The Creation of You

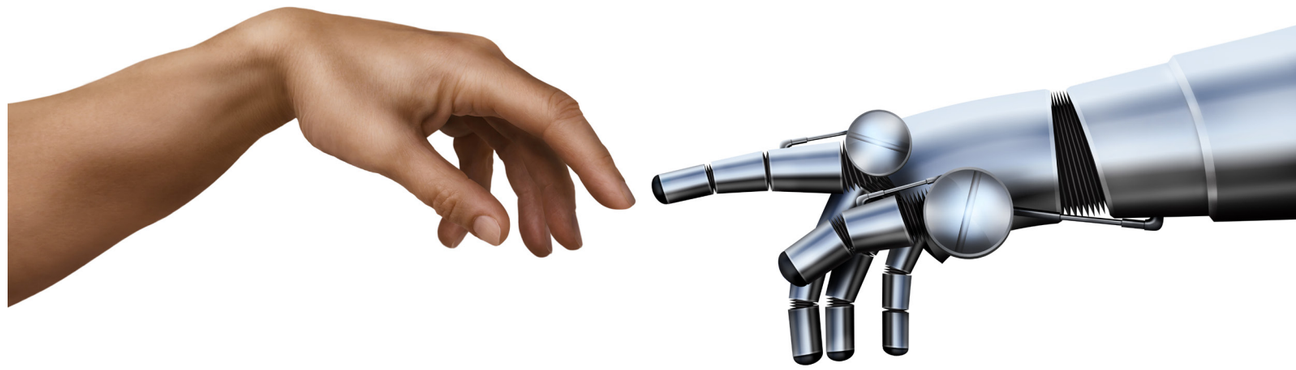
A Holistic Approach to Design for AI-Augmented Brand Experiences Through Individual Differentiation.

Graduation Report of Nick Hermes
MSc Strategic Product Design
March 2019

TU Delft

Deloitte. Digital

> AI is a tool. The choice about how it gets deployed is ours.
>
> **OREN ETZIONI - CEO ALLEN INSTITUTE FOR AI**



Colophon

The creation of you
A Holistic Approach to Design for AI-Augmented Brand Experiences Through Individual Differentiation.

Master thesis
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Preface

This thesis is the final deliverable of my graduation project of the MSc Strategic Product design at the Delft University of Technology, in collaboration with Deloitte Digital. I am grateful that this project enabled me to put my 5 years of theoretical knowledge to practice in one of the most interesting and dynamic environments you could find!

Although this 20-week graduation project has been an individual one, I never had the feeling that I was on my own. First, from the TU Delft side, I would like to thank my supervisory team for supporting me for their continuous support throughout the project.

Thank you, Giulia, for your sharp feedback, and ability to judge the content from a design, as well as business perspective. Even with your cramped schedules and busy personal life, I always felt that you were really involved with the content. The same goes for Femke, who I could send a text message at any time, and almost always got a reply instantly. I always felt you always were not only genuinely interested in the project, but also in how I was doing myself. I want to thank for your enthusiasm throughout, and helping me to scope the project without being too steering!

Furthermore, I want to thank my colleagues at Deloitte Digital, for always being open to discuss anything at any time over a coffee, or a beer at the 'Cabrioledge'. I always felt welcome at the Edge, and really enjoyed my time at Deloitte, which made the two-hour travel each day more than worth it!

Also, a special thanks to my company coaches Franklin and Naïma, who were always there for me during my graduation. Thank you, Franklin, even with your intense busy schedule, I always felt you really took the time for me. You always inspired me, and somehow each conversation I had with you led to new insights and ideas! Furthermore, thank you Naïma for taking the time to support me throughout the project, and help to bring structure in my sometimes 'chaotic' way of working!

Furthermore, thanks Emma, my graduation buddy who was always in for a coffee, and the rest of my friends and family who had to listen to stories about my graduation for 20-weeks straight. Also, thanks for everyone that participated in my interviews, surveys, sessions and many, many talks! Especially a big thank you to, Peter, for the talks that we had, and being so open in providing me with your industry perspective from the Volksbank.

Last but not least, a special shout out to Lot who always exactly knew when to give me a pep talk, or when to help me place everything into perspective. You were always there for me, even when you were busy with your own graduation.

In sum, thank you all, I couldn't have done this without you. I sincerely hope you will enjoy the read that is before you!

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Executive Summary

Introduction
If brands that operate in the digital context do not start building their own front-end AI-enabled channels, they risk falling behind on competition (White, Addison & Fritz, 2018). But as these (often traditional) organisations implement AI-systems in customer-facing practices, it slowly becomes the new front-office brand ambassadors of the brand (Wilson, Daugherty & Bianzino, 2017). But even though many organisations are starting to invest and implement AI-solutions they do not seem to fully comprehend its impact on their brand and business (Capgemini Digital Transformation Institute, 2017. And, in a similar way that people can be annoyed or pleased by an interaction with a customer service representative, customer-facing AI also has the potential to shape the brand experience of users. This is due to the fact that people tend to judge and anthropomorphise interactions with such AI-systems, which will ultimately affect their perception of the brand and its performance.

Therefore, in order for customer-facing AI to add value to the business as well as the consumer, AI-systems should be designed in such a way that they fit with the brand, and benefit the brand experience of the customer. Based on this, the following research question has been formulated: *How to augment the brand experience of users in service-driven brands through customer-facing Artificial Intelligence?*

Furthermore, as this project has been performed in the context of Deloitte Digital, the aim is twofold. First, this thesis will explore how to design for AI-augmented brand experiences by defining brand experience, and the potential of Artificial Intelligence in it. Secondly, these insights should be presented in such a way that they are applicable for Deloitte Digital designers and strategists, so it can be implemented within their existing design processes. Hereby, the insights from each chapter are made actionable, and are translated into concrete add-on design tools and methods that can be used within the context of the client. These tools are illustrated and validated with a concrete client usecase.

Brand Experience
Literature is relatively ambiguous when it comes to brand experience (Brakus, Schmitt & Zarantonello, 2009), so first an exploration around the most important concepts of branding is performed which serves as a basis for creating a clear and actionable framework around brand experience. Hereby, it is shown that three levels are important when it comes to branding, namely self-expressive, emotional and functional level. When looking at branding from the perspective of the organisation (brand identity), as well as the consumer (brand image), this translated to 'brand purpose, personality, promise' and 'user feeling, thinking, and doing attitude' respectively. To make these insights applicable for Deloitte Digital, they are translated into a canvas booklet that contains actionable elements for brand identity, as well as brand image (user attitude).

AI-Imperative
In order to create a shared understanding on the concept of customer-facing Artificial Intelligence (AI), it is described as a set of skills that mimic human cognition: perceive, analyse, interact. An AI-system is described as a collection of technologies that fall under these cognitive skills, and interacts with the consumer on behalf of the organisation. Through the metaphor of a human-human interaction (relational metaphor), a vision for the role of AI-systems in brand experience is created. Hereby, the main potential of AI for the brand-human relationship is to differentiate the brand experience of users on an individual level. In order to make this insight applicable for Deloitte, an actionable AI-system model that described the concrete capabilities of AI that are involved when creating and building the individual experience of the user: Perceive (create, collect, integrate), Analyse (reason, plan) and Interact (content, communicate).

AI-Design Principles
To fully explore and concretise the role and impact of AI on brand experience, an industry analysis around retail banking is performed for the user attitude/ needs (user perspective), and internal/ external competition (brand/ offering perspective). The industry-specific insights around opportunities, threats and guidelines for AI are converted into five generic design principles for AI that benefit the individual experience of the user (Figure 1): Intuitive AI, Responsive AI, Personal AI, Beneficial AI, and Explainable AI. To make these AI-design principles actionable for Deloitte, they are translated to the different design levels of Deloitte, namely service-design, UX design and UI design, and are shaped into concrete design stimuli: the AI-Accelerator deck.

Volksbank Usecase
In order to validate the insights and illustrate the use of the different tools that have been developed, they have been put to practice by using them for an actual client case (Volksbank). Hereby, the design process consists out of four main phases: Discover (brand mapping), Define (idea selection and user attitude mapping), Develop (co-creation session for journey mapping and experience design) and Deliver (concretising and iterating of design). The final concept/ user journey 'Peer Profiles' illustrates the output of the aforementioned design tools, and shows how this related to AI-augmented brand experience through the different elements of individual experience (AI-design principles).

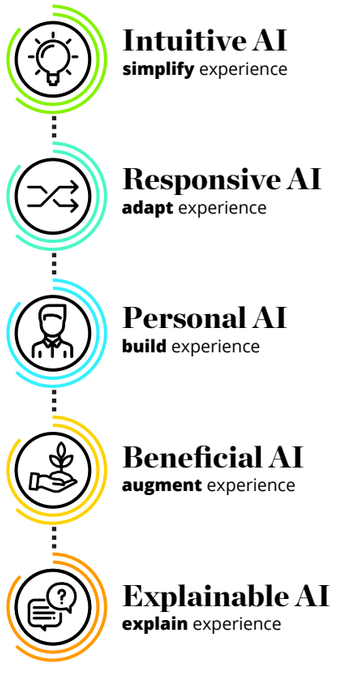


Figure 1 *AI-Design principles*

1.

Introduction

1.1. Introduction

With Artificial Intelligence (AI) becoming more advanced, more and more organisations start implementing AI-solutions with the aim to enhance the customer experience and the relationship between organisations and its customers (Capgemini Digital Transformation Institute, 2017; Wilson, Daugherty & Bianzino, 2017). Already, 45% of consumers indicate they prefer a chatbot as the first line of communication for customer service activities, and by 2020 around 25% of customer service operations will use a virtual assistant (Gartner, 2018a; Grand View Research, 2017). As conversational experiences and personalised engagement increasingly make an appearance in customer-facing and other front-office activities, such technologies slowly become the new front-office brand ambassadors of the organization, taking brand anthropomorphism to a completely different level.

A. Context & Background

With the coming of computational machines such as that of pioneer Alan Turing in 1937 philosophers and scientist slowly started the discussion about the possibility of creating an artificial brain that simulates the process of human thinking (McCorduck, 2004). In 1955, John McCarthy coined the term Artificial Intelligence: “making a machine behave in ways that would be called intelligent if a human were so behaving” (McCarthy et al., 1955). Since 1990, the enthusiasm and actual adoption of AI-technologies has been gradually rising. And from 2010 on, AI (and especially machine learning) started to get a rapidly increasing role on the research and strategic agenda of governments and organisations (Chui & Francisco, 2017; Ransbotham et al., 2018).

Major advances in the (calculation) speed of computers, combined with ever growing data sets make today’s AI applications capable of solving increasingly complex problems in all kinds of sectors.

The increased capabilities of these AI-technologies (technology push) makes it increasingly attractive for (cost) optimisation, and resulted in the creation of some high-profile usecases that are widely and intensively reported on by the media. In turn, this generates more awareness, which again increases the demand and adoption of AI technologies by organisations (market pull) (Figure 2).

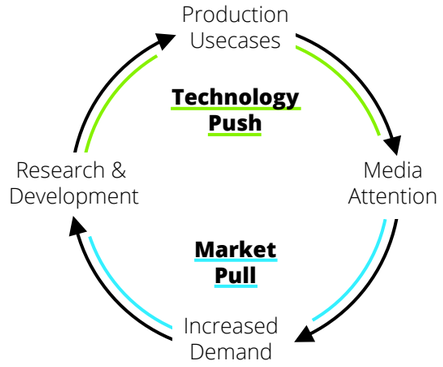


Figure 2 *Technology push and market pull around AI.*

As this process repeats itself, the media-fuelled attention to AI has currently created a hype around the topic for media, businesses, governments as well as the general public (Stanek, 2018). Companies even seem to go as far as rebranding existing technological solutions to ‘AI-powered’ to take advantage and attract press coverage, something which is clearly indicated in research by MMC ventures that shows how 40% of AI startups in Europe almost have nothing to do with AI (Schulze, 2019; Van Duin & Bakhshi, 2017).

> “Within the next five to 10 years, almost every company will be using AI in a pretty significant way.
>
> **RAJEN SHETH, SENIOR DIRECTOR GOOGLE**
>
> **(Capgemini Digital Transformation Institute, 2017)**

Indeed, Gartner (2018b) indicates that AI is one of the top trends of the current hype cycle and that it has at least another 2 to 5 years to go before it reaches mainstream adoption. A survey by PWC (Curran, Garett & Puthiyamadam, 2017) indicated that business and IT executives expect AI to be among the technologies that will have the biggest impact on business, with 54% saying that they are currently investing in AI. Moreover, the Instatik Data-Center estimates that the global spending on AI will increase from $12 billion in 2017 to over $57 billion in 2021 (Deloitte LLP, 2017).

Customer-Facing AI

Capgemini Digital Transformation Institute (2017) indicated that especially within customer care, AI could have great benefits (short, as well as long term) such as personalised, contextual and predictive care and chatbot/ virtual assistants and tailored product/ service recommendations. As a consequence, the way that people interact with businesses is becoming increasingly conversational in nature (White, Addison & Fritz, 2018). Organisations that offer a good voice assistant experience will increase positive word-of-mouth and generate more business (Capgemini Digital Transformation Institute, 2017). This because people will then interact more with the brand, be more engaged, and tend to share their positive experiences with family, friends and social media. However, despite many organisations are excited to act upon the "AI buzz", they do not seem to fully comprehend its impact on their brand and business (Capgemini Digital Transformation Institute, 2017). Indeed, many organisations decide to implement customer-facing AI to either optimise (save money on) their customer-facing processes or to avoid falling behind on competition (White, Addison & Fritz, 2018). However, in order to successfully implement customer-facing AI and maximise its potential, organisations should not simply "Adopt AI for the sake of ticking the box" (Tan, 2018).

Scope Brand Experience

It is thus essential for organisations to design the AI-system in such a way that it delivers an added value to the customer as such technologies will inherently affect the (subjective) brand experience of their customer. Because in a similar way that people can be annoyed or pleased by an interaction with a customer service representative, a customer-facing AI also has the potential to shape the brand experience as each interaction results in the customer judging the AI-system and consequently brand performance (Wilson, Daugherty & Bianzino, 2017). This is due to the fact that people tend to anthropomorphise interactions with a conversational interface (e.g. voice- or text-based bot), attributing a certain kind of behaviour and accompanying 'personality' that will consequently affect the brand perception (Abbing, 2010; Wilson, Daugherty & Bianzino, 2017). However, the impact of a machine-to-human (M2H) interaction is inherently different from a human-to-human (H2H) interaction in a sense that a single 'bot' can interact with thousands of people at the same time, meaning any good or bad impressions on the brand experience might have a long-term and global reach. This because a negative brand experience has a direct impact on the affective commitment of the customer and eventually on their loyalty (Brakus, Schmitt & Zarantonello, 2009; Iglesias, Singh & Batista-Foguet, 2011). Besides, it is also essential to maintain coherency in the manifestation of the brand within the brand experience that the customer-facing AI-system offers. Because eventually, a congruent brand experience (familiarity) leads to understanding, trust and loyalty (Brakus, Schmitt & Zarantonello, 2009; Choo, 2016).

B. Main Research Question

In conclusion, organisations who do not start building their own front-end AI-enabled channels risk falling behind. But as organisations implement AI in customer-facing practices, it slowly becomes the new front-office brand ambassadors of the brand (Wilson, Daugherty & Bianzino, 2017). So, in order for customer-facing AI to add value to the business as well as the consumer, they should be meticulous in why, and how it fits their own brand, and how this technology affects the brand experience of their customer. Therefore, the research question (RQ) is as follows:

Research Question 1 (RQ1)
How to augment the brand experience of users in service-driven brands through customer-facing Artificial Intelligence?

This research questions is about the connection between two main subjects, namely (customer-facing) Artificial Intelligence and brand experience. Hereby, based on the aforementioned RQ, two sub-research questions can be defined.

Research Question 1A (RQ1A)
How to define brand experience within the context of service-driven brands?

Research Question 1A (RQ1B)
What is the potential of customer-facing Artificial Intelligence for brand experience?

C. Deloitte

At Deloitte too, a rapidly increased demand in AI-related projects can be seen. So much even, that Deloitte NL opened the Artificial Intelligence Centre for Expertise (AICE) in November 2017 to align various initiatives (both for clients and internally) and connect experts within the field of AI. Furthermore, within Consulting (Technology) they established a dedicated knowledge centre (AI & IoT Guild) to connect and spread the expertise of AI experts within Consulting, among which Deloitte Digital.

Deloitte Digital

Deloitte Digital (DD) is the service line within consulting (Figure 3) that designs for digital transformation and consist out of three sub-departments namely Engineering, Strategy/ Advisory and Creative. They focus on the areas of digital strategy, (social) web and mobile services and deliver end-to-end solutions, meaning they are involved from the fuzzy-front end (strategy) till the development and implementation phase. According to Franklin Heijnen, Creative Director Deloitte Digital, AI-solutions become an increasingly integral part of their propositions (personal communication, September 12, 2018). According to Jim Guszcza (2018), Deloitte chief data scientist, AI-technologies will change the way that organisations interact with their customers, meaning there is an increased need in tackling AI-related problems in a human-centred way.

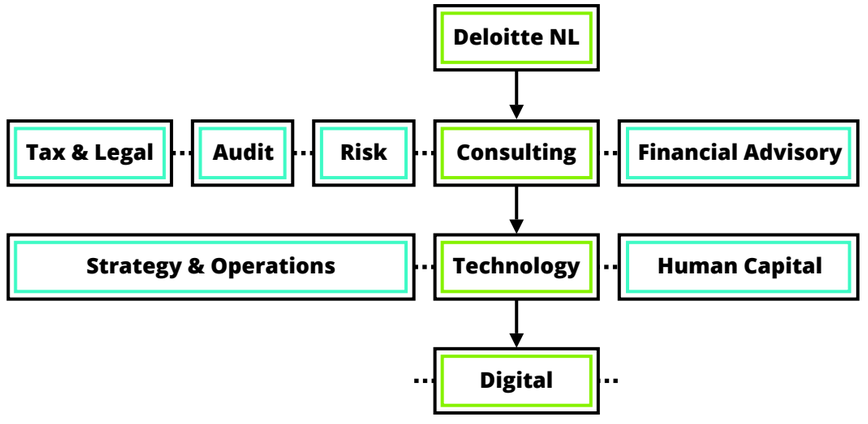


Figure 3 *Organisational structure Deloitte, and place of Deloitte Digital in it.*

Design for AI-Augmented Brand Experiences

Based on the main research question (RQ1), and the fact that Deloitte is the main stakeholder of the project, the purpose of this thesis is to add designing for AI-augmented brand experiences to the capabilities of Deloitte Digital (personal communications Franklin Heijnen).

Thereby, the target group of the insights of this thesis are the designers and strategists from Deloitte Digital, as well as their clients. Therefore, in order to enable them to use the design tools, the second research question is as follows:

Research Question 2 (RQ2)

How to present the insights around AI-augmented Brand Experiences to Deloitte Digital designers and strategists in such a way that they can be methodically applied during their design process.

In order to better understand what this means, the research question (RQ2) can be divided into two sub-research questions.

Research Question 2A (RQ2A)

How to make insights around the AI-augmented brand-experiences actionable for Deloitte Digital?

Research Question 2B (RQ2B)

How to merge and implement insights around AI-augmented brand-experiences into the current design processes of Deloitte Digital?

Before these research questions (RQ2A, RQ2B) can be answered, it is essential to fully understand Deloitte Digital, and introduce their way of working. According to Franklin Heijnen (personal communication), Deloitte Digital offers end-to-end design in digital transformation projects and aims to be present from the (front-end) strategy phase till the delivery phase. Hereby, as can be seen in Figure 4, they work according to the design process of the double diamond: discover, define, develop and deliver (British Design Council, 2019).

// **Discover |** The discovery phase is about the kick-off, or start of a project. Designers and strategists prepare the ground, and start to gather new insights.

// **Define |** The definition phase is where designers and strategists try to make sense of the insights and information that they gathered during the discovery phase. They prioritise what matters most, and define where to start.

// **Develop |** The development, or design phase, is where designers create, prototype, test and iterate concepts or solutions.

// **Deliver |** The delivery phase is where the resulting solution (e.g. product, service or even strategy) is finalised and prepared to be launched. The result is often a minimum viable product (or minimum lovable product).

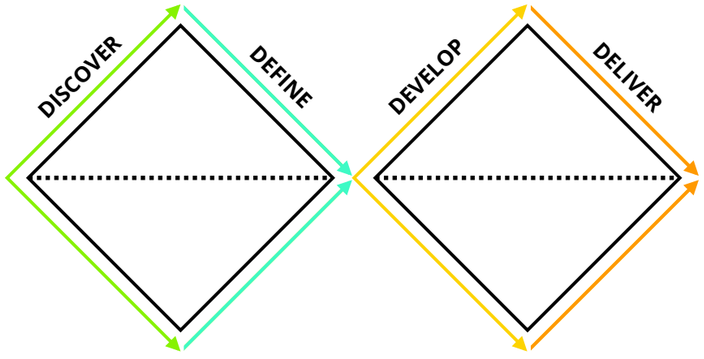


Figure 4 *Double diamond design process (adopted from: British Design Council, 2019).*

Design Approach

Within this design generic process, Deloitte Digital uses many different methodologies, often combined with client workshops, hackathons and (design) sprints. Based on expert talks within Deloitte, and internal documentation about the Deloitte Digital offering (Deloitte Development LLC, 2017a; Deloitte Digital, 2018), the (generic) design process of Deloitte Digital has been mapped (Figure 5).

An example of a design sprint that goes through all of these steps is the 'CJM Factory' (Customer Journey mapping Factory) which is often used to deliver end-to-end solutions with a focus on delivering a strong future journey (Figure 6). In agreement with Deloitte it has been decided that the methods and tools that will be designed around AI-augmented brand experiences should fit within these established processes.

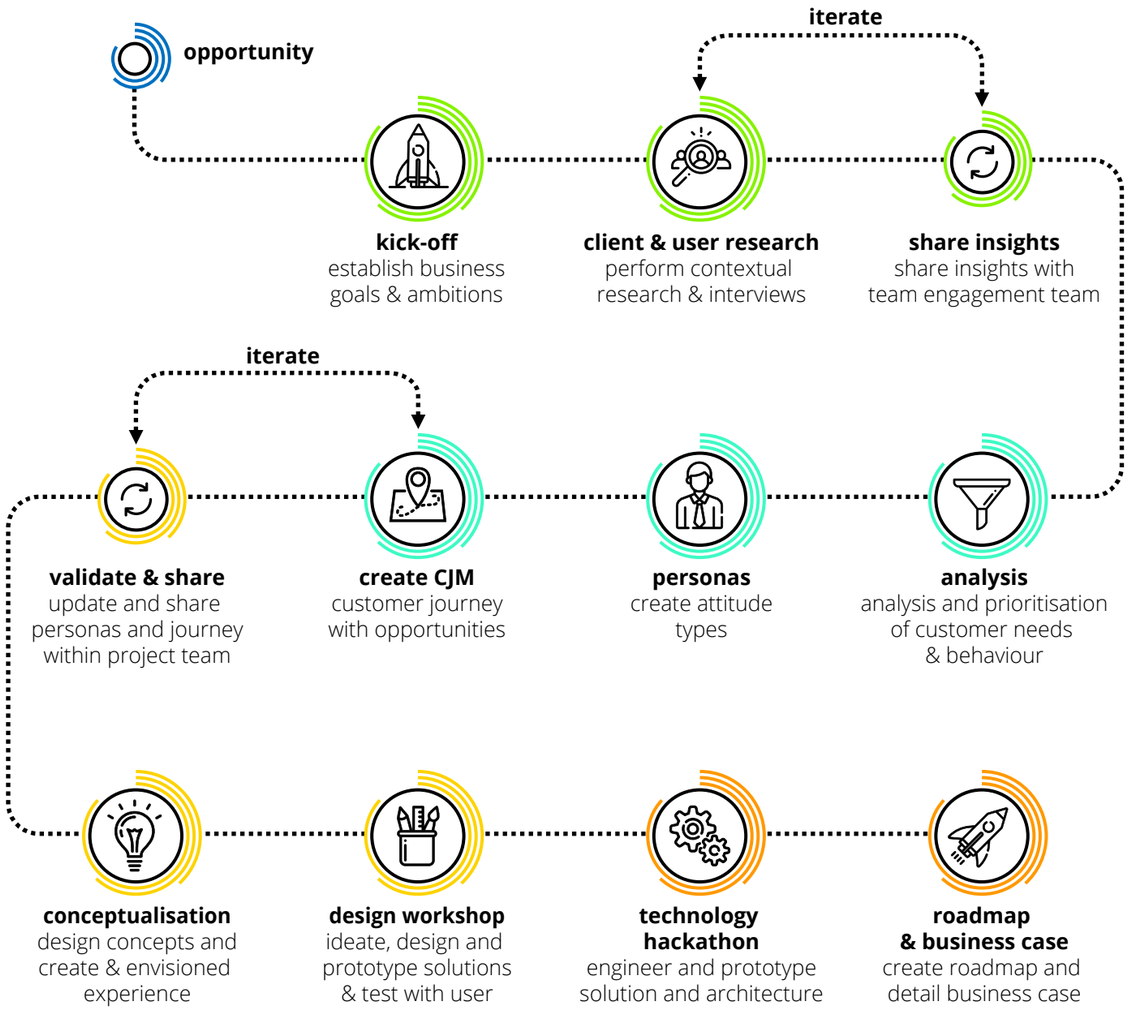


Figure 5 *Generic design process of Deloitte Digital, based on the double diamond model (Figure 4).*

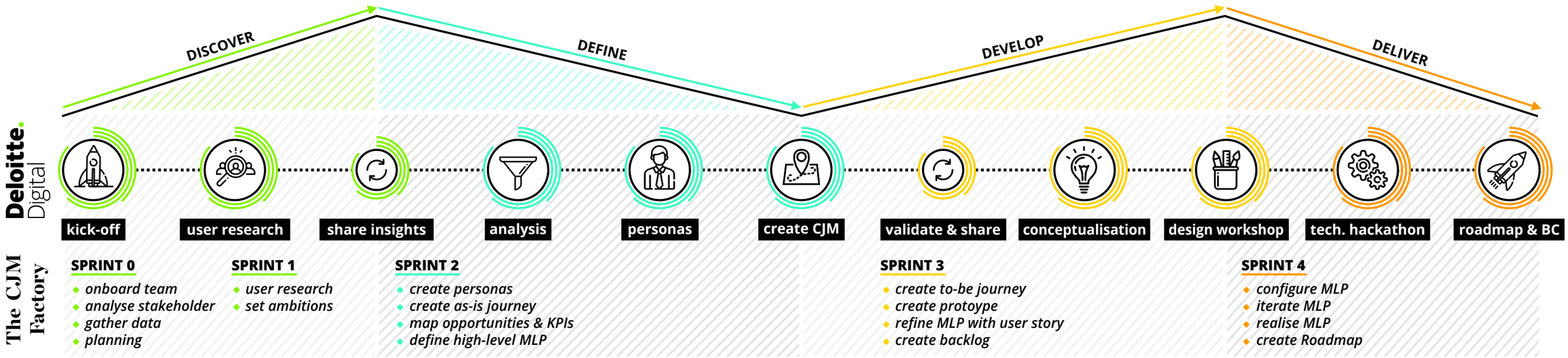


Figure 6 *Deloitte Design Process with example of the CJM Factory design sprint.*

Modular Output

Indeed, as can be seen in Figure 6, the generic Deloitte Digital design process, and the example of the 'CJM design sprint' both fit neatly under the double diamond model by the British Design Counsel (2019). However, in reality the various teams within Digital (creative, strategy/ advisory and engineering) are entangled with other teams such as market gravity (proposition design), customer solutions (customer/ marketing platforms), IT strategy, Monitor Deloitte and even other service lines such as strategy & operations or human capital. As a consequence, projects often aren't as linear as described in Figure 6, because certain project teams might only be involved in specific stages, and new assignments (or proposals) may evolve from existing projects. Furthermore, different managers and project teams might stick to different ways of working, depending on the team, deadline, deliverable and client. It is thus impossible to define a unified (repeatable), streamlined process with regards to the Deloitte Digital way of working.

As a consequence, the design materials that will be created around AI-augmented brand experiences should be as modular as the teams that will be using it. This means that even though the various design tools that will be developed could be used chronologically, project teams should also be able to utilise them independently from each other at any stage during the design process (e.g. brand strategy, customer experience design, user experience design, user interaction design). This means that the design tools and methods need to be self-explanatory, and should require a minimum amount of knowledge when it comes to branding and AI.

1.2. Project Approach

As stated in RQ2 (page 12), the insights of this thesis should be made applicable for Deloitte Digital by making the results actionable (RQ2A) and implementing them in their current design processes (RQ2B). Therefore, based on the aforementioned double-diamond model, each chapter will be divided into four main parts: discover, define, develop, deliver. These can be recognised by the icons (see below).

Discover
Exploration of context and relevant concepts to create a thorough understanding.

Define
Synthesis of relevant concepts from exploration phase into concrete insights (answering RQ1).

Develop
Making the insights actionable so that they are applicable within the context of Deloitte Digital (answering RQ2A).

Deliver
Converting the actionable insights into concrete design tools that are implemented within the current design processes of Deloitte Digital (answering RQ2B).

Furthermore, although this report is described chronologically, the process has been performed in iterative steps. The reading guide below (Figure 7) shows an overview of this, together with the expert talks per topic that helped to shape the project.

A. Chapter 2: Brand Experience

Before the main research question (RQ1) can be answered, it is essential to have a clear and definition of the concept brand experience within the context of service-driven brands. However, literature is relatively ambiguous when it comes to the exact definition of brand experience (Brakus, Schmitt & Zarantonello, 2009) and lacks an actionable framework that can be used during strategy and/ or design sessions. Therefore, before exploring how AI can improve the brand experience, this thesis will explore and elaborate the concept of brand experience itself. Hereby, the first chapter aims to answers sub-research question 1A (RQ1A, page 11).

2.1. Discover | Theoretical Grounding
At first, a brief exploration on the general concept of branding will be performed to create an understanding of the main concepts and assumptions around the topic.

2.2. Define | Two-Perspectives of Brand
In order to create a definition and the basis for the framework, the concept of brand is approached from the perspective of the organisation as well as the consumer.

2.3. Develop | Brand Experience Framework
In order to make the insights around the brand experience framework applicable for Deloitte employees, a connection is made to different design fields, and clear actionable elements are included in the framework.

2.4. Deliver | Brand Experience Design
Lastly, the actionable insights from the brand experience framework are translated into concrete design tools that can be used during various stages in the design process, enabling brand-experience design.

B. Chapter 3: AI-Imperative
With an actionable brand experience framework established, the next step is to explore the potential of AI within this. Hereby, this chapter aims to answer sub-research question 1B (RQ1B, page 11).

3.1. Discover | Demystifying AI
To begin with, the meaning of AI within the context of this thesis will be briefly explained. Furthermore, the concept of AI will be illustrated by describing its capabilities.

3.2. Define | Individual Experience
After the dimensions of AI have been set, the potential of AI on brand experience is explored in more detail and a vision for AI is created. This is done by comparing a human-computer interaction to that of a human-human interaction (the relational metaphor).

3.3. Develop | AI-System Model
To make the vision on AI actionable, it is translated to a model that contains concrete capabilities for AI that are involved when creating and building the individual experience of the user.

3.4. Deliver | AI-System Design
Finally, the insights from the AI-system model are translated into concrete design tools that can be used during various stages in the design process and benefit the individual experience of the user.

C. Chapter 4: AI-Design Principles
In order to further explore the role of AI in brand experience, concrete principles that contain opportunities, threats and guidelines around the individual experience of user will be established. Hereby, this chapter aims to answer research question 1 (RQ1, page 11).

4.1. Discover | Industry Analysis
In order to obtain in-depth insights around the role of AI in brand experience, an industry analysis is performed. The scope of this analysis will be within the retail-banking industry, and from the perspective of the brand (offering) as well as the user (needs).

4.2. Define | AI-Design Principles
Secondly, the insights from this industry analysis, containing AI-specific opportunities and threats are translated into generic design principles (clusters) that fall under umbrella of 'individual brand experience'.

4.3. Develop | AI-Accelerator Deck
To make the insights around the AI-design principles actionable for Deloitte, they are made applicable for various design principles and translated into a design card deck.

4.4. Deliver | AI-Accelerator Design
Lastly, the AI-accelerator deck will be implemented in the design process of deloitte so that Deloitte Digital employees can methodically design for AI-augmented brand experiences.

D. Chapter 4: Volksbank Usecase
5.1. Introduction Usecase
In order to validate the insights and different tools that have been developed, an actual client case has been performed for the Volksbank.

5.2. Discover | Mapping
First, the brand identity is mapped using the insights and tools from the brand experience chapter. Secondly, initial idea directions (future journey) are explored based on the brand and industry analysis.

5.3. Define | Select & Prepare
Secondly, an initial idea direction for AI-services have been selected using the brand-prioritisation tools from the brand experience chapter. Afterwards, an in-depth map on the attitude of users are made based on their current intentions, feelings and thoughts (based on the brand experience chapter).

5.4. Develop | Co-Creation Session
Based on the insights from the discover and define phase of the usecase, a co-creation session is held to design an AI-enabled service for the idea direction. Here, the insights and tools from chapter 2, 3 and 4 are used to create a journey map and experience design.

5.5. Deliver | Concretising
The last step of this chapter iterates on the output of the co-creation session. Hereby, the AI-stimuli and brand experience tools are translated into a concrete user journey that illustrates the output of the design tools for AI-augmented brand experiences.

E. Chapter 6: Conclusion
In the final chapter, there will be a reflection on the entire process and output, and recommendations will be made for further research.

Interested, but little time to read?

Conclusions, key insights and chapter 'wrap-ups' will be highlighted in these blue boxes.

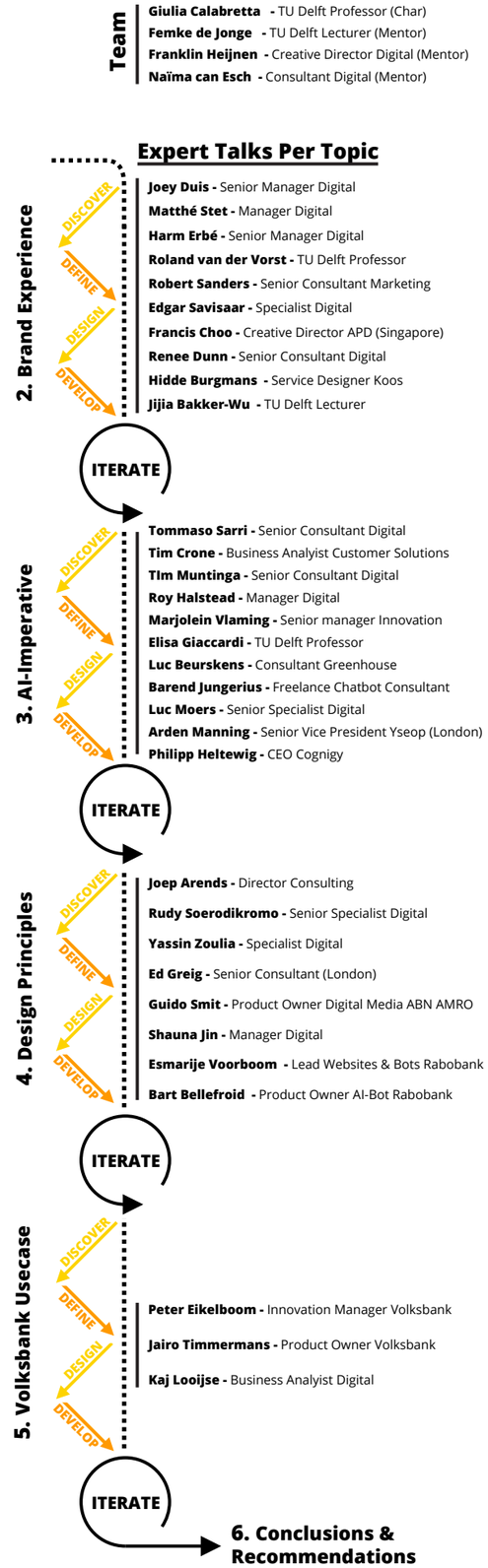


Figure 7 *Reading guide that shows iterative steps and experts that were involved.*

2.

Brand Experience

2.1. Theoretical Grounding

The brand experience framework should be holistic, as well as actionable. Therefore, a brief analysis is performed around the main concepts and assumptions of branding based on various types of literature. Hereby, the framework will be constructed by looking at brand from two perspectives, namely from that of the organisation (brand identity) and the consumer (brand image). These concepts are then deepened by branding, marketing and psychological constructs.

A. Evolution of Branding

The terminology 'branding', as we know it today, comes from the word 'brandr' (burn), used by Norwegian farmers that branded their livestock with a hot iron (Bastos & Levy, 2012; Wheeler, 1946). Logically, the terminology entered marketing practices with the meaning of a meaning trade/ proprietary name (Stern, 2006). Currently however, brand is seen as the overlapping entity with a set of functional, emotional and self-expressive associations that connect enterprise with its (brand) managers, employees, shareholders, technology & media, and most importantly, its customers (Juneja, n.d.; Bastos & Levy, 2012). Hereby, 'branding' is a holistic term that is multi-functional and multi-dimensional and includes both the tangible (e.g. logo, name, product) and intangible (e.g. emotional connection, loyalty) aspects of an organisation that give them a unique position. In order to create a deeper understanding, the three different levels (functional, emotional, self-expressive) of branding will be elaborated in more detail below.

Functional Benefits

The first big commercialising brands such as P&G or Coca Cola used branding for showing the origin of the product and used it as an indicator of character and quality (Bastos & Levy, 2012; Clark, 1927). Hereby, they communicated mainly the functional benefits of their products in order to build a reputation and distinguish themselves from competition (Branding Strategy Insider, 2016). As a consequence, the relation with the customer was built on trust in the promise (of quality/ performance) of the brand.

However, after the Second World War (late 1940s and 1950s) there was a huge increase in the demand of consumers and goods offered (later named as 'consumer revolution'), which greatly intensified competition as well as distribution of brands. This had the consequence that consumers could no longer differentiate between similar brand offerings as the majority only communicated the functional attributes of their brand as being superior (Gardner and Levy, 1955).

Emotional Benefits

Because of the lack of consumer's ability to distinct between brands, organisations started to focus more on the social and psychological aspects of products, media, services and ideas (Bastos & Levy, 2012; Gardner & Levy, 1955). As a consequence, marketeers started to focus more on the social and emotional context of brands, with the idea that this would establish a more durable, long-term connection (Bastos & Levy, 2012; Gensler, 2013; Loureiro, Ruediger & Demetris, 2012). Because the notion of establishing an emotional (instead of only functional) connection with customers stimulated the idea that people can have relationships with brands, just like they can have relationships with people (Blackston, 2000; Fournier, 1998).

Hereby, organisation realised that a brand character or personality is an essential part in emotional brand building (Gardner & Levy, 1955; Meeneghan, 1995). Early uses of brand personality led to the creation of brand characters such as that of the Marlboro Man (Marlboro - 1954), Mr. Clean (Proctor & Gamble - 1957) or Ronald McDonald (McDonald's - 1963). But as the idea of brand personality started to thrive more, even brands without a brand distinguished character started to convey emotional values that are anthropomorphically similar to those of people (Bastos & Levy, 2012).

Self-Expressive Benefits

Eventually, more and more companies started to deliver an added (emotional and social) value over their functional offering. As a consequence, it once more became more difficult for consumers to understand the differences between brands. In order to maintain coherency, storytelling became a new point of interest for brand and marketing managers. This made sure that all of the brand manifestations/ offerings where perceived as a logical product from the organisation, giving it a distinct position in the minds of the consumer (Branding Strategy Insider, 2016). Hereby, brands increasingly needed to communicate what their essence entails, in order for the 'story' to make sense. This led to the new idea that 'what we consume, says something about what we are or what we strive to become' (Aaker, 1999; Belk, 1988; Branding Strategy Insider, 2016).

However, false promises in combination with some big scandals have had some negative impact, leaving consumers more cynical towards big (for-profit) organisations (Bhattacharjee, Dana & Baron, 2011; Torelli, Monga & Kaikati, 2011). As a result, there is a more recent development in brand and marketing management to focus on regaining trust and respect by focusing on the idea of having an ideology and an increased focus on Corporate Social Responsibility (CSR). Hereby, it is now the duty of the organisation to stand for something (bigger) in order to guide people and connect with them to create long-term customer loyalty (Branding Strategy Insider, 2016; Spence, 2009; Sinek, 2013).

Furthermore, with the coming of digital technologies, consumers have access to much more brands than before, and much more choice in what types of media (such as commercials) they would like to see and what not. For organisations, this means that they cannot longer force their brand content on the consumer. In order for brands to engage and retain customers, they need to convey aspects of the culture around the target customer and environment (Schulz & Stout, 2011). This includes groups that their target customers want to be associated (to belong) or disassociated (to stand out) with (Bastos & Levy, 2012). This way, organisations become interesting and relevant enough to create communities of like-minded people (community marketing).

