

#### **Master Thesis**

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# Acknowledgement

#### This has been the best thesis project experience I could have ever asked for.

Rewinding back to my very first day at TU Delft, we were asked to write down our aspirations for our future studies and careers. I put IKEA as a goal, as it has always been one of my favorite brands. Never in my wildest dream that just one and half years later, I am working with this dream team.

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#### **Background & Project Objective**

With the increasing widespread use of digital channels, many retailers, including IKEA, are adopting an omnichannel strategy. It refers to integrating different channels within the same shopping process. With this background, the primary objective of this project is to explore opportunities to better integrate IKEA's online and offline shopping channels, aiming to enhance customer experience and potentially drive business growth.

#### Research Insights & Design Goal

Research through literature reviews and in-store interviews revealed that a significant part of the home furnishing journey involves exploring ideas rather than making direct purchases. While exploring, customers are not just looking at products; they also seek inspirations such as styles and colors. IKEA's physical stores, particularly the showrooms, provide an excellent environment for this exploration. However, online customer interviews indicate that customers find it difficult to relate IKEA's curated showrooms to their own home constraints and personal tastes, making the experience less useful. Additionally, from a business perspective, IKEA currently does not track what interests or concerns customers have while in the showroom, missing opportunities to offer guidance the customer needs. Consequently, two interrelated design goals were formulated.

- How might we make exploring inspirations in the showrooms feel more personal for the customer's own home project?
- How might we guide people to their next step in their shopping journey after their showroom visit

#### **Design Concept**

Based on the design goals, ideas and concepts were developed. After multiple iterations, incorporating expert feedback and pilot testing results, a final design concept was proposed. This concept includes a kiosk and new features for the IKEA app. Each showroom will have a kiosk displaying a digital twin of the showroom, allowing customers to learn more about the interior and explore alternative product options. Additionally, a new page on the IKEA app is proposed, featuring functionalities such as saving the digital showrooms from the kiosk, capturing inspirations with the phone camera, and applying virtual 3D items to a scanned room.

#### **Evaluation Results & Conclusions**

The final design concept was tested with customers at the IKEA Amsterdam store to assess its effectiveness in meeting the design goals. Additionally, the concept was presented to store workers to understand whether it adds value to their day to day work. Overall, perceived value of the design proposal can be discussed from three perspectives, *for customers, store workers and the business*.

Value For Customers: both the kiosk and the proposed app features were said to make the showroom experience feel more personal by allowing participants to discover their own preferences by trying out different combinations. Additionally, these features guide participants to potentially make more confident decisions by enabling them to visualize showroom items in their own spaces. However, a complete digital showroom displayed on the kiosk did not work well for customers looking for specific items, as it lacked focus and didn't feel realistic. Additionally, privacy concerns were raised regarding the app, as it requires customers to upload photos of their own spaces.

**Value For Store Workers**: Base on interviews with IKEA store workers, the concept could reduce daily workload by enabling customers to independently access information through the kiosk. It could also potentially improve communication, as customers can use the product recognition feature to present specific product article numbers, making it easier for store workers to assist them without needing to revisit the showroom.

**Value For IKEA Business**: The concept proposal leverages the technology of IKEA's existing 3D tool: Kreativ, potentially increasing its usage by integrating it into key moments in the store. Also, by allowing customers to save digital showrooms or photos of the showrooms, IKEA can gain insights into customers' preferences, including product choices, styles, and colors. This data opens up opportunities for personalized promotions and targeted information, ultimately driving increased customer engagement.

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# Introduction

- ightarrow Project background
- $\rightarrow$  Omni-channel
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- $\rightarrow$  Consumer value
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# **Project Background**

This project is in collaboration with IKEA, specifically working with the digital experience teams.

Despite its origins as a traditional brick-and-mortar home goods retailer, IKEA has actively expanded its focus into the digital realm in recent years. This transition is exemplified by several strategic moves, such as investments in e-commerce and physical stores becoming the role of fulfillment centers (Harvard Business Review, 2021). The iconic IKEA paper catalogue ended in 2021, marking a significant shift towards digitalization. Additionally, the introduction of the IKEA app in 2019 and the launch of the Alpowered 3D visualization tool, Kreativ, in 2022, demonstrate IKEA's emphasis on creating digital experiences for customers. By prioritizing the needs and preferences of its customers, digital channels are developed in alignment with IKEA's overarching vision: "To create a better everyday life for the many people."

As IKEA thrives in creating digital experiences with a strong focus on human-centeredness, the company is embracing an 'omnichannel strategy.' This approach integrates different channels to provide customers with a cohesive shopping experience. The concept of omnichannel thus serves as the starting point of this thesis project. The aim is to seek opportunities to synergise online and offline IKEA shopping journeys to ultimately enhance customer experience and potentially drive business growth. The concept of 'omnichannel' will be further elaborated in the next section.



Figure 1. Ikea digital channels

#### **Omnichannel**

The rapid development of the internet, along with improvements in logistics service efficiency, and the widespread adoption of smartphones, has led both companies and consumers into the digital era.

When digitalization started to thrive, past studies separated offline (physical stores) and online channels (web stores or e-commerce platforms), known as the 'multi-channel' strategy. During the earlier stages of development, companies managed online channels individually from other corporate strategies (Verhoef, 2012).

The rise of new digital channels, particularly the prevalence of the mobile channel, has transformed the retailing landscape, shifting from a multi-channel approach to an 'omnichannel' one (Rigby, 2011). Omnichannel retailing refers to retailers integrating different channels within the same shopping process. Able to access the internet at any time through multiple digital devices, customers tend to behave and expect to use offline and online touch points interchangeably and simultaneously at different stages of their shopping journey (Verhoef, Kannan, and Inman, 2015). For example, 'research shopping' is a typical approach where consumers exhibit omnichannel behavior. It means research is conducted on one channel and purchases are made in another channel. Other examples include 'buy online, pick up offline' or cases where a purchase is made either online or offline and the return is processed through the other channel (Verhoef et al., 2017; Wieland, 2023).

The challenge of omnichannel retailing often lies in ensuring that the shopping journey is smooth and delivers a seamless customer experience. As these channels are managed collectively, the perceived interaction isn't with a specific channel but rather with the brand itself.

While 'omnichannel' refers to incorporating a wide range of online and offline channels for the same shopping process, this project will focus on channels managed by IKEA, including their website, the IKEA app, and their physical stores. These channels are commonly used for typical omnichannel scenarios such as 'research shopping' or 'buy online, pick up in-store.' From a business perspective, starting with these existing IKEA channels, rather than third-party channels, could make it easier to implement and manage new strategies.

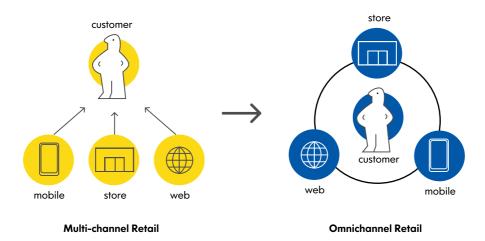


Figure 2. The transition from multi-channel to omnichannel retail

# Characteristics of furniture shopping

In the realm of furniture shopping, **omnichannel retail has become even more relevant and crucial** due to the nature of the furniture shopping process. One distinguishing characteristic of furniture shopping is the need for carefully consider spatial factors and textile details before making decisions. This need becomes even more pronounced when dealing with larger or higher-priced furniture, which requires a more rational purchasing process (Zhang et al., 2022). Physical stores allow customers to **physically examine tactile and visual details**, while digital channels such as the web shop can provide **access to detailed product information** at anytime.

## **Consumer Value**

Speaking of the **shopping experience** in general, past studies on shopping behaviors have proposed customer value, which could be defined as the overall experience perceived by consumers. Holbrook (1999) pointed out key dimensions of consumer value, including **extrinsic and intrinsic aspects**. Extrinsic value means the consumption serves as a means to accomplishing some further purpose, aim, goal, or objective. In contrast, intrinsic value indicates that the consumption experience is appreciated as an end in itself.

Babin et al. (1994) also categorized consumer value into **utilitarian and hedonic dimensions.** Utilitarian value, similar to the extrinsic mindset, is goal-oriented and reflects a working mentality, where consumers prioritize efficiency in achieving their goals. Satisfaction is derived from successfully completing tasks. In contrast, hedonic value leans towards the intrinsic end. It suggests that the act of shopping itself brings pleasure and satisfaction to the consumer, regardless of product acquisition or goal achievement. A hedonic shopping experience is often characterized by increased arousal, heightened involvement, perceived freedom, fantasy fulfillment, and escapism (Bloch and Richins, 1983; Hirschman, 1983).

This understanding of consumer value serves as an insight for analyzing customer behaviour further in this project.



Figure 3. Hedonic and utilitarian mindset in shopping

# **Project process and methods**

There are five main phases in this project. Starting with the background of IKEA's omnichannel retail, the first phase is **contextualization** (Chapter 1). Next, a **design brief** is defined (Chapter 2), followed by **conceptualization** (Chapter 3). After developing a final concept proposal, the project enters the **evaluation** phase (Chapter 4). Finally, **recommendations and conclusions** are formed based on the evaluation results (Chapter 5).

In the first phase, contextualization, the goal is to understand the current home furnishing journey from both customers' and IKEA's viewpoints and then identify opportunities for design intervention. The initial research questions are shown on the right:

**RQ1** What does a home furnishing shopping journey look like?

**RQ2:** What are the roles of IKEA digital and IKEA store in a furnishing journey?.

Previous user research studies from IKEA have provided insights for these research questions. Additionally, an in-store customer interview was conducted to gather insights into customers' current behavior and motivations in physical IKEA stores (see Appendix A for the in-store interview plan). From these previous user research studies and store interviews, key insights were extracted, helping to narrow the project's scope. Within the scope, a research gap is found, therefore an online interview with IKEA customers was conducted to identify current pain points and needs.

After gaining a comprehensive understanding of the context, a design brief was defined. Problem statements and design goals were formulated to serve as the foundation for the conceptualization phase. In this phase, the project followed an iterative approach, refining ideas and concepts based on expert critiques and pilot testing. At the end of this phase, a final concept proposal was developed and later evaluated with IKEA customers and IKEA store workers. The objective of the evaluation is to test whether the concept effectively addresses the design goal. Based on the evaluation results, recommendations were proposed to outline possible future development of the concept.

