and creative foundation and enables the creation of a meaningful and innovative design outcome.

The combination of these methods, presented in Figure 2, played a key role in this project by enabling both deep, creative exploration and structured development. The Double Diamond enables process clarity and helps to structurally move from insights to implementation. The VIP method enables more depth and provides a critical redefinition of what the future of kitchens could mean in the context of circularity and the company. The methods are applied in parallel rather than sequentially: VIP guided the design direction, while the Double Diamond structured its execution. On a critical note, while the VIP method provides a creative framework for reframing product–user interactions and envisioning future scenarios, it offers limited guidance on how to deal with real-world organisational constraints. This study therefore adapts VIP beyond its original speculative intent, applying it within an operational business context.

To explore the complexity of the subject, this thesis combines a desk and literature search, and qualitative research to gain deeper insights into experiences, needs, and challenges. This approach enables the collection of rich, nuanced data.

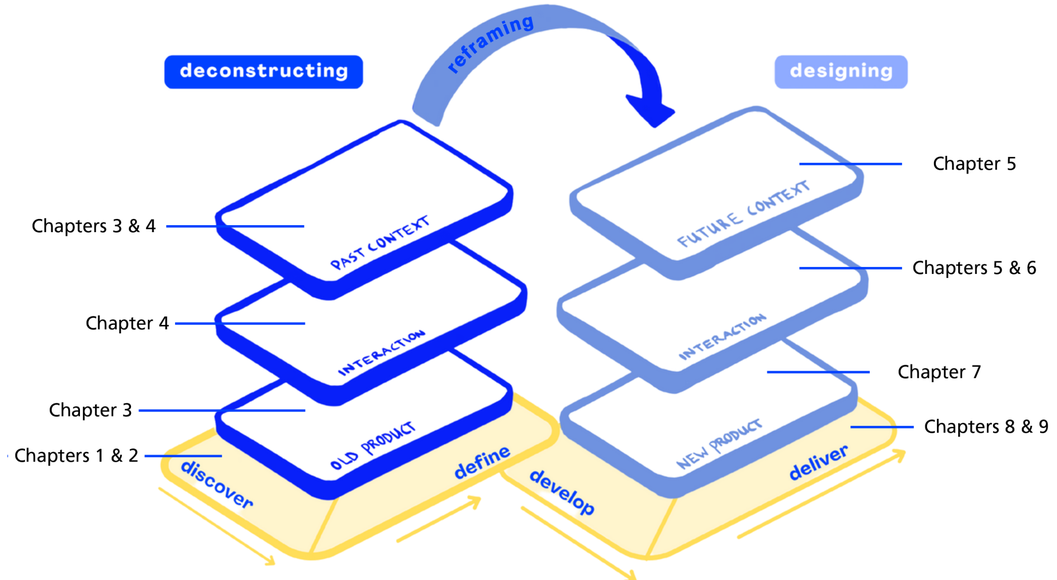


Figure 2 - Design process, showing the multi-layered process development.

2.2 / FOUR PROJECT PHASES

PHASE 1 - UNDERSTANDING THE CONTEXT AND VALUES

This phase kicks off the project with desk and literature research to explore the broader context of circular kitchen services and identify existing frameworks and developments. Building on this research foundation, ethnographic observations, system mapping, and semi-structured interviews further investigate user needs, stakeholder dynamics, and service operation. Together, these methods reveal values, practical challenges, and points of misalignment in the current system.

This phase includes three main research steps:

RESEARCHING THE CONTEXT AND VALUES

The combined research explores the context and its underlying values. It examines how stakeholders engage with the (R&R) kitchen services. Desk and literature research, interviews, and ethnographic observations reveal current processes, collaboration dynamics, and structural challenges. The qualitative analysis focuses on how employees and users interact with their kitchen, repair and refurbishment, and the obstacles they encounter.

SYNTHESISING: IDENTIFYING OPPORTUNITIES AND PAIN POINTS

Interviews with users and external stakeholders reveal key needs, challenges, and expectations surrounding kitchen repair and refurbishment. A systematic coding of the interviews identifies recurring themes and patterns. The findings are synthesised with insights from desk and literature research to form an understanding of the current context and uncover opportunities to add value through design.

SERVICE BLUEPRINT DEVELOPMENT

The development of a service blueprint enables the identification of user actions and stakeholder needs for a consistent customer journey. Multiple workshop sessions with various stakeholders collect input. Which results in a consolidated service blueprint for the new service, which reveals key strategic gaps that require further design intervention.

PHASE 2 - VISION DEVELOPMENT AND DESIGN CHALLENGE

With the information and findings from the first phase, the second phase focuses on creating a guiding vision for the future. The process includes reframing the existing values into new ones and creating a clear direction to guide design decisions. This phase formulates a focused design challenge and a set of guiding principles for the service and solution development.

The main steps in phase two are

(RE)DEFINING CORE VALUES

The first step focuses on analysing the existing company and service values and reformulating them to align with the objectives of the envisioned kitchen service. The analysis of the service concentrates on identifying values and actions that should be preserved, adapted, or replaced. The set of extracted values forms the foundation for future concepts and design directions.

FORMULATING VISION AND INTERACTION

The formulation of a future vision comes from the newly defined values, contextual insights, and blueprint analysis. This vision serves as a guide for the solution, describes a desirable scenario for how customers and employees engage with the service in the future and forms the base of the future interaction. This interaction conceptualises an impression of how people will view, use, understand, and experience the product or service (Hekkert & Van Dijk, 2010). This step defines how customers and co-workers could ideally interact with the service in a future scenario, using an analogy to enhance comprehensibility and engagement.

FRAMING DESIGN CHALLENGE

The design challenge builds upon the vision statement and brings together the key insights from research, value framing, and service analysis. It articulates the ambition of the project and includes a set of concrete design requirements that will guide the development of solutions.

PHASE 3 - CONCEPT DEVELOPMENT AND ITERATION

In the third phase, the project translates the vision and values into tangible service concepts. The study conceptualises a future interaction using the VIP method, aiming to understand, experience, and deliver the service as it should be. The focus lies in designing solutions that align with the envisioned interaction while addressing feasibility and integration with existing service infrastructure.

The third phase follows the following three steps:

IDEATION

The creation of solution-oriented ideas builds on the defined future interaction. The ideas address a chosen gap and reflect the future context and interaction. Each idea receives an assessment with attention to feasibility and integration with the current service offering.

CONCEPT ITERATION

The most promising ideas are turned into concepts. These concepts undergo iterations through feedback sessions with stakeholders to ensure alignment with internal priorities and practical constraints.

INTERNAL VALIDATION AND DESIRABILITY TESTING

Feedback sessions with internal teams evaluate the concept to assess its business feasibility and operational fit within the service. In parallel, a quantitative questionnaire distributed among potential users tests the desirability of the concept. This double validation ensures that the design is appealing to customers and desirable for IKEA.

PHASE 4 - FINAL CONCEPT AND IMPLEMENTATION STRATEGY

The final phase focuses on validating the chosen concept through customer testing and creating a strategy for implementation. The goal is to ensure the design is visionary, actionable, scalable, and integrable within the new service and the company's operational structure.

The final three steps are

FINAL CONCEPT

The final concept integrates the last refinements based on user feedback to strengthen clarity and usability. Visuals that communicate the design's functionality and value, along with a storyboard, explain the concept and the intended customer journey. In addition, a strategic fit analysis demonstrates how it aligns with internal priorities and existing service capabilities.

ROADMAP DEVELOPMENT

A roadmap supports future implementation by outlining key phases, strategic priorities, and actions. The roadmap outlines how the suggested concept and technology can be further developed, implemented, and scaled in the future.

FINAL STORYTELLING AND DELIVERABLES

The project consolidates its outcomes into a strategy book and final presentation. The final deliverables combine storytelling and visual communication. Explaining the strategic design reasoning and recommendations that support internal adoption at IKEA.

3/ UNDERSTANDING THE CONTEXT

This chapter deconstructs and presents the research on the past and present conditions of IKEA and its services. It researches the company, the product, and circular strategies to obtain a deeper understanding of the current context through desk and literature study.

CHAPTER OVERVIEW

PHASE 1A

3.1 / DESK AND LITERATURE RESEARCH APPROACH

This section presents the method used to build a foundational understanding of the organisational, strategic, and legislative context. The desk and literature research focuses on reviewing IKEA information, policy regulations, behavioural theory, and academic insights into circular strategies for business contexts.

3.1.1 / SOURCES AND APPROACH

The desk and literature research involves the review of internal and external sources to gain insight into the current state and enabling conditions. Figure 3 presents a visual representation of the approach for phase 1A.

The following types of sources are consulted:

- Academic and industry sources specifically focused on IKEA's organisational structure, business model, service evolution, and transition to circularity.
- Internal IKEA documents, including process overviews and strategic frameworks.
- Scientific and design literature on circular strategies, product-service systems, and sustainable consumer behaviour.
- European policy documents and regulatory frameworks such as the Ecodesign for Sustainable Products Regulation (ESPR), Extended Producer Responsibility (EPR), and the Right to Repair directive.
- Industry reports and trend analyses from NGOs and policy institutes related to sustainability and circular economy developments.

Information synthesises across multiple dimensions: the structure and capabilities of the organisation, the systemic context of the kitchen product-service system, the customer and drivers for sustainable behaviour, and the role of design. These insights form the theoretical foundation for the qualitative research and design phase that follows.

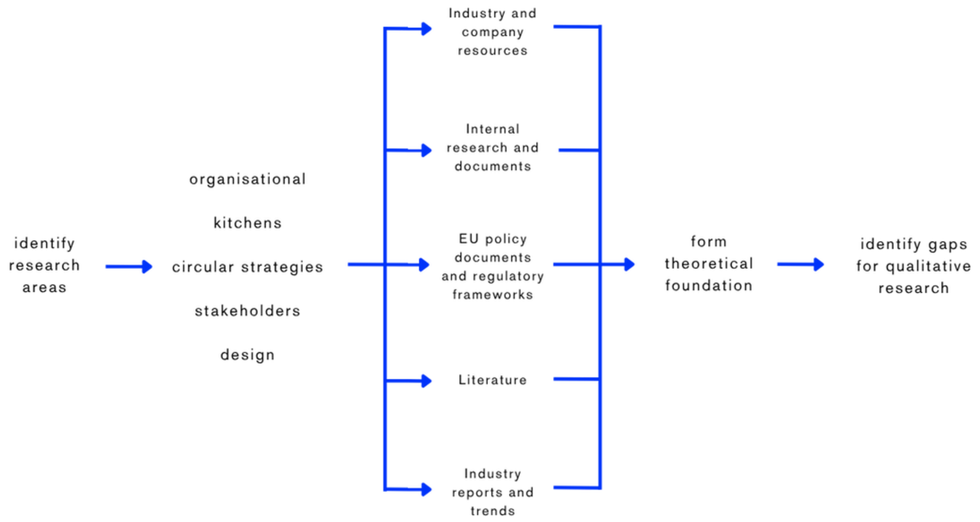


Figure 3 - Overview of desk and literature research approach

3.2 / THE COMPANY AND SERVICE CONTEXT

This section explores the company's structure, design methodology, and kitchen service system to uncover opportunities and problems and to understand how a design should fit within the existing offering.

3.2.1 / THE COMPANY - IKEA

Founded in 1943 as a trading company, IKEA took shape in its current form in 1953, introducing a showroom format supported by a catalogue in Sweden. The name IKEA combines the initials of founder Ingvar Kamprad, the farm Elmtaryd where he grew up, and the nearby village Agunnaryd. Ingvar believed that great furniture revolves around affordability, functionality, and simplicity. This philosophy is the foundation of the innovative culture of the company. The mission of IKEA is to 'create a better everyday life for the many people' (IKEA, n.d.).

Today, IKEA is one of the biggest furniture retailers globally, operating 481 stores in 63 markets (How We Work – IKEA Global, n.d.). The company controls its full supply and value chains. In 2024, it reported a global revenue of €45 billion (Topic: IKEA, 2025). IKEA operates under a complex franchise model: Inter IKEA Systems B.V. owns the IKEA concept and franchise rights. Ingka Group, the largest franchisee, manages the majority of IKEA's retail operations worldwide (One Brand, Many Companies – the IKEA Franchise System, n.d.).

The franchise system and its operational structure are key to understanding how kitchen services can be effectively scaled and integrated. Figure 4 illustrates and shows the complexity and width of the system and the roles and divisions of Inter IKEA Systems B.V. and Ingka Group.

These distinctions play a crucial role in integrating a kitchen repair and renewal service that aligns with existing processes and stakeholders. Despite its global success, the company faces growing competition. For example, in the Netherlands, retailers like Action, Xenos, Hema, and bol.com offer extremely low prices, have a fast-changing assortment, and have high local visibility.

Figure 4 - The franchise structure of IKEA. (One Brand, Many Companies – the IKEA Franchise System, n.d.-b)

Their business models challenge the position of IKEA in the price-sensitive customer segment it traditionally serves. Globally, IKEA faces competition on the category level (for example, specific sofa brands), and on the national and international levels from other large furniture retailers like XXLutz and Target.

Over its 80-year history, IKEA consistently introduced customer-centric innovations beyond its product design. For instance, IKEA introduced flat-pack furniture and customer-assembled products in 1956. This innovation revolutionised logistics and enabled competitive retail pricing to keep the prices for the customer low. Which led to another innovation in 1970: the self-service warehouse. This system enables customers to take their new furniture home directly after visiting the showroom in an easy and efficient process and continues to shape the customer experience of IKEA (IKEA 80th Anniversary - IKEA Global, n.d.; IKEA Museum AB, 2023; Key Milestones in the History of IKEA, n.d.).

Other, more recent innovations include:

- Democratic Design (1995) is a framework that ensures that every product is designed according to five principles: functionality, form, sustainability, quality, and low price (Our History, n.d.).

- IKEA Kreativ (started as IKEA Place in 2017) is an application that uses Augmented Reality (AR) to visualise how the furniture will look in their homes (IKEA Apps, n.d.; VR Owl, 2023).

As sustainability pressures grow, IKEA intends to halve emissions from its value chain by 2030 and become net zero by 2050. In line with these goals, an international team develops and tests services that reduce waste and promote reuse and repair. One of the objectives is to improve the existing Buyback & Resell service. In this service, customers return used IKEA furniture in exchange for store credit. The initiatives try to shift customer behaviour towards circularity.

3.2.2 / THE IKEA METHOD

The success of IKEA stems not only from its products but also from its carefully designed brand experience. The company's identity and values anchor themselves in affordability, functionality, and simplicity. Its consistent omnichannel shopping experience, strategically designed to maximise customer convenience and minimise friction, reflects these values (Clifford, 2019). Their modular and minimalist product design makes large-scale and low-cost production possible while appealing to customers seeking value for money (Gershenson et al., 2003).

A well-documented aspect of this experience is the 'IKEA effect'. This psychological phenomenon describes that customers develop a stronger emotional attachment to products they have partially created or assembled themselves, just like their IKEA furniture (Norton et al., n.d.).

It enhances brand loyalty and supports IKEA's competitive advantage by combining affordability with emotional value. This emotional bond strengthens the company's market positioning and keeps product prices low for the customer. The company's reliance on standardised, self-assembled products and its integrated supply chain further enables cost efficiency and global scalability (Breaking Down the IKEA Value Chain – IKEA Global, n.d.).

At the core of the product development at IKEA lies the Democratic Design framework. This framework ensures that every product meets five criteria: form, function, quality, sustainability, and low price. Democratic Design has guided the company's product development since the 1990s, as presented in Figure 5. Recently, the company has started to use it as well for the development of services. The framework supports the ambition to make well-designed, customer-centric services ("IKEA® Service Design Methodology", n.d.). Developing new customer-centric services supports the company's transition toward circularity, with foundational values of functionality and sustainability.

Figure 5 - The democratic design framework for products from IKEA

Furthermore, IKEA offers customers choices in both product selection and service engagement. A tiered pricing model, offering low-, mid-, and high-price options, reflects this approach and ensures accessibility for a broad customer base. For services, customers can choose between do-it-yourself (DIY), DIY with support services, or full-service options, depending on their preferences, needs, and capabilities (Services, n.d.). This layered approach enhances the convenience and flexibility associated with IKEA and reinforces its customer-centric approach in both product and service design.

3.2.3 / KITCHEN SERVICES

Kitchens are a strategically important yet complex product category. Historically limited to furniture sales with third-party referrals for installation, the kitchen offering evolved into a fully integrated service and business model. IKEA now provides completely integrated solutions for their kitchens, from Do-It-Yourself (DIY), DIY with assistance, to full service. Customers can access a measurement service, a digital design tool to create their dream kitchen in 3D, plan and design consultations with kitchen experts, and both assembly and installation services. Figure 6 shows an overview of the current services. Dealing with these different services underscores the necessity for clear expectation management and guidance.

The existing infrastructure provides a strong foundation for the development of a repair and refurbishment service. However, the new service must integrate smoothly into the ecosystem of kitchen services of IKEA. As the company continues to evolve its kitchen services to meet customer expectations, it strives to deliver a seamless experience across digital and physical channels and consistency across different service levels, from self-service to full-service journeys (Confidential Appendix B).

Analysis of existing kitchen services and touchpoints reveals opportunities to leverage current offerings in the design of the new repair and refurbishment service. The Kitchen Planning & Advice and Installation Services are particularly relevant for this project. They serve as critical integration points for circular interventions, such as modular upgrades, repairs, and partial renovations, without requiring a complete overhaul of the customer experience or IT infrastructure.

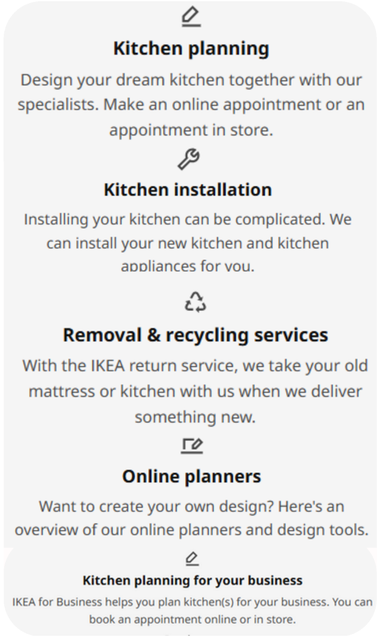


Figure 6 - Overview of kitchen services at IKEA (Services, n.d.-b)

PLAN & ADVICE (REMOTE AND IN-STORE)

Customers perceive buying kitchens as complex and intimidating. Especially with topics such as renovation and repair, people often feel they lack the knowledge needed for repair (Terzioğlu, 2020). The plan & advice service allows new customers to have low-effort but high-value guidance. Integrating this service into the customer journey of the new service offer could equip users with the technical knowledge, guidelines, and confidence needed to pursue repairs and upgrades.

INSTALLATION SERVICE

Installation services form the operational foundation for both initial kitchen delivery and subsequent repair or refurbishment activities. Accurate execution of these services is essential; poor installations cause complications that undermine future repair and maintenance efforts. Moreover, the refurbishment process mirrors many aspects of the original installation workflow, only applied to selected elements rather than a total rebuild. By reusing established installation processes and service partners, IKEA can deliver repair and refurbishment services more efficiently and consistently.

The presence of established customer touchpoints, trained service partners, and back-end IT systems allows for circular interventions to be embedded with minimal disruption. However, successful implementation requires careful alignment with existing workflows and service journeys to maintain consistency, minimise operational friction, and ensure customer trust. By strategically leveraging and adapting its current service ecosystem, IKEA is well-positioned to scale circular kitchen services within its broader business model.

3.2

The organisational structure of IKEA, the company's design approach, and its existing kitchen services reveal a strong foundation for circular innovation and key integration challenges.

Key insights:

- *The modular kitchen infrastructure and existing services are a solid foundation.*
- *Organisational silos and legacy systems create integration challenges.*
- *The franchise and omnichannel model influence how new services must be integrated.*

3.3 / CIRCULAR PRACTICES AND STRATEGIES

This section introduces the two main strategies central to the service: repair and refurbishment. It discusses their definition, relevance, and practical challenges. It also explains the influence of European legislation on circular business model development.

3.3.1 / 10 R-FRAMEWORK

Experts developed the 10R framework to guide sustainable practices in a future circular economy. This framework shows strategies on how to minimise resource use, extend product lifespan, and keep materials in circulation as long as possible. The framework appears as either a ladder or a circular framework. R0 ranks as the most impactful strategy (e.g., refusing unnecessary materials or products), and R10 represents the least impactful strategy (e.g., recycling materials). Figures 7 and 8 show both versions of the framework. The central 'slowing the loop' segment, where users actively participate, focuses on extending product life and component reuse (Rood et al., 2019; The R-ladder: Key to a Circular Economy for Plastics, 2001).

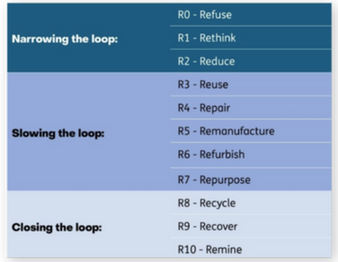


Figure 7 - Circular strategies R- ladder (Potting et al., 2018)

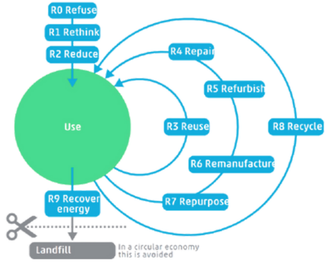


Figure 8 - R- ladder loops (The R-ladder: Key to a Circular Economy for Plastics, 2001)

The following sections explain two high-impact R strategies, repair and refurbishment, implemented in the new service. These strategies reduce waste and reinforce the company's commitment to circularity by offering consumers alternatives to buying an entirely new kitchen.

3.3.2 / REPAIR

Repair (R4) ranks high in the 10R framework. Repair refers to 'repair and maintenance of a defective product so it can be used with its original function.' (Circular Economy: Measuring Innovation in Product Chains, 2017). Repair happens when the product is in use by a consumer. Repairing is also described as 'putting something that is damaged, broken or not working correctly, back in good condition or making it work again' (Repair, 2025).

Research conducted by the UK RepairCafe reveals that repairs frequently occur without replacing large components, with 52% of repairs requiring no spare parts. The study further demonstrates that each completed repair can, on average, prevent approximately 24 kilograms of CO_2 emissions. Additionally, the research highlights that 17% of the repairs of general home products are attributable not to product failure, but rather to routine maintenance and installation tasks, such as cleaning or product set-up failures (Privett, 2019). This insight is particularly relevant for kitchens since they require a precise setup to function effectively for a long period.

IKEA currently offers customers a wide range of free small, functional spare parts (e.g., screws, knobs, plugs) and performs repair services for warranty-related cases. These warranty cases usually involve installation or material defects (Alle Garanties Op Onze Producten, n.d.; Spare Parts - IKEA, n.d.). When designing the new service, the team defined two focus categories of repair: functional and aesthetic.

FUNCTIONAL DAMAGES

Damages that impact the product's functionality, like uneven doors, cabinets, or malfunctioning drawers. See an example in Figure 9.

functional

Figure 9 - Example of functional damage

AESTHETIC DAMAGE

Damages that affect the look of the product, such as scratches, dents, discolouration of cabinet doors, and burn marks on countertops. See an example in Figure 10.

aesthetic

Figure 10 - Example of aesthetic damage

Repair offers many benefits, such as no replacement costs for large new components. However, addressing several challenges and barriers is necessary to make repair a widely adopted strategy for kitchen products.

ECONOMIC VIABILITY

For repair services to serve as a viable alternative to component or full product replacements, the cost of repair labour must remain economically competitive with the cost of replacing the damaged item. The cost of the repair service is a significant barrier for the customer (Roskladka et al., 2023), especially in the Netherlands, where labour shortages limit growth and increase repair service prices (Europe: Less Widespread but Still Meaningful Labour Shortages, n.d.). IKEA produces mass-market products at low prices, which poses a challenge when repair services are more expensive than a new product.
The most affordable option for the customer is to perform the repair themselves, which IKEA can enable through DIY guidance. By providing clear instructions, step-by-step support, and access to affordable parts, IKEA could empower customers to take ownership of their kitchen's maintenance and repairs. This reduces the overall cost and makes repairing a more accessible and affordable solution.

PERCEPTION OF QUALITY

Customers resist repairs since they perceive them as short-term solutions or low-quality fixes. Research indicates that consumers often cling to negative stigmas or lack confidence in the effectiveness of repairs (Terzioğlu, 2020). IKEA must shift the perception of repair as a high-quality and long-lasting alternative to full replacements. Alternatively, they should provide clear and transparent information about the longevity and value of repair compared to a new product.

REDEFINING RELATIONSHIPS

Research reveals that circular services demand a different relationship between customer and product, one that moves beyond ownership to ongoing engagement (Circular Service Finance - Sustainable Finance Lab, 2021). Emerging models such as “selling access” rather than transferring ownership have the potential to support more durable product use and align incentives for long-term repairability. In such models, companies remain responsible for the performance and thus have greater reason to invest in design for maintainability and service integration (Repair in the Circular Economy – European legislation, product design and business models).

3.3.3 / REFURBISHMENT

Refurbish (R6) is another circular strategy focused on restoring and updating products to extend their lifespan and refresh their appeal (Circular Economy: Measuring Innovation in Product Chains, 2017). Refurbishment is defined as ‘the act or process of cleaning it, decorating it, and providing it with new equipment or facilities’ (Refurbishment, n.d.). This strategy applies once the product is already in the hands of the customer. Refurbishment involves both aesthetic improvements and functional upgrades, incorporating new components.

Unlike repair, which restores a product to its original state, refurbishment often alters or enhances the product’s appearance and performance. Refurbishment serves as a way to prolong the use of existing components while providing customers with the experience of ‘totally new’. It is a new kitchen without the environmental impact of a complete kitchen renovation.

Refurbishment typically involves updating and renewing an existing product. However, the new service also includes changing the layout or adding new components to meet changing needs, sometimes referred to as renovation, without discarding the existing kitchen. Refurbishment and renovation often intertwine: when a kitchen layout requires expansion or adjustment, existing elements are simultaneously upgraded to suit the new setting. Figure 11 shows an example. IKEA's business model, which involves purchasing kitchen components separately, lays the groundwork for refurbishment. A significant number of customers already buy products to refurbish their kitchens by themselves. (Confidential Appendix F)

Figure 11 - Example of a complete refurbished kitchen

You can replace or update individual cabinets, doors, handles, countertops, and appliances, usually without compromising the overall integrity of the system. This approach extends the lifetime of the structural core of the kitchens while offering customers an as-new kitchen experience.