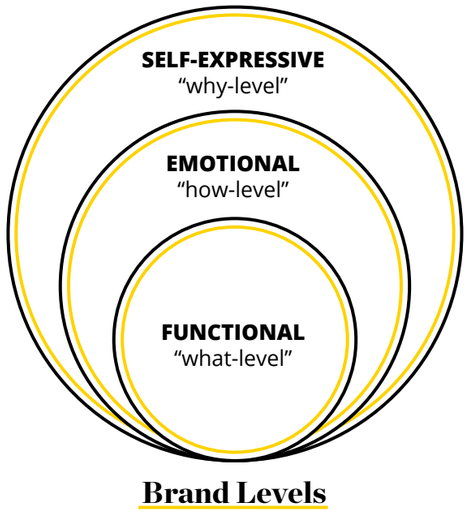


Figure 8 *Strong brands have a clear and meaningful 'why', coherent and engaging 'how' and distinct 'what' (image based on Bastos & Levy, 2012, Sinek, 2013).*

B. Conclusion

The concept of branding has evolved over time, growing in perceived importance as well as complexity (Figure 8). Furthermore, the role that brand plays in the life of consumers evolved over time as well. Organisations started realising that consumers do not only buy brands for their functional benefits. Instead, consumers engage with brands for the more holistic experience that it offers. As a consequence, brands focused on communicating (social-)emotional benefits to the consumers. Lastly, with the coming of digital technologies consumers are exposed to an ever-growing number of brands which leads to confusion for the consumer. By standing for something bigger using storytelling, brands increasingly start to communicate self-expressive benefits in order to create communities of like-minded people who play an essential role in the creation and growth of the brand.

2.2. Two-Perspectives of Brand

As organisations realised that the offering of brands can be seen as psychological and emotional extension of the consumer, brands were increasingly seen as the building blocks of consumer's identity (Belk, 1988). In other words, although it's the organisation that creates their offering (e.g product, service, logo) and decides on how to communicate, it is people who give these creations life and longevity (Gensler, 2013). Hereby, the brands live as much in the minds of the consumer as in the organisation that created it (Kapferer, 2008; Keller, 2013; Bastos & Levy, 2012) (Figure 9). This concept is known as brand identity (organisation's perspective) and brand image (consumer's perspective) (Abbing, 2010; Aaker, 1996; Keller, 1993; Keller, 2013).

A. Brand Identity

Brand identity is how an organisation seeks to identify itself to all relevant publics internally (within the organisation) and externally (the market and its stakeholders) to convey its individuality and distinctiveness (Kapferer, 2008; Nandan, 2005). Brand identity always precedes (and shapes) the brand image as brand identity is on the sender's side and brand image is on the receiver's side (Kapferer, 2008).

As a consequence, before projecting the identity to the public, it is important to understand and define exactly why, how and what to offer/ deliver as an organisation. However, that does not mean that organisations should obsessively try to shape the brand image in such a way that they are always perceived as favourably by as many as possible. Because blindly following public's expectations might result in the brand being perceived as messy, opportunistic and even meaningless (Kapferer, 2008). Hereby, managing your brand identity is a fragile balance between listening to the consumer and promoting your own views and standpoints as an organisation.

As indicated above, brand can be divided in three levels, namely the 'why' (self-expressive level), 'how' (emotional level) and 'what' (functional level) you offer. This corresponds with the brand purpose, brand personality and brand promise respectively (Figure 10). These constructs are based on expert talks within Deloitte (Matthé Stet & Joey Duis, managers of Deloitte Digital) and a combination (and commonalities) of different brand models, among which the 'Brand DNA' model that been established by van der Vorst & Berghuis (2017).

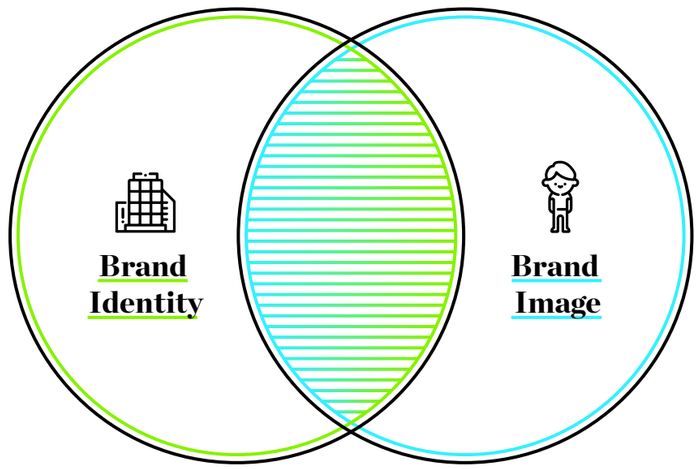


Figure 9 *In order to explore the concept of brand experience, it is useful to consider the perspective from the organisaiton (brand identity), as well as the consumer (brand image).*

Purpose
The brand purpose explains 'why' the brand exists and is about the self-expressive benefits that the brand offers to the consumer. This (internal) cause/ belief represents a set of values that provide direction and guidance within the organisation (Nandan, 2005). Furthermore, the purpose creates unity and meaning in everything that the organisation communicates/ delivers to the customer (Ademson, 2009). Everything a company does (how it behaves and what is delivers) should at least maintain, and ideally strengthen the core message, and thus the brand's competitive distinctiveness (Kapferer, 2008; Sinek, 2013). A strong brand purpose is developed internally and embodies a reflection of the of the cultural/ ideological norms and values of the target customer (Asiegbu, Powei & Iruka, 2012).

Personality
Even when there is a clear purpose, it is essential for the whole organisation to 'live the brand' (Ind, 2001) and be deliberate and coherent in 'how' they deliver the brand offering to the customer. As discussed before, people tend to anthropomorphise brands. It is therefore helpful to think of them as personalities (Aaker, 1997) that possess specific behavioural, visual and tonal brand elements (Kaplan, 2016). Hereby, organisations should deliberately design this personality in such a way that it conveys the desired brand values, that is consistent across all touchpoints (Abbing, 2010, Kaplan, 2016). Because eventually, a congruent brand experience (familiarity) leads to understanding, trust and loyalty (Brakus, Schmitt & Zarantonello, 2009; Choo, 2016; Sääksjärvi & Samiee, 2011). The brand personality is thus about the emotional benefits that the brand offers to the customer.

Promise
In the end, it is all about 'what' it is that the organisation delivers to whom, and it thus about the functional benefits that the brand offers to the consumer (Kapferer, 2008). The promise is what the consumer sees, feel and interacts with, and should thus be proof of the brand's core purpose and capabilities.

Hereby, the promise should breathe the self-expressive benefits from the core purpose and emotional benefits from the personality. Building on aforementioned literature, expert talks and a validation session, the three following sub-elements have been defined.

B. Brand Image
The image or perception of a brand be seen as the sum of individual associations, expectations, values and beliefs shaped by their environment: the group to which they belong and the content that is offered/ communicated to them (Aaker, 1991; Asiegbu, Powei & Iruka, 2012; Coney, Best & Hawkins, 2001; Dichter, 1985; Jain, 2014; Kapferer, 2008; Kotler, 1988; Nandan, 2005). According to Keller (1993), these associations are the sum of meaning of all 'informational nodes' that are connected to the 'brand node'. This means that brand image is the consumer-constructed notion of the brand (Abbing, 2010; Nandan, 2005). In other words, based on their own attitude, consumers will always perceive the content/ message through their own subjective lens resulting in a personal interpretation (Berkowitz et al., 2000; Gordon, 1999). Hereby, brand image is about the personal attitude of the consumer that describes the extent to which a person reacts favourably or unfavourably and drives the consumer's behaviour towards an idea or organisation (Bohner & Dickel, 2011; Blackston, 2000; de Chernatony, 1999; Sääksjärvi & Samiee, 2011).

One of the most commonly used models to describe attitude it the tri-component attitude model that describes how behaviour is a combination of cognitive (thinking) attitude, affective (feeling) attitude and conative (doing) attitude (Asiegbu, Powei & Iruka, 2012; Kolbe, 1990; Howard & Seth, 1969; Petty, Wegener & Fabrigar, 1997) (Figure 11). The concept of the tri-component attitude describes the tendency of what we think, feel and how we act and determines the consumer's likelihood to accept and or adopt the product/ service or idea.

Thinking
The thinking (a.k.a. cognitive) component is about the consumer's opinions, thoughts and beliefs/ disbeliefs about the brand (Jain, 2014; Nandan, 2005). The perception of the thinking component is shaped by the type and amount of information/ knowledge that people have which often manifests as a belief through their subjective experience (Asiegbu, Powei & Iruka, 2012). These positive or negative associations influences the behaviour of people, and can be shaped by the positioning of the brand. The thinking attitude describes the reason (the 'why') behind the self-expressive (latent) needs of consumers, and is thus based on their beliefs.

Feeling
The feeling (a.k.a. affective) component is about the emotions and feelings (positive, neutral or negative) that consumers have towards a brand (Nandan, 2005; Walley et al., 2009). It is thus about the emotional response (liking/ disliking) that consumers experience (Asiegbu, Powei & Iruka, 2012; Jain, 2014). Although this affective reaction is often shaped by the consumer's beliefs, an initial emotional reaction (e.g. like/ dislike) can also occur without cognitive basis while still influencing the consumer's behaviour (Zajonc, 1980).

Even more so, these emotional experiences evoke an emotional state that might shape the thinking attitude such as thoughts and beliefs (Johnson & Zinkhan, 1991).
The feeling attitude is thus about the (social-) emotional needs (the 'how') of the consumer.

Doing
The doing (a.k.a. conative, or behavioural) component is the likelihood/ tendency of the consumer to take a specific action (Nandan, 2005). It is thus the verbal (response tendency) or overt behaviour by the consumer and consists out of the intended actions or observable responses (favourable/ unfavourable) towards the brand/ idea (Asiegbu, Powei & Iruka, 2012; Jain, 2014; Wicker, 1969). The doing attitude is thus about the functional needs and wants of the consumer, and is shaped by what the consumer thinks and how they feel.

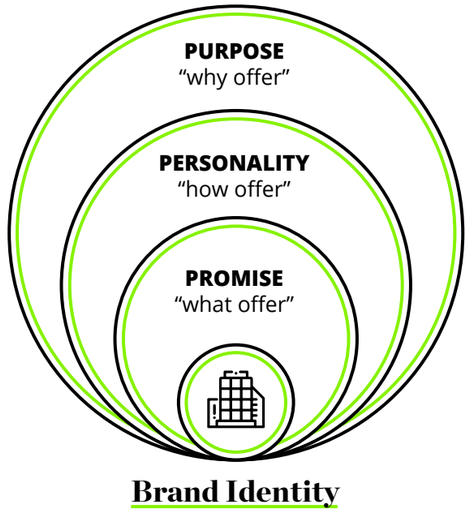


Figure 10 *The organisation's perspective (why, how, what) can be explained by the brand purpose, personality and promise to the consumer.*

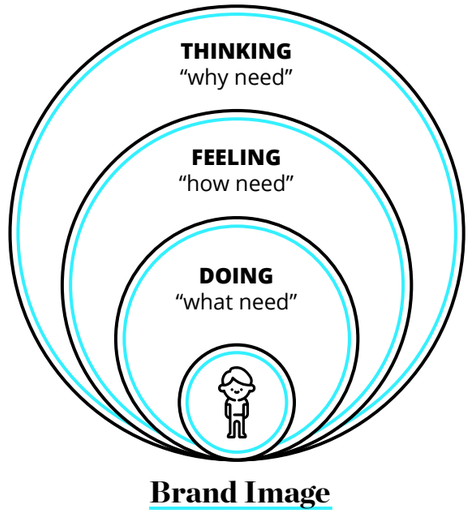


Figure 11 *The consumer's perspective (why, how, what) can be explained by the thinking, feeling and doing attitude that drives their behaviour, needs and wants.*

C. Relation Brand Image & Brand Identity

Brand identity starts with the organisation and is about creating (and living) a relevant and differentiated product/ service. In contrast, brand image refers to the attitude and perception that a consumer has about the brand. However, both the concept of brand identity and brand image are interrelated as organisations decide what to deliver based on the needs and wants of the customer, which in its turn only generates value for the organisation if the consumer understands and values what the brand delivers (Figure 12).

For example, if the organisation's brand belief and/ or manifestation is wrongly interpreted by the consumer, the organisation may try to correct them through branding, marketing and/ or advertising strategies (Asiegbu, Powei & Iruka, 2012). It is thus important for organisations to prevent an unwanted gap between what they are trying to deliver (brand identity) and are actually delivering in the perception of the consumer's (brand image) (de Chernatony, 1999). Hereby, organisations need to understand the consumer behaviour/ attitudes to develop an effective brand identity and provide the right stimuli to shape the brand image as desired (Asiegbu, Powei & Iruka, 2012).

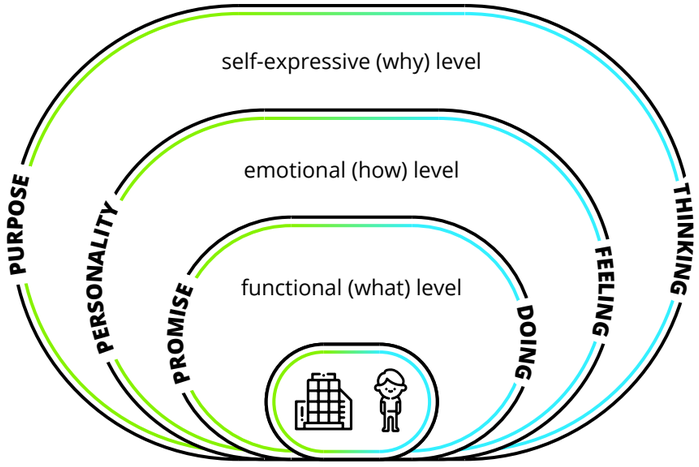


Figure 12 *The why, how and what of the organisation's perspective (identity) and the consumer's perspective (image) come together on a functional, emotional and self-expressive level.*

D. Conclusion

Although brand identity and brand image have a strong linkage and influence on each other, they cannot be used interchangeable and should both be regarded as separate entities in the creation of your brand. Organisations should be deliberate in why, how and what they deliver and be conscious in how consumers will receive and interpret the content/ message by understanding why, how and what they want/ need. To generate brand loyalty, the link between identity and image should be strengthened, and the gap between the reality of the organisation and the perception of the consumer should be minimised (de Chernatony, 1999; Nandan, 2005).

2.3. Brand Experience Framework

Brakus, Schmitt & Zarantonello (2009) and Schmitt (1999) describe the brand experience as the consumer's subjective internal response by the consumer and the behavioural responses. Hereby, they argue that the brand experience of the consumer consists out of cognitions (thinking dimension), affections (feeling dimension), and behavioural responses (behavioural dimension) that are evoked by brand-related stimuli. This corresponds with the abovementioned relation of brand identity and brand image. The brand experience is thus defined by the holistic model of brand identity (Purpose, Personality and Promise) and the brand image (thinking, feeling, doing attitudes). Hereby, the brand experience is shaped on three levels, namely the why (self-expressive benefits), how (emotional benefits) and what (functional benefits) level.

A. Design Perspective

When looking at these insights from the lens of the design professional, the Brand Experience (BX) can be seen as the cumulative result of the Customer Experience (CX), User Experience (UX) and User Interaction (UI).

This is a derivative from the model by Burgmans, senior service designer from Koos Service Design (Figure 13). In this model, the UI is embedded in UX, and UX is embedded in CX (personal communication, November 30, 2018; Burgmans, 2017). In the rest of this chapter, there is will be a more detailed elaboration on how these design fields (CX, UX, UI) relate to the aforementioned levels (Figure 14).

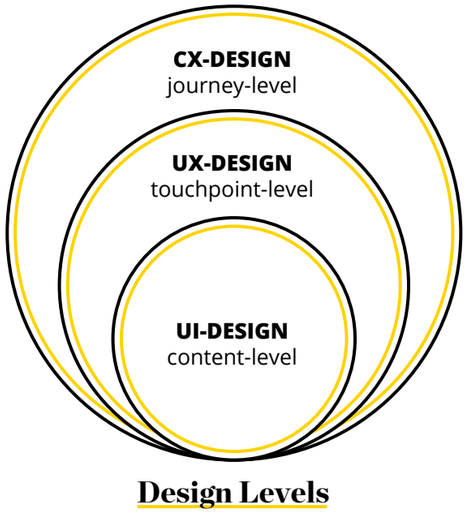


Figure 13 *Layers of design (CX, UX, UI). As adopted from model by H. Burgmans (2017).*

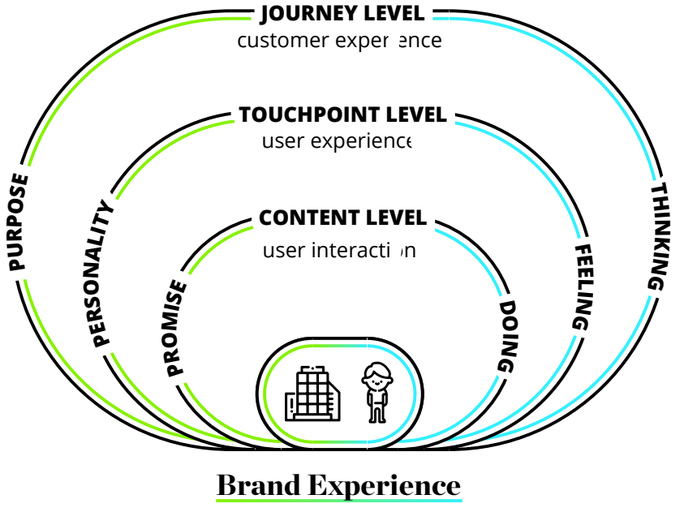


Figure 14 *Brand Experience is defined by the CX, UX and UI which brings together the brand identity and brand image on why, how and what level.*

B. Method

Furthermore, as stated before, the aim is for designers and strategists of Deloitte to methodically apply the insights around brand experience. It is therefore necessary to create an actionable framework from the constructs and insights that have been found. Therefore, most important elements for brand identity and brand image on each design level (CX, UX, UI) have been mapped. These elements are based on expert talks within Deloitte, Koos Service Design & TU Delft, Maslow's (1943) Hierarchy of Needs, Kolbe's (1990) elements of three parts of mind model and Vorst & Berghuis (2017) Brand DNA model in combination with aforementioned literature on branding (Figure 15). Furthermore, they have been validated and iterated through multiple (validation) talks within Deloitte and a co-creation session with Deloitte, a client (Volksbank) and users ("Co-Creation Session" on page 112).

The elements have been shaped into a canvas booklet, which clearly describes each element and accompanying methods/ tools for retrieving those so that it can be used by Deloitte Digital employees to map the identity of a client, and the attitude of users. The methods and tools have been based on design expert talks, and existing design tools used in the double diamond model. An overview of the elements of brand identity and image (user attitude) can be seen in Figure 16 and Figure 17. An elobration of these elements can be seen in Figure 18 to Figure 35.

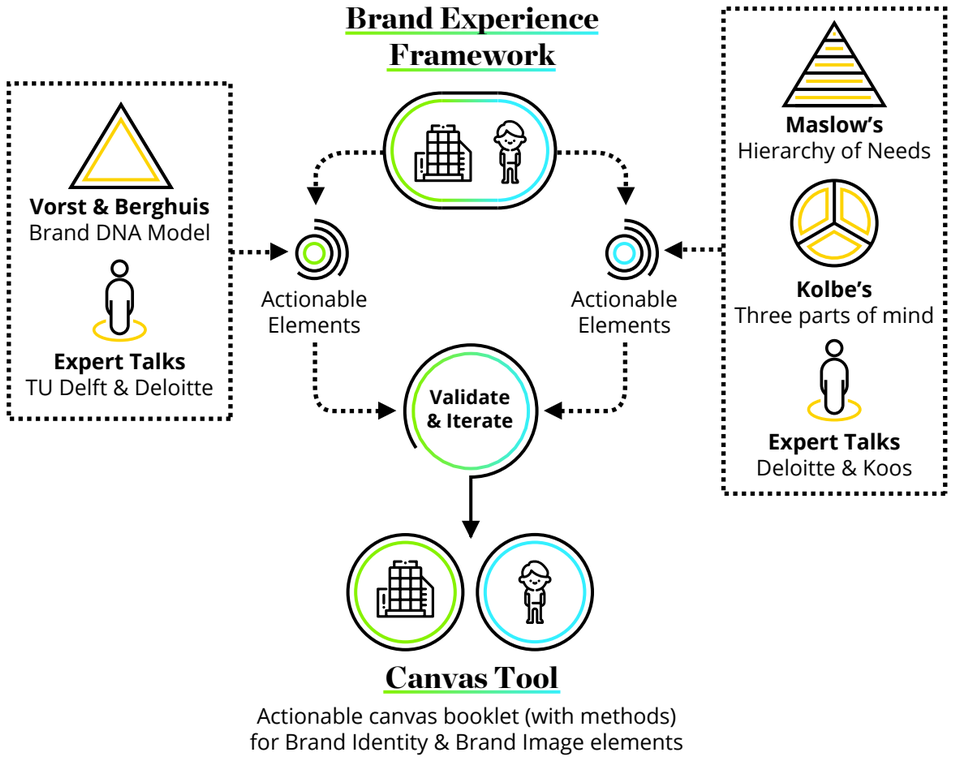
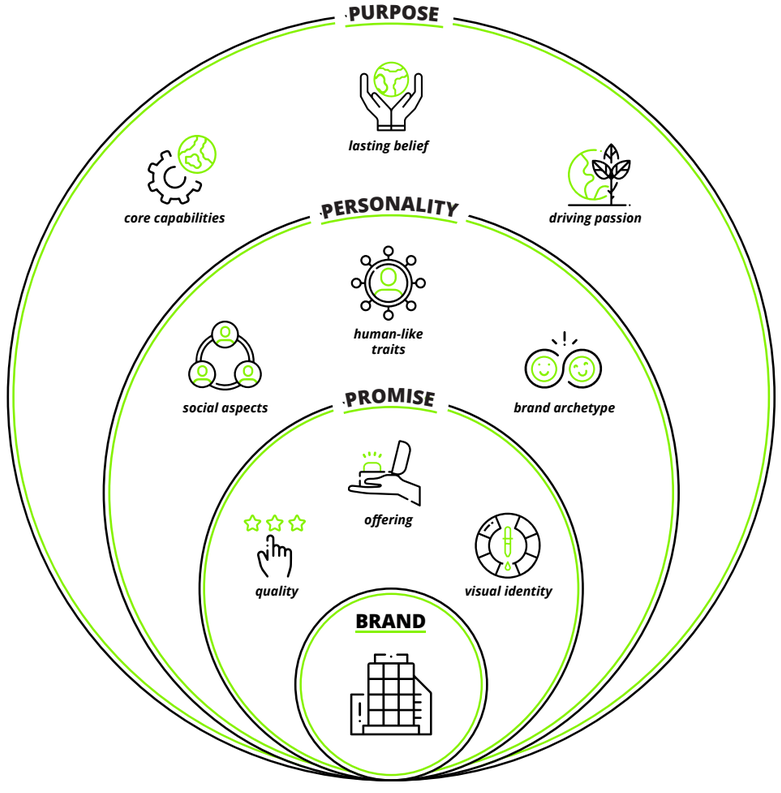
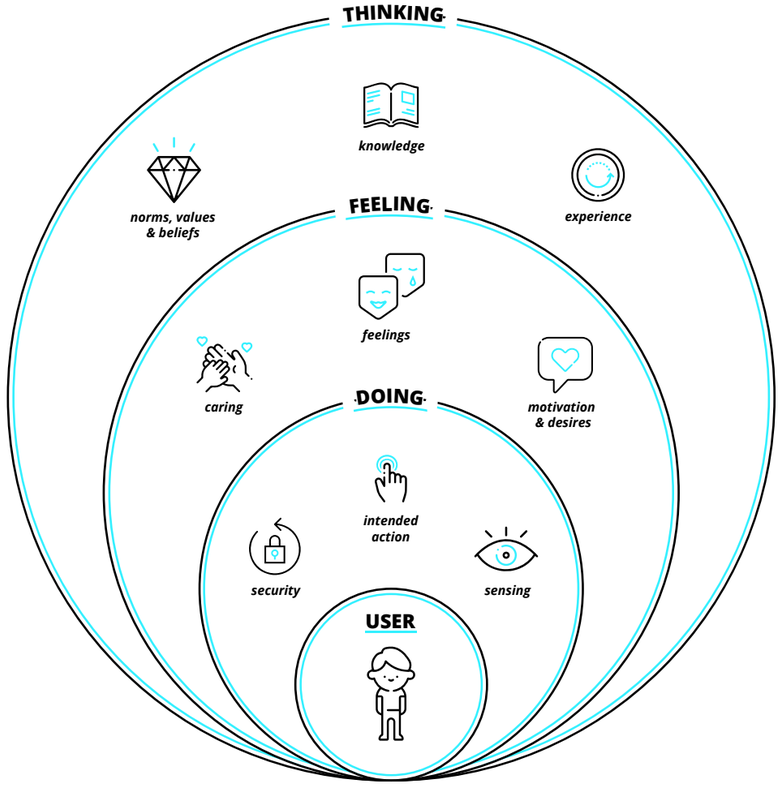


Figure 15 *From brand experience framework to actionable brand identity & brand image canvas, based on literature, expert (validation) talks and a validation (client) session.*



Brand Identity

Figure 16 *Brand Identity Canvas with the most essential elements per level (purpose, personality, promise).*



Brand Image

Figure 17 *Brand Image (user) Canvas with the most essential elements per level (thinking, feeling, doing).*

C. Customer Experience

The customer experience (CX) is the collection of touchpoints within the customer journey (Edelman & Singer, 2015). It is therefore a collection of all interactions that the customer has with service provider (H. Burgmans, personal communication, November 30, 2018).

Brand Identity | Purpose

It is essential for organisations, especially for those that are service-driven, to practice omni-channel management and try to deliver an integrated 360° customer experience (Edelman & Singer, 2015; Lemon & Verhoef, 2016).

Furthermore, as the customer experience defines the overall, holistic and/ or sum of thoughts/ experiences of the customer, it is paramount for organisations to deliberately connect the various touchpoints and embed their core purpose to generate consistency and meaning to the overall customer experience (Choo, 2018; Roto, Nieminen & Tutal, 2015). A strong and successful brand should thus deliberately shape the customer experience by embedding the fundamental value of their offering at every step in the journey (Meyer & Schwager, 2007). The three elements that are important to include are 'lasting belief', 'driving passion' and 'core capabilities' of the brand (Figure 18, Figure 19, and Figure 20).

Figure 18 *Lasting Belief is an element within brand purpose and includes cause, essence, vision and belief (based on: Choo, 2018; Ingersoll, Witzel & Smith, 2005; Keller, 2013; Mirvis, Googins & Kinnicutt, 2010; Parameswaran & Jacob, 2011; Sinek, 2013)*

Figure 19 *Driving Passion is an element within brand purpose and includes passion, motivation, enthusiasm to deliver and should be inspirational (based on: Ingersoll, Witzel & Smith, 2005; Mirvis, Googins & Kinnicutt, 2010).*

Figure 20 *Core Capabilities is an element within brand purpose and includes core competences, knowledge and how the brand differentiates (based on: Vorst & Barton, 2017; Vorst & Berghuis, 2017).*

Brand Image | Thinking

Furthermore, organisations should create a deep understand on the customer journey level to orchestrate and deliver a meaningful experience (Berry, Carbone & Haeckel, 2002). From the perspective of the user, the customer experience defines the overall subjective response of the customer when interacting (directly or indirectly) with the organisation, and thus captures what a customer thinks and knows about an organisation (Meyer & Schwager, 2007).

Hereby, the journey is about the top-of-mind considerations and thoughts of the target customer that are largely affected by their individual thinking attitude: top-of-mind thinking, knowing, experience stimuli etc. (Edelman, 2010; Edelman & Singer, 2015). The three elements that are important to include are 'norms, values & beliefs', 'knowledge' and 'experience' of the user (Figure 21, Figure 22, and Figure 23).

Figure 21 *Norms, Values & Beliefs is an element within user thinking attitude and includes individual beliefs, collective values and latent needs (based on: Asiegbu, Powei & Iruka, 2012; Hofstede, Hofstede & Minkov, 2010; Jain, 2014; Kolbe, 1990; Maslow, 1943).*

Figure 22 *Knowledge is an element within user thinking attitude and includes prior knowledge, expertise, awareness and shapes expectations (based on: Asiegbu, Powei & Iruka, 2012; Jain, 2014; Kolbe, 1990; Maslow, 1943).*

Figure 23 *Experience is an element within user thinking attitude and includes prior experiences and/ or familiarity and shapes expectations (based on: Asiegbu, Powei & Iruka, 2012; Jain, 2014; Kolbe, 1990; Maslow, 1943).*

Conclusion

Organisations should customise the overall customer experience based on the purpose of their brand as well as the thinking attitude of the customer. This means that organisations should make deliberate decision based on an explicit set of priorities that are driven by the position of the brand and the thinking needs and wants of the customer in order to convey a recognisable added value and generate consistency, accuracy and integration across all touchpoints (Edelman, 2010).

D. User Experience

The user experience (UX) defines the overall human-object or human-computer experience (in digital solutions) of the user (Morgan, 2017; Roelofs, 2017). Thus, in service-driven brands, the user experience defines the overall (emotional) experience of the interaction between the user and any specific (or bundled) omni-channel touchpoint (H. Burgmans, personal communication, November 30, 2018).

Brand Identity | Personality

From the side of the organisation, the overall customer experience is defined by what happens at each point of contact. Therefore, to avoid your brand being lost in the 'noise of everyday life', coherency in storytelling are essential at all touchpoints (Choo, 2016; Kapferer, 2008). Hereby, the user experience is the cumulative result of the context and characteristics of the touchpoint, which includes the emotional benefits such as brand behaviour and tone of voice that the brand conveys. The three elements that are important to include are 'human-like-traits', 'brand archetype' and 'social aspects' of the brand (Figure 24, Figure 25, and Figure 26).

Figure 24 *Human-like Traits is an element within brand personality and includes characteristics, emotional values and tonal elements (based on: Aaker, 1997; Bechter et al., 2016; Belk, 1988).*

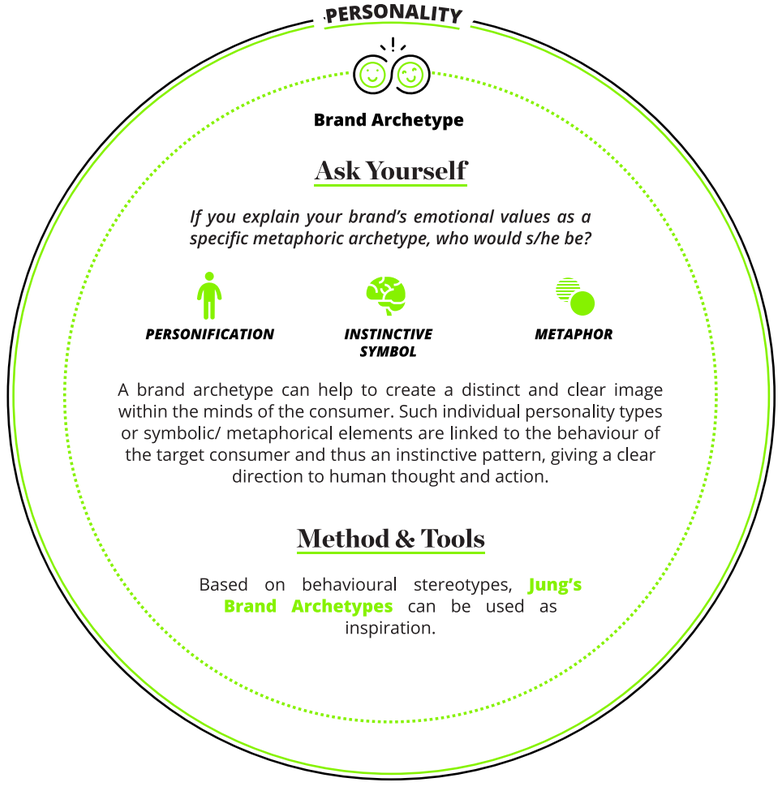


Figure 25 *Brand Archetype is an element within brand personality and includes brand personification and the use of instinctive symbols and metaphors (based on: Bechter et al., 2016; Jung et al., 1964; Faber & Mayer, 2009).*

Figure 26 *Social Aspects is an element within brand personality and includes the notion of belonging, relations and stakeholders (based on: Bastos & Levy, 2012; Schulz & Stout, 2011).*

Brand Image | Feeling

The user experience is about things that are actively experienced by the user, and thereby includes the dynamics of context, time, space and state of the user (Khambete & Athavankar, 2010). Hereby, the user experience includes the emotional attitude and subjective feeling that the user experiences (Hassenzahl, & Tractinsky, 2006; Nenonen et al., 2008). The three elements that are important to include are 'feelings', 'motivation & desires' and 'caring' of the user (Figure 27, Figure 28, and Figure 29).

Figure 27 *Feeling is an element within user feeling attitude and includes the emotions and feelings of the user (based on: Kolbe, 1990; Maslow, 1943; Pluchik, 1980).*

Conclusion

Organisations should thus focus on conveying emotional values through the touchpoints they create, based on the emotional values/ personality of the brand as well as the (desired) emotional state of the user (Roto, Nieminen & Tutal, 2015). This because a strong brand is grounded in the creation of a strong emotional band between the brand and the customer (Travis, 2001). Furthermore, the user experience should always be seen in the broader context of the customer experience and should therefore include coherency and meaning that have been established at the customer experience level.

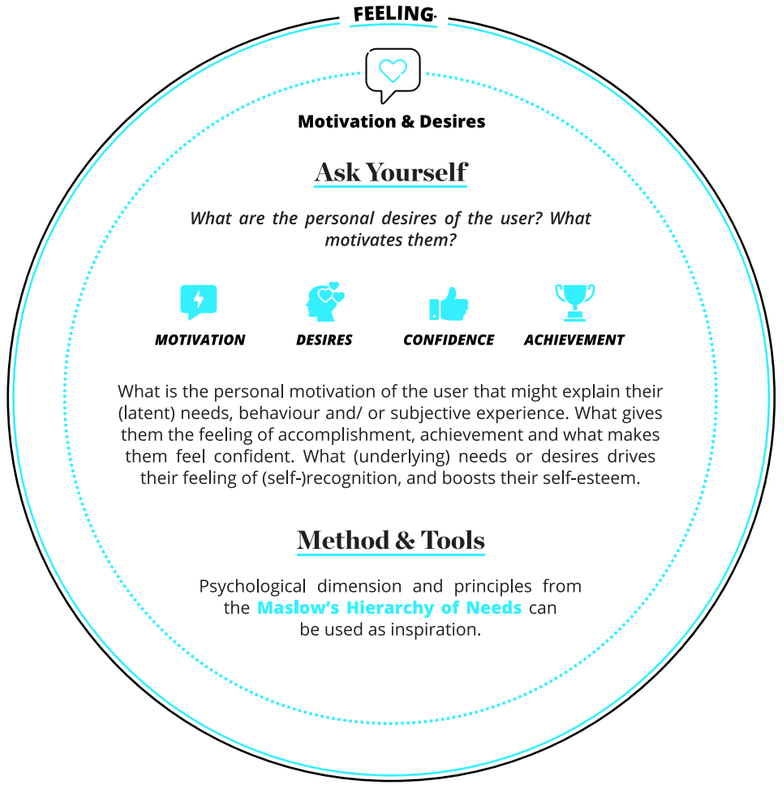


Figure 28 *Motivation & Desires are an element within user feeling attitude and includes the user's motivation, desires, confidence and sense of achievement (based on: Kolbe, 1990; Maslow, 1943).*

Figure 29 *Caring is an element within user feeling attitude and includes a sense of caring, belonging, love and respect (based on: Kolbe, 1990; Maslow, 1943).*

E. User Interaction

User interaction (UI) design is the combination of content/ media (e.g. texts, images, documents, information etc.), form (e.g. text field, buttons, graphic design etc.), and behaviour (e.g. click, type response).

Brand Identity | Promise

The user interaction is thus about 'what' it is that the organisation delivers to the user: the actual interface (look & feel) with accompanying interaction (usability) itself (Arora, 2018; H. Burgmans, personal communication, November 30, 2018). The three elements that are important to include are 'offering', 'quality' and 'visual identity' of the brand (Figure 30, Figure 31, and Figure 32).

Figure 30 *Offering is an element within brand promise and includes the brand's manifestation, functional benefits and serves as proof of the identity & personality (based on: Kapferer, 2008).*

Figure 31 *Quality is an element within brand promise and includes the brand's quality and heritage, and notion of security, privacy, and integrity (based on: Kapferer, 2008).*

Figure 32 *Visual Identity is an element within brand promise and includes audio, visual and sensory proof (based on: Kapferer, 2008).*

Brand Image | Doing

As user interaction design is about creating an integrated, intuitive experience, is about designing for behavioural expectations. Hereby, organisations should be aware of the intent (wants, needs) of the user while delivering their distinct offering based on their own capabilities. The three elements that are important to include are 'intended actions', 'security' and 'sensing' of the user (Figure 33, Figure 34, and Figure 35).

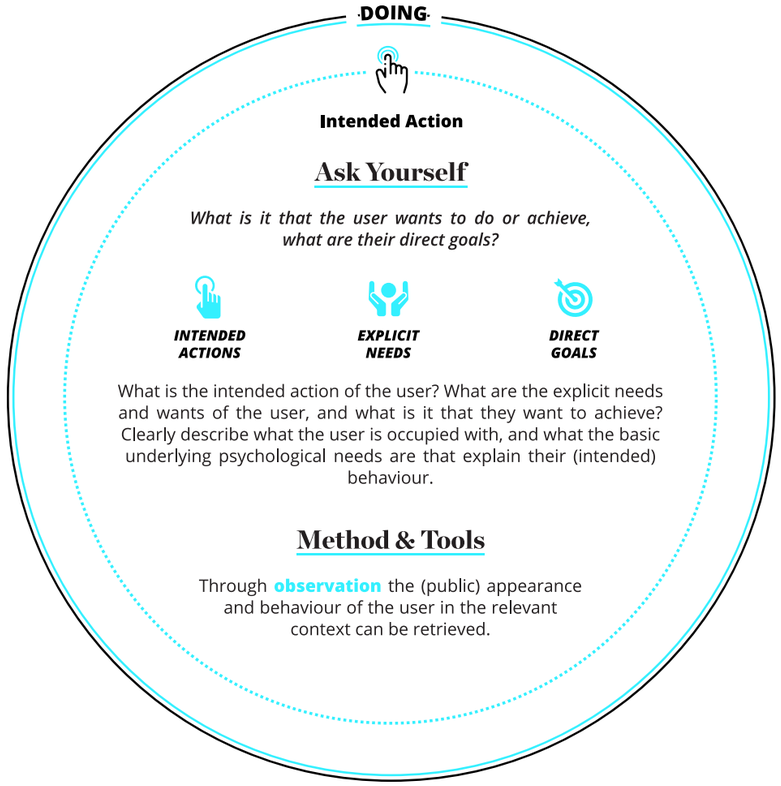


Figure 33 *Intended Action is an element within user doing attitude and includes the intended actions, explicit needs and direct goals of the user (based on: Asiegbu, Powei & Iruka, 2012; Kolbe, 1990; Maslow, 1943).*

Conclusion

The user interaction is about conveying functional benefits through the content (brand manifestation and interfaces) they create. It should therefore include the offering of the brand and fit with 'what' it is that the user wants (to do) or need. Furthermore, the user interaction should always be seen within the context of user experience and customer experience. It is therefore the proof of the self-expressive and emotional benefits that the brand offers to the consumer.

