



# Doing money better

Supporting young adults in sustainable financial decision-making

**Graduation Thesis**

Msc. Strategic Product Design

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Mariana Itza de Miguel

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Mariana Itza de Miguel  
marianaitza13@gmail.com  
website: marianaitza.design  
Student number: 4723880



**Doing money better:  
Supporting young adults in  
sustainable financial decision making**

Msc. Strategic Product Design  
Faculty of Industrial Design  
Engineering  
University of Technology of Delft  
Delft University of Technology  
[www.tudelft.nl/ide/](http://www.tudelft.nl/ide/)

**Supervisory Team**

Chair  
Prof. dr. Jan Schoormans  
Product Innovation Management  
Industrial Design Engineering Delft  
University of Technology

Mentor  
Ir. Ehsan Baha  
Product Innovation Management  
Industrial Design Engineering Delft  
University of Technology

*"If you want to teach people a new way of thinking, do not bother trying to teach them. Instead, give them a tool, the use of which will lead to new ways of thinking."*

**Buckminster Fuller**

# Acknowledgements

All the good things come to an end, as well as my journey in Strategic Product Design at Delft University of Technology. I am happy and proud of presenting my master thesis as my final deliverable.

While coursing my master studies, I have come across numerous opportunities and challenges. My graduation project has helped me in growing in both the professional and personal layer. I consider myself extremely lucky for having learnt so much from my studies and the people who surrounded me during these years.

This report is the result of a 8-month project development, which without the involvement of the following people would not have been possible. I would like to thank them with all my heart.

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# Executive Summary

Money is a key element in people's overall well-being (Abey & Ford, 2008). Young adults are behaving very differently towards finances compared to previous generations (Williams et al, 2010). In addition, young adults have little trust on financial institutions and no one to turn to for actionable advice (Deloitte Millennial Survey, 2019). Adults in their twenties and thirties are struggling with money, feeling overwhelmed and lost (Foundation for Economic Education, 2018).

A gap in the market was found, where no current solutions fostered long-term behaviours for young adults towards a secure financial future. I wanted to use my skills as a designer to solve this paradigm involving young adults and finances. The goal of this graduation project is to provide guidance and support for young adults in changing their current money habits so they can ensure their future well-being.

This project was performed following first, a Design-Driven Innovation approach to foster innovation and second, a Human Centred Design approach. Through Design-Driven Innovation, I articulated a new vision for the design challenge involving making young adults change their behaviour regarding money to ensure a future stable financial well-being. Through the Human Centred Design approach, I defined

and developed the design concept for further implementation. Tools and methodologies of both approaches were carefully chosen adapted to project stages and needs.

This societal issue regarding young adults and money is a shared problem in countries all over the world. For a better understanding of the relationship young people have, the context was scoped down: the project was based in Madrid, Spain and it was targeted for young adults belonging to this country. Under this context, the research of the project provided valuable findings which led to the final design. Those findings can be extrapolated to non-spanish young adults.

Research consisted of extensive literature review, a benchmark, desk, field and trend research. It was imperative to understand the context of the target group: the behavioural, cultural, societal, economical and political background of young adults. With that aim in mind, young adults lifestyle, goals, standards, values and attitudes were analysed in depth.

Once research was finished, the current money habits of young adults and the desired behaviour, which increased financial well-being, were identified and mapped in two frameworks. The transition between both was possible

through the creation of a new product-service-system. In addition to the transitional model, design requirements and insight themes were developed to be used as a starting point for the conceptualization phase. Also, a new meaningful vision was articulated. As a result, the design concept was gradually shaped, enabling both empowerment and support for young adults in changing their current habits.

The last part of the report focuses fundamentally on the detailed final design, named Volt, that crafts a new meaningful relationship between young adults and money.

Volt consists of a smart phone case, a related digital application and the system that sustains both. Through the phone case, young adults will progressively save by clicking a button and check their financial health thanks to a coloured light, located above the button. The digital application will first help young adults budget on their personal financial goals into vaults or buckets and keep track of their financial health and progress. After some digital application use, the digital application will provide young adults with actionable financial advice and the entrance to a community of young people with similar financial situation, so they can feel supported and have the peace of mind they crave.

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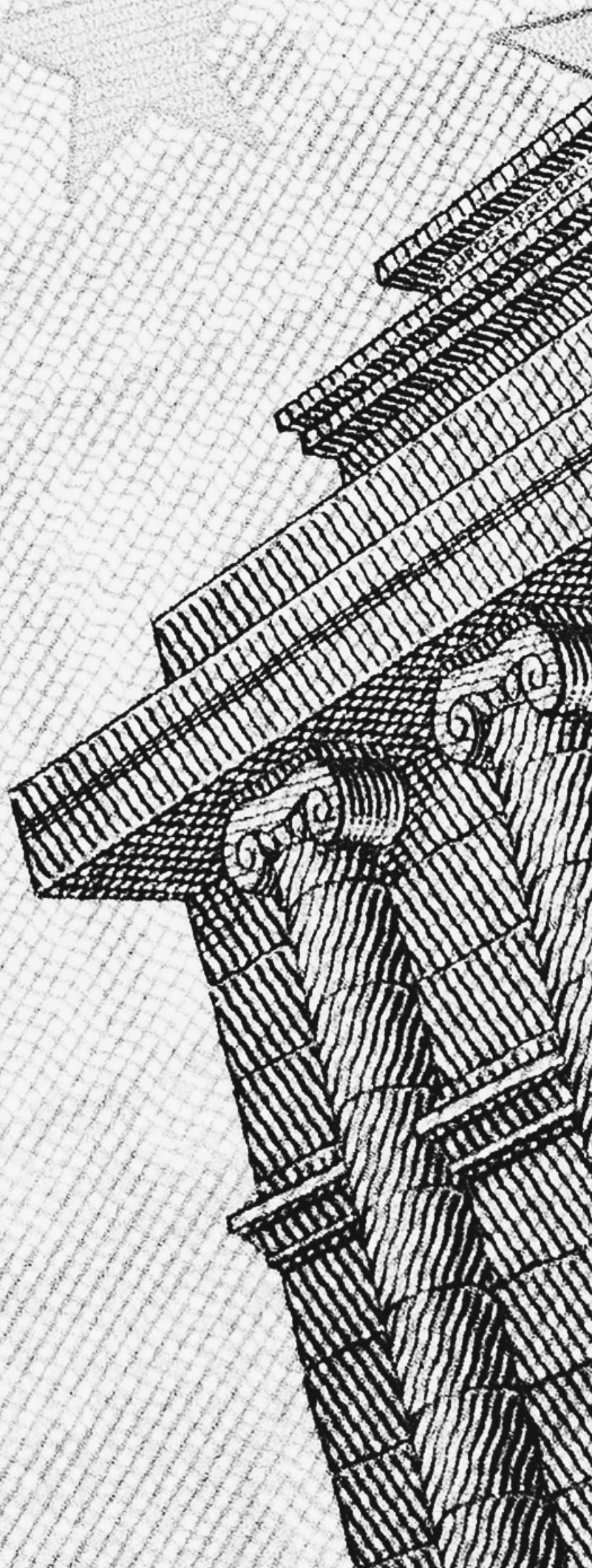
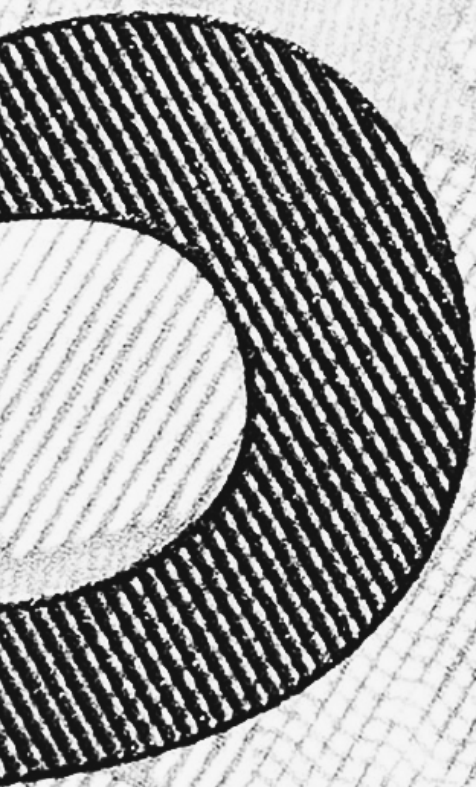
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1.

# Project

In this chapter, the relevant background of the project is presented and the motivations towards the chosen topic are described. The importance and significance of this project is also documented. Finally, the approach and the design process used is explained.



# 1.1 Introduction

In this section, I introduce my project's topic, its relevance and the societal challenge I wanted to address.

I decided to initiate this project because of my deep interest in young adult's financials. My curiosity sparked when I talked to people close to me about money. I found out that the current relationship of young adults and money is not securing their present and future welfare. My friends and family understand money as the way to achieve their main needs and their deepest wishes. Each one of them wanted to increase their financial health, spending and investing wisely to ensure their well-being, but they did not know how to do it. I framed this project with the aim of helping young people getting better with money, by supporting them now and in their future goals.

## Target Group

Today, young adults comprise 31.5% of the global population and are to become 75% of the workforce in 2030 (Fry, 2019). The decision to focus on the young adults target was made due to their potential to grow financially from the present moment and to optimize their future financials. Furthermore, among its generation, Spanish young adults are chosen as the target group. This decision was made mainly due to practical matters, as the project was based in Spain and the access to young adults living in this country was quite convenient. Although, the situation of young adults in Spain will resemble those of many non-spanish young adults.

Millennial or young adults are the generation referred as the one born between 1981 and 1996 (Pew Research Center, 2019) as shown in figure 1. Due to the present world's globalization, young adult's characteristics are shared among different countries the existing differences are subtle. Spanish young adults are true representatives of these generation's values. Millennial are young, educated and have easy access to travel around the globe (Fry & Parker, 2012). They communicate with others that can be thousands of kilometres away, which makes them culturally rich and optimistic. They are the first digital generation, introducing technology in their daily life since they were just kids.

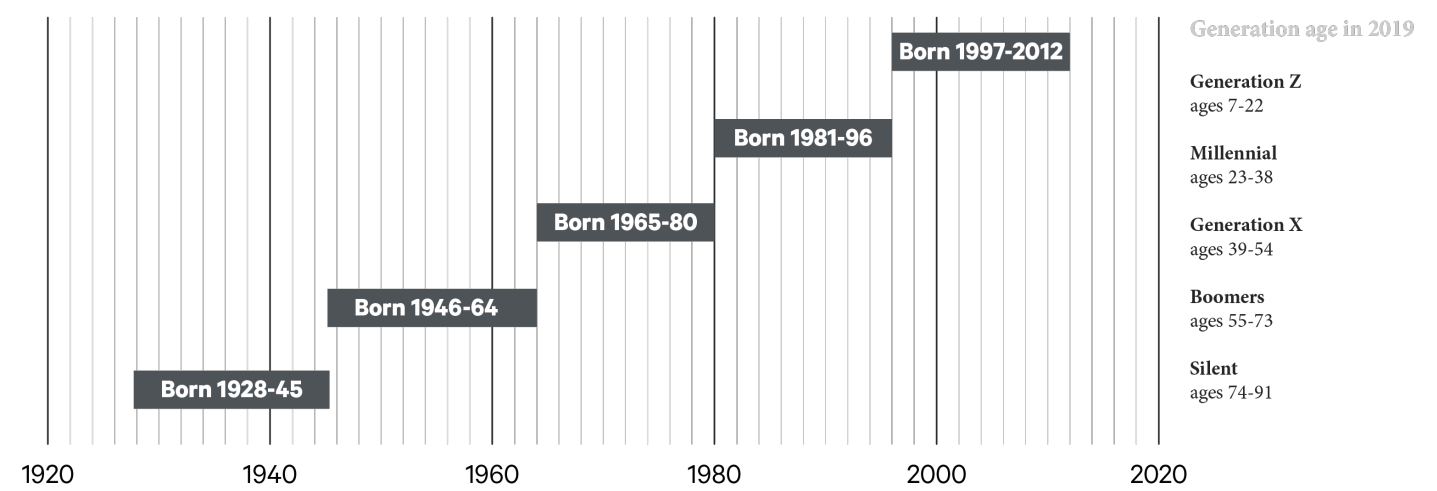


Figure 1. Generational born dates and current age in 2019



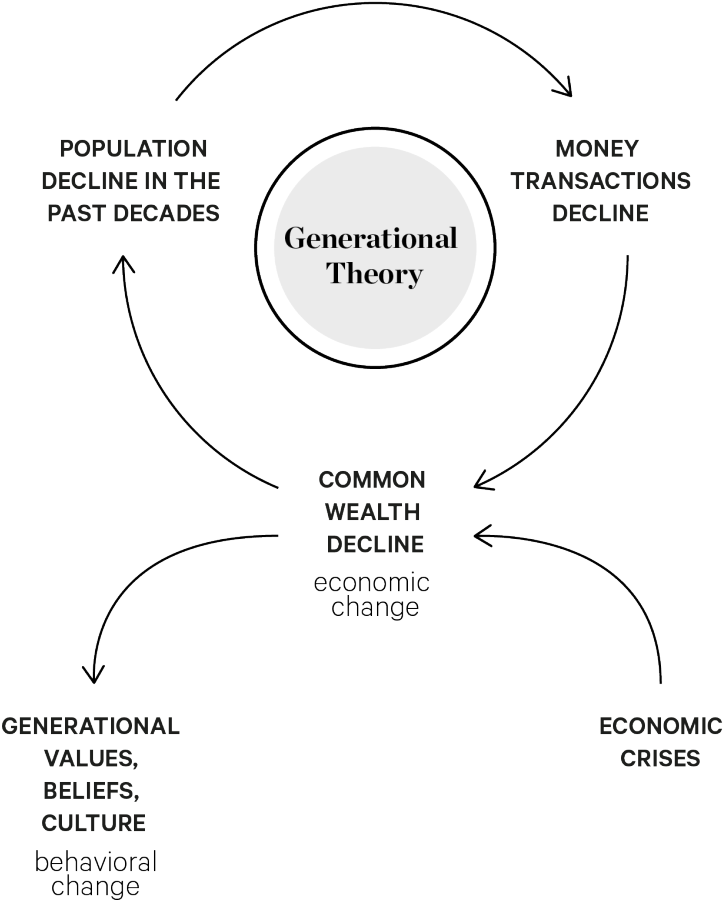


Figure 2. Generational Theory influence in each generational archetype



## Societal Challenge

In the world that we currently live in, behaviour of distinct generations differs greatly from one another. The Generational Theory (Strauss & Howe, 1991) defends the idea of historical events associated with generational groups. Each generational group bursts a new era which usually last around 20–22 years and where new social, political, and economic context arise (Strauss & Howe, 1991). The early mentioned historical events involve economic growth, which is a direct consequence of population growth, determining specific values and beliefs of each generation as shown in figure 2 (Strauss & Howe, 1991). Due to the economy decline induced and increased by economic crises, population growth has been consistently slowing down during the past decades (Strauss & Howe, 1991). As a consequence, money transactions have been steadily decreasing, lowering the common wealth of new generations, in a loop that makes them poorer and poorer compared to previous ones (Strauss & Howe, 1991). Due to this fluctuating economy, each generation develops its own specific priorities, mindset and values, having a tendency to cultivate different habits regarding money and ways to spend it

(Strauss & Howe, 1991). Consequently, young adults are behaving differently towards money compared to the previous generations being Baby Boomers & Generation (Williams et al, 2010).

Economic change induces behavioural change. Young adults in their twenties and thirties face the break of the tradition of having a better financial situation than their parents. The Young adults generation is unlikely able to recover fully from the recession of 2008, implying large employment cuts (lowest employment rates ever in Europe), a stagnant economy and low wages, where they find themselves in a worse place than their predecessors (Dugas, 2010). They have less spending power due to the economic decline, summing up to being less wealthy in the present day. This situation makes it hard to balance a reasonable present well-being and also secure some future savings. Young adults are accumulating debt and this makes them delay the decision to invest on big-ticket items such as a house or a car. This is truly inconvenient, since the opportunity of developing good financial habits in valuable years and saving for their life goals is lost. The question arises

in how to save enough money for the future when they have a limited money position.

In addition to the complex situation regarding money, a longer life-span for the current generations and the upcoming ones is expected. Therefore, young adults will live longer than their previous generations. They will live a healthy life after retirement and will therefore need to access to a larger amount of money than the current generations do now.

Finally, there is a very small amount of financial guidance and support related initiatives targeting young adults. Therefore, managing money is a relevant step towards adulthood, as means of a crucial time in their life, and they are lost in how to deal better with it.

### Scope & Solution Space

The project is based in Madrid (Spain), due to practical matters, with the subsequent cultural, social, economical and educational circumstances this implies. Therefore the design will include all these factors to adapt fully to the young adults living there.

The main goal of this project consists of the development of a final design that guides and support young adults in their present and future financial life so they can take control and action over their finances. A shift from “pure economic growth” to a more “holistic approach” is taking place in current financial solutions, from solving a specific part to working out the complete journey of young adults (Pablo Marcel de Aruda Torres, 2018).

Unlike current solutions that focus on the present improvement of dealing with money, the goal is to foster a change in young people behaviour so they have a more meaningful, healthy and sustainable relationship with it in the long-term. The emphasis of the project rests on the development of a valuable and radical vision together with a detailed design concept that will foster this behaviour.

### Value of Design

Designers have the power to add value to society through the application of their expertise (Manzini, 2013). Through the creation of new product-service-systems that help steer change for a sustainable behaviour now and in the future (Yelavich & Adams, 2014). This is why the combination of creative and strategic mindset could be means of solving paradigms in radical innovative ways, never thought of before (Manzini, 2013).

There is a need for a new perspective, one much more human, creative and innovative. It could play a major role in the financial management disjunctive, introducing new ways to be sustainable in young adults day-to-day life, meeting the needs of the present without compromising the ones in the future.

### Limitations

The main limitations regarding the project are to trigger young adults to change their current financial behaviour for a healthier one and to maintain a financial behaviour in time. This new behaviour will optimise their finances, but they will need to make sacrifices and introduce discipline in their everyday life.

In what follows, I will start with describing the project approach and process followed in this project.



## 1. 2 Approach

Once the initial context was explored, the approach for this graduation project was chosen. This section gives an overview of the methods and theories that are used in this graduation project. In this project, two main theories are used. First, Double Diamond Design (British Council, 2006) which will be used as a basis for organizing the complete process. Second, the approach of this project follows a more unusual design process based Design-Driven Innovation (Verganti, 2016) as opposed to Human Centered Design, which is usually used in design projects worldwide.

### 1.2.1. Expert & Diffuse Design

The project uses both expert and diffuse design approach. Tools and methods regarding one or another were chosen thoughtfully depending on the design phase of the project, the goal and needs at that project stage.

Expert design is the one performed by those, who have been expressly trained and prepared as designers with specific skills and culture to solve problems and paradigms through design (Manzini, 2016). In this case, I am the designer trained to lead this project with the knowledge acquired during my academic years. Through this specific approach, the contemporary society is seen as a future-

building opportunity to change everyday life for the better (Manzini, 2016). Expert design was used to foster a healthier and future-oriented behaviour in young adults that would ensure their long-term well-being. This approach is opposed to diffuse design, which is conducted by individuals who are not formally trained as designers.

Expert design was chosen at stages such as conceptualization (in the scenario mapping) and during the vision generation, among others. In contrast, diffuse design tools such as business model canvas and brainstorming were used in the graduation project.

### 1.2.2. Theoretical Background

The combination of the Double Diamond Design Framework and the Design-Driven Innovation Framework shaped my design process as an adjusted double diamond.

#### Double Diamond Design

The Double Diamond process was used as a way to gain insight into young adults context, to find the design requirements and the design challenge to later ideate on potential directions and test iteratively on the final design.

The Double Diamond Framework is worldwide used by designers from all the disciplines. Double Diamond Design divides the design process into the four phases of Discover, Define, Design and Deliver, and it is known for its visualisation of the moments of divergent and convergent thinking. The phase of Discover focuses on the research and analysis of the context, which has to be done prior to focus on a specific area developed in the Define phase. The phase of Design is meant to ideate on possible design solutions and Deliver focusses on creating a final outcome.

The Human Centered Design approach (HCD) main characteristic is the involvement of a human perspective in all the steps of the problem solving process. Over the years, HCD has become the most used method in design projects due to its richness in delivering solutions in projects involving design. This is the reason why I chose to have HCD as a base. Although, this method is too linear to represent the reality of design projects where iteration is usually a constant. This approach mostly leads to incremental improvements to existing products or problems instead of radical ones (Norman & Verganti, 2013).

In order to design a more radical outcome, in the Discover and Define stage of this project, according to the Double Diamond, Design-Driven



Innovation was integrated. The aim of this integration was to articulate a new vision with a new meaning that would change young people's relationship with money.

### Design-Driven Innovation

Design Driven Innovation is a strategy that generates new meaning and fosters radical improvement of products as shown in figure 3 (Verganti, 2009). Radical innovation is the way to turn a service or a product experience into something completely new, offering innovative ways of use through changes in technology or changes in meaning (Verganti, 2016). Design Driven Innovation fosters the development of new dilemmas (Norman & Verganti, 2013). Meaning innovation has its root in understanding social and cultural paradigms, such as the one of young adults and money, to create new meanings and languages that change those dilemmas to build a better future.

The latest trend in design schools is silencing the designers inner gut (Verganti, 2016). In Human Centered Design, people have become the guiding light for every design decision made. People can show designers what they need but not what they crave and would love to find in a design. Therefore, research is usually too focussed on existing human behaviour and people's needs and the designer finds itself to be trapped those needs.

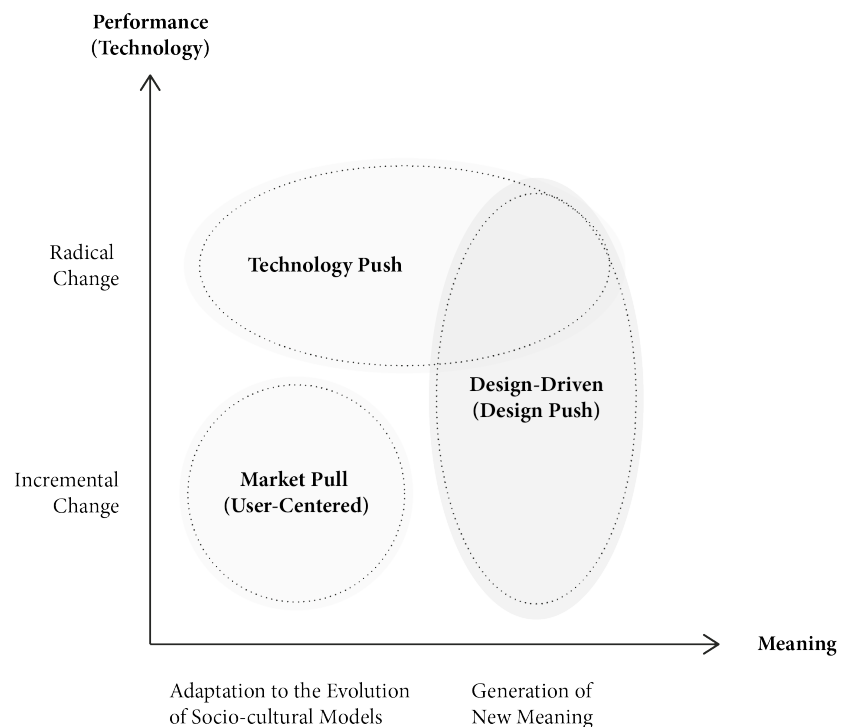


Figure 3. Design Driven Innovation Strategies.

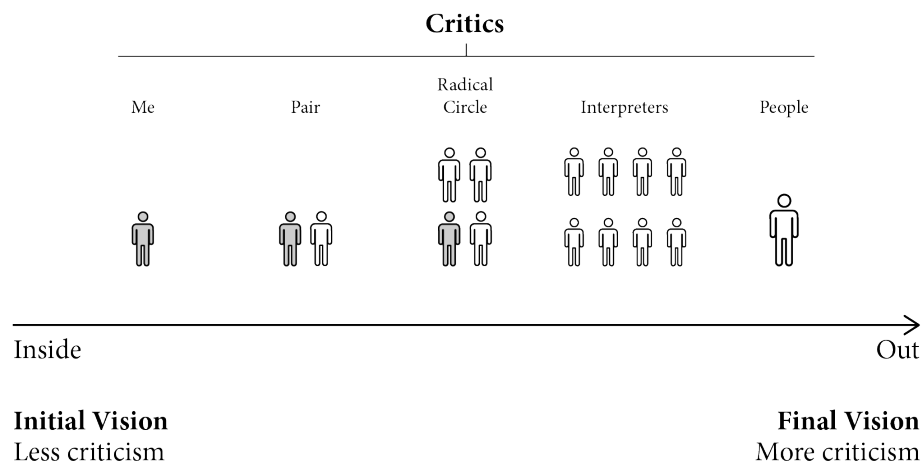


Figure 4. Inside-Out process in Design-Driven Innovation (Verganti, 2016).

In design research through Design-Driven Innovation, a meaningful reinterpretation of a product, service or system triggers a new vision (Verganti, 2016). This vision fosters the development of a new paradigm solution that entails a large and lasting impact (Verganti, 2016).

#### Design Driven Innovation Principles

In order to articulate and refine a new vision, the Design-Driven Innovation approach is based on two principles: the first one being that innovation of meaning is found through the process of starting from oneself as designer and then involving outsiders, and the second one, including the art of criticism in the design process.

The first principle is innovation of meaning. To apply this principle, designers have to start first with their own beliefs by creating an initial vision, which is already inside of them, and then move to outsiders through sharing.

The second principle is the art of criticism. Our present society has applauded

ideation and banished criticism. There is a need for deeper interpretations and opposed perspectives, critics are the key to make those interactions a reality. This tension between the designer and the critics makes the vision more powerful, challenging the designer's beliefs based on our individual past.

#### The Inside-Out Process

"The purpose of going through a process based on inside-out criticism is to create a vision that is powerful, robust, and, especially, meaningful: something for people to love." (Verganti, 2016, p.309) Both principles are tangibilized in the Inside-Out process as seen in figure 4.

The process starts with the individual. In the first step, the individual creates an initial vision based on its own beliefs about the product or service, starting "inside". This is the start of the conversation with a number of people, who are previously identified. These people are known as critics and have the to challenge the individual's vision to foster the individual's self reflection

to promote a meaningful new vision in the end. The design process moves slowly to the "outside": the hypothetical vision is further shared and iterated listening to the judgement of the critics several times until it becomes richer. First critics and later young people, are part of this process due to their expertise, they give new perspectives to the vision and an innovative direction.

This specific element (Inside-Out process) of the Design-Driven Innovation approach was included in the Double Diamond Framework for this project, creating an adjusted Double Diamond Framework. The reasoning behind this decision lies in the benefits of using the Inside-Out process to ensure a meaningful design for young adults, creating the intended impact in their current lifestyle.

#### Personal Principles for Good Design

In this graduation project, one of my personal goals was to discover myself as a professional. I wish to dig deep



and understand my personal principles for good design to feel confident about designing in harmony with myself and my beliefs. One of the main was to use my personal principles as guidance in the decision-making in the project.

A growing number of studies champion the relevance of designers being aware of their identity so they can develop radical innovation. Designers who are aware of their identity increases their creativity, their decision making, structures their procedures of working and conducts design activities into recognizing a radical design concept (Baha et al. 2018). Through the discovery of my personal principles as a designer I want to create a design concept which is aligned with my deepest beliefs and values, making the output much more valuable for people, where I am fulfilled with the final outcome. The ideation for a vision for a new service or a product happens in the fuzzy front end of design. This first stage is characterized by the amount of information designers gather. With all

this information, it can be difficult to synthesize all the learnings and insights. Moreover, I could get overwhelmed with the amount of possibilities for new visions regarding the same design challenge. Through my personal principles I get clarity and prioritize what kind of design I want to deliver.