While a refurbishment service offers significant potential for circularity and customer satisfaction, several challenges and barriers must be addressed to translate these practices into a scalable service model.

ECONOMIC VIABILITY

Refurbishment sits between repair and brand new in terms of labour and material cost. Refurbishing cabinet fronts or kitchen appliances is more expensive than a repair since it requires new components. However, it is always more affordable and sustainable than removing an entire kitchen and purchasing and placing a new one. The business case for refurbishment relies on the ability to offer modular updates at competitive prices and to communicate the added value (environmental, budgetary, convenience, and emotional) to the customer.

TECHNICAL LIMITATIONS AND COMPATIBILITY

A challenge for including refurbishment in the service is compatibility (both technical and aesthetic) between old and new components. Some partial renovations necessitate additional technical procedures. For example, if the worktop is replaced with a thinner version, the wall finishing (e.g., tiles or stucco) must also be considered and included in the cost. Additionally, when customers wish to update only one part of their kitchen, they want new elements to match the existing kitchen. This process requires long-term product continuity and access to a consistent aesthetic palette over time. Discontinuing certain essential components [1] makes refurbishment more difficult or restricts it to new models only.

3.3.3 / LEGISLATION AND POLICIES

European and national legislation plays a critical role in driving companies toward the transition to a circular economy. Policies require companies to take greater responsibility for the entire lifecycle of their products, from design and production to use and end-of-life management. Although these regulations do not yet directly affect IKEA, they are expected to have significant implications shortly. Meeting these legislative requirements demands clear alignment between internal teams and service partners. Key upcoming circular policies that impact current operations include the following:

EU GREEN DEAL & CIRCULAR ECONOMY ACTION PLAN

The European Green Deal concentrates on making Europe the first climate-neutral continent. Central to this initiative is the Circular Economy Action Plan (CEAP). This document is a comprehensive plan of legislative and non-legislative actions created to transition the European economy from a linear to a circular model. It includes measures for production, consumption, repair, remanufacturing, waste management, and secondary raw materials (The EU's Circular Economy Action Plan, 2022; The EU's Circular Economy Action Plan | Shared by IGC, n.d.).

For IKEA, this transition requires the company to adjust its product designs and service strategies to comply with new measures. This process involves enhancing product transparency, prioritising sustainability, and improving lifecycle performance.

RIGHT TO REPAIR

The Right to Repair directive, which EU member states must implement by July 2026, mandates that manufacturers provide timely, cost-effective repair services and make information about repair options and spare parts easily accessible to consumers (Baccini, 2024). This policy should incentivise consumers to choose repair over replacement (Right to Repair: Making Repair Easier and More Appealing to Consumers | News | European Parliament, n.d.).

For IKEA, this regulation presents both a challenge and an opportunity. It drives the development of repair services and requires logistics, inventory management, and standardisation adjustments to facilitate the easy repair of products. However, this policy also positions IKEA to lead the market in offering sustainable kitchen solutions by focusing on long-lasting product use and repair services.

1 In 2014, IKEA stopped selling the FAKTUM kitchen system and its compatible parts after 20 years and replaced it with a new system. This system has different dimensions and components, which complicates developing a refurbishment service for this type of kitchen (FAKTUM Keuken: Nuttige Informatie, n.d.).

ECODESIGN FOR SUSTAINABLE PRODUCTS REGULATION

The Ecodesign for Sustainable Products Regulation (ESPR) is a component of the CEAP, setting requirements for specific product groups to support the transition to a circular economy. This regulation will become mandatory for numerous product categories by 2030. Furniture and kitchens are not yet included. Nevertheless, they will be phased in as new product categories over time. The DPP serves as a digital record for products, components, and materials, containing important information such as technical performance, material origins, repair activities, recycling capabilities, and lifecycle environmental impacts (Data.Europa.Eu, 2025; Ecodesign for Sustainable Products Regulation, n.d.).

For IKEA, the DPP represents a first-mover opportunity to provide customers with transparency about their kitchen's sustainability, repairability, and circular potential. By integrating this digital passport into its kitchen services before it becomes mandatory, IKEA demonstrates its commitment to circularity and improves the transparency of the kitchen's lifecycle, from design to end-of-life management.

EXTENDED PRODUCER RESPONSIBILITY

The Extended Producer Responsibility (EPR) mandates that companies manage the waste that remains after the use of the product (end-of-life), such as collecting, recycling, or reusing products (Kvk, n.d.). This obligation includes both financial and operational responsibilities, which vary depending on the specific legislation (Coalition, n.d.; OECD, 2024).

For IKEA, this involves managing kitchen components and materials after the point of sale, ensuring proper disassembly and recycling to maximise their value. By adhering to EPR regulations, IKEA is required to integrate recycling and waste management practices into its kitchen product lifecycle and services.

3.3

Repair and refurbishment are core strategies to execute the circular ambition of IKEA, offering tangible and affordable ways to extend the product lifespan.

Key insights:

- *Major barriers include labour costs, customer trust, and standardisation difficulties.*
- *Legislation (e.g., Right to Repair, Ecodesign) accelerates the need for such services.*
- *Enabling clear communication and values is key to the adoption of the strategies.*

3.4 / THE R&R STAKEHOLDER SYSTEM

This section identifies key internal and external stakeholders and maps their roles. It explains customer profiles and their context.

3.4.1 / KEY STAKEHOLDERS

The key stakeholders divide into two main categories: internal stakeholders, who are part of the IKEA organisation, and external stakeholders, who operate outside of it but influence or engage with the service. To visualise their relationship to the new service, an onion model is used to develop a stakeholder engagement model, see Figure 12.

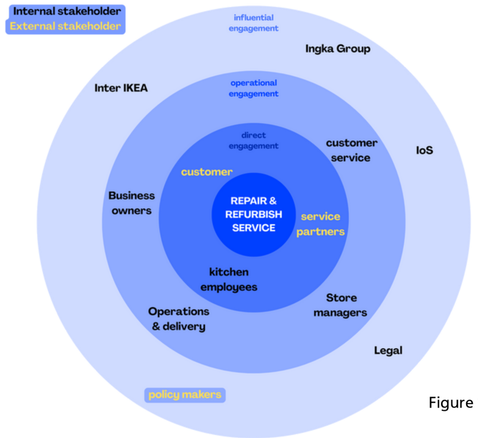


Figure 12 - Stakeholder engagement diagram

This model organises stakeholders based on their proximity to and type of engagement with the service: direct, operational, or influential. Colour coding highlights the distinction between internal and external stakeholders. Mapping these stakeholders and their roles reveals that effective service integration demands cross-functional coordination across operational, strategic, and external levels. The onion model highlights the layered nature of this engagement but also reinforces the importance of aligning internal processes with external expectations to ensure successful implementation.

The stakeholders and their functions in this service are briefly explained below:

Inter IKEA Systems B.V. / Safeguards brand consistency and initiates strategic innovation, ensuring alignment with IKEA's identity and long-term vision.

Ingka Group / Oversees global retail operations and ensures services are scalable and feasible across digital and physical channels.

IKEA of Sweden (IoS) / Designs the products and provides essential product data, for example, component specifications and material codes needed to assess and enable repair or refurbishment.

Legal teams / Ensure the service adheres to relevant regulations and internal standards concerning safety, liability, and customer rights.

National business owners (for kitchens and services) / Are responsible for financial performance, aligning service innovation with revenue models and commercial goals.

Store managers and operations / Manage service implementation, employee coordination, the in-store customer experience, and overall operations.

Customer service / Act as key customer touchpoints of services, handling feedback, troubleshooting, and after-sales support.

Employees / Particularly in kitchens and customer-facing roles, co-workers are central to delivering the service effectively. Their commitment, knowledge, and interaction with customers directly shape the service experience.

Service Partners / External contractors who carry out the physical repair and refurbishment activities. Their capacity, reliability, and craftsmanship are critical to service quality and scalability.

Customers / IKEA kitchen owners or potential buyers whose needs, satisfaction, and participation in circular behaviours are essential for the adoption and iterative improvement of the service.

Policymakers / National and European authorities who define regulations around sustainability, repair rights, and extended producer responsibility. Their influence determines the regulatory context and pace for circular service development.

3.4.2 / CUSTOMER PROFILES

Internal market analysis identifies a key target group for kitchen repair and refurbishment: first-time homebuyers within one to two years of purchase. This group often lacks the financial flexibility to replace their entire kitchen but seeks practical, affordable solutions to personalise or extend the life of what they already own or buy.

In addition to this core group, other emerging audiences include pensioners and younger adults in urban settings. These target groups, visualised in Figure 14, tend to show a higher interest in sustainable consumption and budget-conscious decision-making or simply do not want to or know how to carry out a repair or renewal themselves (Transform UK, 2024).

Figure 14 - Example of functional damage

Recent housing and demographic trends further reinforce the relevance of these profiles.

LOWER BUDGET

Younger adults (25–35) in the EU increasingly rent rather than buy as rising home prices push many into longer-term renting. The average age of leaving the parental home in the EU is now approximately 26 years, and home ownership of this group declined significantly in recent decades (Young People - Housing Conditions, 2022; Skopeliti, 2024) Renting among those under 30 rose from ~66 % to ~68 %, and among 30–39-year-olds from ~38 % to ~45 % between 2010 and 2019 in the EU ("Unaffordable and Inadequate Housing in Europe," 2023). This growing renter demographic usually executes 'renter-friendly' partial upgrades or repairs, and is responsible for tiny repairs of a kitchen that they did not purchase (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2024). This decline in budget underscores the need to provide more affordable and lifespan-prolonging services and solutions.

CLIMATE CONCERN

The concerns about the impact of climate change are rising. In 2025, research shows that 74% of the participants are concerned about the impact of climate change (IPSOS & Patodia, 2025). There is also growing concern, or climate anxiety, among young adults, and climate change is affecting their mental and physical health (Pinchoff et al., 2025). Environmental concern impacts the intention towards sustainable consumption (Maduku, 2023). However, there is a gap between consumers' attitudes towards sustainability and their actions (Borges-Tiago et al., 2024; Maduku, 2023; Van Dam & Van Trijp, 2016).

OWNERSHIP

Another trend among these customer profiles is a changing attitude towards ownership. For several sectors, a mindset shift to usership or a share-based model is already happening (Publicis Sapient, 2020; Statista, 2025). An example of a changing attitude towards ownership is Kitchen-As-A-Service, a Dutch initiative that reinvented the ownership of kitchens (Circulariteit — Chainable, 2025).

Financial pressure, climate awareness, and changing attitudes towards ownership drive these trends. These trends indicate a strong demand for solutions that emphasise affordability, reinforced by messaging centred on sustainability.

The stakeholder ecosystem, customer segmentation, and behavioural trends reveal both the potential and complexity of aligning circular kitchen services with user needs and operational realities.

Key insights:

- *Successful implementation requires coordination across internal and external stakeholders.*
- *Target groups value affordability, practicality, and sustainability.*
- *Trends like climate concerns and changing views on ownership drive interest in circular services.*

3.4

3.5 / ENABLING SUSTAINABLE BEHAVIOUR

This section delves into the behavioural drivers that shape circular decision-making and identifies how design can support sustainable actions. It outlines enablers and design strategies to close the gap between intention and behaviour.

3.5.1 / DRIVERS FOR BEHAVIOUR CHANGE

The transition to a circular economy not only depends on industries and policymakers; the customer also plays a significant role (Shevchenko et al., 2022). Understanding what motivates and discourages customers' engagement in circular behaviours is crucial for designing effective solutions and services that respond to real-world needs.

Although many consumers express positive attitudes towards circular practices, their actual participation remains limited. This gap between intention and action, as mentioned before, is well-documented in circular economy research. One key reason is the relative ease of buying new compared to engaging in circular processes. If consumers perceive circular options as inconvenient, costly, or time-consuming, they are more likely to opt for the simpler, linear alternative (Trinomics B.V., 2018). Price sensitivity also plays a crucial role. Research indicates that beyond a certain price threshold, most consumers are unlikely to consider repair unless they are particularly motivated or identify as repair-minded individuals (De Vries et al., 2023). For customers to choose repair, it must compete on cost, perceived value, reliability, and emotional reward.

Behavioural change theory underscores three key conditions that must be present for sustainable behaviour to occur: *motivation*, *ability*, and a *prompt* to trigger the behaviour (Fogg, 2009; Fogg Behavior Model - BJ Fogg, n.d.). For circular services to succeed, they must deliver added customer value beyond sustainability alone, aligning with the motivational component of the model (Benz, 2022; Parajuly et al., 2020).

When examining the drivers of circular behaviours in purchasing and service decisions, consumers often prioritise price, quality, and convenience, followed by factors such as durability and repairability (Gomes et al., 2022; Publications Office of the European Union, 2018). However, consumers currently lack accessible information on durability and repairability. This lack of knowledge directly affects the ability to engage in circular behaviours. Research shows that when consumers receive repairability information upfront, they are more than twice as likely to choose products with high repair scores. Additionally, when long-term economic benefits are communicated in advance, consumers become more willing to accept a higher purchase price, thereby fulfilling the prompt that drives action. (De Vries et al., 2023; Trinomics B.V., 2018).

Three possible enablers that support circular behaviour by directly addressing the drivers and barriers are identified:

ADDED VALUE AND CONVENIENCE

Consumers appreciate services that offer additional value and convenience, not just sustainability benefits. Examples include bundling options such as design support, measuring services, or technical installation alongside repair offerings. These integrated approaches reduce the need to coordinate across multiple service providers and lower the overall perceived effort. For example, value-adding features such as upgrade opportunities, warranty extensions, or the preservation of aesthetic quality can further enhance appeal and relevance (Van Den Berge et al., 2020).

EMOTIONAL ATTACHMENT

Emotional attachment influences the decision to repair or refurbish rather than buy new. Products with sentimental value, such as those linked to good memories or milestones, are more likely to be repaired or refurbished rather than replaced (“Product Attachment and Replacement: Implications for Sustainable Design”, 2014). For many people, the kitchen holds symbolic value as the heart of the home. It is a space for daily routines, shared meals, and family traditions, and often represents a significant personal investment, particularly for first-time homeowners. This emotional bond increases the likelihood that customers choose to maintain and extend the life of their kitchen through circular solutions.

INFORMATION UPFRONT

Providing clear, upfront information about the reparability and durability of kitchen components is a key enabler. It allows customers to make more confident and intentional choices while increasing their perceived control and knowledge (Helping Consumers Choose Product Repair Over Replacement, n.d.).

3.5.2 / ENABLING SUSTAINABLE BEHAVIOUR THROUGH DESIGN

Building on the identified drivers and enablers of circular behaviour, designing for sustainable transitions involves aligning products, services, and behaviours to create systemic conditions that support circularity. As a mediator between people and systems, design plays a crucial role in shaping how sustainable practices are adopted daily (Höpfl et al., 2024). It shapes the interaction between users and products or services and influences how people perceive, understand, and act upon sustainability principles (Franceschini & Da Rocha, 2025).

Although consumers often express pro-environmental attitudes, actual behaviour does not align, a gap known as the attitude–behaviour gap, as mentioned before (Borges-Tiago et al., 2024). This gap stems from individual factors such as awareness, habits, and motivation. Environmental barriers, including accessibility, affordability, income, and social norms, also influence the gap (Borges-Tiago et al., 2024; Wintschnig, 2021).

Design addresses both. It strengthens individual competence and motivation, for example, through intuitive actions, feedback and emotional engagement, while restructuring service and product systems to lower friction and enable circular practices (Fleischmann, 2020; Scholtysik et al., 2023 Wever et al., 2008; White et al., 2019). In this way, design simultaneously activates user behaviour and reconfigures the underlying systems and structures that sustain these behaviours over time. This positions design as a critical driver in the transition towards circular economies.

Design decisions influence whether sustainable behaviour becomes feasible, desirable, and normalised by creating the correct prompts to change the behaviour as mentioned in Section 3.5.1 (Fogg, 2009). Transition design frameworks and systems thinking approach show that small design decisions can cascade into broader behavioural and infrastructural shifts, making design a key driver of change (Goss et al., 2025; Irwin, 2020). It is essential to find the system structure that leads to the problem and where to look for leverage (Meadows, 2009).

In the context of this project, this means design can enable and normalise circular behaviour throughout the kitchen ownership journey, particularly by embedding guidance, modularity, and service consistency into the repair and refurbishment experience.

Design plays a pivotal role in enabling circular behaviour by bridging individual motivation and systemic enablers through accessible, engaging, and well-structured service experiences.

Key insights

- *Repair must be affordable, convenient, and emotionally meaningful to compete with replacement.*
- *Design can close the attitude, behaviour gap by activating motivation and lowering friction through clear prompts and intuitive interactions.*
- *Systemic design decisions, like embedding guidance, modularity, and consistency, help normalise circular behaviour over time.*

3.5

3.6 / IMPLICATIONS FOR QUALITATIVE RESEARCH

The insights of Chapter 3 reveal a need to complement theoretical insights with qualitative research. This section elaborates on three central reasons.

The desk and literature research presented in Chapter 3 shows a foundational understanding of IKEA's organisational and operational context, circular strategies, customer profiles, and behavioural drivers. However, to move towards grounded design opportunities, qualitative research is essential. Qualitative research contextualises and validates the earlier findings through lived experiences and stakeholder realities. Three primary research gaps emerge that inform the direction of qualitative inquiry:

UNDERSTANDING STAKEHOLDER VALUES AND MISALIGNMENTS

Sections 3.2 and 3.4 show that IKEA has a strong organisational structure and evolving circular ambitions. However, internal and external stakeholders, ranging from product designers to service partners, have different roles, incentives, and operational realities. Qualitative research is necessary to:

- Uncover conflicting or hidden value drivers.
- Identify operational frictions that prevent smooth repair/refurbishment integration.
- Find out different perspectives on how R&R should be implemented.

LOCATING REAL-WORLD FRICTION IN SERVICE AND PRODUCT USE

Section 3.3 highlights barriers to implementing repair and refurbishment, including technical compatibility, customer trust, and economic feasibility. While theoretical models such as the 10R ladder and repair impact data (e.g., Repair Café, 2019) provide broad direction, they do not reveal where customers actually encounter friction in the current service flows of kitchens.

Qualitative research uncovers:

- Specific pain points in the kitchen ownership and repair journey.
- Unspoken reasons or emotions that drive avoidance of repair and refurbishment.
- Issues in service handling between IKEA and service partners.

IDENTIFYING CUSTOMER NEEDS AND DESIRES

As seen in Sections 3.4.2 and 3.5, desk research uncovers key customer trends, such as increasing climate concern, price sensitivity among renters and first-time homebuyers, and shifting ownership models. While these trends reveal potential demand, they do not show what users want or expect from repair and refurbishment services for their kitchens. Qualitative research is needed to:

- Explore customer perception of repair and refurbishment related to their kitchen and its lifecycle.
- Understand what motivates and stimulates customers to repair and refurbish.
- Discover what people encounter when they repair or refurbish their kitchen.

This section highlights the need for qualitative research to ground theoretical insights in real-life experiences and uncover design opportunities.

Key insights:

- *Stakeholder misalignments and frictions require deeper exploration.*
- *Practical and emotional barriers in the repair journey must be uncovered.*
- *Customer expectations and motivations need to be understood firsthand.*

3.6

4/ EXPLORING THE VALUES

This chapter explores the past and present conditions that will inform the future vision and concept through qualitative research. It researches the values and dynamics of the internal context, the service, and the user to extract the current values.

CHAPTER OVERVIEW

PHASE 1B

4.1 / QUALITATIVE RESEARCH METHOD

This section outlines the qualitative research approach used to explore the complexity of implementing a kitchen repair and refurbishment service. The method consisted of multiple qualitative techniques aimed at understanding stakeholder collaboration, operational barriers, and customer behaviour.

4.1.1 / RESEARCH OBJECTIVE AND COLLECTION METHODS

Given the novelty of this offering within IKEA and elsewhere, a series of qualitative methods surfaces lived experiences, operational realities, and cross-functional tensions that would not be accessible through desk research alone. The goal of this research is to identify systemic, organisational, and behavioural dynamics related to the implementation of a new kitchen R&R service. This exploratory research supports the development of a context-sensitive and feasible design and strategy.

To build a holistic understanding of the service system, a combination of qualitative methods is used:

- Ethnographic shadowing of internal IKEA teams involved in service and sustainability development allows for real-time observation of internal coordination and decision-making, see Confidential Appendix C.
- Semi-structured interviews with IKEA employees, service development leads, and external service partners aim to surface operational tensions and expectations, see Appendix B and Confidential Appendix D.
- Workshops and co-creation sessions, including one led by the researcher to engage frontline employees and validate early findings, using blueprinting tools, see Appendix C.
- Informal 1-on-1 conversations across departments and roles for context-rich background insights.
- Structured and informal interviews with customers and repair-experienced users to explore behavioural drivers, barriers, and personal experiences with kitchen upgrades, see Confidential Appendix D

Nine interviews are recorded, transcribed, and thematically coded to enable structured analysis (Confidential Appendix D). Additional input from informal conversations and workshops supports triangulation, which will be explained in more depth at the end of this section.

4.1.2 / PARTICIPANTS AND INTERVIEW DESIGN

Participants represent a range of perspectives across the service ecosystem, including:

- IKEA employees from kitchen sales, customer service, and service development.
- Service partners responsible for repairs and refurbishment.
- Customers and external experts with direct experience in kitchen repair and refurbishment or home renovations.

This mix allows for capturing high-level strategy perspectives and hands-on operational experiences. The interviews and semi-structured interviews are adapted to each participant group. For service partners and internal partners, the interviews are semi-structured. Questions focus on their specific processes, their perspective on the feasibility of the service, and their vision for the future service. For internal teams, the interviews explore coordination practices, knowledge gaps, and perceptions of customer and company readiness and feasibility. For customers and experienced users, there is a fixed question guide to explore their behaviour, decision-making, and expectations around repairing and refurbishing their kitchens. The fixed guide and semi-structured format are included in Appendix B.

All participants provided informed consent. Interview data is anonymous; only the function is mentioned. The research focuses on discovering underlying values and ways of working, without offering direct interventions during the data collection phase, preserving the exploratory nature.

4.1.3 / ANALYSIS

The research uses thematic coding to analyse the recorded interviews and identify recurring patterns across stakeholder perspectives. It discovers codes and organises them into core themes such as customer behaviour, service feasibility, and knowledge. Observations and workshop input support the validation and contextualisation of emerging insights.

The insights feed into a service blueprint, co-developed with internal stakeholders. This blueprint visualises the envisioned

customer journey exposes systemic gaps and clarifies key actions and touchpoints of internal teams, external partners, and customers. The service blueprint maps the full journey of a future R&R service, from initial customer contact to service execution and after-sales handling. It functions as a synthesis tool and a strategic artefact to align perspectives and guide further development. Additionally, it supports the creation of a modular, flexible service that is adaptable to different store formats or countries while maintaining core service consistency. All the findings are synthesised to uncover common value tensions and system-level insights. Figure 15 presents a schematic overview of Phase 1B.

TRIANGULATION APPROACH

To strengthen the validity of the findings, triangulation will be applied across methods, data types, and stakeholder perspectives. For example, observations during ethnographic research cross-check assumptions made by stakeholders during interviews, especially regarding feasibility and frontline challenges. Workshop outcomes are compared to service research results and help refine the service blueprint with input from multiple departments. This multi-angle comparison uncovers not just converging insights, but also value tensions and blind spots between strategic, operational, and behavioural layers. While triangulation in this context is interpretive rather than statistical, it plays a central role in forming a grounded and multi-perspective understanding of the circular service system.

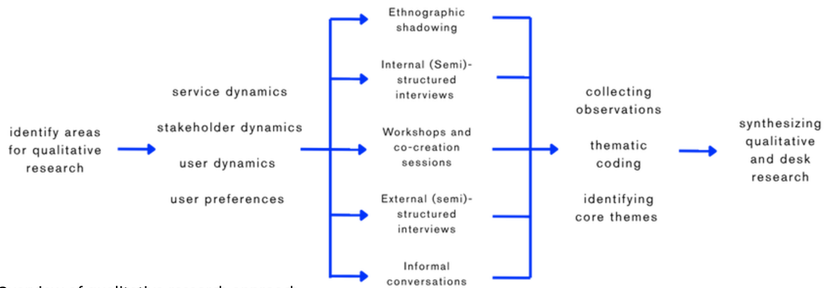


Figure 15 - Overview of qualitative research approach

4.2 / STAKEHOLDER AND SERVICE DYNAMICS

Section 4.2 explores and presents the dynamics within the organisational and operational system behind the kitchen repair and refurbishment service. It highlights how internal teams and service partners collaborate, where service gaps emerge, and which factors influence feasibility. Insights are based on interviews, observations, and co-creation activities.

4.2.1 / STAKEHOLDER AND COLLABORATION DYNAMICS

Effectively managing and integrating circular services requires collaboration across different stakeholders within and beyond the company. The different stakeholders described in Chapter 3.4 operate at different organisational levels and have diverse priorities and varying operational methods. Understanding these relationships and interconnections is essential for designing feasible and scalable solutions aligned and operable with existing workflows.

Researching the stakeholder system reveals several structural, operational, and behavioural challenges and value tensions that must be addressed for the successful implementation of an R&R service. Value tensions are misalignments between the priorities and values of different stakeholders. They occur when actors disagree on the desirability or feasibility of service elements due to differing goals or operational constraints (Mosaddek, n.d.)

First of all, findings reveal **priority divisions** between departments. For instance, front-line employees express a need for greater adaptability to respond to customer needs, while centrally positioned, international teams emphasise the importance of process consistency across locations. This tension stems from a difference between teams that prioritise commercial outcomes and those that prioritise customer satisfaction and service quality (Confidential Appendix C).

Secondly, a value tension occurs between **the ambition to standardise service processes and the need for flexibility in addressing complex, case-specific repairs.** While central teams often prioritise process efficiency and cost control, service partners and employees require more room to adapt to unexpected conditions while performing the service. This misalignment complicates expectation management toward customers, particularly when outcomes depend on variables and outcomes that can't be completely anticipated during planning. (Confidential Appendix C and D, Interviews 1 and 2).

Thirdly, there is **fragmentation in collaboration and decision-making.** This is especially visible in the interaction between kitchen department employees and service partners. Interviews highlight that communication across teams is often inconsistent, and coordination relies heavily on individual effort rather than systematised processes. In addition, due to the introduction of new IT systems, several stores use different ways of communication with the service partners and customers. This complicates standardising the employee's journey and confuses the customer (Confidential Appendix D, Interview 7).