Figure 34 *Security is an element within user doing attitude and includes the user's sense of safety, security, health and wellbeing (based on: Kolbe, 1990; Maslow, 1943).*

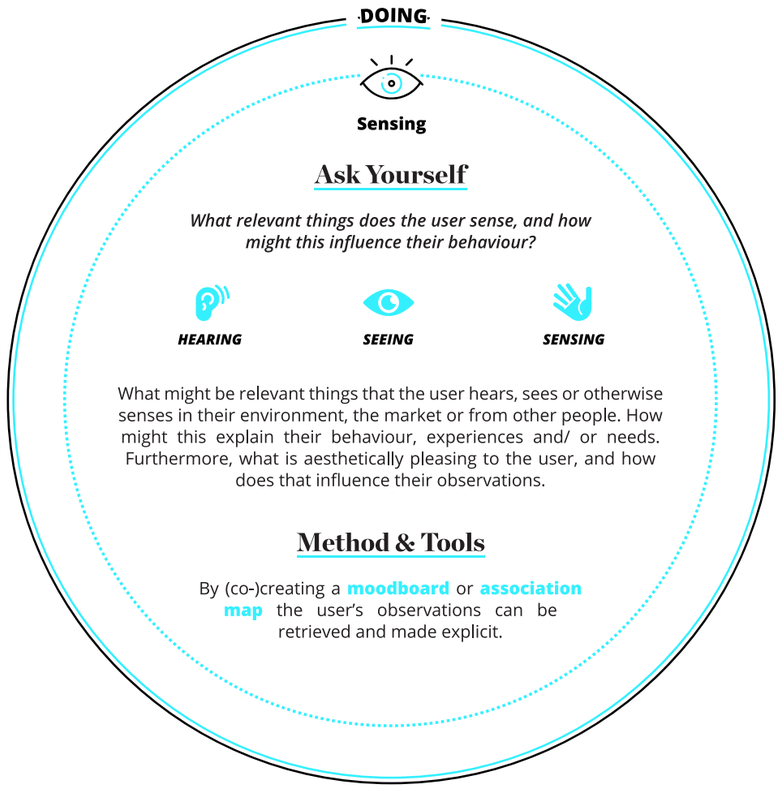


Figure 35 *Sensing is an element within user doing attitude and includes what the user hears, sees and senses (based on: Brakus, Schmitt & Zarantonello, 2009; Kolbe, 1990; Maslow, 1943).*

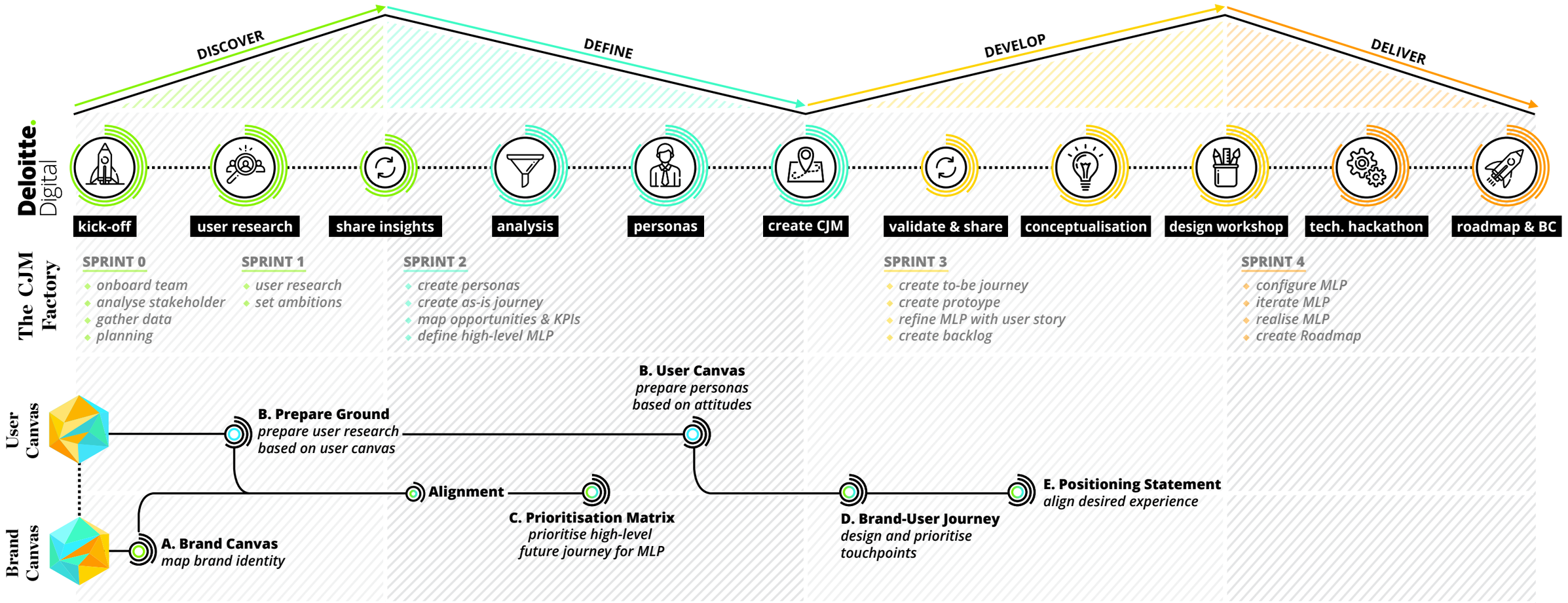


Figure 36 *Deloitte Design Process with designed add-on tools based on user and brand canvas.*

2.4. Brand Experience Design

In the previous part, the insights around brand experience design have been made actionable. However, the goal is for Deloitte strategists and designers to actually use these principles during their design process. Therefore, the brand identity and brand image canvas are translated into concrete design tools, that can be used during a session and/ or during different stages of the design process (Figure 36). By using these tools, Deloitte employees can adopt a brand-centric mindset during the process, and ensure a good brand experience design.

A. Brand Mapping Canvas

Before starting any project for a client that involves service-design for the end-consumer, it is essential for Deloitte to have a clear and thorough understanding of the client's brand. Brand is an ambiguous concept and the extent to which an organisation documented its own values might differ per client. Therefore, in order to create a more unified way of mapping out the brand values of a client, the **brand mapping tool** has been developed. This tool is based on the Brand Identity canvas from the Brand Experience Framework and thus include the self-expressive, emotional and functional benefits of a brand (page 27).

This tool should be used for preparing a client session/ interview which involves retrieving and mapping the brand values of the client, or during a client session to co-create the various brand elements. The output of the canvas should be used to create alignment between Deloitte and the client, as well as the various teams that are involved within Deloitte.

B. User Mapping Canvas

Before designing any service-solution, it is essential for strategists and designers to get a good understanding of the end-user, with their needs, pains desires etc.

This is commonly done by preparing and creating personas, based on (qualitative) user interviews. With the **user mapping tool**, design researchers can prepare user interviews in such a way that all essential elements of the user attitude (brand image) are included in the process. Furthermore, the different elements of the brand image canvas can be used to prepare personas and segment the insights of the qualitative interviews to create a communal understanding and alignment between the various teams within Deloitte. This tool is based on the Brand Image canvas from the Brand Experience Framework (page 27).

C. Prioritisation Matrix

The **brand prioritisation matrix** evaluates the potential of the concept from a brand, as well as a user (market) perspective. The tool is based around the selection of concept directions (‘to be’ journeys), and measures which of the ideas fit most with the brand. Hereby, the selection matrix serves as a prioritisation tool for the brand. The output of the tool will visually indicate which of the potential journeys fit best with the brand, as well as the user (Figure 37). The tool is a derivative from the standard Harris Profile, and a multi-criteria analysis (a.k.a. weighted decision matrix) (Boeijen et al., 2014). The key elements of the purpose (core belief, driving passion and core capabilities) from the brand identity canvas are taken into consideration (Figure 38). This way, the selection process will prioritise concepts that resonate with the purpose of the brand, also known as brand-driven innovation. From the perspective of the user (user relevance), the ‘thinking’ elements from the brand image canvas are included. These are merged with front-end idea screening criteria that are based on desirability (Hultgren & Tantawi, 2014).

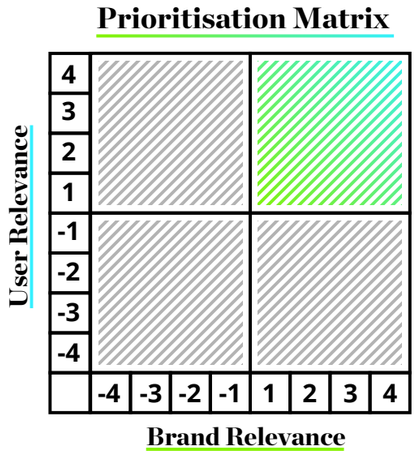


Figure 37 *Overview matrix of outcome selection criteria per concept direction. The concept should be at least be between 1 - 4 for both the brand relevance and user relevance.*

Brand Relevance

		-4	-3	-2	-1	1	2	3	4
lasting belief	To what extent is the concept proof of the brand cause?								
	to what extent does the concept fit within the brand’s long-term vision?								
	To what extent does the concept benefit the individual customer?								
	To what extent does the concept benefit society as a whole?								
driving passion	To what extent does the concept resonate with what the brand does and how it behaves?								
	To what extent is the concept an inspiring manifestation of the brand’s mission?								
	To what extent is the concept proof of how to achieve the long-term vision?								
	To what extent is the concept a measure for the brand’s the level of performance?								
core capabilities	To what extent does the concept fit within the key (strategic) focus areas?								
	To what extends does the concept logically flow out of the brand's key competences?								
	To what extends does the concept flow out of the brand's key knowledge/ expertise?								
	To what extent does the concept (further) differentiate the brand from competition?								

User Relevance

		-4	-3	-2	-1	1	2	3	4
DESIRABILITY	To what extent does the concept solve existing pains/ problems of the customer?								
	To what extent does the concept answer existing needs and desires of the customer?								
	To what extent does the concept create customer awareness of the brand?								
	To what extent does the concept exceed consumer's expectation of the brand?								
	To what extent does the concept help the user to achieve what s/he beliefs in?								
	To what extent does the concept evoke acceptance (adoption) by the customer?								
	To what extent does the concept resonate with main market trends & opportunities?								
	To what extent does the concept have a market (growth) potential?								

Figure 38 *Selection criteria for measuring brand relevance, as well as user relevance (e.g. to be used during a session). In conversation with the client, the criteria could also be appointed weights in order to prioritise between criteria.*

D. Brand-User Journey

As can be seen in Figure 36, Deloitte Digital often has a focus on creating and iterating customer journey maps in service-design projects. The output of these journey maps is consequently used to define design opportunities (e.g. with customer journey factory & experience engine). In order to design for brand experiences, the content of the brand and user map should be included in the customer journey. In order to do so, the **thinking**, **feeling** and **doing layer** of the user map should be translated over time on the journey map. This segmentation is something which is already commonly done. Afterwards, there should be an extra layer that defines the biggest pains.

Furthermore, these should be an additional **brand opportunity layer**, which is based on the brand canvas and identifies where the organisation could add the most value from a branding perspective. As a result, Deloitte Digital designers can use these ‘add-ons’ during creative sessions to prioritise which touchpoints need to be redesigned based on the biggest user pains and brand opportunities. Ideally, the client as well as the user will be involved in making these decisions (e.g. through a co-creation session).

E. Positioning Statement

Before redesigning a part of the journey (touchpoint or combination of touchpoints), designers from Deloitte Digital should create a **positioning statement** (Figure 40) that is based on the brand canvas (brand opportunities) and user canvas (persona). This positioning statement will create alignment and understanding within the team, as well as with the client and/ or users. The format of the positioning statement is based on the ‘positioning’ dimension of the ‘Brand DNA’ by van der Vorst & Berghuis (2017) and on the established brand experience model. Hereby, it includes elements from self-expressive, emotional and functional benefits to the consumer.

Positioning Statement

For (target customer**)** .....

The service offers (attributes**)** .....

which delivers (functional benefits**)** .....

giving the feeling of (emotional benefits**)** .....

to become (self-expressive benefits**)** .....

Figure 40 *Positioning Statement, based on output of the brand and user canvas*

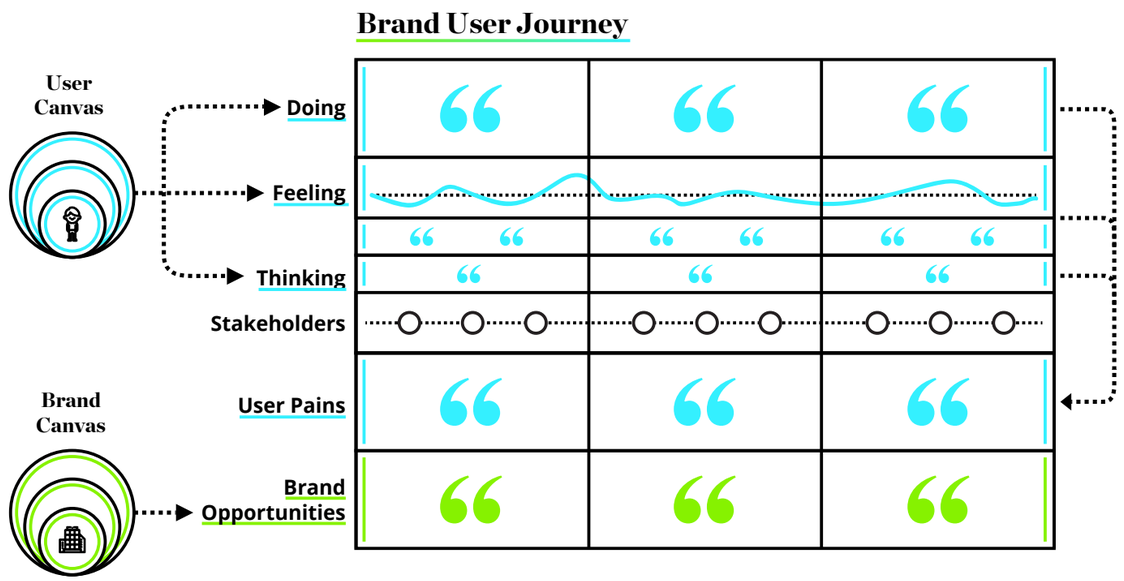


Figure 39 *Band-User Journey with the translation of the user canvas to a ‘doing’, ‘feeling’, and ‘thinking’ layer, and brand canvas to ‘brand opportunities’ layer.*

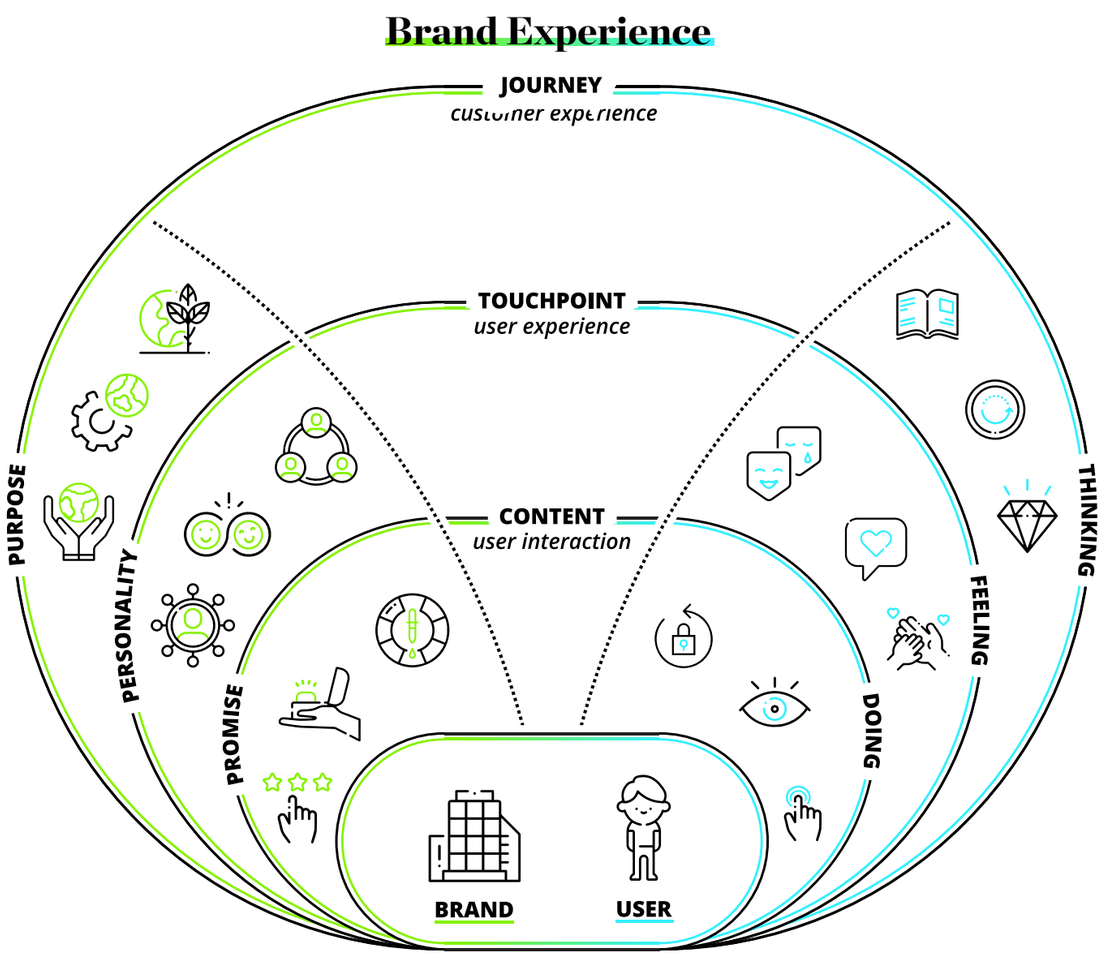


Figure 41 *Brand Experience Framework with brand identity and brand image elements. The why, how and what of the organisation's perspective and the consumer's perspective come together on a journey (CX), touchpoint (UX) and content (UI) level.*

2.5. Wrap-Up

In this chapter, RQ1A (page 11) has been explored by explaining the main concepts around branding, and creating an actionable framework around brand experience (Figure 41). Furthermore, these insights have been translated into add-on tools that can be used by designers and strategists of Deloitte Digital to design for brand experiences (RQ2, page 12), with a brand-centric mindset. However, the end-goal is to explore how Artificial Intelligence could augment the brand experience (RQ1, page 11). Therefore, the coming chapter will explore to potential of Artificial Intelligence on brand experience using the framework that has been defined in this chapter.

3.

AI-Imperative

3.1. Demystifying AI

In order to discover the potential of Artificial Intelligence on brand experience, it is essential to establish a clear and shared understanding of AI within the context of this thesis, and the output of the design tools. In order to do so, a brief exploration is performed on the meaning and definition(s) of AI.

A. Definition of AI

Artificial Intelligence is an overlapping concept which includes various types of technologies and has a myriad of (sometimes contrasting) definitions, depending on who is using it and in which context (McWaters & Galaski, 2018). A commonly used definition for AI, as described by Tegmark (2017) is as follows: *Intelligence is the ability to accomplish complex goals, Artificial Intelligence (AI) is simply non-biological intelligence.*

This interpretation is based on the original description by McCarthy et al. (1955) and many dictionaries state similar definitions (Marr, 2018). The positive side about this definition is that it is based on the notion that 'intelligence' is not particularly 'black' or 'white' as well (intelligent versus non-intelligent), but more of a gradient (new-born, toddler, science professor). Hereby, the definition is relatively broad and encompasses the entire field of AI. However, the downside of the above stated terminology is that it is relatively broad and might thus still have many interpretations, depending on the person, situation and context (Marr, 2018; Tegmark, 2017).

Customer-Facing AI

For the purpose of scoping this thesis, AI will refer to customer-facing Artificial Intelligence. This because brand experience describes the perspective of the organisation as well as the user, and is thus inherently about the interaction between both. Hereby, it is useful to describe AI as the capabilities that it offers to the organisation, and the effect this has on the interaction and perception of the user. Consequently, AI-technologies that have the sole purpose of non-customer-facing practices such as back-end optimisation or process automation are purposefully excluded from the scope.

B. Capabilities of AI

From the perspective of the organisation, implementing customer-facing AI is like 'hiring' a (digital) customer-agent, that is able to perform any (narrow) cognitive task in order to accomplish any (complex) goal in customer-service. In order to get a better understanding of this idea, it is useful to describe AI as a set of cognitive functions that could benefit the organisation in their way of working with their customer (Figure 42). These cognitive functions are based on the cognitive skills 'see, think, and do' by Noessel (2017), the 'input, processing, and output' model from the fundamentals of computing (Goel, 2010), and expert talks within Deloitte.

Perceive

Ability to sense and recognise data & input signals such as images (e.g. face/ object recognition), sound (e.g. speech recognition, song identification) and text (e.g. chatbot, document summarisation, text translation).

> "Intelligence is the ability to accomplish complex goals. Artificial Intelligence is simply non biological intelligence."
>
> **MAX TEGMARK**

Analyse

Ability to recognise patterns and predict & plan actions for the user based on data & input signals (e.g. segmentation, group discovery, predict values etc.).

Interact

Ability to interact and communicate insights and actions to consumer through content (e.g. natural conversation, recommendations, targeted communication etc.).

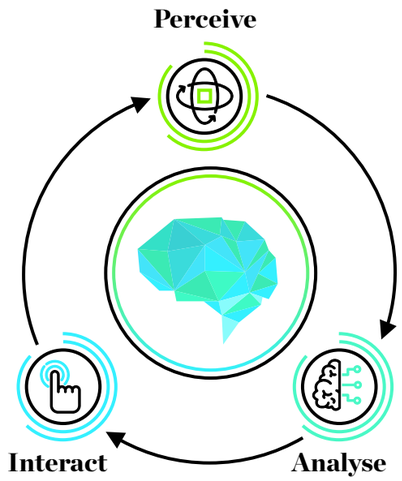


Figure 42 *Cognitive capabilities of Artificial Intelligence (based on: Goel, 2010; Noessel, 2017)*

C. The AI-System

It is important to note that, although AI does mimic the (cognitive) functioning of the brain, it does not replicate it. To further elaborate on this concept, it is essential to understand the difference between Artificial General Intelligence and Artificial Narrow Intelligence.

Artificial General Intelligence (AGI) means that a machine would be able to successfully combine the aforementioned cognitive skills, having a similar understanding of our world as we do. In this case, the AI-system would thus essentially be an artificial human brain (Esch, 2018; Tegmark, 2017).

Artificial Narrow Intelligence (ANI) means that a machine is only able to leverage one (or sometimes a few) of the aforementioned dimensions of cognitive abilities, using it for (pre-designed) specific tasks (Tegmark, 2017). In other words, a specific AI-enabled chess program might beat any human player in chess, while it is unable to solve a simple math problem, or recognise a cat from in a photo (Bakhshi & van Duin, 2017).

All current forms of AI are still a form of AGI, and it isn't even sure whether science will ever create a true ANI system (Tegmark, 2017). It is therefore more useful to describe AI as ANI, meaning it consists out of specific technologies that have been designed to perform specific tasks. Hereby, the holistic concept of AI consists out of AI-related technologies that can either perceive, analyse or interact and have to be connected/ work together in order to perform on all the levels. Furthermore, the subject of this thesis is not necessarily about one niche-technology, but rather about a collection of different technologies that enable conversational experiences and AI-driven interactions and content. Therefore, in the rest of the thesis, the term 'AI-System' will be used to refer to the collection of customer-facing Artificial Intelligence technologies that might be involved.

D. Conclusion

Artificial Intelligence has the ability to accomplish complex goals through the cognitive capabilities of perceiving, analysing and interacting. In the rest of this thesis, AI-system will refer to a collection of customer-facing Artificial Intelligence technologies that fall within these cognitive capabilties and allow for conversational experiences and AI-driven engagement, content and interactions.

3.2. Individual Experience

As brands will increasingly engage consumers with AI-technologies, it is essential to define what it means from the perspective of the user. This will be explored through the 'relational metaphor', in which the potential of AI-systems in brand-human relationships is explored in more detail, and a vision for the role of AI in brand experience can be created.

A. Relational Metaphor

As mentioned above, the capabilities of AI can be described as a set of cognitive skills that mimic that of a human. Because of this, people tend to anthropomorphise interactions that they have with such systems (Abbing, 2010; Wilson, Daugherty & Bianzino, 2017). This effect has also been shown in a study by MIT Press, in which they found that people use the same part of their brains during interaction with robots and conversational UX (e.g chatbots) as they do when interacting with actual humans (Nass & Brave, 2005). Furthermore, as has been researched before, humans can have a relationship with a brand in a similar way that they have a relationship with another human (Blackston, 2000; Fournier, 1998).

Hereby, it is useful to think of a brand-human relationship with human-computer interactions as human-to-human relationship with a human-human interaction (see Figure 43).

Relational Metaphor
Imagine human-to-human relationships, with a human-to-human interaction. In such interactions both parties have a fixed personality with a fixed set of values, attitudes, character traits and so forth. Still, when people interact with each other, they slightly adjust their own behaviour to fit the context, (perceived) behaviour, mood etc. of the other party. For example, when two people talk to each other they usually align their way of speaking (Branigan et al., 2010). For example, a customer service representative might have a different behaviour and interaction with a teenager in comparison with an elderly person (e.g. easy going versus respectful tone of voice respectively) or with a first-time customer in comparison to a well-known customer. Similarly, the tone of voice of a 'fun and cheerful' brand (e.g. Coolblue) might be more neutral or serious when interacting with an angry or sad customer.

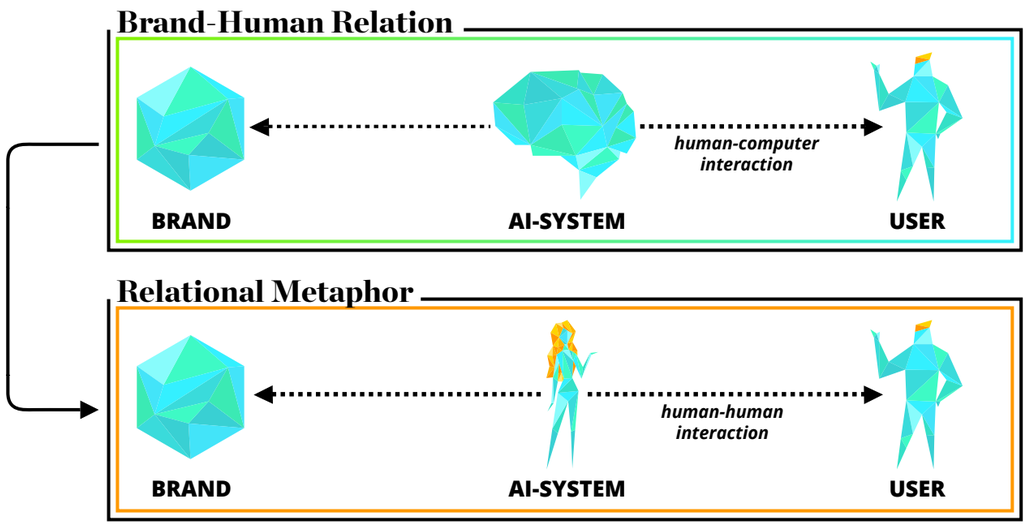


Figure 43 *Relational Metaphor for a brand-human relation with a human-computer interaction.*

> The AI-system should augment the brand experience of users through differentiation on an individual level.
>
> **VISION AI-SYSTEM**

Hereby, the biggest opportunity of AI for the brand-human relationship is to differentiate the brand experience of users on an individual level (Figure 44). Such personalised brand interactions will increase the brand experience of users, which in turn positively influences the emotional connection, affective commitment and eventually their loyalty to the brand (Aaker, 1999; Bastos & Levy, 2012; Belk, 1988; Brakus, Schmitt & Zarantonello, 2009; Iglesias, Singh & Batista-Foguet, 2011; Meeneghan, 1995; Packard & Miller, 1957).

3.3. AI-System Model

An AI-system is able to differentiate on different levels, namely through the data that the AI-system gathers (perceive) for individual segmentation (analyse), and the way the system communicates with the user (interact). However, the goal is for designers and strategists to design AI-augmented brand experiences. Therefore, it is important to establish a more comprehensive, actionable model for the functioning of AI when it comes to delivering individual experiences to the user.

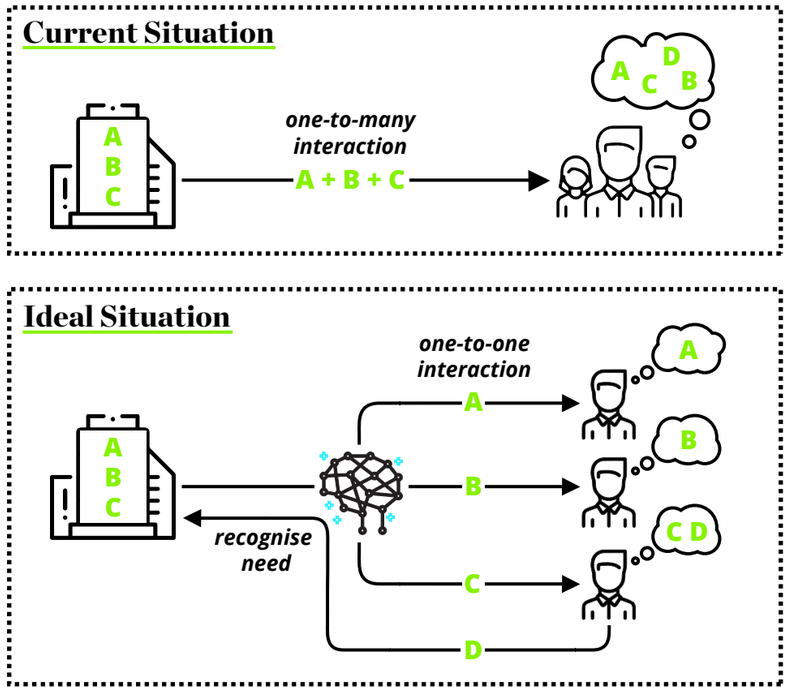


Figure 44 *AI enables organisations to deliver an individually differentiated experience to the user.*

A. Method

It is important to fully understand the role of AI-systems in benefitting the individual experience of users, in order to design for services that achieve this. The more detailed model is based on the abovementioned cognitive dimensions perceive, analyse, interact (Figure 42). Building from the vision on the AI-System, an extensive list on the functions and capabilities of AI within this context has been made. Afterwards these are integrated into the new AI-System model which describes the cognitive capabilities of AI that play a role in creating and building the individual experience of the user (Figure 45).

The new AI-system model (Figure 46) is grounded in expert talks within Deloitte, a variety of different literature (Abbatiello et al., 2017; Bakhshi & van Duin, 2017; Deloitte DTTL, 2018; Mittal, et al., 2017; Canell, 2018; Schatsky, Muraskin & Gurumurthy, 2014), the Deloitte IoT-blueprint (Deloitte Development LLC, 2017), and the IBM-Watson human-machine communication model (Suskis, Lawrence, 2018).

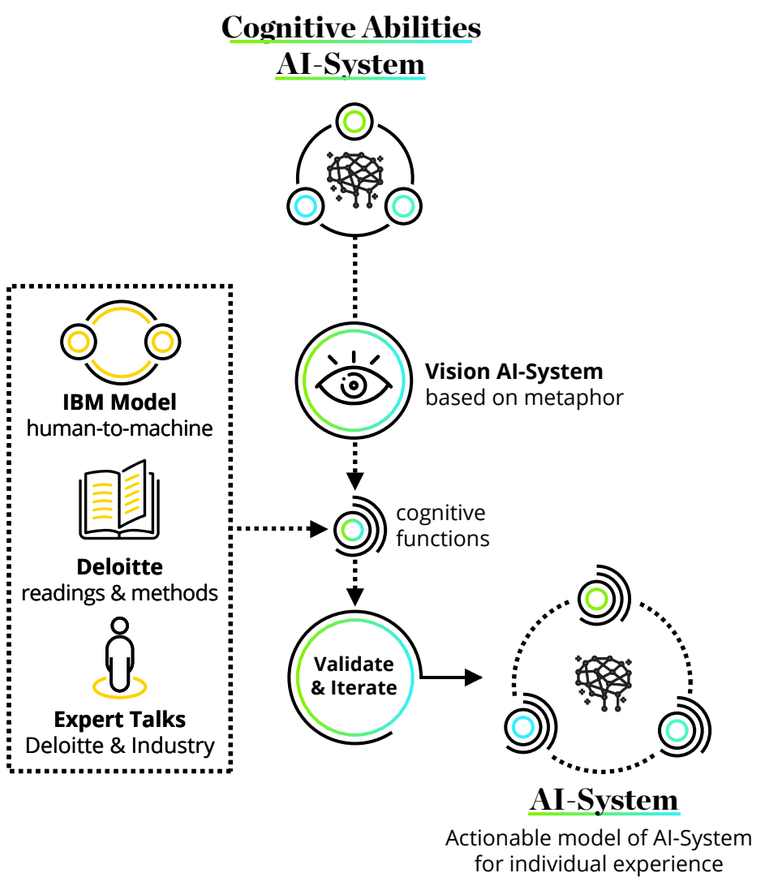


Figure 45 *From generic AI capabilities to actionable AI-System that fits within the context of building an individually differentiated experience dor users, based on literature, Deloitte (session) materials, expert talks and a client (validation) session.*

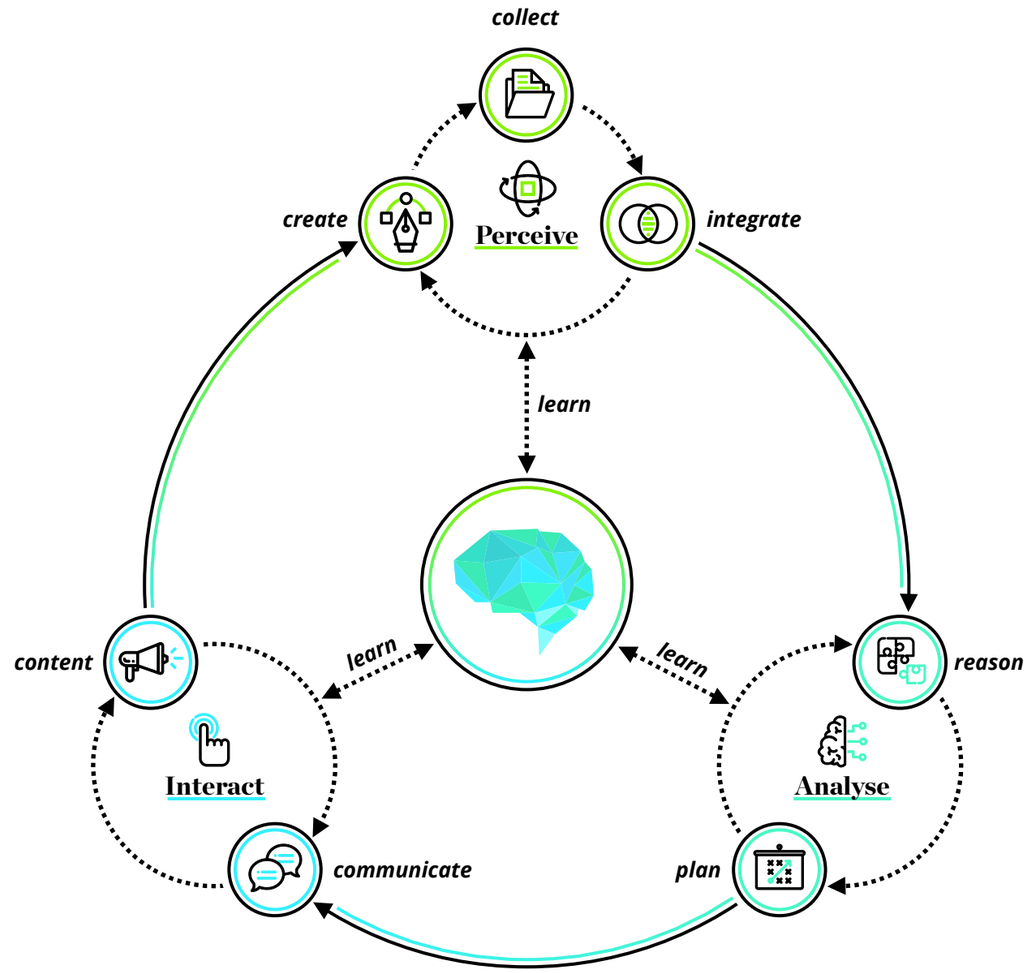


Figure 46 *The AI-System model describes the various functions of AI that are involved in creating and building the individual experience of the user*

B. Perceive

In order to differentiate the individual experience of the user, the AI-system needs personal data from users and their context. AI technologies have the ability to gather and process structured, as well as unstructured personal data (e.g. imagery, speech, language). Such personal data could be attitudinal (e.g. beliefs, needs), social (e.g. context, interactions), contextual (e.g. time, location) or behavioural (e.g. past interactions). These data sources can be combined and integrated in order to come to meaningful insights. From the perspective of the AI, there are three different perceptual elements which need to be considered.

create

The AI-system could retrieve specific data by asking from active user input (e.g. through input field or sensors/ IoT devices). This is about data which is created for this specific end-goal of the AI-system, and could therefore differ per context or context.

collect

The AI-system is able to collect and integrate 3rd-party data such as (3rd party) user profiles and complementing social (e.g. social platforms), behavioural or historical data (e.g. search history).

integrate

Furthermore, the AI-system is able to integrate the data that has been created into existing datasets and user profiles of the organisation itself to get a deeper understanding of the user (micro-level) and user groups (macro level).

C. Analyse

By combining (unstructured) data generated date with 3rd party data sets, AI can uncover deep cultural insights into consumer behaviour, attitudes and perception on an individual (micro) level (Adobe Inc, 2018; Harries, 2017). Hereby, AI is able to increasingly build and deliver an individually differentiated experience to the consumer. In order to achieve this, two analytical elements need to be considered.

reason

Ability to draw inferences based on (specific) situation. Hereby, the AI-system is able to identify patterns (e.g. group/ anomaly discovery, segmentation), retrieve underlying concepts, create assumptions and inferring and applying rules.

plan

Ability to predict and plan actions based on input data. Hereby, the AI-system is able to analyse the context and subsequently predict an outcome (e.g. number, answer, set of options) and plan the most probabilistic action.

D. Interact

AI-solutions that offer conversational experiences and personalised content allows for a direct two-way communication stream. Hereby, AI allows brands to move from a one-to-many to a more personal one-to-one way of (brand) communication. This means that the micromanagement of the individual brand experience will shift from the customer service and/ or marketing department to the (semi-) automated AI-system (White, Addison & Fritz, 2018). Besides this, such a two-way communication stream also means that the user is able to provide feedback on their experience. For brands, this means that they can validate, and even co-create the experience together with the user. In turn, this will positively affect the customer's brand experience through a feeling of ownership and belonging (de Chernatony & Christodoulides, 2004; Clauser, 2001). Hereby, two elements which belong within interaction need to be considered.

content

The AI-system has ability to interact and communicate (relevant and personalised) insights and actions to users through the content that it offers. Hereby, the brand-based content can be differentiated on an individual level (e.g. personalised information/ recommendations, imagery or products).

communicate

The AI-system is able to interact with humans in an intuitive (human-like) and natural way (e.g. through speech/ text, audio or animations). As a consequence, the AI-system is able to easily retrieve new insights (perceive) and test/ validate the content/ output that it offers in a user-friendly way.

E. Learn

Lastly, interwoven through all of these steps is the ability of AI-systems to learn based on datasets and historical patterns, interactions. This way, each data point, outcome or interaction helps to develop and strengthen the accuracy and performance of the AI-system. By refining user profiles and validating each outcome and interaction of the AI-system, it can slowly build and improve the individual experience of the user, in the same way a loyal customer representative could.

F. Conclusion

Just like people in one-to-one interactions (slightly) adjust their own behaviour based on the context and other person's personality (and/ or emotional state), AI-technologies enable brand to move from a one-to-many to a one-to-one communication strategy. This means that the individual brand experience of the user will be based on their intentions, attitudes, needs/ wants and preferences (Renner, 2019). An AI-enabled brand channel should thereby adjust its own brand identity (e.g. behaviour, personality, tone-of-voice etc.) to that of the context, attitude (e.g. personality, emotional state etc.) and feedback of the user its interacting with.

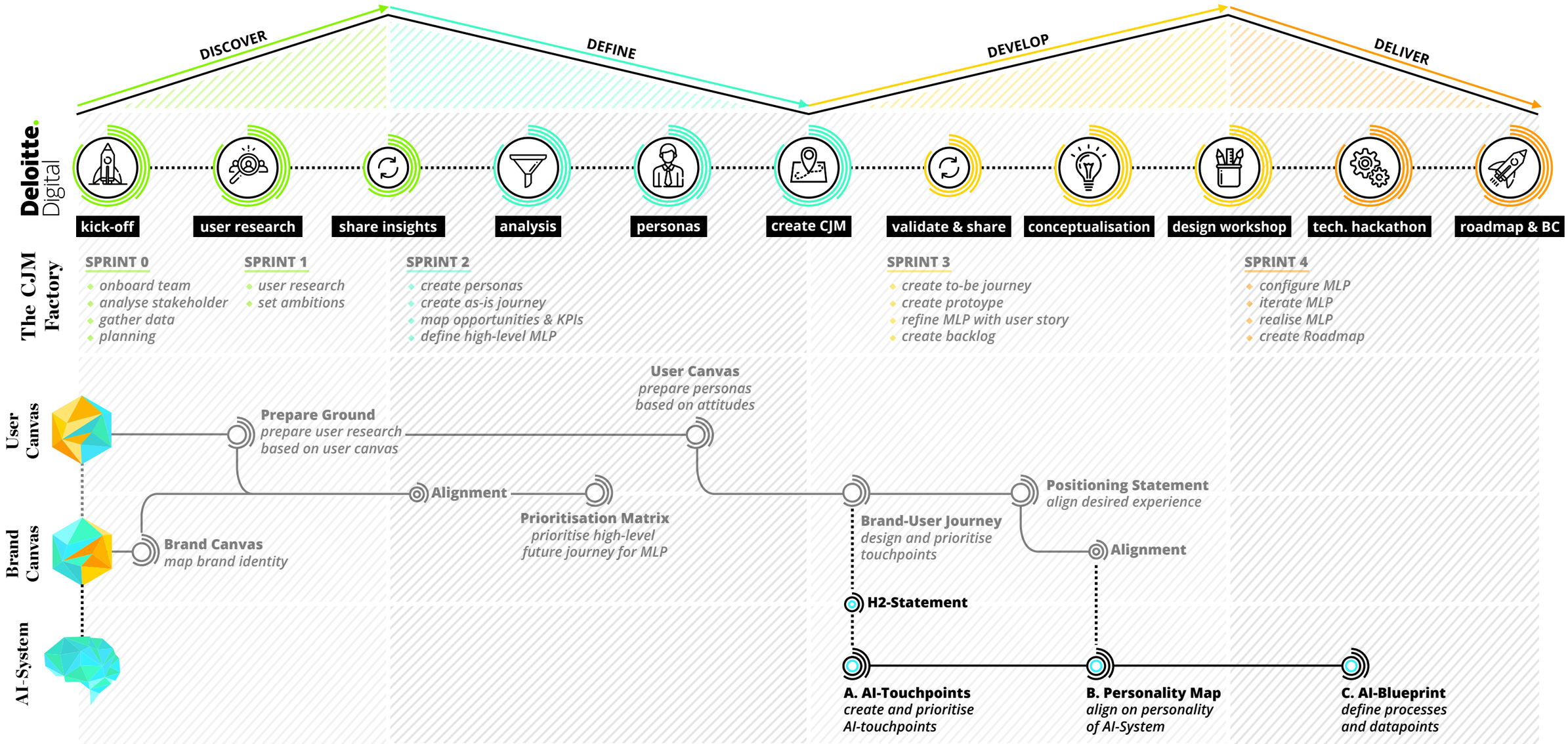


Figure 47 *Deloitte Design Process with designed add-on tools based on relational metaphor, vision and AI-System model.*

3.4. AI-System Design

In the previous part of this chapter, an actionable model for AI has been created. This model indicates which capabilities an AI-system has in order to benefit the individual experience of users. However, as stated before, designers and strategists of Deloitte should be able to use these principles during their design process.