### **The Designer Identity Workshop**

In order to sense and articulate my personal principles for good design, shown in the previous section, I conducted a Designer Identity Workshop with the instructions of my mentor Ehsan Baha. Firstly, I chose three product/services/systems that I deeply valued and loved. Secondly, I met with five peer designers that were following the same workshop in pairs. Each of us explained the reasoning behind the choice of these specific designs while the other had to take notes and ask questions about it. One took the role of asking climbing the "Why" ladder to inquire about "Why is that important to you?"; during approximately 30 minutes (10 minutes per design). To

keep record of the principles withdrawn from the conversation, both of us wrote down the sensed design principles, our own ones and the ones from the other. One additional session was conducted with my mentor Ehsan, he went very deep into my reasoning in the discussion of product and services I chose. After this, I defined my personal principles of Good Design according to my own values, in order of importance. Those principles are expressed further in the next section.

## 1. 3 Me as a designer

The Personal Principles for Good Design were discovered through a Designer's Identity Workshop, explained in detail in the previous section.

One of my personal ambitions in this project was to design in harmony with my deepest beliefs. Rather than getting rid of my designer biases, I seized the opportunity to design with my personal gut. This is why I discovered my Personal Principles for Good Design, which will be checked throughout the project to keep the alignment with what is truly important for me personally, in order to finally create a product that I am proud of and is exciting to make.

My personal design principles for good design are visualized and explained in Figure 3, numbered in order of importance.

### **My designer's identity in a nutshell**

I wish to design to provide a safety net for humans and care for their well-being, so they can fulfil their deepest needs and be ultimately happy with themselves and with others.

## My Personal Principles for Good Design

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### **01. Good design contributes to a stable well-being**

The design provides stability to young adults so that their well-being is secured. Moreover, it helps them throughout the ups and downs of life.

### **03. Good design makes people feel cared about**

The design can be tailor-made or personalized to young adults preferences to make them feel unique and empowered. Even if there is equity, it is important to celebrate one's identity.

### **05. Good design does not discriminate**

The design should try to thrive for all the humans to have access to it, so that everyone can enjoy it.

### **02. Good design liberates, so people can focus on what really matters to them**

The design allows people to spend time with people doing activities they want, enabling them to enjoy what they want in the moment. Consequently, people are fulfilled with their own life.

### **04. Good design is intuitive**

People can understand the design without thinking too much and putting more cognitive load than strictly needed. The design naturally brings comfort to people.

### **06. Good design connects with the present moment**

The design helps people to connect with the present, to mediate, to enjoy the moment through beautiful things.

## Conclusion

After finding out my personal principles for good design, I used these principles to decide upon a plan for my project, a fitting project process and decide upon exploring certain topics in the research phase of this project.

## 1. 4 Project process

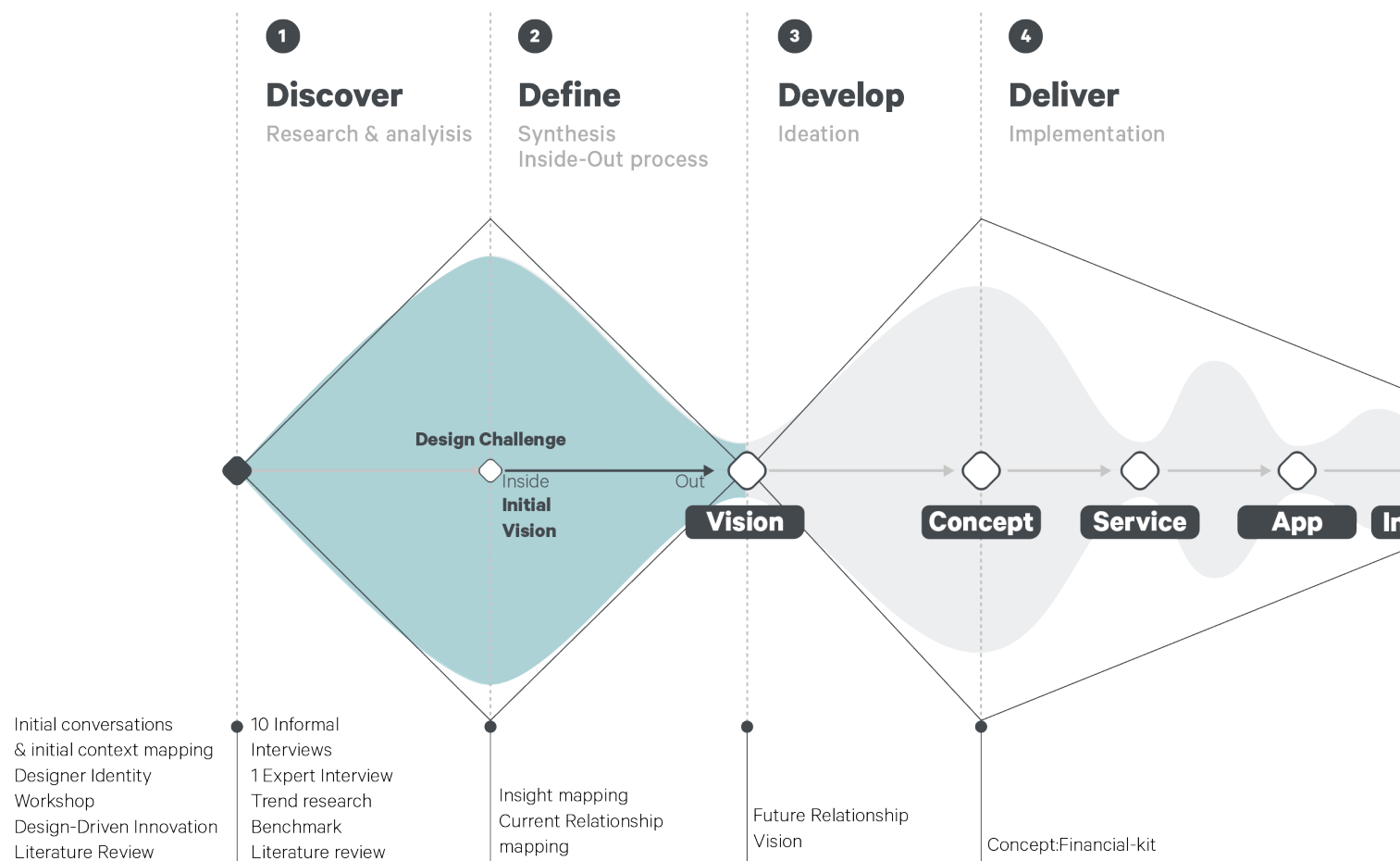
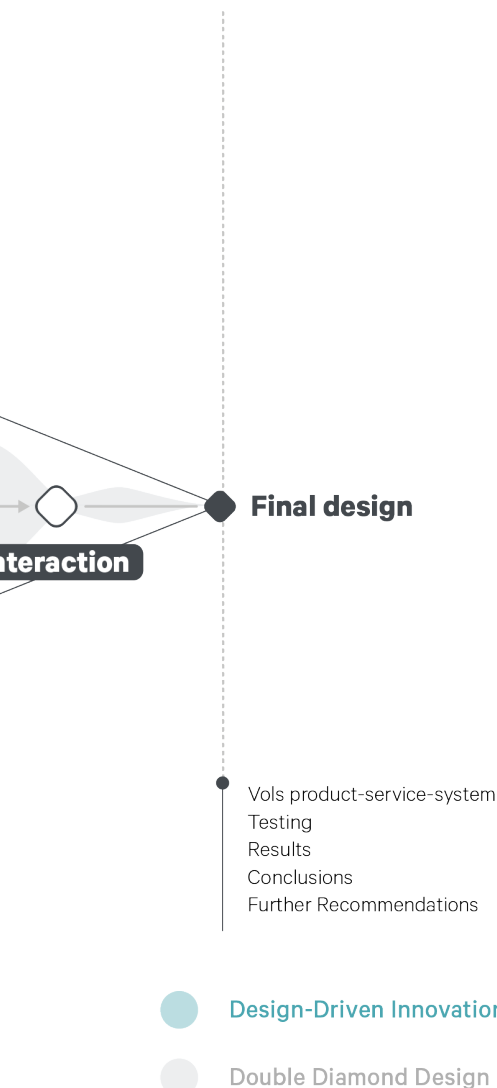


Figure 5. The Graduation project's process, stages and outcomes



The different project process phases are explained and detailed further in this section. As seen in figure 5, the adjusted Double Diamond is visualised as well as the outcomes of each phase in the design process. The two divergence and convergence thinking phases, representatives of the Double Diamond, are visualized as well. The use of Design-Driven Innovation is shown in the figure, illustrated through a different colour. Short explanations regarding each phases of the project are provided in the following paragraphs:

### Discover

Research and analysis took place in this phase. The focus in this part of the process was to gather all the needed information to better understand the context by identifying the main insights. Secondary research including a benchmark, trend analysis, desk and field research was carried out. In addition, a financial expert and ten informal interviews with young adults were conducted as primary research sources. Key findings and insights gathered in this phase were synthesized into a transitional behavioural model, insight themes and design requirements to finally identify design challenge.

Not using Human Centred Design research techniques such as questionnaires and in depth interviews with young adults was a deliberate choice since the involvement of young adults would not lead to a meaningful final design, this one being my main priority.

### Define

The design challenge served as the starting point for the initial articulation of the new vision, which was developed through criticism in the Inside-Out process as indicated in the Design-Driven approach. I got critique from my supervisory team, a financial expert, young adults and peers, which helped me in iterating and refining the vision. The final output of this phase was the final vision which triggered a change of meaning in the product-service system to be designed.

### Develop

Once the new vision was articulated, the design conceptualization took place in this phase. A large amount of possible design directions were defined. Later, the pursue of the most fitting and relevant one was conducted involving saving as the main trigger to change young adults behaviour. Finally, the design concept was chosen called the financial-kit and further detailed.

### Deliver

At this stage, the product-service-system in form of a phone case, a digital application and the system sustaining it were defined. In addition, the fitting present and future strategic implementation was developed. The phone case and the digital application were tested with young adults during this last phase. Improvements were made based on these tests integrated in the final design.



2.

# Research

In chapter two of this report, the research and analysis phase of the project are presented. Research on four different levels was conducted, each section in this chapter matches each levels. In the first section, research on young adults current financial patterns was performed. The second section presents a benchmark analysis. Trend research was conducted to get insight into the young adults context in the third section of this chapter. In the fourth section, an extensive study regarding the meaning of financial health and the way to achieve it was carried out. Finally, the insight themes and design requirements were defined and the design challenge was articulated.



## 2.1 Young adults current financial behaviour

Young adults behaviour regarding money is a complex subject, where different elements add up to influence the financial decisions young adults make which in the end, constitute their reality. Through research and subsequent analysis, those elements were mapped in this section and taken into account for the following phases of the project. In this research phase I gathered rich and insightful underlying reasons and patterns for young people for relating to money in the way they do. Moreover, the identification of motivations, attitudes and values was key to understand the current context to finally deliver a meaningful outcome.

In this section where the first level of research is presented, learnings from both field research and literature review are reported. Ten informal unstructured interviews, each having a duration of fifteen to twenty minutes, with young adults to whom I had easy access to, were used as primary investigation sources in field research. The list of topics of the informal interviews can be found in Appendix B. Extensive literature review including topics from different nature in relation to finances were used as secondary research. To clearly communicate the insights withdrawn in this section, conclusions from field research are shown in quotes in italic. Whereas, results from literature review are written in the conventional style. In the next paragraphs, most relevant

elements influencing the relationship of young adults with money are further described.

### Young adults generation

Millennial or young adults were born in the timespan of 1981 to 1996 (Dimlock, 2019). Young adults are now 23 to 38 years old. Also referred as the Generation Y, they are 1.8 billion people, which accounts for about a quarter of the world's population (Dimlock, 2019). In Spain, they represent the 18,7 % of the total population (National Statistics Institute of Spain, 2018). Young adults count for a large amount of the population in Spain, therefore the management of their money is a matter that should be taken into consideration to make a positive impact in their life.

### Young adults in Spain

Motivations, attitudes and values of young adults based in Spain are shared amongst their neighbours all over the world. Young adults are the most open and educated generation in history (Fry and Parker, 2012). The 54 % of Spanish young adults have a university degree (El Mundo, 2019). This is supposed to ensure a better financial situation in the future but it is not becoming the reality. One of the main disparity is the request

of student loans percentage, being steeply low in the case of Spanish young adults (National Statistics Institute of Spain, 2016). The tendency in Spain is for the student's parent to cover all costs related both school and university. Another peculiarity is that young adults move out from the family household and are financially self-sufficient much later than their next-door-countries peers. Spain is three years above the European average in terms of youth independence (Eurostat, 2017). Young Europeans leave the family household with an average age of 26 years, while in Spain it is 29.3 years (Eurostat, 2017). This fact is closely linked to the lack of financial freedom. Young adults feel valued, full of hope and secure thanks to their parents, but they should be feeling that way with independence of them. With that aim, they need to change their current relationship with money. The estimated monthly salary of young adults in their twenties and thirties in Spain is 943 € for people from 20 to 24 years old, 1,323 € for people from 25 to 29 years old and 1,612 € for people aged 30 to 38 (National Statistics Institute of Spain, 2018). In addition, young adults are ought to be the largest labour force and ones spending most by 2025 (Schawbel, 2012). Their behaviour influencing money decision is more relevant than ever, having a greater impact on the economy compared to previous generations.



### Affluent young adults

Within the Generation Y, in this project we target young adults that have a certain level of income, which overweights expenditures and allows them to live with a certain financial security in their everyday life. Their estimate wage starts from 20.000€/year in Spain. This group is referred to as the affluent young adults. This specific target group will be tackled since they have the means to allocate money into personal goals and focus on their well-being, since their fundamental needs are already covered.

### Globalisation

The globalisation phenomena burst during the young adults birth time. As a result, the millennial generation is the one that had more access to the rest of the world and the most ethnically diverse generation out there (Fry & Parker, 2018). They are informed well and tend to adopt

new technologies quickly. Considered as tech savvy, they grew up spending a daily fair amount of time on the internet and entered a world of infinite knowledge thanks to this. This "globalized" perception of the world makes them capable of changing their current behaviour with money without feeling judged, which favours the introduction of new habits in their life.

### A Digitalized Generation

Moreover, being the first ones born into this digital world, the members of this generations are known as digital natives. Raised surrounded by phones, computers and tablets, changed their consumption behaviour. The 89% of young adults say they could not be able to survive without their laptops, 80% say they could not imagine their life without smartphones (Visa, 2011). Growing up with a technological revolution, young adults expect simple, instant interactions personalized to their financial situation

and they are asking for intuitive, trusted interactions that promote financial health.

### High expectations

Young adults have really high expectations for their personal life including the careers they would like to follow (Bishop, 2006). Known as the "entitled generation", the high expectations extend to the use of products and services. Young adults have resilient optimism, confidence, ambition and they are willing to include new familiar and social values in their life compared to the generation of their parents (Karina, 2017). This self-centered, self-assured, tech-based group influences the cultural and societal reality in different ways compared to previous generations, which need to be taken into consideration in order to help them with their financial reality.

## The Experience Economy

Young adults are the main promoters of the experience economy, valuing more an experience than ownership, where they do not need to commit their money (Goldman Sachs study, 2015). This mindset has changed their buying habits. Their finances need to be optimised in the consumption-led environment young adults live. In the sharing economy context, young adults are faced with two opposing and embedding factors: the incapacity of making large expenditures, due to their financial situation, and the refusal to do so, preferring services before owned products.

## Instant Gratification

The Generation Y, as experience seekers, value instant joy greatly. They are caught a tendency to give prefer present payoffs when considering future trade-offs, known as the present bias (O'Donoghue & Rabin, 1999). Described as the "instant-gratification generation" (Fry & Parker, 2012), immediate enjoyment usually comes in the way of the spending of experiences rather than durable goods focussed on the longer term (Deloitte Millennial Survey, 2019). They see financially healthy habits as opposed to their short-term happiness. Furthermore, when this tension happens, short-term gratification normally beats long term

goals. This reality makes it difficult to save money for goals that truly fulfil young adults.

## Present before Future

As exposed earlier, young adults generation is characterized by their propensity for a consumption-led behaviour, tend to live the present instead of worrying about their future. Managing money well and short-term happiness is seen in direct competition. In the informal interviews with young adults carried out, young adults stated one year is the maximum long-term period they think ahead. Being organised and planning ahead are seen to be key to be financially successful in the long-term (Britain Thinks, 2018) and due to the society's pressures and the consumption prone behaviour, one of the main issues regarding financial relationship and young adults is planning for the future (Karina, 2017). Considering planning further, young adults also pursue purpose over a pay check (Schullery, 2013). Goals are what people want to achieve in their interactions with their reality (Desmet, 2012). With this result-driven behaviour, setting goals can be means of a better financial planning but generally these disappear for ones that deliver instant gratification instead of long-term well-being.

## Life Intentions

Young adults intentions are from a varied nature, ranging from getting married to a travelling to a specific destination, which depend on the individual's personal goals. The lack of financial stability makes them have kids and get married later than any other generation (Goldman Sachs, 2015). Ways to help young adults in achieving the intentions they long for are missing.

## Young adults & Money

### Money modes

In the interviews four distinct behaviours around how young people engage with their money arose. The understanding of those would help in understanding how to support adults in their thirties and twenties with money.



#### Manage it

Making decisions on how and when to spend, and how and when to save.



#### Track it

Keeping an eye on income and outgoings, savings pots and debts.



#### Get it

Earning money through work, cash back deals and discount vouchers.



#### Spend it

Using money to attain or maintain the desired lifestyle.

### Worse economic situation than previous generations

The economy has defied young adults, not the other way around (McMaken, 2018). Young adults are in a worst financial position than their parents (Bialik & Fry, 2018), they feel stressed, overwhelmed and confused about how to proceed (Edelman, 2018).

*“I’m scared to see what’s in my banking app, so I just don’t open it” - Sergio, 26 (quote form the informal user interviews session)*

Young adults are facing the most uncertain economic future in history (Britain Thinks, 2018). Two-thirds (66.2%) of working young adults have nothing saved for retirement (Deloitte Millennial Report, 2017). Although, actions can be designed to help young adults in their framework they were born.

*“Pension savings are too far away and I don’t want to think about it now.” - Paloma, 28 (quote form the informal user interviews session)*

Young adults are able to save an average of 17% of their earnings (LaCaixa, 2016). The aims to save were in order of preference: familiar future and pension; emergencies; trips and vacation; upgrading their everyday life and buying a house (LaCaixa, 2016). It is important for young adults to have enough long-

term savings or assets, to ensure a good future (World Economic Forum, 2019). Nearly three-quarters of young adults agreed upon the fact that having money self-control more crucial than having financial education (Britain Thinks, 2018). Solutions which help young adults manage their finances based on self-control and education are not common in the market.

### No trust in financial institutions

Movements such as Occupy Street have sunk deeply into young adult’s minds, making them refuse to trust institutions that have historically helped adults in the complex world of money and finance (Deloitte Millennial Survey, 2019). An amount of 71% of young adults would prefer to go to the dentist than listen to their banker has to say (Millennial Disruption Index 2013). This is truly inconvenient, since these are valuable years for developing good financial habits and saving for big ticket items. In addition, banks and financial advisors are not investing in the young adults market, mostly because young people don’t have much money and the fact that they lost faith in financial-service institutions is not helping either. Initiatives that build trust are missing as a part of solving this specific problem and should be fostered to support young adults in their money related matters.

*"I just don't feel like they value or care for me" - Javier, 31 (quote form the informal user interviews session)*

*"It feels like a one sided relationship. Even if you did offer something new I'm not sure I'd trust you" - Ana, 29 (quote form the informal user interviews session).*

### **Financial pressures**

In addition, social pressures arise regarding to money, young adults are highly influenced on the spending patterns they see on social media regarding their friends or others. This situation makes a conscious spending for young adults really hard.

*"You don't want to be the person that cannot go there, do that or afford that plan." - Sergio, 26 (quote form the informal user interviews session)*

Behavioural Economics and Social Science main finding is that humans make decisions depending on the environment they are surrounded by (Moore & Ibekwe, 2018). The daily financial behaviour is steered by immediate stimuli (applications, stores, news, advertisements, social media among others), which is not focussed on young adults long-term well-being but rather on the opposite (Moore & Ibekwe, 2018). Companies and organisations shape the day-to day and the consumption-prone environment (Moore & Ibekwe, 2018). Young adults may have the best intentions to be responsible with their finances, with attitudes such as saving or budgeting,

but the precise moment they are faced with the context, they loose control of their actions. Financial self- efficacy is fundamental towards a healthier pattern towards money (Lapp, 2010). In the informal interviews, the participants stated they had no trust on themselves to manage money neither to talk about money related issues with others. It is clear that there is a need for solutions that guide young adults with their money.

*"If I have access to my money, I do not trust myself not to spend it. I sometimes put it in an account shared with my mom so she overviews what I am doing with it" - Paloma, 27 (quote form the informal user interviews session)*

### **Lost in money matters**

Additionally, guilt and shame around talking about money are a very common fact among young adults. Young adults have been left with no one to turn to for financial advice. They also do not feel any support in immediate circle of friends and family. Furthermore, money related issues are treated as a taboo among family and friends (Britain Thinks, 2018). If they do not have their immediate circle to resort to; who can they ask for financial issues that they trust?

*"We don't talk about money openly. I always talk to my best friends about everything, but it is not normal for us to talk about our salaries. I can't talk to my parents either, they have very different values or ideas about how money should be spent." - Alejandro, 27 (quote form the*

*informal user interviews session)*

As a consequence, young adults have no clue about financial issues (Oxford University & BNY Mellon, 2014).

*"I'd like to just be shown what I need to do!" - Iván, 28 (quote form the informal user interviews session)*

*"Am I doing well? Am I not, I don't know?" - Jorge, 29 (quote form the informal user interviews session)*

*"I know I should be the one to manage my finances, but I don't do it, I don't like it and I'm not good at it" - Nicolás, 32 (quote form the informal user interviews session)*

*"Money should matter to me but it's too complex and overwhelming" - Cristina, 27 (quote form the informal user interviews session)*

*"This money thing is not for me" - Sergio, 26 (quote form the informal user interviews session)*

Lack of knowledge for steps to act upon young people's financials represents their everyday, which was expressed also in informal interviews. This blindness generates anxiety in their everyday life. Futher, young adults have very small financial literacy, 50% of them have no knowledge about pension (Oxford University and BNY Mellon, 2014). The main issue of the Generation Y is the lack of this financial knowledge (Greenspan, 2016). For a successful literacy regarding financials elements should be present:



knowledge, behaviour, and attitude (OCED, 2016). New developments in financial products and services are needed since knowledge is missing and behaviour is contradictory. Although, financial advice can be a successful replacement for financial knowledge, making the need for financial literacy disappear (Collins, 2012).

#### **Negative emotions relating to money**

There are many negative emotions fuelling young adults relationship with money, preventing them to change the way they manage money. Their lives are rapidly, constantly changing, financials is a challenge and it usually makes them scared since they do not have the tools to manage it well. Most of them struggle with juggling day-to-day cash flow. An amount of 54% of young adults find financial decisions a struggle with and stress and anxiety arise when they are faced with money matters (Edelman, 2018). In informal interviews, young adults explained a missed connection to money due to the negative emotions attached to it based on the uncertainty and complexity on how to improve, stopping them from making the most out of their finances.

*“I feel disconnected from money-related matters, even if I would really love to know more.” - Paloma,<sup>27</sup> (quote form the informal user interviews session)*





### Money behaviour framework

Factors and patterns shaping the current financial situation of young adults were synthesized into a framework for clarity in using them as a guide for future project steps, visualized in figure 6. Moreover, these elements are understood as barriers that prevent the adoption of the behaviour that would enable a stable future well-being.

“To build a habit-forming product, makers need to understand which user emotions may be tied to internal triggers and know how to leverage external triggers to drive the user to action.”

- Nir Eyal, Hooked (2013)

The current behaviour of young adults regarding money is now purely transactional. People spend 5 minutes average on banking applications where the most common tasks involve balance, bill payments check and transfers (King, 2018). Since the economic relationship

is in essence transactional, money has power over young people. Young adults just take the minimum time possible to attend money matters, failing in optimizing their financials when they have a real chance to do so. As explained earlier in this section, negative feeling regarding money add up and make the relationship of young adults with money a struggle.

The main limitations young adults encounter are impulsiveness, apathy, blindness, mistrust, bias and short-sightedness. Impulsiveness refers to the intrinsic characteristic of young individuals to "living the moment" fuelled by the need for instant gratification which expands to all the aspects of their life. Young adults do not take action even when they have the guidelines and the knowledge, this apathy towards financial matters makes the future economic breakthrough very hard to achieve. Blindness is born from young adults not knowing what are the principles for good

money behaviour to be successfully safe in the future. Mistrust emerges through the lack of belief in the help or guidance of current institutions such as banks or close family and friends. Tensions in young adults life arise due to money, it puts strains in people's relationships. Young adults present happiness has much more weight than the future one, full of uncertainty, generating short-sightedness.

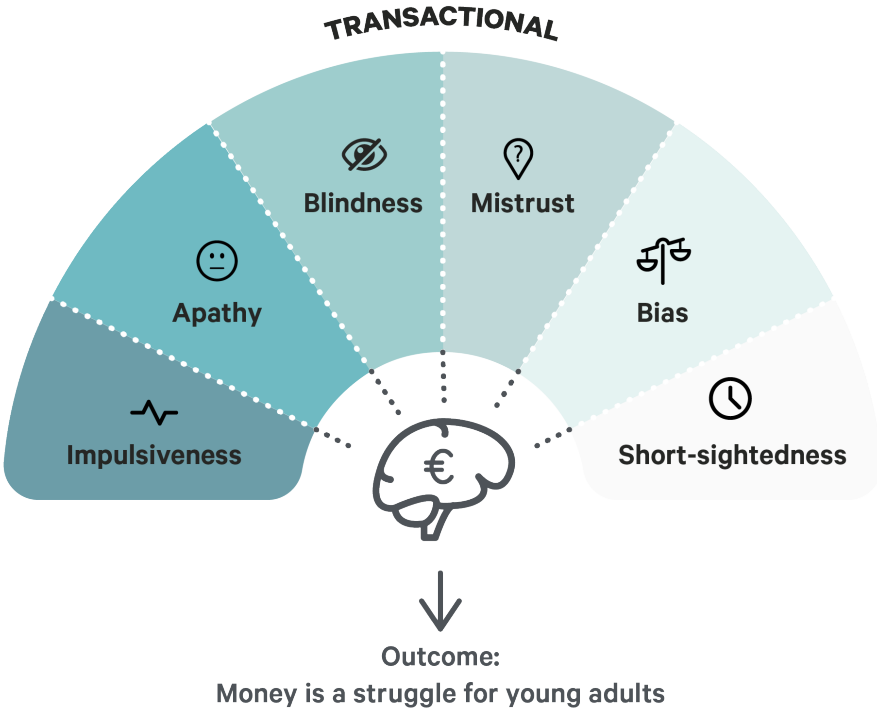


Figure 6. Money Behaviour Framework: Feelings concerning young adults current behaviour with money

## 2.2 Benchmark

In a second level of research, a financial services benchmark was performed to get an orientation in this specific market, in order to define where the design solution could stand towards its competitors in the field of financial applications. The main goal of the benchmark was to understand the positive and negative effect and aspects of current solutions offered by the financial industry to young adults. Digital sources and magazines were used in this part of research.

As a first step in the benchmark, a competitor analysis was carried out. This analysis of competitors led to an overview of areas that enabled an understanding of where financial organizations and companies were investing their efforts in. Financial services delivered by both Spanish, International banks and fin-techs were studied. Later, the best practices in the industry regarding money and financials were analysed to keep positive aspects of current solutions in mind for the conceptualization process. Also, key learnings were withdrawn to be later applied in the design concept. The same

organizations mapped in the competitor analysis were examined. Finally, once the image of the pool of solutions was clear, the missing elements found in the benchmark that would help young adults grow in their financial well-being were expressed to be means of possible improvements to foster a sustainable financial behaviour in young adults.