Moreover, as discussed in Section 3.2.2, **economic viability is a shared concern among stakeholders**. This concern influences the underlying business model and the way customers and business owners perceive the service. Without added value or convenience in addition to an attractive price tag, the adoption of repair services remains limited, both internally within the organisation and externally among users.

Finally, all of these dynamics **operate under the influence of the incoming regulatory context** and upcoming circular economy legislation, as discussed in Section 3.3.3. These developments create urgency and opportunity: they require internal systems to adapt but also provide momentum for investment in new service models.

4.2.2 / SERVICE DYNAMICS

The next section elaborates on the main service-related findings from the qualitative research and service blueprinting process. It highlights the operational and experiential dynamics that influence the successful execution and implementation of the R&R service.

VARIETY IN SERVICE REQUESTS

The pilot of IKEA focuses on customers who own a modular kitchen from the existing range and are looking for a solution to 'renew' it. Customers can renew their kitchen via repair, refurbishment, or a combination. Observed service requests during the pilot are presented in Confidential Appendix F. There are several differences between repair and refurbishment requests. Repair customers often prioritise aesthetics and functionality, and typically expect quick, affordable fixes that restore their kitchen's look and feel without much disruption (Confidential Appendix D, Interview 1). Refurbishment customers need more technical support and guidance since their updates require precise measurements and may involve plumbing, electricity, or any other subsequent action needed. They want to extend the kitchen's lifespan, adjust to a changing household situation or style, or manage budget limitations (Confidential Appendix D, Interview 2).

An internal objective is to merge different needs into one service whenever a customer requests a mixture of aesthetic or functional repairs and refurbishments. Such an arrangement highlights the importance of a flexible service and a service that provides solutions for different levels of intervention within a cohesive customer journey.

STANDARDISATION VS. FLEXIBILITY

Repair solutions vary significantly depending on the type of damage, making it challenging to offer a standardised repair service. For instance, structural repairs require more time and product knowledge than aesthetic fixes. This variability challenges the setup of a one-size-fits-all repair service. Some scenarios require custom solutions, increasing the need for customisation and clear expectation management. Managing customer expectations around the standardisation of repairs is essential to ensure customers understand what is possible and how the service is delivered (Confidential Appendix D, Interviews 1 and 2).

KNOWLEDGE AND COMMUNICATION GAP

The lack of repair and refurbishment knowledge among employees and customers is also a challenge. This knowledge gap limits the employee's ability to assess technical feasibility and complicates guiding customers correctly through the service process. Currently, there is an absence of clear tools or formats to transfer knowledge from the service partner to staff and from staff to the customers (Confidential Appendix C and D, Interviews 2, 3, 5, and 6).

Within IKEA, there is also a concern that promoting repairs alongside new products could lead to the impression of selling low-quality products (Confidential Appendix C).

4.2

Analysis of diverse stakeholders involved in kitchen services revealed significant tensions and gaps.

Key insights:

- *Tensions between standardisation and flexibility.*
- *Gaps in communication, knowledge, and ownership hinder service delivery.*
- *Stakeholder alignment must be improved to implement scale circular solutions.*

4.3 / USER INSIGHTS

This section explains how customers perceive, value, and interact with their kitchen and their approach to potential refurbishments and repairs. It offers insights into kitchen users and IKEA customers. It also outlines key behavioural drivers, values, and challenges.

4.3.1 / DYNAMICS AND CHALLENGES

As stated in the VIP method, '*products do not exist independent of the world of people*' (Hekkert & Van Dijk, 2010). Thus, it is essential to obtain a deeper understanding of customers and their needs. Interviews conducted during this research confirm several recurring barriers and identify the following customer-facing challenges (see Confidential Appendix D, Interviews 4, 5, 6, and 9):

LACK OF KNOWLEDGE

Customers indicate that they do not know how to approach a repair or where to start. They lack the knowledge to diagnose issues themselves and are unsure what to search for when trying to find a solution independently (Confidential Appendix D, Interviews 4, 6 and 9). As a result, they regularly turn to IKEA or external experts for guidance.

Additionally, employees note that customers have little to no knowledge about their kitchen setup, such as the type, dimensions, or available components. '*It rarely happens that the measurements the customer gives us are correct*' (Confidential Appendix D, Interviews 2 and 3). Customers also lack clarity about what aspects of their kitchen can be repaired or renewed and how. This is especially true for older models or discontinued components. The absence of transparency and clear eligibility guidelines causes hesitation and inaction, even among customers open to circular solutions.

PERCEPTION OF INCONVENIENCE AND COMPLEXITY

Repair and refurbishment are frequently associated with stress, uncertainty, or logistical hassle. Users perceive the process as more complex, time-consuming, or disruptive than replacing a product entirely. One consumer said, '*I think it requires a lot of time, effort and precision to get my worktop and sink out. I think it is too big of an operation'* (Confidential Appendix D, Interview 9).

This perception persists even though most interventions do not require demolition or invasive construction work. Instead, many upgrades, such as replacing cabinet fronts or adjusting appliances, can be implemented with minimal disruption and in a short time frame. Nonetheless, the absence of a clear, simple pathway and visible examples of what is possible discourages engagement, particularly among customers without technical knowledge or prior experience.

LOW TRUST IN QUALITY AND AESTHETIC OUTCOME

Some customers hesitate to opt for partial refurbishment or repair due to concerns about mismatches in colour, wear, or alignment with the existing kitchen. There is a common fear that the outcome is temporary or less reliable than a full replacement, undermining the value proposition of circular services (Publications Office of the European Union, 2018; Roskladka et al., 2023).

Unlike repair, the initiative for refurbishment usually stems from a desire for a new look, whether aesthetic or functional, and budget constraints. Interviews also indicate that customers often question the value of repairing their kitchen. For example, in an interview, an IKEA consumer mentions, '*If I had a worktop with many holes and cracks, then I would just order a new worktop, I think. Since it has to be a durable product, it should last for a long time.'* (See Confidential Appendix D, Interview 9).

4.3.2 / DESIRES AND PREFERENCES

The interviews with experts by experience reveal a range of desires and preferences about repairing or refurbishing their kitchens. These insights reflect practical needs and emotional drivers such as clarity, autonomy, and trust. Across interviews, three main themes emerge

TAILORED TO YOUR KITCHEN

Customers consistently expressed a desire for repair or refurbishment solutions grounded in the specific characteristics of their current kitchen. Rather than receiving generic suggestions, they want the service to use data from past purchases or allow input based on their current kitchen layout. Several mentioned experiences with the IKEA kitchen planner as positive, suggesting that connecting circular solutions to their actual kitchen configuration would be valuable (Confidential Appendix D, Interviews 8 and 9).

GUIDANCE AND DECISION SUPPORT

Participants indicated they feel uncertain about what is possible and rely on expert advice to guide their decisions. 'We can do it, but it is always nice when someone has a look with you' (Confidential Appendix, Interview 5). They want help understanding which parts can be repaired or replaced, the impact on aesthetics and function, and whether something is worth fixing. Customers also desire transparent information on cost, duration, and effort, so they can weigh different options and decide what suits them best, whether that's a DIY solution, partial service, or full support (Confidential Appendix, Interviews 3, 5, and 6).

DIY SUPPORT FOR SMALL FIXES

While major changes tend to be handed over to professionals, many customers are open to handling smaller repairs by themselves, such as replacing cabinet fronts or fixing broken parts. However, they emphasise the need for more instructions, visual guidance, and accessible tools to do it. When properly supported, this DIY approach becomes a more affordable and empowering alternative, which is also the most sustainable solution (Confidential Appendix, Interviews 5, 6, and 9).

This section highlights key barriers and motivations in how customers approach kitchen R&R.
Key insights:

- *Lack of knowledge, trust, and perceived complexity hinder engagement.*
- *Users want tailored advice and clear guidance to feel confident in their decisions.*
- *Many are open to DIY fixes if supported with the right tools and instructions.*

4.3

4.4 / SYNTHESIS OF CONTEXT AND VALUES

This section synthesises insights from the research. It brings together findings from the desk and qualitative research in an overview of facilitators and hindrances, a service blueprint, possible strategic directions, and a value proposition. These insights enable the creation of a service blueprint, which also identifies potential leverage points for solutions.

4.4.1 / ORGANISATIONAL, OPERATIONAL AND INFRASTRUCTURAL FACTORS

The integration of the kitchen repair and refurbishment service into the existing product-service system relies on several organisational, operational, and infrastructural conditions. These conditions, identified through qualitative and theoretical research insights, either hinder or facilitate the implementation and integration of a new service and solution. Table 1 below categorises the facilitators and hindrances across the three different dimensions.

DIMENSION	FACILITATOR	HINDER
Organisation	• High commitment to circularity & sustainability • Established reputation for affordability • Warranties • Desire to make circular services profitable	• Current internal silos and communication scattering • Value tensions between commercial & service teams • Global vs. local standardisation conflict • Lower trust in quality
Operations	• Existing kitchen service infrastructure • Widespread adoption of digital tools (for kitchens) • Established service partners	• Low flexibility to handle varying repair requests • Lack of repair and refurbish knowledge/literacy • Perception of inconvenience and complexity
Infrastructure	• Existing IT infrastructure and systems • Modular product design	• Integration new services issues • New policies

Table 1 - Overview of facilitators and hinders on the three different dimensions

4.4.2 / SERVICE BLUEPRINT

A service blueprint helps build and map the operations of the service. The desk and qualitative research identified components that are both usable and scalable for the new service. For example, parts of the kitchen installation workflow infrastructure are reused to reduce complexity and ensure feasibility in the renewal process. Similarly, elements from the Planning & Advice service are adapted to better support customers uncertain about technical repair decisions.

However, mapping the roles and actions that enable an ideal customer journey revealed several gaps. These gaps highlight opportunities for design interventions to enhance clarity and improve the overall customer experience. For the complete service blueprint and the highlighted gaps, see Confidential Appendix E.

Figure 16 - Blurred blueprint with highlighed gaps

The service blueprint revealed the following opportunities for possible design solutions:

- Increasing repair and refurbishment knowledge (for both customers and employees).
- Improving knowledge transfer between employees and customers.
- Improving the product delivery experience.
- Introducing a central dashboard for kitchens.
- Encouraging informed ownership after buying a new kitchen as a starting point for repair and refurbishing.

4.4.3 / STRATEGIC DIRECTIONS

Based on the identified tensions and leverage points, this section outlines several possible strategic directions. A quadrant framework is developed to identify the necessary operational conditions and determine how to balance standardisation with customisation (Figure 17). This framework shows two strategic tensions: the need for standardised versus customised service offerings, and the degree of operational efficiency versus flexibility. Each quadrant reveals a different configuration of communication intensity and modularity, presenting design trade-offs.

Service offer refers to the degree to which service components are interchangeable and independently upgradable. A fixed offer enables efficient scaling and repeatability; a modular offer requires bespoke handling and reduces repeatability.

Operations refer to the personal communication and coordination between the customer and IKEA to execute the service. Supported means back-and-forth contact, co-decisions, or guidance; self-guided implies clear, predefined steps and communication, which limits the need for human interaction.

This framework defines four potential interaction configurations that can be used to choose the direction most desirable for IKEA, and each direction represents a potential focus for concept development in the next phase:

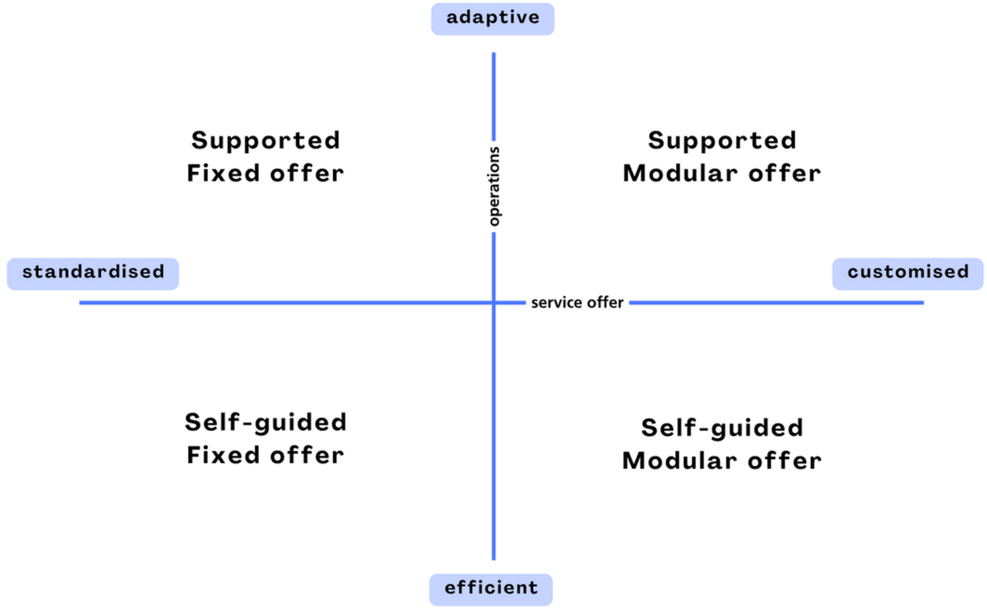


Figure 17 - Strategic direction in a quadrant framework

SUPPORTED, FIXED OFFER
The service is standardised but involves direct communication or assistance to guide users through the process.
Design implication: Introduce digital guidance tools or standardised consultation scripts to streamline communication and reduce operational effort.

SUPPORTED, MODULAR OFFER
Modular elements make up the services, which the customer co-defines through personal communication.
Design implication: Implement co-creation tools, guided product selectors, and staff training to enable feasible, personalised service interactions.

SELF-GUIDED, MODULAR OFFER
Service is built from predefined modules and delivered with minimal need for personal support.
Design implication: Enable self-service flows and clear decision journeys to scale efficiently while preserving flexibility.

SELF-GUIDED, FIXED OFFER
Services are predefined and require little to no personal contact and clear, pre-defined customer journeys.
Design implication: Clarify customer journeys through predefined and well-tested communication.

The preferred quadrant is the bottom right, self-guided and modular. This quadrant suits best the DIY culture of IKEA and the desire of the customer to take charge and have transparent and personal service solutions.

4.4.4 / EMERGING VALUE PROPOSITION

This section summarises the foundational elements of a new value proposition for the R&R service. It reframes the offering in terms of:

- Emotional and functional customer needs.
- Internal capabilities and constraints.
- Broader transition towards circular consumption.

The value proposition canvas, see Figure 18 on the next page, presents specific value gains and pain relievers found through qualitative research, and solutions for the service based on the insights. The Value Proposition Canvas is a strategic tool to help organisations design offerings that meet real customer needs (Value Proposition Design, n.d.).

The canvas translates qualitative research findings into concrete solutions that stimulate customer participation. The canvas shows that stimulating customer participation requires more than offering sustainable alternatives. It depends on thoughtful service design that removes barriers, builds trust, and aligns with customer goals and identities.

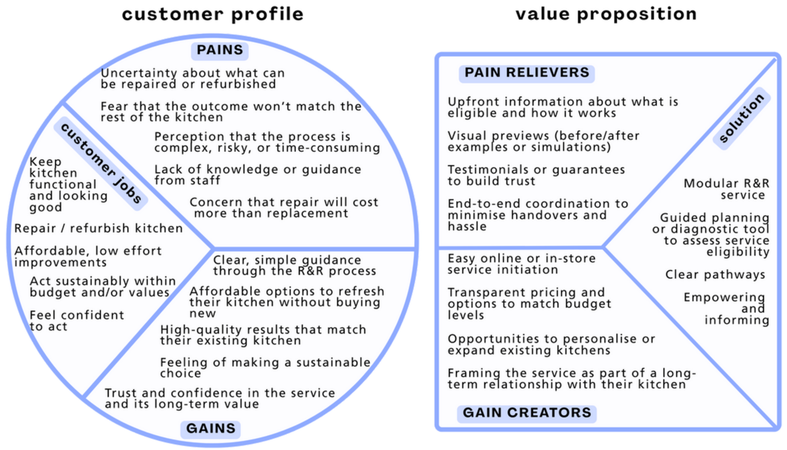


Figure 18 - Value proposition canvas

4.4

This section synthesises insights by presenting a service blueprint, strategic directions, and a value proposition. It outlines leverage points to guide the next design phase.
Key insights:

- *Operational gaps and knowledge barriers hinder effective service delivery and customer engagement.*
- *A self-guided, modular service model best fits IKEA's values and customer expectations.*
- *A strong value proposition must remove friction, build trust, and empower customer participation.*

4.5 / CONCLUSION PHASE 1

Phase 1 established a clear understanding of the systemic, organisational, and behavioural conditions that influence the development of a kitchen repair and refurbishment service. Chapters 3 and 4 combine desk research and qualitative research to analyse IKEA's service infrastructure, circular strategies, stakeholder dynamics, and customer behaviours. The research highlights both enablers, such as the modular kitchen system and existing service flows, and barriers, including fragmented collaboration, knowledge gaps, and low customer participation.

The findings show that, while the infrastructure and service foundation is in place, several misalignments hinder successful implementation. Operational frictions, collaboration gaps between stakeholders, and limited engagement from customers create challenges that the new service must address.

These insights point toward a future in which:

- Customers actively participate in circular behaviour, supported by clear guidance and tools.
- Stakeholders collaborate more effectively through shared systems and aligned processes.
- The service becomes modular, scalable, and emotionally meaningful to users.

This synthesis lays the groundwork for the next phase of the VIP method: envisioning a future context that reshapes how people interact with their kitchens and the systems that sustain them. Phase 2 uses these findings to create a vision and define a design challenge that guides the creation of actionable, desirable, and future-proof service solutions.

5/ FRAMING THE FUTURE VISION & CHALLENGE

This chapter translates the insights into a future vision that forms the foundation for the design phase. Reframing current values envisions how circular behaviours become a part of everyday life. A vision scenario, interaction metaphor, and requirements set a challenge to develop a solution desirable for customers and feasible for implementation.

CHAPTER OVERVIEW

PHASE 2

5.1 / VISION DEVELOPMENT

To move from analysis to opportunity, the value system of IKEA kitchen services is reframed. The existing values shift toward a future-oriented perspective, forming the foundation for a more circular, modular, and user-driven kitchen service vision.

5.1.1 / REFRAMING THE VALUES

To envision a meaningful future for kitchen services, it is necessary to reflect on the current value system underpinning the existing IKEA kitchen offer. The research, stakeholder interviews, ethnographic research, and internal documentation reviewed in Chapter 3 distil these current values. They reflect a service model built around low upfront costs, standardised solutions, and self-managed customer journeys. The five current values that emerge from this analysis are shown in the left column of Table 2.

These current values are reframed to explore and challenge the future of circular kitchen services. This transition from current to new values establishes the foundation for the vision's direction. The right column of Table 2 shows each current value translated into a new one, aligned with long-term circularity, customer empowerment, and sustainable business practices.

current values		new values
Affordability through low upfront pricing	⟷	Affordability through circularity & long-term value
Standardised service offer	⟷	Modular & customisable service blocks
Empower through DIY assembly	⟷	Empower through informed & proactive ownership
Transaction focused	⟷	Relationship focused
pre-defined customer journey	⟷	Self-directed customer journey

Table 2 - Current and reframed new values

Affordability through circularity and long-term value shifts the focus from initial pricing to lifecycle savings. The service enables users to extend the lifespan of their kitchen, reducing the need or desire for full replacement.

Modular and customisable service blocks replace one-size-fits-all solutions with adaptable service modules, allowing users to tailor their kitchen and related services over time according to personal needs.

Empowerment through informed and proactive ownership redefines empowerment beyond assembly, enabling users to maintain and evolve their kitchen through access to tools, knowledge, and support.

Relationship-focused moves away from one-off transactions, facilitating an ongoing, evolving relationship between the user and their kitchen that reflects personal growth and change.

A *self-directed customer* journey implies a shift from reactive, service-led interventions to proactive, user-initiated actions. It positions the user as an informed actor who shapes their own service experience, supported by transparency, guidance, and personalised recommendations.

The envisioned future kitchen system shifts from a static product to a dynamic, modular environment that empowers users to actively shape and sustain their kitchen over time.

Key insights:

- *Supportive guidance and intuitive tools to promote user independence.*
- *Flexibility and modularity to enable adaptation to life changes and needs.*
- *Ownership over the kitchen lifecycle to foster long-term engagement and circular behaviour.*

5.1

5.2 / FUTURE VISION

The future vision builds on the new value set introduced in Section 4.1. It imagines a shift from transactional, standardised services to modular, circular, and user-driven services. To bring this vision to life, a scenario is created to illustrate how a future customer interacts with an IKEA kitchen. Figure 19 visualises the future vision. Appendix D shows the development of the vision.

VISION SCENARIO

It's 2030, imagine you just moved into your first home, exciting but also overwhelming. The world around you is uncertain, prices are rising, resources are limited, and life is changing fast. You want to invest in something reliable, something that can grow with you and with your wallet.

In the future, a kitchen will no longer be a fixed installation. It is a system designed to truly live, celebrate, and enjoy. You start simple and affordable, but it is made to be maintained, updated, and adapted as life unfolds. You repair, refurbish, expand, and resell it whenever you want to.

Sounds a bit intimidating to do alone, right? Well, you are not alone in figuring it all out. IKEA gives you the tools, knowledge, and confidence to take action. Need to fix a cabinet door? There's clear customised guidance and support. Can't fix it? Swap out the fronts, effortlessly matching the rest. Moving in together or a child on the way? Expand the setup. Need help with doing it? Services are within reach, easy, and transparent, and you are in full control.

This kitchen doesn't lock you into choices you made at 25. It evolves as your needs and values shift, helping you live more sustainably, and spend and waste less without giving up comfort or style. In the future, your kitchen will be more than furniture; it will be a long-term companion. It lives with you, supports you, and stays flexible in a world that constantly changes.

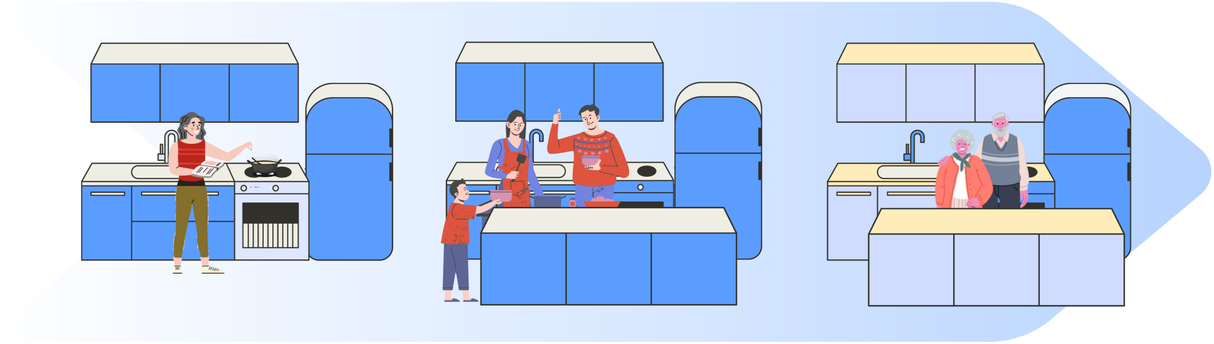


Figure 19 - Visualisation of the future vision

5.3 / ANALOGY AND INTERACTION QUALITIES

To ensure the envisioned future and design resonate emotionally and function intuitively, this section introduces a guiding metaphor and five interaction qualities. They conceptualise how users will engage with the solution and how it aligns with the new set of values.

5.3.1 /ANALOGY EXPLANATION

A set of analogies is explored to clarify this vision and make it relatable (see Appendix D). An analogy captures how the interaction with a solution and the service should look and feel. The following analogy illustrates the desired experience of the design:

DESIGN ANALOGY – FAMILY RECIPE BOOK

The family recipe book emphasises evolution and long-term engagement with a familiar and cherished object. Just as a family recipe book is passed down through generations, evolving with new ingredients and personal touches, the kitchen becomes a space that grows with the user. Over time, users adapt and update their kitchens to maintain their relevance and functionality. Just like a recipe book that reflects individual tastes and changing preferences, and ingredients to match the current time. This recipe book might not be permanently present in your life, but when you want to cherish certain memories, it is there, ready to be opened again. The design allows for personalised adjustments, empowering users to continuously shape and enhance their kitchens according to their changing needs. This analogy highlights the idea of ownership and continuity, where the kitchen becomes a lasting, adaptable part of the user's life.

The interaction reflected by this analogy revolves around user attachment and intuitive control over the kitchen's upkeep and evolution. By providing seamless access to personalised knowledge and repair resources, users are supported in making confident decisions, performing repairs, and adapting their kitchen on their terms, according to individual preferences, life phases, and timelines. The solution integrates naturally into daily life, reducing friction, and enhancing usability. It enables proactive engagement and flexible ownership. For example, when a customer moves, the kitchen can transfer smoothly to the next owner, along with its history and relevant product information.

5.3.2 / INTERACTION QUALITIES

We identify five key interaction qualities based on this vision, which also have a narrow connection with the new values presented in section 4.1.

FAMILIARITY

The interaction becomes easier and more natural over time, just like returning to a well-used page in a trusted recipe book. It fits smoothly into everyday routines and requires minimal effort to engage with.

GUIDING

It guides you to take confident, independent action. It offers clear guidance while leaving room for personal decision-making, similar to how a recipe provides structure but allows for individual adjustments.

FLEXIBILITY

Users can choose services that match their needs, combining or adjusting them as life changes. The solution supports modular interaction, like selecting or modifying ingredients to suit a moment.

PERSONALISATION

The products adapt to the user's specific kitchen, preferences, and usage history. Like a recipe book filled with annotations and family variations, the interaction becomes more tailored and meaningful over time.

CLARITY

Every step, cost, and outcome is communicated. Just as a recipe outlines expectations and required ingredients, the system ensures users feel prepared and in control throughout the process.

To operationalise the vision, a metaphor, "the family recipe book," is introduced alongside five key interaction qualities. These elements shape how the solution should feel and function from a user perspective, translating strategic intent into actionable design criteria for the next development phase.

5.3

5.4 / STATEMENT AND CHALLENGE

This final section translates the future context into a concrete and actionable design brief. It begins with a statement that synthesises the intended role of the IKEA kitchen in the future. Next, it defines the design challenge and a set of guiding design requirements.

5.4.1 / STATEMENT AND DESIGN CHALLENGE

To move from vision to development, a concise design statement is formulated. The purpose of this statement is to communicate the overarching ambition in an inspiring yet concise way, acting as a compass for further design development. It summarises the intended future role of the kitchen for IKEA and communicates the emotional and practical ambition behind the solution.