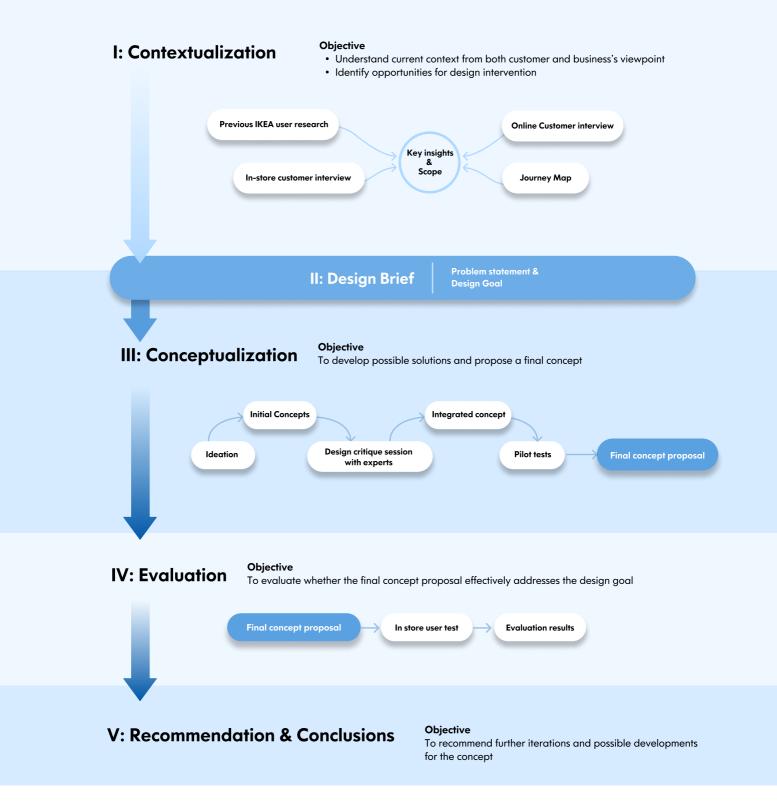


Figure 4. Project process and methods

# **Chapter I**

# Contextualization

- ightarrow Understanding home furnishing shopping journeys
- ightarrow Understanding the role of IKEA digital channels and the IKEA store
- $\rightarrow$  Insights and project scope
- ightarrow Journey Map: between the showroom to home

# Understanding home furnishing shopping journeys

RQ1: What does a home furnishing shopping journey look like?

#### What is home furnishing? Life at Home Missions

Before diving into people's journeys in furnishing their homes, let's begin by addressing a fundamental question: **What is a home furnishing project?** 

Home furnishing projects can be categorized across different levels. IKEA has introduced **Life at Home Missions**, which represent occasions when people make changes in their living spaces and lifestyles (IKEA internal research). These missions vary in scale, ranging from minor adjustments like buying individual items for small enhancements (buy product) to more substantial changes such as upgrading parts of a room (home refresh). They can also encompass more ambitious projects like revamping an entire room (home project). Additionally, Life at Home missions can extend to significant life events, such as moving to a new home, which often lead to complete makeovers of living spaces (life change). People also frequently make purchases to maintain their day-to-day lives, such as buying sustainable home lights (manage everyday). It is notable that Life at Home missions can happen simultaneously and often it is difficult to distinguish which mission people are on. For instance, a customer could be redesigning their dining area (home project) while starting by buying new chairs for their old table (buy product).

#### **Customer shopping journey**

Life at Home Missions constantly exist, yet it doesn't imply that people are actively seeking to purchase something to fulfill these missions. **Triggers** are necessary to prompt people to take action and initiate the purchasing process and this is where the goal-oriented, utilitarian mindset comes to play. Triggers may include the availability of time and budget, or an urgent need to purchase or change something in the house. Once triggers occur and the person begins shopping, several common phases are typically observed (IKEA internal research): first, the person recognizes their need (**recognize**), then they start exploring ideas for possible solutions (**explore**). Following exploration, people begin to narrow down their options and make choices between them (**choose**), ultimately committing to a specific option (**commit**).

#### Stages in the explore phase

Zooming in on the 'Explore' phase of the shopping journey, there are three non-linear stages that can overlap or occur simultaneously: plan and scope, vision and direction, and discover possibilities.

In the 'plan and scope' stage, the goal is to identify needs and make plans to start the project. People set specific constraints such as urgency, budget or measurements then prioritize tasks base on the constraints. Then, in 'vision and direction,' people focus on exploring ideas for themes or styles, rather than searching for specific products. Lastly, in 'discover possibilities,' people would explore concrete products that align with their constraints and plans (IKEA internal research).

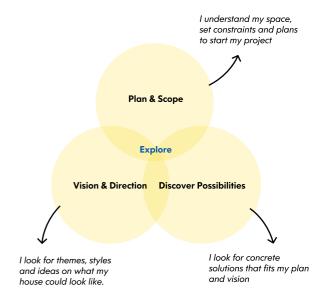


Figure 5. Three stages in the explore phase

#### **Collecting inspiration**

Apart from the shopping journey for home projects driven by purchase intent, another common behavior related to home furnishing is 'collecting inspirations.' When collecting inspirations, people are often in a hedonic mindset, enjoying a sense of escapism as they dream about their ideal home (Babin, 1984). This behavior doesn't necessarily carry a purchase intention and can even be detached from their own home constraints. The motivation for collecting inspirations may include cultivating personal taste or creating a visual repertoire. Research suggests that people engage in collecting inspirations regardless of whether they currently have a home project underway—in other words, collecting inspiration is an ongoing behaviour. When the need to make a purchase arises, people often find themselves referring back to the inspirations they've saved over time.

In terms of what people consider inspirational, they prefer **content that is authentic and relatable**. Therefore, **social media platforms** like TikTok, Pinterest, or Instagram, where they can see how other people have furnished their homes, serve as excellent sources of inspiration (IKEA internal research).

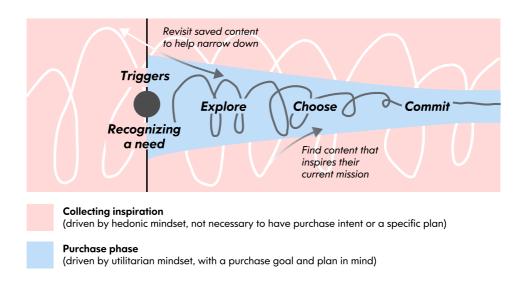


Figure 6. A general journey of collecting inspiration and purchase phase

Figure 7. shows **an example journey** of how a shopping journey for a home project would look like.

It is important to note that these shopping phases are **not necessarily linear steps**; they can occur simultaneously or in a loop and **doesn't always go from explore to commit in one go.** People would keep their shopping journey on hold due to their head space and budget. Also, people tend to **shop gradually** overtime when working on a room project (IKEA internal research).



Figure 7. An example of how a living room project could be carried out

#### Differences in how people behave in each phase

In reality, how people behave in each shopping phase and the time and effort spent in each phase may differ depending on **different home projects** and **different customer traits**.

The time and effort invested in each step vary depending on the scale of the current Life at Home Mission. For instance, for larger and more complex home missions that may include larger furniture pieces, more time and effort will be spent on planning and scoping, as people tend to be cautious about measurements, total budget, and prioritizing tasks. Additionally, more visits to furniture stores or more online research would be required before committing to a final decision (IKEA internal research).

The tools and methods people use for planning during the exploration phase, as well as how they track their inspiration, also vary widely. For instance, some people jot down random notes on paper, while some may prefer to create well-organized Excel sheets. These approaches depend on factors like their level of organization, their current furnishing project, or the most convenient media available at the time (IKEA internal research).

#### **Browsing content levels**

From the shopping and furnishing phases that people go through, it is observed that people often seek content at different levels. For example, when people are in the 'vision and direction' stage or when people are collecting inspirations, they are seeking ideas. Ideas do not focus on specific products but rather on the broader picture, including inspirations for styles or combinations of products.

On the other hand, when people are in the stage of *discovering concrete possibilities* or *choosing* between options for making purchase decisions, they are looking for content at the 'product' level. people seek concrete details such as price, dimensions, or availability of the interested product.

People often navigate through ideas and products through the lens of their own constraints and missions that they currently face. Content that aligns with these constraints and missions is usually captured and carries on to the next phase of the furnishing journey.

**Browsing products with budget constraints** 

"I constantly calculate my budget when I look at things...
For example, I still have to think about these shoe cases because
I would need two of them, but then it will be over budget."

-participant in IKEA store

**Browsing products with space constraints** 

"I'm moving to a smaller house, so I'm taking photos of how things can be combined to save space"

-participant in IKEA store

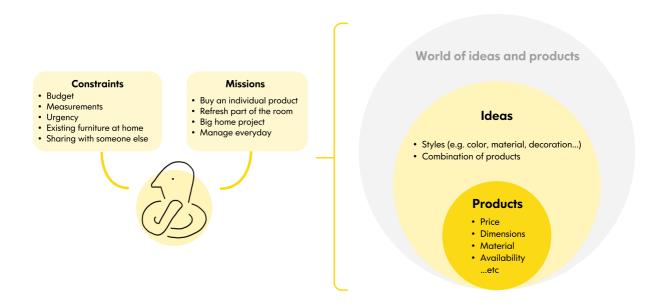


Figure 8. Different content levels

#### **Conclusion**

In summary, a home furnishing journey is an ongoing and dynamic process. Triggers are essential to stimulate action and initiate shopping behavior. However, it's important to note that not all behaviors within this journey involve making a purchase. Instead, a considerable portion of the process may be spent on exploring inspirations for the home, making plans based on home constraints, and discovering suitable products.

This exploration phase is critical in the home furnishing journey, especially for larger home projects or bigger pieces of furniture. During this phase, people seek ideas on styles, themes, and also individual products that align with their constraints and needs.

# Understanding the role of IKEA digital channels and the IKEA store

RQ2: What are the roles of IKEA digital (app and web) and the IKEA store in a furnishing journey?

#### **Omni behaviors**

IKEA customers are already behaving in a omnichannel way. Both the IKEA app and web are commonly used as a **preparation tool** before visits to store. By browsing the app or the website, customers can have a first understanding of what they can get from the store, and narrow down options that fits their needs and preferences. Additionally, it is found that, people choose either to browse on the app through their mobile phones or browse the website through a bigger screen base on convenience and their current context. After researching online, people visit the store to validate their options. Apart from this online-to-offline approach, the reverse is also common. For example, **people may discover interesting items instore**, **keep track of them, and then make purchases online through either the website or the app**.

#### IKEA web & app: Addressing functional needs through product content

Diving deeper into the role of the IKEA's digital channels, such as their website and the app, they are seen as **tools that effectively addresses functional needs**. The clear layout of the IKEA website is highly praised by customers, as it is easy to look for information (IKEA internal research). Similarly, the IKEA app assists people who has a specific goal in mind to **discover concrete solutions** and narrowing down options along the journey (IKEA internal research). In other words, browsing on the web or the app **fosters a more utilitarian way of shopping**.

However, when it comes to seeking inspiration or collecting ideas for vision and directions, the IKEA website and app are **not** the most common places to look. IKEA web and app supports people well on searching for content **more on the product level rather than on an idea level.** Customers often reflect that the styles of the inspirational content are hard to relate, and not being authentic enough as they are often professionally photographed (IKEA internal research).

In terms of assisting people in keeping track of items of interest, both the website and the app offer a favorite list feature, which synchronizes when logged into the same account. However, the favorite list currently only allows users to **save 'products'**, but **not 'ideas'**.