### 2.2.1 Competitor analysis

There are several organisations that are committed to support people in the transition towards a more financially sustainable lifestyle. The main organization that were studied:

#### International and national banks

Banks are the institutions which traditionally have been managing young adults money, they are in a constant race of attracting current and potential customers in trusting them with their financials.

#### Fin-techs

Young adults are betting on new financial services companies that use existing technology to offer innovative financial products and services.

#### The competitor matrix

In this competitor search, the organisations were mapped on two axis: the first one, with a focus on present benefit or on future benefit versus the second one, the companies goal being people's financial health or people's financial management. As shown in figure 7, a visual has been elaborated for better understanding of the competitors position. They have been mapped in order to categorize them and make their comparison easier to get an overview of efforts being made in the financial industry.

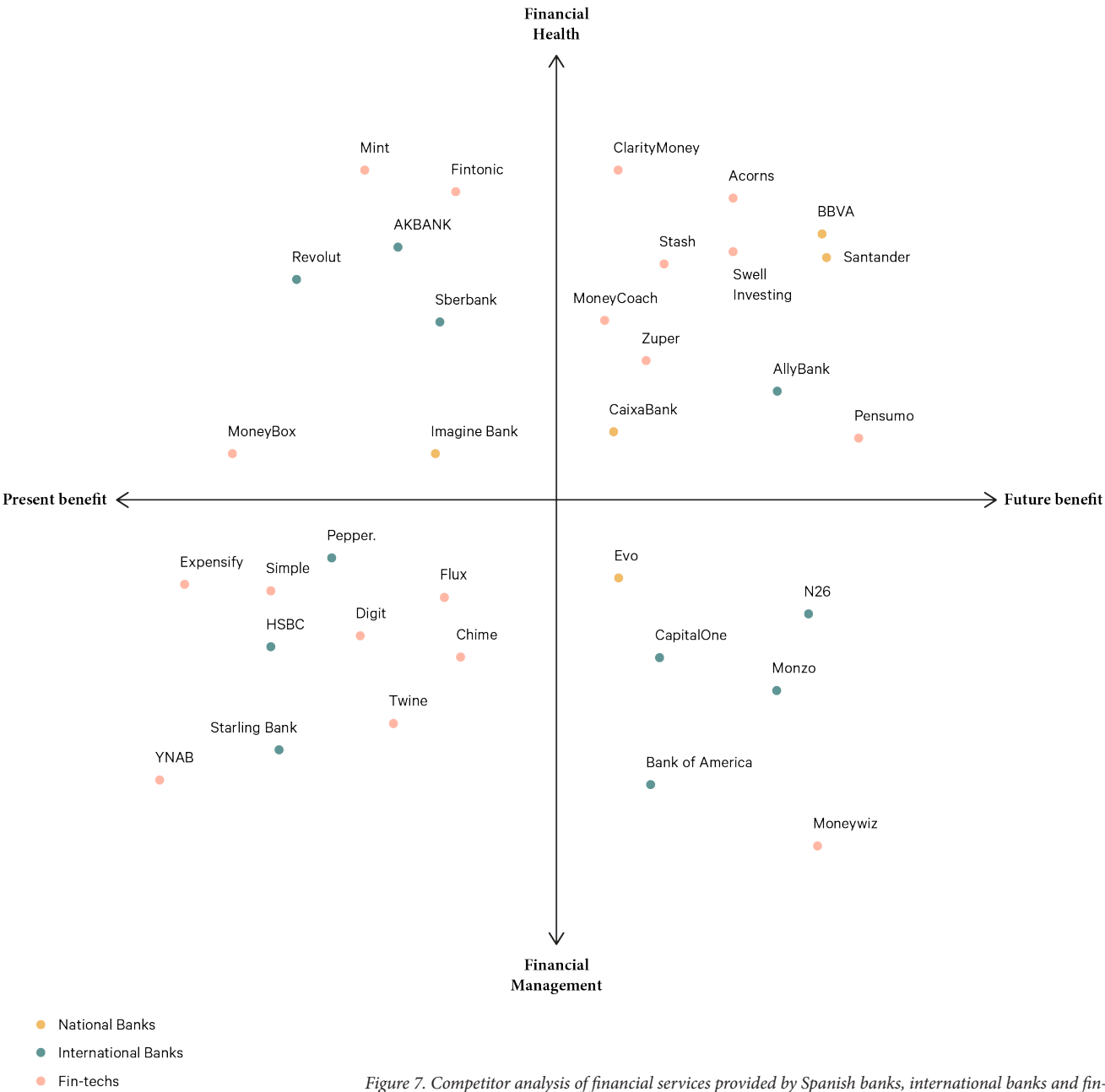


Figure 7. Competitor analysis of financial services provided by Spanish banks, international banks and fin-techs.

Criteria	Description
Actionable Information	Services which translate complex financial concepts into clear notions for better user understanding and reachability, so people can turn knowledge into improvements in their financial health.
Long-term guidance	Services that allow the inclusion of personal financial goals and objectives, where suggestions on how to achieve those are given and the future evolution is monitored, fostering the completion of those goals.
Visualization	How well services show information in a graphical way, even if they are processing and displaying a large amount of data, to make it simple and easy for the user to have an overview of the personal financial situation in one look.
User Experience	Intuitive interaction design that fosters agile processes while using services, which is one of the main characteristics of good user experience.

Figure 8. The benchmark's criteria.

### 2.2.2 Industry's best practices

More than 50 best practices were analysed with the focus around functionalities and elements that stood out in helping people manage their financials better. From this analysis insights were extracted to be used in the next phases of the project.

#### Selection criteria

The following criteria was used for considering the best practices and was decided prior to the benchmark mapping. This criteria was chosen after researching young adults current behaviour with money and grasping an idea of what were important aspects which allowed them to optimise their finances through current solutions. The description of the four criteria determined are visualized in figure 8.

#### Key learnings

Whether if its for a saving, spending control, educational or investment purpose, more and more applications are being developed with the intention of helping young people in a certain part of their relationship with money. A summary of findings of the best practices of financial services for young adults is explained in the following paragraphs.

### Digital Platforms

Most of financial products and services are provided digitally in form of applications. This reality is shared amongst bank and fin-techs. Through digital platforms devices are connected between each other and information is synchronized, giving young adults the possibility of accessing and managing their financials anywhere, anytime. Therefore, the product-service-system designed should be built in a digital context to fulfil young adults' expectations and adapt to their everyday-life to accompany them in their long-term financial journey.

### Personal data

Personalization in the financial industry is enabled through data, allowing a more relevant and fitting personal advice and service for young adults. Personalization comes primarily from information that people pro-actively share. Security of personal data is key in order to generate trust and make people want to share their financial situation with other parties. To gather personal information, the use of quizzes or tests is a common practice to tailor a service or product more closely to people's profile and needs. Further, tests usually shape personal portfolios, which are a very common feature in services such as SigFig or Acorns. In addition to hyper-personalization, Sbernbank incorporates predictive capacities identifying future

events and making personalized financial recommendations. The designed product-service-system should be based on building trust with young adults and deliver tailored assistance to them, having their personal financial goals such as buying a car or travelling somewhere special into account.

Moreover, latest technology advances are being introduced in the financial industry: intelligent applications technologies such as machine learning, augmented reality or artificial intelligence. Informative virtual assistants and chat-bots powered by artificial intelligence are able to give tailor-made recommendations to the current financial situation of the people. Added to this reality, real time and relevant content to customers is a common feature among financial applications. Mint shows indicators on how good the customer is doing in each category of spending, giving constant insight on people's finances. Acorns, the past, present and potential of the account is informed. The final product-service-system should include insight into the financial reality of young adults, giving intelligent recommendations on how to successfully optimise their money.

### Simple interactions and experiences

The best practices in the financial industry simplify digital platform use. Interfaces are becoming more attractive

and understandable, breaking from the traditional banking image of complicated and incomprehensible processes with financial language for experts. User Experience and User Interaction design is applied to make the user understand complex financial information, explore and operate in a simple and intuitive way. Clean and clear interfaces are usually displayed trying to make the information as easy to interpret as possible, for example in Revolut's interface or the dashboard of Clarity Money. The applications adopt colours evoking a simple and attractive data visualization and have the tendency of a minimalist layout, replacing texts with icons and images. Further, young adults are being targeted through a young, fresh vibe, a good example is the N26 application. Simplicity, intuitiveness and clarity should be the principles to build the product-service-system interaction and interface.

### Make the complex easier

Successful services make difficult financial concepts such as investment, retirement funds, debt management simple to help people with their money. Services such as Robinhood and Mint are highlighted in this aspect. Operatives as complex as investment become accessible to people and introduced into everyday life, regardless of purchasing power, and are explained in a simple and fun way.





Given the lack of financial knowledge that usually the average young adult has, some outstanding platforms offer guidance in the processes to people, as well as courses and lessons to educate people in making better financial decisions. Spanish bank's such as BBVA and Santander have an interest in training its customers in financial education, through more accessible language in blogs, articles and other tools. In Finimize, young adults they can learn in an easy and simple way about finances. The delivered product-service-system needs to provide advice and help in an accessible way for young adults to improve money-wise in the long-term. Including financial education and communities to share knowledge and tips to maintain a future financial can be means to help young adults in their daily money management through a new product-service-system.

#### **Intuitive and fun experiences**

The secret of service achievement appears to be original and entertaining modes of interaction, adjusted to each target (young adults, women, etc.). Making finances fun is key so young adults are motivated to learn. Most applications geared towards the young adults audience are enticing them to save through rewards and gamification. A good example outside the financial industry is the Samsung Health player. Another good practice is the creation of communities of people in applications such as Gazella. The designed product-service-system should encourage activity,

user-friendly functionalities that require active participation, with the ultimate aim of changing the concept of “boring financials” to a more innovative and attractive idea.

#### **Focus on a financially healthy behaviour**

The best applications focus on encouraging good habits, even if achieving them means less application use in the longer run. In this aspect, despite this type of training, offering a differential value that encourages people to continue using the application is key. Best practices include coaching in saving, budgeting and investing through different tools and methods. The proposed final product-service-system is aimed to serve as a tool that triggers and motivates young adults to change their current money behaviour for one that ensures their future well-being.

#### **Saving as the base**

Saving is becoming inherent to the people's behaviour through features such as the automatic saving (the daily expense is rounded up and the change is invested automatically towards the people's future in a saving account), which was introduced by Revolut first and then Spanish banks such as BBVA are including it in a more sophisticated way. Different approaches towards saving are being promoted such as in the Twine application, where saving money as a couple is made intuitive and easy. As opposed to applications like Digit and Wealthfront where there is an overarching aim is informative, focussed

on the present good money management from people. Saving is key to maintain a healthy financial status; this is why in the conceptualization of the product-service-system the saving interaction should be introduced as one of the main actions.

#### **Allocation of money in budgets**

Budgeting applications make the control over spending much easier, YNAB stands out in this aspect. The possibility of introducing personal money goals is understood as a good practice by creating a roadmap to achieve the young adults' goals, exemplified in Clarity Money. Adding to this, it is worth to mention in applications that distinguish from the same expense, which amount corresponds to them and which to their friends, Starling Bank stands out. Budgeting should be included in the product-service-system, to allow young adults in finding out what is most important for them in life, their goals, and support them to get there.

#### **Performance based on behaviour**

Best practices take into account the difference in financial behaviour to give a clear idea of the financial status, some service providers choose to offer scores related to their financial health in comparison for example with other peers, banks are using this feature quite often to promote a better money behaviour. Status awareness should be a feature included in the designed product-service-system, since it has the power to induce a better financial behaviour.

#### **The importance of tone**

The best examples regarding the tone for young adults were identified depending on the information conveyed to people. The purpose of the communication determined the tone:

- Formal/serious: to introduce financial concepts, transferring security, professionalism and trust.
- Functional or instructional: in guiding young adults through processes.
- Close: to introduce goals, in order to motivate people.
- Cheerful: to broadcast good news.

In order to successfully change young adults behaviour, the product-service-system should be functional, close and cheerful in the different interactions depending on the features.

#### **Possible improvements**

After carrying out the extensive benchmark, some elements that would make young adults shift their current money behaviour towards a healthier one are missing. It is worth to mention that this market is saturated with organizations and companies providing young adults with all type of money solutions. The most interesting characteristics that are not being developed by companies and open an opportunity space are described further.

The most common features, interactions and content amongst financial services are shown in figure 9 as an overview of current best practices regarding those aspects.

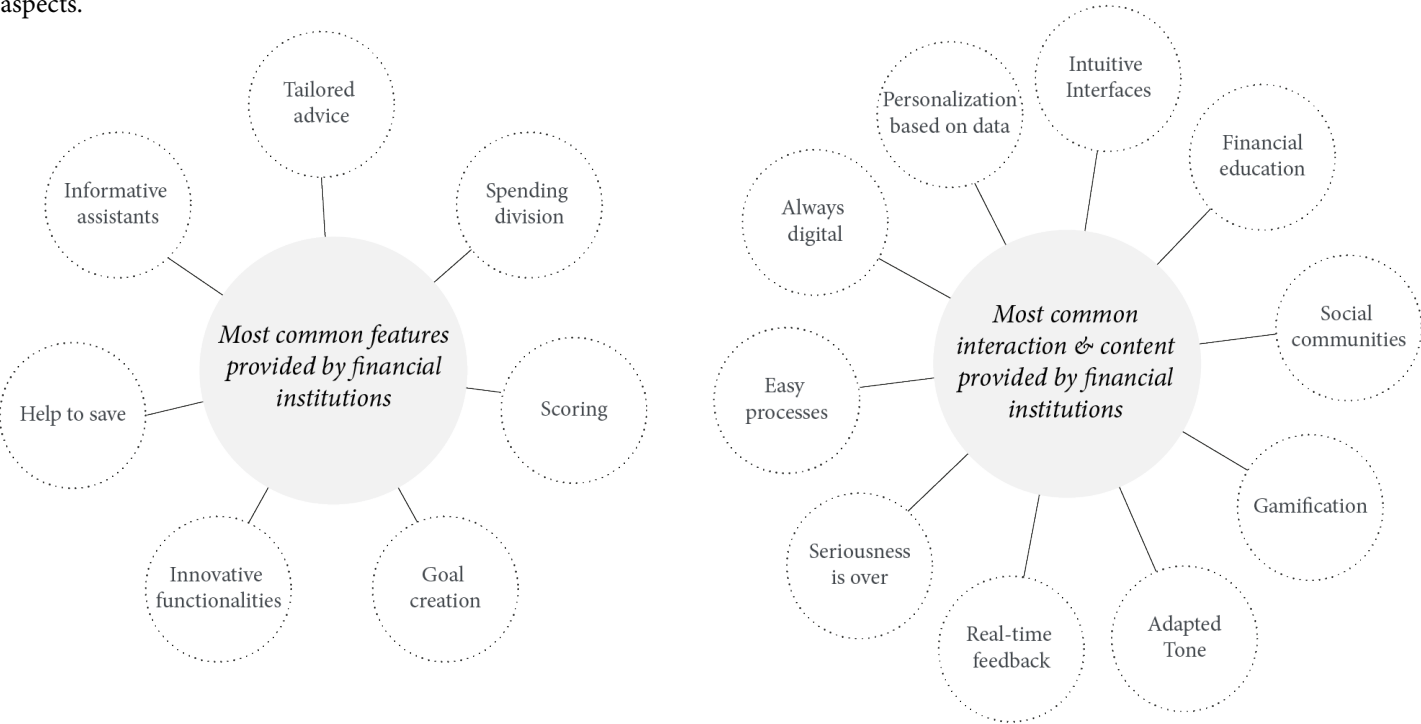


Figure 9. Best practices regarding features, interaction and content in financial services

### **Peace of mind in finances**

Some of the applications require too much cognitive load and the people stops making use if them, inducing them to be overwhelmed. There is an opportunity gap in making a service that guides young adults in its use and in the processes, taking them slowly step by step in finding the financial advice, tools and methods that increase their financial well-being.

### **Future orientation as the basis**

No service in the current market accompanies people in their long-term relationship with money, only benefiting them in the present. The immediacy of increasing revenues and the desire from the people to see financial results as soon as possible, organizations are attempting to respond to present customer needs focusing on what they get in return now. This way, companies are losing sight of the future people's need which will have a higher impact on people's well-being, helping them in the longer term.

### **Holistic perspective**

Financial services tend to either provide all the possible features people would expect to manage their financials (transactions, payments, accounts management) added to load of new features (real time banking, chatbots...) or focus on a single part of the journey of young adults and money making one-feature-only solutions (such as budgeting, saving, investing, etc.) available. Current financial solutions are failing in taking a more holistic perspective, building a service as a companion that guides them in their complete financial life trip.

### **Conclusion**

In conclusion, current solutions in the market are failing in treating the financial journey of young adults as a whole, in keeping their future goals and needs into account and in providing them the peace of mind over their money they are silently asking for. The meaning of current financial solutions is focussed on financial services only responding to present young adults needs, fostering immediate outcomes that serve as a band-aid for their financial issues, which only help to give them inner calm in a short period of time.

A simple, intuitive, fun, digital product-service-system is to be designed. This product-service-system should be based on creating trust in young adults so they are able to share their data to get a tailored service and be encouraged to follow a healthier money behaviour. In addition, features such as saving, budgeting and financial progress should be included with adapting the tone to those in order to motivate new financial habits.

## 2.3 Trend Research

Trend exploration was performed intuitively at first but then evolved into a very structured and analytical research. Information was compiled from reports, magazines and articles to gather insights in the third level of research. The goal was to take other fields into account, with the ultimate objective of identify meaningful relations in the financial well-being of the young adults domain. The goal was to understand the current elements affecting money behaviours and how those can be influenced in the future.

### Procedure

In this section a description of the approach used to find context insights regarding recurring patterns is presented. The trend research first takes a look at the evidence gathered to finalize with an overview of how the current domain regarding young adults looks like. Within this trend research, a trend patterns technique was used (Design Roadmapping: Guidebook for Future Foresight Techniques, 2017) consisting of two activities: first, an intensive immersion into the context in the area of young adults and a synthesis of trend patterns through different pieces of evidence.

After investigating key trends in the young adults current environment shaping their behaviour towards money, findings served as a guide in the design of a product-service-system that could help young adults change the present financial behaviour for a healthier one.

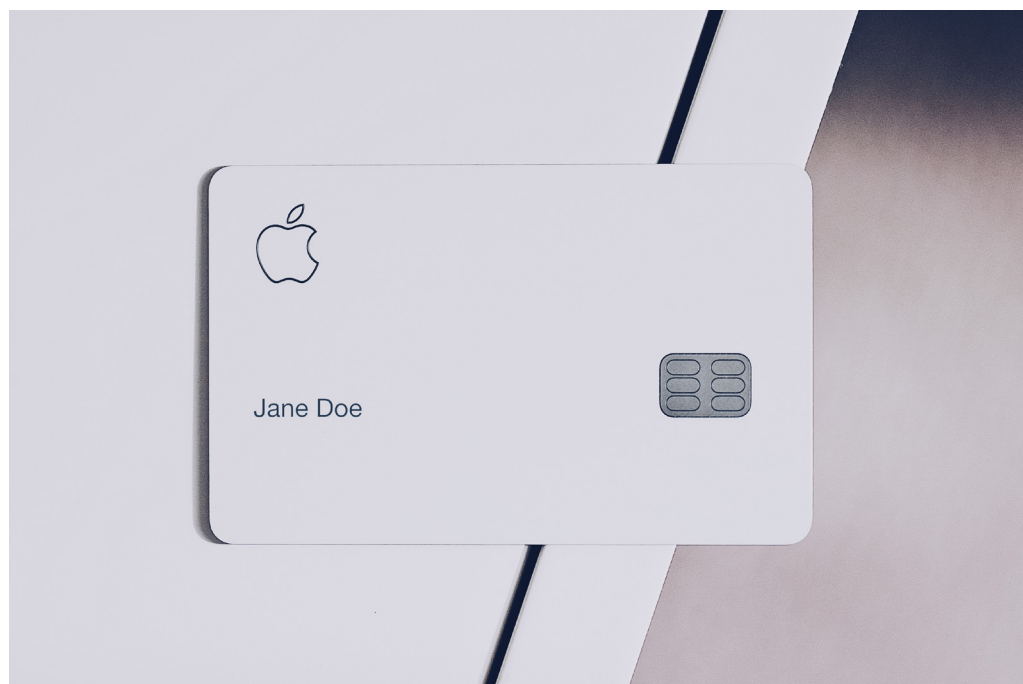
### Results

The trend analysis includes relevant findings from areas such as economy, digitalisation, brand and technology.

The three main following trend areas, which comprise the trends, were prioritized due to their relevance in shaping young adults behaviour today. Those would have a great impact in young adults financial behaviour and future well-being. With this aim in mind, trends surrounding young adults and their welfare are explained below.

### Digital Finances Digital Transformation

Digitalisation is changing the way people live in countless ways. Young adults are raised in a digitally saturated world and therefore, they process information and think in a quite unique way (Prensky, 2001). This makes them include the latest technology advances in their everyday without any struggle, the most relevant ones are explained further.



Apple Card is a credit card created by Apple Inc., which is developed by Goldman Sachs.



### Government Involvement

Money is important to humans, without the minimum amount of it, people cannot survive in our society. Governments are making efforts in trying to help citizens to ensure this survival. Institutions such as The Money Advice Service, which is part of the United Kingdom government, are helping citizens in their money management, specially young adults through applications with features such as financial literacy optimisation in digital channels. In Spain, the Central Bank has launched a website called "Finanzas para todos" (Finances for everybody) gives guidance for people to make better financial decisions

### Digital Banking

Once upon a time, people went into a bank and waited in a queue. After some years, people are serving themselves with online and mobile banking. Profit based organizations are also doing everything it is in their power to adapt to digital transformation, changing the way they provide former and new services. There is a tendency for financial businesses, such as fin-techs, banks or start-ups, of making every offline transaction and feature possible in the online dimension channelled through people's digital devices. Banking information aperture to third parties through an open application programming interface has introduced new incomers in this financial market such as Apple (Apple card) or Google, creating innovative platforms and services. Digital banking is fitting into



Wibson lets you use blockchain to sell your own data.

digitalisation by including all processes relating to money in the online plane.

### Open Banking

The opening of personal banking information has favoured a new trend named open banking. This new concept aims to optimise the banking sector and give individuals greater control over their financial data, which they may freely share with other parties through consent and get new personalised services.

### Blockchain & Trust

Although, for any significant innovation adoption, businesses need to build people's trust. When a valuable information transaction related to money is completed, transparency and trust are key for success. Blockchain technology opens a horizon of new opportunities regarding the element of hyper-security. People will be able to trespass the information they want to others without the need of an intermediary, giving them total control of their personal data transactions. Organizations from all over the world, such as Wibson, are trying to include this type of technology in all the divisions since is a trend that will shape the world we live on in the upcoming years.





Almost every mobile device includes a digital payment system.

### **New Payment System**

Now, many societies – in Asia, especially – are going cashless. Adding to this reality, other legal measures such as the approval of the PSD2 law favour innovation in the digital financial sector. After this European regulation was authorized, the security of payments through the internet was reinforced, making young people trust digital financial services much more than before. Therefore, physical barriers are surpassed through the use of new payment methods, making the tendency of paying with the mobile phone steadily grow. Besides this fact, the trend to use new contact-less payment methods or mobile payment technologies are increasing and therefore, the use of cash is steeply declining globally (Capgemini, 2015).

**New Currencies**

The newness of service interactions expands also to the type of money cash. Bitcoin is the representation of the changing perspective in how currency is perceived. Companies are creating new ways to deal with each other without needing an exchange of any physical element. Young adults are willing to innovate in this aspect, the 17.21% of young adults would like to own cryptocurrency, a much higher percentage compared to the 8.75% of Generation X and the 2.24% of baby boomers (Finder Study, 2017).

**Artificial Intelligence**

Similarly, another trend that will have a meaningful impact in people's life is artificial intelligence. Companies are introducing this technology in the financial industry in form of automated wealth managers or financial coaches, that make smart and immediate suggestions to people, based on their personal data. This way, young adults take decisions in a much more informed, efficient and fast way. But for young adults it is not only about the comfort of a virtual assistant to give the information they demand immediately.

**Self-learning**

There is a willingness of self-learning, increasing the knowledge through digital tools such as podcasts, online courses and electronic books.

**Humanizing Tech**

During the last years, the rapid pace integration of innovation has become the new norm. Companies from different industries are introducing digital innovation in the everyday life of young people, from smart homes regarding people's environment with products such as Alexa (Amazon) to technology that they carry such as wearables exemplified through smart bracelets (FitBit) or watches (iWatch from Apple). People are ready to include digital solutions in every aspect of their everyday.

**Connected Ecosystem**

Generally, these solutions have the ability to connect seamlessly to other devices, providing a consistent experience in use. This trend of connecting in-between is known as omni-channel. Omni-channel strategies are a recurring pattern, through which people can live a constant experience in every touch-point enabled through the Internet of Things. The tendency of IoT was introduced some years ago but it is growing nowadays. IoT is described as a system of related computing devices enabled through everyday objects, allowing them to send and receive data through the Internet without a human-to-human or human-to-computer interaction.



New cryptocurrencies such as bitcoin are changing the way people perceive money.

**Phygital experiences**

Digital connections are increasing efficiency and personalisation of service experiences. Although, the physical plane is not forgotten. Moreover, efforts in the digital transition are making digital and physical experiences blend. Companies and giants as Nike are looking for smoothly interconnecting both dimensions to make young adults be able to enjoy: the efficiency digital services and the need for a the physical connection with a space or a person.

**Silent approach**

However, increasing digital presence can be sometimes overwhelming. A silent approach trend is being favoured in the current digital solution space. In a world where notifications have become the commonplace, young adults are asking for solutions that are not constantly disturbing them with irrelevant information, exemplified in the Light Phone.







Nike's new flagship NYC store, where the digital online experience is duplicated in the physical dimension.



Amazon's Alexa is integrated in peoples homes and everyday life



Apple devices are designed to synchronize seamlessly between each other

### **Data First**

Nowadays, data is becoming the main asset for a successful service. Once personal data is processed, people have access to a product service or system which is tailor-made for them. Companies are processing their customers data to improve their services, saving time and money.



Light Phone is based on the concept of minimalism, designed to be used less than an average phone.

### **Big Data**

Algorithms and programs are being developed to analyse great amount of personal data known as big data. Moreover, there is a race in organizations trying to make profit of the customer data they have collected in the last decades. People's information is becoming the main asset to trade the current market.

### **Hyper Personalization**

Data is key in order to deliver a hyper-personalized experience that will increase engagement. Personal data is used in order to provide tailor-made experiences to customers.

### **Data Minimalism**

Additionally, young adults are tired of introducing their data in every digital interaction they have, services are being designed in requesting only necessary personal information, the less times possible.





Flax & Kale restaurant is an example of organic, healthy food.



Everlane is revolutionizing fashion thanks to their transparency and sustainable values.



### **Upcoming Values**

Young adults are following very specific patterns in the social and cultural dimension.

### **Middle Class Explosion**

During the last decade, an increasing part of the total population in the world is not rich or poor, but finds itself in the middle of the income distribution (Kharas, 2010). This middle class explosion has made consumption of products and services available for a large amount of the population. The freedom in money has channelled new upcoming values, influencing young adults behaviours, foremost their constant need to consume goods for life satisfaction goals.

### **Wellness Concern**

Young adults identify hold health and wellness as relevant, they take physical fitness, keeping to an ideal weight or getting enough sleep as important aspects in their life. Young adults place a very high importance on leading a healthy lifestyle, following a balanced diet and having a weekly sports routine. This proactive healthcare is improved by latest advances in technology.

### **Environmental & social consciousness**

Additionally, young adults are preferring environmentally and socially conscious services. A global study (Unilever, 2017) found one-third of consumers buy from brands based on their social and environmental positive impact. The concerns about climate change, pollution and sustainability are shifting, where the believe of not being able to do anything about it has become the opposite. Therefore, young adults are taking action towards being sustainable and inclusive (Cheng, 2019). This reflects in their life in form of behaviours such as the diet they are following, the shops they visit and the supermarkets they are purchasing in.