Therefore, the vision and model for AI are translated to concrete design tools which can be used during different stages of the design process. These tools are combined with the aforementioned tools of the brand experience. This way, Deloitte employees can design AI-systems that benefit the individual experience while maintaining a brand-centric mindset.

A. AI-Touchpoints

As indicated before, Deloitte often makes use of a customer journey map when defining opportunities for the client. As can be seen in “Brand-User Journey” on page 43, these journey maps can be complemented with the brand identity and attitude of users, in order to prioritise on a user (pains/ needs) as well as brand (opportunities) level.

In case there are not yet initial ideas for AI-systems (e.g. from brainstorm session, or client/ user input), or if there is the desire to generate new ideas through a brainstorm session, the relational metaphor should be used to prime people.

Furthermore, the initial brainstorm should be about answering a clear **H2-Statement**, which is based on the vision from the relational metaphor, but might differ per client/ case etc. This way, people don't require a deep (technical) knowledge of AI, in order to brainstorm on its potential. The general lay-out of this H2-statement should be like below:

> **How to** *create a personalised experience for the user with a tailored interaction, behaviour and content based on the person, situation and context.*

In order to connect the initial ideas to the established journey, there will be an additional **AI-touchpoint layer** (Figure 48) over the customer journey. Furthermore, the most essential touchpoints, based on the prioritised user pains and brand opportunities, will be identified so that it becomes clear what stakeholders are involved. Lastly, an early feasibility round should be done. This can be achieved by filling in the **cognitive capability cards** that include the 'perceive, analyse, interact' layers. These cards should then be placed over the AI-touchpoint layer (Figure 49). After discussing the output in groups, people should prioritise the AI-system based on the most important user pains/ needs, brand opportunities and AI-touchpoints.

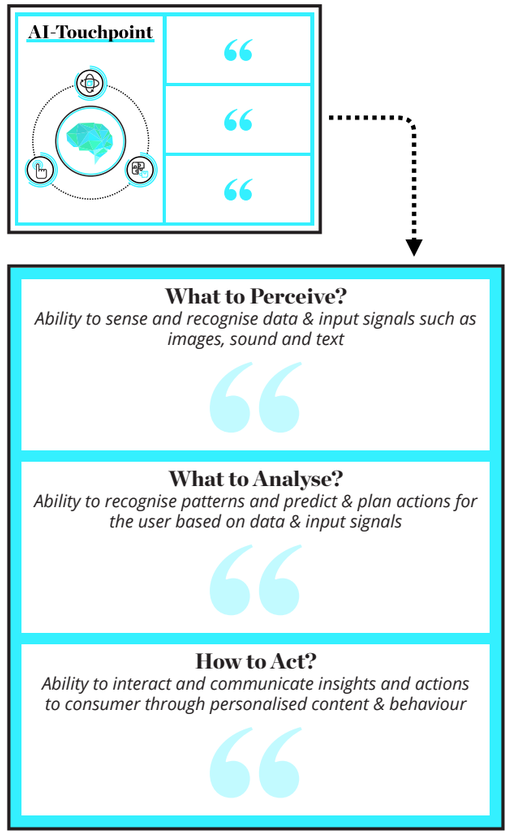


Figure 49 *Cognitive capability cards that enable designer to think about the feasibility and processes early in the design phase.*

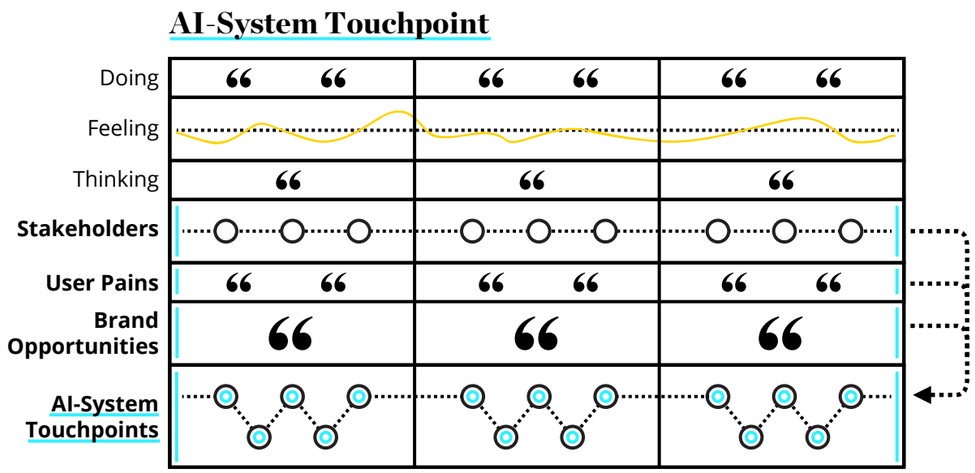


Figure 48 *Building on the established Band-User Journey, the AI-System Touchpoint layer connects the initial user pains, brand opportunity and stakeholder layer to the concept direction.*

B. AI-Personality Map

As indicated in the brand identity model, organisation often use human-character traits, personification and emotional values when communicating with the consumer. Furthermore, AI-systems often makes use of conversational experiences (e.g. speech, text) or other means (e.g. character animation) in which the personality of the brand can be directly conveyed to the consumer.

Furthermore, as indicated above this personality might differentiate on an individual level, based on the context, mood, attitude etc. of the person. For instance, responsive AI-systems could take note of the consumer's tone of voice or even body language and facial expressions. This way brands can align the brand-human interaction in the same way as it would during a human-human interaction (as in the relational-metaphor).

In order to create a shared vision for the personality of the AI-system, and the boundaries for differentiation, the **personality mapping tool** has been created (Figure 50, Appendix 1). This tool enables designers from Deloitte to (co-)create a concrete personality profile for the conversational experience together with the client. The map is based on the big five personality dimensions (FFM) and describes openness, conscientiousness, extraversion, agreeableness and neuroticism (Barrick & Mount, 1991; Soto, Kronauer & Liang, 2015). First, designers and their clients should create a baseline which should be derived from the established personality of the brand identity (canvas). Hereafter, an upper- and lower-boundary line should be set, which indicates to what extent the conversational experience could differentiate from the baseline. For a more detailed description about the different dimensions, and the actual canvas, see Appendix 1.

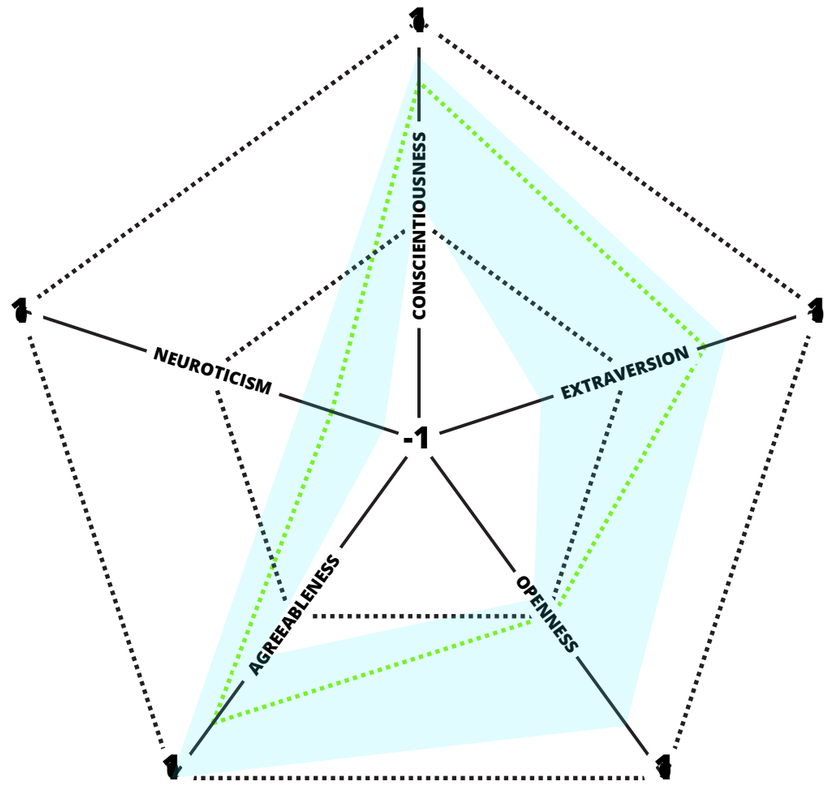


Figure 50 *Hypothetical example of filled in AI-Personality map with brand personality baseline (green dotted line) and upper- and lower-boundaries for differentiation (light blue area).*

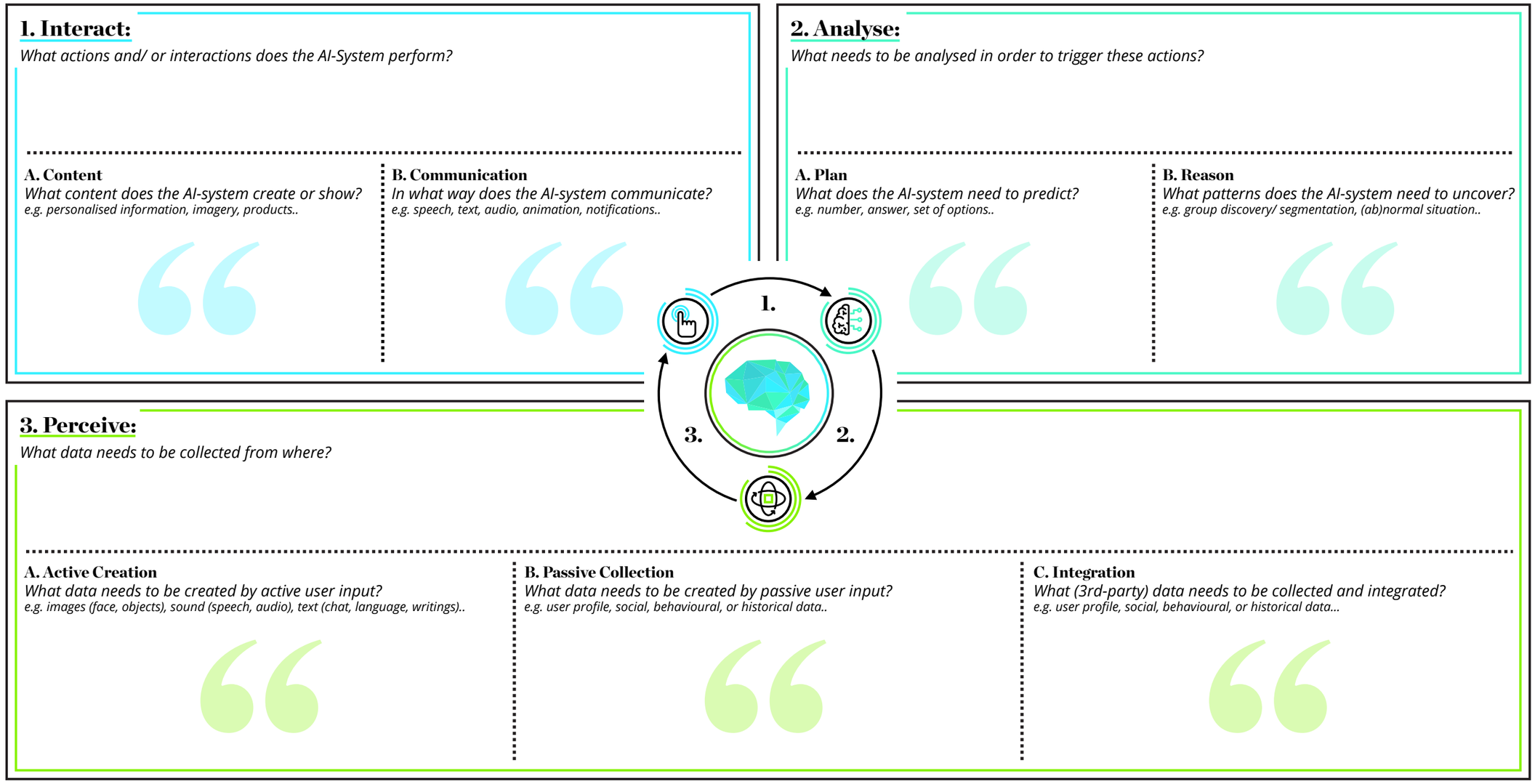


Figure 51 *AI-Blueprint Canvas that helps designers to translate the actions of the AI-system to concrete processes and datapoints.*

C. AI-Blueprint

After establishing the desired 'to-be' journey (e.g. through user scenarios), it is necessary to concretise the role of AI and define the necessary processes and datapoints. In order to achieve this, an **AI-Blueprint Canvas** has been generated. This tool is based on the aforementioned AI-system model, and helps designers and strategists to transfer their findings to engineers and programmers.

The canvas works in the opposite direction of the initial AI-system model. Hereby, designers are first asked to summarise the interactions and communication that the AI-system has with the user. Then, they need to describe what the AI-system needs to analyse and which processes are involved in order to enable such interactions and communication. Lastly, the designers are probed to think about which data is needed (from the user, as well as the organisation and 3rd-parties) in order to achieve such an analysis.

3.5. Wrap-Up

In this chapter, an exploration around the definition and capabilities of AI have been done. Furthermore, by comparing the human-computer interaction to a human-human interaction, the potential of AI for brand experience has been explored in more detail, answering RQ1B (page 11). Hereby, the biggest opportunity of AI for the brand-human relationship is to differentiate the brand experience of users on an individual level. These insights have been translated into an actionable model for an AI-system (answering RQ2A, page 12), and concrete design tools for designing such AI-systems (answering RQ2B, page 12). However, in order to concretise and fully explore the role and impact of AI for the individual experience of users, an industry analysis will be performed. This will be based on the elements from the brand experience framework, as well as the capabilities and vision of the AI-system.

4.

Design Principles

4.1. Industry Analysis

In the previous chapters, an actionable framework for brand experience, and the potential of AI in it has been established. Hereby, it has been found that the AI-system should augment the brand experience of users through differentiation on an individual level. However, even though the design tools around brand experience and AI-systems are actionable and concrete, this vision on AI is still relatively generic. In order to design for AI-augmented brand experiences, concrete principles that contain opportunities, threats and guidelines around the role and impact of AI on the individual experience of users should be established. In order to do so, an industry analysis will be performed. This will look at the role and impact of AI within a defined industry from the perspective of the offering (brand identity) and user needs (brand image). The insights from this industry analysis, containing AI-specific opportunities and threats will be translated into generic design principles that fall under umbrella of 'individual brand experience'.

A. Industry Scope

In order to scope the industry analysis, a specific industry is identified in which the role and impact of AI for the offering and needs will be explored in more detail. This scope has been set during the proposal phase of this thesis in conversation with Deloitte and industry related experts. The chosen industry is based on the extent to which both brand experience and AI play an important role presently as well as in the future.

Retail-Banking Industry

Deloitte identifies the Financial Service Industry as one of the key industries in which AI-technologies will disrupt the way that these organisations operate. The Financial Service Industry (FSI) entails banking markets, insurance and investment management sectors. But especially in business-to-consumer (B2C) banking, also known as retail-banking (Figure 52), more and more of organisations realise the need of leveraging AI-technologies to change the way they interact with their customers (Deloitte Digital UK & Market Gravity, 2017; White, Addison & Fritz, 2018).

Indeed, when comparing to other industries, Adobe Inc. (2018) states that the financial service industry is in particularly lagging behind when it comes to being able to deliver a personalised experience through AI-technologies. From the retail-banking industry itself, AI is also thought to have a large impact, with 76% of banking CXOs believing that the adoption of AI-technologies will be essential to the organisation's ability to differentiate in the market (McWaters & Galaski, 2018). Even more so, if financial organisations decide not to invest in customer-facing AI-services, they might soon start to face the realistic threat of falling behind (Finextra research Ltd, 2017). Because once they do, they might be unable to catch-up and compete with future competition, that are able to augment the experience of the user through AI-technologies. Hereby, organisations that fail to adapt might slowly become irrelevant to the customer, in a similar way that many (once) successful organisations became after the coming of digital/ internet. This is especially a threat in the financial industry, with disruptive brands that are branching out to financial services, and fast-moving fintech start-ups (Adobe Inc, 2018).

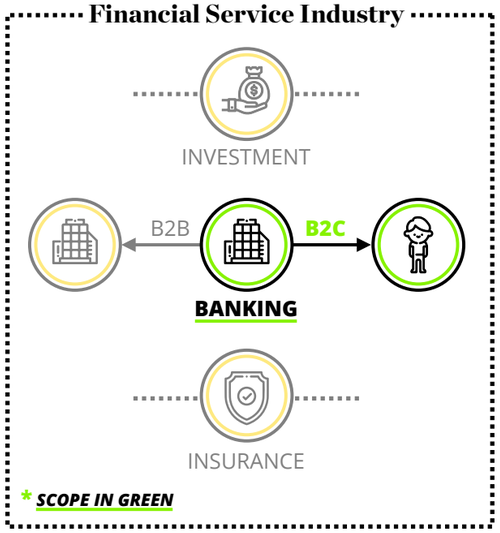


Figure 52 *Within Financial Service Industry, the scope is on B2C-banking (retail-banking).*

Furthermore, there is the risk of brand (dis) intermediation with the rise of all-round conversational services such as that of Facebook Messenger and Amazon Alexa in combination with (open-)banking services such as Paypal, Google Wallet or WeChat. As people indicate that they increasingly use these channels to perform all sorts of tasks, these all-round digital native brands slowly become the new front-office communication channel for the underlying brands (Wilson, Daugherty & Bianzino, 2017) (Figure 53). As a consequence, underlying brands that fail to adapt may become obsolete or invisible to the customer, negatively affecting their loyalty to the brand.

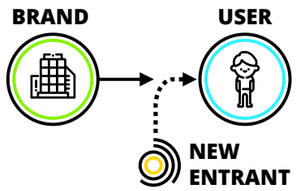


Figure 53 *Risk of brand intermediation*

Conclusion Industry Scope
The retail-banking industry could greatly benefit from AI-technologies that allow banks to create a more personal, emotional connection with the customer. However, traditional players are moving relatively slow, with the consequence that there is a risk of being replaced on the front-office by new entrants, which could further lower consumer's loyalty towards banks.

B. Method

In order to explore the role and impact of AI within the retail-banking industry, a broad analysis on the changing landscape of retail-banking has been performed. In order to scope the research, the changing landscape of FSI has been clustered into four pillars: user attitude, user needs, internal competition and external competition. These are derived from the brand experience framework, with the needs & attitude coming from the brand image (needs) side, and the competition coming from the brand identity (offering) side.

Within these four pillars, research on the role and impact of AI within the changing landscape of retail-banking has been performed by doing qualitative interviews with three Dutch major banks (Appendix 2, Appendix 3), expert interviews with Deloitte & external experts (see Figure 7), a quantitative study among banking consumers (N=180) (Appendix 4, Appendix 5) and literature research/ trend report (Figure 54). The result is insights on opportunities, threats and guidelines on AI within the retail-banking industry from the perspective of users, as well as organisations. Below the method for the quantitative user banking survey and the qualitative client banking interviews are elaborated upon in a bit more detail.

User Banking Survey

The user banking survey was created to develop an understanding of the landscape of banking from the perspective of the consumer. Since the industry is analysed from a brand (experience) perspective, the following elements where included: brand associations, brand personality (based on: Aaker, 1997), brand loyalty (retention rate), brand uniqueness, and their attitude towards banks and financial institutions in general. Besides this, they had the possibility to elaborate on their answers through (qualitative) responses. For more details about the survey, including the questions and most important findings, see Appendix 2 and Appendix 3. The results of the survey has also been used as a preparation for the qualitative interviews with the three major Dutch banking brands. Furthermore, the main findings (including quotes) are indicated throughout the industry analysis below.

Qualitative Banking Interviews

In conversation with Deloitte, three banking clients have been selected for qualitative interview on the topic of brand and AI-design. An interview was performed with ABN AMRO (product owner digital media & data team), Rabobank (team lead website & bots, and product owner AI-bot) and the Volksbank (innovation manager). Although the interviews where structured, there was also a semi-structured part near the ending to engage more freely in a open discussion.

Based on brand experience and AI-design, the topic of the interviews was around the client's brand, the translation of brand to (AI-)services and innovations, and AI-technologies. For a more elaborate description on the interview guide, see Appendix 2. For the qualitative insights, see Appendix 3. The main findings (including quotes) are indicated throughout the industry analysis below.

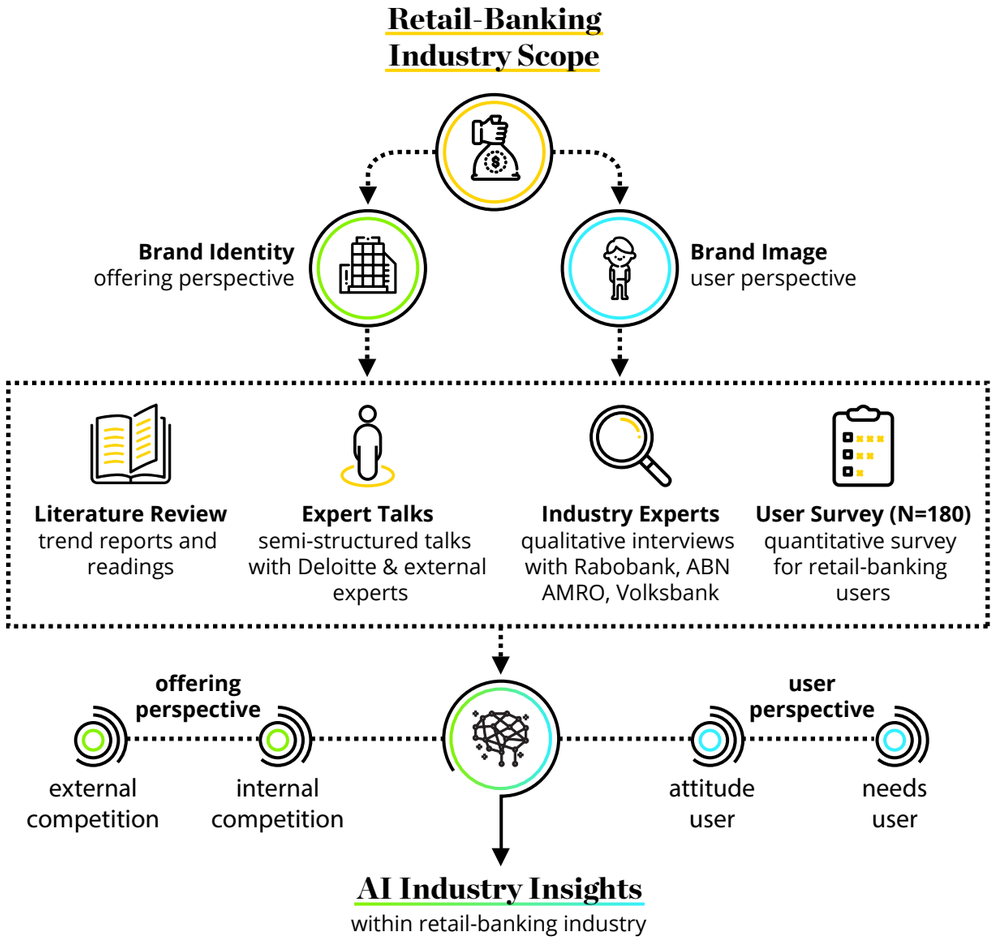


Figure 54 *Method for retrieving insights on AI through industry analysis around retail-banking industry. Based on the brand experience framework, the landscape of retail-banking has been divided in the offering (brand identity) and user (brand image) perspective.*

C. User Attitude

Diminished Loyalty

Historically, trust and loyalty were built at the banking office (branches) where consumers withdrew or deposited money, and purchased banking products (Interview Volksbank & Rabobank, Appendix 3). Indeed, most big financial institutions still have a steady number of loyal customers from previous generations. Close to 50% of consumers indicated that they have been a customer at their bank for 10 years or longer (Accenture, 2015). However, banks seem to have lost this personal connection with the consumer, with 68% of Dutch banking customer between the age of 18-35 indicating that the main reason they are a customer at their bank is because their parents arranged it when they were younger (User Banking Survey, Appendix 5). The danger for banks is that younger generations tend to be less brand loyal and switch brands easier (and more often) than older generations do (Lambert-Pandraud & Laurent, 2010). According to Salesforce Research (2018), 76% of all customers indicate that it has never been as easy to switch brands until they find an experience that matches their expectations. This also seems to hold up for retail banking. A (multi-year) study conducted by Accenture (2015) indicated that 18% of millennials (those born between 1980 and 2000) switched their main bank the past half year in comparison to 10% of customers between 35 to 54, and 3% of the customers that are older than 55. Moreover, a study conducted by Viacom Media Networks (2013) indicated that 80% of millennials would be open to switch banks, with 1 in 3 millennials open to do so within the 'next 90 days' (Kreger, 2018). Therefore, in order to stay relevant, it will be more important for financial institutions to battle for the loyalty of their customer (McWaters & Galaski, 2018; Interview ABN AMRO, Appendix 3).

> "I never chose to be a customer at my current bank. It is just a decision my parents took when I was 12."
>
> **ING CUSTOMER**

Negative Attitude

An important aspect of the diminished loyalty is the neutral, or even negative attitude that people have towards their banks (User Banking Survey, Appendix 5). Especially for younger generations, banks are among the least loved brands by millennials (Viacom Media Networks, 2013). To begin with, the global financial crisis in 2007/2008 greatly diminished the credibility of financial institutions (Mogaji, Farinloye & Aririguzoh, 2016). Furthermore, some people regard financial institutions and its employees as greedy and amoral because of the seemingly never-ending quest for self-serving monetary gain such as that of ING-head Ralph Hamers (Mogaji, Farinloye & Aririguzoh, 2016; Paauwe, 2018; Werkman, 2015; User Banking Survey, Appendix 5).

> "I feel like they are in it for the money, my money."
>
> **ING CUSTOMER**

Lastly, the public opinion about the banking industry suffered due to negative media attention about morally questionable practices such as price fixing, shady investments and money laundering scandals such as that of the recent ING scandal (Denning, 2013; Ritzen,2018; Wijnen, 2016). Such incidents affected the consumer's trust in banking institutions. As indicated in research by Bain & Company (2019) an average of 54% trust at least one big technology company more than banks in general, with 29% stating that they trust such companies more than their own primary bank. Therefore, it is essential for organisations, especially those in the financial sector, to start (re-)building trust with their consumers, which is essential for the brand-user relationship. This is emphasised by the findings of Salesforce Research (2018) which states that 95% of customers indicate that trust in a company greatly increasing their loyalty.

> "I should have switched banks already, they invest in things I despise and probably can't even do without breaking the law."
>
> **ING CUSTOMER**

Role of AI | Social Responsibility

Just like in human-human relationships, trust and a positive attitude are essential for establishing a long-term relationship (Nandan, 2004; Salesforce, 2018; User Banking Survey, Appendix 5). Therefore, it becomes more important for banks to provide an added value to the customer while staying within the best interest of the society (McWaters & Galaski, 2018). Even though Corporate Social Responsibility is a general trend among big corporations, it is especially important for those that need to change the attitude of their consumer for the best (Interview Volksbank, Interview ABN AMRO, Interview Rabobank, Appendix 3; User Banking Survey, Appendix 5).

> "I am very happy with my new bank, because my money is now being invested in green and moral initiatives."
>
> **TRIODOS CUSTOMER**

However, as many companies jump on this 'corporate social responsibility' (CSR) bandwagon, empty promises don't longer work. Millennials want organisations to put their money where their mouth is (Kreger, 2018). Banks should thus make their social and environmental actions evidence based instead of only promise based. AI-technologies, especially those that are consumer-facing, should thus be individually, as well as safe and beneficial for society, a concept better known as Beneficial AI (Baum, 2017; Tegmark, 2017, Urban, 2015). This way organization can (re-)build trust with the consumer, for example by providing more transparency throughout the whole value chain, enabling consumers to be more critical in their own choices.

Role of AI | Secure & Transparent

However, AI-technologies also poses challenges for the brand image of the bank. Especially with customer data becoming an increasingly valuable asset for organisations, dilemmas around data privacy and ownership arise. With the increased integration and collaboration between organisations within all types of industries, the data alliances become more blurred and difficult to manage (McWaters & Galaski, 2018; Interview Volksbank, Appendix 3). Even though the majority of consumers state they currently trust their bank to manage their personal data securely it may become increasingly unclear what happens with their data when they give their data to automated AI-systems (Accenture, 2015; McWaters & Galaski, 2018). Furthermore, the rising adoption of AI-enabled technologies in combination with the increasing use of customer data will thus inevitably bring new societal implications and potential public scandals such as that of Facebook-Cambridge Analytica scandal (BBC, 2018; McWaters & Galaski, 2018). Already, 62% of customers indicate that they are more afraid then before that their data becomes compromised, and 57% indicate that they feel uncomfortable with how companies use their personal information (Salesforce Research, 2018). As trust is an essential element for a good, sustainable brand-user relationship (User Banking Survey, Appendix 5) it is therefore essential for organisations to properly manage their channels and data flows and provide transparency in how data driven decisions are made. Hereby, it should be clear to the consumer what happens to their data, and by whom it is being used.

> In this new world of data collection, exchange and ownership, you should consciously deal with bias and the danger of security leaks, and think on how to communicate this to the consumer.
>
> **PETER EIKELBOOM - VOLKSBANK INNOVATION MANAGER**

Role of AI | Data & Decision Ethics

Furthermore, as AI enables data driven advise and/ or decisions, it is essential to prevent bias in the outcomes of AI-driven algorithms which could cause unintended inclusion or exclusion (discrimination) of certain customer segments and/ or individuals (Interview Volksbank, Appendix 3). This is especially harmful when it is not clear how AI-systems come to a certain decision and/ or action, a phenomenon called the 'black box' problem. Because when people do not understand the reasoning of AI-systems, they tend to distrust the outcome and be more anxious with their human-computer interaction (Bloomberg, 2018; Esch, 2018; Tegmark, 2017). It is therefore important to prevent the 'black box' problem, and be transparent about when AI is involved, and how AI comes to a certain conclusion. This way, users can comprehend decisions that are made. As this allows them to remain critical, potentially intervening themselves, they will gradually gain more trust in the AI-system (Personal communication Deloitte Expert Luc Moers, Figure 7).

Conclusion User Attitude

Increasingly, there is a diminished loyalty, negative attitude, and reduced trust among retail-banking customer. It is thus important for banks to battle for the loyalty of their customer, especially for those of younger generations. Furthermore, the changed attitudes of consumers towards the retail-banking industry, together with an increase in security and ethical dilemmas around data and AI, demand organisations to be socially conscious, and transparent about their (data-related) actions. Hereby, AI-systems should be beneficial for the user, as well as society, and explainable in a sense that it is transparent and robust towards the user. A broad overview of the main insights around AI based on the user attitude can be seen in Figure 55.

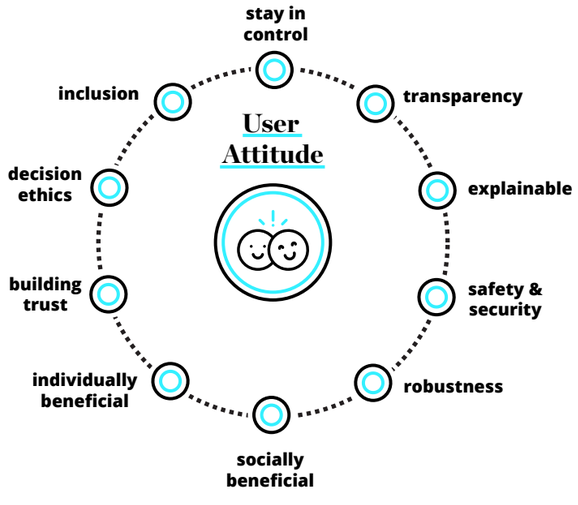


Figure 55 *Overview of main insights around AI, based on the user attitude in the retail-banking industry.*

D. User Needs

New Principles for Interaction

With the coming of the digital age, people (and younger generations especially) seem to increasingly lose affection for traditional banking institutions as these digital technologies brings along new principles for interactions and behavioural patterns that influence the user needs and values (Kreger, 2018). As digital natives, younger generations demand larger portions of their work life as well as social life to become digitalised. Hereby, users increasingly prefer to use digital bank channels for performing transactions and other banking activities which shapes the way that financial institutions interact with customers (BBVA, 2016). According to WorkingMediaGroup, 92% of millennials indicate they would choose a bank that offers digital services over a bank that doesn't (Yurcan, 2016). Even more so, according to theFinancialBrand, 46% of bank customers solely interact digitally with their own financial institution (Kreger, 2018). Slowly, the smartphone, together with other on-the-go digital devices, are becoming the foundational bank channel (BVVA, 2016), as younger generations increasingly see their smartphone as 'the new wallet' (Fiserv, 2016; Mchale, 2018). However, the fact that traditional points of contact have shifted to become more digital does not mean that consumers have a lower interaction rate with their bank (User Banking Interview, Appendix 5). In fact, millennial access financial information through their mobile device eight to nine times more often that other generations do (Singh, 2018). Furthermore, 72% of millennials that do use their banking application say that they access the app a few times a week, with 24% even indicating that they access it at least once a day (Pilcher, 2016). For banks, this means that they now have the opportunity to engage more with the customer and deliver more personalised offerings through their digital channels.

Nevertheless, when it comes to banking technology and innovation, two main factors hold back consumer adoption, namely awareness (not knowing it exists) and proficiency (not knowing how it works). Especially with regard to the offering of the more traditional (corporate) banks, many consumers lack either awareness or understanding of all of the different features of payment options of their own financial institutions (Fiserv, 2016; Interview Rabobank, Appendix 3). According to PwC only around 25% of all 'banking products' are available online (Kreger, 2018). However, people use digital channels in an increasingly different way, and expect brands to offer anything that they need, when they need it, without having to put in too much effort themselves (Interview Volksbank, Interview Rabobank, Appendix 3). As a result, the awareness, as well as proficiency of these digital banking products often remain relatively low.

Role of AI | Channel & Process Integration

As a consequence, managing the overall customer journey is essential in the customer's experience of a brand (Edelman & Singer, 2015). It is thus important for banking organisations to be able to deliver their content through a variety of channels (channel independent) and connect these in order to create a more coherent and person experience for their customer (Interview Rabobank, Appendix 3). However, there is often a lack of integration between different departments, leading to a fragmentation in coherency of the brand and overall experience of the customer (McWaters & Galaski, 2018; Interview ABN AMRO, Appendix 3).

> Often, a gap can be seen between the long-term brand building department, and the marketing or social media division that focusses on short-term customer engagement.
>
> **GUIDO SMIT - ABN AMRO DIGITAL MEDIA & DATA TEAM**

Furthermore, because of the often-outdated touchpoint- and data-infrastructure, financial advice and offerings are usually based on average assumptions and thus generic and impersonal (McWaters & Galaski, 2018; Interview Rabobank, Appendix 3).

By using AI-technologies, organisations are able to integrate such processes and channels, as well as these of partner organisations (Edelman, 2010; Personal communication Deloitte Expert, Joep Arends, Figure 7). By collecting and utilising the data of the consumer, organisations can better comprehend the individual decision journey of the customer to intertwine the overall experience of the customer (Edelman, 2010). Findings by Salesforce Research (2018) emphasise the importance of such a connected experience to the user. Their research indicates that 70% or all customers feels that a connected process is important in winning them over, and 73% would want to switch brands if an organisation is not able to deliver a consistent experience across all channels (web, mobile, in-person etc.).

Role of AI | Personalised Engagement
Digitising touchpoints, and offering AI-enabled solutions such as a more personalised customer experience journey does not does mean that the actual customer agent should be removed from the process. In fact, the contrary is true. Currently, consumer segmentation is still frequently performed by either the design or the marketing department, making it a slow process that have non-evolving user profiles as output (White, Addison & Fritz, 2018). However, AI-technologies enable brands to automatically build and maintain user profiles, and deliver these through intelligent dashboards that contain insights from past interactions with the consumer, 3rd party information and personal recommendations.

This way (human) customer agents can deliver a more personal experience, which is very important to the consumer (User Banking Interview, Appendix 5). This is emphasised by findings of Salesforce Research (2018) with 84% of all customers stating how essential they think it is to be treated like an actual person, instead of "just a number" (Salesforce Research, 2018). Even more so, 59% of customers indicate that a more personalised engagement based on past interactions is essential for them (Salesforce Research, 2018). However, most customer-service practises simply do not have enough men to provide every user with a personal response (in a timely manner).

> I am thinking about switching my bank because personalised service is very important to me and seems to be increasingly diminishing .
>
> **ABN AMRO CUSTOMER**

As a result, organisations often still force their customers through a linear engagement path that is largely irrelevant to their individual needs, context and situation (e.g. where they are in a journey) (Renner, 2019). With AI-technologies however, brands can provide all customers with a personalised interaction based on their stage in the journey, personal preferences and past interactions, even when thousands of customers call, text or email at the same time (Renner, 2019; Interview Rabobank, Appendix 3). Furthermore, when the automated systems take on the large sum of easy, repetitive and low-emotional questions, the human customer agents have more time to handle the important, unique and high-emotional customer requests (Capgemini Digital Transformation Institute, 2017).

> Websites should adjust the content according to the customer's preferences by using their personal data, while still maintaining a clear and distinct brand feel throughout the complete experience.
>
> **ESMARIJE VOORBOOM - RABOBANK TEAM LEAD WEBSITE & BOTS**

> If you do not create the right expectation patters, people expect that they can do 'everything' with a chat interface which is going to turn out as a disappointment.
>
> **BART BELLEFROID - RABOBANK PRODUCT OWNER AI-BOT**

Furthermore, when using such customer-facing AI-technologies, it is essential to manage the expectations of the customer as well as possible by trying to 'under promise' and 'over deliver' so that people are not disappointed by the interaction (Esch, 2018; Interview Rabobank, Appendix 3).

Role of AI | Predictive Analytics
Furthermore, based on predictive analytics, AI-technologies allows to predict consumer behaviour and allow for pro-active services, containing specific and accurate offerings and recommendations (McWaters & Galaski, 2018; Interview Volksbank, Interview Rabobank, Appendix 3). By predicting consumer needs and behaviours, and using human-like ways of communication such as conversational interfaces, brands are able to create a seamless and more intuitive experience for the user. This could also help to increase the proficiency of the existing offerings. Current Graphic User Interfaces (GUIs) often have fixed interfaces to offer an interaction experience that has the most intuitive, and thus the lowest interaction cost (sum of mental and physical user effort) for the majority of their target customer (Budiu, 2013). With AI-systems such as conversational UI (CUI), personalised content and adaptive interfaces (Fluid UI), organisations can greatly reduce the interaction cost of the individual experience of the user (Personal communication Deloitte Expert Franklin Heijnen, Figure 7). However, as stated before, it is essential that such predictions do not make the user feel like being (wrongfully) labelled. Hereby the user should have the possibility to intervene with the AI-system at all times, to change its assumptions or get in touch with an actual human-agent (Interview Rabobank, Appendix 3).

Communication & Community Needs
Furthermore, with these new digital channels (especially when conversational in nature) people expect organisations to be reachable 24/7, and for their opinions and concerns to be heard (Kreger, 2018). This is amplified with the coming of social networking, where the two-way communication stream in combination with online (brand) communities increasingly empowers the customer.

> We think that you should just be able to message a business in the same way you message a friend. You should get a quick response.
>
> **MARK ZUCHERBERG (Heath, 2016)**

Hereby, it is important for organisations to try and manage not only their own channels, but also community owned channels (Pilcher, 2016; Interview Rabobank, Appendix 3). Because such community owned digital channels (e.g. social media) could greatly influence the buying behaviour and loyalty of consumers, especially of the younger generations. This because younger generations indicate that the most important motivation to choose for a financial institution is because of recommendations by family or friends (Kasasa, 2016). Hereby, any negative impressions could have a large impact on the popularity of financial institutions (Pilcher, 2016). According to Salesforce Research (2018) 72% indicate that they would share good, and 62% indicate that they share bad experiences with others.

Role of AI | Conversational Experience

The use of automated conversational experiences does not only enable 24/7 customer support, but also allow for a meaningful touchpoint for user input. With the use of Natural Language Processing AI-systems are able to generate useful patterns and insights from unstructured data (e.g. user feedback) as well as structured data (e.g. user exiting the application/ unsolved intent). By doing so, banks can more easily experiment with developing their offering and innovate to stay up-to-date and relevant to the customer (McWaters & Galaski, 2018). These automated feedback points should be present during 1-on-1 contact (e.g. using NLP through the conversational interface) as well as on community level (e.g. through sentiment and content analysis). Organisations could thus easily gather useful insights about their (to-be) customers.This works according to the principle of the 'Virtuous Cycle of Data' (Figure 56) that describes how products and services can be continuously improved using customer data (McWaters & Galaski, 2018).