Figure 9. IKEA website

#### The role of the physical store in the shopping journey

The physical IKEA store offers a rich and immersive experience, allowing customers to interact directly with products and explore a wide variety of items. Within IKEA stores, there is a showroom area where products are displayed in room settings designed to resemble real rooms or homes. In the Market Hall area and the Self-Serve area, customers can pick up both smaller and larger items then proceed to checkout.

Various stages of the shopping journey unfold within the store. For instance, customers can **validate items** they've previously explored online. Beyond validation, visitors could **explore surprising ideas or products**, with a hedonic mindset rather than a purely utilitarian, goal -oriented one. For some people, a visit to the store becomes an enjoyable 'day trip' in itself. In contrast to digital channels, the showrooms in the stores could provide inspiration at the 'idea' level, which includes offering insights into product combinations, colour themes, or interior styles (IKEA internal research).

#### **Explore surprising ideas from the showrooms**

"On the website, you can search for a category of products and browse these products, but when in the showroom, sometimes something is catching your eyes and you just go and check it out."

-online participant

#### **Enjoying the showroom itself**

"We're not really planning to buy anything, we just always get 'distracted' by the showrooms"

-participants in IKEA store



Figure 10. Areas in an IKEA store

#### IKEA physical stores v.s. IKEA digital channels

Comparing the role of physical stores and digital channels (the website and the app), we can see that customer value leans differently in these two different channels. While using the website and the app, people tend to have a more utilitarian shopping mindset, usually with a specific task in mind. Therefore the digital channels are used to fulfill these tasks. In contrast, in the store, people may have both a utilitarian mindset and a hedonic mindset. They might visit the store with specific plans, such as validating something they have seen online or purchasing a particular item. Browsing in the store is a pleasurable experience in itself. People enjoy exploring the store even without a concrete plan or task at hand.

In terms of the content that people search for or are exposed to, while on digital channels, the focus is more on 'products.' People look for product categories, product information, and comparisons between options. On the other hand, in physical stores, people are not just looking at individual items but they get a picture of ideas. Especially in the showroom area, they explore ideas on styles, combinations of products and colors, as a way of collecting inspiration.

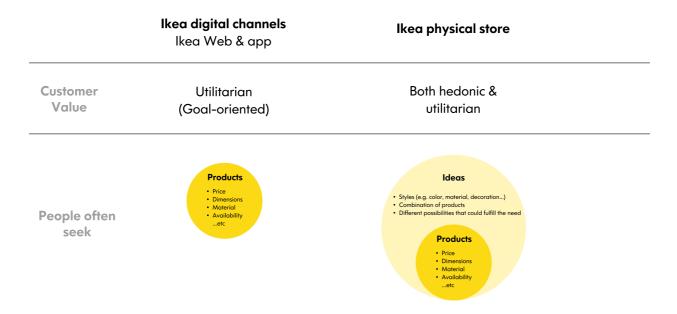


Figure 11. Comparison between the role of IKEA digital and physical stores

#### A single visit to IKEA is just part of a bigger journey

Whether visiting a physical IKEA store or using the IKEA app or website, each visit is just one step in a larger journey. Referring back to the shopping journey for home furnishing projects discussed in the previous section (Figure 7), people may not go through all shopping phases in one visit to IKEA. They often pause their furnishing or shopping process due to financial constraints or a lack of head space at the moment, but they return to it when time and money become available again.

## **Insights**

After gaining a deeper understanding of how people shop for their home furnishing projects, and the roles of IKEA channels that plays within, the following key insights are concluded:

- While shopping for their home projects, people not only search for products but also look for ideas that inspire them.
- Customers already exhibit omnichannel behaviours. A single visit to an IKEA channel

  (whether digital or physical) is just part of a larger journey, and a purchase is not always involved.
- Currently, the IKEA website and app effectively support customers' functional needs. In contrast, visiting physical stores is an enjoyable experience in itself, that allows people to explore products and gather inspiration.

## **Project scope**

Based on the insights identified above, a more precise project scope has been defined to provide greater focus. The project targets the **'explore' phase** of the shopping journey. As discussed in previous sections, a significant aspect of the shopping journey involves exploration from various sources (online and in physical stores), which ultimately leads to purchases. This phase is especially crucial for larger home projects or purchases involving larger furniture pieces.

Following the exploration phase, this project will focus on the **in-store experience**, particularly the **showroom area**. This area serves as a hub where customers gather ideas and discover products.

Based on this scope, an online interview was conducted with IKEA customers to dive deeper into their pain points and needs related to the IKEA showroom experience. The interview questions especially focus on cases when purchases doesn't happen immediately, to bring focus on the explore phase of the shopping journey. The results of the online interview are presented in the next section.

# Journey map: between the showroom and home

An online in-depth interview was conducted with 7 IKEA customers who had visited an IKEA store within the past 3 months (see Appendix B for the interview plan). The goal of the interview was to **identify current behaviors**, **pain points**, and **needs** of the **showroom experience**. The journey map below was created to identify opportunities for design intervention.

Phase	Pre-store visit		visit	In the store: showroom area	
Needs	<ul> <li>Plan what to see and buy to make the most of their store visit.</li> </ul>			<ul> <li>Validate items they have seen online (check texture, size and colour)</li> <li>Explore ideas that fits their style plan and shopping list</li> </ul>	Keep track of ideas
Activities	<ul> <li>Browse online to decide some options</li> <li>Make a shopping list</li> <li>Browse social media to plan on style</li> </ul>			Look around the showroom	<ul><li>Take photos</li><li>Memorize things of in</li></ul>
Touch Points	<ul> <li>IKEA web or app</li> <li>Pinterest</li> <li>Notes in phone</li> </ul>			Showroom items	<ul><li>Product tag</li><li>Customer's mobile ph</li></ul>
				$\overline{}$	
		Showroom Gain	Find	the item they have seen online	Come across a sur
			I want my	My g god  I don't see the table I saw in the app.  room styled like this, boom is way smaller.	But I wonder if there is a smaller option for this?
	Showroom Pain  The items that the customer wants to validate are not being displayed  Unrelatable room setting (e.g. size, colour, or existing furniture)			Coming across somethin but unsatisfied about community Missing information was about certain community.	

# · Look back at and search saved inspiration · Prepare for next store visit discussion · Order online · Look online terest · IKEA web or app one rprising product t or colour combination It's a nice option, but let me think about it. Will this fit into my car for transport? ing interesting ertain aspects when unsure details

Post store visit

#### What do the showrooms mean to customers?

In general, all participants have **a positive impression** of the showrooms, finding it a pleasurable experience to see nicely designed room settings. Besides the enjoyment itself, the showrooms mainly serve two purposes. First, the showrooms allows people to **validate items they have seen online**. While the items are displayed in a room set up, it gives customers a sense of scale. The room setups also allows customers to check product colours and textures under different lighting conditions.

"Visiting the showrooms makes shopping more than a chore." -online participant

"You can measure it and stuffs like that online, but it's a very different feel when you can actually come in and like see how big the table is."

-online participant

Another purpose is that the showrooms allows people to **come across surprising options**. It is common for people to encounter products they didn't find online or they didn't thought of. Other than discovering single products, things that participants find inspiring were ideas for **product or colour combination**.

"So you can see if I get this sofa, you can merge it with this, you can merge it with this kind of table."

-online participant

#### Pain point 1: limited displayed options

Despite generally being considered a positive experience, in some cases, the showrooms may not be as helpful. One common issue is having limited options on display, which can lead to frustrations when **items people want to validate in person are not found** in any of the showrooms. Another pain point is that people are **not always satisfied with the items that are displayed**; they often express a need to find alternatives or variations of the items on display.

"Now you're not seeing what the red colour is, you can only see the red online." -online participant

"Sometimes you see a design and you're like, oh, wow. I wish it's this big or, wish it is really petite." -online participant

#### Pain point 2: room settings difficult to relate to

Other than the limited options displayed in the showrooms, people also sometimes find it difficult to relate to the room settings. This difficulty arises because the **layout and sizes** of the showrooms may differ significantly from those in the customer's home. Additionally, **people usually have existing colours or other furniture in their homes that the showroom settings do not reflect**, making it difficult to imagine how things will look in their own home settings.

"Before I bought my flat, I thought great, then I can just take it (showroom) completely, but in reality it's extremely hard."

-online participant

"Sometimes I have a colour in mind, let's say my curtains and I want to buy a wall art that will match colours with my curtains. Um obviously the colour may not exactly match."

-online participant

#### Pain point 3: missing product information hindering purchase

"I found a handle but I wasn't sure if it could fit with the door I have, the holes doesn't seem matching. At the end, I didn't buy it."

-online participant

Some participants mentioned that there were times when they were interested in an item displayed in the showroom but were **unsure about certain details**, causes them hesitant in buying the product. For example, they wanted to know how big the item is when packaged, how it can be transported, or whether it can be assembled with another piece of furniture. If they fail to find this information in the showroom or cannot find a store worker to assist them immediately, they are less likely to buy the item.

#### After visiting the showrooms: bringing inspirations to the next phase of the shopping journey

Given that the showroom is a place where people gather inspiration, and purchase doesn't always happen immediately in the store, the participants were also asked about how they keep track of these inspirations after they leave. It is common for people to **take photos** of things they are interested in when a purchase doesn't happen immediately. Taking photos is said to be **convenient**, and also **more realistic than online photos**, as people can recall exactly what they saw from the showrooms. When customers needed to do further research on the product they have seen in store, they will go back to the photos and search it on the website or app. Sometimes, when a purchase plan is not urgent, people **simply memorize** what they liked and wait until they have the need or ability to buy; then they either return to the store or go online to make their purchase.

We can tell that, in terms of keeping track of what customers are interested in, **IKEA** channels such as the favourite list in the app, are not currently being used for this purpose. In other words, IKEA currently doesn't know what people are interested in while they are in the showrooms.

# Chapter II Design Brief

- → Problem Statement
- ightarrow Design Goal

#### **Problem Statement**

From previous research studies and interviews with IKEA customers, it is known that the showrooms play a role in the 'exploration' phase, in which they provide inspiration, helping people to set vision and discover possible solutions for their home projects. Furthermore, the showrooms address functional needs by allowing people to validate and check the spatial and physical aspects of the products.

Despite being highly praised by customers for the enjoyable experience, several pain points have been identified. The main issue is the difficulty in relating what is curated by IKEA to what customers actually have at home or to their personal preferences, making the experience less useful for their home missions. Given the project's focus on 'omnichannel' retailing, it was found that the showroom experience currently lacks connection with other IKEA channels. Specifically, IKEA does not follow up on the customer journey after showroom visits. This means IKEA is unaware of customers' interests or concerns while they are in the showroom, missing opportunities to provide needed guidance. From a business perspective, this results in lost opportunities to support and personalize the customer experience, ultimately hindering the conversion of exploration into purchase.