### Authenticity & Transparency

young adults are not attracted to traditional branding, they are seeking brands they feel truthful and real to them. There is a call for transparency and authenticity in advertisement and a search for relevant and meaningful connections. Brands (such as Patagonia) are putting their efforts in getting across a transparent message to their customers.

### Influence of Social Media

Brands are not the main reference anymore. The model to follow has shifted to from companies to influencers on social media. Further, social networks are present in the everyday life of young adults, the use of new services has increased largely in this dimension, creating a very strong influence in their daily decision making. Networks based on social interactions open up the possibility of connecting with others constantly, reducing the once existing distance barrier. Socializing with their current friends and making new ones is a common pattern followed by young adults. The food they eat, the entertainment they enjoy, the clothes they buy is being determined by their social media role models. However, some negative aspects of social networks are also present. Insecurity due nonstop comparison can appear as a symptom of the trend of social media.

### Convenience

As a busy generation, trying to balance their professional and personal life, young adults are craving services that make their life easier and better. Services that allow them to find what they need quickly and have it delivered to them fast like Amazon and their concept Amazon Go.

### Self-awareness

This occupied lifestyle opens room for a concern for self-awareness. Mindfulness is becoming mainstream, favouring the need for a mental rest from their

overloaded everyday. Relaxing activities such as yoga or walking countryside are promoted and led in a weekly basis. Additionally, therapy sessions are becoming a tendency in the last years through online and offline channels. Exemplified in Headspace, which is a digital application that enables meditation through the mobile phone.

In order to illustrate the trends concluded from desk research, a mind-map of trend patterns is shown in the next page.

Amazon Go is a physical store where people do not need to stop at the check-out.







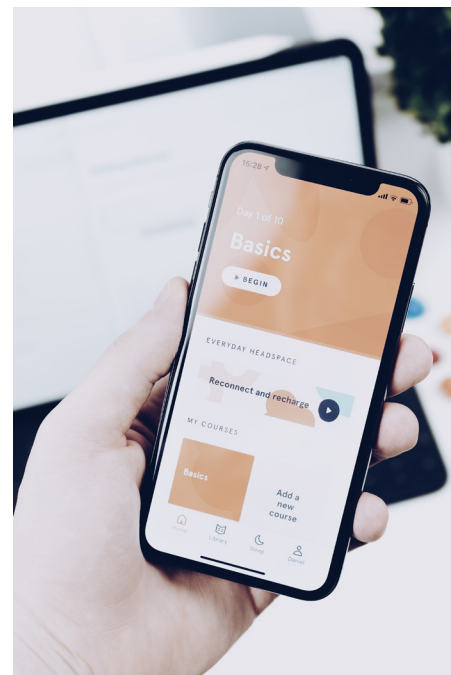
Everyday life events are usually shared through Social Media

Patagonia's motto is based on transparency towards people

**Build the best product.  
Cause no unnecessary harm.  
Use business to inspire and  
implement solutions to the  
environmental crisis.**

**patagonia®**

[patagonia.com/ourmission](https://patagonia.com/ourmission)



Headspace, meditation powered digitally



## Conclusion

Through trend research analysis, the study of current emerging behaviours in young adults was performed. Worldwide, new circumstances considering financials of young people were spotted and understood the way those shaped their shifting behaviour compared to previous generations, shown in figure 10. The following main aspects were taken into account for further project development. The importance of digital transformation in our era in trespassing barriers in banking, enabling self-learning through

digital tools and humanizing tech to support young people in using it in a daily basis. Special attention was put into the value data would bring in the future, introducing hyper-personalization as the new normal. Upcoming values such as wellness concern and self-awareness, which led to young people current and future well-being were studied. This reality triggers further exploration and rises questions about how to channel

a good money behaviour, whereas some of the key aspects for a successful final design were already defined. The designed product-service-system should be digital, enable personalization, build trust through transparent and trusted relations, take the intangibility of money into account and ultimately, foster young adults peace of mind through awareness of themselves, now and in the future.



Figure 10. Understanding young adults motivations, values and needs through current trends shaping their



## 2.4 Financial health: Identifying good money behaviours

The fourth level of research focuses on finding what is financial health and how young adults can achieve a healthier financial lifestyle, compared to the one they currently have, that will lead ultimately to their well-being. With this intention, elements which should be taken into account to enable this behavioural change through a product-service-system will were determined. A literature review and primary research was conducted through informal interviews with young adults and a semi-structured interview with an expert, Jaime Plaza (Economy and Financial Administration teacher at the Cardenal Cisneros University of Madrid, Spain). This research resulted in arguments and insights regarding how to lead a sustainable financial lifestyle. Later, a framework was constructed from the findings of research for a healthy financial behaviour of young adults. This framework is enriched through findings in this project's research phase to finalize in a transition model, as a guide to evolve from the current behaviour to the desired one.

The next section presents key elements

for excelling in financial health and an explanation of the relevance for young adults to live a financially sustainable lifestyle.

### Relevance & meaning

#### Life Satisfaction

Usually, life satisfaction increases when covering the fundamental needs, which are housing, food, taxes, and healthcare, through an individual income (Cheung & Lucas, 2015). However, once you the line of basic living costs is overcome, the income can increase but life satisfaction will continue to be quite the same (Cheng & Lucas, 2015). Money cannot buy happiness but it help to participate in meaningful activities and experiences to accomplish an individuals well-being (Stanca & Veenhoven, 2015).

#### Economic well-being

In literature, developed economic strength will unlock and enable three dimensions: security, continuum and freedom. When people are in a financial

well-being state, they are more open to enjoy the little everyday pleasures of life, feeling a net of security. Continuum is understood as having control over day-to-day finances, being able to face a financial crash, succeeding in personal financial goals, and having the freedom to make choices that help people enjoy life (Consumer Financial Protection Bureau, 2015). Financial well-being has different meanings, it can mean freedom from financial stress (21 % of people), freedom from worry about unexpected expenses (21 % of people), freedom from debt (21 % of people) or freedom to make choices (18 % of people). (Employee Financial Wellness Survey, 2018).

#### Financial Health

In this project, financial health is understood as the capability of an individual to cover the basic costs, succeeding in outweighing the earnings with the expenditures and having the ability to the optimise this difference to achieve present and future financial stability. Also, financial healthy behaviour means having enough savings,

in form of accessible liquid money, to face unforeseen events in both the present and the future to achieve freedom to enjoy life and ultimately, attain happiness. Financial liquidity is understood as the money which is immediately accessible and easily exchangeable for other goods, quite important in cases of financial emergency. Young adults are confused about the concept of financial health. They lack knowledge and conflicting messages from institutions such as banks and friends or family induced different interpretations of what 'financial health' and 'financial well-being' means. In addition, as stated in the interviews, it is not clear for them who was responsible for managing their money, the banks, the government or themselves. In figure 11, a summary of the meaning of financial health and the main factors that young adults need to take into account to achieve it are shown. Those factors will be explained in the following lines.

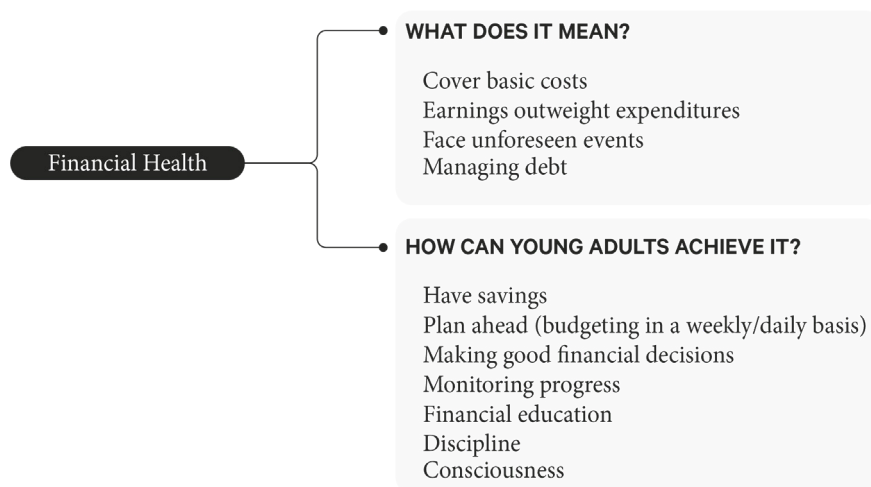


Figure 11. Financial Health meaning and how young adults could accomplish it

### **Saving**

According to the financial expert, health in financial terms is an indicator of people's capability to manage money well, protecting their present and long-term welfare. Savings are a key part of that future prosperity. Savings is defined as setting part of one's earnings aside in order to spend in the future (Family Economics & Financial Education, 2010). Saving early enables the potential of compounding, which makes the individual enjoy their economic freedom and independence is achieved (J.P. Morgan, 2016). It is important for young adults to have enough long-term savings or assets, i.e. enough savings to enable them plan long-term expenses, such as mortgage, retirement, healthcare, etc., without haste. Through small efforts, young adults could progressively improve their saving status. With little actions such as using public transport instead of a personal car, spending could really decrease your. In addition, another strategy to be financially successful is allocating money in a savings account. According to the expert, young adults should open a savings account to set aside money for larger financial goals such as marriage, a car purchase, a trip,

a house, etc. They need to set a savings goal. One of the approaches is to move money to savings within three days after being paid. The financial expert strongly advises to young adults to not only save for goals such as trips, marriage, a house, etc. but they also create a financial safety bucket that would secure their future. The creation of an emergency fund with at least two to six months' worth of living costs is needed to protect young adults well-being.

### **Budgeting**

Besides saving, budgeting is known as a very powerful tool to manage money well. Budgeting is thinking of a plan to manage the money to cover minimum living costs in a previously settled timespan (Clark, 2007). The act of budgeting concerns the registration of the amount of earnings and spendings (Moeti, 2007). The budgeting process helps people in taking action when expenditures overcome income (Moeti, 2007). "Budgeting directs your money where it matters most, including budgeting items for one off spending sprees ensures you also get to enjoy the fruits of your income." (Karina, 2017, p.18).

The activity of budgeting involves

financially planning. To guarantee financial health, financial organization is very effective to acquire healthy money habits. Further, planning allows keeping the personal dimension in mind to plan for the short and long term. Moreover, planning and self-reflecting are one of the primordial aspects of a good money management. Reflecting on the person's personal dimension for the short and long term is needed to guarantee their financial health and promote the development healthy habits. Budgeting involves young adults reflecting on the meaning of their life. Young adults would need to map their short, medium and long-term goals in a time-plan. The plan would serve as a guide on where young adults would need to apply their financial efforts. First taking financial action and then monitoring further is key to achieve an individual goal.

### **Financial Literacy**

Financial literacy and education is needed for young adults to outperform in their financial health. Financial Literacy is the key to acquire awareness, knowledge, skill, attitude, and behaviour needed to decide on financial issues and further achieve individual financial well-

being (OECD, 2013). Young adults are careful with their financials but require actionable education to develop a better management, since they have a tendency to earn money and immediately spend it (Der Hovanesian, 1999). The presentation of the previously mentioned financial literacy or advice is relevant for a positive impact in young adults financial health. Successfully visualizing information on how to be manage finances will trigger behavioural change (Bernheim, 2014). Clearly, young adults need to boost financial education as a first step, but to fruitfully improve their financial health they need to turn knowledge into action. Furthermore, it is not a 'knowing' problem, it is a 'doing' issue.

### **Frequency**

Also, to ensure a good financial health, money towards the right things should be spent, after, separating fixed costs from variable ones, a spending limit or a saving goal on a monthly basis should be established in order to split it weekly as a guide to know how much money to spend that week. Young adults financial status should be checked everyday to ensure safeguard expenditures on products or services young people need and value.

### **Discipline**

Relating to Generation Y, discipline in money management is missing. Discipline is crucial to be able to save money, postponing instant gratification (Karina, 2017). Having strong willpower and not falling into temptation are crucial elements for a healthy money management (Karina, 2017). Young adults who are good with money management know how to say no to things they cannot afford. Further, money does not come without effort, care for financials arises due to this reality.

### **Debt**

Regarding debt, people who are able to handle their financial commitments have a healthier economic life, not affected by late payment fees. The degree to which people keep abreast of all their invoices is an indicator of their ability to manage their finances and daily commitments, avoiding problems due to delay. If young adults are in debt, a repayment plan should be set and followed. The optimisation of the current debt amount and the avoidance of additional one is key for success in the long-term financials of young adults.

### **Money perception**

In the past years, people's experience of money is changing at a macro-scale (what it is) and at the micro-scale (what it can do). The perception of it, the relationship with the way we pay with it is changing as well. Once, money was a physical entity but it has become digital and people are tending to pay through online channels instead of physical ones. Digitalisation has changed the way money is perceived and powered invisible value exchange ecosystems. When money is fractionated, instead of a large bill with a certain amount, money is divided into smaller portions of that amount, spending decreases. This fact added to digital transformation reality, makes that the payment more unconscious, increasing young adults expenditures.

There is a need for young people to change their attitudes and behaviour with money. These findings and learnings will serve as the base to induce a behavioural change that will greatly improve individual financial health to ensure a future welfare.

### **Adopting a new money behaviour: engaging young adults**

With the aim of turning current financial lifestyles into healthier ones, existing theories on behavioural change were studied. In this section the two most relevant theories are presented: the Behavioural Model (Fogg, 2009) and the Transtheoretical model of Behavioural Change (Prochaska & DiClemente, 1992). A behaviour is the actions performed by individuals either with themselves or their environment (Hemakumara & Ruslan, 2018) to different internal or external conscious or unconscious stimuli (Minton & Khale, 2014). A new behaviour is developed when people feel motivated up to a certain degree and take action to include that certain behaviour in their everyday life (Fogg, 2009). There are three key elements that make changing human behaviour possible: motivation, ability and trigger (Fogg, 2009). First, motivation is the extent of willingness carry out a behaviour (e.g. they could consist of pleasure, pain, hope, fear, social acceptance, and social rejection). Second, ability is expressed as the capability to carry out a specific behaviour, which can

be improved by training until a degree in which the behaviour is perceived as easy to carry out. Third, trigger is known as the call to action, some triggers come naturally and others need to be induced depending on the ability or motivation level the person has for the desired behaviour. After considering this behavioural change enabler, it becomes clear that there are opportunities regarding guidance and support in changing young adults relationship with money for the better.

Moreover, in order to foster this desired behaviour, motivation and ability need to be influenced. For the purpose of inducing a new behaviour into people a systematic three-step process is proposed. The first step is to be specific regarding the behaviour, identifying and establishing specific target outcomes and goals. The second step would be to make it easy. Simplicity favours behaviour change greatly. The question to be answered is how the behaviour can be set up so that it is easy to accomplish. The third step involves the use of triggers. No behaviour happens without a trigger, what will prompt the desired behaviour needs to be identified.

The second relevant theory, which will be used in inducing the desired behaviour detailed in future chapters of this project report, is the Transtheoretical model of Behavioural Change. Enough behaviour repetition can be means of creating an habit in an individuals life as the step-by-step journey towards a greater objective

(Prochaska & Di Clemente, 1992). This path is followed in time, before behaviour adoption it generally takes 18 to 254 days (Lally, 2009). Different stages are experienced by individuals before behaviour embracement takes place. According to every stage, tasks and refusal removal need to be accomplished (Prochaska & Di Clemente, 1992). The different stages are visualized in figure 12. The stages of the Transtheoretical Model were used in the final design conceptualization phase as a guide to shape the final deliverable over time.

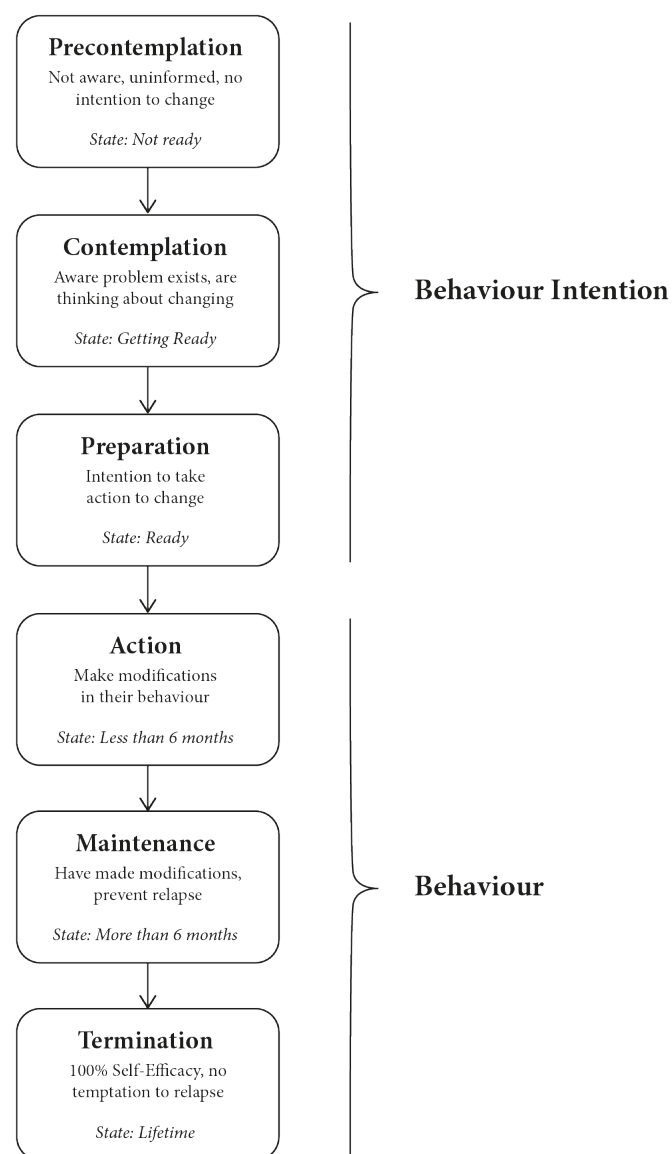
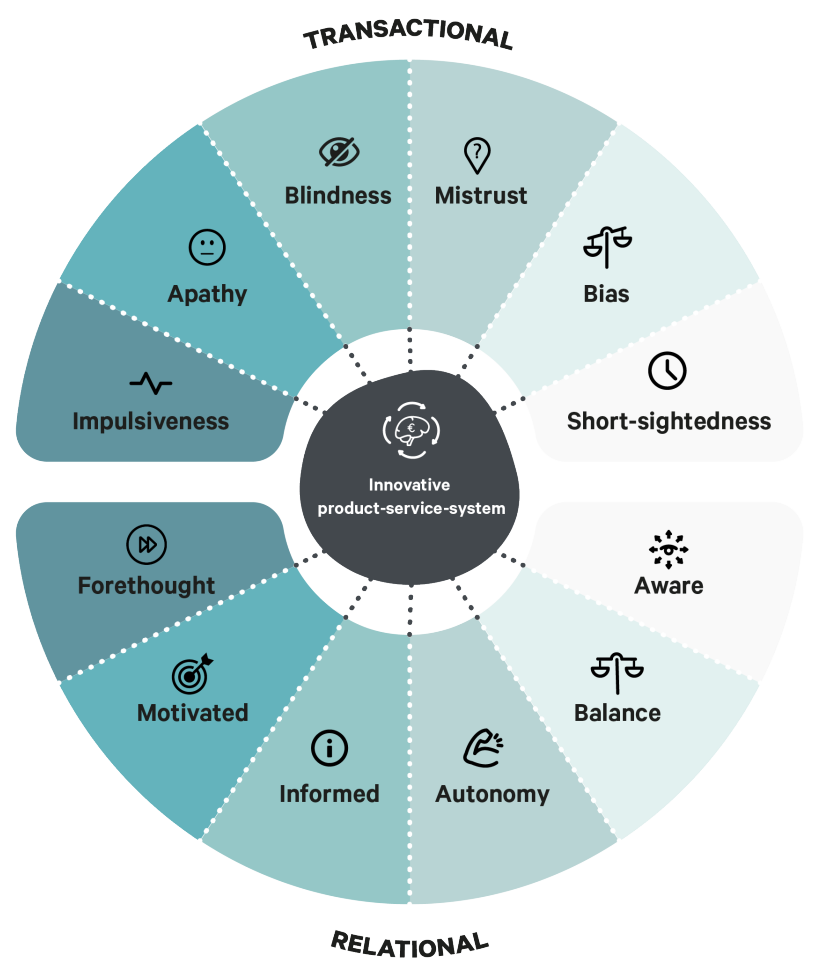


Figure 12. The Transtheoretical Model (Prochaska &amp; Di Clemente, 1992).



Figure 13. Transition Money Model: framework that moves from current behaviour of young adults with money to the desired one involving the achievement of financial



### **A financially healthy behaviour: the transitional model**

After the extensive research and the construction of the current money limitations framework, the first step of the systematic three-step process of the Behavioural Model, where the desired behaviour is defined, is captured in this section in detail as a transitional model. The other two steps of the three-step process are introduced in the latter design conceptualization phase, as well as the guidelines of the Transtheoretical model of Behavioural Change.

Through introducing new healthy money habits, young adults would move from a transactional to a relational relationship with money. A transitional model was developed, shown in figure 13, from a transactional to relational. Through the desired relational behaviour with money, young adults would be fore-through, living the time being, but considering the future as a priority as well. This new relationship would make them motivated and excited to outperform financially even if this means making sacrifices. Young adults would also be informed by having the access to knowledge based on the principles for healthy financials to later accomplish defined actions leading

to a better financial management and health. Autonomy would be achieved through self-efficacy and self-control to be able to manage money well. Balance in money bringing calmness on young peoples life and relationships. Young adults would be aware of the financial actions that would help them in looking after their future self, shifting from the excess of present certainty to increase future one.

### **Conclusion**

The desired behaviour for a sustainable lifestyle regarding money in young adults should turn from transactional to relational. This type of relationship with money, would make young adults feel good about themselves, accepting them for who they are, helping them in their personal development to achieve their well-being and happiness, bringing the best out in them. Ultimately, the aim in the sustainable financial behaviour is to empower young adults to make good money decisions.

The transitional model that gathers all these needed shifts of money behaviour will be used as a guide to enable and support the needed behavioural change in young adults regarding money.

## 2.5 Insight themes & design requirements

In this section, the summary of key insights from research (Current behaviour of young adults, benchmark, trend research and the identification of good money behaviour) were synthesized into three overarching insight themes, which are explained further. Themes were withdrawn to gain clarity in the important aspects to take into account in the conceptualization phase. Later, themes were turned into design requirements for the final design. These design requirements are important characteristics that the final design should meet in order to be successful. Those requirements for design were used as a compass to decide upon the most promising design concept. The requirements are shown visually in Chapter 5 (Final Design) to justify the outcome of the final design.

### Relationship with Money

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Today, young identify money as a struggle, making them overwhelmed, lost and ultimately, feeling guilty. It prevents young adults from being financially independent and free. A new relationship with money needs to be developed, enabling the transition from current transactional money behaviour (impulsiveness, apathy, blindness, mistrust, bias and short-sightedness) to a relational way of interacting with money (fore-thorough, motivated, informed, autonomy, balance and aware).

- ✓ Build trust
- ✓ Holistic perspective of their financial journey
- ✓ Future orientation
- ✓ Make young adults proud of taking care of themselves financially
- ✓ Saving awareness
- ✓ Give young adults peace of mind

## Taking Action

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By turning financial education into action, by saving and by budgeting, young adults could achieve the financially healthy behaviour. Triggers and motivation will help young adults act upon those areas to later be means of including good financial habits in their everyday life. Self-control and discipline need to be part of the mix as well to make the behavioural change possible.

- ✓ Advice and help in an accessible way, so they can take action
- ✓ Access to financial education to make smart, informed and fast money choices
- ✓ Help young adults save within a timeframe and goal in mind
- ✓ Saving progressively
- ✓ Financial health status and performance
- ✓ Help young adults to budget, giving shape to their life goals
- ✓ Cool, attractive image to make young adults be a part of the product-service-system

## New Interaction

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The design of a new interaction is needed. This new interaction should take into account the intangible connection with physical money of young adults, their concern for wellness and self-awareness, the need for transparent and trusted relations, the digitalized world they daily operate in and both, the easiness, the fun and intuitiveness as a reference of successful financial solutions. Young adults want complex concepts made easier, where personalization takes a key role. They need a holistic perspective of their financial journey, where they are guided, from their present to their future.

- ✓ Bring physicality back, combining physical and digital
- ✓ Digital
- ✓ Clean and intuitive interface
- ✓ Tone should be cheerful, close and functional
- ✓ Fun, simple, fast interaction

## 2.7 Design Challenge

To be able to help young adults change their money behaviour the definition of the design challenge was first needed. In this section the design challenge of this project is presented. Since the brief of this graduation project was self-initiated, the previous four levels of research were needed to articulate the referred design challenge. After getting a full understanding of the bigger picture, the challenge was articulated:

---

Design to help young adults in changing their current behaviour regarding money for one that increases their financial health ensuring their future stable well-being.

## 2.8 Chapter Conclusion

The nature of the current relationship of young adults and money is transactional. It is clear that there are negative feelings fuelling the relationship between young adults and money impulsiveness catered by young adults "living the moment", apathy in taking action, blindness in knowing what financial health means, mistrust regarding their usual references, bias in their financial decision-making and short-sightedness in their goals in life.

Most financial institutions are in a race to attract customers in order to increase their profit while they are failing in helping young adults in their complete financial journey, present and future, focusing only on one specific feature (investing, budgeting, saving) or on all of them losing the focus (too much cognitive load for young people), forgetting about young people's peace of mind and ultimately, their well-being.

The desired relationship with money involves a relational essence, where young adults will be fore-thorough in financial matters, motivated to improve, informed to make weighted decisions, autonomy to be self-sufficient, balanced in their lifestyle and aware of their situation. A transitional model, from transactional to relational, will help young adults in changing their relationship with finances to do money better, achieve financial health.

The transitional piece that makes this behavioural change possible is a new product-service-system. This product-service-system should be digital, give constant support, have a holistic perspective of the financial journey of young adults and keep the future orientation in their scope by introducing a fun, simple interaction recovering the physical dimension of money. Design requirements were defined to be included in the final design and answer to the design challenge.





3.

# Vision

Taking the design challenge, defined in the last chapter, as the starting point, this chapter introduces the initial vision and the reasoning behind choosing the final vision. The Inside-Out process of Design-Driven Innovation took place in this phase though criticism and iteration of the vision.

## 3.1 Vision: financial sustainable well-being

As a starting point for the conceptualization phase of this project, a vision was articulated based on the previous research chapter and my Personal Principles for Good Design. This section elaborates on my initial designers' vision on a new product-service-system and the final one.

### Initial Vision

A product-service-system is defined as a unified proposal of products (tangible), services (intangible) and the necessary infrastructure to provide functional value to people (Tietze, F. & Schiederig, T. & Herstatt, C., 2011).

Currently, the relationship young adults have with money is experienced as something very complex and confusing, generating struggle. Young adults identify becoming more financially sustainable as missing out on the present, cancelling any present gratification. In order to avoid this kind of feelings, the aim of this vision for a new meaningful product-service-system would be to generate a different experience with money, creating a situation in which young adults do not feel lost or judged by others.

I formulated my preliminary vision for this concept of the product-service-system as follows:

"Young adults should be supported in having a safety net that helps them

throughout the ups and downs of their life. Young people need to be able to focus on what matters most to them and take care of the others who are important to them. The product-service-system should induce a change to ensure long term well-being in their current relationship with money to achieve that. The concept of the product-service-system should focus on the well-being of young adults in the longer-term, involving a behavioural transition for the better."

To design a product-service-system that would transform the unsustainable financial behaviour towards sustainable ways of living with money, the initial vision was iterated. The preliminary vision was further defined, the next step was to get criticism from my mentor, my chair,

and after that, from service designers in the financial sector and ultimately from young adults. Criticism was incorporated in the vision through the self-reflection and iteration on the vision. From all these vision directions, a final choice was made. In this selection, the positive impact on young adults in ensuring their future financial health was prioritized. Finally, the articulated final vision was based on the improvement of the experience of young adults saving money.