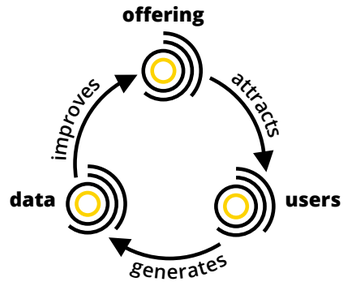


Figure 56 *Improve offerings through 'Virtuous Cycle of Data', adopted from McWaters & Galaski (2018).*

Hereby, the automated systems could thus easily user test content on an individual level (e.g. through A/B-testing) to improve the experience on all levels (UI, UX and CX). Even more so, as customer become co-creators of the overall product/ service experience they will start to 'love' the brand more and thus become more loyal, an effect known as the 'ikea' or 'I designed it myself' effect (Franke, Schreier & Kaiser, 2010; Norton, Mochon & Ariely, 2012; Travis, 2001).

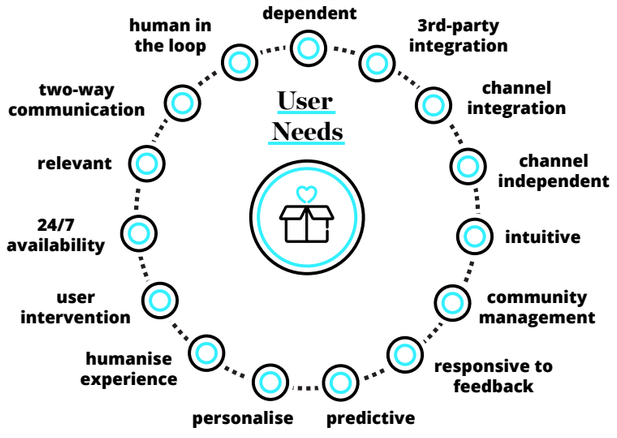


Figure 57 *Overview of main insights around AI, based on the user needs in the retail-banking industry.*

Conclusion User Needs

Customers increasingly expect proactive service, connected experiences across channels and personalised interactions based on their previous engagement (Salesforce Research, 2018). However, traditional players often lack the ability to integrate their offerings and connect those to the consumer. Through integrated and predictive AI-technologies, organisation can offer consumers a seamless integration with existing channels and social networks (Fiserv, 2016; Kreger, 2018; Singh, 2018) in which they are empowered to (indirectly) co-create their own experience. A broad overview of the main insights around AI based on the user needs can be seen in Figure 57.

E. Internal Competition

Brand Commoditisation

When it comes to the big players within the Dutch retail-banking landscape people seem to think their bank doesn't offer anything special over other banks (User Banking Interview, Appendix 5). Even more so, 34% of Dutch banking customers couldn't even indicate a single element when specifically asked what they thought it is that distinguishes their bank from other (User Banking Interview, Appendix 5).

> "In my eyes, all big banks simply offer the same, the difference is too much in the nuances."
>
> **RABOBANK CUSTOMER**

This is mainly because the old ways of differentiation (e.g. price, speed and access) commoditised banking institutions (McWaters & Galaski, 2018). According to Peter Eikelboom, innovation manager at Volksbank (Appendix 3), the problem with 'basic banking' jobs (e.g. transactions, profiling, financial advice etc.) is that it is easy to copy by other banks. Although it might help to be a first mover when it comes to launching new services (e.g. Tikkie by ABN AMRO), innovations that prove to be successful will most definitely be copied by other banks. Especially when financial organisation become big and successful they become increasingly dull and colourless, and thus easier to replicate (Interview Volksbank, Appendix 3).

Because of this, banking organisations should look at the 'extra experience layer' that they want to deliver to their customer. By adding such an experience layer (unique and lasting essence behind organisation) over the basic banking layer, your identity becomes unique and is thus not easily copied by others. Hereby, the role of banks moves from being purely transactional to delivering an actual value to the customer.

However, the fact that banking products can currently easily be copied is only partly responsible of the commoditisation of traditional banking institutions. Another important aspect is that the personal customer connection which was historically build at local branches is increasingly diminishing (McWaters & Galaski, 2018). In the past banks knew who you were. You visited the local banking branch and knew the manager/ financial advisor, who also knew you and everything about you (Interview Volksbank, interview Rabobank, Appendix 3). As banking institutions lost their personal connection with the client, they slowly turned into a commodity and became more anonymous.

> "I see my bank as the keepers of my money, nothing more."
>
> **RABOBANK CUSTOMER**

Role of AI | Personal Banking Journey

As a bank, you want your customer to get the feeling that the bank really 'knows you' and stands beside you during important moments and decisions in your life (e.g. study/ graduation, marriage/ children, buying a house, death of loved ones) (Interview Volksbank, interview ABN AMRO, Appendix 3; User Banking Interview,Appendix 5). This way banks give a personal meaning to the (rational) money of the customer, thus playing a meaningful role in their lives. With AI technologies, banking institutions can increasingly focus on a customised experience with tailored offerings, advise and recommendations. Instead of a one-to-many experience, AI allows for a highly customised journey with personalised products, content, interactions and seamless authentication to be there for the consumer when it counts (McWaters & Galaski, 2018; White, Addison & Fritz, 2018; "AI-System Model" on page 49).

> The role of banks should move from being purely transactional to delivering an actual value to the customer, for example by being there during important life events.
>
> **PETER EIKELBOOM - VOLKSBANK INNOVATION MANAGER**

However, personalisation requires personal data about the customer which might seem in contrast with the earlier mentioned (growing) privacy and security concerns around personal data. And even though such data transactions could be made very secure, it has been shown that younger generations do not appreciate these privacy and/ or security steps to be too obtrusive (e.g. long secured forms) (Kreger, 2018). It is thus about the balance between privacy/ security, usability and level of personalisation. According to Peter Eikelboom (Appendix 3) it should be crystal clear for the consumer what (services) s/he gets in return for their data.

As a consequence, the data that the consumer 'releases' should only be used for the essence of what is was supposed to be used for. The data shouldn't be sold to others, or used for other purposes without the customer knowing (moving away from 'once your data has been shared, is will be shared forever'). Hereby, there should be a clear WIN/WIN situation for all parties (organisation & especially consumer), again emphasising the social role that banks will need to play in society. Even more so, if they trust organisations to be honest and transparent, the majority of consumers are prone to share personal details if that ensures a more personalised user experience or more accurate recommendations (Salesforce, 2016).

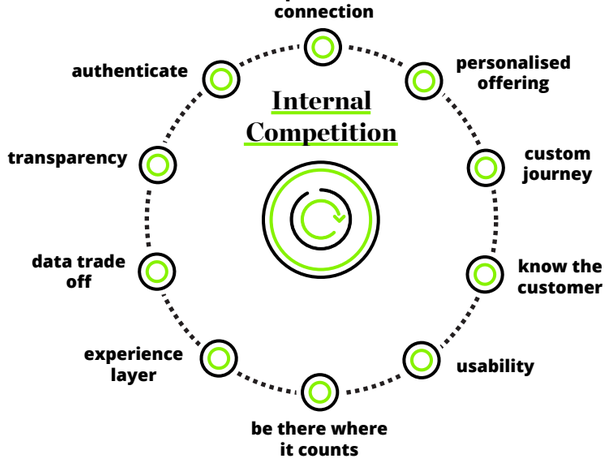


Figure 58 *Overview of main insights around AI, based on the internal competition in the retail-banking industry.*

Conclusion Internal Competition
Because the 'basic banking' offering which differentiates on price, speed, access etc. is increasingly easier to copy, most players within the retail-banking industry are now a commodity in the eyes of the consumer. Through AI-technologies, banking organisation can create a more personal connection through tailored journeys, products and interactions. However, as personalisation requires a data-trade off, the added value of personalisation should be clearly communicated to the consumer. A broad overview of the main insights around AI based on the internal competition can be seen in Figure 58.

F. External Competition

Threat of New Entrants

The biggest threat to the competitive advantage of banks may not even come from within the banking industry itself. As stated above, younger generations regard their relation with a bank mostly transactional (functional) in nature and do not see the direct added value of their own bank over that of other banks. As a result, most believe that innovation will come from outside the industry with 50% being convinced that start-ups will overtake the banking practices, and 73% indicating that they would be more enthusiastic with new financial services from technology giants (e.g. Google, Apple or Amazon) than from their own nationwide bank (Viacom Media Networks, 2013). Consequently, one in three millennials believe that eventually they won't need a bank at all anymore.

The emerging industry of Financial Technologies (Fintechs) describe the rise of non-traditional players within the retail-banking industry. Technology driven start-ups as well as established players increasingly try to compete with the traditional financial offerings (Adobe Inc, 2018; FinTech Global, 2018). Because of the increasing trend of open-banking (made possible by regulations such as PSD2) these new entrants can quickly innovative and adapt their digital solutions as they do not have such a complex (back-end) infrastructure (White, Addison & Fritz, 2018; Interview Volksbank, Appendix 3). This is kickstarted by Google, who started to get access to banking transactions of European citizens in early 2019 (Betlem, 2019). Furthermore, it is usually easier for such companies to bypass some of the regulatory guidelines and costs that are associated to banking services.

Especially large technology corporations have a big advantage as the have already acquired the attention, loyalty and data a lot of customers by offering free products and services to the customer (McWaters & Galaski, 2018). E.g. in western countries this is now slowly happening with services such as Applepay, whereas in China Tencent (WeChat) already took over a large portion of the transactional role of banks (Interview Volksbank, Appendix 3). This effect is called brand intermediation or brand invisibility (Wilson, Daugherty & Bianzino, 2017, Figure 53).

Ecosystem Curator

According to Guido Smit (Interview ABN AMRO, Appendix 3), banks could deal with this by either focusing on delivering value where it counts, or on delivering a really good and safe back-end component. However, the latter would mean that from a branding perspective you would lose touch with the customer and that you would turn more into a B2B proposition. Furthermore, with fast moving new entrants, it is a gamble to try and become the long-term preferred player as a B2B back-end service provider as this means that they won't build and maintain a relationship with their end-consumer. Therefore, as consumers have more choice than ever before when it comes to financial products/ services, it becomes more important for financial institutions to differentiate themselves from the growing competition (Interview Volksbank, Interview ABN AMRO, Interview Rabobank, Appendix 3). Therefore, in order to maintain an added-value over the myriad of new entrants, banking institutions should start playing a different role than they currently do: moving from assets manager to 'Ecosystem Curator' (McWaters & Galaski, 2018; Interview Volksbank, Interview ABN AMRO, Appendix 3).

> The traditional way of establishing loyalty doesn't work any longer, and for the big traditional bank the challenge lies in the transition of finding this new way of conveying your brand to the customer.
>
> **GUIDO SMIT - ABN AMRO DIGITAL MEDIA & DATA TEAM**

Role of AI | Ecosystem Curator

By integrating 3rd-party data through AI-technologies, banking organisations can really get to know their customer beyond their financial situation, and function as a facilitator between different partner organisations (a.k.a ecosystem curator). Because as banks might not be able to be the preferred party when it comes to transactional activities in the near future, they should seek collaborations instead of trying to compete and deliver shared solutions with third parties such as Fintechs or other commercial/ governmental organisations (McWaters & Galaski, 2018; Interview ABN AMRO, Appendix 3). Hereby, automated AI-systems could monitor and automate parts of the customer's routine tasks and decisions to ensure that they have an ease of mind on a daily basis (McWaters & Galaski, 2018). Hereby, as banks could thus play an essential role in facilitating different data streams of the customer, they might metaphorically turn into 'data vaults' rather than 'money vaults' (Interview Volksbank, Interview ABN AMRO, Appendix 3).

This would allow banks to play a trusted a powerful role in regulating the personal data profile of their customers. Hereby, banks could be the point of control for customers to manage and control this data through their personal (digital) ID. According to Guido Smit (Interview ABN AMRO, Appendix 3), banks might be a trustworthy party in doing so as start-ups might not have the right back-end infrastructure, and big technology companies might have ulterior motives with the data (e.g. selling to 3rd parties). Customer could hereby create, update, save and retrieve their (personal) data profile at their preferred bank, enabling the bank to deliver a more personalised service. Lastly, as future propositions might thus be more data-orientated rather than only finance orientated, financial institutions will need to find a balance between protecting consumer data and facilitating innovation through the AI-solutions that they offer (McWaters & Galaski, 2018).

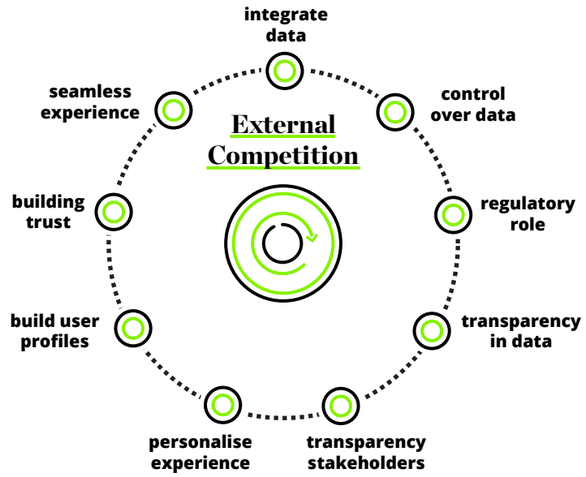


Figure 59 *Overview of main insights around AI, based on the external competition in the retail-banking industry.*

Conclusion External Competition

New entrants in the retail-banking industry might substitute the 'basic banking' (e.g. transactional) offering. AI-technologies allow banking organisations to move away from being purely functional. Hereby, the future 'everyday' bank should be seen as a personalised and trusted advisor that choreographs the digital ecosystem around its customer while delivering an exceptional, tailor-made user experience. Hereby, AI-systems should integrate and centralise customer data from various stakeholders, and build user profiles to enable a personalised experience to the user. A broad overview of the main insights around AI based on the external competition can be seen in Figure 59.

4.2. Design Principles

By performing an exploratory research (industry analysis) on the role and impact of AI within the retail-banking industry, a wide range of insights have been gathered. These insights contain opportunities, threats and criteria for the adoption of AI-technologies within retail-banking. However, in order to make these insights actionable for design and strategy professionals of Deloitte Digital in a variety of service design projects, they are converted into (generic) design principles for AI. These design principles fall under the umbrella aforementioned vision on AI-systems (page 49), thus benefitting the individual brand experience of users.

A. Method

In order to generate the design principles, an extensive brainstorm session have been performed based on the insights from explorative research (page 75). Hereby, the 34 hollistic design opportunities that have been found in the explorative part of the industry analysis have been extended to +/- 160 concrete design opportunities (See Appendix 6 & Figure 61). These have then been clustered (Figure 62) in order to generate five generic but actionable design principles, consisting out of 2-4 sub-design principles for customer-facing AI. This has been done through an iterative process with multiple validation talks with Deloitte experts.

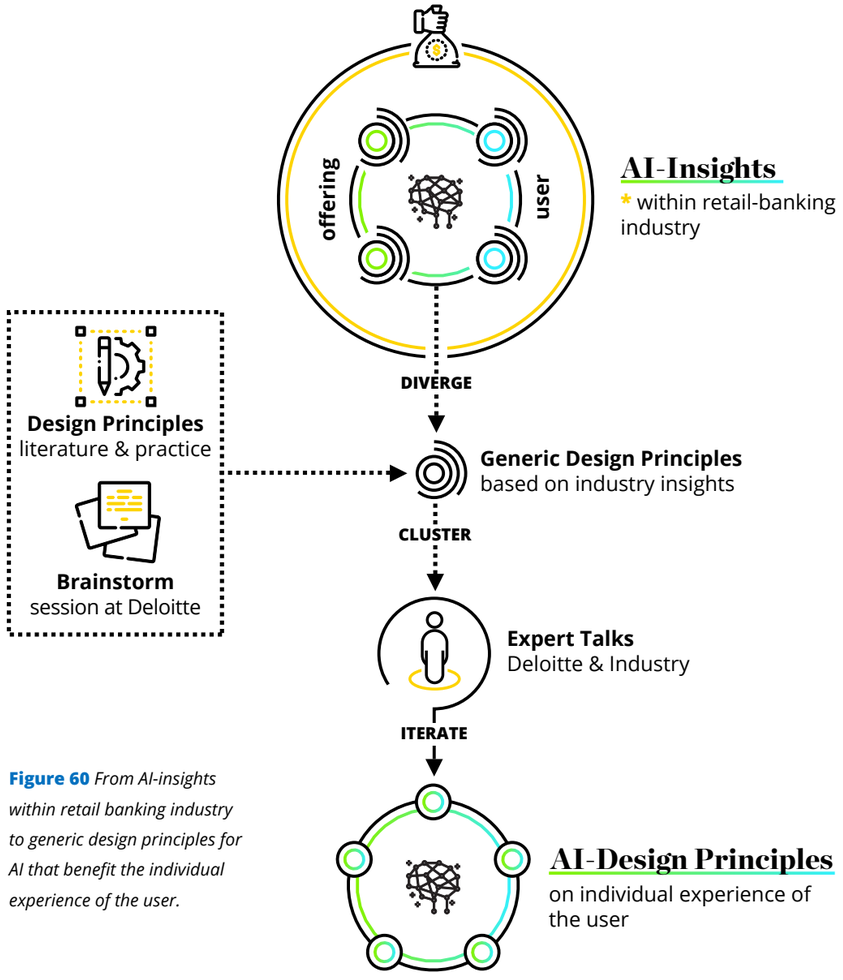


Figure 60 *From AI-insights within retail banking industry to generic design principles for AI that benefit the individual experience of the user.*

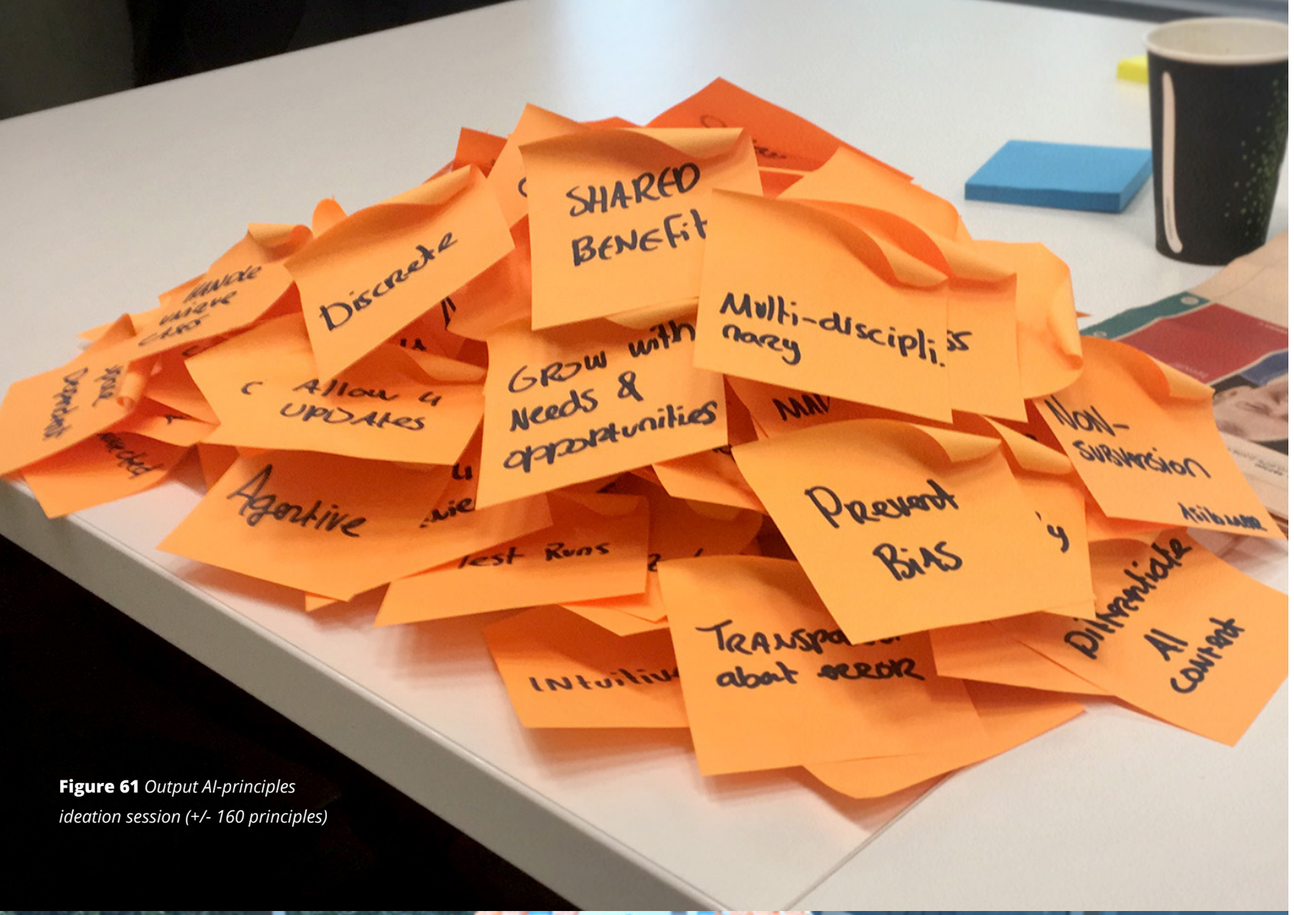


Figure 61 *Output AI-principles ideation session (+/- 160 principles)*

Figure 62 *Initial clustering of design principles (first iteration).*

B. Design Principles

The AI design principles enable and stimulate the creation AI-augmented brand experiences. They optimise the potential of customer-facing AI-technologies, and indicate clear design opportunities as well as guidelines. Each cluster is a subdimension of 'the individual experience', stemming from the vision (page 49) and thus aims to benefit the overall brand experience of users. The different design principles (main clusters), including the sub-elements (subclusters) will be elaborated in more detail below. In Figure 63 - Figure 66, the relation of the clusters to the industry insights can be seen.

Intuitive AI

simplify individual experience

Although AI and accompanying processes might be complex from the perspective of the user, the experience and interaction itself should be simple and intuitive. As simplicity is relative, it could only be achieved through a thorough understanding of the thinking processes of the user. With the help of AI-technologies, brands can better comprehend the customer on an individual level. This way, brands can simplify the overall individual experience, instead of making it more complex. In order to simplify the individual experience of users, the following for elements have to be considered:

// Intuitive

As AI-technologies should be comprehensible and not overcomplicate the experience of the user, it is therefore essential that the AI-system works in an intuitive way. AI-technologies can achieve this by tailoring the individual experience, and making the overall interaction more human-like through conversational technologies. Besides, for the user, this means that they should not have to put in more effort than before (without the AI-system) in order to achieve their goal.

// Expectation

In order to deliver a satisfying individual experience, it is important that the user is educated about what the AI-system can, and cannot do. Especially because it might be unclear to users what the capabilities of such AI-systems are. It is thereby essential to manage customer's expectations by being clear about the end-goal and capabilities of the AI-system.

// Predictive

By predicting individual behaviour, AI-systems have the ability to do some of the 'thinking' and 'planning' for the user, simplifying the overall experience for the user. Hereby, AI-systems can predict the most probabilistic user goals and infer what it is that the user needs.

// Integrated

AI-technologies enable brands to work operate various channels, including that of 3rd parties, while integrating relevant information and processes. By aligning and connecting different systems and parties, the overall experience will be more coherent and tailored to the individual. Hereby, the AI-system also needs channel independency.

Responsive AI

adapt individual experience

A big advantage of AI is that it is able to automate some of the processes that initially needed a human. However, this means that there should be a balance between the autonomy of the AI-system, and human control. The AI-system should automatically adjust according to the context of the user, but still be responsive to intervention from the user. As a consequence, in order to adapt to the individual experience of the user, the following three elements should be considered (see next page):

// Intuitive
As AI will make some automated decision, it is essential for the user to be able to intervene whenever they want. This way, users will still feel in control, and the AI-system will be prevented from making any wrong definite decisions. Users should always have the feeling that the machine listens and acts according to what the user needs and wants.

// Adaptive
Service solutions are increasingly used within the personal context of the consumer (e.g. desktop, mobile, homepod etc.). As a consequence, brands take a new, more intimate place in the life of its customers. AI powered touchpoints should recognise and adapt to the context of use of the consumer, and thus offer a different experience, for instance during driving (e.g. by using voice input) than at work (e.g. by using text input).

// Feedback
The user should always be able to provide feedback on the experience of the AI-system. This way, such AI-systems can learn from user input and slowly become more fitting to the individual user. As conversational technologies fully enable a two-way communication stream, brands can co-create the overall brand experience together with the user.

Personal AI

build individual experience

As brands will start offering more individual experiences through AI-solutions, they should slowly build this from the 'basic brand experience' layer. Therefore, in order to build the individual experience of users and increase the loyalty and engagement of their customer, the following two elements should be considered:

// Individual
As AI could retrieve and generate customer insights on an individual (micro-)level, customer segmentation and targeting can also go as far as an individual level. This personalisation will be mostly automated, based on customer data.

// Emotional
Through conversational AI-technologies, brands can humanise their brand interaction as users tend to anthropomorphise such interactions. It is important for brands to be deliberate to what extent they want to humanise the experience without setting wrong expectations about the interaction.

Beneficial AI

augment individual experience

From the perspective of the user, AI should not merely be used for the benefit of the organisation. User's should be convinced that such AI-systems have an actually benefits themselves, as well as their social circle, and even society (corporate social responsibility). Hereby, in order to augment the individual experience of users, the following elements have to be considered:

// Individually Beneficial
The user should have the feeling that AI-systems empower them in their envisioned activities. These AI-technologies should thus be purposeful in a sense that they are relevant to the customer, and actually provide them with an added-value.

// Socially Beneficial
As organisations are increasingly expected to be socially responsible, AI-solutions should take the societal impact into consideration and aim to deliver actual meaning, or shared benefit to the society as a whole.

Explainable AI

explain individual experience

For the (user) adoption and engagement of AI-technologies, it is essential for consumers to gain trust into the AI-system by understanding its reasoning, outcomes and in what way the AI-system is safe and secure. Therefore, in order to explain the individual experience to the user, the following two elements should be considered:

// Robustness
An essential part of building trust in by providing the users with a safe and secure feeling while using the AI-system. The AI-system should thus be transparent and inform/ educate the user about any safety or security issues or threats. By emphasising a secure experience throughout, the user will perceive the system as more robust and thus trustworthy. Besides this, it is important for the AI-system to be transparent about personal data gathering, usage and sharing.

// Transparency
It might be unclear to the user whether or not AI-technologies are involved. It is important for the consumer to be made aware of this so that they are stimulated to remain critical of the output and actions of such an AI-system. Furthermore, in order for users to trust the outcome of the AI-system, it is important to be clear about the decision-making process that such systems have. By explaining the reasoning, users will better understand how decisions are made and underlying processes work which will eventually diminish the doubts and mistrust that they might have.

C. Conclusion Design Principles

Intuitive AI
Simplify individual experience of the user by making the experience more intuitive, setting expectations, predicting user behaviour and integrating systems and processes.

Responsive AI
Adapt individual experience according to the context of the user while allowing the user to stay in control and provide feedback to the AI-system.

Personal AI
Build individual experience based on personal preferences and interactions of the user to create an emotional connection between the user and AI-system.

Beneficial AI
Augment individual experience of the user by letting the AI-system benefit the individual as well as society.

Explainable AI
Explain individual experience and build individual trust by offering transparency in the reasoning and robustness of the AI-system.

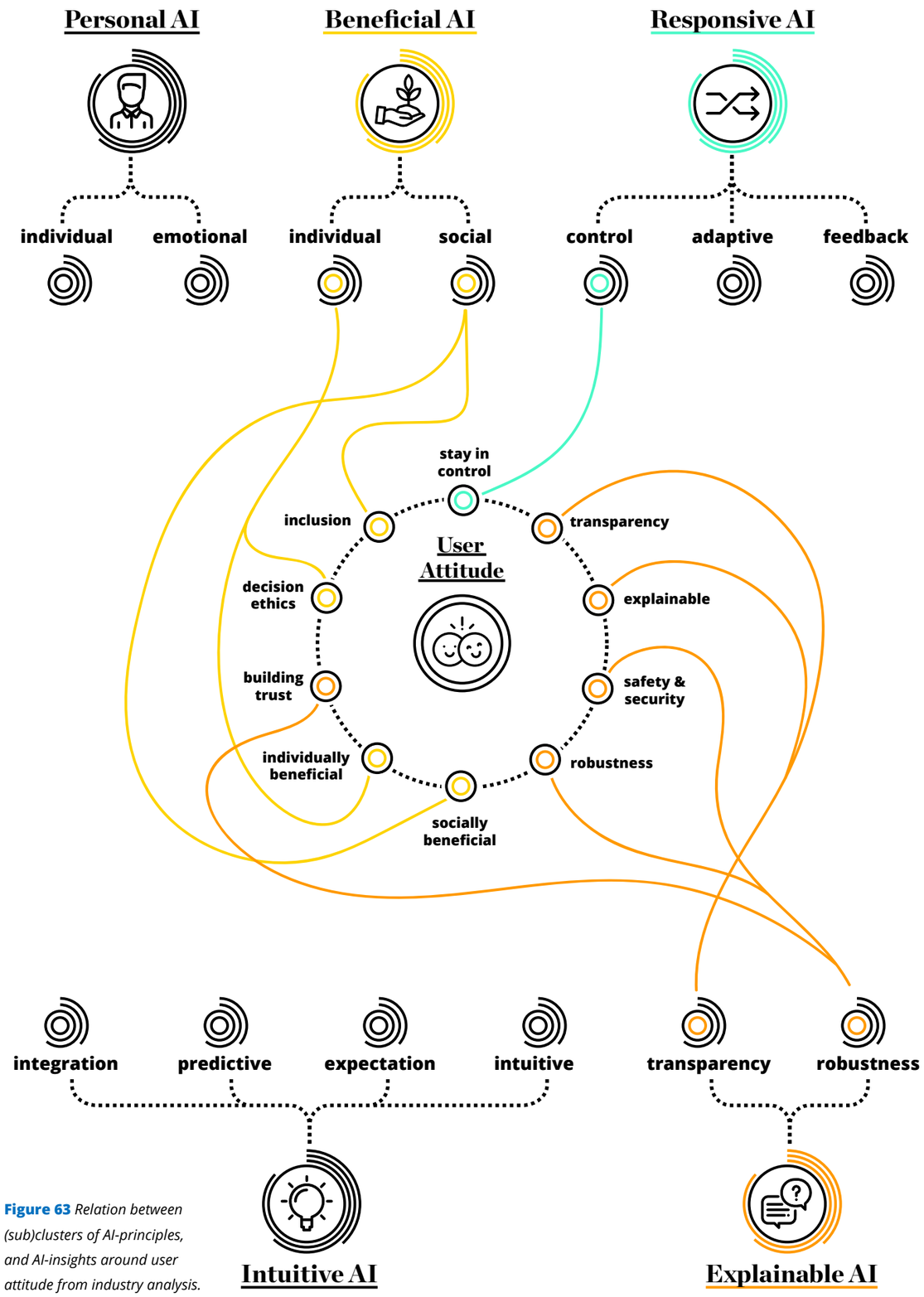


Figure 63 *Relation between (sub)clusters of AI-principles, and AI-insights around user attitude from industry analysis.*

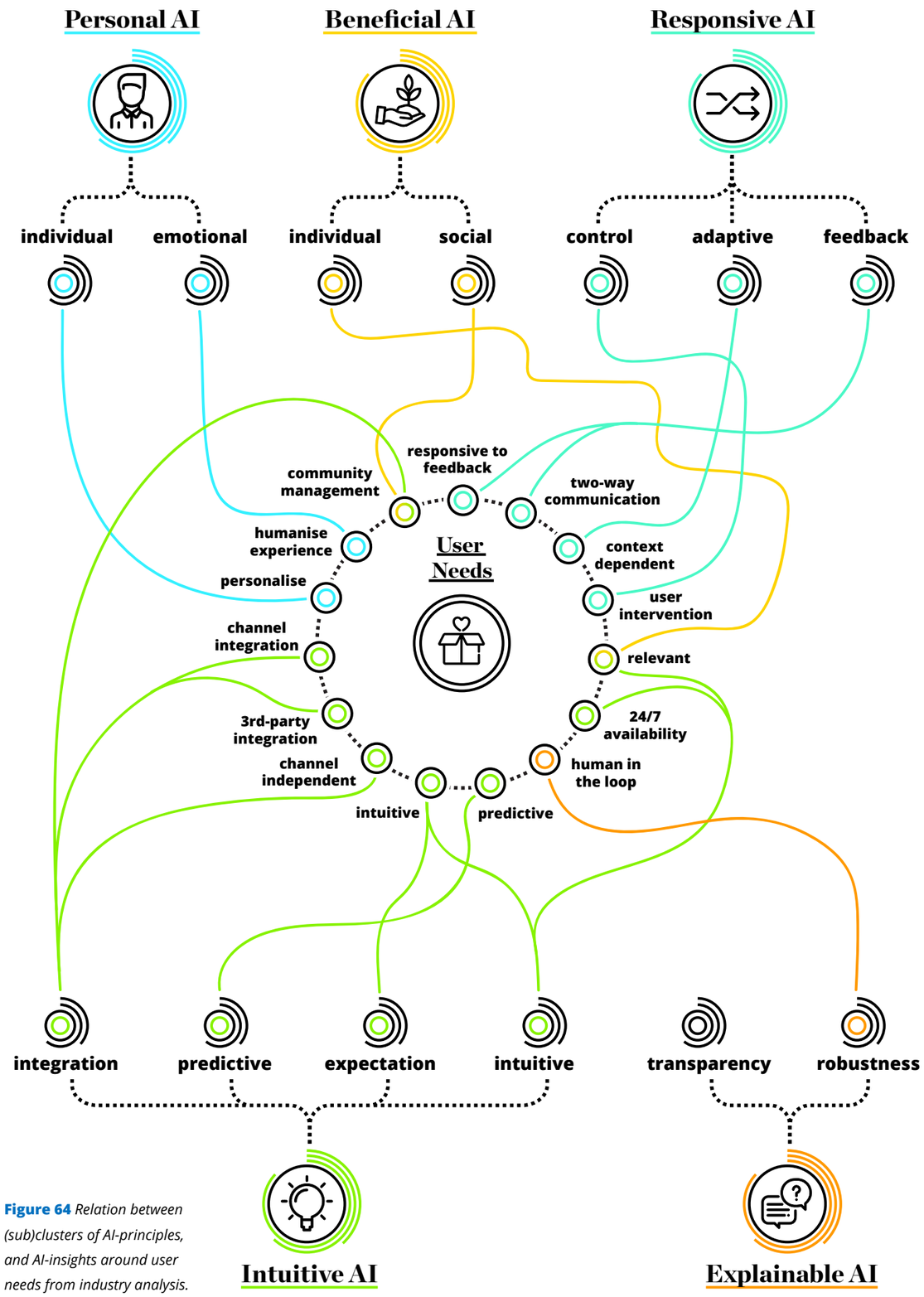


Figure 64 *Relation between (sub)clusters of AI-principles, and AI-insights around user needs from industry analysis.*

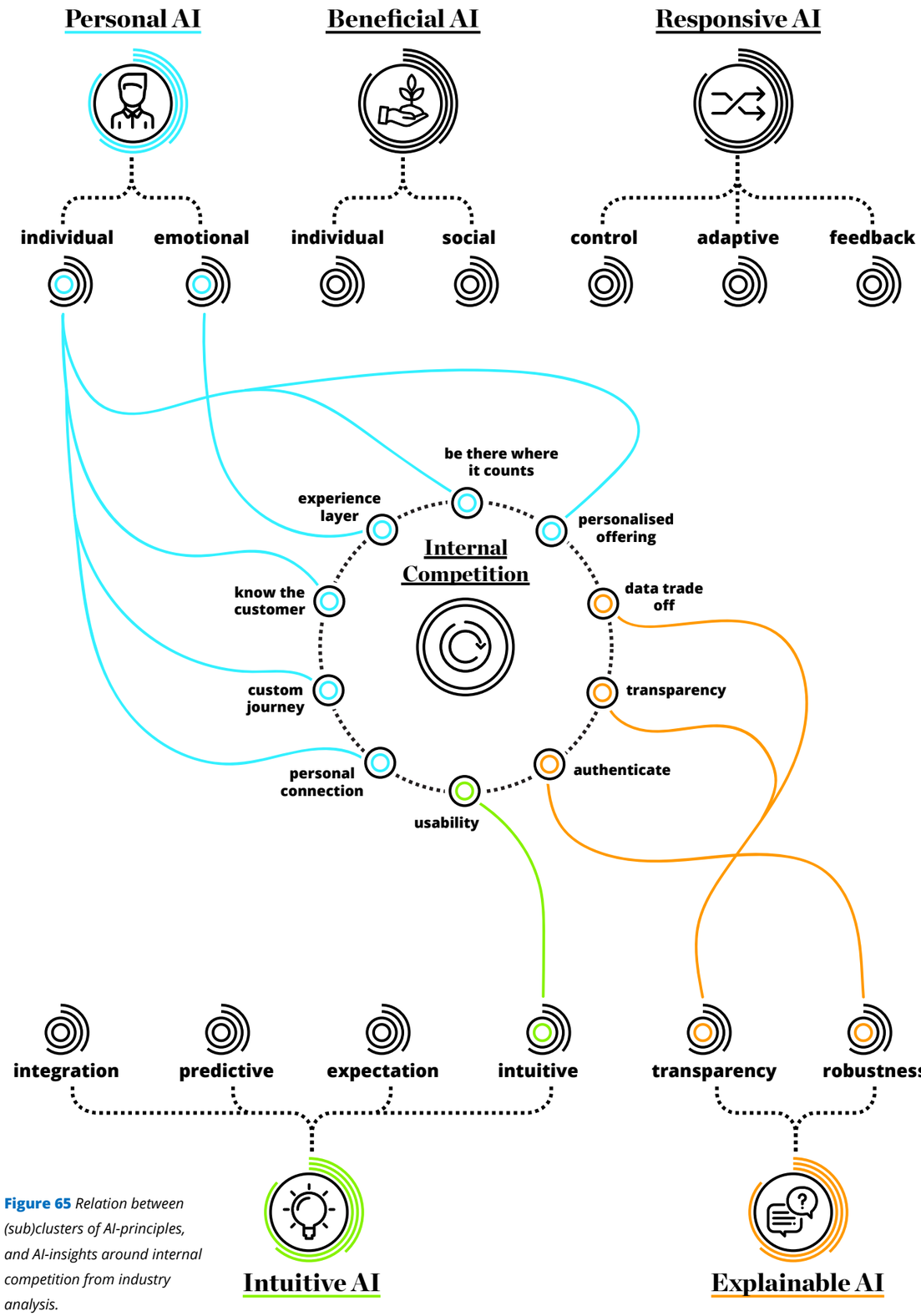


Figure 65 *Relation between (sub)clusters of AI-principles, and AI-insights around internal competition from industry analysis.*

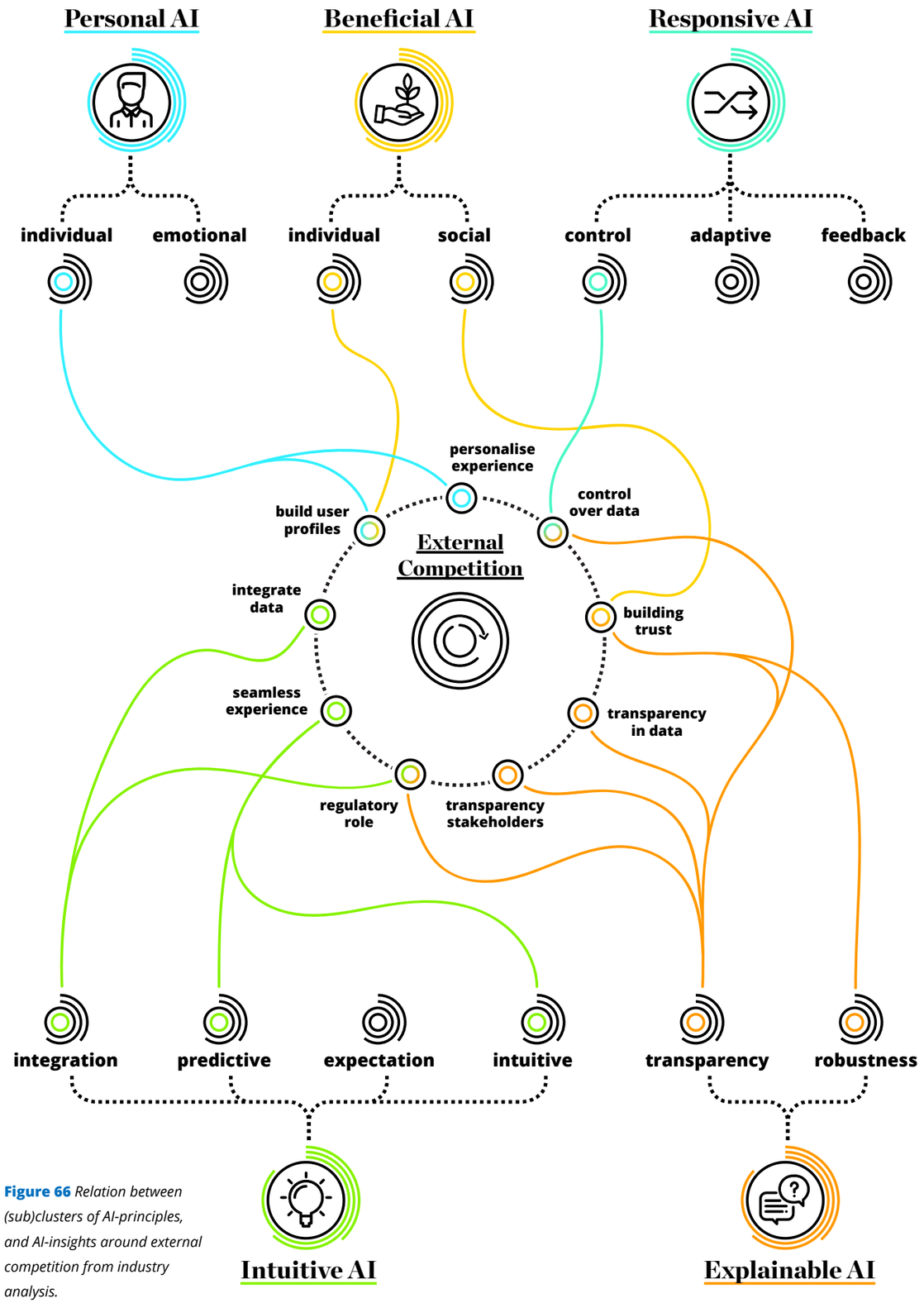


Figure 66 *Relation between (sub)clusters of AI-principles, and AI-insights around external competition from industry analysis.*

4.3. AI-Accelerator Deck

A. Method

Above, the insights around AI have been concretised into generic design principles for AI, consisting out of 5 main clusters and a total of 13 sub-clusters. However, the end-goal is for designers and strategists to use these principles during their design process. Hereby, the AI principles will be related to the aforementioned brand experience framework and design fields of customer experience (CX), user experience (UX), and user interaction (UI) design. Hereby, the elements from the brand identity and brand image canvas (page 23) are included within the design principles (Figure 68, Appendix 7). This has been done by performing multiple ideation sessions (Figure 69), after which the different elements have been translated into concrete design principles for each design level (CX, UX, UI) (Figure 67). The final output of the various design principles is converted into an actionable card deck.