**Problem Statement** 

The IKEA showrooms currently do not effectively cater to customers' personal home setups and preferences, and lack integration with other IKEA channels, which misses the opportunity to follow up on customers' journeys after visits.

## **Design Goal**

Regarding the problem statement above, two interrelated design goals are formed. Together, they aim to create a complete showroom experience and integrate it seamlessly into the customer's shopping journey. The design goals are: How might we make exploring inspirations in the showrooms feel more personal for the customer's own home project? Consequently, how might we guide people to their next step in their shopping journey after their showroom visit?

Making the showroom feel more personal refers to aligning it with the customer's vision and constraints, creating a **relatable** experience. Guiding people to their next step means making the showrooms more **actionable** by providing planning assistance and relevant information, which enables customers to make more confident purchase decisions in the future. Figure 13. shows the pain points and needs that the design goal aims to improve upon.

# How might we make exploring inspirations in the showrooms feel more personal for the customer's own home project?



# How might we guide people to their next step in their shopping journey after their showroom visit



Figure 13. Design Goal

# **Chapter III**

# Conceptualization

- ightarrow Process of the conceptualization phase
- ightarrow Final concept proposal
- ightarrow Overview of the final concept

# Process of the conceptualization phase

The aim of the conceptualization phase is to develop possible solutions that address the design goals. This phase follows an iterative approach, where ideas and concepts are iterated upon and integrated based on expert feedback and pilot testing.

Initially, possible solutions were developed divergently and then integrated into two concepts. The design intervention focuses on implementing digital channels, which have great potential to create a personalized experience for customers, aligning with the design goals. The initial concepts were then presented to 7 IKEA digital designers who work on the app, website, and in-store kiosks in a critique session using the 'I like, I wish, I wonder' format to gather structured suggestions (Kelly T. 2018; HyperIsland toolbox). Expert feedback helped integrate the concepts into one, which was then evaluated in a pilot user test to identify and improve usability issues. Lastly, the final design proposal was developed.

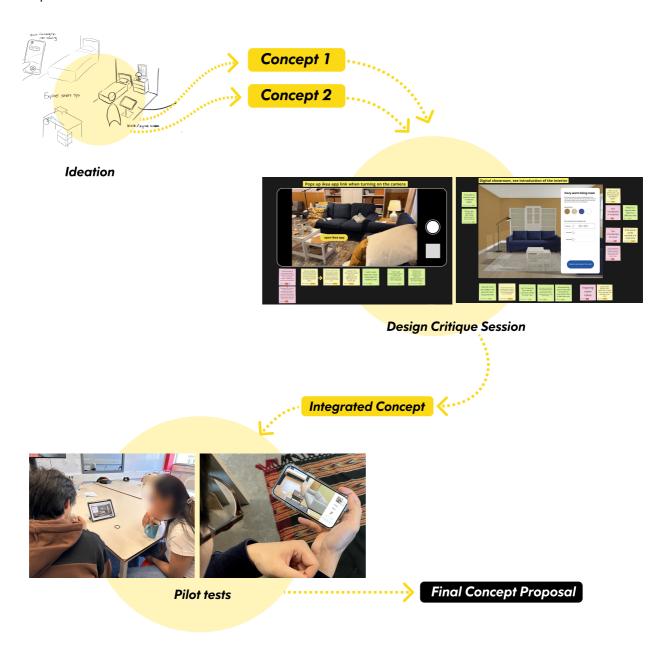


Figure 14. Process of the conceptualization phase

## Initial concepts and critique insights

The two initial concepts were developed based on different interaction qualities. The first concept focuses on giving **guidance** to customers, allowing them to learn about furnishing knowledge by interacting with a kiosk, with the ability to save this information to their mobile phones. The second concept aims to be **more relatable** to customers home missions, offering customers more **freedom** to capture things of their interests using their own phones (see Appendix C for details of the initial concepts).

These concepts were then critiqued by digital designers at IKEA. The feedback emphasized the importance of providing furnishing and interior design tips, as this is currently implicit knowledge within IKEA. Additionally, the ability to capture inspirations from the showrooms through customers' personal lenses was noted to have the potential to meet multiple practical needs, such as ensuring measurements and budget.

Furthermore, the strength and roles of implementing a showroom kiosk and the mobile phone were discussed in the critique session:

#### Possible strength of implementing a kiosk: a more accessible approach

A core value of IKEA is to 'Design for the many'. With this in mind, the kiosk is designed to be a more inclusive device that can be used by customers who don't have a mobile phone or who are not familiar with using one. Furthermore, it is commonly observed that group customers, such as couples or families, discuss their home projects in the showrooms. With the big screens, the kiosk allows group customers to view and discuss things together.

#### Possible strength of the using the IKEA app (mobile): a more personal approach

During the critique session, it was noted that people tend to be reluctant to enter personal information on a public device like a kiosk. Additionally, they often do not want to spend too much time using a device in a public area due to concerns about feeling watched or making others wait. Therefore, using a mobile phone could be a better approach, allowing people to quickly save information and continue exploring the content freely at another time.

As a conclusion, ideas from the two concepts were integrated into one which includes the use of both a kiosk and the mobile app. In the next session, the final concept proposal will be elaborated in detail.

# Final concept proposal

The final concept consists of **a kiosk** and **new features proposed for the IKEA app.** There will be a kiosk in every showroom in the store, displaying a digital twin of that showroom. People can use the kiosk to learn more about the interior of the showroom and explore alternative product options.

A new page on the IKEA app is proposed, featuring concepts such as storing showrooms from the store, capturing inspirations with your phone camera, and applying virtual 3D items to your scanned room.

In the next section, a user scenario and details of the concept will be explained in detail.



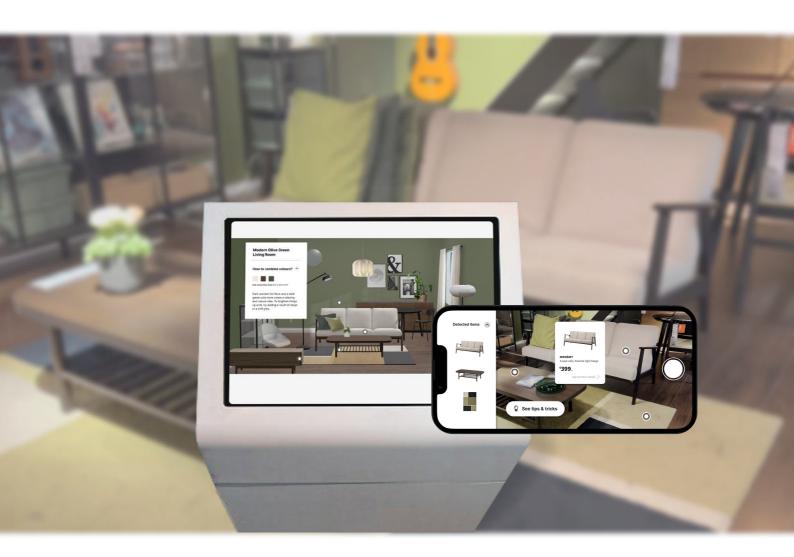


Figure 15. Final concept proposal

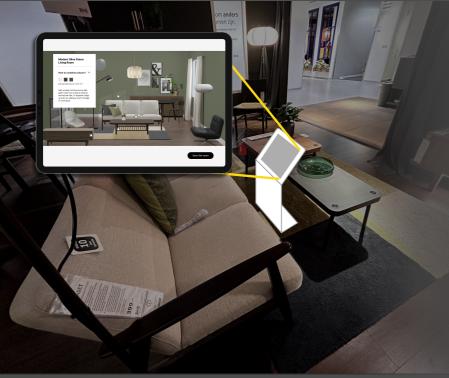


Figure 16. Showroom kiosk placement

## **User scenario**





Laura and Sam are a couple who are moving to a new apartment. They are currently working on their living room area. In the IKEA store, a living room caught their attention, so they entered it. In front of the couch, they see a kiosk displaying a digital twin of the showroom.

## ightarrow Furnishing tips

Furnishing tips are given to guide people to recreate the style they are seeing in the showroom.

For example, in this screen, it shows the colour palette the room uses and explains why the colour combination gives this certain interior vibe.

I like the style of this room, but I don't know anything about design...



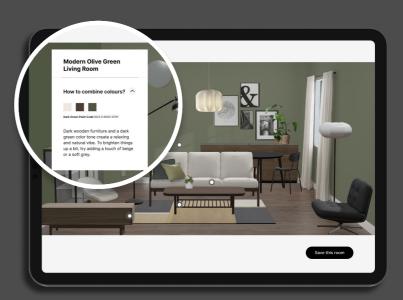
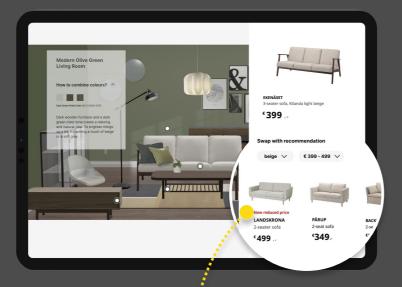


Figure 17. Kiosk furnishing tips

### ightarrow Swap with recommendation



By tapping on individual items shown on the screen, you can open their product pages, which include basic information such as the product name and price.

In the section below, similar products are recommended, and filters can be applied to adjust these recommendations.

Beige looks nice, but I don't like the handles. Let's see what else can we choose.



Modern Office Green
Living Room
How to combine colours?

Dark wooden furniture and a dark green color a relating green color for tongs or a surface, Gunnared/frage

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Swap with recommendation

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Figure 18. Kiosk swap with recommendation

By tapping on a recommended item, the furniture piece is swapped out, and the recommended option is now placed in the digital showroom.

I like this model here and it's on discount! It also looks quite nice in this setting.





# ightarrow Save the showroom to your phone

People can take this showroom with them by tapping the 'save this room' button. Scanning the QR code brings the customer to their IKEA app, where the showroom has been saved.

Once the showroom is saved in the 'My IKEA' page of the app, With the saved showroom, people can check the products and tips from the showroom at any time.



Figure 19. Save digital showroom to the phone

## ightarrow 'My IKEA'

The 'My IKEA' page within the app is designed to capture inspiration from the store. It not only saves the digital showrooms from the kiosks but also allows people to save anything inspiring from the showrooms by using the camera feature.

It's saved! We can look back when we start building our living room.



# Peticitid Rems Control Lam Co

# Camera view & product recognition

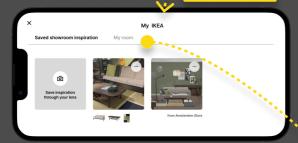
A proposed camera feature in the IKEA app recognizes products when the camera is pointed at them. By tapping on the products, their information appears.

The phone also recognizes the customer is in the showroom through geotagging, which it will retrieve furnishing tips from that showroom.

When the customer takes a photo, the products and related tips will be saved to the app. The photo, along with the recognized items, will be stored on the 'My IKEA' page.