STATEMENT

In a world of change, the IKEA kitchen is a reliable and evolving part of daily life. It empowers you to repair, refurbish, and reuse kitchens with confidence and on your own terms.

Following this, a design challenge is defined to guide the concept development phase. This challenge brings together user needs, system constraints, and strategic goals into a focused brief. It outlines what the solution needs to empower users, align with internal operations, and enable circular behaviour. The following design challenge was defined:

DESIGN CHALLENGE

Design a user-facing solution that empowers IKEA customers to intuitively maintain, adapt, and extend their kitchen over time, while supporting seamless integration into existing services and operational workflows.

5.4.2 / DESIGN REQUIREMENTS

To translate this into an actionable brief, the following design objectives were defined:

USER INTERACTION

1. The design works intuitively and is easy to use, requiring minimal effort or instruction.

2. The design feels familiar and accessible, without the need to learn entirely new things.

3. The design empowers users to take independent action when they want while offering guidance when needed.

4. It offers a personalised experience based on the user's kitchen setup, preferences, and service history.

FUNCTIONALITY

5. The design helps users to identify, plan, and carry out kitchen repairs or refurbishment actions.

6. The design supports modular upgrades and partial replacements, avoiding a full kitchen replacement when unnecessary.

7. The design offers clear, step-by-step instructions for both self-service and full-service options.

8. The design supports a kitchen ownership transfer, allowing new future users to access relevant service history and product information.

SERVICE INTEGRATION

9. The design aligns with the existing service infrastructure of IKEA, including digital tools, in-store services, and external partners.

10. The design simplifies IKEA's internal workflows and enables straightforward coordination between stakeholders.

11. The design supports data integration (e.g. product specifications, order history) to deliver a tailored experience.

SCALABILITY AND FEASIBILITY

12. The design must be scalable across different IKEA locations and adaptable to various customer types.

13. The design minimises disruption to existing operational processes.

14. The design is cost-effective to implement, operate, and maintain.

COMMUNICATION AND TRANSPARENCY

15. The design communicates costs, service steps, and expected outcomes.

16. The design builds trust with the customer by offering transparent, predictable experiences.

5.4

A clear design challenge and set of requirements translate the vision into actionable criteria, ensuring coherence between user interaction and system functionality.

Key insights:

- *Design a user-facing solution that empowers customers to maintain, adapt, and extend their kitchen over time, while fitting into existing services.*
- *A set of requirements on user interaction, functionality, service integration, scalability and feasibility, communication and transparency.*

5.5 / CONCLUSION PHASE 2

Phase 2 translates the contextual insights from the research into a future-oriented vision that reimagines how circular kitchen services can become part of life. By reframing the current value system, phase 2 shifts away from standardised, transactional models toward adaptive, modular, and user-driven services. The new vision positions the kitchen not as a static object but as a dynamic and evolving companion that grows with the user, emotionally and functionally, through life's changes.

The future vision imagines a system that empowers customers to take ownership of their kitchen's lifecycle by offering modular upgrades, guided repair options, and service transparency. It highlights a future where customers confidently maintain, refresh, and adapt their kitchen over time, supported by clear information, intuitive tools, and seamless service integration. To make this future relatable, a narrative scenario, a guiding metaphor (the family recipe book), and five key interaction qualities are developed: familiarity, guidance, flexibility, personalisation, and clarity. These elements clarify how the solution should feel and function from a user perspective and serve as anchors for concept development.

To ensure that this vision leads to actionable outcomes, the phase concludes with a clear design statement and design challenge that encapsulate the vision of the kitchen of the future. Together with a set of design requirements, they form a design brief for the next phase.

Phase 3 builds on this foundation to generate, develop, and validate design concepts that bring the vision to life and ensure the design outcomes are emotionally resonant, strategically aligned, and operationally feasible.

6/ DESIGNING & TESTING THE CONCEPT

This chapter presents the process and development of a design concept. It translates the strategic insights by exploring, selecting, and testing ideas that support circular kitchen ownership.

CHAPTER OVERVIEW

PHASE 3

6.1 / IDEATION AND DESIGN APPROACH

The following section explains the approach taken to translate the insights, vision, and defined requirements into a set of concepts. The ideation phase explores a wide range of possibilities to bring the vision of circular kitchen ownership to life, reflecting the defined interaction qualities.

6.1.1 / IDEATION PROCESS

The process starts with an open, exploratory approach. Several ideation methods guide the process, including brainstorming, brainwriting, design tools like Heroes of Value (Meet Our Heroes of Value — Valsplat Design & Research Lab, n.d.), and asking How-To questions (see Appendix E). These methods and tools help with creative and divergent thinking and support the creation of over twenty concept ideas. The first stage focuses on expressing future interaction qualities, not feasibility, so the ideas are deliberately unconstrained by current operational or technical limitations.

The initial 20 ideas are narrowed down to six and then evaluated using the defined design requirements (see Appendix E). This assessment leads to the selection and visualisation of three options. These options are shared with the R&R pilot and Sustainability team for feedback and rated on desirability and feasibility. Input from internal stakeholders guides the selection of the final concept design. The selection process is detailed in Confidential Appendix G.

Figure 20 presents an overview of the ideas and methods used for development and selection. The following section provides a brief explanation of the three concepts and their evaluation.

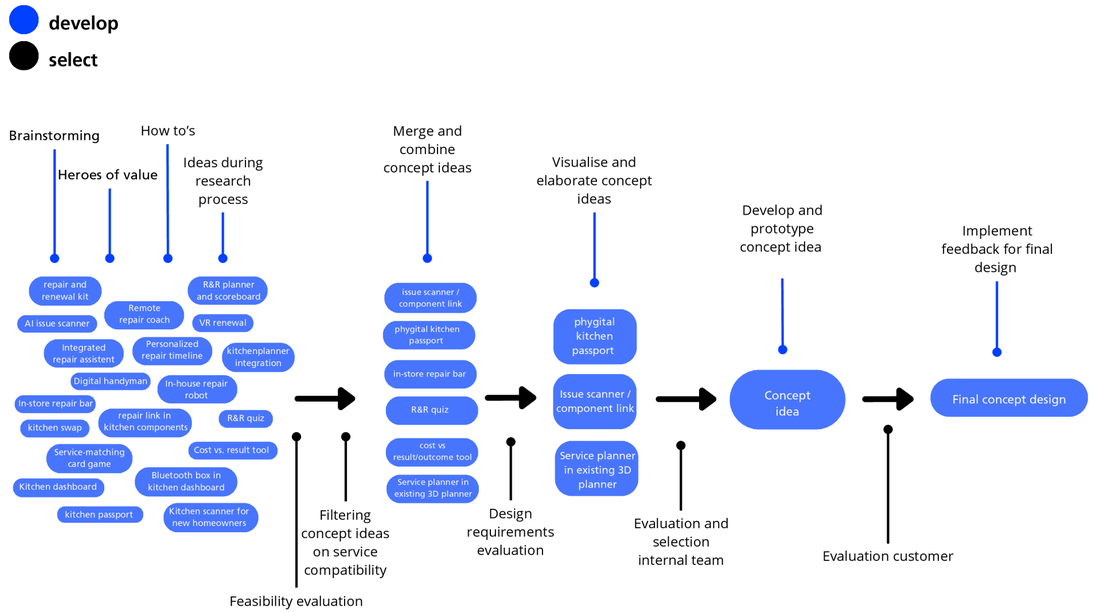


Figure 20 - Process and methods ideation and concept development phase

6.1.1 / THREE CONCEPTS IDEAS AND FEEDBACK INSIGHTS

Three concepts emerge from the second evaluation. Internal stakeholders evaluate them as they are visualised, explained, and presented as follows:

KONNEKT

KONNEKT, visualised in Figure 21, is a tool that connects the components of your kitchen with your IKEA app. It provides immediate information about the specifications of each component in your kitchen, including its warranty and common repair or refurbishment issues, and their solution.

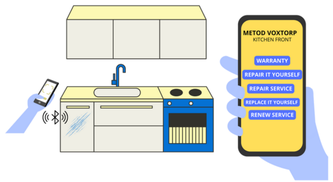


Figure 21 - Visualisation of KONNEKT

KITCHEN ID

KITCHEN ID, see Figure 22, is a hybrid memory and service 'passport' of your kitchen. It helps both the current user and any future one to understand the condition, composition, and history of the kitchen, as well as possible DIY upgrades, maintenance, and service possibilities.

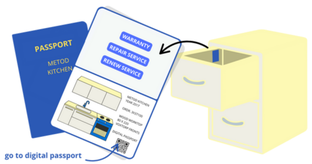


Figure 22 - Visualisation of KITCHEN ID

SERVICE PLANNER

The Service Planner, shown in Figure 23, leverages the 3D design platform for kitchens. Using the existing 3D digital twin of your kitchen, you can easily select the focus area and learn about and order possible repair and refurbishment solutions or visualise your project.

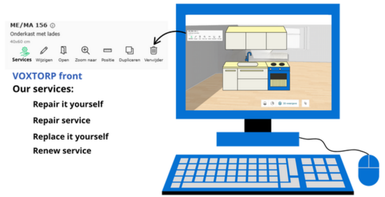


Figure 23 - Visualisation of Service Planner

FEEDBACK INSIGHTS

To determine which of the three concepts to develop further, feedback is gathered from internal stakeholders across various roles within IKEA Netherlands. The concept evaluation (see Confidential Appendix G) reveals a divergence between visionary appeal and immediately implementable solutions.

KONNEKT is the most preferred concept, due to its long-term potential and relevance to future business scalability to other product categories and progressive technology usage. However, it receives average desirability and feasibility scores due to perceived technical complexity, both for customer usage and internal implementation and development. Stakeholders prefer visual recognition over product connection, as it avoids the need for product adaptation.

KITCHEN ID received the highest rating in both desirability and feasibility and is considered the most practical and easy-to-use

for the customer, particularly for the pensioners' target group. Stakeholders consider it well-aligned with existing systems and view it as a low-barrier solution to support informed long-term ownership.

Although some rate the 3D Service Planner positively for its alignment with the company's current digital tools, most regard it as less urgent, and it scores lowest in preference. When compared to current planning services, respondents doubt its added value, particularly for small repairs or improvements.

Overall, the feedback suggests prioritising Kitchen ID for short-term implementation, while KONNEKT holds strong potential as a longer-term strategic investment. Based on this outcome, the elements of KONNEKT and KITCHEN ID are merged into a phased solution. This allows the development of a short-term solution grounded in the practicality and feasibility of KITCHEN ID, which can be implemented 'immediately' using existing data and infrastructure. At the same time, the concept establishes a foundation for future integration of KONNEKT's more advanced functionalities, such as visual recognition, digital interaction, and an omnichannel experience.

6.1

A structured ideation process translated the vision into concrete concepts, leading to a phased solution that balances immediate impact with long-term potential.

Key insights:

- *Over twenty concepts were generated and filtered through design criteria and feedback.*
- *Kitchen ID offers short-term feasibility; KONNEKT provides strategic future value.*
- *A phased concept combines both to align with practical and visionary goals.*

6.2 / CONCEPT IDEA AND TECHNOLOGICAL FEASIBILITY

As a result of the ideation phase, this section now presents and explains the selected, combined, and further developed concept. The next section dives deeper into the concept's value, features, technology and the user scenario.

6.2.1 / CONCEPT DESCRIPTION

The selected, combined, and further developed concept consists of two parts: MY KITCHEN ID and the FIXIT Lens.

MY KITCHEN ID is a physical identity card that the customer receives after buying a kitchen and can simply be stored in a designated pocket in the kitchen. This card provides essential information about the kitchen and serves as the first, immediate and accessible point of contact for any kitchen-related question or issue. The card grants the user access to a personalised digital kitchen environment. This online space includes all relevant information specific to their kitchen, along with quick and easy access to services and support tailored to the user's needs.

FIXIT Lens is an AI-powered feature in both the IKEA application and the digital KITCHEN ID space. Customers can simply use their camera to scan any issue related to repair or refurbishment. The tool analyses the specific product and the nature of the problem and subsequently suggests tailored, step-by-step solutions or services to provide direct help in the situation.

The concept aligns with the vision and analogy described in Chapter 4 by addressing both short-term and long-term needs. Figure 24 visualises the overall concept. It brings the vision to life by offering a tangible foundation that provides users with a low-threshold and intuitive entry point for when they need to act, while also giving them the freedom to choose their ideal mix of services.

The physical card is crucial as it facilitates a smooth transfer of ownership, transferring the product's ownership from the initial

buyer or IKEA to the actual kitchen user. This adaptability acknowledges the unpredictable and messy nature of real life, making ownership simple, accessible, and manageable. It strives to align with the vision's focus on empowerment and natural re-engagement over time.

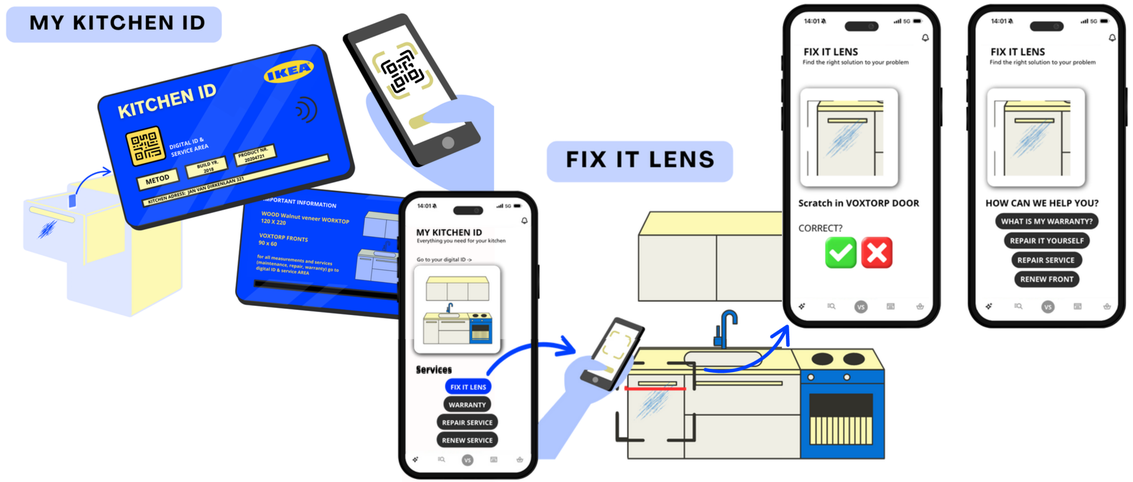


Figure 24 - MY KITCHEN ID and FIXIT Lens visualisation

6.2.2 / TECHNOLOGICAL FEASIBILITY

The concept builds on existing, widely used technologies that enable both physical-digital integration and AI-based support. The key technologies involved in MY KITCHEN ID and FIXIT Lens are:

- QR codes - to link the physical card to the digital kitchen environment.
- Product data integration - to connect MY KITCHEN ID card to specific product and service information.
- Cloud-based digital environment - to provide scalable, secure access to kitchen data and service options.
- Image recognition and machine learning - to power the FIXIT Lens to detect products, assess issues, and suggest appropriate actions.

Technologies already used in retail and e-commerce across various industries underpin the feasibility of the concept. Many companies already actively experimented with or implemented different formats for digital product passports and visual AI recognition (Hestad, 2024; Team, 2025). Examples include the photo search feature of Google (Google Lens) or Snapchat visual search (Google Lens - Search What You See, n.d.; Heath, 2021). In the repair industry, several AI tools for diagnosing and solving problems emerged (YesChat.AI, n.d.; AI For Field Service Companies | Aventic, n.d.).

IKEA already leverages visual recognition technology for product search and AR product placement (IKEA Kreativ). These existing tools show the capacity of IKEA to detect, classify and diagnose physical products and provide targeted repair and refurbishment suggestions and solutions, the foundation of the FIXIT Lens. IKEA can train the AI tool by leveraging its large internal database of products, materials, and frequently occurring issues.

Integrating these technologies into the domain of repair and refurbishment category requires mostly structural organisational effort since the core technical components are already well-established and accessible in the company's infrastructure.

While the combined service experience is novel, its enabling technology (QR-linked digital profiles, profound databases, and AI image recognition) is available and familiar. This makes the concept technically achievable for IKEA.

6.2

The final concept combines MY KITCHEN ID and the FIXIT LENS into an intuitive, low-threshold solution that empowers users to manage their kitchen sustainably over time.

Key insights:

- *MY KITCHEN ID offers a simple entry point and personalised digital support.*
- *FIXIT LENS uses image recognition to provide instant, tailored repair guidance.*
- *The concept builds on existing technical capabilities, ensuring appeal and feasibility.*

6.3 / USER EVALUATION

To validate the proposed concept and generate actionable insights for further development, a structured quantitative evaluation takes place. The objective and design of this evaluation are explained. This evaluation aims to gain deeper insight into the perspective of the customer on the concept and how this concept affects their intent to repair or refurbish their kitchens.

6.3.1 / OBJECTIVES AND RESEARCH DESIGN

The evaluation addresses two main objectives:

1. To assess the concept's perceived:

   - Desirability - the extent to which the concept is appealing and relevant.
   - Usefulness - the practical benefit in kitchen-related situations.
   - Clarity - how clearly the function and purpose of the concept were understood.
   - Adoption intention - the likelihood that the respondent would use the concept if implemented.

2. To evaluate whether the concept stimulates users to take action aligned with the circular kitchen ownership, including repair, maintenance, refurbishment, expansion, and the handover of the kitchen to the next user.

A scenario-based concept testing method uses an online questionnaire as the research instrument. This approach allows participants to engage with short, visualised scenarios that simulate real-life use of the concept. The questionnaire is designed to be time-efficient and intuitive, while still capturing structured feedback on key aspects of the design.

The questionnaire consists of three sections, each of which includes visual materials and short descriptions. For the total survey, see Appendix F. The participants evaluate all three components. The three components are:

MY KITCHEN ID: a physical identity card and linked digital environment providing kitchen-specific documentation, first touchpoint service access, and ownership continuity.

FIXIT Lens: an AI-powered feature that allows users to scan issues and receive tailored repair or refurbishment service or DIY suggestions.

Overall concept: a short narrative combining both features to demonstrate the concept's full potential.

6.3.2 / PARTICIPANTS AND MEASURES

PARTICIPANTS

Participants are recruited through internal networks, social media, and peer referrals. The evaluation targets 80–100 responses to provide a sufficient basis for early-phase validation while remaining feasible within the limited timeframe. Screening questions capture the respondent's housing situation (owner/renter), experience with kitchen installation or upgrades, and digital proficiency. These variables support segmentation during analysis and ensure contextual relevance.

MEASURES

Each concept component is evaluated on three core criteria, desirability, usefulness, and clarity, using five-point Likert Scales. In addition, adoption intention is assessed separately.

To assess the concept's intended behavioural impact, participants are also asked to what extent the concept encourages them to:

- Repair or maintain their kitchen.
- Refurbish or expand their kitchen setup over time.
- Transfer their kitchen to a new user, with access to relevant information and service history.

The questionnaire includes an open text field for qualitative feedback, allowing participants to elaborate on their responses or make suggestions for improvement.

6.3.3 / ANALYSIS

The analysis uses descriptive statistics to identify patterns and average scores across the evaluation criteria. It focuses specifically on questions measuring the likelihood of users engaging in circular behaviours, as this factor is central to the concept's intended impact. A paired samples test tests the significance of differences in perceived usefulness, desirability and clarity for the two components. Cross-analyses explore how factors such as housing status or previous kitchen ownership influence adoption intentions and circular behaviour. These behaviours include both individual actions (e.g. repairs, upgrades) and relational actions (e.g. transferring the kitchen and its data to a new user). Thematic analysis of open-ended responses captures recurring feedback and highlights potential areas for design improvement. For an overview of the results, see Appendix G.

This evaluation method provides a clear and time-efficient way to assess both the functional and strategic value of the concept. The insights contribute directly to the refinement of the concept direction and informed priorities for communication, implementation, and further prototyping.

The concept validation combines scenario-based testing and user feedback to assess clarity, usefulness, desirability, and potential to trigger circular behaviour. A visualised questionnaire presents KITCHEN ID and FIXIT, with analysis based on quantitative data and open-ended responses to inform further refinement.

6.3

6.4 / RESULTS AND DESIGN IMPLICATIONS

This section presents the outcomes of the evaluation analysis and explores their implications for the design. User feedback is analysed to assess the concept's desirability, clarity, and adoption intention. The findings translate into concrete design recommendations, highlighting areas for improvement and confirming elements that resonate with customers and support circular behaviour triggers.

6.4.1 / RESULTS

The evaluation generated rich insights into user perceptions of the proposed concept and its separate parts. The focus is on the desirability, clarity, usefulness, and adoption intention and their potential to stimulate sustainable behaviours, such as repair, refurbishment, and transferring a kitchen to a new owner. The results are presented below, structured around key evaluation dimensions. For a complete overview of the descriptive statistics, see Appendix G.

PERCEIVED USEFULNESS, DESIRABILITY, AND CLARITY

The paired sample analysis reveals clear differences in how participants perceived the two concept components: MY KITCHEN ID and FIXIT Lens. Participants rated the FIXIT Lens significantly higher than MY KITCHEN ID on both usefulness (M = 4.12 vs. 3.57) and desirability (M = 4.07 vs. 3.50). Paired t-tests confirm that these differences are statistically significant ($p < .001$), indicating that users consistently found FIXIT Lens more useful and appealing.

The effect sizes, shown by moderate correlations (usefulness r = .476, desirability r = .399), suggest that while both components are positively perceived, FIXIT stands out as the more impactful tool.

In contrast, no significant difference is found in clarity ratings between the two components (MY KITCHEN ID M = 4.35; FIXIT Lens M = 4.42), with a non-significant t-test result (p = .439). The results suggest that both concepts are similarly well understood by participants.

The data indicates that people perceive FIXIT Lens as more desirable and useful, while both components achieve comparable clarity. These results validate the strength of the combined concept and suggest a clear opportunity to build on FIXIT's appeal in communication and development.

CONCEPT ELEMENT	Usefulness (SD)	Desirability (SD)	Clarity (SD)
KITCHEN ID	**3.6** (1.1)	**3.5** (1.2)	**4.3** (0.9)
FIXIT	**4.1** (0.9)	**4.1**(0.9)	**4.4** (0.7)

Table 3 - Ratings per component

To assess whether housing ownership influences user evaluations, group statistics are compared. Results show minimal differences between owners and renters. For MY KITCHEN ID, usefulness ratings are nearly identical (Owners: M = 3.57; Renters: M = 3.57), and desirability is slightly higher among owners (M = 3.96) than renters (M = 3.83).

For FIXIT Lens, usefulness and desirability are consistently high across groups, with only marginal variation (Usefulness: Owners = 4.14, Renters = 4.11; Desirability: Owners = 4.16, Renters = 4.09). Both groups rate the concept itself as equally useful (M = 4.08), reinforcing its broad applicability regardless of user background. These findings suggest that the concepts resonate across different user segments, supporting their potential for wide-scale adoption, for example, for the B2B segment.

ADOPTION INTENTION AND PURCHASE INFLUENCE

Adoption intention is assessed through frequency distributions. For both MY KITCHEN ID and FIXIT Lens, a majority indicates a willingness to adopt and use the concept, with responses clustering around 'Yes' and 'Maybe'.The percentages are presented in Table 4.

Adoption intention	KITCHEN ID	FIXIT
WOULD ADAPT AND USE	63.5%	70.2%
WOULD MAYBE ADOPT AND USE	21.2%	24%
WOULD NOT ADOPT AND USE	14.4%	4.8%

Table 4 - Percentages adoption intention per component

Furthermore, when asked whether the concept would influence their decision to purchase an IKEA kitchen, 50% responded affirmatively, while 26% said no, and 24% remained uncertain. This indicates a promising commercial potential, particularly if uncertainties can be addressed through clearer value communication.

INFLUENCE ON CIRCULAR BEHAVIOUR

To evaluate the impact of the proposed concepts on circular kitchen behaviours, participants are asked whether each concept motivates them to engage in actions such as repair, renewal, transfer or takeover. These behaviours reflect key circular strategies and are central to the intended impact of the service.

The overall concept shows strong potential to encourage such behaviours. The majority of respondents indicate that the concept prompts them to act:

- 91% of respondents indicated it would motivate them to perform repairs.
- 59% saw it as encouraging for refurbishing components.
- and 41% believed it would support the transfer of the kitchen to the next user.

These results suggest that the concept successfully communicates value beyond initial use, particularly by stimulating maintenance and extension of the kitchen lifecycle. The lower rating for transfer-related behaviours may indicate a need for further design or communication efforts in this area. Results for the individual components (MY KITCHEN ID and FIXIT Lens) are included in Appendix G for reference.

OPEN RESPONSES

The open-ended responses (see Appendix G) offer extra insight into user needs, preferences, and potential barriers related to the proposed concepts. The responses overall reflect broad support for the design, with participants describing the concepts as '*sounds very lovable*', '*It is such a good idea, it surprises me that it doesn't exist yet!*', and '*The idea of the FIXIT Lens is groundbreaking...*'. General suggestions include support for checking appliance compatibility, restyling inspiration, manual integration of appliances and skill-based repair guidance.

Several participants prefer relying on their skills: 'I prefer fixing things the way I'm used to,' yet welcomed suggestions and component availability to support self-led repair. This shows the need for optional, non-intrusive guidance. Participants who had taken over an existing IKEA kitchen expressed clear benefits: '*I took over an IKEA kitchen from the previous owner of our home. These features would really help me to fix and refurbish this kitchen.*' and '*We now have a Kvik kitchen and I would love to have my kitchen ID to get some extra parts or door closing mechanisms, and above all, to get a new lid for our green*

container - we need to renew this for 5 years now…' This underscores the concept's potential for second-hand ownership, refurbishment, and long-term use.

However, feedback also includes critical reflections. One recurring concern is the use of separate and physical IDs. '*No extra IDs please! We already have too many, for the car, for the bank, etc.*' This feedback suggests the system should be physically embedded in the kitchen or fully integrated into the IKEA app ecosystem. Some respondents question the realism of the concept: '*Slightly far-fetched*,' and raise privacy concerns: '*Taking a picture inside your home that's processed online doesn't feel very secure.'*

Overall, the responses confirm the relevance of the concept while highlighting the need for clarity, trust, and minimal friction. These themes are further addressed in the design implications that follow.