This deck can be used by Deloitte employees during various stages of the design process. There had been many iteration cycles for these principles, based on expert (validation) talks within Deloitte, validation sessions (and follow-up talks) with TU Delft students doing AI-related projects (Figure 73), and finally a client session with the Volksbank and Deloitte Digital designers and strategists ("Co-Creation Session" on page 112, Figure 74). In conversation with Deloitte (Matthé Stet, manager Deloitte Digital) the design levels customer experience (CX), user experience (UX), and user interaction (UI) design have been renamed to 'service design', 'UX design', and 'UI design' respectively. This because these terminologies resonate better with Deloitte strategists and designers. In the next part (page 87) the design deck and cards will be explained in more detail.

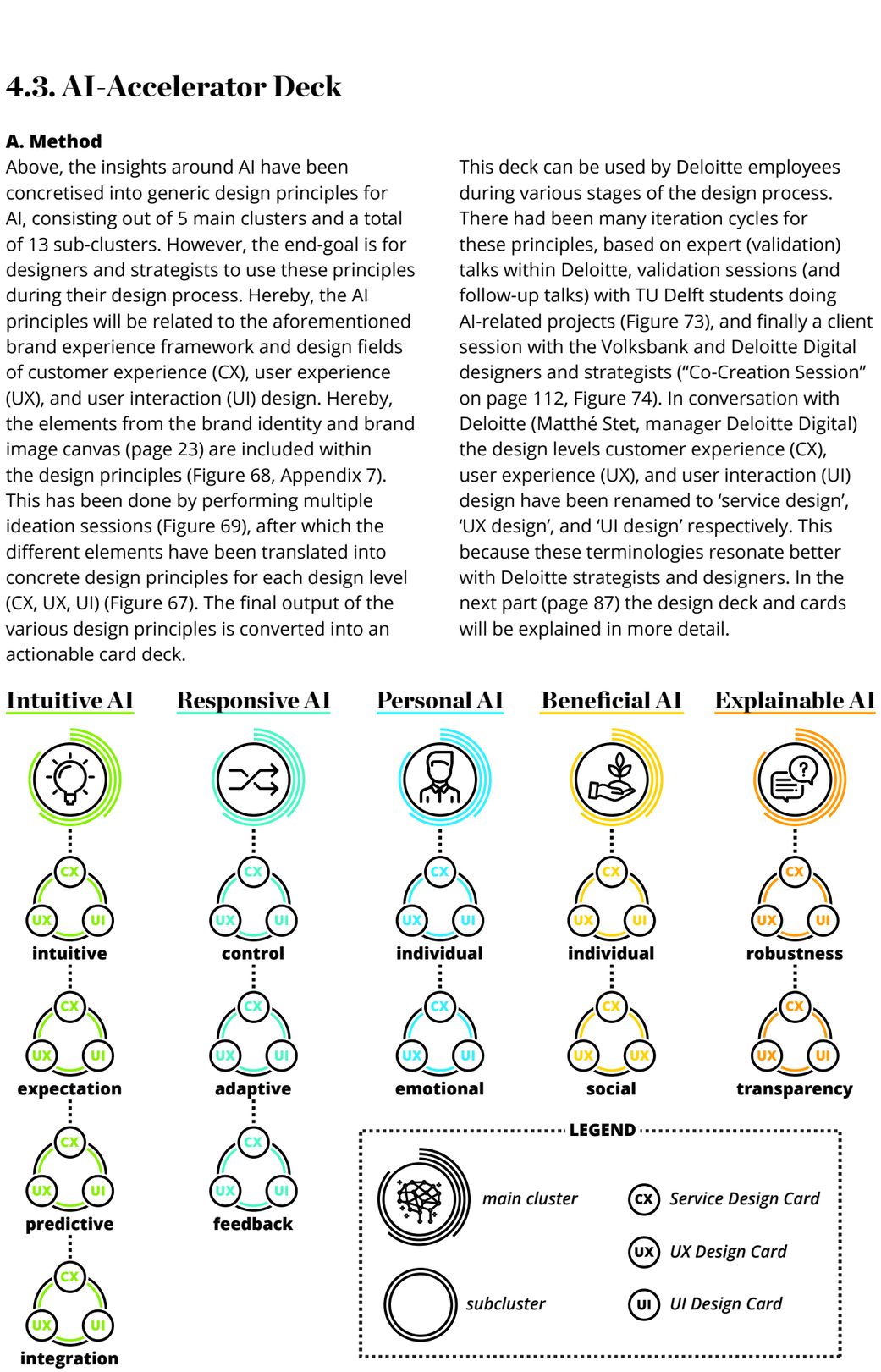


Figure 67 *Overview of main clusters, subclusters and detail-level (CX, UX, UI cards) of the design principles.*

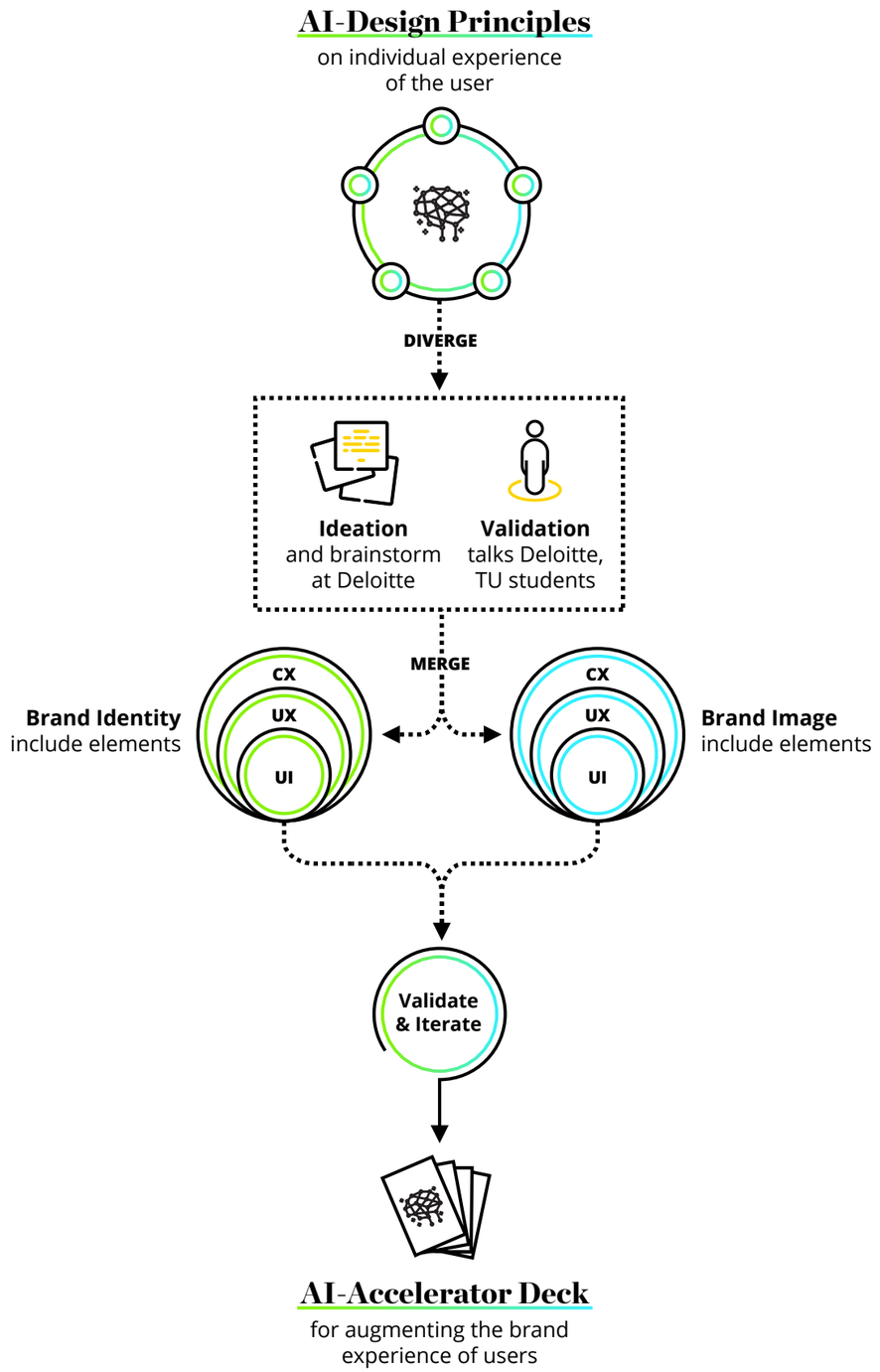


Figure 68 *From generic AI-design principles to actionable principles for the different levels of design (CX, UX, UI). This is shaped into a concrete card deck (AI-Accelerator deck) which can be used to augment the brand experience of users when designing for AI.*

Figure 69 *Ideation of design principles for the different design levels of service design (CX) (middle), UX design (top) and UI design (bottom).*

B. AI-Accelerator Deck

The AI-design deck has been nicknamed the AI-accelerator deck, as the content of the cards stimulate and guide services around AI-systems that serve to augment the (brand) experience of users. The cards contain the main cluster on the back, and are colour coded per main cluster (thus five in total). Furthermore, the subcluster is stated underneath the main cluster, as well as on the front of the card. Furthermore, on the front of the card the (unique) name of the design principle can be read on top, with a short summary from the perspective of the user directly below. the various design principles, and also contains a hint of the colour code that links to the main cluster.

The image is meant to more easily distinguish Underneath, a more elaborated description of the design principle can be read. Although reading the top line may in some cases be enough for users of the design deck to understand the principle, the description below hands the deck users with concrete guidelines and criteria. Finally, the bottom line reads for which design level the design principle is meant, in order to indicate to the deck user when the cards should be ideally used in the process. A more elaborate description of the card elements can be seen in Figure 70. A summary of all the cards is shown from Table 1 till Table 5 (per cluster). The complete card deck can be found in Appendix 8.

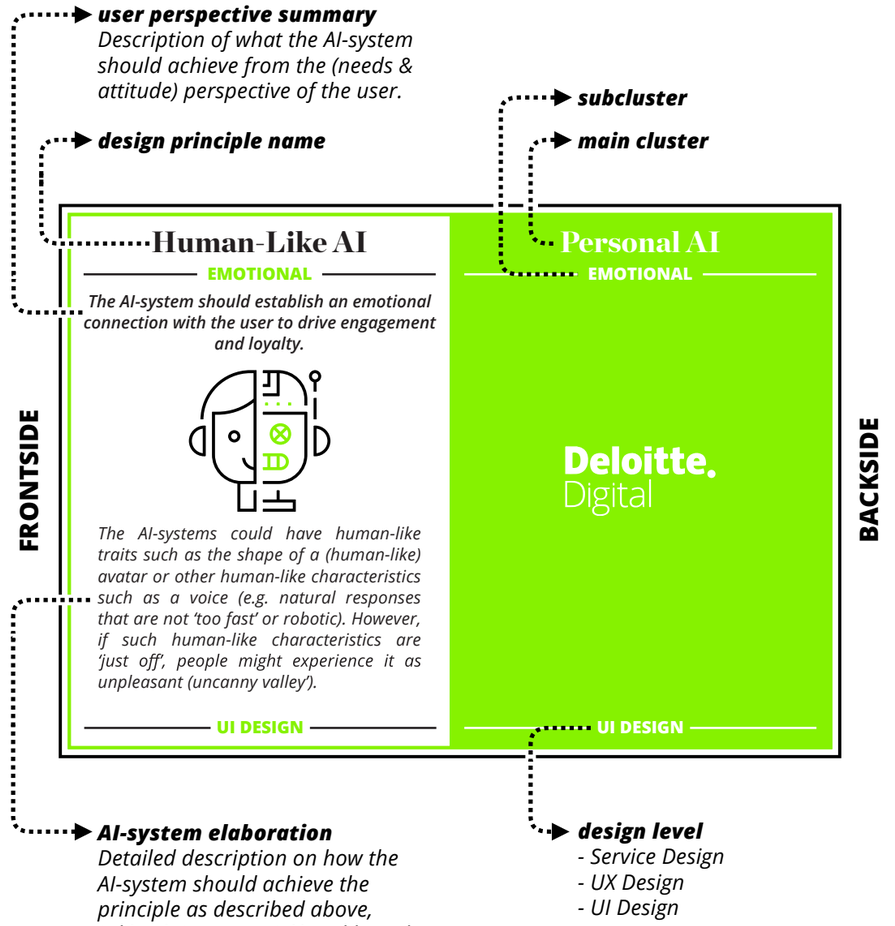


Figure 70 *Example design principle card with explanation of the different elements that are included.*

Intuitive AI

INTUITIVE

Natural Flow
CX DESIGN

Users should experience a natural flow when navigating through their individual journey.

Natural Interaction
UX DESIGN

The user should not need to invest a lot of effort in learning to use the AI-system.

Interaction Cost
UI DESIGN

The user should experience a minimum interaction cost, instead of a more difficult and demanding interaction.

EXPECTATION

Communicate Flow
CX DESIGN

It should be clear to the user what will happen throughout their individual journey.

Manage Expectations
UX DESIGN

The user should understand the abilities, as well as the boundaries of the AI-system.

Guiding Usecues
UI DESIGN

The user should know what to expect from the user interaction, providing them clearly with defined (use)cues.

PREDICTION

Design for Convenience
CX DESIGN

The number of required steps that the user must take to end up at the desired channel should be minimised.

Agentive Technology
UX DESIGN

The AI-system should give the user a peace of mind (on a daily level).

Fluid UI
UI DESIGN

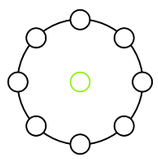
The user should experience a fluid user interaction while manoeuvring through the interface flow.

INTEGRATION

Ecosystem Curation
CX DESIGN

Even when multiple channels and/ or stakeholders are involved, the user should have a congruent experience.

Consistent Experience
UX DESIGN



The user should have a coherent, integrated experience throughout the entire interaction.

Integrated UI-Flow
UI DESIGN

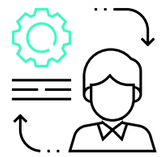
The user should be able to easily navigate to the AI-system through a variety of devices & channels.

Table 1 *Summary of design principles around intuitive AI.*

Responsive AI

CONTROL

User Consent
CX DESIGN



The user should have the feeling that they remain in control of their own experience flow.

User Intervention
UX DESIGN

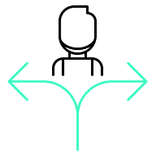
At all times, the user should be able to intervene with the actions of the AI-system.

Escape Hatch
UI DESIGN

The user should not feel locked-in or forced to use the AI-system at any time during the interaction.

ADAPTIVE

Availability Dependency
CX DESIGN

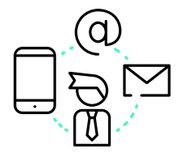


The user should automatically be redirected to the channels that are available.

Contextually Adaptive
UX DESIGN

The AI-system should adapt according to the state and context of the user.

Respect Medium
UI DESIGN



The AI-system should respect the (messaging) medium through which the user is engaged.

FEEDBACK

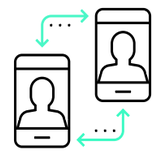
Feedback Loop
CX DESIGN

The user should be able to provide feedback on the AI-system at any point within the experience flow.

Human-Like Feedback
UX DESIGN

Users should be made aware that they are (co-)responsible for building and improving their own individual experience.

Two-Way Communication
UI DESIGN



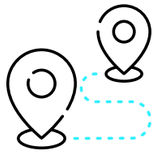
The user should feel that they are truly engaged in a two-way communication stream.

Table 2 *Summary of design principles around Responsive AI.*

Personal AI

INDIVIDUAL

Individual Journey
CX DESIGN



The AI-system should increasingly engage the user where it counts, when it counts.

Behavioural Adaptation
UX DESIGN

The AI-system should adapt and differentiate to the behaviour of the user.

Hyper-Personalisation
UI DESIGN

The user should be engaged through individually differentiated AI-generated content.

EMOTIONAL

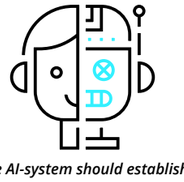
Attitude Matching
CX DESIGN

The user should be able to feel the brand throughout the individual journey.

Sympathetic AI
UX DESIGN

The user should feel understood by the AI-system in order to drive engagement and build a long-term relationship.

Human-Like AI
UI DESIGN



The AI-system should establish an emotional connection with the user to drive engagement and loyalty.

Table 3 *Summary of design principles around Personal AI.*

Beneficial AI

INDIVIDUALLY BENEFICIAL

Value Alignment
CX DESIGN

The user should feel that the AI-solution has an actual individual added-value.

Goal-Orientated AI
UX DESIGN

The user should feel that the AI-system helps them to achieve their ultimate motivation and desires.

Accessibility
UI DESIGN

The user should feel included, with the AI-system adapting to their individual (dis)ability.

SOCIALLY BENEFICIAL

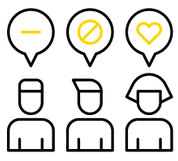
Socially Beneficial
CX DESIGN

AI-systems should positively impact the user as well as their (in)direct social environment.

Inclusive AI
UX DESIGN

AI-systems should engage all people and empower everyone that is involved.

Community
UX DESIGN



Ideally, the user should feel as if their individual experience is part of something bigger.

Table 4 *Summary of design principles around Beneficial AI.*

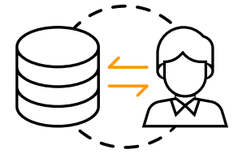
Explainable AI

ROBUSTNESS

Human-in-the-Loop
CX DESIGN

It should be clear for the user in what way an actual human-agent might be involved or contacted.

Data Trade-Off
UX DESIGN



It should be clear to the user for what reason their personal data is being gathered and used.

User Authentication
UI DESIGN

In order to establish trust with the user, the AI-solution should feel safe, secure and robust.

TRANSPARENCY

Identify Stakeholders
CX DESIGN

In order to build trust with the user it is essential to be transparent about their data flow and those involved.

Glass-Box AI
UX DESIGN

The user should be able to comprehend the reasoning behind the output of the AI-system.

AI-Labelling
UI DESIGN

It should be clear to the user if and when they are dealing with an AI-system and/ or AI-generated content.

Table 5 *Summary of design principles around Explainable AI.*

4.4. AI-Accelerator Design

The AI-accelerator card deck includes stimuli for AI-driven service solutions, and include principles of brand experience design throughout the three-layered levels of customer experience, user experience and user interaction design (Figure 41). The complete deck is thus a holistic overview of AI-guidelines and principles throughout the entire design process, meaning the card deck is not supposed to be used all together at once. This is in line with the notion that the design tool should be modular, in a sense that it can be used in multiple ways during different stages of the design process. Three main possibilities of using the AI-Accelerator deck are described in more detail below (Figure 71).

A. Preparation

To begin with, Deloitte employees can use the AI-deck during the preparation of a co-creation or design session for services that will (or might) involve AI-systems. Hereby, they should specifically go through the cards that are linked to the desired output of the session: e.g. the service design cards when (re-)defining a journey, the UX design cards when creating a touchpoint, and the UI design cards when defining and concretising a minimum viable product through screens and content. By doing so, the facilitator (or session designer) can make a pre-selection of the elements that s/he thinks are important to include for the final output of the session. Besides, by going through the whole deck, they are also triggered to think about each element, and (re-)consider whether it is necessary to include them in the design process.

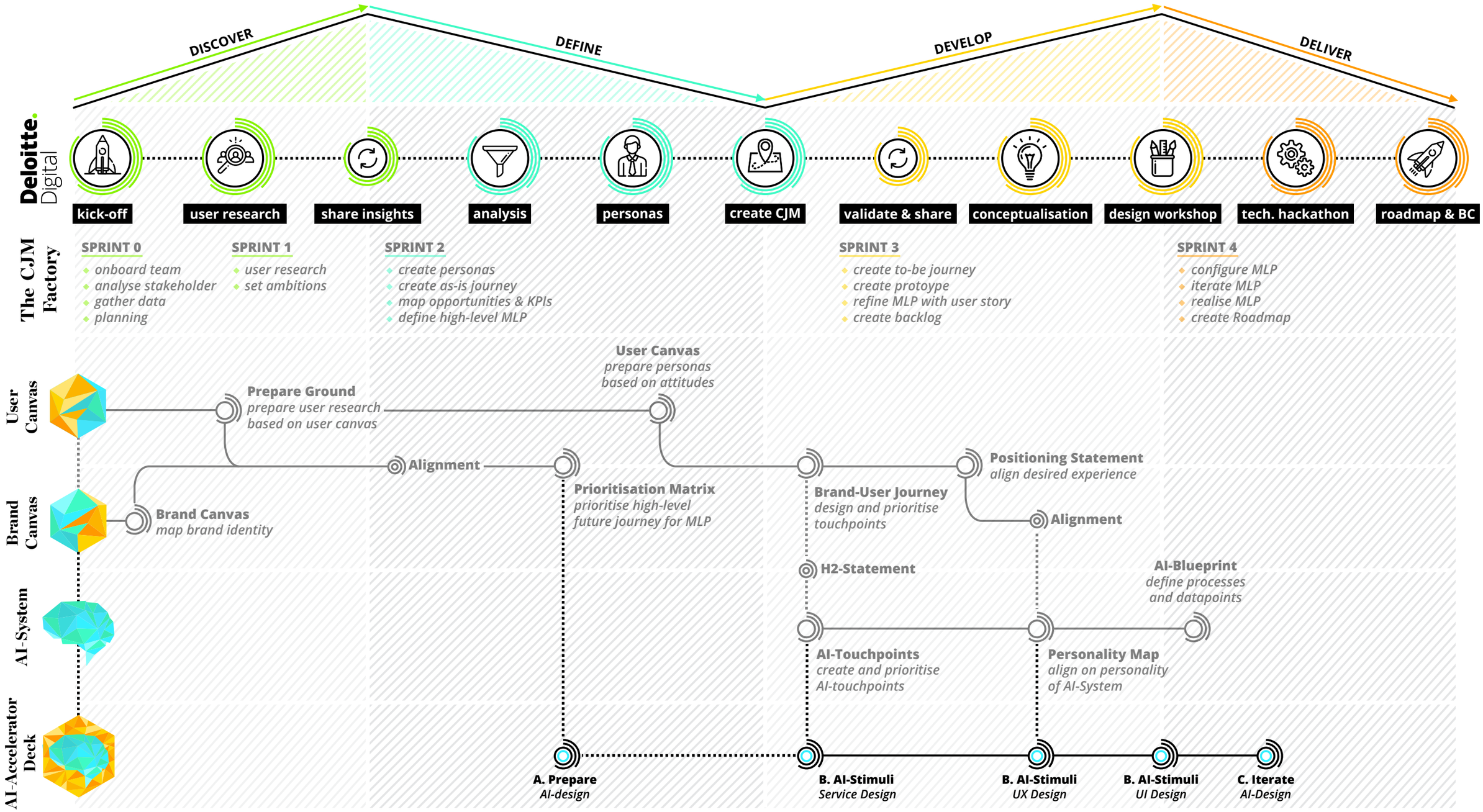


Figure 71 *Deloitte Design Process with designed add-on tools based on AI-design principles.*

Furthermore, as reading (or going through) the AI-deck educates the facilitator about the essential dimensions of AI, this also stimulates them to be the 'quality control' for the output of the session.

As a consequence, during the session they are better able to ask 'stimulating' (or provoking) questions to the session participants in case they feel that some of the aspects of AI might still be lacking when working towards a design.

B. Design Stimuli

Secondly, the AI-accelerator deck can be used for the stimulation of new idea (directions). In order to do so, the design principles should be translated into (provocative) H2-statements that lets the user actively ideate on the AI-design principles.

This can be done on cluster level, where the cards actually function as stimuli to answer the cluster related H2-statement (Figure 72), or on detail level where participants actually ideate solutions based on a single stimuli card, or a combination if desired (Figure 74).

Besides a direction ideation on the principles, the cards can also be used to stimulate and guide individual thinking group discussions. In order to achieve this, the facilitator should ask the participants to keep a certain principle in mind while creating a design. For example, during the creation of a user scenario in a UX design stage the facilitator might ask different people to keep in mind a different dimension of AI (e.g. intuitive AI, beneficial AI, personal AI etc.) and make them responsible of including those into the design using the relevant cards of the AI-accelerator deck.

C. Iterate

Lastly, the AI-accelerator deck can be used to validate and iterate existing ideas and concepts around AI-systems (Figure 73). Hereby, users of the deck should determine to what extent the current concept meets the guiding principles as described on the cards. This way, the concept can be deepened so that it complies with the basic requirement for AI-systems, and can be optimised for augmenting the (individual) brand experience of users. Hereby, the cards can also be used as a decision-making tool for the inclusion or exclusion for certain functions and/ or elements and as a prioritisation tool when choosing between different concepts or ideas around AI-systems.

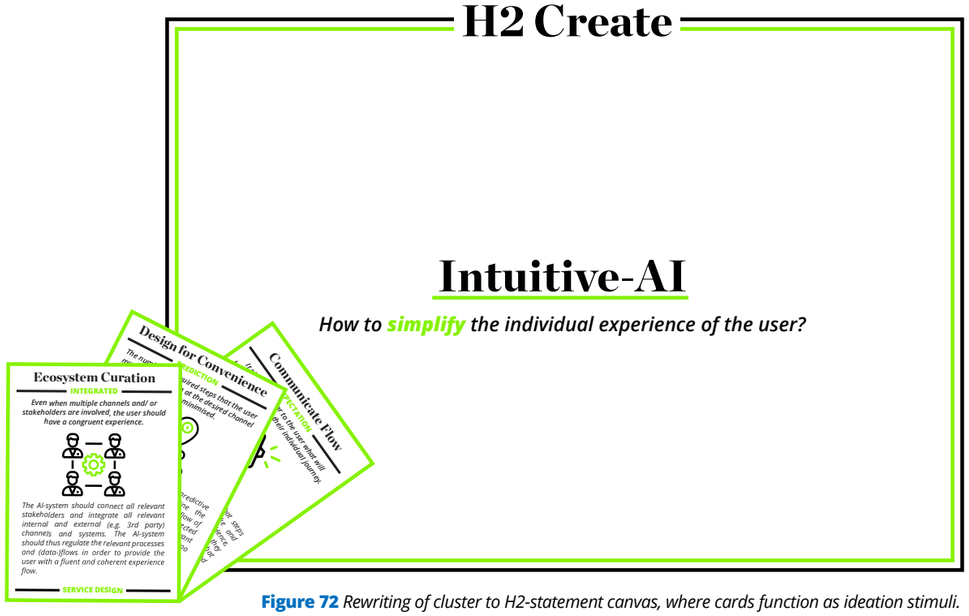


Figure 72 *Rewriting of cluster to H2-statement canvas, where cards function as ideation stimuli.*

4.5. Wrap-Up

In this chapter, the role of AI in the brand experience of users has been explored in more detail by doing an industry analysis. Through this analysis, in-depth insights for AI have been found, which have been translated to actionable design principles that augment the individual experience of the user (answering RQ1 & RQ2A, page 11 - page 12). Furthermore, these have been diverted into concrete design principles for service design (CX), UX design and UI design and are shaped into a card deck (AI-Accelerator Deck) (answering RQ2B, page 12). This can be used by designers and strategists of Deloitte Digital to augment the brand experience of users through AI-solutions. The next chapter will put the design tools of the past chapters to practice in an actual client usecase with the Volksbank. This usecase will illustrate in what way the tools should be used, and validate the earlier findings of this thesis.

Figure 73 *AI-Accelerator deck usage validated for ideating and iterating AI-design for elderly people(with TU Delft student).*

Figure 74 *Validation session of initial AI-Accelerator deck (with Deloitte experts).*

5.

Volksbank Usecase

5.1. Usecase Introduction

A. Recap
The main topic of this thesis (RQ1, page 11) is about how to augment the brand experience of customers in service-driven brands through customer-facing Artificial Intelligence. Hereby, in chapter 2, the definition of brand experience is explored in more detail, and an actionable framework for brand experience (including defining elements) is introduced (RQ1A, page 11). In chapter 3, the vision on AI proposes that AI should augment the experience of users through individual differentiation, which is translated to an actionable model for an AI-system that included the relevant cognitive capabilities of AI (answering RQ1B, page 11). In chapter 4, the concept of 'individual experience' is deepened by performing an industry analysis, resulting in generic design principles for AI (answering RQ1, page 11). Furthermore, the aim is for designers and strategists from Deloitte Digital to methodically apply insights around 'AI-Augmented Brand Experiences' during their own design process (RQ2, page 12). Therefore, throughout this thesis the insights have been made actionable, and shaped into concrete design tools.

In order to validate the insights and different tools that have been developed, an actual client case has been performed. Hereby, this chapter will go through the design process as described in the introduction ("Design Approach" on page 12), and design for a concept that augments the brand experience of users through customer-facing AI, using the design tools from chapter 2 - 4. In Figure 75, it is shown in what part of the usecase these design tools are used. Furthermore, by doing the usecase, the usage of the various tools will be illustrated within the context of an actual client, which enables Deloitte employees to become aware of the tools, and the potential output. In agreement with Deloitte, the Volksbank has been selected for the usecase. This because the Volksbank has a clearly defined brand, and is currently experimenting with launching AI-powered services. Peter Eikelboom (innovation manager Volksbank) has been the main point of contact, and has been involved in different stages of the design process.

B. Method
The design process of this usecase consists out of 4 different stages: discover, define, develop, deliver (based on Figure 6). The discover and define (Figure 75) phase have been performed individually, with feedback and validation from Deloitte a well as the client at different stages. The develop phase has been done through a co-creation session with users (TU Delft students), the client and Deloitte Digital designers (page 112). The deliver phase has been performed individually, and is based on the output of the co-creation session and validation talks with Deloitte. For the sake of this usecase, the different design steps have been clustered into 5 main steps: mapping, selecting, journey mapping, experience design and concretising (Figure 75).

Mapping
Create and identify brand identity and attitude of user based on the brand identity and image canvas (page 40 - page 41). The output forms the basis of (attitude) persona and the journey map. Note that in this specific usecase the user mapping tool is used after the selecting phase.

Selecting
Prioritise high-level journey based on insights from brand map and user desirability (based on page 42).

Journey Mapping
Preparing and creating brand-user journey map based on brand map and user attitude (persona) (page 43), and define AI-opportunities (based on page 55 and page 93).

Experience Design
Redesigning defined touchpoint and experience of user using AI-stimuli (page 93), creating AI-personality map (page 57) and define necessary processes and datapoints (page 58).

Concretising
Concretising and iterating user journey and define role of AI and brand experience using brand-related tools page 43) and AI-stimuli (page 93).

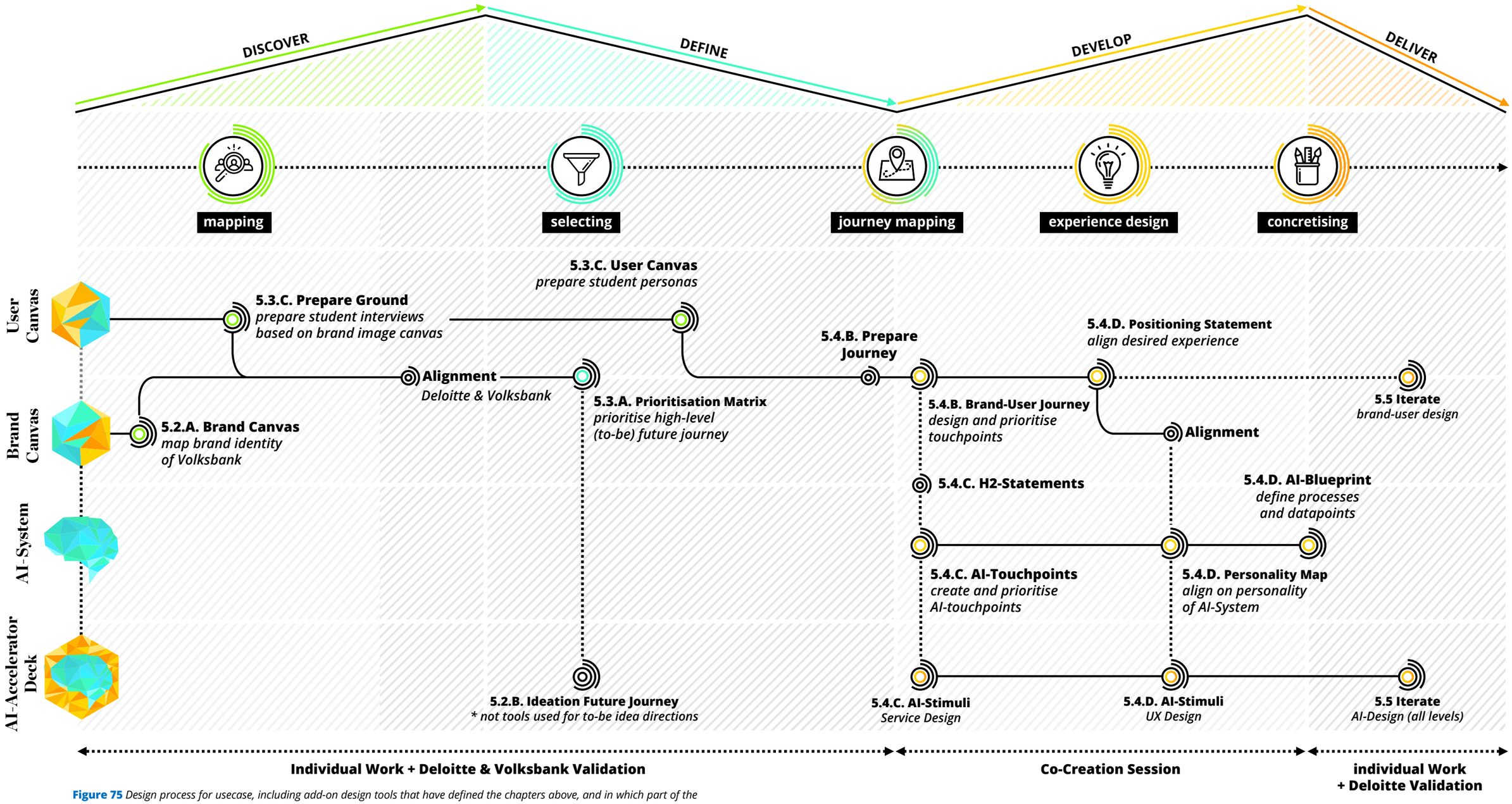


Figure 75 *Design process for usecase, including add-on design tools that have defined the chapters above, and in which part of the usecase they are used and described.*

5.2. Mapping

The Volksbank is an independent bank holding company with a focus on the Dutch banking sector, and is one of the major players in the Dutch retail market. They offer services such as insurance, investment and lending services, serving (smaller) companies in a retail manner. However, their main business focusses on business-to-consumer (B2C) banking, offering transparent and simple mortgage, savings and payment products to private individuals (Interview Volksbank, Appendix 3). The Volksbank markets itself as being people-orientated, social and sustainable. A more in-depth analysis of the brand is performed below.

A. Brand Analysis

As explained on page 40, the brand mapping tool should be used to create a thorough understanding of the client's brand before starting any service-design project. By using this tool, the brand benefits on self-expressive, emotional and functional level can be retrieved. The brand identity canvas tool (Figure 16) has been used to map and cluster the different brand elements of the Volksbank (Figure 76). These elements have been gathered from various brand documents of the client, such as the "Brand Manifest", "Visioning Document", public website and video content and internal brand documentation, as well as talks with the Volksbank (Volksbank, 2018a, 2018b, 2018c, n.d.-a, n.d.-b, n.d.-c; personal communication Volksbank).

In practice, Deloitte designers and strategists could also use this tool during a client session (to map the brand together with the client), or as a tool for creating a quick overview of the key brand elements in keywords. However, for the sake of illustrating the full potential of the tool, an extensive version of the brand map has been created (Figure 77), which is explained below. An overview of the output (in keywords) can be seen in Figure 78. Such an overview should be used to create alignment between Deloitte and the client, as well as the various teams that are involved within Deloitte. Furthermore, such an overview can be used to introduce and empathise session participants with the brand (e.g. Figure 84) to enable brand-centric design.

Purpose | Lasting Belief

Financial Resilience

Due to changing payment technologies, as well as changes in the dynamics of society, people increasingly experience financial concerns and/ or uncertainty. This can be about any event that involves unexpected costs (e.g. debts, divorce, new job), preparing for the future (e.g. pension, study children) or with big expenses (e.g. buying a house). This could happen with anyone, at any time (every age), in any financial situation (rich as well as poor).

> "Why would society feel only responsible for financially raising children, instead of people from all ages
>
> **VOLKSBANK (Volksbank, 2018a)**

Volksbank beliefs that financial resilience is a condition for the wellbeing of the individual and of society as a whole. They are convinced that if people feel strong and confident about their financial situation, they feel more rest, (head)space and confidence, and are able to go along with society and be resilient in times of economic or personal setbacks. Therefore, Volksbank strives to create financial resilience for every single individual, in his/ her own personal way. Hereby, they want to educate their customers about finances and help people to become and/ or stay financially resilient while still keeping the customer in control of his/ her own situation. Financial resilience does not only offer this to current generations, but also provides a good start for future generations. This way, they want to increase the (financially) carefree feeling of the Netherlands, and let people feel in control of their own financial situation.