I like this combination of the couch and the coffee table. Let me snap a photo of them.





recognized items

#### ightarrow Apply to my room

After saving inspirations from the showrooms, you can directly place the objects virtually and the wall colour to your own space. Using AR, the items will appear in a previously scanned room of yours.

I wonder if this couch and coffee table will fit in our room?



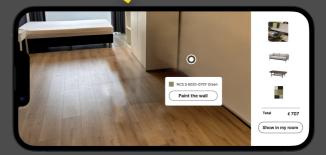




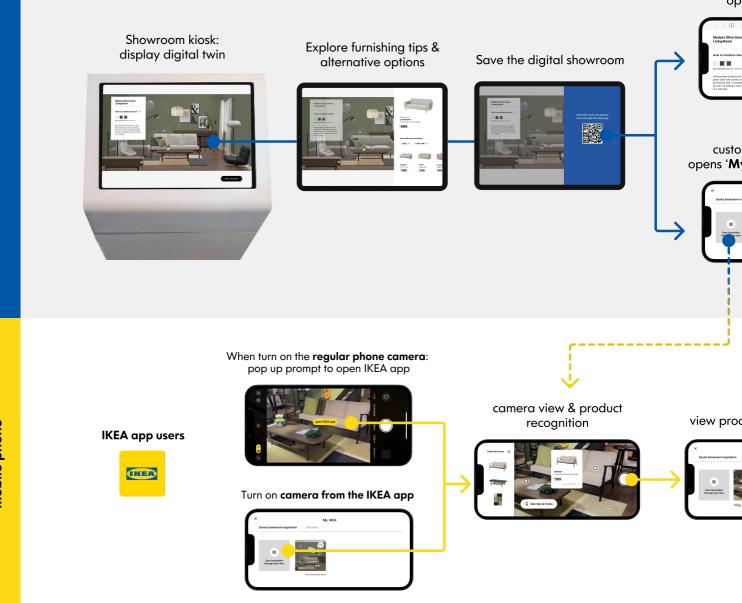
Figure 21. Apply to my room

#### Overview of the final concept

Both the showroom kiosk and the proposed features in the IKEA app are designed to make showroom exploration more catered to customers' personal needs and allows customers to take inspirations from the showrooms home. There are different paths to use the kiosk and the app, depending on the customers' preference.

The kiosk doesn't necessary require customers to have the IKEA app. The furnishing tips and product recommendation feature of the kiosk are accessible to all customers in the store. If a customer without the app wants to save the showroom, a webpage of the digital showroom will pop up after scanning the QR code from the kiosk. The webpage allows them to review the furnishing tips and item list of the showroom at anytime. For customers with the app, the QR code leads them to their IKEA app. On the app, they can see the saved room. When logged into their IKEA account, the customer can switch to other devices such as their computer or tablet to review the digital showroom.

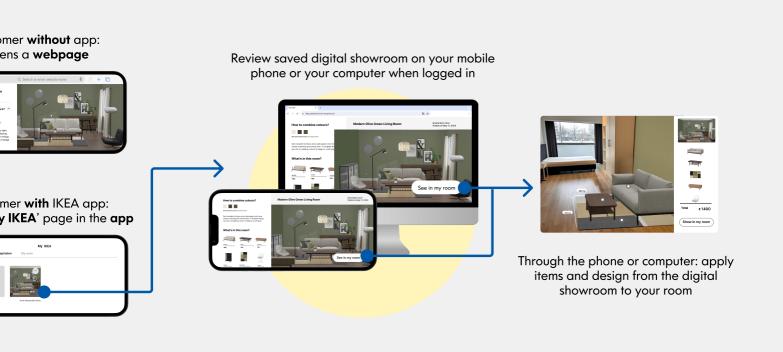
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For the proposed app features, customers can access them directly from the app through the 'My IKEA' page. Another way to trigger these features is by **turning on the regular camera** on their mobile phone. The phone recognizes that the customer is in an IKEA store through **geo-tagging**, and a link to open the IKEA app will pop up once the camera is activated. This guides the customer to use the product recognition feature and other subsequent features on the app. This approach leverages customers' existing behavior of taking photos in the showroom, introducing these proposed app features to them seamlessly.

From either the saved digital showroom or saved photos, customers can access furnishing tips and items from the showroom at any time. They can then apply this content to their own space using AR technology. Customers have the option to scan their room before visiting the store, allowing them to try out items and make decisions directly in-store. Alternatively, they can save things from the showroom and try them out later once they get home and have their room scanned.

Figure 22. Overview of the concept proposal





Through the phone or computer: apply items and design from the photo to your room

# Chapter IV Evaluation

- $\rightarrow$  Evaluation Plan
- ightarrow Results and discussion
- $\rightarrow$  Summary of findings

#### **Evaluation plan**

After developing the final concept proposal with a high-fidelity prototype, an evaluation test is conducted to assess whether the concept meets the design goals (Chapter 2) and identify potential improvements for future iterations.

#### **Customer user test**

The evaluation test was conducted at the Amsterdam IKEA store, where 6 groups (8 customers) were recruited on site. Participants' ages ranged approximately from 30 to 60+, to ensure feedback from diverse user groups are involved. The testing took place in the showroom that the prototype depicts. During the test, participants were first given a scenario in which they are working on the living room of their new house. Then, the concept was introduced to them, starting with the kiosk (tested on an iPad) and moving on to the mobile phone feature. An interview about their overall experience with the prototype was conducted afterward (see Appendix C for the detailed evaluation plan).

#### Store worker interview

In addition to customer user testing, 4 IKEA store workers were interviewed as experts. The questions aimed to gain insights into whether they find the concept helpful based on their understanding of customers, and whether the concept adds value to their day-to-day work as store workers.

#### **Evaluation Objectives**

- To understand if people find the showrooms more relatable and inspiring for their own home projects through showroom exploration.
- To understand if people feel guided and prompted to take action after interacting with the concept.
- To understand if the concept could add value to store workers' daily work.





Figure 23. In store user test

#### **Results and discussion**

In this section, the evaluation results for **the kiosk** and **app features** will be discussed separately, as participants had different attitudes toward these features. Insights were gathered from both customers' and store workers' feedback.

#### Insights for the kiosk

In general, participants appreciated the provided furnishing tips and the ability to swap out items. However, some say they are less likely to use the kiosk. In the following section, feedback for individual features of the kiosk prototype will be elaborated upon, then followed by a discussion on why it did not meet some participants' expectations.



Figure 24. Kiosk-furnishing tips

"I'm not so good with colours so I would definitely tap every colour." - participant

"I also get questions on whether a sofa fits with their wall colour." - store worker

#### **Furnishing tips**

# Colour tips can help customers solve difficulties in combining colours

Showing color tips is useful. As mentioned by participants, they often find it difficult to combine colors on their own. According to store workers experience, questions regarding 'colors' are most frequently asked by customers.

4/8 participants tried tapping the color thumbnails which currently in the concept is not interactive. They expected to try out different color palettes or change the color of the wall. As said by the participants, visualizing and trying out different color combinations helps them understand what works for them.

#### Swap with recommendation

# Helpful to try out product combinations and swap out disliked items

Swapping different combinations of products helps participants imagine new possibilities. Similar to the difficulty to match colours, it is often difficult for people to come up with product combinations on their own. This feature is also especially helpful when they are not satisfied with the displayed item, allowing them to explore more options.



Figure 25. Kiosk-swap with recommendation

"I don't like it [couch] closed, so it helps me see different combinations" - participant



In a case where the participant disliked the couch displayed in the showroom, the swapping feature helped her to find a more suitable alternative.

#### **Product information**

#### **Need for additional information**

In the current prototype, only the price and name of the product are shown when participants tap on individual items. Participants expressed a need for additional information to make the showroom more actionable for informed purchase decisions. The needed information reflects customers' constraints, such as their budget and room size. Information mentioned in user testing included the total price of the room, product dimensions, stock availability, and product locations in the Markethall area. Especially for information such as product location, would help the shopping journey moving from the showroom area to the Markethall.

This highlights the importance of addressing customer inquiries through the kiosk. Store workers noted that having these kiosks in each showroom could potentially help customers answer their questions independently, reducing the workload for store workers on busy days.



Figure 26. Kiosk-product information

"It would be nice if they say where in the store it is" - participant

"If it is in every room, that would help.

Today they come walk all the way, ask us to follow them back to the room, so it would free our time."

- store worker

# Different shopping modes affects the perceived value of the kiosk concept

As mentioned in the previous section, **not all participants find the kiosk relevant to them**. This is mainly **due to the different shopping modes** people tend to have. Among the 8 participants tested, two typical shopping modes were identified which led to different attitude towards the concept. The first mode is when people are more willing to spend time exploring and getting inspired by showrooms. This aligns with the 'hedonic shopping mindset' mentioned in previous chapters, where making a purchase is not the only goal of the shopping experience. The second mode is when people are focused on looking for specific items. In this 'utilitarian mode,' shoppers have a clear goal of what they are seeking. People in this mode also tend to develop their ideas by themselves.

The customers' own shopping preferences play a role behind these shopping modes. Some people find exploring showrooms enjoyable, while others prefer to shop in an efficient manner. The specific home mission people currently have at hand also determines which mode they are more likely to be in. For example, people who are starting with a new empty space are more likely to exhibit the first shopping mode, whereas those who are simply making changes or additions to their room may lean towards the second.

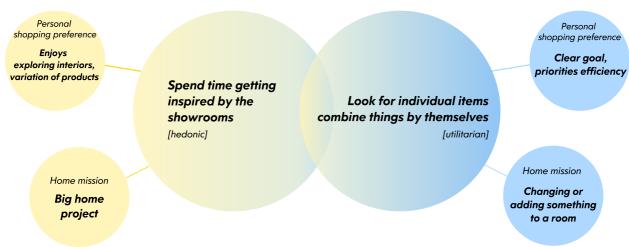


Figure 27. Identified shopping modes from the user test

#### Spend time getting inspired by the showrooms

# Perceive the kiosk as enhancing shopping exploration

Participants who prefer the first shopping mode, where they enjoy exploring showrooms for inspiration, found the kiosk prototype particularly helpful. The kiosk shows a variation of product combinations and offers opportunities to experiment with different color combinations. By expanding the range of possibilities, the kiosk allows people to visualize options that might otherwise be challenging to imagine by themselves, helping them discover items that align with their preferences.

# The kiosk display is overly conceptual, not suited to this shopping mode

Look for individual items, combine things by themselves

On the other hand, 3/8 participants tend towards the second shopping mode. They expressed that both the kiosk and the showroom itself do not align with their shopping habits. The kiosk displays the entire showroom in a 3D digital format. Participants found this digital representation to be overly conceptual. They **felt it implied guiding them towards replicating the entire showroom**, whereas in reality, they prefer to gradually build up their own homes. Additionally, they found it less realistic to copy & paste the showroom in their own spaces, considering they already have existing furniture of their own.