6.4.2 / DESIGN IMPLICATIONS

The evaluation results confirm the relevance and potential of the concept, while also revealing critical considerations for refinement. Based on the feedback presented in Section 5.4.1, several design implications aim to enhance usability, encourage adoption, and strengthen circular impact.

DESIGN FOR AUTONOMOUS REPAIR

Participants express a preference for maintaining control over repair activities, especially among those with prior DIY experience. While the FIXIT Lens is rated highly for usefulness and clarity, many prefer to '*fix things the way [they] are used to,*' indicating a need for optional guidance rather than prescriptive solutions. Therefore, design features have to support user-led repair and include layered support such as part suggestions, compatibility checks, and issue-specific tips.

DIGITAL INTEGRATION PHYSICAL ID

Adoption intention is strong, but several users reject the idea of additional physical elements. To reduce friction, the MY KITCHEN ID should be integrated or embedded in the kitchen (e.g. QR code or NFC tag). The connection between the ID and a digital environment needs to be clearer. This lowers perceived barriers of a physical ID while maintaining the concept's core functionality: giving a direct and easy-to-find entry point for repair and refurbishment services.

CLARIFY SERVICE LOGIC AND PRIVACY BOUNDARIES

Despite generally high clarity ratings, open responses reveal confusion about the distinction between the components and their specific roles. Such confusion indicates the need for clear onboarding and contextual communication, explaining when to use what. Furthermore, privacy concerns regarding image recognition ('doesn't feel very secure') highlight the need for transparent data use and the option to opt out of AI-based tools.

FOCUS ON SUSTAINABLE BEHAVIOUR TRIGGERS AND QUALITIES

The concept effectively stimulates intent to repair and refurbish, but scores lower on transfer. To strengthen this final behaviour, future iterations should explore features that frame transfer as a separate feature and as a positive, guided act. The concept's influence on kitchen purchase decisions (50% positive) also shows commercial promise, provided that uncertainties are addressed through clearer value framing.

The evaluation confirms the concept's relevance and appeal while highlighting opportunities for improvement in onboarding, clarity, and support tools.

Key insights

- *FIXIT Lens scores highest on clarity, usefulness, and desirability.*
- *The integrated concept effectively encourages circular actions like repair (91%) and refurbishment (59%).*
- *Half of respondents say it would influence their decision to buy a kitchen, with consistent results across renters and owners.*
- *Suggestions include integrated manuals, clearer onboarding, privacy controls, and features to support kitchen transfers.*

6.4

6.5 / CONCLUSION PHASE 3

In Phase 3, the strategic vision takes shape through an active process of ideation, evaluation, and refinement. Over twenty concept ideas are generated and filtered based on design requirements and stakeholder feedback. This led to the idea of a phased solution that merges the short-term practicality of MY KITCHEN ID with the long-term potential of the FIXIT Lens.

A new product service system that enables users to engage with repair and refurbishment in an intuitive and personalised way. MY KITCHEN ID offers a low-barrier access point to kitchen-specific services and documentation, while the FIXIT Lens uses AI to diagnose issues and suggest tailored solutions and services. Together, these components activate sustainable behaviours and create new value beyond the point of purchase.

User testing confirms that the concept resonates strongly with its intended audience. Participants rate FIXIT especially high on clarity and usefulness, and the integrated solution successfully motivates actions like repair (91%) and refurbishment (59%). Feedback also reveals key improvement points, including a need for ID integration, clearer onboarding, and privacy-conscious design.

With a clear and user-aligned concept in place, the project now moves into its final phase. Phase 4 focuses on refining the final design according to the user evaluation and defining the total product service system, developing a roadmap for internal adoption, and creating compelling strategic communication. This final phase ensures the design is visionary, actionable, scalable, and ready to hand over to IKEA.

7/ FINAL CONCEPT - KITCHEN+

Through a detailed design description, customer journey, and interactive prototype, the next chapter demonstrates how the final solution works and how it can be applied in practice and integrated into the R&R service. It integrates functional support, omnichannel service entry points, and behavioural triggers into one cohesive solution.

CHAPTER OVERVIEW

PHASE 4A

7.1 / DESIGN AND CUSTOMER JOURNEY

The design outcome is described by outlining the design, its function, and its elements in detail. The section also explores its purpose, as well as the strategic role and fit of the design within the R&R service and IKEA's broader ambitions.

7.1.1 / PRODUCT SERVICE SYSTEM KITCHEN +

The final design is a product service system called KITCHEN+, which enables circular ownership by supporting customers in managing, maintaining, and extending the life of their kitchen easily, either by themselves or through the new R&R services. KITCHEN+ consists of two interconnected components, the MY KITCHEN ID and the FIXIT lens.

KITCHEN PRODUCT SERVICE SYSTEM

This product service system empowers users to care for, adapt, and extend the life of their kitchen. Either through guided self-service or by connecting with IKEA's new Repair & Refurbishment (R&R) services. KITCHEN+ transforms complex maintenance into simple, intuitive actions, helping users get more value from what they already own and making sustainable choices feel natural.

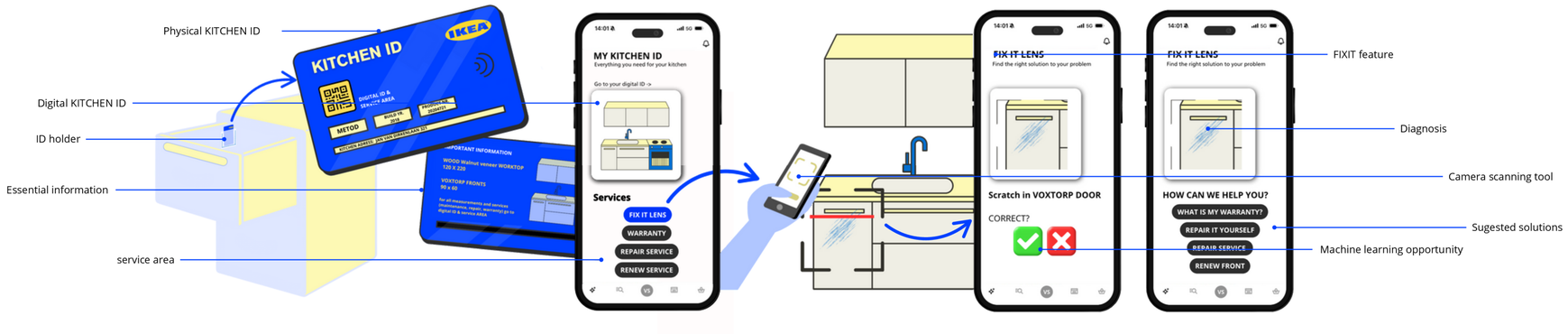


Figure 25 - KITCHEN+ and it's features

The **FIXIT Lens** simplifies diagnosing and empowers users to perform sustainable behaviours. It is an AI-powered feature accessible via the digital environment of MY KITCHEN ID. By scanning visible damage or wear, the tool identifies the product and situation to provide tailored repair or refurbishment advice and services. The suggestions offer different levels of support, from quick tips to full-service bookings.

The hybrid setup with **MY KITCHEN ID** lowers barriers to seeking help or information and simplifies the ownership transfer of the kitchen's history and documentation. You can store this physical identity card in the kitchen furniture. Embedded with an NFC tag, it links directly to a personalised digital environment that contains kitchen-specific documentation and access to services. The physical integration makes the service access point simple and intuitive.

Figure 19 describes the two features and their technologies.

7.1.2 / CUSTOMER JOURNEY

A storyboard, see Figure 26, visualises the customer journey by showing how a user interacts with the solution across various touchpoints. It captures key actions, decisions, and emotional responses throughout the use of the product service system and the R&R service, from initial awareness to long-term kitchen ownership. The storyboard highlights how the design enables circular behaviour in a practical, accessible way.

Figure 26 - Storyboard representing a scenario of a user of Kitchen+

7.2 / DIGITAL INTERFACES

This section presents the suggested interface design for the FIXIT Lens, a tool that supports users in identifying kitchen issues and choosing suitable repair or refurbishment options. By scanning a damaged component, users receive personalised guidance, from warranty checks to DIY tutorials or service bookings. The interface promotes clarity, autonomy, and circular choices by offering cost, time, convenience and sustainability comparisons for each solution.

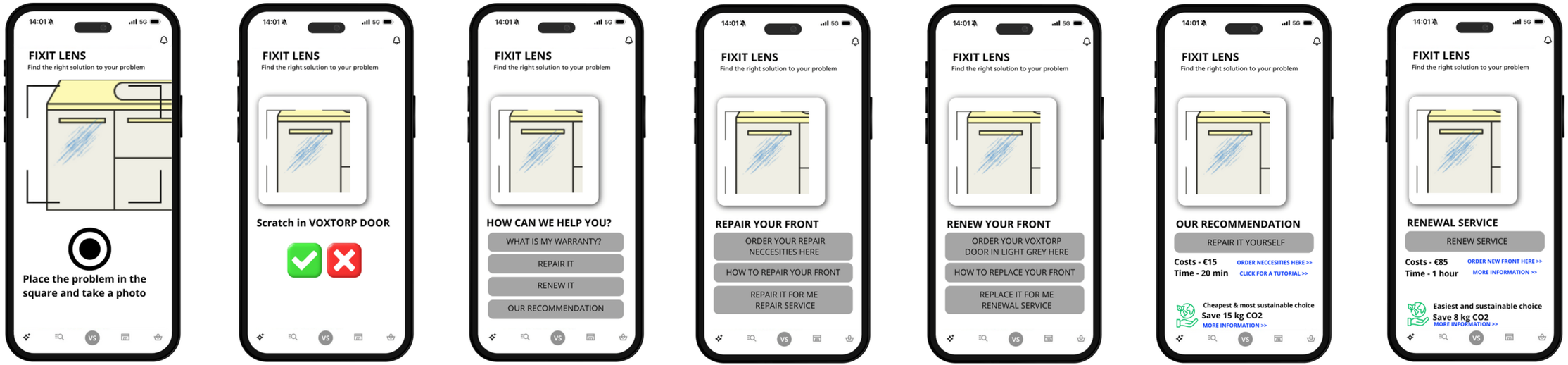


Figure 27 - Digital interfaces designs for the digital KITCHEN ID and service area

7.3 / STRATEGIC FIT

7.3.1 / STRATEGIC FIT WITH IKEA

The proposed KITCHEN+ concept aligns closely with IKEA and reinforces the ambition to lead in circularity while leveraging existing strengths. Through its design, KITCHEN+ strengthens the company's ability to support customers throughout the entire kitchen lifecycle, enabling sustainable behaviour and long-term engagement. The strategic fit can be understood through four key pillars:

SUPPORTS THE REPAIR AND REFURBISHMENT SERVICE AND THE CIRCULAR AMBITION OF IKEA

→ KITCHEN+ enhances IKEA's post-purchase ecosystem by enabling repair and refurbishment as viable, visible options. It encourages customers to extend the life of their kitchens, thereby contributing directly to the company's circularity goals.

ENABLES LONG-TERM CUSTOMER RELATIONSHIPS

→ By introducing intuitive touchpoints throughout the kitchen's lifespan, KITCHEN+ helps IKEA maintain relevance and customer loyalty over time. It offers a service model beyond the initial purchase and builds long-term engagement.

BUILDS ON EXISTING CAPABILITIES

→ KITCHEN+ is designed to integrate with the current infrastructure, particularly its product and data systems. It leverages these assets to create MY KITCHEN ID and FIXIT Lens, avoiding the need for entirely new systems and reducing implementation barriers.

BALANCES SHORT-TERM FEASIBILITY WITH LONG-TERM VISION

→ With a phased implementation approach, KITCHEN+ meets immediate operational constraints while laying the foundation for a scalable circular service model. MY KITCHEN ID offers a practical starting point, and FIXIT Lens introduces forward-looking innovation in diagnostics and repair support.

7.3.2 / PREREQUISITES AND RISKS

Although Kitchen+ aligns with IKEA's long-term circularity ambitions, its successful implementation depends on meeting several organisational prerequisites and managing key risks. Without structural investment, the concept risks remaining a desirable pilot without scalable viability. These prerequisites and risks are linked to the reframed values and explained below.

Cross-functional ownership is essential. Responsibilities for kitchen services, digital tools, and sustainability are currently fragmented. To support long-term service delivery, shared ownership must be formalised across departments, for example with roadmaps.

Internal capability building is needed to support empowerment (*Value 3*). Many co-workers lack the knowledge or tools to assist with repair and refurbishment. Training, intuitive tooling, and internal service resources are needed to make proactive support possible.

Data fragmentation poses a technical barrier to delivering a self-directed journey (*Value 5)*. Kitchen+ relies on integrating product, service, and user data into a seamless experience. This requires IT coordination and investment in shared infrastructure.

Legal and compliance risks may hinder user trust. Features like the FIXIT Lens must comply with privacy legislation and offer clear consent and data transparency to ensure safe and confident engagement.

Strategic alignment is a deeper organisational challenge. Supporting affordability through circularity (*Value 1*) and relationship-focused service (*Value 4*) demands a shift away from a product-sales mindset. This requires rethinking incentives and business models.

Finally, **enabling modular and customisable service blocks** (*Value 2*) calls for operational flexibility. IKEA's current systems are built for standardised fulfilment; enabling variation and personalised pathways requires new support tooling and adaptable workflows.

In summary, Kitchen+ could challenge IKEA to design and work differently. Addressing these prerequisites is critical to prevent the concept from stalling at a pilot stage.

8/ IMPLEMENTATION STRATEGY

This chapter describes how KITCHEN+ can be implemented within IKEA Netherlands and scaled to other furniture categories, as well as internationally. The chapter includes a tailored business model, a phased roadmap for internal adoption and scaling, and a conclusion that reflects on the final phase of the design process. Together, these elements translate the concept into a strategic and actionable plan.

CHAPTER OVERVIEW

PHASE 4B

8.1 / BUSINESS MODEL

This part shows the business model supporting Kitchen+, using the Business Model Canvas as a framework. It clarifies how Kitchen+ delivers value to IKEA and its customers by enabling kitchen repair and refurbishing services.

To evaluate the strategic viability of KITCHEN+, a business model is developed using the Business Model Canvas. This model articulates how KITCHEN+ creates, delivers, and captures value within the organisational context, and supports the shift toward circular kitchen ownership.

Figure 28 presents the Business Model Canvas for KITCHEN+, outlining key elements such as customer segments, value propositions, channels, resources, partnerships, and revenue streams. The business model shows how IKEA can enable continuous user engagement beyond the initial kitchen purchase and create long-term relationships between users and their IKEA kitchen while remaining operationally realistic.

Figure 28 - KITCHEN + FEATURES

8.2 / IMPLEMENTATION ROADMAP

The following section presents a high-level strategic roadmap for the internal implementation of the KITCHEN+ concept alongside IKEA's R&R services. Structured in four phases, it highlights key goals and actions needed to embed the service system into existing structures. It breaks the adoption and implementation into phases, focusing on development and testing, then refinement and broader rollout.

While the roadmap provides initial direction and clarity, it is deliberately high-level and requires further deepening and operational detailing in collaboration with relevant teams. It serves as a shared reference point to coordinate efforts across functions and ensure a phased, realistic implementation over time. Figure 26 shows the implementation roadmap.

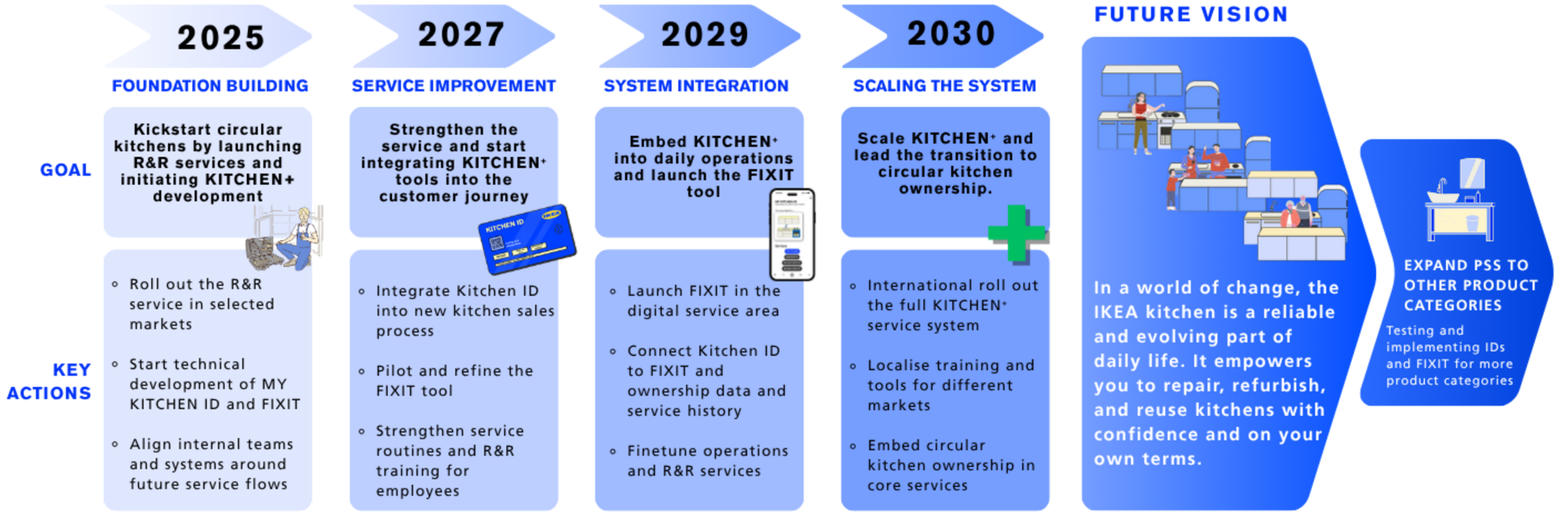


Figure 29 - Implementation roadmap

8.3 / CONCLUSION PHASE 4

The final design of KITCHEN+ brings together strategic intent and practical implementation through an integrated product-service system that empowers circular kitchen ownership. By combining MY KITCHEN ID and the FIXIT Lens into KITCHEN+, the concept enables users to care for, maintain, and extend the life of their kitchen in intuitive and flexible ways, either independently or through IKEA's R&R services. The business model and roadmap developed in this phase translate the concept into an actionable internal strategy.

The high-level roadmap outlines how KITCHEN+ can be gradually embedded into existing IKEA structures, beginning with the foundational rollout of R&R services and evolving into a complete service ecosystem. While the direction is clear, successful adoption requires continued cross-functional collaboration, refinement of service flows, and alignment with local operations. Together, the final concept and adoption strategy offers a concrete and realistic path toward making circular ownership a lived reality for IKEA customers.

In addition to the strategic framework, Phase 4 also focuses on storytelling and translates the concept into a relatable, human narrative through visuals and a storyboard. These deliverables aim to build shared understanding across teams and anchor the concept in everyday life. Together, the report and strategic materials represent the finish line of this graduation project

9/ CONCLUSION AND DISCUSSION

This final chapter concludes the thesis by summarising the overall project outcomes about the central research and design questions. It reflects on the broader relevance of the work, discusses key learnings, and critically evaluates the limitations of the approach. Together, the conclusion and discussion provide closure and offer directions for future exploration or implementation beyond this project.

CHAPTER OVERVIEW

9.1 / CONCLUSION

This thesis explored how design activates and supports the rollout of a new Kitchen Repair & Renewal service within IKEA Netherlands by addressing operational, stakeholder, and customer needs. The resulting design solution, KITCHEN+, is a product-service system that empowers customers to manage, maintain, and extend the life of their kitchens. It consists of two interconnected components: MY KITCHEN ID, a digital and physical identity for each kitchen, and the FIXIT Lens, an AI-powered diagnostic tool that simplifies repair and refurbishment decisions. Together, they lower the threshold for circular action and enable IKEA to build a long-term service relationship with its kitchen customers and users.

The research shows that while IKEA has deeply embedded design practices for its physical products and store experiences, this same depth is often missing in the development of circular services. Through an ethnographic, participatory, and strategic design approach, this project demonstrates that service design can play a key role in shaping how circularity is delivered, perceived, and adopted - both internally and by end users.

The research revealed that organisational fragmentation poses a key barrier to service innovation. Large organisations tend to work in silos and IKEA is no exception. Teams at IKEA often work in silos, and cross-functional collaboration focused on circular innovation is not yet embedded structurally. As a result, even pilot projects often lack agility, and the testing setup tends to remain rigidly attached to their initial, yet exploratory, scope. In this project, service design tools integrate co-worker feedback, system constraints, and customer insights. The project bridged IKEA's existing infrastructure with a future-oriented service experience.

KITCHEN+ meets operational needs by simplifying decision-making through modular service suggestions and by leveraging product data to reduce internal advising time. It supports stakeholders by enabling standardisation while leaving space for customer-driven flexibility, improving efficiency and allowing the service to scale. For customers, it converts circularity into intuitive, actionable steps through omnichannel touchpoints and a guided digital environment, making sustainable behaviour more convenient, visible, and rewarding.

Ultimately, this thesis concludes that design can act as a strategic enabler for circular transitions within large organisations, but only if the organisation is willing to confront the structural and cultural shifts this requires. If IKEA aims to embed circularity into its core operations, it must move beyond pilot-driven experimentation and invest in co-creation and using design as a default way of working.

By framing circular services as a compliance response and a source of long-term value and customer engagement, KITCHEN+ opens up a new chapter in IKEA's post-purchase ecosystem. It positions repair and refurbishment as accessible, desirable, and viable, both for the business and for the people who use its kitchens every day.

9.2 / DISCUSSION

9.2.1 / VALIDITY AND INTERPRETATION OF THE RESULTS

VALIDITY

The applied research approach combined qualitative methods to ensure internal validity, such as stakeholder interviews, internal observations, and iterative design interventions. These methods aligned well with the research objective and enabled a comprehensive understanding of the organisational, operational, and user dynamics surrounding circular kitchen services at IKEA. Triangulation of perspectives, from customers, employees, and internal information, contributed to the credibility of the findings.

External validity remains limited to the context of IKEA Netherlands, and generalisation to other countries or retail organisations should be made with caution. However, given the company's global structure and shared frameworks, the insights may offer transferable relevance for similar service implementations. The sources used are academically grounded or derived from internal documentation, strengthening the reliability of the conclusions. Theoretical framing was drawn from multiple fields, including behavioural design, service design, and transition theory, resulting in a context-specific perspective.

The study supports internal validity, but there is room for strengthening the external validity and methodological transparency. The structure and documentation of specific research activities, such as workshop outcomes and their analyses, and feedback loops, remain implicit. This limits reproducibility and obscures potential biases. For future projects, logging these steps more explicitly (e.g., via research logs or design journals) would support clarity and academic rigour.

In addition, although the thesis draws from a wide range of theoretical sources, the academic framing could have been more thoroughly developed. The introduction of concepts like the attitude-behaviour gap, transition theory, or service modularity lacks critical synthesis or comparison. The discussion of tensions, contradictions, or gaps within the literature remains limited. A more analytical engagement with theory would have strengthened the academic contribution and provided a deeper grounding for design decisions.

The primary aim of the theoretical framing has not been to conduct an in-depth theoretical exploration of any single discipline, but rather to gain a general understanding of how design is relevant and can be effectively used in this context, and similar complex service environments. Theories have served as lenses to support framing and analysis, rather than as ends in themselves.

INTERPRETATION OF THE RESULTS

The results of this thesis largely align with expectations formed at the outset of the project and through the literature review. Prior research has shown that customers are generally open to more sustainable consumption (e.g. repair or reuse), but are often discouraged by perceived complexity, cost, or uncertainty (De Vries et al., 2023; White et al., 2019). The user research conducted in this project confirms these patterns: although participants express interest in kitchen repair or refurbishment, they hesitate due to knowledge gaps, unclear processes, or limited confidence in the outcome.

This correspondence between literature and findings reinforces the importance of designing services that reduce friction and increase clarity. For example, the positive evaluation of the FIXIT Lens shows that users value proactive, situation-specific guidance. A possible explanation for this strong alignment is the relatively clear fit between the nature of kitchen ownership and the logic of circular design. Kitchens are long-term, high-value investments. This makes them emotionally and financially suitable for strategies such as repair and refurbishment. However, this potential is currently underutilised due to operational complexity, internal fragmentation, and limited customer-facing tools.

In terms of the theoretical framework, the findings demonstrate how service design can act as a bridge between sustainability ambitions and actual user behaviour. The application of the VIP method has provided a structured way to identify value tensions, interaction needs, and design leverage points. Although most people use the VIP method for visionary reframing, this project has demonstrated its strategic potential in an organisational setting.

A new insight that has emerged from the qualitative research is the role of ownership transfer in enabling circularity. Several users mentioned situations where they had inherited or passed on an IKEA kitchen and would have benefited from a system that retained documentation, component data, or service history. This realisation has strengthened the direction of the concept by introducing MY KITCHEN ID, which serves as both a digital and physical point of continuity for users. Current circular design literature does not widely discuss the links between the product lifecycle to the user lifecycle.

What the results show is that circular behaviour can be activated not by radically changing customer values, but by supporting and enabling their existing intentions through smart, well-integrated design. In particular, the combination of system-level service alignment and user-centred guidance appears to be an effective strategy. The result confirms that design can connect operational feasibility, stakeholder collaboration, and customer experience into a coherent, scalable circular service.

9.2.2 / LIMITATIONS

Despite the careful design and execution of this study, it is important to consider several limitations when interpreting the findings. These limitations highlight areas that require caution or potential improvements for future research. This study has focused primarily on the Dutch market context, with all user and stakeholder research conducted in IKEA Netherlands. As such, the results may not be fully representative of other markets, where organisational structures, service infrastructure, customer expectations, or regulatory conditions may differ. The reader should be aware that this study is based on a local pilot environment, and that broader generalisations require validation in other contexts.

Another limitation is related to the maturity of the service under investigation. The R&R service is still in development. Therefore, the study conducted user testing on conceptual scenarios rather than on live, real-world service interactions. This influences responses; for instance, users may have reacted more positively or negatively to ideas than they would have in an actual service situation. After the service implementation, future research should validate the proposed solution using longitudinal and behavioural data.

The study has also relied heavily on qualitative research methods. While this has provided rich, in-depth insights, it may limit the objectivity and reproducibility of the findings. For example, interviews and workshops were conducted with a selective group of stakeholders, many of whom were already engaged with circularity or R&R service development. The process could have introduced a form of selection bias (Scharwächter, 2023), as more critical or indifferent perspectives may not have been sufficiently represented. Including a broader range of voices, for example, other industries or stores might have revealed different needs or challenges.