> "As a bank, we strive for a financially healthy live for all people in the Netherlands
>
> **VOLKSBANK VISION (Volksbank, 2018b)**

Figure 76 *Volksbank brand documents from internal & external brand documents and online manifestation (website & video)*

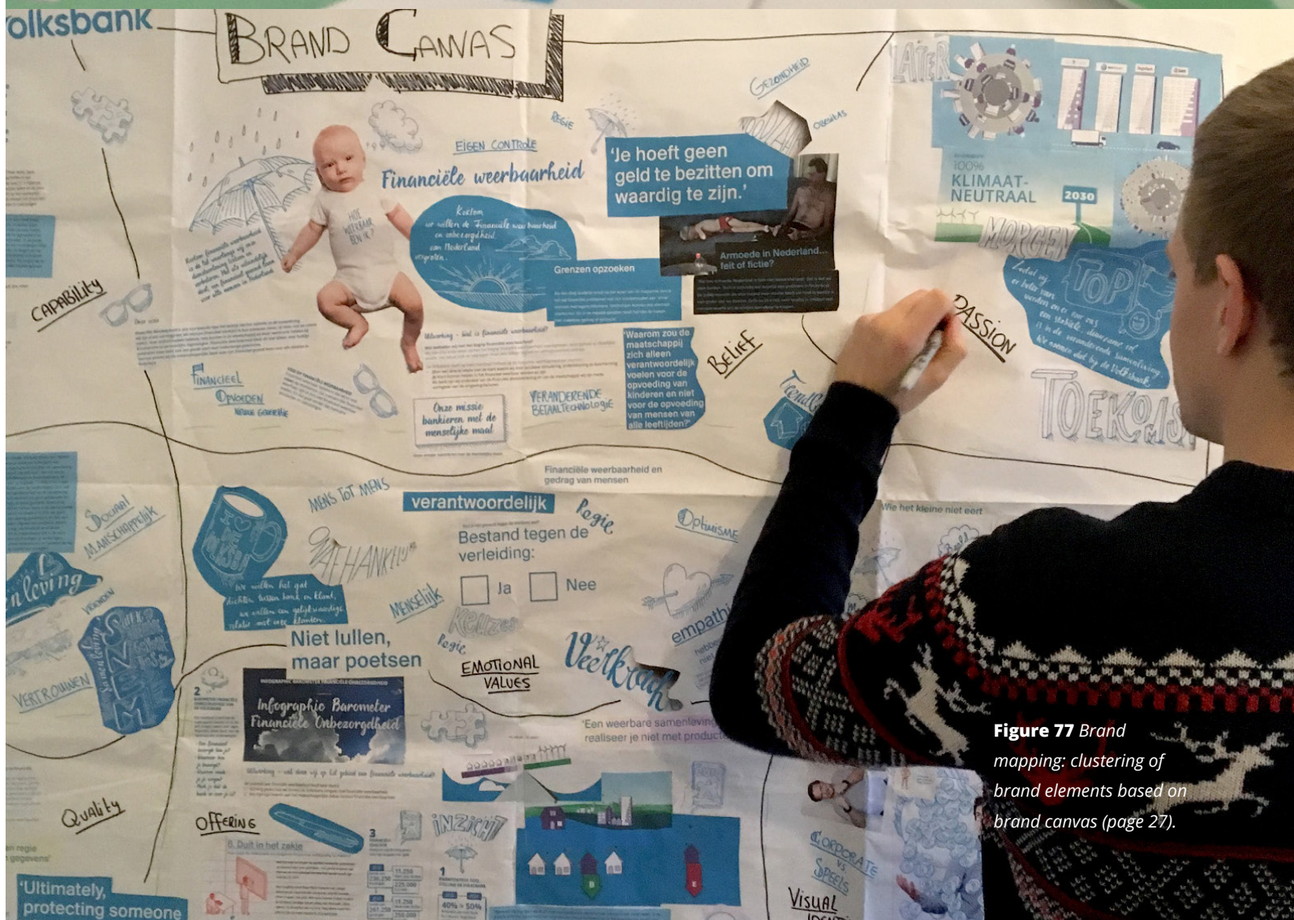


Figure 77 *Brand mapping: clustering of brand elements based on brand canvas (page 27).*

Purpose | Driving Passion

Banking with Human Touch

The Volksbank believes that a company that produces nothing but money, is a ropey business. As a bank, The Volksbank feels they carry the responsibility to benefit not only the individual but society as a whole. Therefore, the Volksbank (and especially the sub-brand ASN Bank) has a strong focus on bringing back the human dimension in banking through durability and honesty.

They want to fulfil a 'collective buffer function' which allows them to be a damping factor in hard times, and can be the wind behind you in better times, contributing to individual risks and prosperity. They involve this in everything they offer (banking products, mortgages etc.), and everything they do (investments, advise etc.). Hereby, banking with the human touch is the bar through which Volksbank tries to achieve their vision, and improve their own offering.

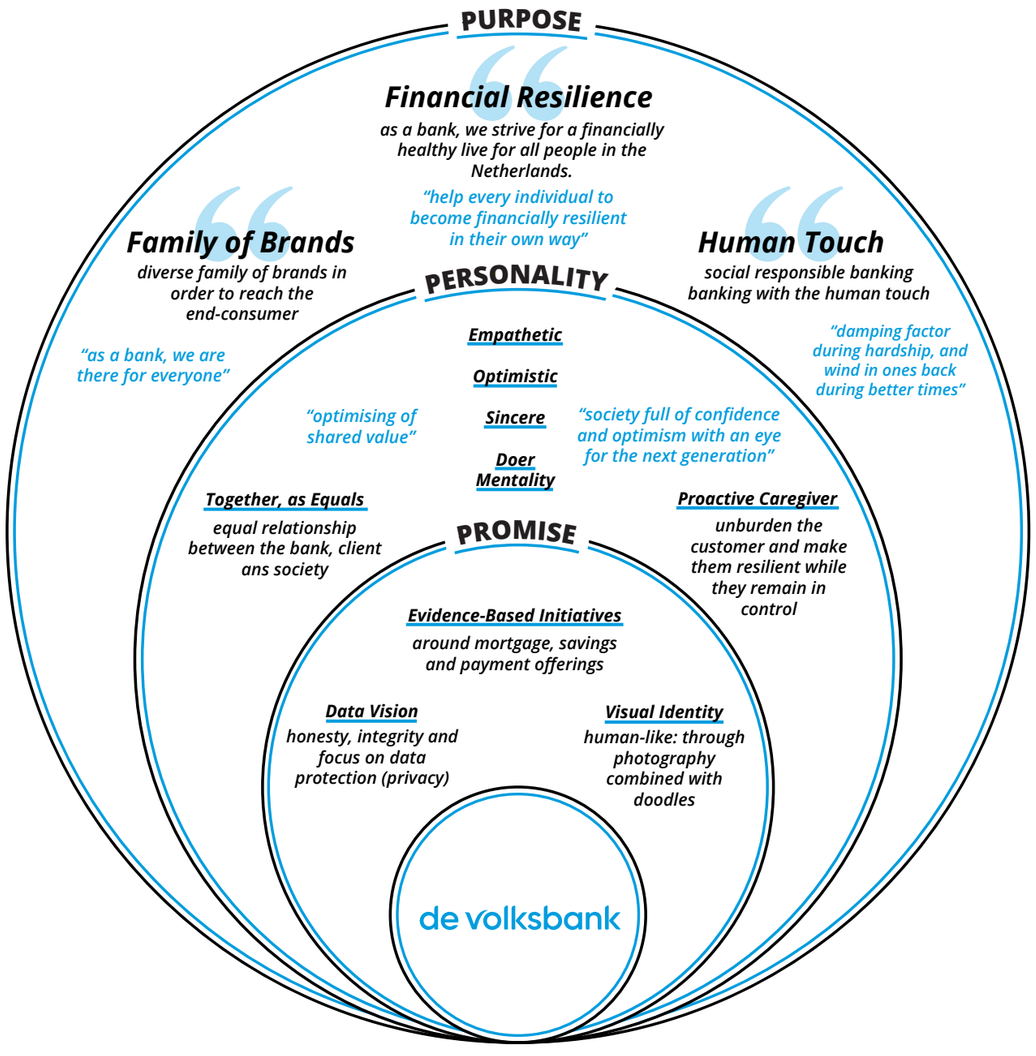


Figure 78 *Overview of key elements of Volksbank brand, clustered by purpose (self-expressive benefits), personality (emotional benefits) and promise (functional benefits), based on brand identity canvas (page 27).*

Purpose | Core Capabilities

Family of Brands

Where some organisations choose to build one strong brand (mono-brand) such as Apple, Volksbank operates from a multi-brand strategy. According to Volksbank, the main advantage of a multi-brand is that they are able to target a variety of audiences while still maintaining the core brand mission and belief. Hereby, Volksbank has four sub-brands that help to deliver that message to the end-customer and fulfil the different customer needs. The ASN Bank enables a durable and just society, BLG wonen helps people to realise their living wishes, Regiobank is the bank that is close to the customer and SNS wants to make banking more human and normal. The Volksbank in this case is the sum of parts, offering durable financial resilience (four brands, one organisation). This means that users do not have a direct interaction with the brand 'Volksbank', but always with one of the sub-brands. However, at the Volksbank innovation department, the concepts that are developed are often translated to one of the sub-brands at a later stage (e.g. during launch/ scaling of solution). Therefore, the usecase will still consider the Volksbank brand as a whole, instead of focussing only one of the sub-brands.

Personality | Social Aspects

Together, as Equals

The Volksbank beliefs in achieving their vision and mission together with their customers, as well as society. Debts do not only impact the individual, but society as a whole as costs are passed on which reduced the overall productivity. Therefore, they emphasise the social role and responsibility that everybody has, both as individuals and as a collective. They want to create a culture of trust, and want to have an equal relationship with their customer. Hereby, their ambition is to optimise shared value (social, economic as well as financial and non-financial aspects) by creating benefits for their customers, taking responsibility for society, providing meaning for their employees and achieving adequate returns for their shareholder(s) (Volksbank, n.d.-a). Lastly, to the consumer, they want to point out the role and responsibility of friends and family in creating and maintaining a (financially) healthy situation.

Personality | Human-like Traits

As stated in their mission (passion), the Volksbank brand is focussed on making the experience more human (again) for its customers. They want to convey this to the customer through the following four emotional values.

Empathetic

Instead of only having sympathy, the Volksbank wants to truly engage with its customers and customer and really understands what moves the consumer to connect with them on an emotional level.

Optimistic

Building and maintaining financial resistance is always about working towards something better, being optimistic about the future, and benefiting the next generation.

Doer Mentality

Instead of only talking about change, innovation and durability, the Volksbank wants to actually do something about it (in Dutch: "niet lullen maar poetsen").

Sincerity

When looking at the brand through the lens of Aaker's brand personalities, it becomes clear that two other aspects are important for the Volksbank brand. To begin with, it is important for the Volksbank to come across as reliable and secure because their services are around a high-emotional product (people's money). Another important aspect of the brand is the more down-to-earth style of communication, and the emphasis they put on honesty, realness and sincerity.

Personality | Brand Archetype

Proactive Caregiver

When looking at the Volksbank through the lens of Jung's brand archetypes (Faber & Mayer, 2009; Jung, 1964), it is clear that the focus of the Volksbank is mainly about caring for individual (financial) wellbeing as well as that of the society (carer archetype). The Volksbank might take the same role as good parents might, empathising with you and actively protecting you from harm without being too restricting (see also the umbrella metaphor). This brand character is emphasised by their sense of selflessness and positivity. Besides the main archetype of the carer, Volksbank also shows some characteristics of a sub-archetype, the sage, with their humanist side and empathising capabilities.

Promise | Quality

Data Vision

The Volksbank states that they are an independent, purely Dutch bank that was established nearly two hundred years ago. Furthermore, they explain how taking care of the money of the Dutch people has always been a number one priority and how it has evolved into three core retail-banking products: savings, mortgages and payments. By indicating their heritage, Volksbank conveys a feeling of quality and consistency for their brand, as well as their products. Besides, Volksbank lays a big emphasis on data protection and privacy for their users. They state that customers should be the ones in charge of their own data, and that corporations should be transparent and clear about when, how and why customer data is used.

> Ultimately, protecting someone else's data protects all of us.
>
> **VOLKSBANK (Volksbank, 2018a)**

Promise | Offering

Evidence Based Offerings

In order to put their money where their mouth is, Volksbank has a number of concrete examples (solutions, services and products) that serve as proof for their purpose. This is extra important for them as the brand personality comes across as a doer, so they want their purpose to be evidence-based. Examples are the 1-2 platform, financial education (Eurowijs), Budget & Job-Coaching, the Financial barometer (for being financially carefree) and their abandoning of debt collection agencies (Interview Volksbank, Appendix 3). Furthermore, the Volksbank wants to include their core purpose in everything they do, including (but not limited to) their banking products (savings & payments), investments and mortgages. And through their sub-brands they try to highlight certain brand values (see core capabilities), fitting the right target audience.

Promise | Visual Identity

The Human Element

Although the visual manifestation for the different brands of the Volksbank differ quite a bit, the human element is something which is important in all sub-brands. For the Volksbank brand, they do this by using a lot of photography of people, in combination with a playful illustration style (doodles) (see canvas Figure 76, Figure 77).

5.3. Select & Prepare

A. Initial Ideation

The tools of this thesis are based around the idea that most projects start with a high-level idea of implementing an AI-solution, or with the idea of improving an as-is journey (current state) to a desired to-be journey (future state) through an AI-enabled service. However, for this client usecase, there was not yet an as-is journey (problem) or initial idea (to-be journey) to start from. In order to generate some idea directions, a design challenge has been formulated. This is based on the main research question (RQ1, page 11, findings from the industry analysis (page 61), and the Volksbank brand analysis.

Design Challenge

Developing an AI-enabled service around financial advisory that augments the brand experience of users, while fitting and strengthening the Volksbank brand.

According to the principles of design thinking (Brown, 2008, 2009), the ideas have been generated and based on market opportunities (literature) and talks with potential users (desirability), Deloitte designers (feasibility) and the Volksbank (viability). From an initial idea generation, three promising idea directions have been selected. This has been done in conversations with Volksbank and Deloitte. These initial idea directions have been converted to high-level to-be journeys (desired state), which will serve as input and context for the design tools.

The high-level concepts can be seen in Figure 79 – Figure 81. As these initial ideas have already been created during the beginning of the project, the AI-design tools (AI-Accelerator deck) were not involved. Therefore, this chapter won't go too much into depth on these idea directions, and how they have been developed. A more detailed description (including the background on which they are based) can be found in Appendix 9.

#1 Role AI-System

Assist students through their personal journey, from the beginning to the end, making them financially resistant.

- *Helps to get started with first time finances.*
- *Helps to get insights (and advise) into spending behaviour.*
- *Helps to advise on student loan and impact.*
- *Helps out with subsidies (when to start and when to end) by facilitating between 3rd-parties.*

#1 Benefits

- *Creates loyalty under younger generations.*
- *Meaningful insights about younger generations.*
- *Assistive technologies are easily scalable (part of journey to whole journey).*
- *Provides it's customers with ease of mind in complex situations.*

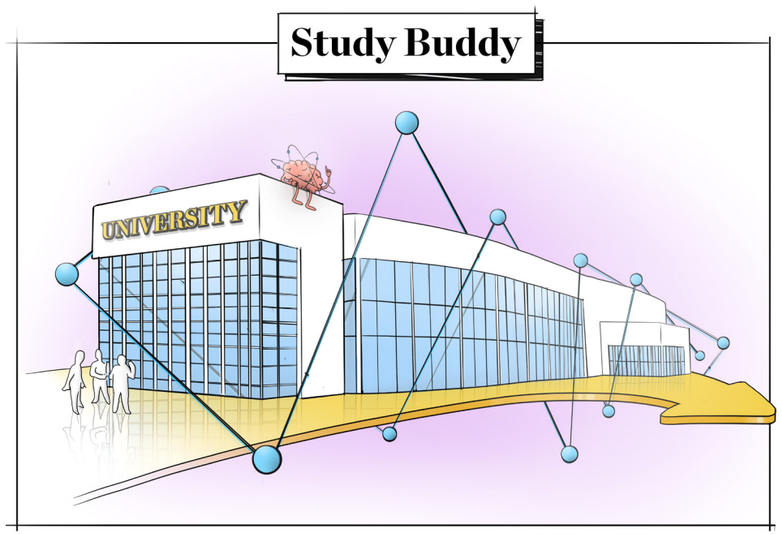


Figure 79 *Ideation direction #1 (Study Buddy).*

#2 Role AI-System

Assist people in making socially conscious decisions ranging from banking products to daily spending behaviour.

- *Helps to make more (socially) conscious decisions when it comes to banking products.*
- *Helps to make more (socially) conscious decisions on a daily level (e.g. consumer behaviour).*
- *Provides clear feedback and insights of personal impact.*
- *Connect people through a social community (and/ or events).*

#2 Benefits

- *Many ASN users consciously chose for social responsibility.*
- *Become front-runner on corporate social responsibility.*
- *Provides customers with ease of mind on daily basis, knowing they make the right decision.*
- *Giving meaning to money by showing personal impact.*

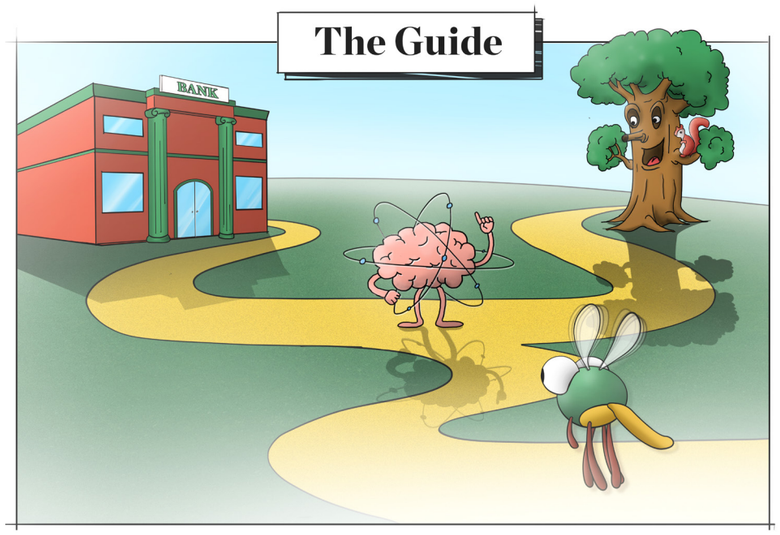


Figure 80 *Ideation direction #2 (The Guide).*

#3 Role AI-System

Assist people when buying a house and applying for a mortgage by offering a more personalised journey.

- *Helps to allocate customers to a fitting (mortgage) journey.*
- *Helps to direct customer to the fitting contact channels.*
- *Helps customer to obtain better insights in their own situation.*
- *Helps out by connecting to, and facilitating with, third-parties.*

#3 Benefits

- *Personalised journey for a highly-personal product (house) within a diverse target group.*
- *Provides customers with ease of mind in complex situation.*
- *Be there where it counts, during important live stages and (high-emotional) decisions.*
- *Offers transparency in which data will be used for which output (personalisation).*

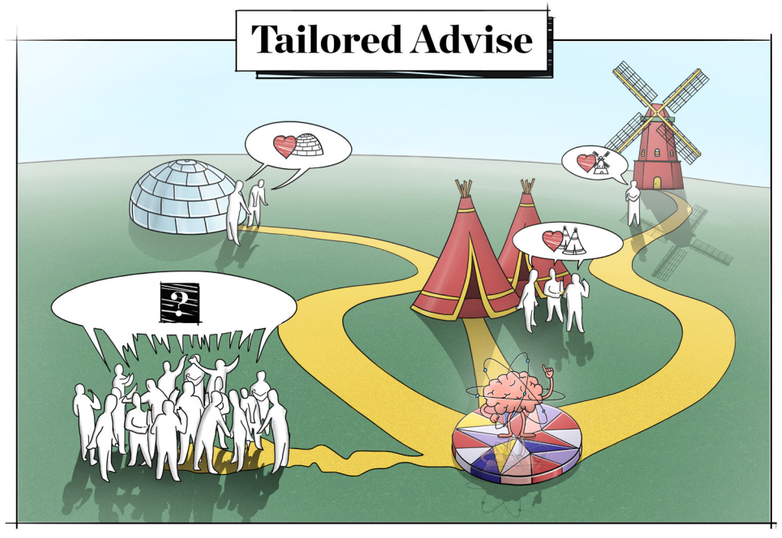


Figure 81 *Ideation direction #3 (Tailored Advise).*

B. Initial Selection

In order to prioritise between the different idea directions, the prioritisation matrix tool is used (Figure 37, Figure 38). As explained in "Prioritisation Matrix" on page 42, the brand prioritisation matrix tool evaluates to what extent the different idea directions fit with the brand, as well as with the user.

The criteria of the matrix have been based on the brand experience canvas, but are not per se a hard requirement for choosing a concept direction. In conversation with the client, employees from Deloitte Digital may decide to add or remove criteria, and to make some criteria more important than others by changing the weight of these criteria. However, for the sake of this specific usecase, all the brand identity elements and user/ market elements have been assigned the same weight.

An overview of the output of this method can be found in Figure 82. As can be seen in this figure, all three idea directions would be viable (brand perspective) and desirable (user perspective) for the Volksbank to pursue. However, idea direction #1 scores the highest when combining brand and user relevance (most towards top right corner).

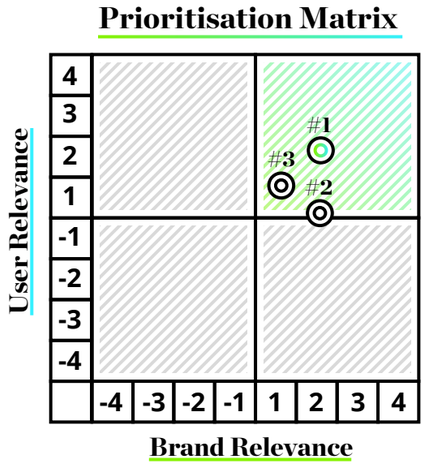


Figure 82 *Output of the brand prioritisation matrix (Figure 38). The exact (numeric) output is described in more detail in Appendix 10.*

Below, a short summary of the prioritisation matrix per idea direction is stated. For a more detailed description (and outcome of different matrix elements), see Appendix 10. The output of the tool has been shared and discussed in with Deloitte, as well as the Volksbank.

#1 | Study Buddy

Idea direction #1 (finance management for students) is identified as having the best brand-user fit. This concept is especially relevant as this strengthens from the core idea of creating (financial) resilience, helping younger generations in building their lives. This fits with their ambition of moving from 'transaction' to 'relation'. Although their capabilities might be somewhat underdeveloped with regards to targeting the younger generation, it is an essential target group that will eventually define the future market of Volksbank.

#2 | The Guide

Personal finance management, as well as social responsibility do have a lot of potential and are a good fit with the current market trends and opportunities. However, as durability and social responsibility become an increasingly important pillar for a variety of organisations, it might not have the same differentiating strength as idea direction #1. Besides, there might be difficulties with adoption of the solution, and it might not entirely be clear for the user 'why' the organisation is pursuing the concept. Therefore, although this concept does fit with what the brand stands for, it performs less as proof of the core purpose of Volksbank.

#3 | Tailored Advise

Idea direction #3 (the mortgage journey) has quite a lot of market potential. The journey as it is right now could use a lot of improvement, and the potential market will be very big as well as diverse. However, when looking at the competitive environment, the concept direction is not that new and innovative. Furthermore, the concept does not emphasise the brand purpose as much as the other two concepts. Lastly, the concept is not that future proof as this might be an automated process in the near future, and does not really build a long-term customer relationship.

C. Attitude Mapping

The last part established the high-end future journey for the usecase, namely finance management for students. In order to create meaningful solutions, it is essential to know the latent, as well as explicit needs of the consumer. Therefore, as stated in chapter "User Mapping Canvas" on page 41, before actually designing, designers should first do extensive user research, and create a comprehensive persona in any service-design project.

In practice, the attitude map tool could already be used to create a quick overview of user attitudes before selecting an initial idea selection to create a more complete overview of the explicit, as well as latent needs that are involved in the different idea directions. However, for this project, the choice has been made to only do a more extensive attitude map based on the most promising idea direction (finance management for students). For this specific direction, 5 qualitative user interviews have been performed. The interview structure has been based on the brand image canvas (page 27) to ensure that all essential elements would be included in the interviews. Hereby, functional, as well as emotional and self-expressive needs of the user have been retrieved, and clustered into a clear overview (Figure 83, Appendix 15). The interview structure, as well as the output of the qualitative interviews can be found in Appendix 11 and Appendix 12. Furthermore, additional insights have been gathered from validation talks with the Volksbank (Peter Eikelboom and Jairo Timmermans). In agreement with the Volksbank, the focus of the attitude map is around (care and rent) allowances, and the user problem of unduly received allowances.

Lastly, just like with the brand map, the (attitude) persona map is used to create alignment between Deloitte and the client, as well as the various project teams that are involved. A more detailed description of most important insights of the different elements (including user quotes) follows below. These have been complemented with the most important quotes for the interviews that illustrate these insights.

Thinking | Norms, Values & Beliefs

Emotional Product

Although money itself doesn't have much value, the things that you can do with it do. Therefore, money is seen as a high-emotional product, meaning that any sudden unforeseen monetary setbacks can have a deep impact. This is especially because students and young professionals (graduates) did not yet build a buffer to cover for any unforeseen events.

> "Even though I have a loan, I cannot imagine saving anything. Once you get it, it is easy to just spend it."
>
> **STUDENT INTERVIEW 2**

> "Even if you lend more money than you need, it somehow disappears."
>
> **STUDENT INTERVIEW 3**

Thinking | Knowledge

Lack of Knowledge

Topics such as allowance (e.g. care or rent allowance), (student) loans (payback regulations) and taxes are often hard to comprehend. The students are often not aware of the regulations that are in place and have the feeling that they are never really provided with the necessary information to make considered decision (e.g. for the height of their student loan). Even more so, almost all interview subjects where misinformed on the exact regulation around student loans, and even about the responsibility you have with regards to your allowance.

> "I never learned something about it on school, or wherever."
>
> **STUDENT INTERVIEW 5**

> "After my graduation, I fully expect my care allowance to stop automatically."
>
> **STUDENT INTERVIEW 5**

Thinking | Experience

New Situations

The start of your study, as well as graduation (and starting your working life) both bring a lot of new situations and challenges, such as finding a new house or even job. On top, there are all the financial situations with which they are often inexperienced.

For example, they are inexperienced with applying for a loan or allowance (at start of study), or stopping your allowance and paying taxes when just graduated and finding a job. The problem is that the most essential moments where people should act is often during important life events, when they have a lot of other things on their mind.

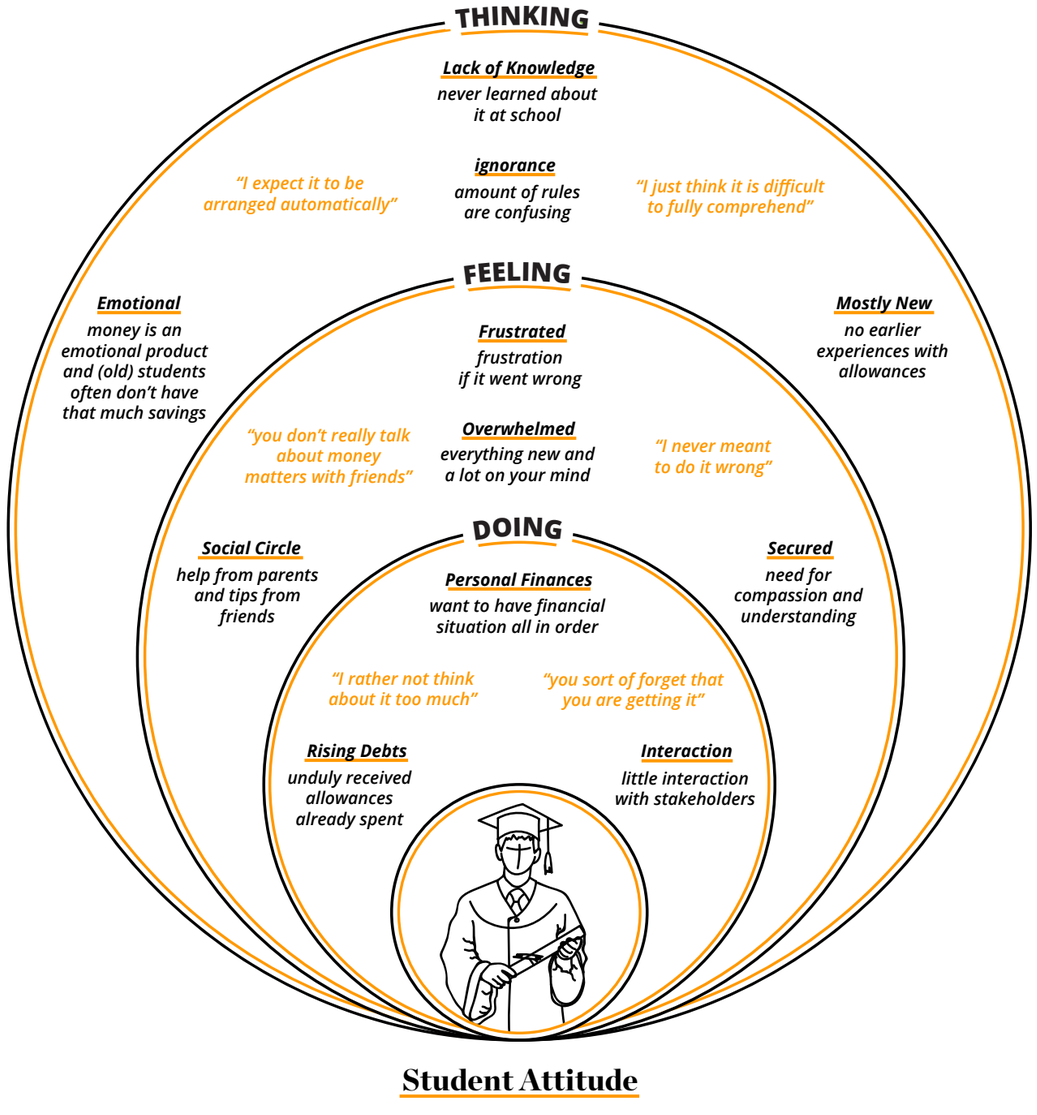


Figure 83 *Overview of key elements of student attitude, clustered by thinking (self-expressive needs), feeling (emotional needs) and doing (functional needs), based on brand image canvas (page 27).*

> I did not yet look into the finances, first I want to focus on graduation, then the rest.
>
> **STUDENT INTERVIEW 1**

Feeling | Caring
Social Circle
Money is often a sensitive topic to extensively talk about. Although most of the students do sometimes discuss whether they have a loan or not, there is often (social) judgement or even pressure. And even though they do get help from other students (e.g. friends, older siblings or parents) when arranging financial matters, the students are often not aware of the financial situation (and potential struggles) of their peers. This also means that they often have to figure things out by trial and error, which at times may lead to unpleasant surprises such as unduly received allowance (personal communication Peter Eikelboom, Volksbank).

> You'll get shocked reactions if you mention that you maxed out your student loans.
>
> **STUDENT INTERVIEW 4**

> At school for example, you never really talk about it.
>
> **STUDENT INTERVIEW 5**

Feeling | Feelings
Overwhelmed
Although financial matters such as loans and allowance are not something people think about quite often, they do feel stressed when they are dealing with it. Because they feel overwhelmed, they would rather just not think about it at all.

> At times that I feel that I lack a financial overview, the loan does provide me with a feeling of stress.
>
> **STUDENT INTERVIEW 4**

Furthermore, if something does go wrong, such as unduly received allowance, people often feel extra bad because they did not mean to do wrong but feel treated as if they did (personal communication Jairo Timmermans, Volksbank). Furthermore, the height of their monthly loans (and their total debt) might lead to a feeling of guild, or even shame which has the effect that they are even less likely to discuss their financial situation with others.

> For now, I'm just turning a blind eye to my upcoming debts.
>
> **STUDENT INTERVIEW 5**

Feeling | Motivation & Desires
Become Secured
Students want to feel secure of their personal situation. Therefore, they want to understand how everything works, and what it is that applies to their personal situation. With an eye on the future, they want to know where they stand. For example, most interview subject are currently maxing out their loans because they are afraid for the financial uncertain times that are ahead after graduation (e.g. when still looking for a job). They want to feel prepared, and be secured of a financially healthy future.

> I expect to have a difficult time with potential monetary problems in case I don't find a job soon.
>
> **STUDENT INTERVIEW 1**

Doing | Security
Rising Debts
Some students indicated that they have the idea that it is easy to do something wrong with regard to their personal finances (e.g. wrongfully applying for loan), and are afraid that there are big consequences. Furthermore, there is the actual risk of starting of your career with debts when unduly allowance need to be paid back. In combination with study loans, costs you make as a starter, and a low buffer this might drag people into a negative spiral (personal communication Jairo Timmermans, Volksbank).

> People think in months, but the tax authorities calculate in years.
>
> **JAIRO TIMMERMANS - VOLKSBANK**

Doing | Intended Action
Personal Finances
People want to be in control of their financial situation, but do not want to put in too much effort in having to figure out everything by themselves. As a consequence, they are often reactive (undertaking action only after something went wrong) instead of proactive. They want to have a clear overview of their financial situation, as everything which is involved (e.g. stakeholders). However, because this is too much of an effort, they usually do not engage with their own financial situation very often (few times a year).

> I rather just not think about my student debts at all.
>
> **STUDENT INTERVIEW 1**

Doing | Sensing
Little Interaction
Most often, people have little interaction with the financial institutions that are involved with student loans, allowance or taxes. Because of this, people are often not easily triggered to think about those institutions when they need to (e.g. to stop rent allowance when moving to a more expensive house). Even more so, students indicate that they are often not aware of which party is exactly involved at what stage.

> You sort of forget that you get these allowances.
>
> **STUDENT INTERVIEW 5**

> It feels like quite a hassle having to log into your DUO account to access your loans.
>
> **STUDENT INTERVIEW 1**

5.4. Co-Creation Session

The tools in the design phase have been validated in a co-creation session with two people from the Volksbank (innovation manager & product/ journey owner), two users (TU Delft, MSc students), and three Deloitte Digital employees (one UX, and two service design experts). The purpose of this sessions was to create an initial concept, based on the as-is journey (student journey and allowances) and the design tools (around brand framework, AI-model and AI-accelerator deck). By reflecting on the output of the session, as well as the feedback of the session participants, the tools are evaluated in more detail, and a final iteration (and/ or recommendations) are made. In agreement with the Volksbank, the scope of the session within financial advisory for students would be around care and rent allowances, as users experience quite some difficulties around this topic. Below, the different steps of the session are explained in more detail. A more detailed planning, including the duration of the different steps, can be found in Appendix 13.

A. Session Introduction

As the session was relatively short for the amount of work that was planned, it was important to get people comfortable right at the beginning. Therefore, before starting the session, an introduction round (ice breaker) was performed in which people explained their role during the session (user, designer, client). In order to empathise the participants with the topic, they were given sheets with endless rules and regulations around allowances (directly copied from the website of the government), that showed the participants how overwhelming this might be for students.

Afterwards, the problem was explained in more detail by elaborating the output of the brand identity and brand image canvas (brand map & persona attitude map respectively) which was presented on big posters (Figure 84). By presenting the findings, the participants where familiarised with the brand, as well as the needs and pains of the user. The participants were also invited to discuss the canvases, in order to create alignment on the output.

B. Brand-User Journey

After going through the output of the brand and user canvas, the (prepared) brand-user journey is explored in more detail (Figure 86), and the connection with the brand and user canvas is explained. Ideally, the brand-user journey is something which is created by the session participants themselves in order to create a maximum sense of ownership. However, because of limited time of the session (3,5 hours) the brand-user journey was already made in advance. As mentioned in “Brand-User Journey” on page 43, the output of the brand map, as well as the user map (persona) are included in the journey map. Hereby, the thinking, feeling doing layer are a direct (but more detailed) translation of the user attitude (persona) and thus student interviews. Furthermore, the brand opportunity layer derives from the brand map, and thus “Brand Analysis” on page 100. A distinction between four main stages has been made, namely the ‘before study’, ‘during study’, ‘after study’ and ‘consequences’ phase (the latter is only for those who incorrectly received allowance).

In order to still create a sense of ownership, the participants were asked to study the journey by themselves in a bit more detail, and add their own insights to the brand-user journey (Figure 85). Hereby, the format has been shaped in such a way that it was easy for participants to complement the map using post-its, or by writing on the sheet. The final output of the journey map can be seen in Figure 86, and includes the input from the co-creation session. Afterwards, the participants were asked to discuss their additions, and explain why they think that is important. The result was a more complete brand-user journey, in which the participants support the content.

The next step was to agree on the most important pains of the user, as well as brand opportunities. In order to achieve this, the session participants were asked to prioritise the different stages of the journey using voting dots (see output of Figure 86).

Figure 84 *Brand Identity, User Attitude and brand-user journey map posters (in Dutch) to empathise participants with the problem and the brand.*

Figure 85 *Participants are asked to complement and adapt the brand-user journey with their own insights, to create a sense of ownership.*

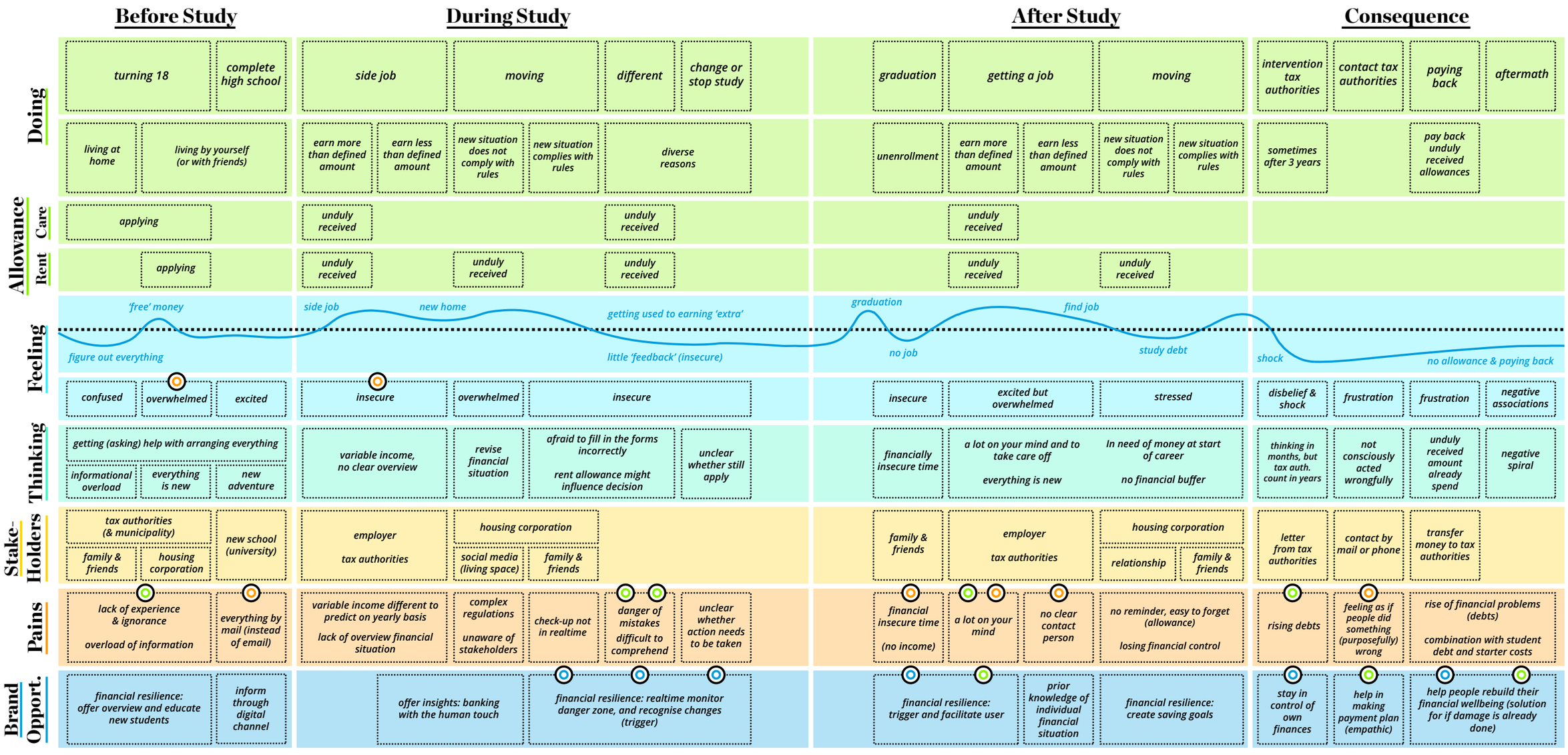


Figure 86 *Brand-user journey map for student journey around allowances, based on brand identity (Figure 78) and user attitude canvas (Figure 83). Adaptations made in the co-creation session, including prioritisation points are included.*

The users where asked to paste voting dots (three per person) on the most important pains, whereas the client was asked to paste voting dots (two per person) on the most important brand opportunities. The designers where instructed that they could do both (two voting dots per person). Afterwards, the participants were asked to discuss their choice.

The end-result of this phase is that the participants are now empathised with the problem, and have a thorough understanding of the perspective of the brand (brand opportunities), as well as that of the user (user pains).