The main reasons behind this specific decision to focus on improving the saving behaviour as a basis are further detailed: As shown in the figure 14, Spanish people, including young adults, are saving less than some years ago. This trend means people are spending their money in their

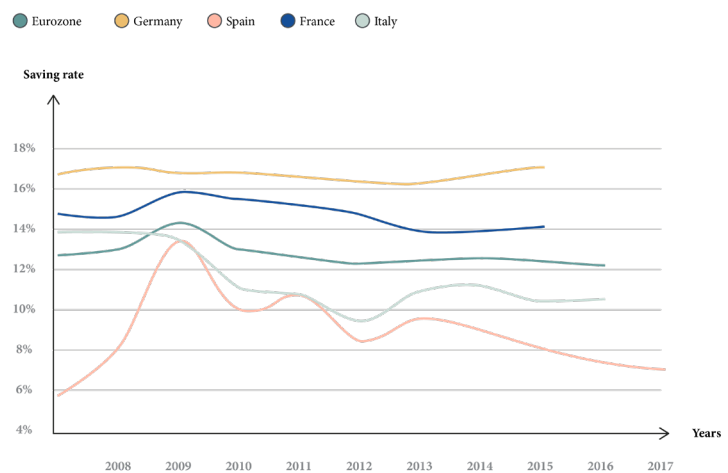


Figure 14. Evolution of the savings rate in relation to disposable income



everyday life, instead of saving it for the future. If people have little or no saving, in case any unexpected emergency appears, they would not be able to overcome it, putting their well-being at risk. The process of saving connects the present state to a meaningful future state. The establishment of this link is important since young adults are constantly looking for instant gratification. By creating this joint, young adults would realise that saving money is important and would take care of their future through their finances. Saving early triggers the power of compounding to facilitate young adults to enjoy their financial freedom (J.P. Morgan, 2016). The benefits of

saving early can be measured in time as shown in figure 15 (J.P. Morgan, 2016). The compounding power is based on the principle of increasing earnings from the progressive sum of interests that work in favour of the saver. Three hypothetical examples of three different persons with distinct behaviour towards money are compared in the referred figure. The earlier the compound power is used, the earlier the snowfall money effect takes place, and the earlier people's wealth grows exponentially. This strategy of saving early would optimize young adults finances and shape a behaviour that would ensure a safe long-term well-being.

Due to the minimal existing design solutions targeting this behaviour, the design of a product-service-system that triggers the saving action and also, connects the present and the future of young adults, has the potential to be developed.

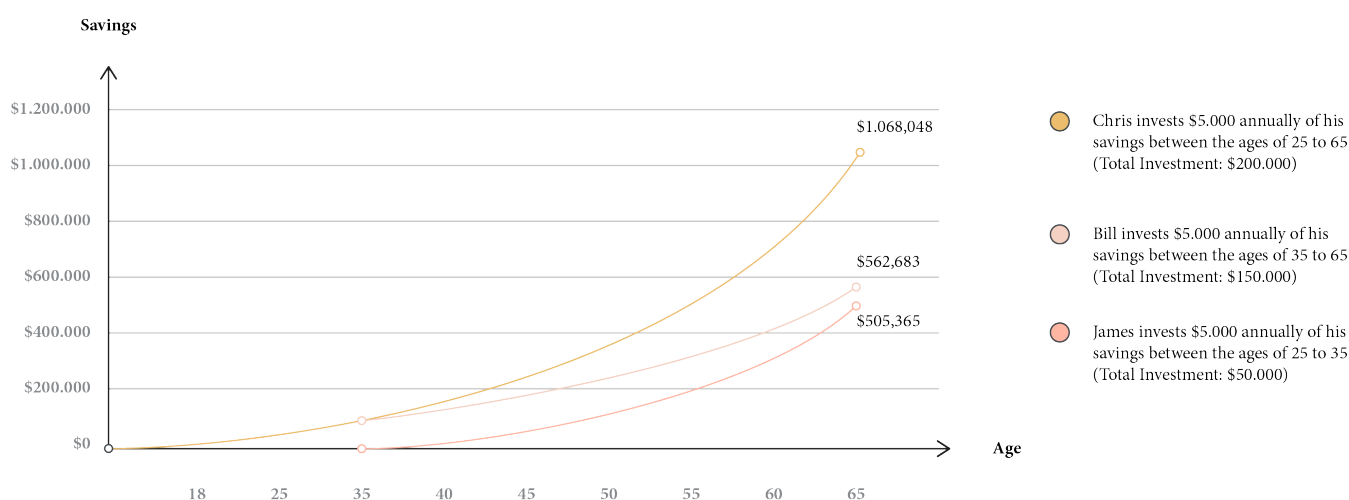


Figure 15. Growth of savings account depending on the start year

## 3.2 Final Vision

Once the direction of vision was defined, the initial vision was refined into a final version, visualized in figure 16. The final design vision of this for young adults to change their money behaviour towards a more sustainable one is:

**“I want to help young adults in changing their current behaviour regarding money by providing a financially secure environment to them that allows them to keep a balance between their earnings and expenditures, ensuring their future well-being, allowing young people to make choices to enjoy life while feeling safe.**

**I want to make young adults feel the freedom, independence and the relief of not worrying anymore about their welfare in the long term.**

**Young people need financial control and motivation to change their current lifestyle. To do that, they need to start taking care of themselves by saving money gradually through a new inspiring way, boosting discipline, commitment, and decision making when saving money."**



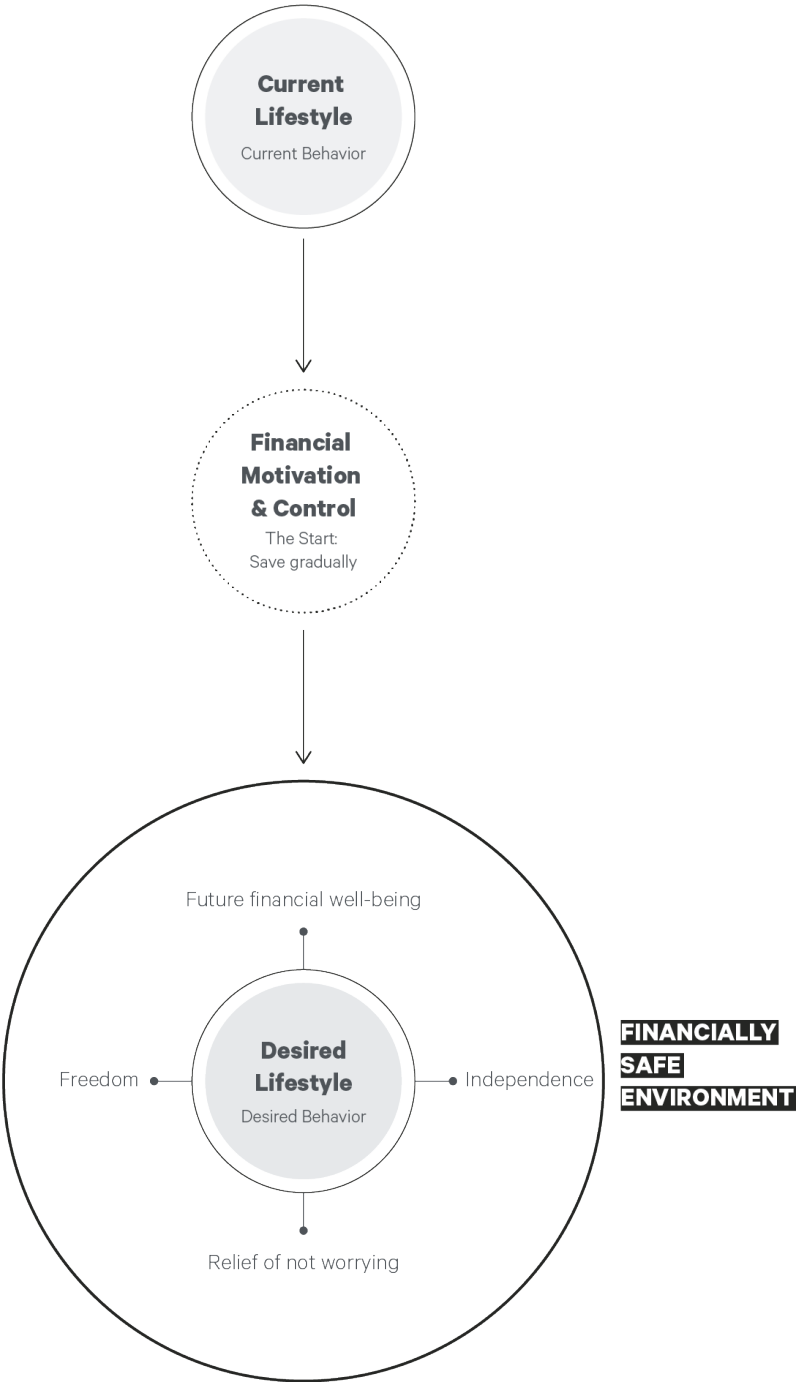


Figure 16. Final Vision.

## 3.3 Chapter conclusion

Young adults need a product-service-system that gives them financial guidance and support to achieve what matters to them most in life. The main driver will be saving since it is the most efficient way to do so. The product-service-system should give young adults the control and motivation.

This new vision for a new product service system that serves as the catalyst in the transition of the current relationship of young adults with money to one that fosters financial health in the present and in the future, ultimately achieving their well-being, the freedom, independence and the relief of not worrying anymore.





4.

# Concept

The new vision based on the need for a product-service-system that could enable a new relationship of young adults with money and the design requirements were the starting point for the conceptualization the design. In this chapter, the conceptualization phase is discussed and the methodology used is explained. Next, the results are presented and explained. Finally, the final concept that turns the vision into a meaningful reality for young adults is constructed as input for the final design.



## 4.1 Concept development approach

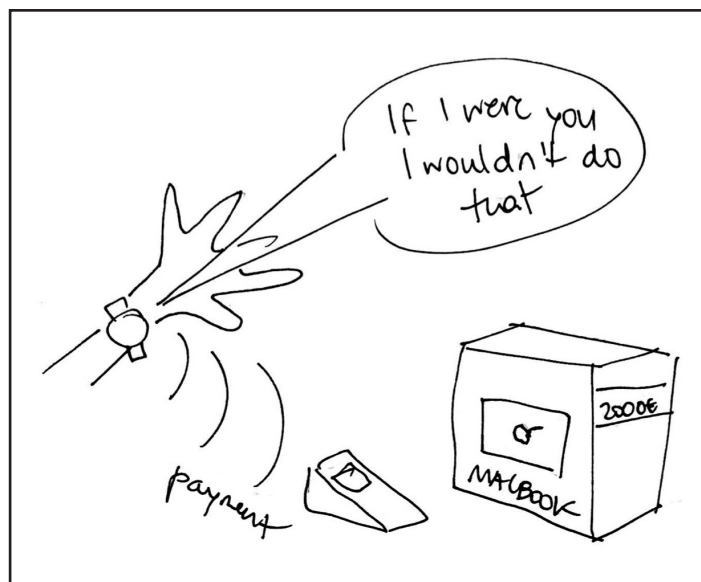
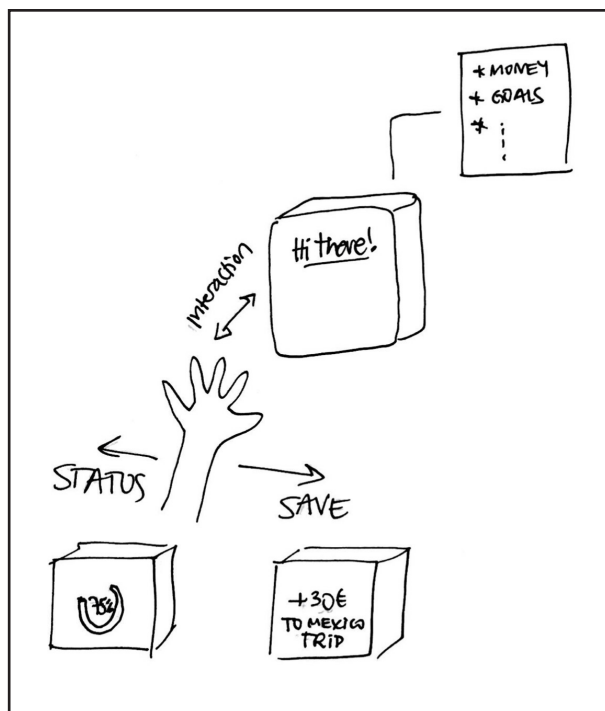
The project follows a Human Centered Approach from this chapter on, since the radical new vision for the relationship of young adults and money is already articulated and more conventional tools belonging to this approach are used to conceptualize the final outcome. Techniques of design conceptualization such as brainstorming, sketching and tinkering were used as exploration tools to turn the vision into a reality. The used tools are explained below and insight into the iterative process that resulted from using those tools is given.

### **Brainstorming & Sketching**

Brainstorming was used to generate a large number of ideas based on the assumption that quantity leads to quality (Delft Design Guide, 2016). One idea would then be picked to solve the design challenge and be aligned with the new vision for young adults relationship with money (Delft Design Guide, 2016). The brainstorming sessions were performed individually, in pairs with my mentor, in pairs with service designers and with three young adults of the product-service-system.

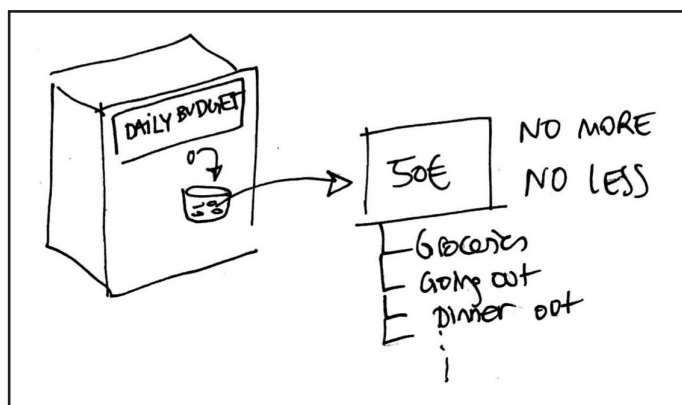
In addition, sketching as part of the brainstorming process in the conceptualization phase. This tool was very helpful in the decision-making in the conceptualization of the final design concept, it served as a quick and easy way to explore different concepts and variations. Also, this method was used to communicate ideas and receive feedback to iteratively improve the concept.

Through brainstorming and sketching, some concepts seemed more successful than others in fulfilling the vision. The sketches on the other page represent ways in which the vision articulated for the product-service-system could be made a reality. Concepts such as a wearable that would help young adults spend wisely, a weekly money dispenser, a piggy-bank that would be activated through physical interactions or a physical object where money could be saved in, were explored and can be seen in figure 17.

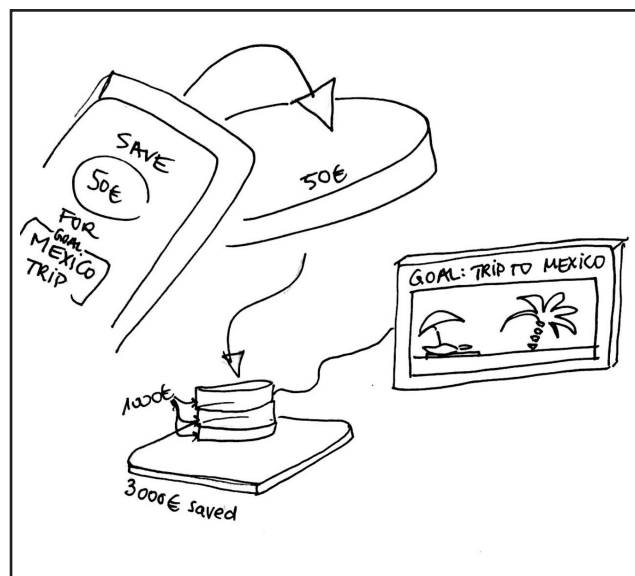


A wearable that helps young adults spend wisely. Every time young adults buy something they do not truly need, the wearable would send a vibration and recommends them to not invest on that item.

A piggy-bank that would be activated through physical interactions: save to the right and check financial status to the left.



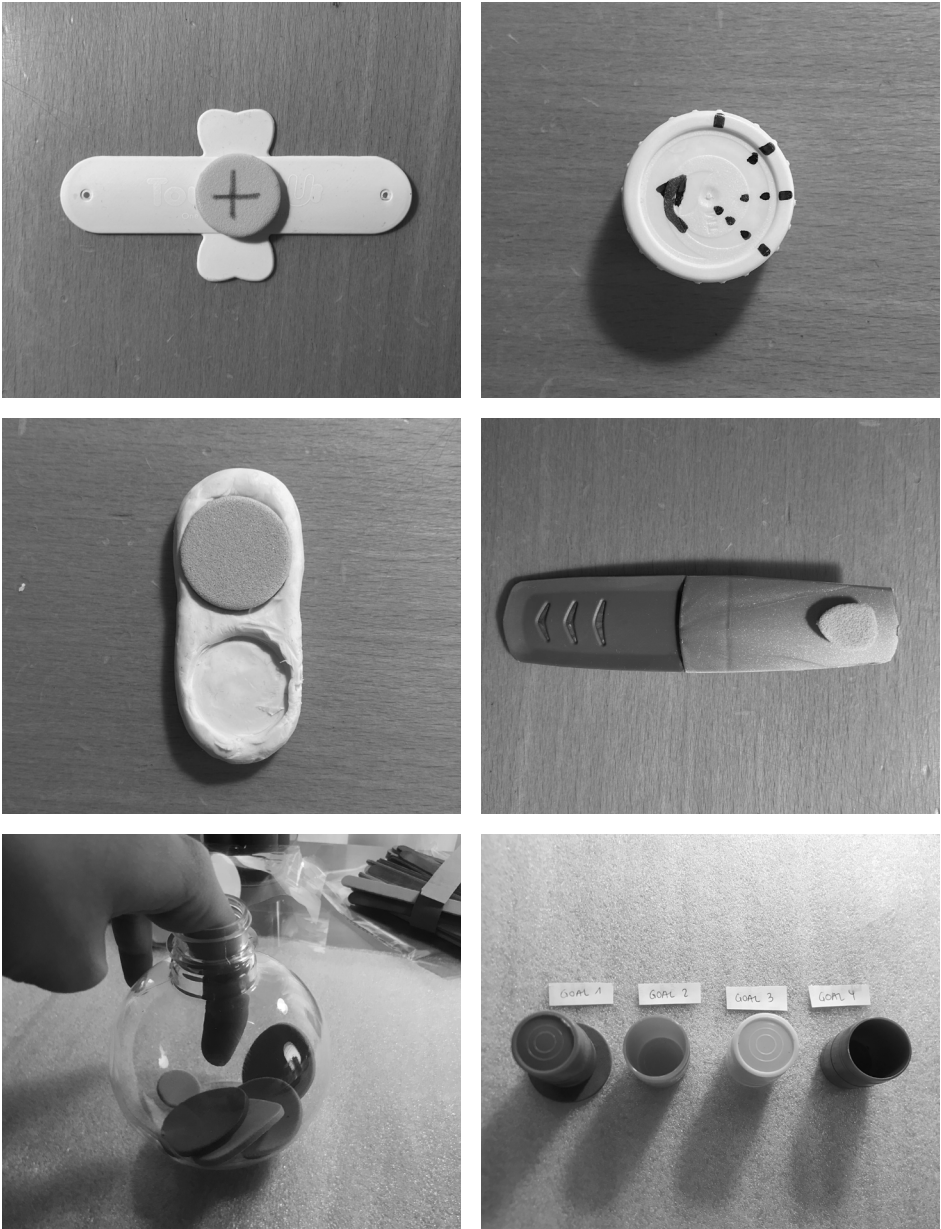
A weekly money dispenser that would give young adults access to the money they need every day, depending on their spending behaviour.



A physical object where money can be saved in, so instead of having a digital character, it becomes "physical", so young adults are more conscious about their finances.

Figure 17. Most promising concepts from brainstorming and sketching in the conceptualization phase.

Figure 18. Tinkering samples from concepts



**Tinkering**

With the aim of conceptualizing the ideas further, the tinkering technique was used. Some pictures of the output of the tinkering sessions are shown in the other page.

Tinkering is based on the principles of purposefulness, inventiveness and playfulness (Agency by Design, 2013) and it is an iterative and flexible process based on the concept of purposeful making of things through experimentation (Agency by Design Team, 2013). I started with the physical building of a first model that got me on the right track. After that, I continued exploring with my hands, seeing where the process lead me. I opened my way into complex, open-ended design challenge that would resonate with the project's vision. The playful dimension truly helped in putting my thoughts into a tangible outcome, pushing away my own restrains and limitations about how the design should be and giving space to how it could be. This way, the concept took a much more creative character.

By taking into account my Personal Principles for Good Design and by reflecting on the ideas developed through brainstorming, sketching and tinkering and comparing to one another, it got progressively clear which would be the concept to achieve the intended change in young adults behaviour towards ensuring their financial future well-being.

## 4.2 The financial-kit

### 4.2.1 The final concept

The final concept is explained in detail below. The vision (see page 64) and the design requirements (see page 56 and 57) were used as criteria to choose the final concept that would help young adults dealing with money.

The concept is a product-service-system named as "the financial kit". This kit makes young adults take action upon their money to optimise their finances, so they can do money better.

This financial kit results in a combination of a digital app and physical device. The app is based on four pillars, presented in the other page. The physical device is a phone case that serves as a saving-kit for young adults. This phone case will allow young adults in saving physically.

The financial-kit will allow young adults to:

#### 1. Start small

Young adults will be able to change their current money behaviour step by step, taking the behavioural phases of the Transtheoretical Model (Prochaska & Di Clemente, 1992) into account, so they can take their time and finalize with a sustainable financial well-being.

#### 2. See progress against goal

Young adults will be motivated thanks to the clear visualization of their personal progress towards their financial goals, taking advantage of their goal-oriented personality. The financial-kit is to maintain the motivation of young adults to lead a sustainable financial lifestyle.

#### 3. Socialize with other young adults

Though the financial kit, young adults will be able to find people they relate to, who have a similar financial situation and money habits, creating a community based on trust and support that makes them feel like they have the control to improve financially.

#### 4. Form multiple habits

The financial kit will inculcate young adults a new way of relating to money based on self-efficiency and discipline, evolving towards a healthier daily habit.

#### 5. Make saving a challenge, not a chore

The financial kit will give young adults the positive encouragement and help to save they are silently asking for, making them keep their sustainable financial situation in track.

#### 6. Get financial knowledge and dare to improve in finances

Through the financial kit, young adults will be urged to take care of themselves and get to feel proud to do so.

#### 7. Make the financial kit easy and accessible

Through simple use and interactions, young adults will be engaged to use the financial-kit regularly and thrive in their finances.



4.2.2 The four pillars

Based on the design requirements including saving, budgeting, getting financial education and meeting others with the same financial situation, the financial-kit was born as a concept. The kit consists of four building pillars: Save, Budget, Meet and Advice. These pillars are visualized in figure 19. These pillars, explained in detail in the following paragraphs, cover the elementary aspects comprised in those dimensions that will change young adults current behaviour and make them achieve a stable financial future well-being.

Save

This pillar is the most important one according to the vision and it is highlighted as the starting point of the financial kit. It is supported by two main aspects: the physical interaction of saving money and the assurance that this money is saved somewhere safe.

Young adults will be able to save money by allocating it into a saving “space” or “vault” they can access in case of emergencies but not for instant gratification purposes. The saving place has a mental and a physical dimension. First, putting the money somewhere safe, will give them peace of mind and eliminate the stress which appears when they spend on whims or

unnecessary treats. A visible status was incorporated in the design concept in order to maintain the calmness of young peoples well-being being under control, getting the impression they are taking care of themselves. Second, through the physical interaction, the lost connection and consciousness between young adults and money is reinvigorated. This was a design requirement based on the trend research, due to the fact that money has become fully digital, young adults spend more since the awareness of spending decreases through digital payments and transactions. In fact, through physical interactions, young adults can finally feel with their hands the abstract concept of safety.

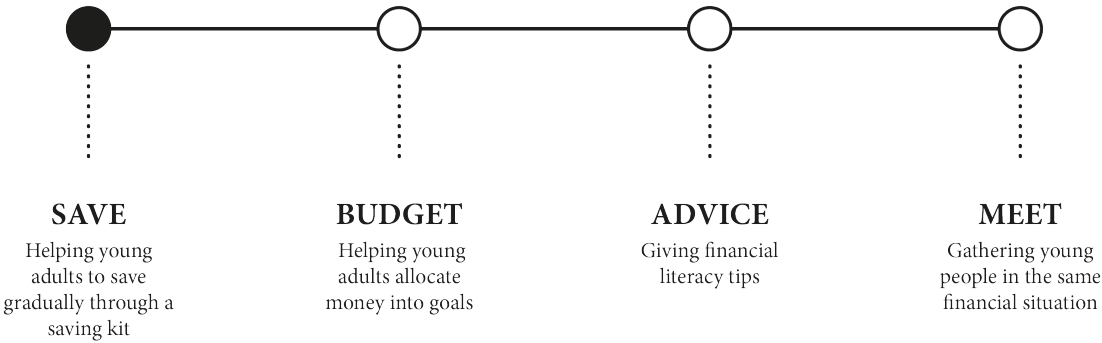


Figure 19. The four financial kit pillars.

### Budget, Meet & Advice

In the remaining pillars of the financial kit, young adults are able to find three areas of improvement that make the relationship with money in the long-term better. The Budget, Meet and Advice pillars are solely based on a digital interaction with young adults, opposing to the Save pillar that has a physical aspect.

In the Budget pillar, young adults will be able to allocate money towards their personal goals to keep their motivation high, saving towards the objectives they find most important in life. Budgeting would represent the second step to incorporate a behaviour of planning, once young adults having already started saving money in a daily basis.

Through the Meet pillar, young adults will be able to meet others with the same financial situation and interests. In this community, the aim is for them to feel empowered, proud to save and willing to meet to get financial advice from others but also to open their social circle.

In the Advice pillar, young adults will get financial advice in a very simple, easy and effective format to acquire knowledge that will help them optimise their finances further.

### 4.2.3 Rapid prototyping

In this case, a low-fidelity prototype was built to start testing the concept in reality. In figure 21, the parts of the physical device, the benefits and the positive impact that each part will have on young adults are shown.

To achieve the desired money relationship in young adults through the financial kit, the Save pillar is turned into reality through a physical device and through the platform. A physical device in form of a phone case and a slider on it allows young adults to save through an easy, fast and intuitive physical interaction as shown in figure 20. A phone case was chosen as part of the financial-kit since young adults are digital natives and use their phones in a daily basis. The phone case would enable them to save anytime, anywhere.