In addition, the dual role of the researcher as both observer and facilitator in workshop and co-creation sessions may have unintentionally influenced participant responses. This is a common risk in participatory research, and while care was taken to minimise bias, it cannot be completely ruled out. Future research could mitigate this by using independent moderators or conducting blind interviews where appropriate.

Lastly, the academic scope of this thesis has limited the depth of certain aspects, such as full business case development, IT and technology integration, or real-time physical testing of the concept. It is beyond the scope of this thesis to resolve all implementation-related questions. Follow-up studies could address these areas in collaboration with operational and technical teams.

To strengthen future research, it is advised to complement qualitative insights with quantitative behavioural tracking, extend stakeholder engagement to more diverse and critical voices, and validate design outcomes in live service conditions. This would improve both the external validity and implementation readiness of future circular service designs.

9.2.3 / IMPLICATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

IMPLICATIONS OF THE FINDINGS

This research highlights that design can support the development and success of circular kitchen services. The findings suggest that customers are generally open to extending the life of their kitchens through repair or refurbishment, but only when they are given the right tools, support, and clarity to act. This means that the effectiveness of circular strategies does not rely solely on changing customer values, but also on changing the infrastructure that enables sustainable decisions.

If IKEA does not structurally address the current gaps in service consistency, knowledge transfer, and user empowerment, circular initiatives are likely to remain fragmented and ineffective. Without intuitive support systems, like Kitchen+, customers may continue to replace rather than repair, despite their sustainable intentions. Over time, this could limit the company's ability to meet its circularity goals and increase the risk of reputational or regulatory pressure, especially as legislation such as the EU's Right to Repair directive becomes more binding.

From a user perspective, the findings imply that services must do more than offer options; they must actively support decisions. This means embedding behavioural prompts, transparency, and modularity into everyday touchpoints. Without these, the gap between intention and action will remain, and customers will continue to struggle to make the circular choice the default one.

These implications are consistent with the literature on sustainable behaviour change and service design: convenience, emotional connection, and clear interaction are essential for adoption. If organisations ignore these factors, circular solutions risk becoming niche, costly, or underutilised.

In summary, this thesis suggests that strategic design can serve as a lever to align operational systems, stakeholder collaboration, and user action. If the insights and solution directions presented in this research are not taken forward, circular kitchen services may remain promising on paper but unfeasible in practice. To avoid this, design, strategy, and operations must work in parallel to create solutions that are not only sustainable but also usable and adoptable at scale.

SUGGESTIONS FOR FUTURE RESEARCH

This study has offered initial insights into the design and implementation of circular kitchen services. To further develop this field and explore newly surfaced questions, the following areas are proposed for future research:

1. Quantitative pilot evaluation of Kitchen+ in practice

To validate the behavioural effectiveness of the Kitchen+ concept, future research could conduct a quantitative pilot study that tracks user behaviour over time. By monitoring service uptake, repair activity, and user engagement across touchpoints, such a study would generate concrete data on how the concept performs in real-world conditions and whether it leads to lasting behavioural change.

2. Bridging internal value tensions to enable circular service development

Future research could investigate how aligning internal practices, priorities, and values can support the co-creation of circular services within traditionally linear business models. This includes investigating how value tensions between standardisation and flexibility, commercial performance and sustainability, or short-term targets and long-term impact can be identified, surfaced, and resolved. Such a study could offer insights into how cross-departmental collaboration and shared ownership emerge in practice, and how design can make circular innovation desirable and feasible within existing business structures.

3. Scalability of the Kitchen+ system or components to other furniture domains

Finally, future research could explore whether and how the Kitchen+ model, or the specific components, could be translated to other product categories with circular potential, such as wardrobes, bathrooms, or living room furniture. Such investigations could include mapping similarities and differences in customer behaviour, service logistics, and emotional attachment across categories to identify opportunities and barriers to scalable circular service ecosystems.

REFLECTION

As this thesis marks the end of my design education, it also opens space for reflection. Beyond outcomes and deliverables, this project challenged and revealed how I think, work, and grow as a designer. This chapter offers a personal and critical reflection on the journey. It connects the intentions set at the beginning with what was experienced, learned, and achieved, both practically and academically. Additionally, it also reflects on the wider meaning of design for circularity and what this process and the past six years have revealed about my role and identity as a designer for the future.

INITIAL INTENTIONS

Looking back at the intention I wrote at the start of this journey, it still feels like the right one. I wanted to design something that was both feasible and desirable while making a real contribution to IKEA's circular ambitions. From the beginning, I was drawn to the opportunity to create impact from within the organisation, not through abstract ambitions, but through a tangible service embedded in real operations. I feel I stayed close to that intention throughout. The fact that parts of my input have continued to flow through the development of the R&R service is something I'm proud of. At the same time, I realise that leaving a lasting impact is a big ambition. I hope my contribution and perspectives will continue to resonate, even if just in mindset or approach. Whether that happens or not is out of my hands, but I believe what I left behind is meaningful.

ENTERING A NEW CONTEXT

This project revealed the limits of my knowledge and skills as much as it highlighted my strengths. Entering the world of (circular) retail showed me how little I knew about operations, finance, and internal hierarchies. I often felt overwhelmed by the scale and speed at which priorities could shift, and at the same time, by how slow and fragmented internal processes could be. Learning to navigate that ambiguity without losing focus on my own vision became an important part of the process. My ability to empathise and adapt helped me uncover needs and gaps, but I also felt the tension between intuition and structure. I struggled at times to translate my insights into clear, concrete and actionable steps and had to remind myself that making trade-offs is not a sign of failure, but a condition of working within reality. What helped most was talking to new people each week. These conversations not only gave me insights but often reaffirmed my gut feeling, showing me that my intuitive direction was grounded in actual, real needs and observations.

WORKING IN A COMPLEX ORGANISATION

Working within IKEA revealed what it means to design in a large, complex organisation. I experienced how internal processes can be both supportive and constraining, fast-moving in some ways, slow and fragmented in others. I realised how essential it is not just to convince customers of the value of a new service, but also to bring internal stakeholders along in the process. This is where I believe design has untapped potential within IKEA, not just to create services, products and experiences, but to align people, visualise complexity, and help shape direction from within. I also learned a lot about project management, compliance, and the financial side of innovation. These were not areas I naturally gravitated toward, but understanding how important and complex these are taught me that feasibility is not the opposite of creativity, but part of making things real.

ACADEMIC REFLECTION

The academic part of this project was a consistent challenge. While I was comfortable with research and connecting ideas, writing academically, formulating a sharp research question, and positioning my work within the literature felt unfamiliar. I struggled with expressing insights in a structured, rigorous way. I put a lot of effort into writing more actively, relating to literature more clearly, and defining how my work contributes beyond the case of IKEA. However, I see that this is not my biggest strength. The VIP method helped me navigate the project. I appreciated how it combines values, context, and interaction; it made room for intuition, creativity, and the complexity of the project without losing structure. Still, I realised too late that my research scope may have been too broad. I tend to prefer exploring a little bit of many things rather than going very deep into a few. That tendency worked against me in parts of my academic writing. But I also know that recognising that is already part of the learning.

DESIGNING FOR CIRCULARITY

This project made me even more convinced of the value of design in circular transitions. I saw how design can visualise complexity, surface tensions, and help people see opportunities more clearly. Especially in a context like IKEA, where big ambitions meet operational realities, design can act as a translator between vision and execution, customers and systems, teams and timelines. But I also realised the limits of design. It is not enough to have good ideas. Some people believe in vision, others in numbers, and both matter. Design alone is often not enough to move an idea forward. It needs to be paired with skills which I learned through six years of education, reflection, and design. That feedback made me see my growth and competencies more clearly, not just as a result of study, but as the sum of many experiences that have shaped how I work and am today.

LOOKING AHEAD

This experience helped me to grow in many ways. I feel more secure in my skills and more confident in my position as a designer. I know now that I can trust my intuition, not blindly, but as something worth listening to. I want to continue working on projects that make sustainability and transitioning to circularity easy, attractive, and achievable. I also want to grow in areas where I still feel uncertain, like writing, numbers, data, and the language of business. I will continue to listen, talk, connect, and translate. I am curious whether my work at IKEA will continue to inspire people, and more broadly, whether I can make the difference I hope to as a designer. That’s not something I’ll know right away, but it’s a question I am excited to carry with me into the future.

APPENDICES

APPENDIX A / DESIGN BRIEF

PROJECT TITLE, INTRODUCTION, PROBLEM DEFINITION and ASSIGNMENT
Complete all fields, keep information clear, specific and concise

Project title Designing a strategy to create and improve a circular service for kitchen renewal at IKEA

Please state the title of your graduation project (above). Keep the title compact and simple. Do not use abbreviations. The remainder of this document allows you to define and clarify your graduation project.

Introduction

Describe the context of your project here; What is the domain in which your project takes place? Who are the main stakeholders and what interests are at stake? Describe the opportunities (and limitations) in this domain to better serve the stakeholder interests. (max 250 words)

The project takes place in the Circular Customer Offer (CCO) team of IKEA B.V. (Ingka). This team works on designing and testing pilots for circular services for the customer, including 'Selling Second-hand Articles,' 'Buyback and Resell (figure 1 and 2)' 'Repair,' and 'Removal & Recycling.' The main focus of my project is specifically on **Kitchen Renewal**. The final goal of the CCO team is to design IKEA's circular services in a way, that they can be adopted in the worldwide 'IKEA Concept". Rapid development and improvement of these pilots is crucial due to upcoming legislation from the EU (Right to Repair and Ecodesign for Sustainable Products Regulation) and the company's goal to help 1BN people live a more sustainable life within the limits of the planet by 2030.

Differences within the stores in Netherlands and other countries, but also the complex infrastructure of IKEA's organisation bring both opportunities and challenges to design this circular service for the IKEA Kitchens. IKEA has a very complex stakeholder environment, making streamlining the adaptation of these services even more important. Possible opportunities for this project include IKEA's strong brand reputation, which helps attract attention to circular services and the Dutch mentality of saving, which can align with sustainable practices. However, challenges lie in keeping the circular service affordable and consistent across all regions and stores while maintaining the strong brand reputation of IKEA.
The main stakeholders in this project are IKEA as the provider of innovative solutions, the regional stores, external stakeholders and current or new customers who will engage with the services. This project aims to address these challenges and opportunities by a designing solution that will help build an IKEA's circular service for KR&KR while ensuring they can be effectively implemented and scaled in the Dutch eventually the international market.

→ *space available for images / figures on next page*

introduction (continued): space for images

image / figure 1 communication of the buyback service of IKEA. example of circular service

image / figure 2 existing circular services of ikea

FOR A future

Personal Project Brief – IDE Master Graduation Project

Problem Definition

What problem do you want to solve in the context described in the introduction, and within the available time frame of 100 working days? (= Master Graduation Project of 30 EC). What opportunities do you see to create added value for the described stakeholders? Substantiate your choice.
(max 200 words)

The CCO team wants to design a scalable circular service for Kitchen Renewal (KR). However, creating and scaling this pilot is challenging due to the complex infrastructure of the company and the desire for (cultural and) local adaptation. Navigating these complex stakeholder systems and different sections at IKEA while designing a consistent, but adaptable KR service for all stores and stakeholders is a challenge.
I see an opportunity to create added value for the stakeholders by having a clear strategy/tool/roadmap to navigate the different stakeholders in implementing the KR service and to ensure consistent customer engagement and success and also provide room for local adaption.

Assignment

This is the most important part of the project brief because it will give a clear direction of what you are heading for. Formulate an assignment to yourself regarding what you expect to deliver as result at the end of your project. (1 sentence) As you graduate as an industrial design engineer, your assignment will start with a verb (Design/Investigate/Validate/Create), and you may use the green text format:

Design a strategy to create and replicate a circular Kitchen Renewalservice for different stakeholders from IKEA B.V. (Ingka) in the Netherlands, balancing consistency and room for cultural/local adaptation/input.

Then explain your project approach to carrying out your graduation project and what research and design methods you plan to use to generate your design solution (max 150 words)

To carry out my graduation project, I will integrate research and several design methods into a structured, iterative process.
Research Phase:
- Conduct ethnographic research at IKEA (sustainability team) to understand their behaviors and barriers
- Analyze regional differences in the Netherlands and benchmark existing circular initiatives and local adaptations.
System Mapping:
- Visualize the complexities of designing the circular business model and blueprint
- Identify pain points and highlight opportunities for improvement
Ideation and Prototyping:
- Use the Vision in Product Design (VIP) methodology to develop future-oriented strategies
- Test low-fidelity prototypes of toolkits or guidelines
Validation:
- Collaborate with the design team to refine solution through feedback
- Small-scale testing within the team, ensuring feasibility and alignment

Motivation and personal ambitions

Explain why you wish to start this project, what competencies you want to prove or develop (e.g. competencies acquired in your MSc programme, electives, extra-curricular activities or other).

Optionally, describe whether you have some personal learning ambitions which you explicitly want to address in this project, on top of the learning objectives of the Graduation Project itself. You might think of e.g. acquiring in depth knowledge on a specific subject, broadening your competencies or experimenting with a specific tool or methodology. Personal learning ambitions are limited to a maximum number of five.
(200 words max)

I am inspired by IKEA's People & Planet Positive strategy, for example the vision from Maron van der Krieken (Country Sustainability Manager NL) about her commitment to making sustainable option the most affordable choice. This thesis internship at IKEA is an exciting opportunity for me to bring my skills in holistic, sustainability-focused design and project management to a large, forward-thinking company.

My personal goal is to create a meaningful impact within a large organization by designing a usable, tangible solution that can drive small but significant change. I see this internship as a chance to apply my skills in a sector that's fairly new to me – sustainable and circular retail. I believe the retail industry has the power to shift customer mindsets and drive positive change, and I want to learn how to use my skills to design impactful strategies in this space.

I want to prove my strengths by creating a desirable and feasible strategy that can make a real difference. With my skills in service design and storytelling, I will deliver solutions that are not only practical but also engaging. I aim to showcase my creativity, entrepreneurial mindset, and passion for sustainability, leaving a personal and lasting impact on IKEA's sustainability efforts.

APPENDIX B / INTERVIEW GUIDES

Interview structure with internal stakeholders

Introduction of the interviewer:
- Introduce yourself and briefly explain what the interview is about.
- Thank the interviewee for their time and cooperation.
- Purpose of the interview:
- Explain that the interview is part of a thesis and internal research into kitchen renovations and repairs.
- state that the answers will be kept confidential and used for research and internal purposes only.

2. Role & Responsibilities
- **C**an you describe your position and your daily tasks?
- Can you take me through how this process normally works?
- What other teams or partners do you work with in service or repair?
- How does communication/collaboration between these parties work?

3. Questions about the renovation/repair
- **E**xperience with customers and kitchens
- What do you notice about the way customers interact with their kitchen?
- How do customers experience service questions or problems with their kitchen?
- Do you ever encounter customers who want to repair or replace something?

4. Questions about experiences and personal opinions
- How do you feel about the idea of repairing or updating a kitchen instead of replacing it?
- In your experience, is repair or refurbish easy or difficult for customers right now?

5. Future vision & needs
How do you see a repair and refurbishment service in the future?
Do you think it is realistic that more customers will choose this in the future?

Closure
Is there anything else you would like to add or think is important to share?
May I contact you again if I have any follow-up questions?

Interview structure experts by experience

Introduction by the interviewer:
- Introduce yourself and briefly explain what the interview is about.
- Thank the interviewee for their time and cooperation.
- Explain that the interview is part of a thesis research project on kitchen renovations and repairs, including the use of a professional service.
- Mention that the answers will be treated confidentially and used for research purposes only.

1. **G**eneral questions
- **C**ould you briefly introduce yourself?
- Name, age, occupation, family situation.
- Could you briefly describe what your kitchen looked like before you decided to renovate or repair it?
- Size, layout, condition.

Questions about the renovation/repair
- **W**hat was the main reason for renovating or repairing your kitchen?
- Why did you choose a professional renovation and repair service instead of doing it yourself?
- How did you find and choose the renovation and repair service?
- Could you describe the process from the moment you contacted the service to the completion of the renovation/repair? First consultation, planning, execution, communication, etc.?
- What were the biggest challenges you encountered during the process? Budget, time, communication with the service, unexpected issues, etc.?
- How satisfied are you with the final result and the service you received?
- What do you like most? What would you have done differently?

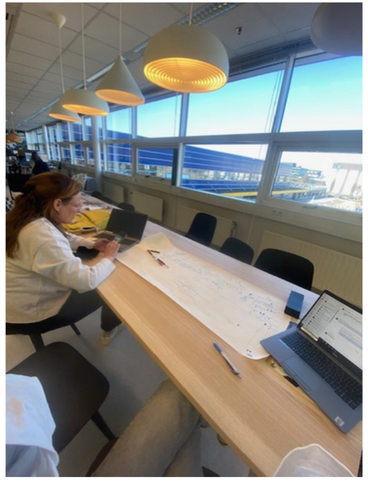
Questions about experiences
- **D**o you have any advice for others who are considering renovating or repairing their kitchen using a professional service? Tips, do's and don'ts?
- Are there things you would have done differently in hindsight? Lessons learned, areas for improvement?
- How has the renovation/repair affected your daily life? Ease of use, aesthetics, value of the home?

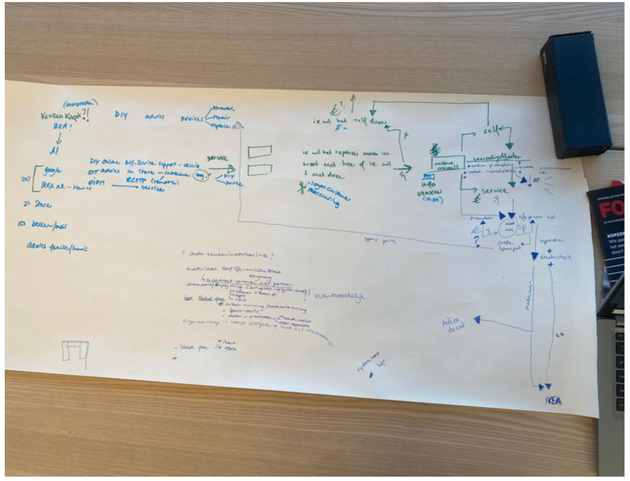
Closing
- Is there anything you'd like to add that we haven't discussed yet?
- Open space for additional comments or experiences.

APPENDIX C / WORKSHOP AND CO-CREATION SESSIONS SETUP

CO-CREATION SESSION 1

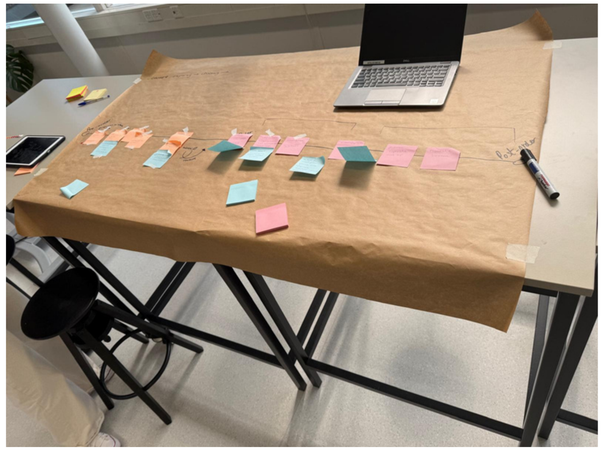
In the first co-creation session, a sustainability colleague and I collaboratively explored what an ideal kitchen R&R service at IKEA could look like. Using creative exercises and systems thinking tools, we mapped out the components, values, and practical steps of an effective circular service offering. This session helped to surface assumptions, identify internal priorities, and lay a rough conceptual foundation for further development.





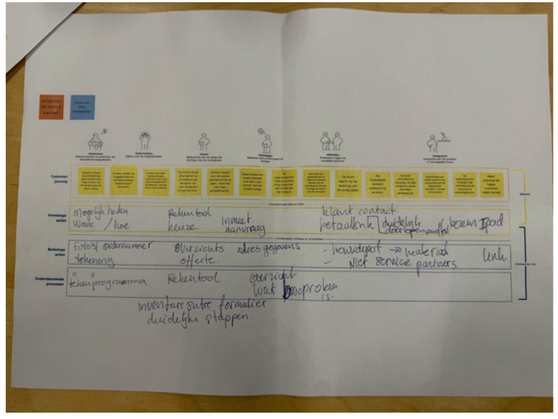
WORKSHOP 2 - COMMUNICATION AND TOUCHPOINTS BLUEPRINT

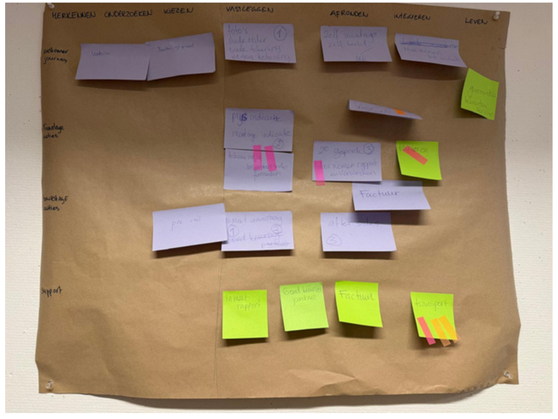
The second session focused on customer communication and key service touchpoints. Conducted with several internal stakeholders (e.g., marketing, communication, customer service, logistics, kitchens), we co-created a customer and communication journey that emphasised clarity and explored what communication is needed. The session aimed to identify friction points, opportunities, and needed support for successful rollout and customer adoption.

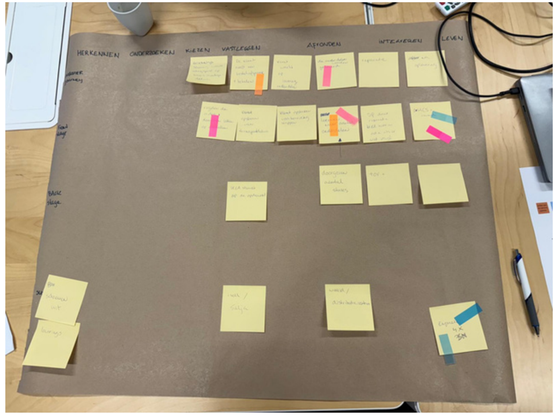


WORKSHOP 3 - SERVICE BLUEPRINT

The third workshop session was conducted with internal stakeholders directly involved in the pilot of the R&R service, including 4 colleagues from the IKEA store team, customer service, and kitchen sales. They brought valuable hands-on experience from supporting customers in the current test phase. The session was structured around a simplified, predefined customer journey. This journey served as a starting point to collaboratively explore how each stage could be brought to life through a service blueprint. Using structured templates, participants mapped out the key customer-facing actions, back-end processes, involved roles, digital and physical touchpoints, and operational dependencies.
The aim was to quickly uncover what is needed to deliver a smooth and coherent service experience, identify pain points and process gaps, and make visible how different teams contribute to each phase of the service. The resulting blueprints provided a shared overview and helped align perspectives on what a scalable and feasible R&R service could look like in practice.



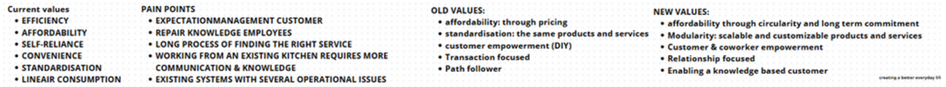




APPENDIX D / VISION DEVELOPMENT

This appendix outlines the future vision for circular kitchen services at IKEA. It reframes current values, explores future scenarios, and uses analogies to imagine a more modular, service-oriented, and empowering customer experience.

Reframing values



CURRENT VALUES	NEW VALUES
Affordability through low upfront pricing	Affordability through circularity and long-term value
Standardization: one-size-fits-all products	Modularity: scalable and customizable systems
Customer empowerment through DIY assembly	Customer empowerment through active ownership
Transaction focused	Relationship focused
Path-following customer	Knowledge driven customer

Ideation future vision

What will influence the kitchen system in 5 years
- product pasport
- circularity and repair
- tech shift
- consumer behaviour - following trends, transparancy, self-services

Goal: Envision a plausible and relevant world in which your design solution will exist.
Actions:
- Based on your trends and tensions, write a narrative (1–2 paragraphs) describing:
- What everyday life looks like for users in this future
- How IKEA operates in this context
- The values and constraints of the system
- Include aspects like resource scarcity, consumer behavior, legislation, etc.
- Think in realistic yet imaginative terms—the goal is not fantasy, but critical imagination.

Deliverable: A compelling, scenario-based future context (~150–250 words).

I envision a future where standardization and customization go hand in hand. The customer is in control and owns the knowledge needed for the future of their product, ensuring they are quick and efficient in their handling when something goes wrong with it or they want to lose it. As an ikea product is modular, not only their product will be but also the service that comes with it. A transparant system of IKEA empowers the customer to solve their product related issues. The customer should feel knowledgable about their product and feels like they own it.

scenario versions

The formal version:

You could swap the word products for kitchens, I wanted to see if it would so even in a broader context then kitchens, which then perhaps could be even a step further in the future.

Imagine a future where people don't just purchase products, they build a relationship with them. IKEA products remain modular at their core, but the ecosystem they are part of - how people engage with, care for, and evolve alongside their products - is just as modular. This ecosystem enables building and growing relationships with people's changing lives, responding to new needs, habits, and values over time.

In this future world, people feel ownership and knowledgeable over the products they live with. They don't just possess a product, they fully understand them and know how to care for it, adjust it and when. Whether it needs a repair, a refresh, or is ready to be passed on or recycled, IKEA enables them to take action confidently and independently.

Information is clear, accessible, and transparent. IKEA gives people the tools to act according to their wishes. They are no longer passive users, but involved and empowered individuals with the freedom to decide how and when to act. This autonomy directly supports flexibility and

affordability by enabling users to repair, customize and adapt their kitchen to fit their lives as they evolve.

This future marks a new way of living with our kitchens. One where change is expected, and products and services are made to grow with us. The role of IKEA shifts from simply delivering kitchen solutions to supporting a lifelong living journey. It offers a system that evolves as people do, making it easy to care for, improve, or rethink their kitchen whenever life calls for it. What was once a static setup becomes a dynamic part of daily life - personal, flexible, and built to last.

The more storytelling version:

Imagine a future where your kitchen isn't just something you own - it's something that grows with you. You can create lifelong memories in the same kitchen space as it will adapt to your ever changing needs and wishes. In the future, kitchens are not just a space or room in your house for cooking filled with functional furniture and appliances. They are living spaces that can change and grow with your life. IKEA kitchens stay modular at their core, but the whole system around them - how you use, care for, and change them - becomes just as flexible and personal.