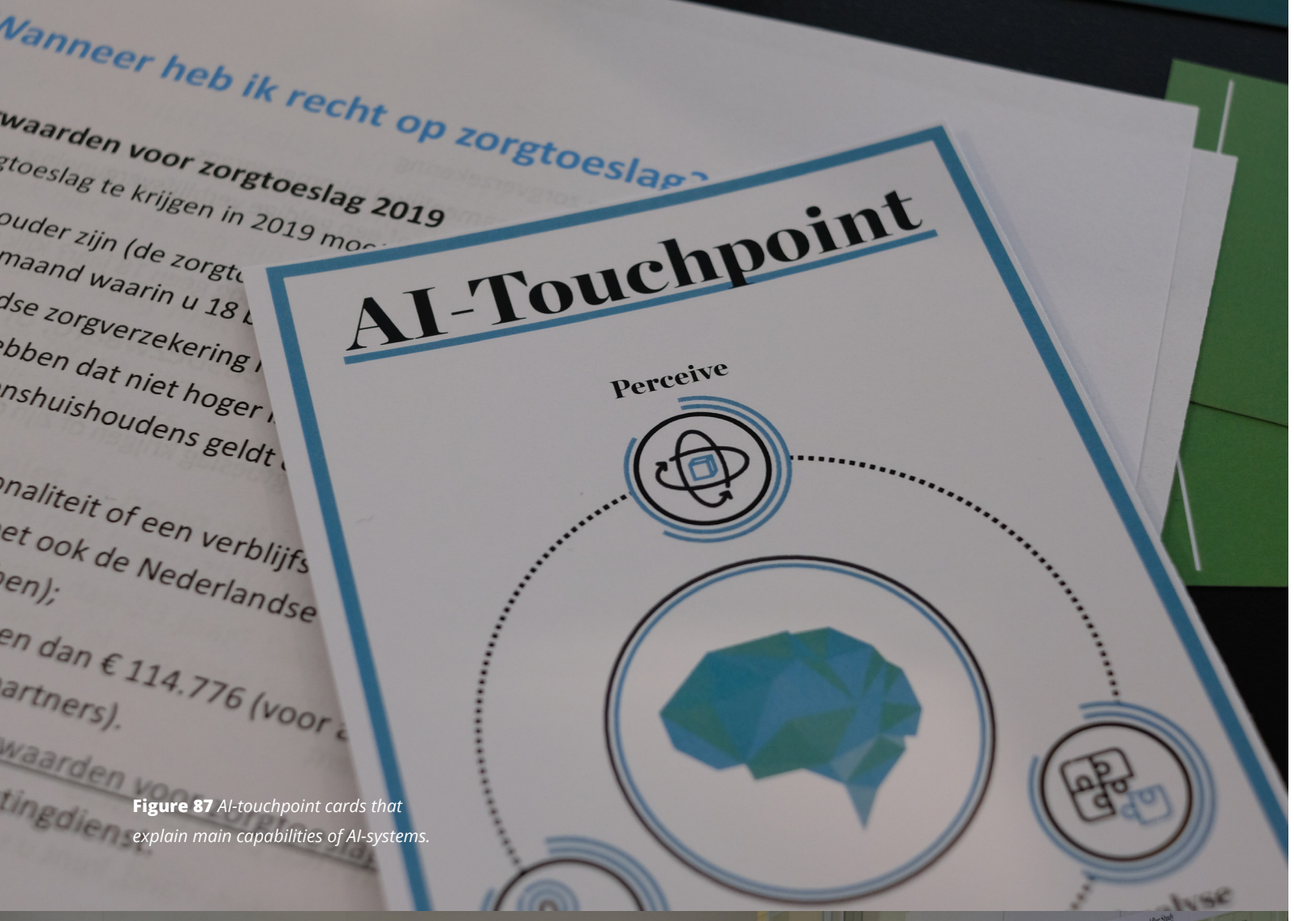


Figure 87 *AI-touchpoint cards that explain main capabilities of AI-systems.*

Figure 88 *Group discussion of initial ideas for AI-solutions.*

C. AI-Opportunities

The next step for participants was to brainstorm about opportunities for AI. Although there was an AI-expert (UX designer), not all participants where too familiar with the capabilities of AI. In order to enable them to brainstorm about potential (sub-)solutions, the relational-metaphor has been used to explain the capabilities of AI (page 48). In order to concretise their early ideas, the session participants were handed AI-capability templates in which they could fill in what it is that the AI-system does (interact), and what it needs to analyse and perceive in order to achieve this (Figure 87). Afterwards, they were asked to discuss their ideas with the group (Figure 88). The most important initial findings where written down on a 'parking spot'.

Afterwards, the participants were asked to team up in two (splitting up users and client) and select the idea which they thought was most interesting. These initial ideas were then deepened using H2-Statement sheets (Figure 72) around the 5 main clusters of the design principles (see Appendix 14). As this was about doing a quick ideation, based on the initial ideas, this part of the session was strictly timeboxed. The participants got 5 minutes to complete the H2-Statement sheet with post-its, while using the service design cards from the AI-Accelerator deck as stimuli. After the five rounds, the participants were asked to present their initial findings to the others, and hang them in plain sight. The end-result of this phase are concept directions that are shaped by the design stimuli from the AI-accelerator deck.

D. Experience Design

After a short break, the participants where asked to return back to the same (two-by-two) teams, and create a more detailed version of their concept directions (Figure 90). Hereby, they were given a booklet which contained a set of different templates (see Appendix 14). First, they had to agree on the concept, and give it a name and a short description. Then, they had to go back to the initial brand-user journey and state the most important user pains and brand opportunities.

Furthermore, they had to create a positioning statement which was based on these pains/opportunities and includes the functional, emotional and self-expressive benefits for the user (from brand attitude canvas) (Figure 40). Afterwards, they were asked to fill in a user scenario using the UX design cards of the AI-accelerator deck (Figure 89). Each individual was instructed that they were responsible for a particular set of design principles. Hereby, they were open to choose whether they wanted to use the cards as ideation stimuli, or as a quality control (see "Design Stimuli" on page 93). Hereby, the end-result of this phase are concepts that are detailed using the design stimuli from the AI-accelerator deck.

E. Initial Developing

Lastly, the participants had to go over two more elements that are important when designing for AI-systems, namely the personality (for conversational experiences) and the data-process canvas. For creating a 'bot-personality', the participants were asked to fill in the personality map (Figure 50, Appendix 1) based on the human-like traits and emotional values of the brand (from the brand canvas). As explained in "AI-Personality Map" on page 57, this personality map visually shows the baseline personality, and in what way it can differentiate on an individual level. Ideally, participants should use this map in order to create an additional conversational flow in which the different aspects of the personality are clearly shown. However, due to time constraints, this step has been skipped. The last step was about translating the scenario that they created to an actionable canvas that includes the cognitive capabilities for AI (Figure 51). This way, the session participants where stimulated to think which types of data are needed in order for the AI-system to interact with the user as described in the scenarios.

The result of these final two steps is a more actionable output which could serve as a starting point for a follow-up session (hackathon) that involve engineers for creating a MVP. Finally, In order to close the session, the participants were asked to give a short presentation about their final output and ideas (Figure 91, Appendix 14).

Conclusion Co-Creation Session

The final output of the session are three concept directions for a AI-driven services. These concepts include the important design principles for AI ("Design Principles" on page 75) and augments the brand experience of users by answering their latent as well as explicit needs through brand-centric design. The output of these three concepts, including a short description per concept and the session materials can be seen in Appendix 14.

Figure 90 *Participants instructed to work in two--by-two teams to detail their concepts.*

Figure 89 *Participants working on the user scenario using the UX design cards from the AI-Accelerator deck.*

Figure 91 *Final presentation of the output as a round-up of the co-creation session.*

F. Reflection Co-Creation Session

Before closing the co-creation session, the participants were asked to leave their initial feedback on 'tips' (red) and 'tops' (green) post-its. Furthermore, more in-depth feedback interviews were scheduled individually the week after the session with Deloitte, as well as the Volksbank. The output of the feedback and validation talks is elaborated below, and divided per topic.

Workshop in General

In general, the participants thought that the workshop had a good pacing, and that there was a good balance between doing/ presenting and textual/ visual. Moreover, they indicated that the workshop felt complete. According to the session participants, the different tools and models force you to look at solutions for AI-systems from a broad, diverse perspective. Therefore, they work good in combination with existing design processes (as add-on tools).

> "I had the feeling that this approach includes a lot, if not everything. This way, you don't forget anything important for the creation of a good AI-design.
>
> **PETER EIKELBOOM - VOLKSBANK**

That said, participants indicated that there was a lot they had to do in short amount of time that they had. Hereby, they agreed that it was easier to fill in something than starting from an empty sheet. However, because there were quite a lot of 'exercises' in little time, it also felt a bit like a fill-in assignment at times which could also work restricting.

Furthermore, because of the time limitation, the problem was handled relatively extensively, but the solution not as much as it could have been. As a result, it was not entirely clear for the participants what the next steps would be in order to work towards a prototype/ MVP.

In future session, this can be solved by taking more time for the different steps that are involved. Hereby, instead of having to work with all the session materials in a row, they should be used as add-ons for existing session objectives. For example, the personality map can be made more actionable by using it to create a more in-depth bot persona and initial conversational flow. Furthermore, by using the tools as add-ons, instead of stand-alone tools, it should also feels less like a 'fill-in' exercise.

> "Room for own input on the customer journey was very good and useful.
>
> **KAJ LOOIJSE - DELOITTE**

Brand-Related Materials

According to the session participants, the user attitude (person) & brand identity really helped to get emphasised with the topic and design from a brand- and user-centric mindset. Especially because of time limitations, it was good that they were already (partly) filled in. However, as said above, the participants indicated that because the whole session moved on in a rapid pace, they felt that there was not always enough time to reflect back on them later in the process (e.g. during scenario design). Lastly, it might be better to start-off the empathising part by letting the users (instead of the facilitator) present their own insights/ pains from the persona canvas, and the client their own brand from the brand canvas.

> "The time was a bit too short to include everything. Be careful that it's not an overkill in templates and cards.
>
> **NAIMA VAN ESCH - DELOITTE**

AI-Opportunities

In this session, the AI-touchpoint cards did not have room for a short description of the AI-opportunity (e.g. name/ drawing etc.). Because of this, it was hard to distinct them at the end, and it wasn't entirely clear how the initial AI-opportunities relate to the touchpoints that have been established. Therefore, for future session, in order to make a clear connection between the AI-opportunities and the journey, the initial AI-opportunities should be placed at the left side of the journey, and connections with the rest of the journey will have to be made on the layer (instead of placing the AI-opportunity immediately somewhere on the layer).

When it comes to the H2-Statement sheet, it was not yet entirely clear for everyone in which way the cards had to be used. However, the participants indicated that once they got how it worked, the sheets and (service design) AI-stimuli really helped to shape the AI-system and tackle the important challenges around it.

AI-Accelerator Deck

According to the session participants, the set of cards did help to really think through the AI-concept. The designers, as well as users indicated that even without of a deep understanding of AI, they were still being able to implement the necessary design principles. However, as mentioned above, the pacing of the session was quite fast. Hereby, the high number of cards made it difficult to take them all into consideration. Furthermore, just like the H2-sheets, it was not immediately clear in what way the cards should be used. Therefore, an instruction card has been developed, and summary cards have been made (Figure 92, Figure 93). These cards can be used when participants don't have that much time to ideate. These cards give more of a global overview of the design principles.

> "The cards help you to keep on track, great! They work pretty well as guidelines throughout.
>
> **JAIRO TIMMERMANS - VOLKSBANK**

Conclusion Reflection

In general, the different tools that have been used throughout the co-creation session should not be used as stand-alone tools, but as add-ons during the complete design process. Hereby, they should be used during different stages of a design sprint (e.g. CJM Factory, Figure 6). This way, there is more time to go over the tools in more depth, and there is less the feeling of repetition. With bigger groups, an extra facilitator should be used in order to explain all the tools to the participants. Lastly, the quality of the people that you invite for such a session is essential, and should be based on the desired output of the session. This is something which has to be set right at the beginning.

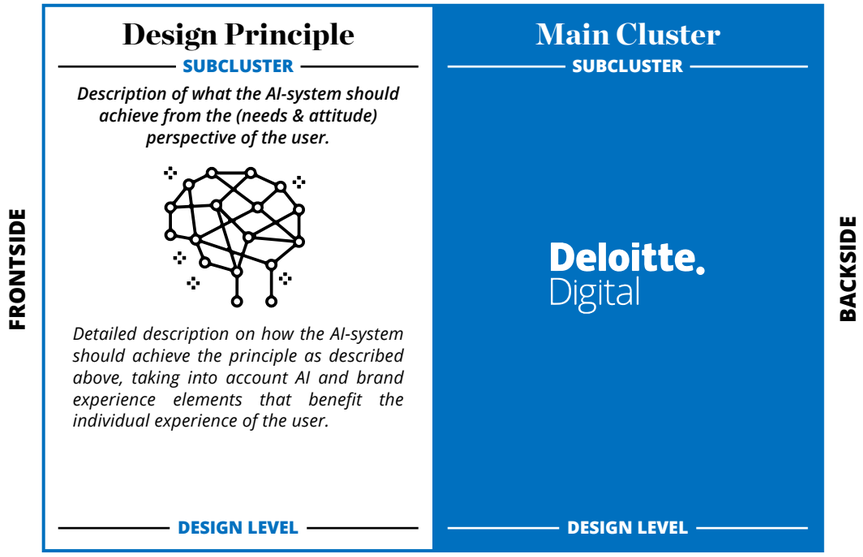


Figure 92 *Explanatory card, based on "AI-Accelerator Deck" on page 87.*

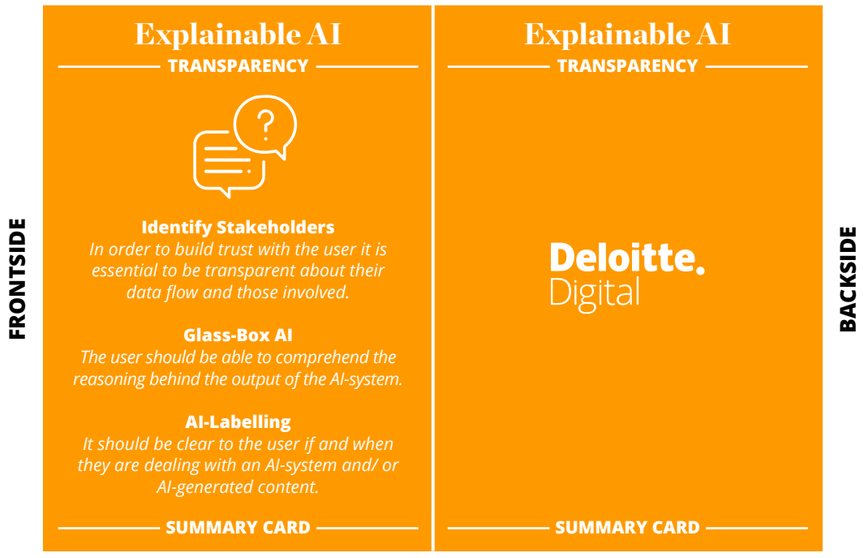


Figure 93 *Example of summary card (per subcluster, combining the design principle from all design levels, based on "AI-Accelerator Deck" on page 87*

5.5. Concretising

A. Concept Background
Based on the co-creation session, a concept has been detailed to a user journey level. This concept is mainly an adaptation of concept output #2 from the co-creation session (Appendix 14), but also includes elements of the other concepts, as well as a final detail layer. This detail layer has been created using the design tools: AI-accelerator deck with brand-related materials (e.g. positioning statement). A description ans summary of the concept 'Peer Profiles' can be seen in Figure 94.

B. User Perspective
The scope for the target group is set for graduates (and young professionals). This is based on the touchpoint prioritisation phase during the co-creation session (Figure 86). Here, it becomes clear that the moment just before, as well as after graduation is a critique from the perspective of the students, and offers great opportunities for the brand Volksbank. From the user perspective, graduation means the start of a completely new life (e.g. new job, new house etc.) that brings along new responsibilities. Besides, people are often unfamiliar with all the rules around financial matters like taxes, allowance and debts. Furthermore, people are not aware of the financial situation (and potential struggles) of their peers and thus find it hard to put their own situation into perspective. Moreover, as people often do not yet have a buffer (savings), they are more vulnerable in case something goes wrong (e.g. with tax or allowance) and people might start off into debts. Lastly, even though it is important to start early, younger people are often not yet too concerned about saving goals (e.g. pension, house, family). An overview of the most important elements from the brand perspective can be seen in Figure 94.

> "I would be interested to know what the average debt of a WO-student would be.
>
> **STUDENT INTERVIEW 3**

C. Brand Perspective
The concept 'Financial Profile' is based around the idea that banks already have the possibility to create a user profile around your financial situation. With the PSD2 (see Industry Analysis on page 73), banks can retrieve transactional data from other bank accounts, and integrate 3rd-party data to create more meaningful user insights. Instead of keeping such information hidden from the consumer, banks should use it for the benefit of the user, as well as that of society. Hereby, users should be able to retrieve their own profile, and compare it to that of their (anonymous) peers. This way, they offer transparency in the financial situation of society, and make people more aware of their financial struggles, making the topic more negotiable. For the Volksbank specifically, this is an opportunity to make this new generation financially resilient and preparing them for the future, setting personal goals, and keeping out an eye for lurking dangers such as unduly received allowance or tax cuts. Furthermore, by offering transparency around the topics that younger people often struggle with, such as regulations around allowance, debts, taxes etc., Volksbank has the opportunity to humanise the overall experience for the user. This way Volksbank can become an empathic coach right at the start of the financial journey of young professionals (graduates). An overview of the most important elements from the brand perspective can be seen in Figure 94.

> "I can imagine that a bank could become your personal accountant.
>
> **STUDENT INTERVIEW 3**

Concept Peer Profiles

Allow users to (re)gain insight in their own financial situation, as well as that of their peers in order to educate people and move towards a more financially healthy life for the individual user, as well as society.

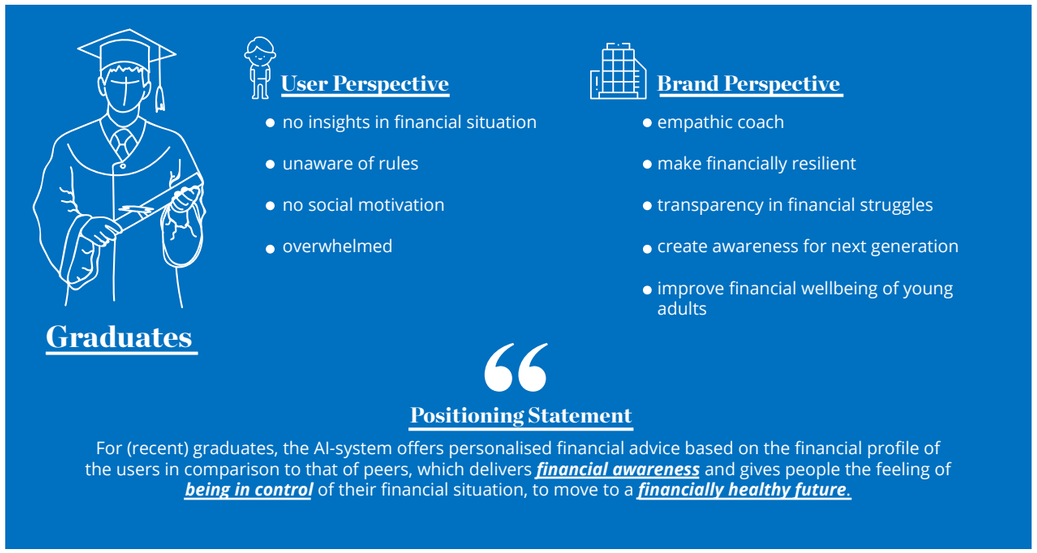


Figure 94 *Explanatory card, based on "AI-Accelerator Deck" on page 87.*

D. AI-Design Principles

The concepts are based round some of the design principles from the AI-Accelerator deck (service design level cards). To explain in what way these design principles are involved, a short elaboration per principle will be stated below. A more detailed description (including all the principles involved from the AI-Accelerator deck) per step of the user journey, can be seen in Figure 95.

Intuitive AI

Based on predictive analytics, the AI-system should be triggered by itself (through life event). Hereby, the user should not have to look up everything by themselves, but be guided through the experience flow that helps them to create their financial profile and set personal goals.

This profile should be integrated in such a way that the user is able to access it any time they prefer. Therefore the solution is integrated into the existing application. Furthermore, the AI-system should integrate relevant financial parties (e.g. tax authorities) to minimise the user effort of completing the personal profile.

Responsive AI

The AI-system should never decide for the user at any point in the process. Through the advice that the AI-system gives, users can choose what actions to take. However, the AI-system should always ask for consent to confirm assumptions and actions. Furthermore, through the conversation experience, the user should be able to provide feedback on the experience.

Personal AI

Based on the design principle "Individual Journey' (page 90), the life event of graduation has been chosen as moment to engage with the customer. Furthermore, the concept of the user profile should slowly build, starting from a more generic profile, and moving towards a highly individualised user profile. By creating a financial user profile that provides personalised insights and adds meaning to money, the user should increasingly feel an emotional connection to the brand.

Beneficial AI

By creating a personal financial profile, the user gets more insights into their personal financial situation. Furthermore, through advice that is based on the profiles of peers, the AI-solution helps preventing (or even help solving) financial problems and preparing the user for the future. By doing so, they do not only improve the financial wellbeing of the individual, but also that of society in general, and help to create awareness for the next generation.

Explainable AI

At any point, the user should have the ability to get in touch with an actual human agent to confirm or adapt any assumptions that the AI-system might have made. However, the human agent (including all stakeholders that are involved) should not be able to see financial profile of the user without their consent.

E. User Journey

The user journey is based on getting people engaged with the financial profile. This includes first time use and setting up the profile and personal goals. In Figure 95 on page 128, an overview of the user journey can be seen. This also includes a detailed overview of which design principle is involved at which point of the user journey. Below, a more detailed description of the various steps, including the role of the AI-system will be given.

Trigger

Starting off, there will be a trigger which will engage with during the life event of graduation/ getting your first job. This will be based on the user's transactional data (e.g. first-time salary, or termination of the student loan/ grants). The user will get a push notification through their mobile device which states that the bank thinks that the user recently graduated. This will be communicated in a way that it appeals emotionally to the user (congratulating and use of emoticons). The user can choose to engage with the message by selecting either yes or no, and continuing to the application or can choose to ignore the message for now. In case the user doesn't engage with the notification, they will see the same message next time they interact with the mobile banking application.

Educate

In the application, the same notification sign is clearly visible. When the user engaged with the notification, they get a short explanation why the bank thinks that the user is recently graduated. In case the user confirms, they get a pop-up about some general facts that relate to their personal situation. For example, when the user is receiving an allowance, or when they used to receive a student loan, they might get some facts specifically about these topics (Figure 95). Hereby, the user gets educated about the possible risks of their current financial situation, and become aware about whether their current state is normal or abnormal. Through these (personalised) facts it should become clear for the user why the bank created the functionality, and why it is important for the user to create a financial profile themselves. The user is informed that they can create (complete) their own financial profile within a few steps in order to prepare them (financially) for the future.

Consent

At first based on the previous notification, the AI-system educates the user what it can do, and where it can help. Hereby, before creating a detailed financial profile of the user, the main goal of creating profile is explained, and they are asked in what functionalities they might be interested (Figure 95). After the user chose which functionalities they want in their financial profile, a conversational agent (chatbot) explains which data is needed in order to achieve this and asks for consent from the user (Figure 95). This can be either by leading the user through a fixed flow (e.g. choose yes or no) or through conversational input (natural language). In case the user gives consent, they will be guided through the process of connecting 3rd-party data, such as that from the tax authority to the individual profile of the user (Figure 95). In this step, it is important that the user should have as less input as possible, but still remain in control of the actions that follow.

Create Profile

Based on the preferences and personal data of the user (including that of relevant 3rd-parties), a profile is generated that contains personalised content and information. The user can access this profile anytime through the application (in-app widget). Furthermore, the user can access a conversation agent at any time to ask topic-related questions, or if they want to know where certain data came from. In the financial profile, the user has an overview of important money matters that are important to them, such as (study) debts, allowances, pension build-up, salary (and tax information), spending/ saving behaviour etc. At any time, the user should be able to opt-in, opt-out for the different functionalities. In case the functionalities are not yet set up (e.g. saving goals or pay off plan for study debt) the user is prompted to continue and fill in additional information to get better results.

Furthermore, based on transactional and 3rd-party data, the AI-system is able to create alerts (notifications) in case an anomaly, or incorrect payment is detected/ assumed. The user is able to follow up on this notification through a conversational agent (e.g. to check whether you are eligible for care allowance). Because the AI-system is continuously monitoring, the user is able to get a peace of mind on a daily level. Besides, the user might choose to hide certain information as a standard setting, so that it only shows when the user specifically asks for it. This way, sensitive information (such as height of study debt, or salary) is not accidentally showed with others around. From here on, the user could either compare themselves to their peers (Peer Comparison, Figure 95), or go straight to setting up personal saving goals and payment plans (Set Goals, Figure 95).

Peer Comparison

The user can choose to compare some of the items of their personal profile to that of their peers. As the peer group is based on (relatively) general assumptions, the user might have to specify to which group s/he wants to be compared to. For example, the user might have to choose their living/ marital state (e.g. Figure 95) in case the AI-system does not have data e.g. around household income/ mortgage etc. or if the user did not specifically give consent to share such information. The user may choose whether s/he wants the AI-system to save and remember those preferences or not. Furthermore, they are able choose to (anonymously) share their information to benefit other users in their peer comparison. Once a peer group has been established, specific points of the personal user profile will be compared to that of (anonymous) peers. As a consequence, the user is able to see whether it is similar or very different. By going to the different topics, the user is also able to see why certain situations are average, and why the individual situation might differ. Based on this, the user might get personal advice (through a conversational agent) that states what is going well, and what might need improvement.

For example, the user might be able to compare their debt including monthly rate and pay-off time to that of others. From the perspective of the AI-system, it is essential that the outcomes/ actions are based on peer data that includes a broad range of contexts. Furthermore, other elements that the user might be able to compare are e.g. saving goals (buffer), pension build up, and potentially even an income (salary) and expense comparison. Based on this information and the advice of the conversational agent, the user might want to (re)set goals such as specific saving goals or a payment plan for debts.

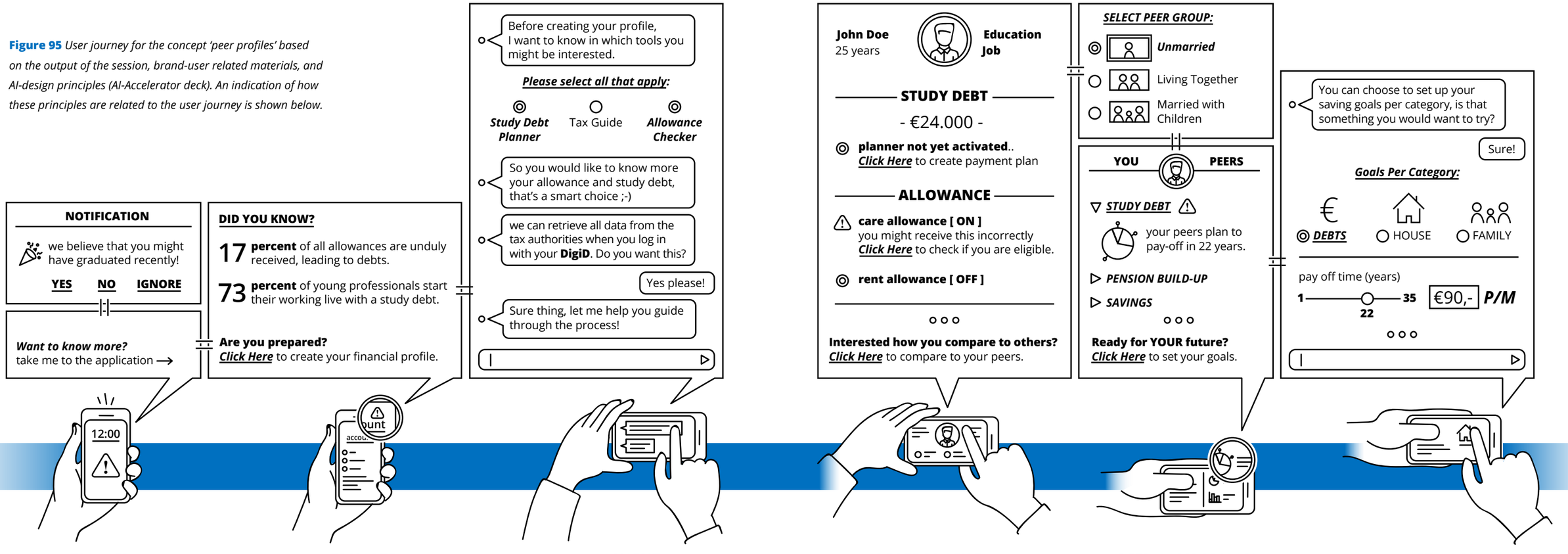
Set Goals

Once the user chooses to (re)set up their personal goals, they are first shown assumptions around their current situation, and a projection what that would mean for their future situation (e.g. their probabilistic salary and savings in 10 years, or the potential height of their mortgage in 5 years). The user can make adjustments per topic, such as specific saving goals, or debt payment plan (Figure 95). Here, they move from broad/ generic goals, to more specific goals (slowly introducing the functionalities of the AI-system). Furthermore, the user is able to ask for advice or questions through a conversational interface. Through the conversational interface, they should also be able to connect to an actual human-agent in case they are unsure about the assumptions of the AI-system, or about their own goals and/ or actions. Based on the goals that the user sets, the AI-system will give advice to the user what that would mean for their future situation, and how this compares to their peers (e.g. by showing points of improvement). The goals that the user sets are saved to the financial profile of the user, and can be accessed at any time through the application. Furthermore, the user can schedule check-up notifications (e.g. once every 2 months) in which the AI-system will update the user whether s/he is on track (aside from the notifications that users get when an anomaly/ possible mistake is detected, see 'Create Profile', Figure 95).

5.6. Wrap-Up

In this chapter, the insights and design tools have been put to practice by using them in an actual usecase for the Volksbank. Hereby, the design process has been divided into four phases, namely discover (brand mapping), define (idea selection and user attitude mapping), develop (co-creation session for journey mapping and experience design) and deliver (concretising and iterating of design). By performing the usecase, the design tools of chapter 2 to 4 are explored in more detail, and their purpose and output in an actual client context is illustrated. The final concept of this chapter illustrates the result of an AI-driven service that augments the brand-experience of users through the different pillars of optimising the individual experience (intuitive AI, responsive AI, personal AI, beneficial AI, and explainable AI). This illustrates RQ1 (page 11), as thus explains RQ2 (page 12). The last chapter of this thesis will reflect on the entire process, and will explain how to continue from here on, leading to clear recommendations for Deloitte.

Figure 95 *User journey for the concept 'peer profiles' based on the output of the session, brand-user related materials, and AI-design principles (AI-Accelerator deck). An indication of how these principles are related to the user journey is shown below.*



TRIGGER
Based on the life event graduation, the user gets a push notification from the bank.

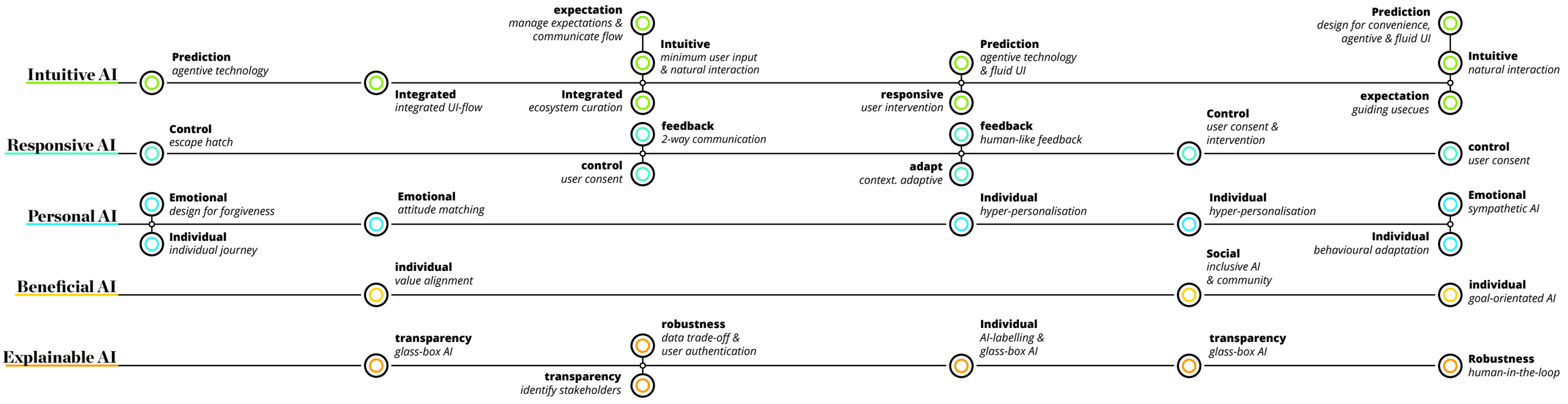
EDUCATE
The user gets educated about risks of their current situation, and informed that they can create a financial plan within a few steps.

CONSENT
Ask what the user wants to do, and indicate what the bank needs to know in order to analyse their personal situation.

CREATE PROFILE
Create and show the financial profile of the user in banking app and let the user correct or complete anything if needed.

PEER COMPARISON
Compare personal profile to (anonymous) peers so that user can relate their own situation.

SET GOALS
Help the user to set goals and create a concrete plan for improving any weak points or working towards future goals.



6.

Conclusion

6.1. Conclusion

The purpose of this thesis was to explore how to design for AI-augmented brand experiences in service-driven brands, and to explain how these insights could be used by designers and strategists of Deloitte Digital in order to methodically apply them during their design process within a client context.

In order to achieve this, an actionable brand experience framework has been created, and shaped into a (brand identity & brand image) canvas booklet so that Deloitte Digital employees can use them to map the brand identity of the client, and the attitude of the user. Furthermore, it has been established that AI-systems should augment the brand experience of users through differentiation on an individual level. This has been translated to a concrete AI-system model that explains the different cognitive dimensions that are involved in order to achieve this. Furthermore, in order to further explain the potential of AI for the individual experience of the user, an industry analysis within retail-banking has been performed. The insights from this industry analysis have been translated to generic design principles for AI that benefit the individual experience of the user, and includes the elements from the brand identity and brand image canvas. The result is an actionable card deck with design stimuli for AI within the context of brand experiences, named the AI-Accelerator deck. Finally, the Volksbank usecase illustrates the various tools that have been developed, and indicates the potential output within an actual client context.

The results of this all are concrete and actionable design tools that are grounded in the literature, as well as the industry, and enable designers and strategists of Deloitte Digital to design for AI-augmented brand experiences. These tools can be used as add-ons within the existing design process of Deloitte, when designing for customer-facing AI.

6.2. Discussion & Limitations

Lastly, a final evaluation of the limitations of this project of this research project is discussed in more detail. Hereby, recommendations for further research, and further development of the tools will be made.

A. Reporting
The graduation process in general was performed in an iterative way, meaning that different parts from different chapters were sometimes developed simultaneously, with findings from one chapter impacting the other. Because of this, the process as described in this thesis is only an approximation, and not per se described chronologically (see discover, define, develop and deliver in each chapter). The advantage of this approach is that all of these chapters were continuously iterated and updated with relevant and actionable insights. However, this also means that the subdivision of these chapters may address different audiences: theoretical grounding for discover & define, and practical aspects in develop & deliver. From a reader's perspective this, this might not be the most ideal division in case they are only interested in either the theory or practice. Therefore, for the Deloitte Digital audience specifically, a separate (summary) report should be made, containing only the main insights and how to put these to practice (design tools and explanation). This will be done the weeks after graduation in collaboration with Deloitte. Furthermore, from the theory perspective, an overview of the most important insights will be published in a set of topic-specific articles, which can be shared on the Deloitte Knowledge Exchange.

B. Industry Scope
The aim of this thesis was to explore how to design for AI-augmented brand experiences in service-driven brands. Hereby, the final design principles and tools that have been developed are not industry specific, but meant to fit all sorts of clients of service-driven brands. However, because of the limited time of this graduation project, the scope for the industry analysis (as well as the usecase) has been set for retail-banking (this has been done in conversation with Deloitte). Even though the design principles are an integration of the retail-banking specific insights, as well generic expert talks and design principles from a variety of industries, it should be validated whether they actually fit within the broader context of service-driven brands. In order to do this, the design tools should be used within the context of different clients, from a variety of industries. Hereby, the designers and strategists of Deloitte Digital should reflect on the output to assess whether the design tools are relevant and complete when it comes to designing for AI-augmented brand experiences.

C. Engineering Perspective
For the sake of scoping this thesis, the methods and tools that have been created are from the perspective of the designers and strategist. The upside is that the findings of this thesis are holistic, in a sense that they can be applied to a wide range of design projects for service-driven brands in which AI-systems are involved. However, the thesis lacks an (in-depth) engineering perspective, and is thus limited when it comes to the development of such AI-systems. Although the design tools work well for thinking about 'what' needs to be built (e.g. through the AI-design stimuli or AI-system Model Blueprint), it doesn't explain 'how' it should be built. For example, the output of the AI-personality map indicates to what extent a 'bot' could differentiate its tone of voice from the baseline experience but lacks the approach to translate this to a concrete MVP, and how to train and/ or maintain such a system. Hereby, the tools should be tested with engineers to discover how the insights from the design phase can be translated to the actual MVP delivery phase. This also holds up for the illustrated end-concept "Peer Profiles" of the Volksbank usecase, which has been concretised until user journey level (with connections of brand-, and AI-design). Although it was beyond the scope of this thesis, it would be interesting to actually develop such a concept to explore how the design principles should be translated into concrete functions (e.g. from AI-blueprint canvas to 'coding' principles).

D. Session Materials
By performing the Volksbank usecase, the design tools have been tested and illustrated in an actual client context. By doing this usecase, some last iterations on the tools have been made, and included within the various chapters (e.g. AI-accelerator tool on page 122 or AI-touchpoint tool on page 55, see reflection on page 120). However, the brand mapping (brand canvas) and user attitude mapping (user mapping) have been performed individually. Even though the output of these tools was discussed with the client (Volksbank) as well as Deloitte, it would be interesting to test them during a preparation session (e.g. with the client). Furthermore, as discussed in "Co-Creation Session" on page 112, the AI-design tools have been tested chronologically in a relatively short session (3,5 hours). In order to do a more in-depth exploration of using these tools in a client context, they should be adopted during different stages of a design process/ sprint, and thus spread over multiple sessions (dayparts), and tested at multiple clients.

E. Creating Ownership Tools
Furthermore, based on a public presentation of this thesis at Deloitte, multiple requests on the brand/ user mapping canvas and AI-Accelerator deck were made for a variety of client projects. Therefore, after graduation, a sample of Deloitte employees will be instructed on how to use the tools of this thesis (by a training), so they can become ambassadors of these design tools within Deloitte Digital. Furthermore, when Deloitte employees start using the tools themselves, a sense of ownership will be created, and new ways of using the insights in client projects might be discovered. Lastly, the fact that the main tools (brand/ user canvas booklet and AI-Accelerator deck) are actual physical design tools does lower the boundary for Deloitte employees to familiarise themselves with the tool and actually start using it. However, as this means that these physical tools might actually be used by people that are not familiar with this thesis and the instructions on the tools, a clear and simple instruction manual should still be made. This will be done in collaboration with Deloitte after graduation.

6.3. Personal Reflection

First, I want to reflect back to my initial learning goals, that I drafted when starting the project. Furthermore, I will look back the process of the graduation project, and briefly discuss my experience and what I learned from it.

A. Making an Impact that Matters
I started off my graduation project by wanting to combine two complex and broad fields, namely branding and Artificial Intelligence. At the start, I often got the initial reaction "ah interesting, but what do those topics have to with each other". Throughout the project, I became better and better in explaining how these topics relate, and started to convince people of the importance of brand- and user-centric design when creating AI-solutions. With the end-result, I did not only bring in concrete design tools and principles to enable people to design for AI-Augmented brand experience, but also hope to have created a bit of awareness around these topics throughout the department.

Figure 96 *Presenting the findings and tools of this thesis to Deloitte Digital employees.*

Personally, I thought that it was a bit difficult at the beginning of the project to comprehend what could be done within the 20 weeks, as most of my friends graduated in the old programme, which sometimes allowed for quite extensive projects. However, by setting the deadline right at the beginning, you are also forced to take quick decisions which in my case helped to prevent getting lost in the myriad of literature around branding and AI. Therefore, in the end I am really positive about this new system as you also learn how to deal with deadlines, something which is very important in practice (especially within the consulting practice). Because of this relative short time (for the complexity of the topics) I decided to work in an iterative way, which also fits better with the dynamic (sometimes chaotic) context of Deloitte Digital. As a result, even the general scope of my main research question changed with every big meeting (midterm, greenlight) that I had. Hereby, I am grateful for my coaches, both from TU Delft as well as Deloitte, to trust me enough to let me fully explore this way of working, and the complex topics of AI and Branding. I am thankful for the fact that I had the chance to become a topic expert within these two topics in which I was relatively unfamiliar before.

Furthermore, as my project included numerous stakeholders (TU Delft, Deloitte, Volksbank and users), it was sometimes difficult to define the main focus. However, I also really enjoyed having that many people involved, and learned the importance of being resilient with regards to the feedback you receive, while clearly managing expectations of your own deliverables. Hereby, I learned the necessity of validating assumptions/ findings with stakeholders. Especially within the holistic topics of branding and AI, I found that it is important to always maintain a critical mindset towards your own findings and approach, and present it to others as often as possible. Because the fact that you consider something as a truth, does not immediately mean that everybody does. By working in these short, iterative cycles, you ensure that you do not end up with an outcome that nobody really wants, or even beliefs in.

Furthermore, as Deloitte is such a dynamic environment in which people are often quite busy, I learned that you have to be pro-active and be able to make decisions all the time in order to get where you want to be. In other words, Deloitte is not the sort of company that 'holds you by the hand'. But for me, this is exactly the work environment that pushes me to my limits (in a good way), and stimulates to keep on evolving myself.

Lastly, as with any project, my graduation has seen ups as well as downs. Luckily, although I definitely had moments of design stuckness, the lows were often marginal, and the highs especially memorable! For me, it really helped to have some small breaks in between (Porto in November, Austria and London in January) to let everything sink in place, and be able to look at things from a fresh perspective. Furthermore, it also really helped to engage as much as possible with people from Deloitte, instead of trying to solve everything by myself. There are so many bright minds at Deloitte that it would have been a shame not to use their knowledge to the fullest potential.

To round up, I personally got a lot of energy from their working environment, and I am also happy that I was given the opportunity to present my findings in front of the Digital team ("Presenting the findings and tools of this thesis to Deloitte Digital employees." on page 133), for the enthusiasm in my co-creation session, and the way that the Volksbank was involved in the project.

Figure 97 *the Edge, Amsterdam, and the many stages I got to see it in during my graduation.*

7.

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