Although two participants indicated they may not use the kiosk, they still found the swapping feature helpful. It allows them to focus on specific areas of the showroom and gather ideas related to the centerpiece they are planning on.

"I'd never enter a showroom and say, 'this is what I want' because it's just a concept...I want to build this [space] over the years"

"Maybe I already have a beige couch, so I want to know what works with what I already have"

- participant

- participant

#### Insights for the app features

In general, the proposed feature in the IKEA app received positive feedback, regardless of the participants' shopping modes. The following section will elaborate on the reasons why the features worked for the participants.

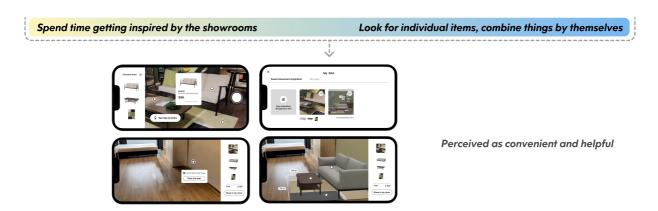


Figure 28. Attitude towards the proposed app features

#### Camera view & product recognition

#### Easy and more efficient way to save things

Participants found the feature of getting product information by taking a photo to be handy. Participants said that they **often take photos of things they are interested in**, therefore, this feature seems easy for them to use. Additionally, it is more convenient because it allows them to gather all the information in one go, without needing to search for each item individually afterward.

Store workers also noted that product recognition would **improve communication with customers**, as people often do not have the correct article number when asking questions.



Figure 29. App-camera view & product recognition

"I already do this with my camera but I take a photo of the product tag and Google it. This feels easier"

- participant

"That will be nice for the customers and for us... We can immediately know what they want"

- store worker

#### Apply inspiration to your room

# Ensuring whether things fit in terms of size and design

Projecting items into their room is said to be very helpful, 4/8 participants mentioned that this feature is **especially helpful for ensuring dimensions and proportion fits in their own space.** Ultimately, this helps them make more confident decisions.

3/8 participants said it also allows them to **check** whether the colors and design work as they wished. As mentioned in the user test, although colour and design may not be the primary concern comparing to dimensions, it is still nice to check the look. By projecting items and colours into their scanned room, they get to see how things look like when placed with their existing furniture.



Figure 30. App-apply inspirations to your room

"I just bought a closet for my son's room and I was in doubt whether I should've gotten the bigger size... This would have helped me to make a decision"

- participant

"You can try things you had in mind and see if it looks good in your own house"

- participant

#### Apply inspiration to your room

#### **Privacy concerns for uploading photos**

Overall, the feature of applying virtual objects in people's own room received positive feedback. However, one participant expressed concern about how the app will handle photos of their private space. This feedback underscores the importance of addressing data privacy issues, which should be clearly communicated upfront. Customers should always have control over and be able to manage their consent regarding the use of their images.

"It's slightly worrying to take pictures with apps on your phone, you never know what they do with your information."

- participant

#### **Summary of findings**

Reflecting the design goals outlined in Chapter 3, both the kiosk and the proposed app features have proven to make the showroom experience feel more personal by allowing participants to explore and discover their own preferences. Additionally, these features guide participants to potentially make more confident decisions by enabling them to visualize showroom items in their own spaces. It was also observed that both medium: the kiosk and the app has its own strengths and perceived roles.

The kiosk display was seen as both an information inquiry point and a place for exploration. Participants expressed the need for more detailed product and room information to be able to take actions after the showroom visit. They found the kiosk helpful because it made the showroom feel more relatable by offering different combinations to try, allowing visitors to explore more options than just what was on display. However, a complete digital showroom did not work well for customers looking for specific items, as it lacked focus and didn't feel realistic. Participants didn't prefer to copy the entire showroom to their homes.

The **proposed app features** was considered easy and convenient. The camera feature **matched how people already use their phones**, such as taking photos of interested items, making it simple to save and apply ideas to their rooms. As for being able to apply items to their own space, the **biggest benefit is checking measurements**, followed by seeing whether the design fits in their personal space. However, **privacy concerns** arise for features that ask customers to upload their personal photos. Therefore, it is important to clearly communicate how the images will be used to build trust and provide customers with the autonomy to use such a feature.

In addition to enhancing the customer experience, this concept has the potential to add value to store workers' day-to-day work. The kiosk could possibly reduce their workload by enabling customers to find information independently. The camera product recognition feature could make communication between customers and store workers easier by identifying the products customers have questions about. This would allow store workers to understand customer inquiries immediately, without the need to walk back to the showroom with them.

# Chapter V

# Recommendation & Conclusion

- → Future recommendations
- → Limitations
- Personal reflection

#### **Future Recommendation**

In the previous chapter, both challenges and positive impacts of implementing the concept proposal were identified. This section will further explore how to overcome these challenges and propose strategies for future iterations. Additionally, this section will highlight the position of the proposed concept within other IKEA channels and recommend areas for future research.

#### Challenges for implementing a showroom kiosk

Based on feedback from the evaluation test, participants **expected to find and explore additional showroom information** while using the kiosk. Also, in the current design proposal, the whole showroom is displayed on the kiosk. This approach **does not meet the expectation of customers who shop with a specific item in mind.** As a result, they are less likely to use the showroom kiosk.

Based on insights that some participants do not prefer using a kiosk, previous research on IKEA's in-store kiosks was reviewed to gain a more comprehensive understanding of customers' attitudes toward in-store kiosks. It was found that the reluctance to use kiosks reflects not only their shopping modes but also their perception that learning to use the machine is time-consuming and that the benefits are unclear. As mentioned in previous research, customers are only interested in using kiosks when they clearly understand the advantages of the kiosk.

Additionally, previous research has found that when customers are in the store, they **prefer to focus on the physical shopping experience** rather than spending time on a digital screen (IKEA internal research).

#### Recommendations for the kiosk

If the showroom kiosk were to be implemented, the content that is displayed on the screen should be revised to cater to customers in different shopping modes. When implementing the kiosks, other facilities and services in the store should also be considered in order to optimize its benefit.

The recommended strategies for future iterations are:

- Add focus to allow people to zoom in parts they think is relevant for them
- Provide customizable additional information
- Communicate clearly what customers can benefit from the kiosk

#### Add focus to allow customers to zoom in parts they think is relevant for them

Instead of displaying the entire showroom on the screen, we could allow customers to zoom in on or select specific areas of the showroom while providing furnishing tips for the focused part. This approach allows customers to concentrate on items they are interested in and receive guidance on how to arrange them, as it is usually a difficult task for people to combine things themselves.



Figure 31. Example of kiosk display iteration

#### Provide customizable additional information

Based on the need for seeking more information, the kiosk should provide showroom information that helps facilitate other in-store behaviors. For example, it should offer stock availability and product locations to guide customers in picking up products or finding alternatives that are displayed within the store. To address customers' crucial constraints such as budget and room size, information including the showroom dimensions and total price could be provided. Furthermore, we can allow customers to adjust these features to better match their own home situations. The potential benefit of providing these information not only guides customers in the showroom but could also reduce the workload of store workers especially on busy days.

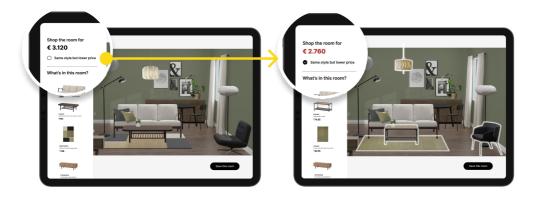


Figure 32. Example of adjusting room total price with alternative products



#### Communicate clearly what customers can benefit from the kiosk

To ensure customers realize and make use of the showroom kiosk, the kiosk itself should explicitly explain what the kiosk is for. Additionally, we could involve store workers and use in-store banners to introduce people to the kiosks. For example, when a customer asks a store worker about an item in the showroom, the worker can guide them through using the showroom kiosk. In the short term, it may take time for customers to understand and get accustomed to using the kiosk to explore products and seek information. However, in the long term, once customers are familiar with the purpose of the kiosks, they are more likely to use them regularly.

#### Recommendations for the proposed app features

#### $\rightarrow$

#### Potential to integrate Kreativ with the IKEA app from the showroom

The proposed feature in the IKEA app involves the use of AR and 3D digital rooms. This technology has already been developed and implemented by IKEA as *IKEA Kreativ*, which is also briefly mentioned in Chapter 1. Kreativ offers two types of user experiences: customers can design in preset digital showrooms or scan their own space to create a personalized design. Currently, customers can access it through both the website and the IKEA app. However, during interviews in the contextualization phase and the evaluation test, *Kreativ was not mentioned by customers*, unlike web and app catalogues or other IKEA planners, which customers reported using. This suggests that Kreativ is **not yet well-known or widely used by customers**, at least in the Netherlands and the UK, where participants in this report are based.



Figure 33. Kreativ: preset digital showrooms



Figure 34. Kreativ: user designing scanned space

Given that the proposed features are powered by similar technology, a short interview was conducted with Kreativ designers after the concept evaluation test to understand Kreativ's current challenges and mission. It was learned that Kreativ aims to provide a furnishing experience rather than just a planning tool, particularly by introducing IKEA's furnishing knowledge. One such feature is 'Goes Well With,' which recommends product combinations for a selected product. According to the designers, Kreativ is not yet widely used due to several possible reasons, including the learning effort required for a new tool and customer traits, where some people are just not interested in room designs.

The proposed features in this project build on customers' current behavior of taking photos and leverage IKEA's showroom furnishing knowledge by providing furnishing tips. These features could introduce Kreativ to customers in the store at needed moments, such as when they want to check whether the size and design fits in their own space. This approach allows customers to stick to familiar habits, potentially reducing the effort to learn something new and enhancing the omni-channel shopping experience. Notably, one participant in the evaluation test mentioned that he had known about AR for a while but had never used it; however, integrating AR features with his current habits could serve as a good introduction to the technology while addressing his needs.

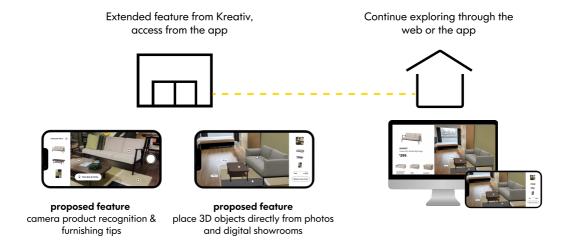


Figure 35. Example of adjusting room total price

#### Limitations

#### Usability issues to be resolved

The evaluation aimed to determine whether the concept meets the design goals. As mentioned in the previous chapter, **usability is not the primary focus** of this evaluation or the project. However, during the user tests, some common usability issues were observed which confused the participants and required more explanation. For example, it was not obvious that the products and the furnishing tips on the kiosk screen is tap-able, therefore participants missed the cues to interact with it. In the app prototype, instead of adding all items through one button, participants expected to add items individually. These observation can serve as insights for future iterations and usability testing.