In this future, you don't just own a kitchen. You understand it. You know how to take care of it, update it, and make it fit your life as it inevitably changes. If something breaks, you fix it. If you need a new look, you refurbish it. If life takes a new turn, you can easily adapt #your kitchen, disassemble it, expand it or pass it on to the next home-owner. IKEA provides you with the knowledge, the tools, services and most importantly the confidence to take action whenever you want, not just when you have to.

Everything you need is clear, easy to find, and ready when you are. You are in control, not waiting for someone else to decide or tell you what to do because they hold all the knowledge. You can repair, change, and grow your kitchen on your own terms. This freedom brings flexibility and keeps things affordable, helping you get more life out of what you already own, without adding unnecessary waste.

This future is not about kitchens that stay the same forever. It's about kitchens that stay with you forever. The role of IKEA becomes more than just selling kitchens it becomes about supporting your journey. Your kitchen becomes a part of your life story: growing, adapting, and lasting, just like you.

analogies

interaction:

Users interact with their kitchen system in a way that makes them feel confident, smart and in control. They easily access personalized knowledge and repair resources tailored to their product and needs , empowering them to take ownership of their kitchen's upkeep and evolution. This effortless access to repair literacy and actionable information enables users to feel capable, allowing them to confidently repair, refresh, and customize their kitchen on their own terms.

Analogieen:
APK check van de auto
System updates telefoon
Fairphone
LEGO
family recipe book
modular recipe (groene bakplaat)

APPENDIX E / IDEATION AND CONCEPTUALISATION

This appendix captures the ideation and early conceptualisation phase of the project. Several ideation methods guided the process, including brainstorming, brainwriting, design tools like Heroes of Value, and formulating How-To questions to translate abstract goals into actionable directions. The outcomes helped identify opportunity areas and shaped initial service concepts based on value shifts, customer needs, and blueprint insights. It also showed the evaluation of 6 ideas based on the design requirements.

HEROES OF VALUE

IDEAS THAT CAME OUT OF THE BLUEPRINT GAPS

1. A INTERACTIVE ORDER CHECKLIST TO ENSURE CORRECT ORDER DELIVERY
2. A CENTRAL KITCHEN DASHBOARD THAT CONTAINS ALL INFORMATION ABOUT YOUR KITCHEN WHERE YOU CAN UPLOAD PHOTOS AND CAN REACH SERVICES NEEDED
3. A PASSPORT, A KITCHEN 'document' that contains all product information, history is used as an official handover of the kitchen to the customer. this can also be used to transfer the kitchen to a next homeowner and connects the customer to maintain, repair and refurbish services.
4. a new way to teach ikea co-workers to learn them about repair possibilities
5. an easy way / a scanner that uses ai to track issues / to find the actual problem to your kitchen issues and a matching solution.
6. an platform that easily guides the customer and co-worker through the process with minimal employee involvement, it shows the process, the things you need to prepare before 'visits' and shows delivery forms, to keep all the information transparent for both sides.

BRAINSTORMING WITH VALUES & HOW TO'S

repair coach video callen

keuken scanner, koop je een huis met een bestaande ikea keuken, kan je de keuken scannen en staat deze gelijk in je system met details etc.

een kaartspel om achter de best matchende service te komen

kitchen health dashboard - smart system

familiarity
guiding
flexibility
personalisation
clarity

affordability through circularity and long term value
modular and customizable service blocks
empower through informed and proactive ownership
relationship focused
self-directed customer journey

in store repair bar

kitchen swap platform

VR renewal kiosk

in store renewal shop

in store renewal VR kiosk

fysiek kitchen paspoort

tool om kosten en resultaat af te wegen

een kaartspel om achter de best matchende service te komen

Geintegreerde repair coach in keukens

welke service past het best bij jou? quiz

QR codes/chips op onderdelen om de bijbehorende informatie to repair te krijgen

HOW TO'S BASED ON INTERACTION QUALITIES

Familiarity

1. How to make it easy for users to return and continue from where they left off, like revisiting or memorizing a known recipe?
2. How to embed the interaction into normal routines (daily, monthly, yearly) , so it doesn't feel like an exceptional task?
3. How to create a design (interface) that feels familiar and intuitive from the first interaction?

Guidance

4. How to guide users through repair or renewal options without overwhelming them?
5. How to provide step-by-step guidance that encourages autonomy, like following a recipe with room for variation?
6. How to build confidence over time, so the user feels more capable with each interaction?
7. How to help customers identify when their kitchen needs repair or refurbishing and which one in what situation?

Flexibility

8. How to allow users to select or combine service elements that reflect their current needs?
9. How to enable flexibility without creating confusion or requiring full customisation?
10. How to offer both simple fixes and larger adaptations through the same service logic?

Personalisation

11. How to personalise the experience based on kitchen setup, purchase history, or usage behaviour?
12. How to make the service feel unique and relevant, like a recipe book annotated over time?
13. How to provide smart, context-aware recommendations that reduce decision effort?

Clarity

14. How to communicate available options, pricing, and timelines clearly from the start?
15. How to show users the outcome or impact of their choices before they commit?
16. How to reduce confusion/ambiguity at every stage, from diagnosis to booking to renewal and repair?

Operational integration:

17. How to integrate the design with existing product and service data to enable smooth operations?
18. How to balance user guidance with back-end feasibility, ensuring the service remains scalable?
19. How to ensure the design reduces the need for manual intervention, while still allowing human support when needed?

Familiarity

1. Working with labels, logical steps, a dashboard page where you can return to, a cloud-like service. Divide into actionable steps, pending, tasklists, done. Notifications
2. Aligning the touchpoints with regular lifecycle events or yearly returning, eg spring clean up, summer (klussen), or make a planning upfront when buying the kitchen to get reminders
3. Use the IKEA app, keukenplanner with already planned kitchen or physical interfaces, either separately or integrated in the kitchen, use familiar structures and welknown technologies,

qr codes, **blue-tooth**, camera scanner, chatbots

Veerle Sonnemans

Guidance

4. Progressive disclosure in quiz format, **visual indications of common repair issues** to easily guide them to the corresponding pages.
5. Guides that adapt to skill and time level – do it yourself or do it for me. Shopping basket for repair and renewal, products and services.
6. Track and reward actions taken, ensure that actions that are taken are guided by IKEA. Create a learning effect or quooker self-service. When you completely and correctly execute it, you do feel „
7. scan kitchen, prompts to prevent, or image checklists, yearly kitchen health quiz.

duo lings, quooker community

Veerle Sonnemans

prevensie is beter dan voorkomen

repair kit based on your kitchen

Veerle Sonnemans

Flexibility

8. a recipe method, give the whole 'shopping list' for renewal,/ build a service journey like assembling ingredients or give a 'tapas' menu option
9. limit choices, make sure to clearly separate diy and difm, always offer customer support.
10. scale selection. With larger adaptations refer to plan and advice. incorporate quotation tool the design.

Personalisation

11. Kitchen dashboard with, personal account, use 3D model/ saved model of kitchen to find solutions. Booklet with services only applicable for your kitchen, after purchase.
12. Give it an ownership booklet or physical element that proves the realness of the kitchen, and shows the evolution. like a photobook. Timeline of kitchen evolution.
13. Give top 3 suggestions to do based on kitchen and most common issues with that type of material/product - insurances?

Big hassle to redesign your kitchen in kitchen planner, nice to have it in one area.

Veerle Sonnemans

system that collects common issues

Veerle Sonnemans

Clarity

14. When having your own kitchen in a model, present a short overview with .. whats included, time needed and cost. Colour coding and visual indications for difficulty levels and urgency
15. kitchen planner spin off. Basicly only important for complete renewals. This solution is already in place if you can edit your kitchen in kitchen planner.
16. Guidance. clear language, keep specific expertise yourself, just provide different options.

Operational integration:

17. use kitchenplanner, and ikea family account, old order history. Ensure that installation 'deliverable reports' are also available to the customer so that then can use that as a starting base.
18. modular service blocks that have standardized operation processes
19. clear paths and automate where possible. (bookings, diagnosis)

Rating 6 concepts on the design requirements

The favorite ideas of alejandro focused on repair and refurbishment services are evaluated
per idea the requirements are rated
Idea 1 and 3 are merged.

Rated on - -, - , ~, +, ++

User Interaction
1.The design works intuitively and is easy to use, requiring minimal effort or instruction.
2. The design feels familiar and accessible, without the need to learn completely new.
3. The design empowers users to take independent action when they want, while offering guidance when needed.
4. It offers a personalised the experience based on the user's kitchen setup, preferences, and service history.

Functionality
5. The design helps users to identify, plan, and carry out kitchen repairs or refurbishment actions.
6. The design supports modular upgrades and partial replacements, avoiding full kitchen replacements where unnecessary.
7. The design offers clear, step-by-step instructions for both self-service and full-service options.
8. The design supports a kitchen ownership transfer, allowing new future users to access relevant service history and product information.

Service Integration
9. The design aligns with the existing service infrastructure of IKEA, including digital tools, in-store services, and external partners.
10. The design simplifies IKEA's internal workflows and enables easy coordination between stakeholders.
11. The design supports data integration (e.g. product specifications, order history) to deliver a tailored experience.

Scalability and Feasibility
12. The design must be scalable across different IKEA locations and adaptable to various customer types.

13. The design minimises disruption to existing operational processes.

14. The design is most possibly cost-effective to implement, operate, and maintain.

Communication and Transparency
15. The design clearly communicates costs, service steps, and expected outcomes.

16. The design builds trust with the customer by offering transparent, predictable experiences.

design requirement	IDEA 1	IDEA 2	IDEA 3	IDEA 4	IDEA 5	IDEA 6
1.	++	--	+	+	~	++
2	~	+	~	+	~	++
3	++	-	++	++	++	+
4	-	--	-	++	++	-
5	++	--	++	+	+	+
6	++	+	~	+	++	-
7	+	-	-	-	+	+
8	--	--	--	--	-	--
9	~	-	~	+	++	++
10	+	+	~	++	~	~
11	++	-	+	++	++	--
12	++	++	+	++	~	++
13	++	~	+	+	+	++
14	+	++	+	-	~	++
15	++	+	+	-	+	--
16	+	++	-	+	+	+
	17	**3**	**6**	**12**	**14**	**8**

1. **AI issue scanner 3. connect directly to your kitchen components and get services available**
2. **In-store repair bar**
3. **Cost vs result tool (feature)**
4. **physical Kitchen passport / dashboard**
5. **Kitchen planner integration of services**
6. **DIGITAL r&r QUIZ**

APPENDIX F / QUESTIONNAIRE

Thank you for taking the time to participate in this survey.

This research is part of my Master thesis in Strategic Product Design at TU Delft, conducted in collaboration with IKEA Netherlands. The goal is to explore how we can better **support and encourage repair and refurbishment of kitchens**.

In this short survey, you will be introduced to a concept that combines a physical kitchen identity card and a digital repair tool. I'm interested in your perspective on how useful, understandable, and relevant these ideas are.

The survey will take **approximately 5 minutes to complete**. All responses are **anonymous** and will be used solely for research purposes. You accept the use of your anonymous responses for this research by clicking the start button.

If you have any questions or encounter any issues, feel free to contact me at:

1 → General questions

The first section will ask you 3 general questions about your housing situation.

Continue press Enter

a. Do you rent or own your home?*

A Rent
B Home owner
C Other

OK

b. Are you responsible (or partly responsible) for the maintenance or upkeep of your kitchen?*

A Yes, i am responsible
B Yes, I share responsibility with others
C No, someone else is responsible
D I don't know
E Other

c. Have you ever purchased a kitchen?*

Y Yes
N No

OK

2 → A closer look at the design

In the next sections, you will be introduced to a concept designed to make kitchen ownership and upkeep **more manageable and sustainable**. The concept consists of **two components** that aim to help you **prolong the lifespan of your kitchen.**

For each component, you receive a visualisation of the idea and you have to **carefully read** the short description. Then you are asked to rate and answer a few questions.

3 → PART 1 - MY KITCHEN ID

Imagine you have just bought a new kitchen.

Together with your kitchen, you receive this small physical card: the **MY KITCHEN ID**. This card can be placed in a designated pocket in your kitchen.

By scanning it's code, it links you to your **kitchen's digital ID and service area**, where you find everything about your kitchen: materials, measurements, components, manuals, and personalized services for repair or renewing parts.

Whenever you have a kitchen-related question or want to explore services, this becomes your go-to starting point.

You will now answer a few questions about this component.

Continue press Enter

4 → Rate this component on the following topics*

How useful would this be for you in your kitchen? *

1 2 3 4 5

Not useful at all — Neutral — Very useful

Powered by Typeform

How desirable do you find this idea? *

1 2 3 4 5

Not desirable at all — Neutral — Very desirable

How clear and easy to understand is this idea? *

1 2 3 4 5

Not clear at all — Neutral — Very clear

OK press Enter

Powered by Typeform

Would you personally use this to look for information or help if it were available with your kitchen? *

A Yes
B No
C Maybe

Powered by Typeform

6 → Will this idea make you more likely to:*

Select all that apply

Choose as many as you like

A Maintain or repair parts of my kitchen (by yourself or by available services)
B Update my kitchen by replacing it with a new parts (by yourself or by available services)
C Transfer this kitchen easily to someone else in the future
D Take over this kitchen from someone else
E All of the above
F None of the above

OK press Enter

7 → PART 2 - FIXIT lens

Now imagine a situation where something is wrong in your kitchen: a cabinet is loose, a drawer sticks, or your worktop is scratched.

You can now simply use your phone camera to **scan the problem**, and the tool will automatically recognise the issue and your product.

It will then suggest either a **personalised DIY step-by-step solution** to fix it or direct you to the right **spare parts** or **repair or renovation services** based on your specific kitchen.

You will now answer a few questions about the second component.

Continue press Enter

8 → Rate this component on the following topics*

How useful would this be for you in your kitchen?
*

1	2	3	4	5

Not useful at all — Neutral — Very useful

How desirable do you find this idea?
*

1	2	3	4	5

Not desirable at all — Neutral — Very desirable

How clear and easy to understand is this idea?
*

1	2	3	4	5

Not clear at all — Neutral — Very clear

OK press Enter

9 → Would you personally use this feature if it were available?
*

A Yes
B No
C Maybe

10 → Will this feature make you more likely to:*

Select all that apply

Choose as many as you like

A Repair small kitchen issues yourself
B Request repair services or spart parts instead of ignoring an issue
C Feel more confident taking care of your kitchen
D All of the above
E None of the above

OK press Enter

Powered by Typeform

11 → ...

Now imagine you have both the **MY KITCHEN ID** and **FIXIT lens** to your availability.

You have the id-card of your kitchen, that you can scan to view your digital kitchen ID and service area. When something breaks or needs attention, you use your camera to **get support immediately.**

This concept **supports you** throughout the full lifetime of your kitchen: from purchase, to upgrades, to maintenance, to handover to a potential next user.

You will now answer a few more questions about the concept.

Continue press Enter

11 → ...

a. How helpful do you find this concept overall? *

1	2	3	4	5

Not helpful at all — Neutral — Very helpful

OK

b. Which part would be most useful to you? *

A My KITCHEN ID (card + digital environment)
B FIXIT Lens (scan + suggestions)
C The combination of both
D Neither

OK

11 → ...

c. Would this concept influence your decision to choose an IKEA kitchen?

A Yes
B No
C Maybe

OK

d. Does the concept motivate you to: *

Choose as many as you like

A Repair or maintain your kitchen more often
B Refurbish or expand your kitchen over time
C Pass on your kitchen (with information) to someone else
D All of the above
E None of the above

OK press Enter

Powered by Typeform

11 → ...

e. Do you have any feedback or something else to say about the concept?

8.

Type your answer here...

Shift ⇧ + Enter ↵ to make a line break

OK press Enter

12 → Rate the overall concept on the following descriptions

The concept feels familiar *

1	2	3	4	5

Not familiar at all — Very familiar

The concept gives me guidance *

1 2 3 4 5

Not guiding at all — Very guiding

The concept gives me flexibility *

1 2 3 4 5

Not flexible at all — Very flexible

The concept is personalized *

1 2 3 4 5

Not personal at all — Very personal

The concept gives me clarity *

1 2 3 4 5

Not clear at all — Very clear

OK press Enter

13 → Demographics

The last questions. Almost there.

Continue press Enter

a. What is your age group?*

A Under 25
B 25-40
C 40-55
D 55-70
E 70+

OK

b. In what type of area do you live*

A City
B Village
C Rural
D Other

OK

c. What is your gender*

A Woman
B Man
C Non-binary / Third gender
D Prefer not to say
E Other

Submit

Thank you for your time and input. If you have any questions related to this research, feel free to contact me at:

APPENDIX G / RESULTS CONCEPT ANALYSIS

Desirability, usefullness, clarity, adoption intention

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
KITCHEN ID usefulness	103	1	5	3,57	1,125
KITCHEN ID desirability	103	1	5	3,50	1,162
KITCHEN ID clarity	103	2	5	4,35	,893
Valid N (listwise)	103				

Respondents rated KITCHEN ID positively in terms of clarity (M = 4.35), followed by usefulness (M = 3.57) and desirability (M = 3.50), indicating it was well-understood but could be improved in perceived value and appeal.

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
FIXIT usefulness	103	1	5	4,12	,900
FIXIT desirability	103	1	5	4,07	,899
FIXIT clarity	103	2	5	4,42	,693
Valid N (listwise)	103				

FIXIT scored high on all three aspects, especially clarity (M = 4.42), followed by usefulness (M = 4.12) and desirability (M = 4.07), suggesting strong potential for user acceptance.

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
CONCEPT usefullness	103	1	5	4,05	,856
Concept clarity	100	2	5	4,09	,753
Valid N (listwise)	100				

The overall concept (the combination of KITCHEN ID + FIXIT) was rated positively, with usefulness (M = 4.05) and clarity (M = 4.09) indicating general approval and understanding among participants.

Group Statistics

	housingstatus	N	Mean	Std. Deviation	Std. Error Mean
KITCHEN ID usefulness	rent	56	3,52	1,128	,151
	own	45	3,71	1,079	,161
KITCHEN ID desirability	rent	56	3,39	1,186	,158
	own	45	3,64	1,131	,169
FIXIT usefulness	rent	56	4,14	,903	,121
	own	45	4,18	,777	,116
FIXIT desirability	rent	56	4,05	,923	,123
	own	45	4,09	,874	,130
CONCEPT usefullness	rent	56	4,07	,850	,114
	own	45	4,04	,878	,131

Small variations between renters and owners: owners scored slightly higher on KITCHEN ID usefulness and FIXIT desirability. Renters found FIXIT slightly more useful than owners. This suggests subtle differences in relevance depending on housing status.

KITCHEN ID adoption intention

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	1,0	1,0	1,0
	Maybe	22	21,2	21,2	22,1
	No	15	14,4	14,4	36,5
	Yes	66	63,5	63,5	100,0
	Total	104	100,0	100,0	

63.5% of respondents indicated they would adopt KITCHEN ID, while 21.2% were unsure and 14.4% said no. The majority sees potential in the idea.

FIXIT adoption intention

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	1,0	1,0	1,0
	Maybe	25	24,0	24,0	25,0
	No	5	4,8	4,8	29,8
	Yes	73	70,2	70,2	100,0
	Total	104	100,0	100,0	

70.2% would adopt FIXIT; only 4.8% said no. This shows strong enthusiasm and perceived usefulness for FIXIT as a circular service.

Influence on purchase ikea kitchen

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	1,0	1,0	1,0
	Maybe	47	45,2	45,2	46,2
	No	22	21,2	21,2	67,3
	Yes	34	32,7	32,7	100,0
	Total	104	100,0	100,0	

About one-third (32.7%) indicated that the concept would positively influence their decision to purchase an IKEA kitchen; 45.2% said "maybe".

Sustainable behaviour engagement

$conceptsustainablebehaviours Frequencies

		Responses N	Responses Percent	Percent of Cases
concept sustainable behaviour[a]	Concept motivates repair	89	47,6%	90,8%
	Concept motivates renewal	58	31,0%	59,2%
	Concept motivates transfer	40	21,4%	40,8%
Total		187	100,0%	190,8%

a. Dichotomy group tabulated at value 1.

91% of respondents indicated the concept motivates at least one sustainable behaviour: 47.6% chose repair, 31.0% renewal, and 21.4% transfer.

$FIsustainablebehaviours Frequencies

		Responses N	Responses Percent	Percent of Cases
FIXITsustainablebehaviour[a]	FIXIT motivates repair	82	38,3%	83,7%
	FIXIT motivates renew services	79	36,9%	80,6%
	FIXIT enables confidence	53	24,8%	54,1%
Total		214	100,0%	218,4%

a. Dichotomy group tabulated at value 1.

83.7% agreed FIXIT motivates repair, 80.6% said it motivates trying new services, and 54.1% felt it builds confidence. These are strong indicators for circular engagement.

$KIDsustainablebehaviours Frequencies

		Responses N	Responses Percent	Percent of Cases
$KIDsustainablebehaviours[a]	KITCHEN ID Motivates maintenance/repair	81	34,5%	83,5%
	KITCHEN ID Motivates update/renew	70	29,8%	72,2%
	KITCHEN ID Motivates transfer	44	18,7%	45,4%
	KITCHEN ID motivates takeover	40	17,0%	41,2%
Total		235	100,0%	242,3%

a. Dichotomy group tabulated at value 1.

58.3% said KITCHEN ID motivates repair, 72.2% renewal, and 45.4% transfer, with 41% saying it also motivates takeover (reusing a kitchen). This reflects its versatility.

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Concept familiarity	100	1	5	3,29	1,066
Concept guidance	100	2	5	4,04	,764
Concept flexibility	100	2	5	3,83	,954
Concept personalisation	100	1	5	3,69	,971
Concept clarity	100	2	5	4,09	,753
Valid N (listwise)	100				

91% of respondents indicated the concept motivates at least one sustainable behaviour: 47.6% chose repair, 31.0% renewal, and 21.4% transfer.

General information

Responsibility for kitchen upkeep

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No, someone else is responsible	16	15,4	15,4	16,3
	Other	1	1,0	1,0	17,3
	Yes, i am responsible	38	36,5	36,5	53,8
	Yes, I share responsibility with others	48	46,2	46,2	100,0

53.8% said they are personally responsible, 46.2% share responsibility, while only 15.4% said someone else handles it. Indicates a strong sense of ownership.

Has purchased a kitchen

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	60	57,7	58,3	58,3
	No	43	41,3	41,7	100,0
	Total	103	99,0	100,0	
Missing	System	1	1,0		
Total		104	100,0		

58.3% said KITCHEN ID motivates repair, 72.2% renewal, and 45.4% transfer, with 41% saying it also motivates takeover (reusing a kitchen). This reflects its versatility.

Demographic informaion

living area

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	1,0	1,0	1,0
	City	76	73,1	73,1	74,0
	Other	1	1,0	1,0	75,0
	Rural	2	1,9	1,9	76,9
	Village	24	23,1	23,1	100,0
	Total	104	100,0	100,0	

gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	1,0	1,0	1,0
	Man	43	41,3	41,3	42,3
	Prefer not to say	1	1,0	1,0	43,3
	Woman	59	56,7	56,7	100,0
	Total	104	100,0	100,0	

	I think price is still one of my largest considerations, since I will be new to purchasing kitchens. I am a DIY'er myself, so I will sooner opt for fixing issues myself. Usually, I encounter issues that need a specific solution that is not mentioned in the manual, so I would see the My Kitchen ID to help me with that.
1	The Fix It Lens would be helpful as well, but I'd rather fix my kitchen the way I am used to.
2	Can u upload manuals of all your kitchen appliances?
3	I think the lens is more accessible
4	more examples will be helpful with understanding the concept of ID card cuz I felt a little confused (like why cant I just access these on a platform with a digital ID?)
5	Heel veel succes!
6	When are these features available?
7	Question: why use an QR-code? Afgelopen week wilde ik een cappuccino zetten alleen wist ik niet hoe dat moest met mijn apparaat en ook niet welk apparaat het was. Door een foto te scannen met AI van het apparaat kreeg ik meteen een het type en een video uitleg over het zetten van een cappuccino.
8	It is such a good idea, it surprises me that it doesn't exist yet!
9	No
10	Succes depends on the content.
11	I don't feel confident the repair solutions suggested will actually work. I also feel confident enough already that I can repair things. The easy availability of parts is most important
12	I took over an ikea kitchen from the previous owner of our home. This features would really help me to fix and refurbish this kitchen.
13	The idea of the fix it lens is groundbreaking if it worked properly. But I personally prefer the idea of the kitchen ID because I don't like some AI or other software to take care of the issues in my kitchen. Also taking a picture inside your home that is then processed through online services doesn't appeal very secure in terms of privacy.
14	I love the tips how to fix your kitchen yourself in the Fixit idea. The comfort of all things and details saved in the my kitchen ID sounds very lovable too. I always loose all papers about these things. We now have a Kvik kitchen and i would love to have the my kitchen id to get Some extra parts or door closing mechanisms and above all to get a new lit for our green container - we need to renew this for 5 years now... Good luck finishing your thesis!!
15	Lekker bezig Veer!!
16	Het zou ook helpen als je met name bij het vervangen van apparatuur kan controleren of het type oven/vaatwasser/ijskast past in je huidige opstelling. Daarnaast zou het leuk zijn als de applicatie ook suggesties heeft voor alternatieven die ook passen. Bijvoorbeeld als je de deurtjes wilt vervangen.
17	I reaply like the combination of both in addressing the full customer journey, yet I am still hesitant if using AR with fix lens I would still be able to repair it, probably pre filling skill level would help, also probably not all issues are visual in one kitchen, thus alternative pathways where maybe door does not close fully or makes a sound should be done with something other than image scan.
18	Good luck
19	Quit often you don't know all the functions of your SDA and would be interesting to be able to have access to this (eg microwave function etc).
20	How would the services be layed out? In my experience finding a company offering a good service is not easy in the Netherlands. Maybe Ikea can work togheter with screened ZZPers that can help you service.
21	I don't want a physical card. I'd loose it. Maybe better if it was digital and would live on my phone. Would you need a card or ID at all? would be nice if I could just do everything with the fixit lens.
22	Add a function not to only fix it but also ideas to restyle or make it your own (design - eg you can paint this in another color, or you could replace the knobs)
23	Very good ideas, maybe you can combine the repair service with a wrapping solution so you can resell the broken cabinets
24	Leuk idee
25	Nice idea. Very much a service concept
26	Good to also share it with appliance manufactorers
27	Slightly far-fetched in my view.
28	Ik zou wel willen begrijpen wanneer ik de ene kan gebruiken en wanneer de ander. Voor de ID zou ik ook concreet product ideeen willen zien, zoals rekjes voor bestek die precies in mijn lade passen etxc
29	Ideally I don't want to touch or interact with the kitchen anymore after it's installed. Can be nice for selling it to the next person when moving out, since IKEA products are not designed to be disassembled
30	Sounds good. But is more a nice to have. Design of the kitchen itself is most important for the buying decision
31	Also get design suggestions with the fix it lens (eg new color schemes)
32	No extra ID's please! We allready have to many, for the car, for the bank, etc.