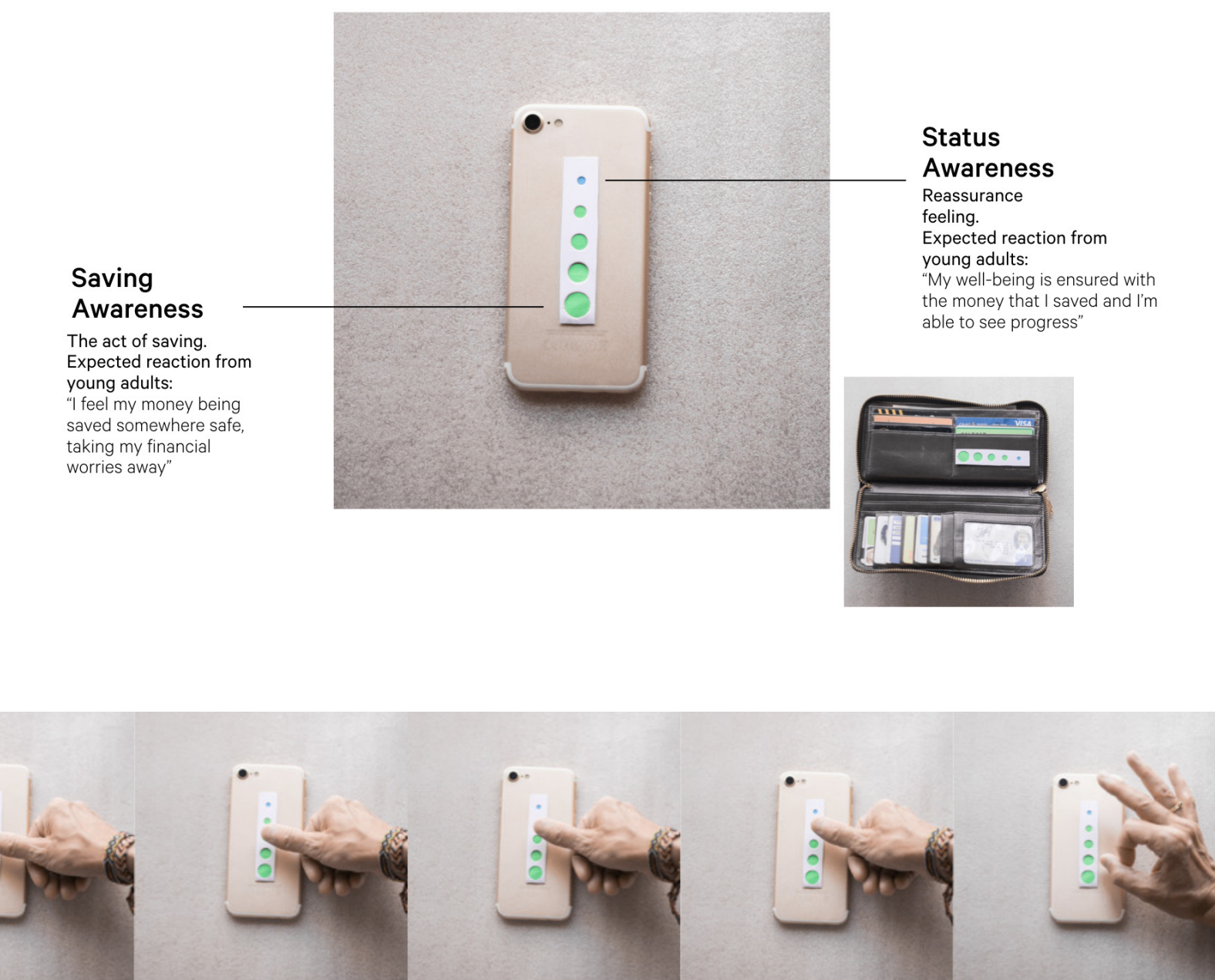
In fact, the “slider” on the phone case (a button in the final design), where young adults slide or press to save an amount of money pre-established. Once young adults performed the activity of saving, the phone case shows their current financial status through a coloured light. The objective of the status light is to evoke positive feelings such as peace of mind and safety to young adults. It is intended that when young adults see the coloured light, they will be able to visually check their financial health and be reassured that they are doing well with money. Also, the saving-kit is aimed to be attached to places where young adults usually have the impulse to save such as a wallet (as shown in figure 21).

The final design, presented in the next chapter, took its end form after testing and reflecting on this on this prototype. The prototype was evaluated with young adults for further improvement.

Figure 20. Use and interaction with the prototype of the saving-kit: a phone case that would allow saving by sliding up one's finger



Figure 21. Benefits and desired behavioural outcome of using the saving-kit



### Benefits for young adults

Through the proposed design concept, young adults can start to save in a fast, immediate way which is fun to interact with. Young adults tend to be reluctant in the precise moment of saving. Consequently, in making this specific activity more playful and fun, they would be encouraged to allocate their money somewhere save. Through this simple interaction of saving they would be able to customize the amount of money to be saved depending on their possibilities and their preferences.

Thanks the financial-kit, young adults would not only save, but also they would not spend as much thanks to the status indicator, making them aware of their accomplishment or failure regarding saving money. Therefore, they would be more prone to achieve the long term intentions they desire. The status indicator would make young adults not spend so much money since they would see financial progress due to their saving performance. Young adults would also foster a saving behaviour, not spending means saving as well.

Through prototyping, the value proposition of the design concept became clear and it is expressed hereunder.

### Value Proposition


The financial kit is a product-service-system that helps young adults in **ensuring the future well-being they crave**.

The financial-kit provides a **complete approach** towards economic independence, which helps young adults to **give shape to their life goals** and **accompanies** them in their complete financial journey, taking them from the present to the future.

Money is saved somewhere safe, not easy to access; giving young adults the **freedom, security and independence** they crave. In a fun, simple, digital, physical, immediate, personal interaction with money to trigger and maintain the desired money behaviour.

## Storyboard of the financial kit

The tool of storyboarding was used to understand young adults behaviour, the context and timing (Delft Design Guide, 2016). In order to map the storyboard, it was necessary to create a persona (Pruitt, J., & Grudin, J., 2003). Through the creation of the persona, the understanding of the behaviour, values and needs of young adults made easier to map, describe and visualize the expected behaviour of young adults in the storyboard. The persona represents young adults behaviours and characteristics as shown in the persona card, in figure 22.



# Laura Garcia

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### DEMOGRAPHICS

Age	Gender	Nationality
28	Female	Spanish

Occupation  
Researcher at a Cosmetic Laboratory

Income	Wage per year
Medium	30.000€

---

### PERSONAL

Status  
Engaged

Personality  
She is not very organized, abstent-minded but tries hard to get better

---

### CURRENT FEELINGS

Stressed
Concerned
Busy

---

### TECHNOLOGY USE

Use

Internet	<div style="width: 80%;"></div>
Social media	<div style="width: 90%;"></div>
Phone	<div style="width: 85%;"></div>
Gadgets	<div style="width: 75%;"></div>

Devices  
Laura owns a laptop and an iPhone. She watches movies and listens to music online from subscription platforms, since she thinks TV is outdated and she wants something she chooses and aligns with her interests.

### CURRENT SITUATION

Quote of her main aspiration  
**"I would love to move in with my boyfriend and have a place we can call our own"**

Laura is living in a shared apartment with her boyfriend Marcos in Barcelona, Spain. She has been working for two years now, but she has been unable to save effectively in that time. She recently got engaged to her boyfriend and she would like to move with him to a nice apartment, which she can't afford due to her financial behavior.

### MOTIVATIONS

- Laura needs to put her priorities in life in order so she can start working towards them
- Has doubts on how to get where she wants to get in life

### INTEREST & VALUES

- ✂ Laura loves to travel and experience other cultures. She spent her last summer holiday in India.
- 🍴 She is passionate about food and enjoys going out for lunch or dinner.
- 🍷 She likes to hang out with large group of friends at bars.
- 💎 She cares about her looks and fashion.

### LIMITATIONS

She loves to travel so much, she is not really saving. Her boyfriend is a pilot and he earns more money than her, so he has been able to save unlike her.

### FUTURE GOALS

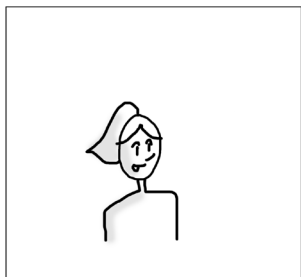
Laura dreams of a future where she can start creating her own home and settle. She is not in a hurry, but she would like to move with her boyfriend, but not in any circumstances, she wants the best for both. Creating the right environment and living in a calmed and nice neighborhood is not cheap but is important for her to not move somewhere at any costs.

Figure 22. Persona card for Storyboard



The following storyboard (figure 23) shows how the designed financial kit works in its present context and its use over a period of time. First, the Save pillar is the start of the journey. Then, the other pillars are incorporated with the course of time: Budget, Meet and Advice.

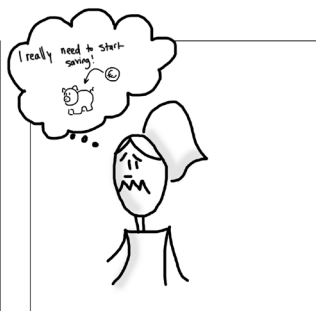
Figure 23. Storyboard of the financial-kit use



This is Laura, she is renting a house right now but she wishes to buy a house for her own.



Laura walks through the street and spots the house of her dreams. The house is on sale for a certain price, she checks her balance, even-though she already knows what is in her bank account, in the bank application of her phone and she realises she cannot afford the house she would like to live in.



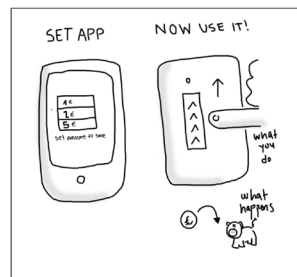
Laura wished she started saving for longer term goals and big ticket items, such as a house. She is too focussed on expenditures that will give her instant gratification such as a week-end trip and she has not taken time to manage her money to achieve financial health. Those two factors make her fail in saving.



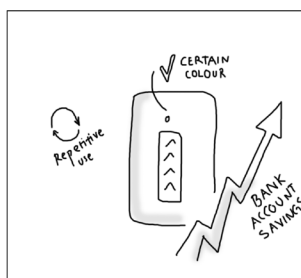
After a long day, Laura arrives to her flat, which she rents with her boyfriend Marcos. He suggests her to try a new application and a new service based on a financial kit that helps young adults in managing their money better.



Laura tries the financial kit, composed of a digital application a saving-kit. She starts by ordering a saving-kit that will unlock the content of the application. The saving-kit is a device she can attach to her phone case, with which she will be able to save anywhere anytime through one simple interaction.



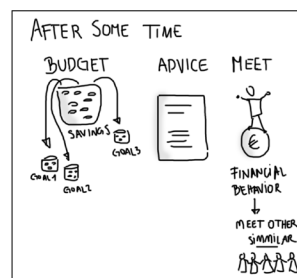
Laura introduces the amount of money she would like to save each time she uses the saving-kit. She starts to save and progressively she increments the amount of money she saves.



Through the repetitive use of the saving-kit, a status light shows in a certain colour. This status light is meant to reassure Laura that she is saving money, making financial progress and getting closer to her goals.



Laura changes her behaviour gradually, getting used to healthier financial habits that ensure her future well-being. Laura is able to visualize the progress she is making regarding financial health through the digital application and the status light (just with a look to her device, without needing to access her phone).



Once Laura has started saving money, she will discover the other parts of the service: the Budget, Advice and Meet feature inside the application. In Budget she is able to allocate money into her specific personal goals. In Advice she will get financial tips to improve her money management and in Meet she will be able to meet other young adults in a community of financial support.

## 4.3 Chapter conclusion

The final concept design is a financial kit for young adults, a combination of a mostly digital but also physical design. The financial kit consists of four building pillars: Save, Budget, Meet and Advice. Each one of the pillars corresponds to an improvement area regarding financials, which over the elementary aspects comprised in those dimensions that will transition young adults current money behaviour and make them achieve a financial health and their present and future well-being. The desired money behaviour is first triggered by saving. Through a physical device, money is saved somewhere safe, providing both saving awareness to reassure financial health is being optimised and financial status awareness for peace of mind, young adults will change the way they relate to money.







5.

# Final design

This chapter presents the final outcome. The main aim is to define the details of the final design and its adoption. The final deliverable consist of a final product (a phone case and a digital application) and the system needed to sustain it that articulates the final design for young adults to change their current behaviour regarding money. Also, the design requirements are integrated in the final design and shown visually in this chapter.

## 5.1 Final design deliverable

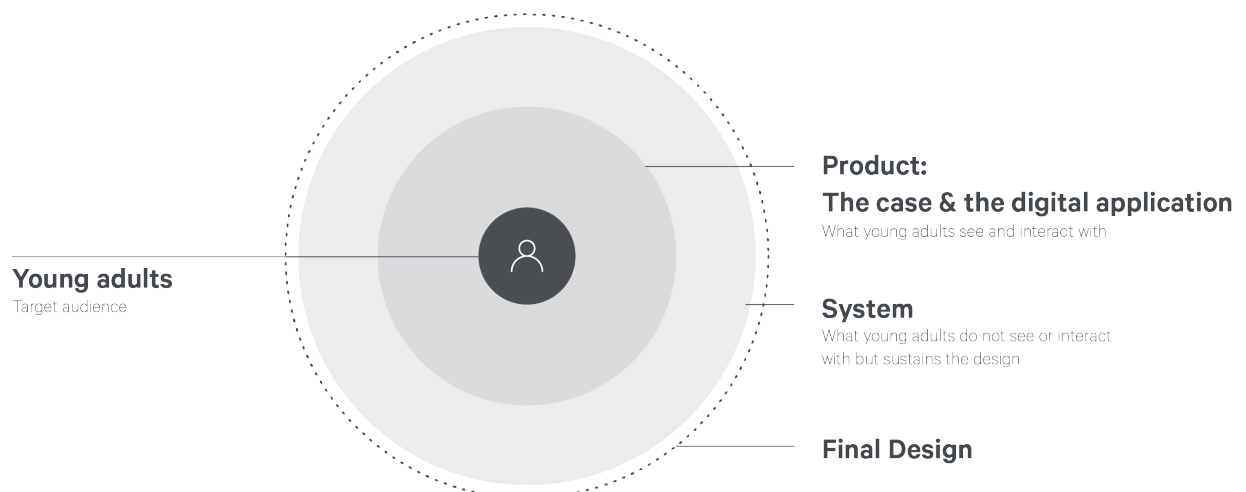


Figure 24. The final deliverable

**Volt: the final design**

Two levels, product and system conform Volt, as shown in figure 25. Volt was embodied through a final product, consisting of a phone case and a digital application and the system sustains the product. The phone case, the app and system are explained in the following sections.

The final deliverable takes the form of a Minimum Viable Product (MVP). An MVP is a product-service-system in its most basic but relevant representation and has just enough features to satisfy people and give feedback for development in the future. The purpose of the MVP is to test the hypothesis and assumptions of the financial-kit and the future implementation of Volt. Testing was carried out by observing young adults interact with the phone case and their thoughts about the app.

**Test, iterate & build**

A commitment to iterative designing was made at the start of this graduation project. Through iteration of the MVP, the improvement that would be synthesized in the final deliverable was achieved to fit young adults lifestyle best. Through evaluation with young adults, desirability, viability, suitability and feasibility were tested.

## 5.2 The case

### Save in a click

The phone case will be the way young adults are able to save in a physical way, with the purpose of recovering the lost connection with money due to digital transformation and the consciousness of money in order to save. In this section, the physical case's functioning, technical specifications and appearance are defined.

#### Functioning and appearance

The case incorporates a button, a small light and a battery (figure 25). The two main features provided by the case are saving awareness and financial status awareness. The first one is enabled through the button and the second one through the light.

#### The button

Young adults will be able to save whenever they press the button. A pre-established amount of money in the digital application will be saved each time the button is pushed. In the conceptualization phase, the button could be attached wherever young adults wanted. After giving some reflection, the button became permanent, due to the digital nature of young adults and their tendency to use the mobile phone for every interaction with money (payments, checking their finances, transactions, etc.).

Young adults feel the money being saved, recovering a conscious connection with finances, once lost. Saved money is trespassed to a saving account of young

adults personal bank, where money is put somewhere safe to avoid spending it on whims.

#### The light

The light will show the status of the financial health of young adults. Through a colour-coded light, young adults will know how they are doing financially just after pressing the button to save. Financial health will be based on behaviour towards the progress of young adults personal goals and their monthly expenditure.

This light will have an impact on young adults psychological dimension. Young adults will get an assurance feeling that gives them peace of mind that they ensure their well-being now and in the future. They have the certainty money is saved somewhere safe.

Images showing how the phone case would look like are shown in the next page.

#### User Testing: the case

The aim was to engage young adults while the case was developed. A low fidelity prototype (figure 26) was built to test the following assumptions of the concept of the final design:

- Young adults would prefer a button rather than a slider to save physically money with.
- Young adults would like the idea of saving physically instead of digitally (through a button in the digital application).
- Young adults would understand how the case worked with a small explanation.

These assumptions were tested and the case was improved: including a button in the case and making the plus icon big enough so young adults understood intuitively the saving functioning. Also, the button was placed in the middle of the case to be more ergonomic and allow young adults to save without having the need to flip the phone. Young adults would had a clear preference for a physical saving interaction as a new and interesting way to relate to money.



Figure 26. Low-fidelity prototype of the phone case



Figure 25. Volt's phone case.



## Case Technology

In figure 27 the technology that makes the case function is shown. The button works thanks to the integrated Wi-fi connection and the battery in the case. This last one also serves as an enabler of the financial status light.

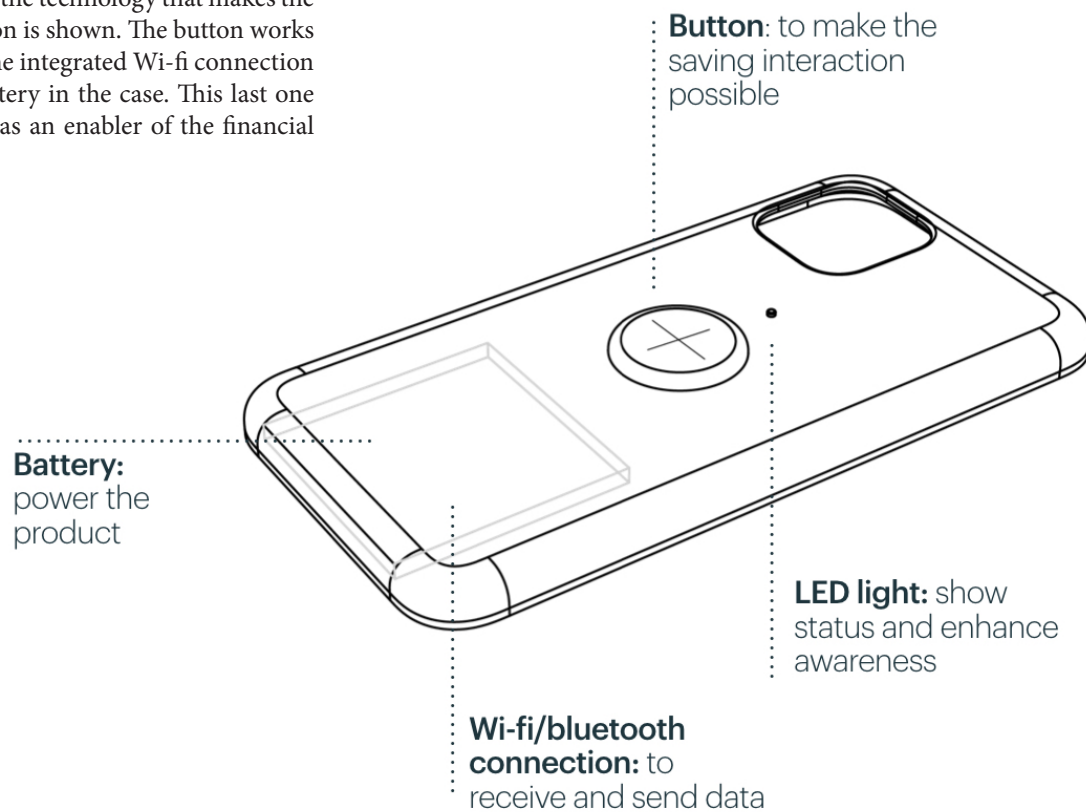


Figure 27. The physical case's technology

## Price

The price of the case would be estimated in 30€. Amazon Dash Button integrates the technology needed for the phone case and it has a cost of 5€. Due to production and the actual cost of the case, the price increases. The case will be given by partner banks or sold individually if young adults would like to purchase it without the involvement of any specific bank.

## 5.3 Volt App

Where everything comes together

Through the digital application (figure 28), a new way to manage young adults financial lifestyle changing the current relationship with money is built. The final screens of the digital application are based on service design and user experience tools such as user flow and wireframes, which can be found in Appendix C and Appendix D accordingly.

### Features

The relevant features which will support young adults in managing their finances better are distinguished in primary or secondary features, in order of importance. The meaningful features are visualized in figure 29.

The primary features will be saving and budgeting, which will be introduced to young adults when they start using the digital application. The secondary features present in the digital application will be: checking financial health, meeting and getting advice. These secondary features will be introduced after three months, after young adults have included the saving and budgeting behaviour in their routine.

### Content

The main content requirement is the financial education knowledge which is synthesized in the financial education pills provided through the advice feature.

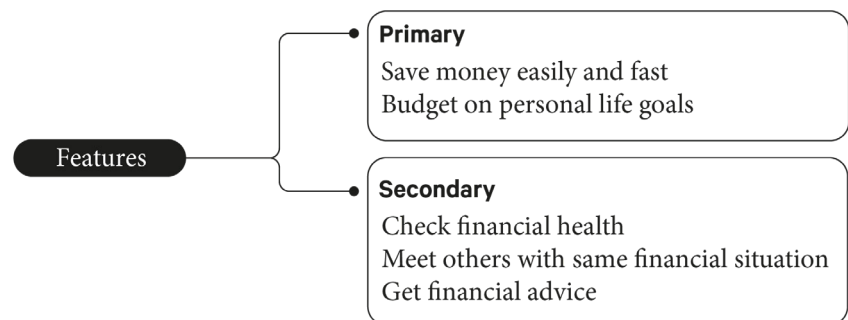


Figure 29. The features of the digital application

### Data trespass

Young adults financial personal data will be directly imported with help of their bank or by self-importing their personal financial files which can be found today at almost every bank website. Afterwards, the data of the banks is synchronized to deliver a personalized experience.

### User Testing: the digital application

Small testing with three young adults was used in the evaluation of the digital application to check if the features motivated young adults to use the digital application.

The appearance of the digital application was positively evaluated, young adults though it was clean, simple and intuitive in use. The features were perceived as useful and it was mentioned the gathering of all the features under one application as an interesting aspect. Meet was the

feature less welcomed, since young adults hesitated in joining a new community based on their financial performance, mainly due to privacy concerns and not wanting to be put into a group based on that aspect. According to young adults user test, saving was the most promising feature. The new way of saving in a physical way was understood as a fun and new way to be triggered to outperform financially.

✓ Digital

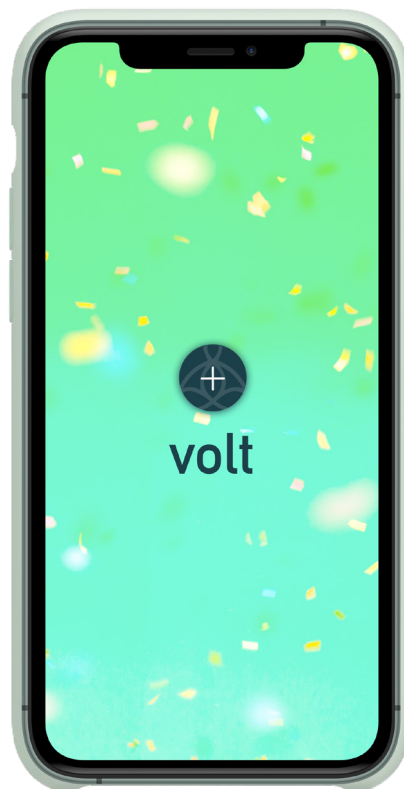
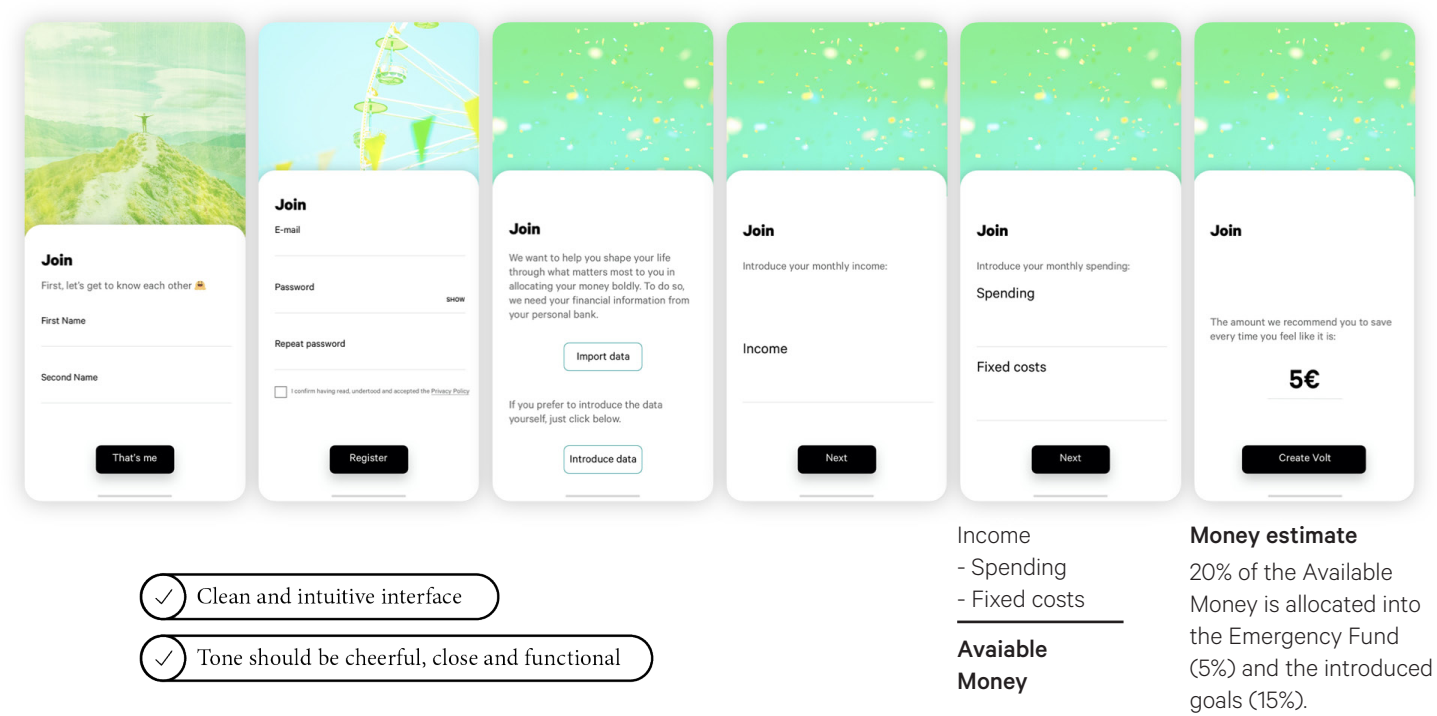


Figure 28. Volt app.

On-boarding

In the on-boarding of the digital application (figure 30), young adults need to introduce their monthly income, spending and fixed costs. After, from the monthly available money a simple rule will be applied: 50% will be allocated for everyday needs (housing, food, transport, etc.); 30% is allocated on things young people want but do not need and the remaining 20% is allocated for saving purposes (Warren & Warren Tyagi, 2006). From that 20%, young adults will allocate 15% on least two personal goals and 5% will be saved for an emergency fund.