#### Placement of the proposed app features

The placement of the app feature needs further discussion and testing. Currently, the concept introduces a new app page called "My IKEA." This page allows customers to review inspirations saved during their showroom visits, either by accessing a saved digital showroom or viewing a photo they have taken. It is yet to be determined whether these features should be consolidated into this new "My IKEA" page, or other possibilities like integrating with IKEA Kreativ, or combining with the favorite list page.

#### Placement of the kiosk

The placement of the kiosk is not evaluated in this project. Currently in the concept it is placed in front of the couch of the showroom. The intention was to allow customers to sit comfortably while using the kiosk. However, the angle customers are seeing from doesn't align with what is shown on the kiosk, which could potentially make the display less engaging. Therefore, the placement of the kiosk should be further researched and seek the most effective kiosk position.

#### Market difference

The participants recruited for the contextualization and evaluation phases were based in the Netherlands, while the online interview involved participants from the UK. Given that IKEA is a global brand, it's important to recognize that the insights and concepts developed in this project may not be universally applicable across all markets. For example, cultural differences influence technology acceptance, therefore strategies for introducing new digital solutions to customers should vary from country to country (Ashraf et al., 2014).

#### **Personal Reflection**

Looking back at the personal learning goals I established when starting the project, I can proudly say that I have pushed myself to meet these goals, especially by making the most of the opportunity to collaborate with IKEA.

#### Refining design through a collaborative approach

The first goal I set for myself was to proactively foster discussions and collaboration. This goal was set because in my past projects I found myself fixated on my own thoughts quite often. Therefore, during this project, I not only discussed with my supervisory team but also reached out to other UX designers and researchers at IKEA to get feedback on my project. I got to integrate my research findings with customer insights from other colleagues. I also organized a critique session (Chapter 3), which was a new experience for me, and I learned how to facilitate such sessions in a structured way. This collaborative approach helped me understand the value of my findings and my design intervention. Moreover, it helped me find a path and scope while having a lot of freedom to explore for this project.

#### Storytelling learnings

To improve my storytelling skills, I studied how IKEA researchers write their reports. I noticed similarities with what I learned in the IDE course 'Context Mapping,' such as the use of participant quotes to support insights. Inspired by these reports, I made sure each research insight had a brief title in my presentations and reports to help readers quickly grasp the context. I also put effort on refining the visuals of my findings. By discussing with my supervisors from TU Delft and IKEA, I carefully considered the use of flows, colors and shapes to ensure that my message was conveyed accurately.

#### Involving real users in context for insights

One of the greatest advantages of collaborating with IKEA was the opportunity to conduct interviews and testing in-store and efficiently recruit participants through their user recruiting channel. I am grateful for these opportunities and resources, which significantly enriched my project. Through user testings, I learned to quickly adjust my interview guide and tailor follow up questions to each participant. By making real-time adjustments, I maximized each interaction with users and gathered more accurate insights. These experiences also provided valuable lessons for improving future user testing and interviews.

#### Possible improvements for the ideation phase

During the ideation phase, I went through multiple rounds of iteration to develop concepts that are innovative and truly meet customers' needs. However, reflecting on the process, I see room for improvement in both diverging ideas and making design decisions. In the initial brainstorming phase, I got stuck on implementing a kiosk and an app. Referring back to my first learning goal, I could have approach this phase in a collaborative way as well by facilitating a brainstorm session with colleagues or fellow students. Another way is to adopt brainstorming techniques such as: SCAMPER (substitute, combine, adapt, modify, put to another use, eliminate, and reverse) to provoke totally new ideas (Dam & Teo, 2024). For the converging steps, a more structured approach or establishing design criteria beforehand could have helped evaluate ideas more effectively and make clearer, more conscious design decisions.

Overall, this thesis opportunity working with IKEA has not only enriched my project but also provided me personal growth as a designer. Although the collaboration with IKEA was mainly online, I connected with many people and learned a great deal from them. I truly enjoyed and appreciated IKEA's 'fika culture,' where everyone I interacted with was open to sharing their work and learnings, and showed great interest in my work as well. From this experience, I aspire to continue being a designer who is willing to share and open to learning different perspectives and thoughts.

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For confidential reasons, IKEA internal research documents cannot be disclosed

# **Appendices**

- ightarrow Appendix A: In-store interview plan
- ightarrow Appendix B: Showroom interview plan
- ightarrow Appendix C: Prototype iterations
- ightarrow Appendix D: Evaluation Plan
- ightarrow Appendix E: Graduation Project Brief

#### Appendix A: In-store interview plan

Location: IKEA Haarlem store

#### **Research Objectives**

- Observe existing behaviors from the beginning of the store visit to checkout.
- Understand relevant and desired information for each phase and what information transfer through different phases of the home furnishing journey.
- Understand interactions between customers (couple, friends, family visitors).
- Understand what triggers a hedonic mindset and utilitarian mindset.

#### Interview questions (5min)

- What brings you to IKEA today?
- Have you done any preparation before coming to the store?
  - Did you checked the IKEA web or app before coming? If so what did you looked up?
- [Observe their behaviour in store] What were you trying to do here? Why did you do that behaviour?
- What do you think is missing in the store that you wished to have?

#### **Observation plan**

- How do people keep track of things? (a physical shopping list? the IKEA app? take photos?)
- How do people interact with the products on display? What information are they looking at?
- How do people interact with each other? What do they discuss about?
- · How much time do people spend in one showroom?

#### Appendix B: Showroom interview plan

#### Interview guide (V2)

Showroom behaviours & needs

#### Research goal

To understand what are customers' behaviour, pain points and needs when exploring ideas in the showrooms.

#### Research questions

- 1. What are the **current behaviours** of <u>examining a showroom</u> and how people <u>capture and take notes of the inspirations</u>?
- 2. What are people's **pain points and needs** when they are exploring inspirations in the showrooms during the early stages of a bedroom furnishing project?
- 3. What are the **positive traits** of the showrooms that people find inspiring and useful for their own projects?

#### 1.Introduction - 5 min

Welcome participant and introduce yourself.

I am a designer working on Ikea showrooms, with a focus on the bedroom area.

We have invited you today because we would like to talk with you about how you get ideas for furnishing your bedroom, and how you find inspirations from the Ikea store.

#### Procedure:

- 1. The interview will take about 60 minutes
- 2. Course of the interview:
  - a. First, general questions about you and your home
  - b. Then I would like to learn more about your experience in the Ikea showroom
  - c. Finally, I'll have some closing questions to round off the interview

Please keep in mind that there is <u>nothing you can do wrong</u>. We want to understand your opinions and thoughts, so please be **open** and **honest** with us. Also, if you do not want to answer a certain question or stop the session, please tell me, you have the right to do so.

#### Video recording:

· We will record this whole session, the camera, and your voice.

I will also be taking some notes during our conversation.

Do you have <u>any questions</u> before we start?

START RECORDING

#### 2. Introductory questions - 5 min

- To start with, I would like to know a little bit more about you. Can you tell me about where you currently live?
  - What type of home is it? (apartment, house, etc.)
  - o How long have you lived there for?
  - Do you live together with anyone? (pets, partners, children)

#### 3. Recent bedroom project – 10 min

I would like to know more about the furnishing projects you have done lately.

- Have you furnished or upgraded your bedroom in the past few months?
- Can you tell me more about your recent bedroom furnishing project? For example, what was **your goal** and what is **your process** like?
- Did you visit any furniture stores during the process? What role do physical furniture stores visits play in your process?
- [If didn't mention showrooms] Do you generally visit Ikea showrooms or showrooms from any furnishing store when you are working on a project? (explain what the showroom is in case the participant doesn't know the term)

#### 4. Showroom behaviours (what and why)- 15 min

I would like to dive deeper into **your experience in the Ikea showrooms**, especially in the **bedroom** setting. You can answer the following questions base on your **most recent Ikea store visit**:

- Can you tell me about the last time you visited the Ikea showroom?
  - [if not mentioned preparation]: Did you do any preparation before visiting the store? (For example, did you checked Ikea web? Did you make a shopping list?etc)

- [examining showrooms]: What is the most important thing you look at when you are in a showroom?
- [If captured Inspiration]: If not mentioned: did you document anything while you were in the showroom?
- Why did you choose to capture things by (writing a paper note, photos etc)?
- What did you do with the things you've captured after your visit (e.g. purchased online afterwards, discussed with sb, or never looked back)?

#### 4. Experience of Showrooms- 15 min

- On a scale of 1-10, how helpful or not helpful was visiting the showrooms for your home project, 1 being very unhelpful, 10 being very helpful?
- Is there anything about the showroom you find helpful for your project?
- Is there anything you do not like about the showrooms?
- In general, is there anything you enjoy about the showrooms, it doesn't have to be anything related to your home project?
- What kind of guidance or advice would you like to get when you are in the showrooms?
- Are there any irreplaceable elements of the showrooms that drives you to visit them in person?

#### Closing - 5 min

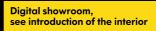
We are now almost **at the end of our interview**, we have spoken about how you go about looking for inspiration in showrooms and shopping for home furniture.

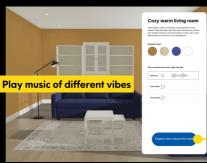
- Is there anything that you would like to add that I forgot to ask you about?
- Do you have any questions for me?

#### **Appendix C: Prototype iterations**

Initial concept 1 Interaction Quality: **Guiding** 







Able to change wall colours to match with customers' home or plan



Load their



## Initial concept 2 Interaction Quality: **Relatable and Freedom**

Pops up IKEA app link when turning on the camera



Camera recognizes products.
The customer can tap and see product information



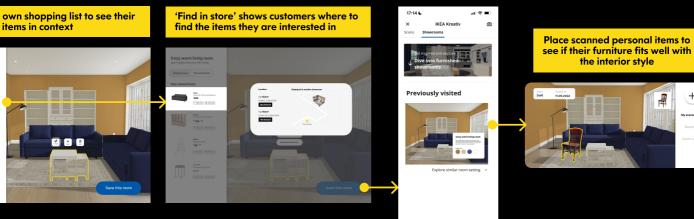
If the customer wants to see alternatives, they can swap items out in real time AR view





Make quick notes and save to an album in the app

#### Continue exploring the showroom



#### Apply saved inspiration from the photo to your own space



#### **Appendix D: Evaluation Plan**

### Interview guide V2

#### **Showroom Exploration Concept Test**

#### **Research questions**

- Do customers find the showrooms more **relatable to their own home projects and their own preferences** while using the showroom exploration? If so, what elements made them feel relatable and useful, and why?
- Does the showroom exploration concept guide people to act after they leave the showroom? If so, what kind of action?
- What is the impression of the showroom exploration concept? (Expecting it to be: inspiring, personal, helpful, guiding)

#### Agenda

- Introduction & Consent Form (2min)
- Habits & behaviors (2min)
- Concept walkthrough (10-12 min)
- · Closing questions (2min)

#### Introduction

We would like to show you some new ideas that IKEA is working on, and it will be valuable for us to know your opinion on them. We are doing this project to improve the experience for the customers, so please feel free to voice your real thoughts. At the end of this interview, you will get a 10-euro voucher for your participation.