REFERENCES

AI for Field Service Companies | aiventic. (n.d.). https://www.aiventic.ai/en/

Alle garanties op onze producten. (n.d.). IKEA. https://www.ikea.com/nl/nl/customer-service/returns-claims/guarantee/

Baccini, F. (2024, August 7). The right to repair has become EU law starting from today. *Eunews.* https://www.eunews.it/en/2024/07/30/eu-directive-right-repair-products/

Benz, L. A. (2022). Critical Success Factors for Circular Business Model Innovation from the Perspective of the Sustainable Development Goals. *Sustainability,* 14(10), 5816. https://doi.org/10.3390/su14105816

Beyond Efficiency: The Roles of Large Corporates in driving Sustainability Transitions - VU Center for Business & Society. (n.d.). https://business-society.org/vids_pods/beyond-efficiency-the-roles-of-large-corporates-in-driving-sustainability-transitions/

Bocken, N., Short, S., Rana, P., & Evans, S. (2013). A literature and practice review to develop sustainable business model archetypes. *Journal of Cleaner Production*, 65, 42–56. https://doi.org/10.1016/j.jclepro.2013.11.039

Borges-Tiago, M. T., Almeida, A., Tiago, F. G. B., & Avelar, S. M. M. (2024). Bridging the innovative Attitude–Behavior Gap: A dual-level analysis. *Journal of Innovation & Knowledge*, 9(4), 100561. https://doi.org/10.1016/j.jik.2024.100561

Breaking down the IKEA value chain – IKEA Global. (n.d.). IKEA. https://www.ikea.com/global/en/our-business/how-we-work/the-ikea-value-chain/

Circular economy introduction. (n.d.). Ellen MacArthur Foundation. https://www.ellenmacarthurfoundation.org/topics/circular-economy-introduction/overview

Circular Economy: Measuring innovation in product chains. (2017, January 27). PBL Netherlands Environmental Assessment Agency. https://www.pbl.nl/en/publications/circular-economy-measuring-innovation-in-product-chains

Circular Service Finance - Sustainable Finance Lab. (2021, December 16). Sustainable Finance Lab. https://sustainablefinancelab.nl/nl/paper/circular-service-finance/

Circulariteit — chainable. (2025, June 11). Chainable. https://www.chainable.nl/circulariteit/

Clifford, C. (2019, October 5). *Meatballs and DIY bookcases: The psychology behind Ikea's iconic success*. CNBC. https://www.cnbc.com/2019/10/05/psychology-behind-ikeas-huge-success.html

Coalition, S. P. (n.d.). *Extended Producer Responsibility - SPC's guide*. https://epr.sustainablepackaging.org/

Data.Europa.Eu. (2025, February 13). EU's Digital Product Passport: Advancing transparency and sustainability. *data.europa.eu.* https://data.europa.eu/en/news-events/news/eus-digital-product-passport-advancing-transparency-and-sustainability

De Hooge, I. E., Virrueta, C. M., Reimink, S., & Pfeiffer, L. (2024). *Slow design : Creating long lasting consumer product relationships.* https://library.wur.nl/WebQuery/wurpubs/628028

De Vries, E., Leiden-Delft-Erasmus Centre for Sustainability, TU Delft faculty of Industrial Design Engineering, Bakker, C., Repasi, R., Castermans, A. G., Kennedy, S., Cucurachi, S., Flipsen, B., Balkenende, R., Mugge, R., Lijmbach, W., Den Hollander, M., Loots, E., Van Straten Medical, ATAG, Freudenberg Home and Cleaning Solutions, Rotterdam University of Applied Sciences, & European Commission. (2023). REPAIR IN THE CIRCULAR ECONOMY: EUROPEAN LEGISLATION, PRODUCT DESIGN AND BUSINESS MODELS. In *Leiden-Delft-Erasmus Centre for Sustainability*. https://www.leiden-delft-erasmus.nl/uploads/default/attachments/LDE%20Whitepaper%20Repair%20EN_0.pdf

Design and the circular economy. (2019, September 16). https://www.ellenmacarthurfoundation.org/design-and-the-circular-economy-deep-dive

Design Council. (n.d.). *The Double Diamond - Design Council*. https://www.designcouncil.org.uk/our-resources/the-double-diamond/

Ecodesign for sustainable products Regulation. (n.d.). European Commission. https://commission.europa.eu/energy-climate-change-environment/standards-tools-and-labels/products-labelling-rules-and-requirements/ecodesign-sustainable-products-regulation_en

Europe: less widespread but still meaningful labour shortages. (n.d.). economic-research.bnpparibas.com. https://economic-research.bnpparibas.com/html/en-US/Europe-less-widespread-still-meaningful-labour-shortages-11/22/2023,49104

FAKTUM keuken: Nuttige informatie. (n.d.). IKEA. https://www.ikea.com/be/nl/customer-service/product-support/faktum-keuken-nuttige-informatie-pube5d69579/

Filho, W. L., Schmidberger, I., Sharifi, A., Vargas, V. R., Rampasso, I. S., Dibbern, T., Liakh, O., Aina, Y. A., Trevisan, L. V., Mbah, M. F., Anholon, R., & Kozlova, V. (2024). Design thinking for sustainable development: A bibliometric analysis and case study research. *Journal of Cleaner Production*, 455, 142285. https://doi.org/10.1016/j.jclepro.2024.142285

Fleischmann, K. (2020). Designers as change agents in the Circular Economy. *DOAJ (DOAJ: Directory of Open Access Journals)*. https://doaj.org/article/d53f6e6b0f3f4670a1f0828201c5ce82

Fogg, B. (2009). A behavior model for persuasive design. In *Persuasive '09: Proceedings of the 4th International Conference on Persuasive Technology*. https://doi.org/10.1145/1541948.1541999

Fogg Behavior Model - BJ Fogg. (n.d.). Fogg Behavior Model. https://www.behaviormodel.org/

Forrest, A., Hilton, M., Ballinger, A., Whittaker, D., & Eunomia Research & Consulting Ltd. (2017). CIRCULAR ECONOMY OPPORTUNITIES IN THE FURNITURE SECTOR. In *European Environment Bureau (EEB)*. https://eeb.org/wp-content/uploads/2019/05/Report-on-the-Circular-Economy-in-the-Furniture-Sector.pdf

Franceschini, P. B., & Da Rocha, C. G. (2025). Design for Sustainable Behaviour: an exploratory study in schools' washrooms. *Sustainability, 17*(3), 1219. https://doi.org/10.3390/su17031219

Gaziulusoy, İ., & Öztekin, E. E. (2019). Design for Sustainability Transitions: origins, attitudes and future Directions. *Sustainability, 11*(13), 3601. https://doi.org/10.3390/su11133601

Geïnspireerd ontwerp voor woonruimtes, in de app of web - IKEA Kreativ. (n.d.). https://www.ikea.com/nl/nl/home-design/

Gershenson, J. K., Prasad, G. J., & Zhang, Y. (2003). Product modularity: Definitions and benefits. *Journal of Engineering Design, 14*(3), 295–313. https://doi.org/10.1080/0954482031000091068

Ghosh, S. K. (2019). Circular Economy: Global Perspective. In *Springer eBooks*. https://doi.org/10.1007/978-981-15-1052-6

Going circular: a future with zero waste. (n.d.). IKEA. https://www.ikea.com/us/en/this-is-ikea/sustainable-everyday/a-circular-ikea-making-the-things-we-love-last-longer-pub9750dd90/

Gomes, G. M., Moreira, N., & Ometto, A. R. (2022). Role of consumer mindsets, behaviour, and influencing factors in circular consumption systems: A systematic review. *Sustainable Production and Consumption, 32,* 1–14. https://doi.org/10.1016/j.spc.2022.04.005

Google Lens - Search what you see. (n.d.). Google Lens. https://lens.google/

Goss, H. M., Tromp, N., & Schifferstein, H. N. J. (2025). Framing system dynamics for designers innovating in transitions. *International Journal of Design, 19*(1), 77–94. https://www.ijdesign.org/index.php/IJDesign/article/viewFile/5412/1089

Hagejärd, S., Ollár, A., Femenías, P., & Rahe, U. (2020). Designing for Circularity—Addressing product design, consumption practices and resource flows in domestic kitchens. *Sustainability, 12*(3), 1006. https://doi.org/10.3390/su12031006

Heath, A. (2021, August 26). Snapchat's new AR features can identify the world around you. *The Verge*. https://www.theverge.com/2021/8/26/22642017/snapchat-scan-feature-ar-camera-visual-search

Hekkert, P., & Van Dijk, M. (2010). *VIP Vision in Design: A Guidebook for innovators*. https://repository.tudelft.nl/view/MMP/uuid:da5e9504-ebb4-4656-a147-2c879d2dd11b/

Hekkert, P., & Van, M. D. (n.d.). *VIP Vision in Design: A Guidebook for Innovators. BIS Publishers.*

Helping consumers choose product repair over replacement. (n.d.). TU Delft. https://www.tudelft.nl/en/ide/delft-design-stories/helping-consumers-choose-product-repair-over-replacement

Hestad, B. (2024, November 12). 10 Examples of digital product passport-like initiatives. *Bluestone PIM.* https://www.bluestonepim.com/blog/digital-product-passport-like-examples

Höpfl, L., Grimlitza, M., Lang, I., & Wirzberger, M. (2024). Promoting sustainable behavior: addressing user clusters through targeted incentives. *Humanities and Social Sciences Communications, 11*(1). https://doi.org/10.1057/s41599-024-03581-6

How the Design of Socio-technical Experiments Can Enable Radical Changes for Sustainability. (n.d.). *International Journal of Design*. https://www.ijdesign.org/index.php/IJDesign/article/view/1308/650

How we work – IKEA Global. (n.d.). IKEA. https://www.ikea.com/global/en/our-business/how-we-work/

Huang, E. D., FORMLABS INC., & RHODE ISLAND SCHOOL OF DESIGN. (n.d.). *DESIGN FOR FOSTERING ACTION-ORIENTED AWARENESS TOWARDS SUSTAINABLE TRANSITION* [Journal-article]. https://www.idsa.org/wp-content/uploads/2024/10/INTER.pdf

I knew I shouldn't, yet I did it again! Emotion-driven design as a means to motivate subjective well-being. (n.d.). *International Journal of Design*. https://www.ijdesign.org/index.php/IJD%20esign/article/view/1027/401

IKEA® Service Design Methodology. (n.d.). In *Inter IKEA Systems B.V.* Inter IKEA Systems B.V.

IKEA. (n.d.). *Hej! welcome to IKEA Global*. https://www.ikea.com/

IKEA 80th anniversary - IKEA Global. (n.d.). IKEA. https://www.ikea.com/global/en/newsroom/corporate/ikea-80th-anniversary-assembling-a-better-future-together-230728/

IKEA apps. (n.d.). IKEA. https://www.ikea.com/nl/en/customer-service/mobile-apps/

IKEA Kitchen Service offer T1 FY23 Update. (n.d.). [Slide show].

IKEA Museum AB. (2023, June 12). *How IKEA took flatpacks to a whole new level - IKEA Museum*. WordPress På Azure. https://ikeamuseum.com/en/explore/the-story-of-ikea/flatpacks/

IPSOS, & Patodia, S. (2025). PEOPLE AND CLIMATE CHANGE public attitudes to the climate crisis and the transition to net zero. In *IPSOS*. Retrieved June 18, 2025, from https://www.ipsos.com/sites/default/files/ct/news/documents/2025-04/People&ClimateChange2025.pdf

Irwin, T. (2020). The emerging transition design approach. *Cuadernos Del Centro De Estudios De Diseño Y Comunicación, 87*. https://doi.org/10.18682/cdc.vi87.3762

Irwin, T., 1, Tonkinwise, C., 2, & Kossoff, G., 3. (2021). Transition design: The importance of everyday life and lifestyles as a leverage point for sustainability transitions. In *Centro de Estudios en Diseño y Comunicación, Cuaderno 105* (pp. 67–94). http://www.scielo.org.ar/pdf/ccedce/n105/1853-3523-ccedce-105-73.pdf

Jung, K., & Mejía, M. (n.d.). Are service designers positioned to design for sustainability? *DRS Digital Library.* https://dl.designresearchsociety.org/iasdr/iasdr2023/fullpapers/107/

Key milestones in the history of IKEA. (n.d.). https://www.ikea.lt/en/page/key-milestones-in-the-history-of-ikea

Kvk, N. C. O. C. (n.d.). *EPR: producers responsible for waste from used products*. business.gov.nl. https://business.gov.nl/sustainable-business/environment/epr-producers-responsible-for-waste-from-used-products/

Maduku, D. K. (2023). How environmental concerns influence consumers' anticipated emotions towards sustainable consumption: The moderating role of regulatory focus. *Journal of Retailing and Consumer Services, 76*, 103593. https://doi.org/10.1016/j.jretconser.2023.103593

Maher, R., Maher, M., Mann, S., & McAlpine, C. A. (2018). Integrating design thinking with sustainability science: a Research through Design approach. *Sustainability Science, 13*(6), 1565–1587. https://doi.org/10.1007/s11625-018-0618-6

McGinty, D. (n.d.). *5 Opportunities of a circular economy*. World Resources Institute. https://www.wri.org/insights/5-opportunities-circular-economy

Meadows, D. H. (2009). *Thinking in systems* (Diana Wright & Sustainability Institute, Eds.). Earthscan. https://research.fit.edu/media/site-specific/researchfitedu/coast-climate-adaptation-library/climate-communications/psychology-amp-behavior/Meadows-2008.-Thinking-in-Systems.pdf

Meet our Heroes of Value — Valsplat Design & Research Lab. (n.d.). Valsplat. https://valsplat.nl/posts/heroes-of-value

Ministerie van Algemene Zaken. (2023, November 3). *National Circular Economy Programme 2023-2030.* Report | Government.nl. https://www.government.nl/topics/circular-economy/documents/reports/2023/09/27/national-circular-economy-programme-2023-2030

Ministerie van Algemene Zaken. (2024, June 24). *Research: Ecodesign for furniture.* Report | Government.nl. https://www.government.nl/documents/reports/2024/01/31/research-ecodesign-for-furniture

Ministerie van Binnenlandse Zaken en Koninkrijksrelaties. (2024, November 14). *Rented housing*. Housing | Government.nl. https://www.government.nl/topics/housing/rented-housing

Mosaddek. (n.d.). VASE | *Understanding value tensions*. https://teachingforvaluesindesign.eu/20_understandingvaluetensions.html#:~:text=Value%20tensions%20occur%20when%20different,that%20other%20stakeholders%20do%20like.

Niedderer, K., Clune, S., & Ludden, G. (2017). Design for behaviour change: *Theories and Practices of Designing for Change*. Design for Social Responsibility.

Norton, M. I., Mochon, D., & Ariely, D. (n.d.). *The "IKEA effect": when labor leads to love* (No. 11–091). https://www.hbs.edu/ris/Publication%20Files/11-091.pdf

Oecd. (2024). Extended producer responsibility. In *OECD Environment Policy Papers*. https://doi.org/10.1787/67587b0b-en

One brand, many companies – the IKEA franchise system. (n.d.-a). https://www.inter.ikea.com/en/this-is-inter-ikea-group/the-ikea-franchise-system

Our history. (n.d.). IKEA. https://www.ikea.com/ph/en/this-is-ikea/about-us/ikea-heritage-pubad29a981/

Our sustainability focus areas – IKEA Global. (n.d.). IKEA. https://www.ikea.com/global/en/our-business/sustainability/

Parajuly, K., Fitzpatrick, C., Muldoon, O., & Kuehr, R. (2020). Behavioral change for the circular economy: A review with focus on electronic waste management in the EU. *Resources Conservation & Recycling X*, 6, 100035. https://doi.org/10.1016/j.rcrx.2020.100035

Pinchoff, J., Etetim, E., Babatunde, D., Blomstrom, E., Ainul, S., Akomolafe, T. O., Carranza, B. M., Del Valle, A., & Austrian, K. (2025). How climate change is shaping young people's health: a participatory, youth co-led study from Bangladesh, Guatemala and Nigeria. *BMJ Global Health, 10*(1), e016788. https://doi.org/10.1136/bmjgh-2024-016788

Pineda, A. F. V., Elle, M., & Iuel-Jensen, J. (2024). The role of design in sustainable transitions: The case of mobility in Greater Copenhagen. *Environmental Innovation and Societal Transitions, 50*, 100807. https://doi.org/10.1016/j.eist.2023.100807

Potting, J., Hanemaaijer, A., PBL Netherlands Environmental Assessment Agency, Statistics Netherlands (CBS), & National Institute for Public Health and the Environment (RIVM). (2018). Circular economy: what we want to know and can measure. In *Framework and Baseline Assessment for Monitoring the Progress of the Circular Economy in the Netherlands* [Policy Report]. PBL Netherlands Environmental Assessment Agency. https://www.pbl.nl/sites/default/files/downloads/pbl-2018-circular-economy-what-we-want-to-know-and-can-measure-3217.pdf

Privett, S., Trustee of Farnham Repair Café. (2019). [Summary findings of research into UK Repair Cafés impact on reducing greenhouse gas (GHG) emissions] (pp. 1–4) [Research]. https://repaircafe.org/wp-content/uploads/2020/04/Summary_impact_of_UK_Repair_Cafes_on_CO2_emissions.pdf

Product attachment and replacement: implications for sustainable design. (2014). In *Int. J. Sustainable Design* (Vol. 2, Issue 3, pp. 265–282). https://www.lucs.lu.se/fileadmin/user_upload/project/lucs/KKEG-23/kkeg23_littsem-2_product-attachment-and-replacement-implications-for-sustainable-design.pdf

Publications Office of the European Union. (2018). *Behavioural study on consumers' engagement in the circular economy : executive summary*. Publications Office of the EU. https://op.europa.eu/en/publication-detail/-/publication/0779f275-f9d6-11e8-a96d-01aa75ed71a1/language-en

Publicis Sapient. (2020, June 29). *Automotive Trends: How to Navigate from Ownership to Usership | Publicis Sapient*. https://www.publicissapient.com/insights/automotive-trends-from-ownership-to-usership

Recycle je oude kussens en dekbedden. (n.d.). IKEA. https://www.ikea.com/nl/nl/campaigns/recycleservice-kussens-en-dekbedden-pubf20ecec0/#:~:text=Breng%20je%20oude%20dekbedden%20en,onze%20klantenservice%20in%20de%20winkel.

Refurbishment. (n.d.). Collins Dictionary. https://www.collinsdictionary.com/dictionary/english/refurbishment

repair. (2025). https://dictionary.cambridge.org/dictionary/english/repair

Right to repair: Making repair easier and more appealing to consumers | News | European Parliament. (n.d.). https://www.europarl.europa.eu/news/en/press-room/20240419IPR20590/right-to-repair-making-repair-easier-and-more-appealing-to-consumers

Rood, T., Kishna, M., & PBL Netherlands Environmental Assessment Agency. (2019). *Outline of the circular economy* (Utrecht University, Drift, Ministry of Economic Affairs and Climate Policy, Ministry of Infrastructure and Water Management, Royal Haskoning DHV, Millennials.ai, RVO, & Ministry of the Interior and Kingdom Relations, Eds.). PBL Netherlands Environmental Assessment Agency. https://circulareconomy.europa.eu/platform/sites/default/files/pbl-2019-outline-of-the-circular-economy-3633.pdf

Roskladka, N., Jaegler, A., & Miragliotta, G. (2023). From "right to repair" to "willingness to repair": Exploring consumer's perspective to product lifecycle extension. *Journal of Cleaner Production, 432*, 139705. https://doi.org/10.1016/j.jclepro.2023.139705

R-Strategies for a Circular Economy. (n.d.). https://www.circularise.com/blogs/r-strategies-for-a-circular-economy

Schaltegger, S., & Burritt, R. (2015). Business Cases and Corporate Engagement with Sustainability: Differentiating Ethical Motivations. *Journal of Business Ethics*, 147(2), 241–259. https://doi.org/10.1007/s10551-015-2938-0

Scharwächter, V. (2023, May 1). *Selectiebias (Selection bias) | Betekenis & Voorbeelden.* Scribbr. https://www.scribbr.nl/onderzoeksbias/selectiebias/

Scholtysik, M., Rohde, M., Koldewey, C., & Dumitrescu, R. (2023). Circular Product-Service-System Ideation Canvas – A framework for the design of circular Product-Service-System ideas. P*rocedia CIRP, 120*, 1404–1409. https://doi.org/10.1016/j.procir.2023.09.184

SDGs ESG ACTION. (n.d.). okamura.com. https://www.okamura.com/en-eu/company/sustainability/sdgs-esg/

Services. (n.d.-a). IKEA. https://www.ikea.com/nl/en/customer-service/services/

Shevchenko, T., Saidani, M., Ranjbari, M., Kronenberg, J., Danko, Y., & Laitala, K. (2022). Consumer behavior in the circular economy: Developing a product-centric framework. *Journal of Cleaner Production, 384*, 135568. https://doi.org/10.1016/j.jclepro.2022.135568

Skopeliti, C. (2024, May 22). 'I'm screwed': young adults forced by EU housing crisis to live with parents. *The Guardian.* https://www.theguardian.com/news/article/2024/may/21/young-adults-forced-by-eu-housing-crisis-to-live-with-parents?utm_source=chatgpt.com

Spare parts - IKEA. (n.d.). IKEA. https://www.ikea.com/nl/en/customer-service/spare-parts/

Statista. (2025, May 16). *Value of the global sharing economy 2021-2024, with 2027 and 2030 forecast*. https://www.statista.com/statistics/830986/value-of-the-global-sharing-economy/

Steelcase. (2023, June 1). *People + Planet*. https://www.steelcase.com/people-planet/#the-power-of-possibility

Team, F. A. (2025, May 7). *Top 15 AI Image recognition companies Revolutionizing Visual Intelligence in 2025.* Flypix. https://flypix.ai/blog/ai-image-recognition-companies/

Terzioğlu, N. (2020). Repair motivation and barriers model: Investigating user perspectives related to product repair towards a circular economy. *Journal of Cleaner Production, 289*, 125644. https://doi.org/10.1016/j.jclepro.2020.125644

The EU's Circular Economy Action Plan. (2022, January 12). https://www.ellenmacarthurfoundation.org/circular-examples/the-eus-circular-economy-action-plan

The EU's circular economy action plan | Shared by IGC. (n.d.). https://emf.thirdlight.com/link/l3i96x2za3la-8o3wq5/@/#id=0

The R-ladder: key to a circular economy for plastics. (2001, March 11). tno.nl/en. https://www.tno.nl/en/newsroom/insights/2024/11/r-ladder-circular-economy/

Topic: IKEA. (2025, February 12). Statista. https://www.statista.com/topics/1961/ikea/#:~:text=Founded%20in%201943%20in%20%C3%84lmhult,the%20world%27s%20largest%20furniture%20company.

Transform UK. (2024). *Home repair services: Market scan report.*

Trinomics B.V. (2018, December 5). *The effects of consumer behaviour on the Circular Economy - Trinomics*. Trinomics. https://trinomics.eu/project/the-effects-of-consumer-behaviour-on-the-circular-economy/

Tukker, A. (2013). Product services for a resource-efficient and circular economy – a review. *Journal of Cleaner Production, 97*, 76–91. https://doi.org/10.1016/j.jclepro.2013.11.049

Unaffordable and inadequate housing in Europe. (2023). In *European Foundation for the Improvement of Living and Working Conditions.* Publications Office of the European Union. https://www.eurofound.europa.eu/system/files/2023-05/ef22024en.pdf

Value Proposition design. (n.d.). Google Books. https://books.google.com/books?hl=nl&lr=&id=jgu5BAAAQBAJ&oi=fnd&pg=PA22&dq=value+proposition+canvas+osterwalder&ots=Po3ehGmCQZ&sig=cW4_-wmPyz57v15R0FBk8dwtb2c

Van Dam, Y. K., & Van Trijp, H. C. (2016). Interventions to encourage sustainable consumption. *Applied Studies in Agribusiness and Commerce, 10*(2–3), 51–58. https://doi.org/10.19041/apstract/2016/2-3/6

Van Den Berge, R., Magnier, L., & Mugge, R. (2020). Too good to go? Consumers' replacement behaviour and potential strategies for stimulating product retention. *Current Opinion in Psychology, 39*, 66–71. https://doi.org/10.1016/j.copsyc.2020.07.014

VR Owl. (2023, July 4). Ikea transformeert e-commerce met Kreativ AR app - VR Owl. *VR Owl*. https://www.vrowl.nl/ikea-transformeert-e-commerce-met-kreativ-ar-app/

Wever, R., Van Kuijk, J., & Boks, C. (2008). User-centred design for sustainable behaviour. *International Journal of Sustainable Engineering, 1*(1), 9–20. https://doi.org/10.1080/19397030802166205

White, K., Habib, R., & Hardisty, D. J. (2019). How to SHIFT Consumer Behaviors to be More Sustainable: A Literature Review and Guiding Framework. *Journal of Marketing, 83*(3), 22–49. https://doi.org/10.1177/0022242919825649

Wintschnig, B. A. (2021). The Attitude-Behavior Gap – Drivers and barriers of sustainable consumption. *Junior Management Science, 6*(2), 324–346. https://doi.org/10.5282/jums/v6i2pp324-346

YesChat.AI. (n.d.). *Fix Anything-Free AI-Powered Repair Assistant.* https://www.yeschat.ai/gpts-ZxWzhxR9-Fix-Anything

Young people - housing conditions. (2022, September). Eurostat. Retrieved June 18, 2025, from https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:EU_statistics_on_income_and_living_conditions_(EU-SILC)

Yu, S. (2025). Transition Designing as Ontological Redirection: Key Principles for Transition-Oriented Futuring. *World Futures Review.* https://doi.org/10.1177/19467567251338771