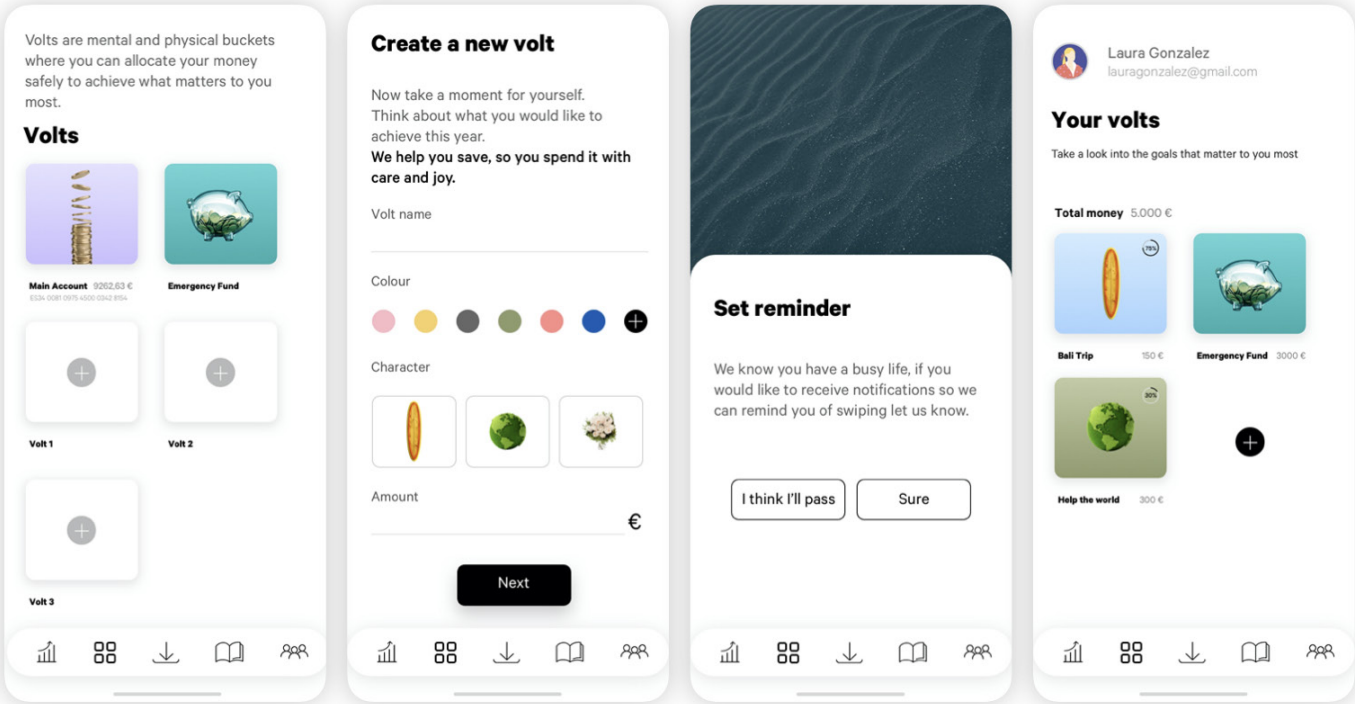
Figure 30. The on-boarding process in Volt's app.



Budget on personal life goals

Through Volt, young adults will budget on their personal life goals so they can map how their life looks like now and in the future (figure 31). They will save money to spend in what it is most important to them: helping non-governmental organization, staying fit, travelling, beauty purposes, etc. Each time young adults press the button, the money they pre-established to be saved is divided in their budgets or the so called "volts". Depending on the importance young adults give to each goal, the percentage will be accordingly saved. A small percentage (5%) will be saved for an emergency fund, every-time the saving button is pressed. This way young adults will have a financial safety net without too much effort. They can see the progress of each budget for positive reinforcement, keeping them engaged and triggered to keep on saving.

Figure 31. Budgeting through the creation of vaults for personal money goals in Volt's app.



- ☒ Future orientation
- ☒ Help young adults save within a timeframe and goal in mind
- ☒ Help young adults to budget, giving shape to their life goals



## Meeting others with the same financial situation

Young adults will be able to access a community of people willing to take part in activities, taking away the pressure they currently feel with their friends and family of spending money they do not have (figure 32).

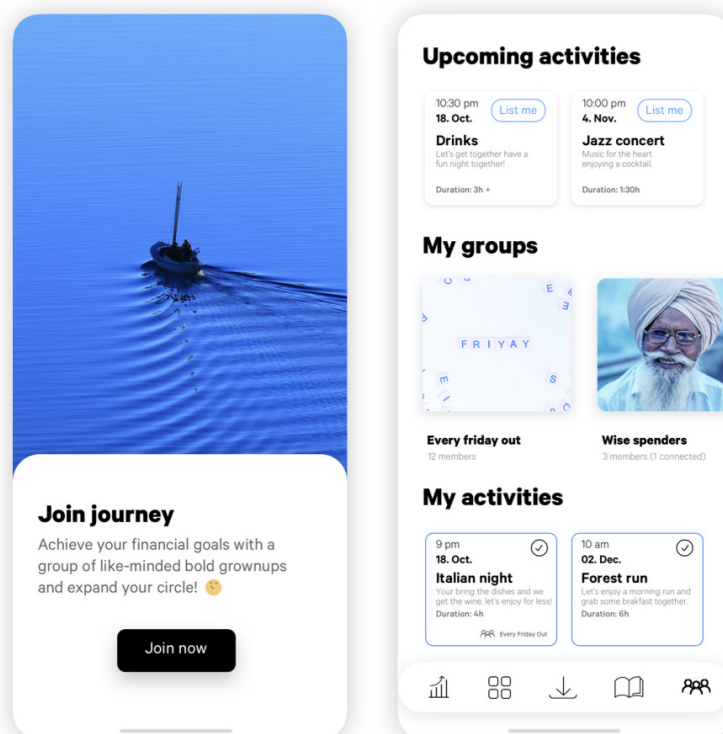


Figure 32. In Volt's app, young adults will meet others with the same financial situation and do activities together according on their financial possibilities.

## Give financial advice

Actionable and easy to understand financial education will be given to young adults through "financial pills"(figure 33). Those pills are short articles which explain financial concepts, generally complex, highlighting the most relevant pieces of information.

✓ Advice and help in an accessible way, so they can take action

✓ Access to financial education to make smart, informed and fast money choices

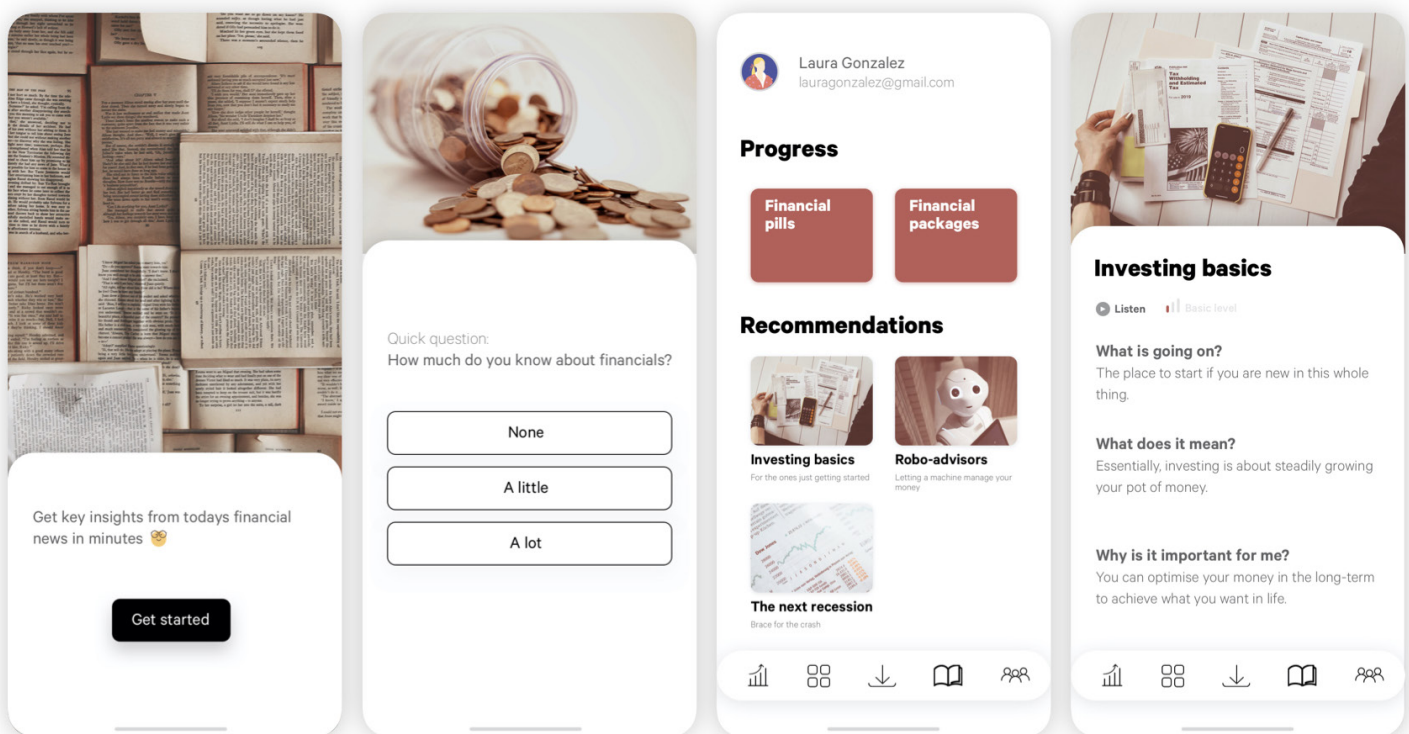


Figure 33. Actionable and easy to understand financial advice will be provided in Volt's app.

## Digital button

### Future of the button

In the future, the button should be integrated in the phone as a digital one (figure 34). In addition, notifications could be included as a reminder for people to save money.

Figure 34. Eventually, the saving button in the phone case will be included digitally in Volt's app.

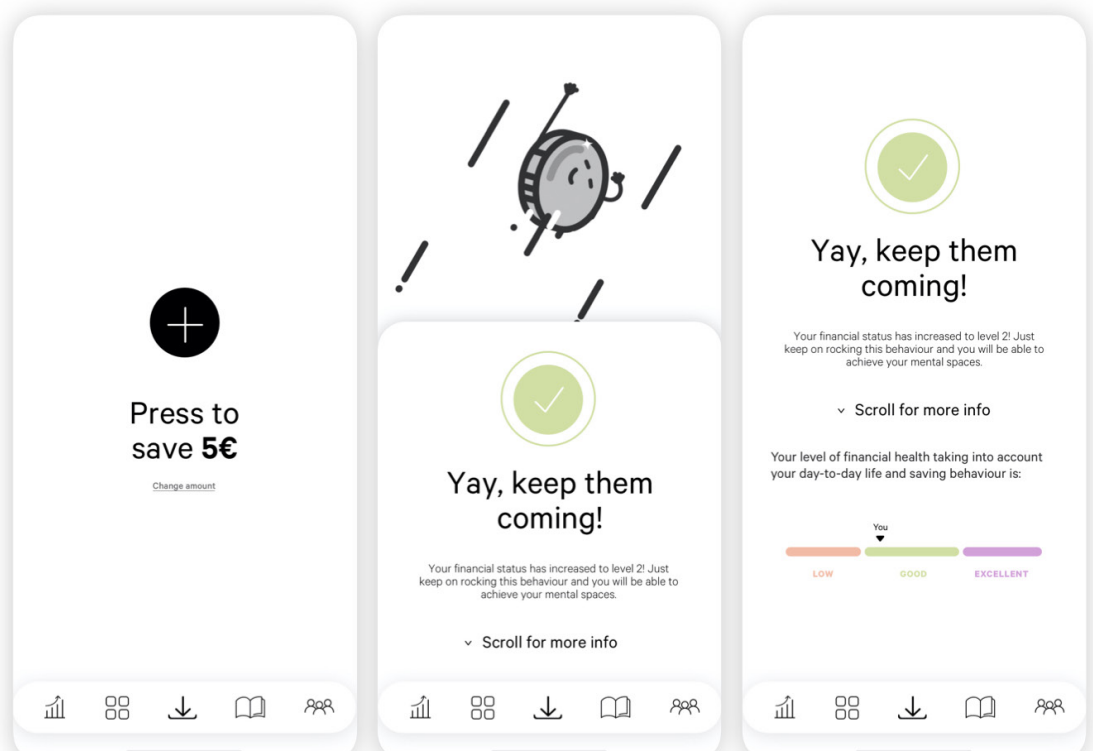
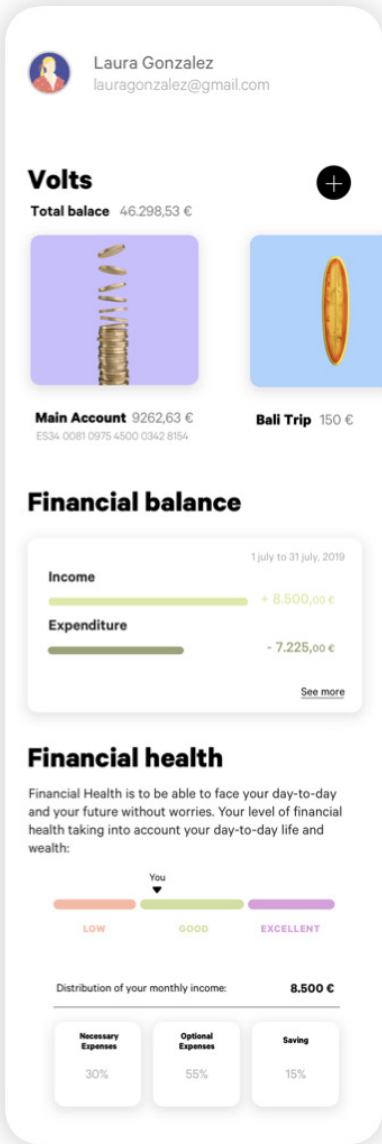


Figure 35. Volt's dashboard, where young adults can find every feature of the app and the most relevant information such as their vaults and their financial status.



Dashboard

In the dashboard screen (figure 35), young adults will have an overview of their financial health and their volts/budgets. Financial health will be determined mainly on saving behaviour performance through the phone case or the digital button.

✓ Holistic perspective of their financial journey

✓ Financial health status and performance

✓ Build trust

## 5.4 The system

How the product can be implemented in the market

Guidelines for the construction and implementation of Volt in form of an MVP are given in this section.

To illustrate and deliver the business plan, the Business Model Canvas was used as a tool (Osterwalder, 2008). Through the Business Model Canvas, a systematic reflection on the business model segment by segment was carried out. The main aspects of the business plan are reflected in the following lines. The complete Business Model can be found in Appendix E.

Roadmaps for the implementation and usage of Volt are included in Appendix F and Appendix G.

### Business plan

#### Key Partners

The partnership with banks is key in order to make Volt a reality. Even though financial institutions such as banks are currently lack of trust for young adults, they have the resources and own first party customer data. This fact makes the implementation process much easier and convenient. In addition, the partnership is needed since when the money is saved through the case it needs to be allocated in a previously opened bank account to make saving money real. Further, the introduction of financial data in the digital application will be much easier to carry out when young adults banks are on board, willing to share that information with the permission of the data owners.

In return, the partnership would be beneficial for banks due to the following aspects:

- They will help young adults introduce healthy habits, caring for their well-being. This way, young adults will be open for

recommended products or services of the bank.

- Innovating their traditional values and the current solutions which banks are providing.

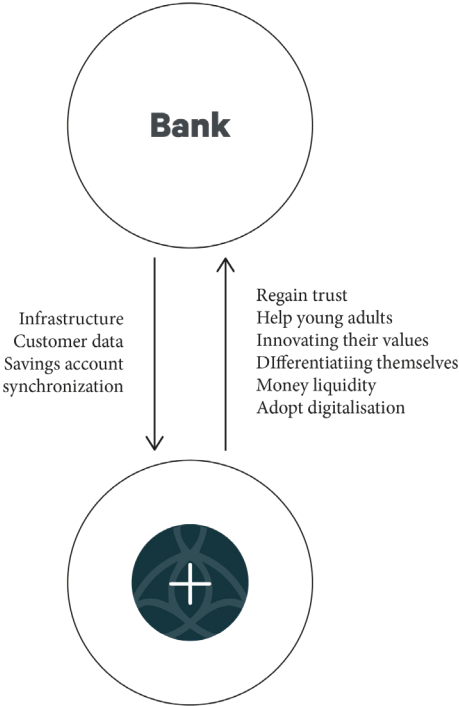
- Re-gaining the trust lost (due to past events and behaviours towards people) by introducing a new solution. Young adults could truly trust a new system to manage their finances.

- Differentiating themselves from competition.

- Acquiring money liquidity for their everyday operative.

- Adopt digitalisation.

Volt will face no direct competition since there is no platform in the market that focuses on helping young adults in achieving what matters most to them in life, an insight that was found during the benchmark research.



Revenue Streams

The primary revenue streams would be the commission the bank would pay to be part of the partnership and the revenue due to the sales of the case. Secondary revenue streams could have its source in the revenues from the community activities fee or for upgraded premium financial advice.

Channels

Mainly, the phone cover along with digital channels will be used to ensure the message reaches the target audience (young adults). The phone cover is a powerful advertisement tool, other young adults would be able to see their friends, family or co-workers wearing a Volt case and therefore, be intrigued to know what benefits that specific case has. Social Media will be used to increase awareness of the digital application and its benefits. According to the Transtheoretical Model (Prochaska & Di Clemente,1992), this would be where the behaviour intention would be developed.



## Branding

The basic aspects of the branding were developed to focus on the desirability of Volt. The creation of attractive, fresh and cool brand image was one of the design requirements and it was necessary to motivate young adults to change their current behaviour with money by using the designed final product, both the case and the digital application.

### Naming

"Volt" references to the word Vault which is a place where people used to save their most precious goods, in this case would be money as a means to achieve what young adults desire most in life. This name was chosen due to its simplicity and powerful nature and its visualized in figure 36.

volt

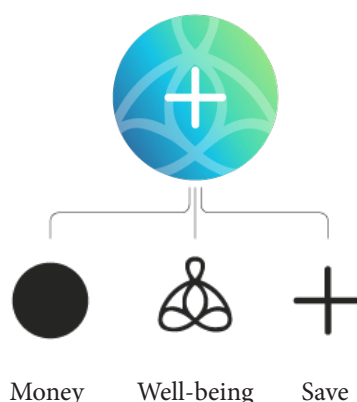
Figure 36. The name logo

### Value Proposition

Volt helps young adults to achieve what matters most to them by ensuring a future sustainable financial well-being through a better money management and fostering saving behaviour.

### Logo

Figure 37. Volt's logo



### Motto

We believe financial support should be available without having to sell a product. We believe it should be easy, intuitive, fun and accessible to manage money. We believe saving is key to achieve the goals that really are important to you. Pushing a button will help in meeting the needs of today's busy young adults.

Figure 38. Volt's alternative logo



The logo was designed based on the following concepts shown in figure 37: money, well-being and a plus sign as a nod to the button on the phone case. An alternative version of the logo was designed to be applied in different brand creativities, shown in figure 38. Some brand creativities are visualized in figure 30.

## Brand DNA

### Purpose

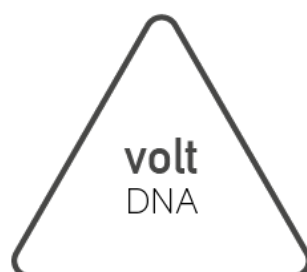
Power and security to people through financial guidance

### Positioning

Affluent young adults/finance  
simple intuitive fun immediate/  
empower/ ensure/ cool

### Personality

Young, optimistic, intuitive,  
stylish, easy going




✓ Make young adults proud of taking care of themselves financially

**User Testing: the branding**

Five young adults were exposed to brand image to test the desirability and the attraction towards them. The image of the brand moved away from focussing only on money. Instead, a lifestyle image of the desired life was favoured.


✓ Cool, attractive image to make young adults be a part of the product-service-system



# Saving money does not need to be stressful



Reach your personal money goals with the app designed with your well-being in mind



## Save money in a click



Figure 30. Brand creativities including Volt's logo.



6.

# Conclusion

This chapter presents both: the personal evaluation of the project and the final design and the final conclusions of the project.

## 6.1 Personal Reflection

In this section a reflection on the final design, the followed process and my personal progress in this graduation project is provided. Personal and professional opinion about the relevancy, meaning and limitations of this project are shared.

### **Evaluation: Final design**

The goal of this project was to help young adults with their finances to ensure their present and future well-being by creating a meaningful relationship with money. The final deliverable is an Minimum Viable Product (MVP), which consists of a phone case and a digital application. Through the case, young adults can save in a fun, physical, immediate way, and through digital application that will give them financial advice, help in meeting others with the same financial situation and allocating money towards what matters most to them.

Also, one of my personal goals was to deliver a tangible outcome so I put effort into translating insights into a real approachable deliverable. I feel very fulfilled with the final outcome of the graduation project, especially with the finalization of the MVP: the phone case and the digital application. I was able to cover a full design circle from the fuzzy front to the most concrete outcome with the limited time for the project. Being a strategic designer and being able to

conceptualize a tangible outcome was a great opportunity, since during the course of my Master in Strategic Product Design, I did not had the chance to turn a vision or an idea into something young adults could really interact with.

I had the pleasure to work to share an overview of the final outcome with some experts in the field, service designers in the finance industry and colleagues involved in innovation area of Spanish banks. They showed great enthusiasm on the way the context was understood and the way the insights were later synthesized into a final design.

Although I tried to define the most important aspects of the final design, I could have continued doing much more young adults testing to refine the digital application and the case. I believe the final design would have been better displayed through other media than the one used (a poster). Looking back, a video showing young people using a specific the final design would have been more appropriate and the flow of the digital application. In general, a more meaningful impact would have been provided through a way that young adults could relate more, to communicate the outcome.

Still, I believe I contributed in a relevant way to young adults life and to academic studies. Further, I realized I have a passion

for service design, where usually the full design circle, from research to a tangible outcome, is covered.

### **Evaluation: Project's Process**

Throughout this project, the followed process was an adjusted Double Diamond, including Human Centered Design and Design-Driven Innovation.

Usually, I design in a very structured manner and I think analytically, focusing in solving people's problems. In addition, I would not consider creativity one of my strengths. I wished to grow as a professional and expand both my knowledge and capabilities. This is the reason why I chose to approach my graduation project using the Design-Driven Innovation. This method is not focussed on solving a problem but rather on coming up with a vision that steers a paradigm change by looking into oneself as a designer instead of basing all the decisions on people's pain-points. This approach broaden my creativity, leaving my comfort and safety zone. Although, I had struggles to make way trough this approach since it comes with great uncertainty. Throughout my project, I spent quite some time on the research phase, necessary to translate findings into insights. Since the project was self-initiated and there was no client, I struggled to frame the project with the extensive information gathered in



research. Although, forcing decision-making and prioritizing my personal interests along with the direction I thought would help young adults most, I learned how to cope with uncertainty. I followed the Design-Driven approach in a purposeful way and came to a meaningful and relevant tangible final design, which I probably would not have using a more human centred design approach.

#### **Evaluation: Personal view**

Throughout this project, I have learned a lot, personally and professionally. First, I realized my character can be sometimes indecisive, which used to be reflected in my work. I tend to stay in the research phase, delaying the conceptualization phase since it involves picking one direction, making decisions, and leaving a whole world of possibilities behind. Coping with uncertainty, which was quite present in this project, did not make it easier. Making decision which I was not fully sure about was a struggle. It takes a great cognitive effort to go deep into my personal preferences and view of the world to find a decision that fulfilled me. Although, through the graduation project, I learned to take the lead, to follow my intuition with all the consequences. I had to force myself to follow my inner gut and make decisions based on that, a much more intuitive way of designing. I followed my design gut and personal process which finally

gave me confidence in both the creative and professional level. In general, I have learned to trust myself much more and be able to defend my own vision in projects.

Since I followed a Design-Driven Innovation, it gave me quite some freedom to bring my personal thoughts as a designer into the table, which gave the final design of this graduation project a very personal feeling. In my case, the aim of helping people in feeling secure and well-being is what I have sensed the world wants and needs. I have grown a lot, not only from the project perspective by using Design-Driven Innovation, which I was not comfortable with, but also by confronting my fear of not being right and my indecisiveness.

Also, I tend to focus on details, sometimes leaving the bigger picture on a second level. I have learned how to get a more abstract and broad perspective of what I want to convey in my designs, focussing on the story behind it so everything connects to deliver a meaningful outcome.

I learned how to manage time, pressure and effort to make the project the best that I could. Those learnings will be applied in my future professional career. Further, discipline was one of my main values since I was managing to balance a morning job at a consultancy and the graduation project, which made

me increase my capabilities to manage more work load and be able to respond to several expectations. Also, I realized sometimes I put too much effort on parts of the project that were not as important as others, whereas now I am focussing on the most important part. I had to learn from mistakes.

I enjoyed truthfully spending some time in making a project with a social aim, to help others, specifically young adults, in their life, keeping any profit based goal behind. As learned in my design personal principles for good design, I care for people's well-being the most. I would really like to pursue projects that relate to this social aspect, if not, give profit-based projects a more social aspect. Also, finances are an industry that stroke my attention and I would like to keep exploring. I almost became an expert so it is easier now to both manage my finances and deliver meaningful projects to financial institutions.

To finalize, my graduation project made me realize that design is my passion, service design is what truly fulfils me and that where I want to steer my career professionally.



## 6.2 Final conclusion

In this section the compilation of the main conclusions of this project is presented.

For young adults, money is a struggle. Generally, they are overwhelmed, stressed and find finances a challenge they do not want to face. This reality is shaping their current behaviour. They crave support and guidance that helps them do money better to ensure their financial future well-being.

The nature of the current relationship of young adults and money is transactional. It is clear that there are negative feelings fuelling the relationship between young adults and money impulsiveness catered by young adults "living the moment", apathy in taking action, blindness in knowing what financial health means, mistrust regarding their usual references, bias in their financial decision-making and short-sightedness in their goals in life.

Most financial institutions are in a race to attract customers in order to increase their profit while they are

failing in helping young adults in their complete financial journey, present and future, focusing only on one specific feature (investing, budgeting, saving) or on all of them losing the focus (too much cognitive load for young people), forgetting about young people's peace of mind and ultimately, their well-being.

The desired relationship of young adults with money involves a relational essence, where they will be fore-through in financial matters, motivated to improve, informed to make weighted decisions, autonomy to be self-sufficient, balanced in their lifestyle and aware of their situation. A transitional model, from transactional to relational, will help young adults in changing their relationship with finances to do money better, achieve financial health.

The transitional model is enabled, that which a behavioural change possible, is a new product-service-system. This product-service-system should include important design requirements: it should be digital, give constant support, have

a holistic perspective of the financial journey of young adults and keep the future orientation in their scope by introducing a fun, simple interaction recovering the physical dimension of money.

Along with the design requirements, a new vision for the relationship of young adults and money is articulated. Young adults need a product-service-system that gives them financial guidance and support to achieve what matters to them most in life. The main driver will be saving since it is the most efficient way to do so. The product-service-system should give young adults the control and motivation to trigger them in doing money better.

This new vision for a new product service system that serves as the catalyst in the transition of the current relationship of young adults with money to one that fosters financial health in the present and in the future, ultimately achieving their well-being, the freedom, independence and the relief of not worrying anymore.

The final concept design is a financial kit for young adults, a combination of a mostly digital, a digital application, but also physical design, a phone case. The digital application is based on four building pillars: Save, Budget, Meet and Advice. Each one of the pillars corresponds to an improvement area regarding financials: young adults will save progressively and easily, allocate money into their personal goals, get financial literacy tips and meet others with the same financial situation as them. Over the elementary aspects comprised in those improvement areas that will transition young adults current money behaviour and make them achieve a financial health and their present and future well-being. The desired money behaviour is first triggered by saving through the phone case. Each time the case is used, money is saved, providing both saving awareness to reassure financial health is being optimised and financial status awareness for peace of mind, young adults will change the way they relate to money.

The final design, named Volt, is a product-service-system consisting of a smart phone case and a related digital application. Through the phone case, young adults will easily save by clicking a button and check their financial health thanks to a coloured light, located above the button. Saving through the button will create a physical and conscious connection with money. Depending on colour of the light, the financial health status will be shown, which can be low, good or excellent. This way, young adults will be informed and empowered to save money. The related digital application will help young adults in creating digital vaults to budget their personal goals, teaching them gradually about finances and putting them together other young adults with a similar money lifestyle.

Through Volt young adults will finally do money better and ensure a sustainable financial decision-making now and in the future.