#### [Explanation of the dynamic]

- · The interview will last around 15-20 minutes
- We will first talk about your habits and experiences at IKEA, and later we will show you some new ideas to get your point of view.

#### [Recording of the session and consent]

- Consent form: We will video record the interview and take some photos during the session. All the recordings and photos will be used by researchers for the purpose of research analysis, mainly for internal presentations. Your face will not be a part of any presentations.
- Please feel free to spend some time reading through this consent form. If you do agree, please sign and we are going to start recording.

#### Habits & Behaviours (2 min)

- · What brought you to the IKEA store today?
- How would you describe the role of the IKEA showroom for you?

#### Concept Walkthrough (10-12min)

Now I'm going to show you the new ideas we have been working on. Note that this is a prototype, so not everything may work. Please think out loud while you are interacting with this prototype.

Scenario: Imagine you are about to move to a new house, and you are working on your living room now. You have entered this showroom to get some inspiration. Now imagine there would be a kiosk standing here, and this is the screen that you will see.

#### Kiosk prototype link

First, look at this page, what would you like to tap on and why?

#### [Furnishing tips]

Have you noticed the 'tips' section? (if not) You can go ahead and tap on it' (Give participant a few second to read)



#### [See other recommendations and swap]

Let's say you are planning to buy a sofa, and you are interested in this sofa displayed here. Now you can try tapping the sofa and show me what you will do. (observe which button / information will the participant want to tap)

(If the participant didn't tap on recommendation) Let's try tap on the recommended sofa on the bottom left.



- So far what do you think about the features you have just experienced (the furnishing tip & swapping items)?
- Is there any feature you think is relevant to you? How so?

#### [Prompt to app]

Now please tap on the button on the right bottom corner. Imagine by scanning this QR code, it opens your IKEA app (let's say this is your phone and you have the IKEA app installed). It has saved the digital showroom. And it introduces another way to capture inspiration from the room. Please tap on the camera icon here.





#### Phone prototype link

#### [Camera view and product recognition]

This is a new feature in the IKEA app which is a camera that recognizes products. Please feel free to try it out. (observe what the participant would like to tap on).





#### [Apply to your room]

Now, if you take a photo, it stores in your app. Then let's go to the 'My room' section. Imagine this is a photo of your room. Now, let's try to put these items into your room.





- How do you feel about being able to save things at the store through taking photos?
- Is this something that you find useful for you? Why or why not?
- How do you feel about being able to apply those items to your own room?
- Is this something that you find useful for you? Why or why not?

#### **Closing Question**

That is everything that I am showing you today. I would like to know your final thoughts on your experience with these concepts.

- How would you shortly describe the ideas you have just interacted with?
- was there anything that you saw today that could be relevant to use for your own home projects? If so, in what way(s)?
- Based on the concepts you just reviewed, is there any feature you wish could be added?

#### **Appendix E: Graduation Project Brief**





#### Personal Project Brief – IDE Master Graduation Project

Name student Sophia Chou (Wen-Hsuan Chou) Student number 5,789,656

#### PROJECT TITLE, INTRODUCTION, PROBLEM DEFINITION and ASSIGNMENT

Complete all fields, keep information clear, specific and concise

Project title From Home to Store: Connecting the Ikea Shopping Journey with Digital Touchpoints

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 prevalence of mobile applications, websites, and social media platforms has resulted in the widespread adoption of omni-channel retail strategies. Omni-channel experience refers to seamlessly integrating multiple channels to enhance the overall customer journey. An example is the 'Research online, buy offline' approach, where customers gather information about products on digital platforms and make their final decision in a physical store (Wieland, 2023). Other common practices include 'Buy online, pick up in-store,' or aspects related to returning items.

Furniture shopping involves consumers carefully considering factors such as spatial perception and textile details as they make decisions. This becomes even more pronounced when dealing with larger or higher-priced furniture, requiring a more intentional and rational purchasing process (Zhang et al., 2022). In the realm of furniture shopping, where tactile and visual aspects are crucial, the journey of researching online and buying offline has become a typical omni-channel experience. Digital touchpoints could carry relevant information about homes and products throughout the shopping journey, aiding the overall shopping experience.

This project collaborates with Ikea INGKA, focusing on digital experience design. While Ikea excels in in-store experiences, it has been developing digital touchpoints like apps, websites, in-store kiosks, or digital tags. Omni-channel experience is a strategy to combine all these touchpoints and make them into one cohesive shopping journey. Both digital and analog touchpoints provide not only product information but also inspiration and furnishing tips. Ikea conducted research with customers across 38 countries and found out there is an increasing number of people planning to renovate their homes (Ikea, 2023). Moreover, with the influence of social media, more people nowadays prefer to curate their own homes with a personal style, indicating a growing need for purchasing home products and seeking inspiration for room rearrangement.

Wieland, T. (2023). A micro-econometric store choice model incorporating multi-and omni-channel shopping: The case of furniture retailing in Germany. Geographical Analysis, 55(1), 3-30. Zhang, S., Zhu, J., Wang, G., Reng, S., & Yan, H. (2022). Furniture Online Consumer Experience: A Literature Review. BioResources, 17(1).

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#### **Project Process** Ideate & Iterate Base on the design goal, ideate solutions, test and iterate solutions Contextualize **Evaluation** Ideation Understand the context, find research gap, User test: evaluate final and define design goal Outcome design concept Refine Design Prototype testings Final Design Concept · Literature Review Discussion & Suggestions Goal Observations · Interviews Idea Iterations

image / figure 1

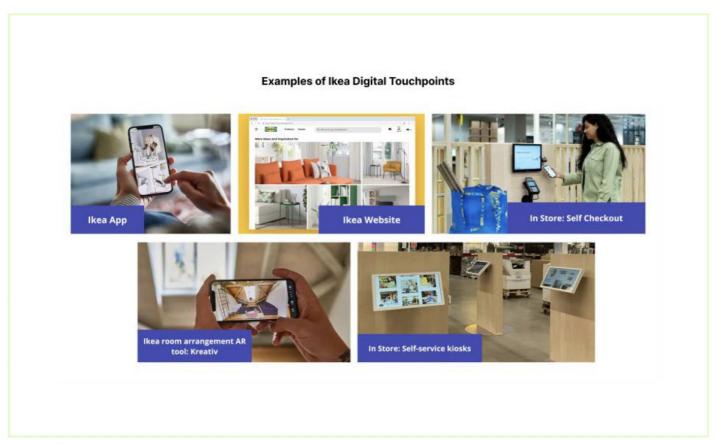


image / figure 2



#### 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)

While customers are at home looking into the Ikea website, it could be difficult to picture product details and imagine how items will fit into their homes. Similarly, when in-store, it can be challenging to envision how a product will appear within their living space. A knowledge and information gap exists between customers' homes and shopping in store. To overcome these challenges, implementing a seamless transition between different channels that carries relevant content and information throughout the shopping journey could bridge this gap and help people make more mindful decisions.

From the customers' perspective, they could reduce the time of going back and forth between the store and their home to decide on products and style, and also be less likely to buy products that are left unused overtime. For the company, this project aims to discover opportunities for utilizing existing digital touchpoints and potentially creating new ones. Ikea already possesses rich furnishing knowledge meant to inspire people to build their ideal homes. However, this knowledge is not effectively engaging people in current digital platforms (app and website). Utilizing this existing furnishing knowledge in the digital experience could potentially help people make more informed purchase decisions. Ultimately, the optimization of the digital experience expands the Ikea brand beyond the physical store, creating a more comprehensive and accessible shopping experience for customers.

#### **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 digital intervention that enhances the Ikea shopping journey from customers' homes to the store in order to inspire and guide customers to create their ideal home environment.

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)

The project consists of three phases: contextualizing, ideating and iterating solutions, and evaluating the final concept. The first two phases will partially overlap, wherein understanding the context, setting the design goal, and ideating possible solutions will be an iterative process.

The first phase is contextualizing, with the aim of understanding the current context and identifying design opportunities. Drawing insights from existing Ikea user research and my own field research, I will formulate a design goal and design criteria.

The second phase involves ideation and iterations. Based on the design goal and criteria, diverse ideas will be generated and translated into quick, interactive prototypes. I will conduct prototype test workshops with Ikea digital designers to gather feedback for further iterations. Once refined through multiple iterations and tests, the final concept will be developed.

The third phase is evaluating the final concept through user testing in context. Insights gained from testing will be discussed and lead to further refinements and suggestions.

#### Project planning and key moments

To make visible how you plan to spend your time, you must make a planning for the full project. You are advised to use a Gantt chart format to show the different phases of your project, deliverables you have in mind, meetings and in-between deadlines. Keep in mind that all activities should fit within the given run time of 100 working days. Your planning should include a **kick-off meeting**, **mid-term evaluation meeting**, **green light meeting** and **graduation ceremony**. Please indicate periods of part-time activities and/or periods of not spending time on your graduation project, if any (for instance because of holidays or parallel course activities).

Make sure to attach the full plan to this project brief. The four key moment dates must be filled in below

Mid-term evaluation 22 Apr 2024

Green light meeting 1 Jul 2024

Graduation ceremony 19 Aug 2024

In exceptional cases (part of) the Graduation
Project may need to be scheduled part-time.
Indicate here if such applies to your project

Part of project scheduled part-time

For how many project weeks

Number of project days per week

Comments:

#### 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 have always had passion for furniture and home products. Home is the safe place where people gain their energy from, by creating products that help shapes people's dream home is very meaningful for me. This project is a great opportunity to combine my passion for the furnishing industry with my skills and enthusiasm for designing user experiences. The following outlines my personal learning goals, where I aim to improve:

**Proactively foster discussions and collaborations:** I tend to get stuck in my own thoughts quite often, especially in solo projects. Engaging in discussions, sharing ideas, and openly expressing struggles are crucial for breaking through difficulties. In this project, given the valuable resources from Ikea, I challenge myself to be more proactive in initiating discussions with others and reaching out for assistance when needed.

Improve storytelling skills: Effectively communicating research findings and ideas is important for designers, as it helps to engage people in discussions and persuades them of the design's value. In this project, I want to improve my storytelling abilities, including visualization techniques. Also, I would like to put more effort in crafting a compelling story that conveys the essence of my design process.

**Immerse myself in the Real Context** Being a more introverted person I want to challenge myself to step out of my comfort zone and try to gather insights from real customers in the real context which is their homes and the Ikea store.

**Iterative approach**: In the first year DFI course Exploring Interactions, we have followed a research through design approach, which really helped to explore contexts and develop concepts. Therefore, for this project, instead of having a linear design process, I would like to follow a more iterative design approach, which I would use prototypes to test ideas as well as gathering more insights on interaction and people's behaviours. Iterations of the ideas and design goal will be refined as the project progresses.

# Tack!