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# Appendix

# Appendix B - Interview topics

## Interview guidelines

### 1. Personal information & background

*Age, occupation, income level of young adults.*

**2. Meaning of money.** *Significance of money to young adults, in their life and their future.*

**3. Money modes & behaviour towards money.** *Interactions young adults have with money for different purposes (see page 21).*

**4. Life intentions.** *Aspirations and ambitions in life.*

**5. Finances & trust.** *Who young adults trust/ do not trust for money guidance.*

**6. Financial pressures.** *What pressures regarding money do young adults have and what impact do those have in their everyday life.*

**7. Emotions towards money.** *Current feelings towards money (fear, struggle, relief...).*

**8. Level of knowledge in managing finances.** *Inquire whether young adults have some mechanisms in dealing with money.*

# Appendix C - User Flow

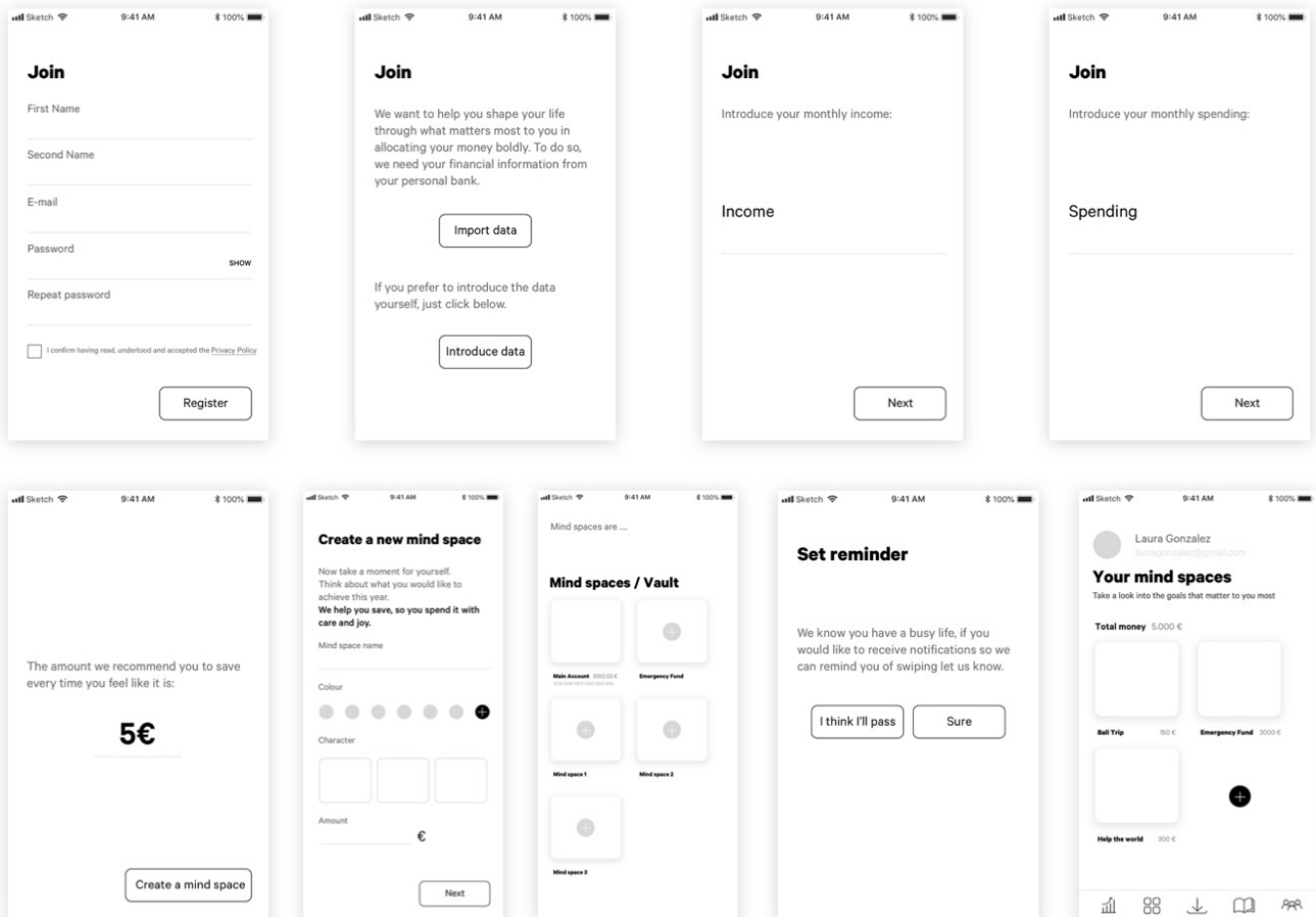


# Appendix D - Wireframes

From wireframes to a visual prototype, which is the final deliverable in its most tangible form. A wireframe usually represents the structure of the designed product and a visual prototype shows the appearance of the product. In this project, a visual prototype is understood as a high fidelity representation of the final product which is meant to simulate interaction. In order to digitalise the MVP and make it

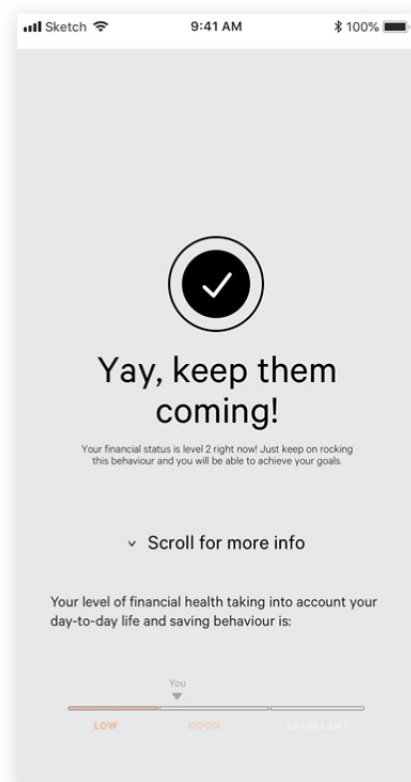
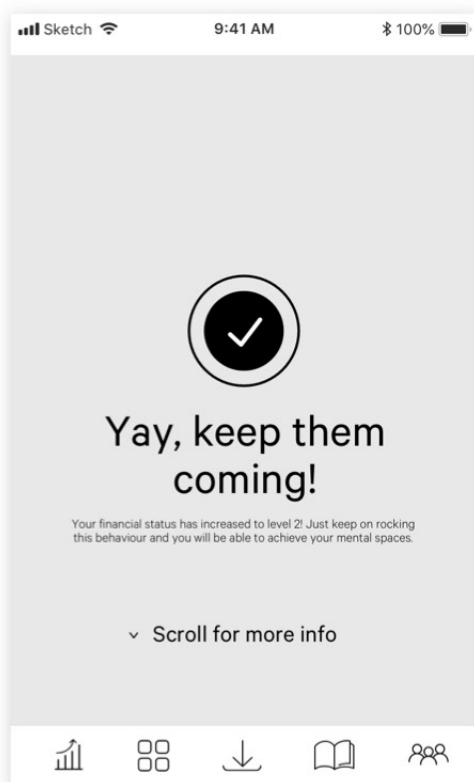
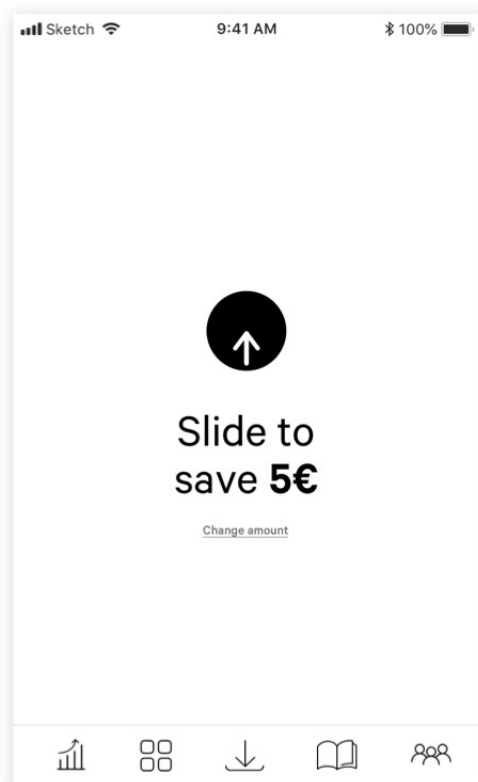
reality, the prototype was created. The prototype shows how to help young adults achieve their financial welfare in the long-term is shown in this page. The visual interface is what unleashes the emotional impact of the design, which at the end is what young adults will see and directly interact with.

## On-boarding & Budget on personal life goals

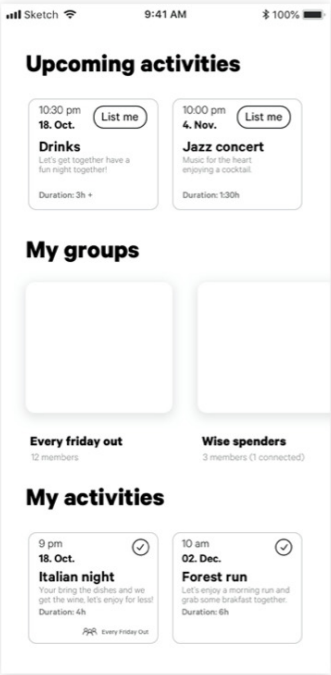
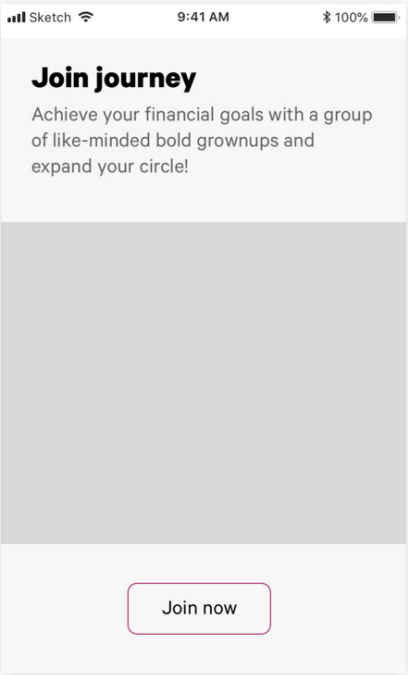




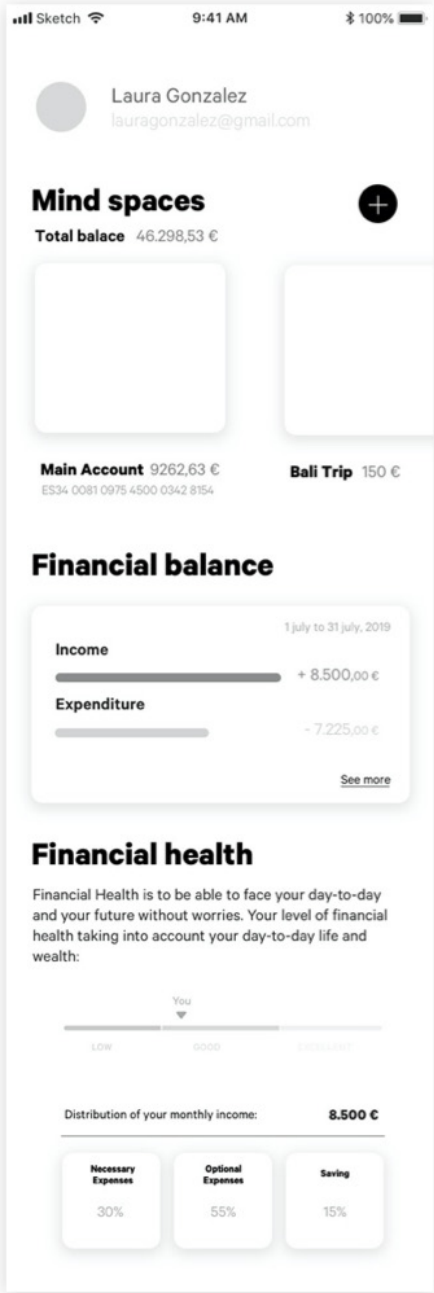
## Digital button



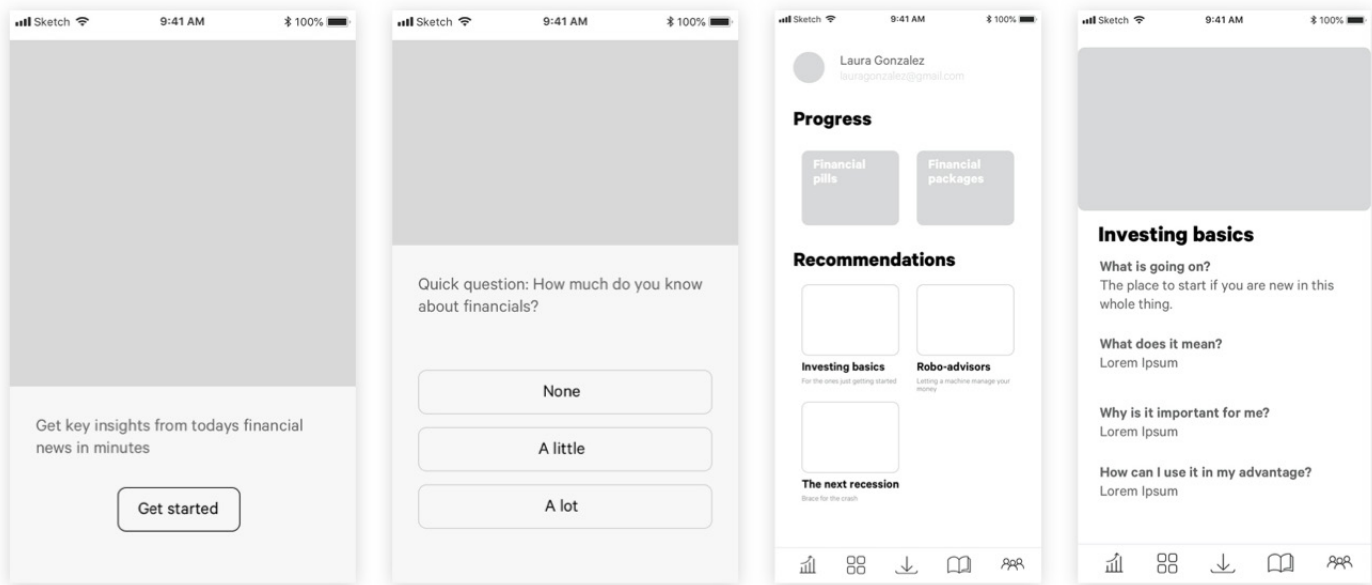
Meeting others with the same financial situation



Dashboard



Give financial advice



# Appendix E - Business model canvas

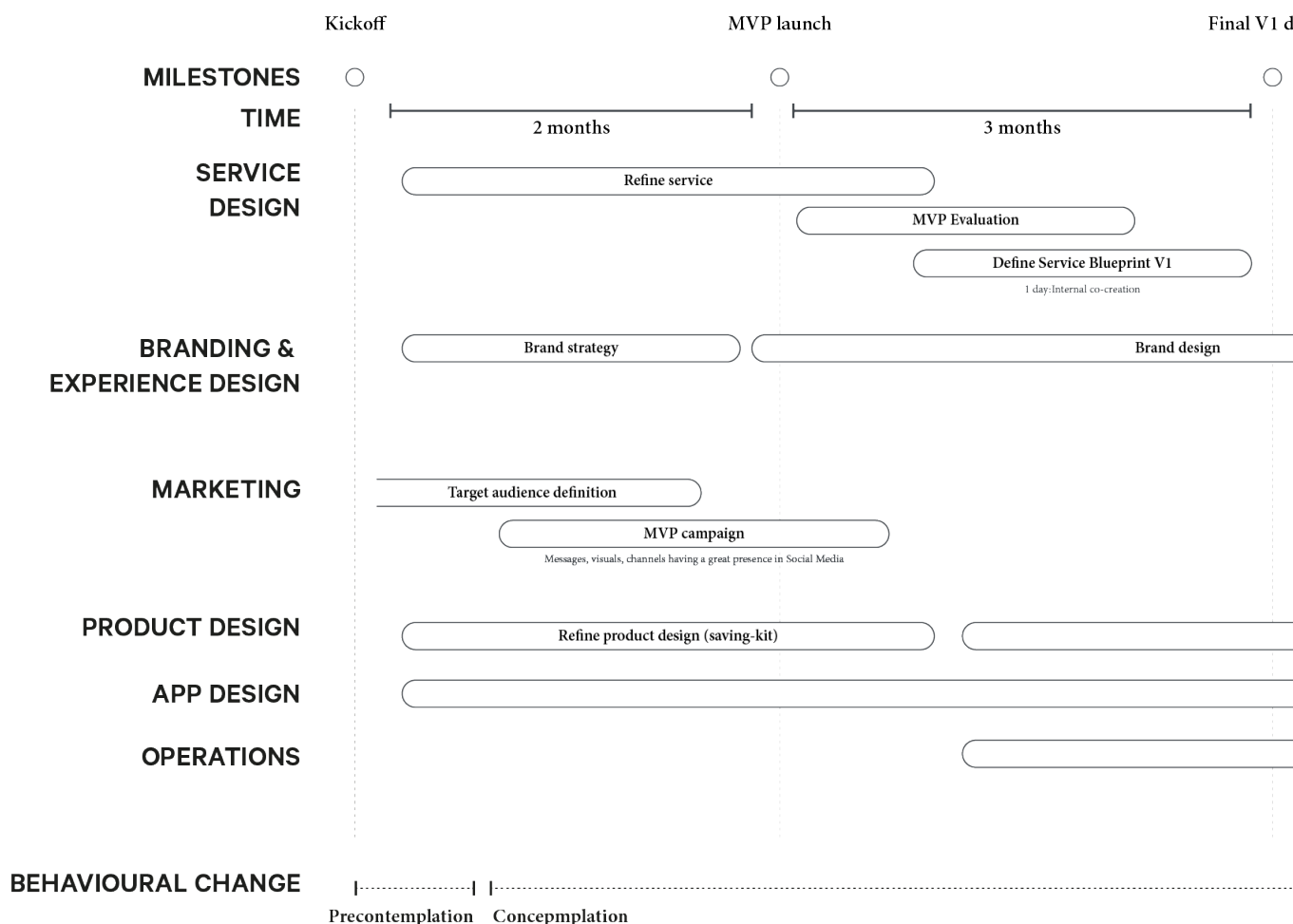
<p><b>KEY PARTNERS</b></p> <p><b>Bank</b></p> <p>Key Resources: Infrastructure &amp; Customer data (financial status: income, savings, spending patterns)</p> <p>Key Activities: Share data of each one of their customers</p> <p>Motivations: Optimization &amp; improvement of customer economy (big ticket items, investment), regain trust, money liquidity, innovation from traditional image</p> <p><b>Case producer</b> <b>Distribution Company</b></p>	<p><b>KEY ACTIVITIES</b></p> <p>App design, software development &amp; regular continuous product feature update Produce &amp; deliver saving-kit Content Financial Advice Organizing meetings Branding Platform expansion</p>	<p><b>VALUE PROPOSITION</b></p> <p>Financial services for young generation Lifestyle brand “Help you achieve what you want most”</p> <p>Promise: Help young adults to save money Help young adults to live better Be proud of saving, investing for themselves Taking their worries away Provide a simple way to manage money Holistic service that covers all their needs They can get advice and support Connect the present with their future aspirations.</p>
<p><b>COST STRUCTURE</b></p> <p>Marketing, Branding, Customer service, Administrative support Platform development cost Regulations, Compliance, Licensing</p> <p>Providing advice &amp; meetings organisation Salaries (Fixed Costs) Production &amp; Delivery of case (Variable Costs)</p>		

<p><b>PERSONA</b></p> <p>Spanish or millennial</p> <p>What matters to you</p> <p>Ensure their future face their situation taking care of</p> <p>is away y to save t accompanies them when they want t and their future</p>	<p><b>CUSTOMER RELATIONSHIP</b></p> <p>Self-service Communities Personal assistance Co-creation</p>	<p><b>CUSTOMER SEGMENTS</b></p> <p>Spanish Young Adults in their 20s and 30s</p>
	<p><b>CHANNELS</b></p> <p>Majority digital Platform Social Media (Awareness) Bank branches (where case could be delivered)</p>	
<p><b>REVENUE STREAMS</b></p> <p>Primary: Bank comission; feature upgrades, case’s price Secondary: Meetings entrance, premium subscription model for financial advice</p>		

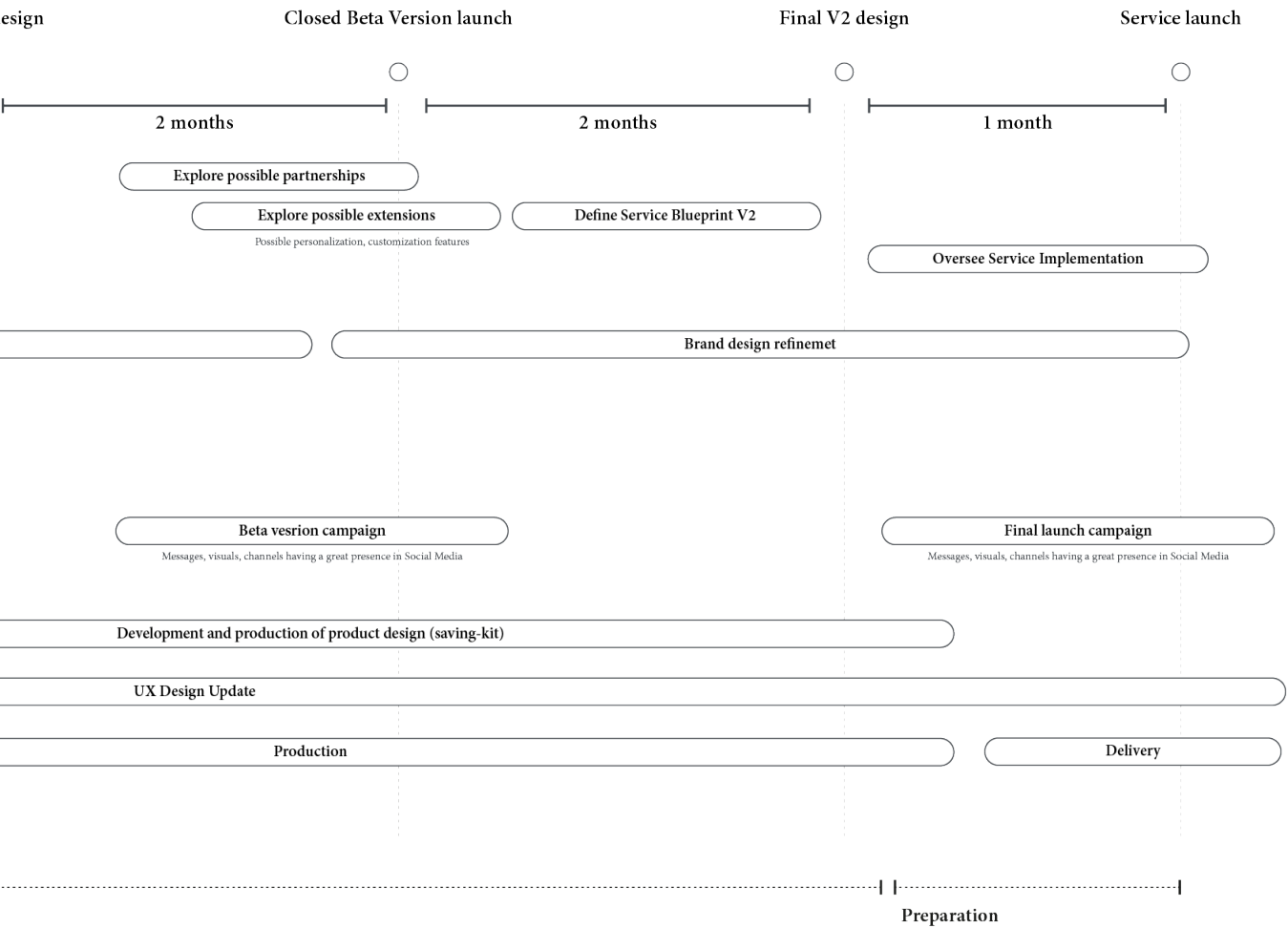
# Appendix F - Implementation roadmap

The goal of this roadmap is to serve as a detailed guide for a successful implementation and use of the final deliverable: the Volt product-service-system. The Transtheoretical model (Prochaska & Di Clemente, 1992) is included in the roadmaps to express when the phases of the behavioural change would take place.

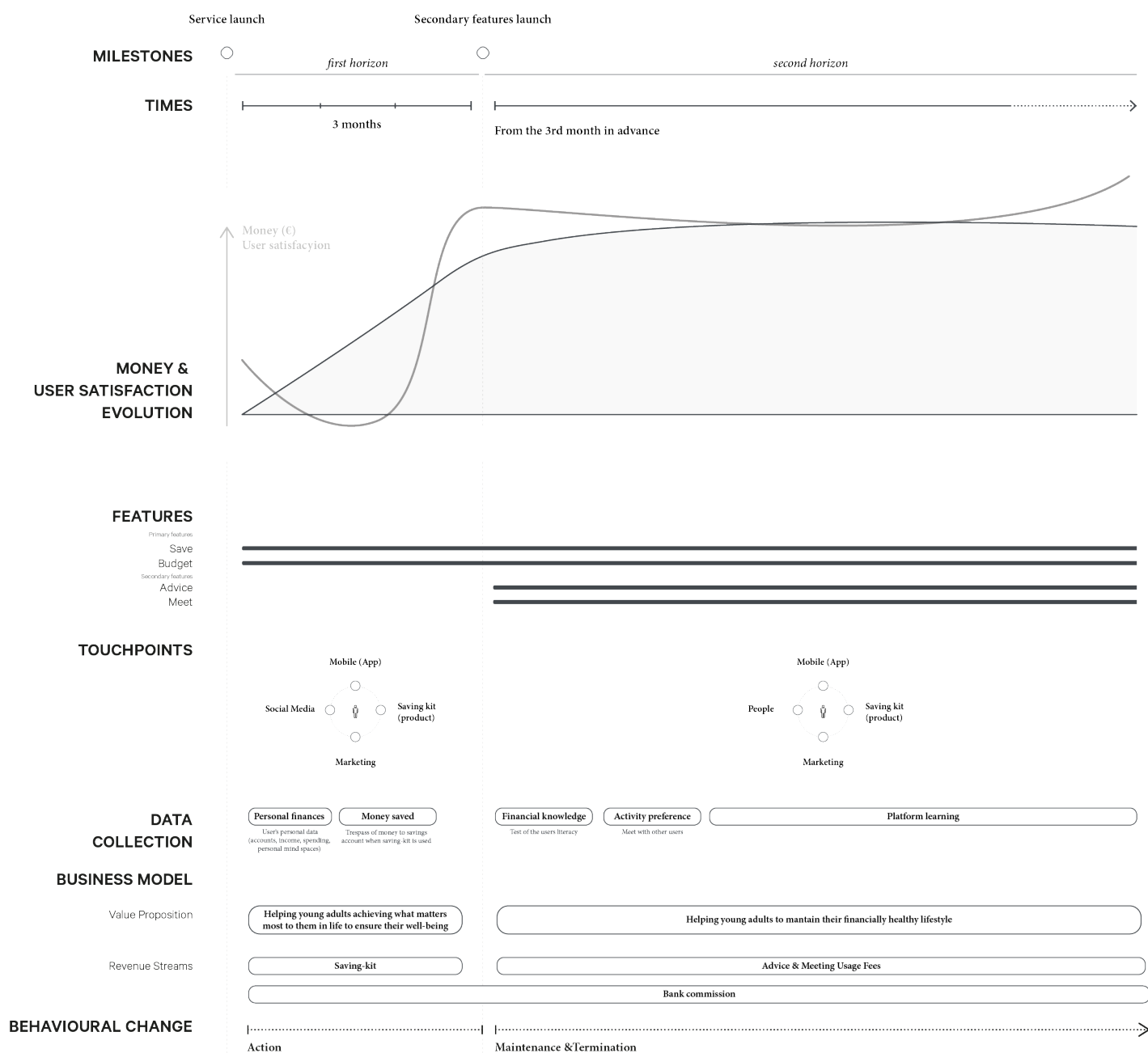
The milestones and phases for a proper implementation are illustrated in the implementation roadmap.







# Appendix G - Usage roadmap



In the usage roadmap it is illustrated the desired final design experience. A result from young adults interactions and their relationship with money supported by a new behaviour towards financials. The roadmap shows the need for further design and refinement of Volt.