

# Appendix

# Appendix

**Appendix A: Project Brief**

**Appendix B: Context Research**

**Appendix C: User Research**

**Appendix D: User Interviews**

**Appendix E: Analysis**

**Appendix F: Creative Session**

**Appendix G: Conceptualization**

**Appendix H: Evaluation**

# APPENDIX A: Project brief

DESIGN  
FOR OUR  
future



## IDE Master Graduation

Project team, Procedural checks and personal Project brief

This document contains the agreements made between student and supervisory team about the student's IDE Master Graduation Project. This document can also include the involvement of an external organisation, however, it does not cover any legal employment relationship that the student and the client (might) agree upon. Next to that, this document facilitates the required procedural checks. In this document:

- The student defines the team, what he/she is going to do/deliver and how that will come about.
- SSC E&SA (Shared Service Center, Education & Student Affairs) reports on the student's registration and study progress.
- IDE's Board of Examiners confirms if the student is allowed to start the Graduation Project.

**! USE ADOBE ACROBAT READER TO OPEN, EDIT AND SAVE THIS DOCUMENT**

Download again and reopen in case you tried other software, such as Preview (Mac) or a webbrowser.

**STUDENT DATA & MASTER PROGRAMME**

Save this form according the format "IDE Master Graduation Project Brief\_familyname\_firstname\_studentnumber\_dd-mm-yyyy". Complete all blue parts of the form and include the approved Project Brief in your Graduation Report as Appendix 1 !

family name	<u>Godo Blasco</u>	Your master programme (only select the options that apply to you):
initials	<u>AG</u> given name <u>Alejandra</u>	IDE master(s): <input type="radio"/> IPD <input checked="" type="radio"/> Dfi <input type="radio"/> SPD
student number	<u>4903714</u>	2 <sup>nd</sup> non-IDE master: _____
street & no.	_____	individual programme: - - (give date of approval)
zipcode & city	_____	honours programme: <input type="radio"/> Honours Programme Master
country	_____	specialisation / annotation: <input type="radio"/> Medisign
phone	_____	<input type="radio"/> Tech. in Sustainable Design
email	_____	<input type="radio"/> Entrepreneurship

**SUPERVISORY TEAM \*\***

Fill in the required data for the supervisory team members. Please check the instructions on the right !

\*\* chair Gert Pasman dept. / section: Industrial Design - DFI

\*\* mentor Gert Hans Berghuis dept. / section: Industrial Design - SPD

2<sup>nd</sup> mentor Daan Van Klinken

organisation: Flow Money Automation

city: Amsterdam country: The Netherlands

comments (optional)  
:  
:  
:

- ! Chair should request the IDE Board of Examiners for approval of a non-IDE mentor, including a motivation letter and c.v..
- ! Second mentor only applies in case the assignment is hosted by an external organisation.
- ! Ensure a heterogeneous team. In case you wish to include two team members from the same section, please explain why.

**Procedural Checks** - IDE Master Graduation

**APPROVAL PROJECT BRIEF**

To be filled in by the chair of the supervisory team.

chair Gert Pasman date - - signature \_\_\_\_\_

**CHECK STUDY PROGRESS**

To be filled in by the SSC E&SA (Shared Service Center, Education & Student Affairs), after approval of the project brief by the Chair. The study progress will be checked for a 2nd time just before the green light meeting.

Master electives no. of EC accumulated in total: 33 EC

Of which, taking the conditional requirements into account, can be part of the exam programme \_\_\_\_\_ EC

List of electives obtained before the third semester without approval of the BoE

YES all 1<sup>st</sup> year master courses passed

NO missing 1<sup>st</sup> year master courses are:

name Alejandra Godo Blasco date - - signature \_\_\_\_\_

**FORMAL APPROVAL GRADUATION PROJECT**

To be filled in by the Board of Examiners of IDE TU Delft. Please check the supervisory team and study the parts of the brief marked \*\*. Next, please assess, (dis)approve and sign this Project Brief, by using the criteria below.

- Does the project fit within the (MSc)-programme of the student (taking into account, if described, the activities done next to the obligatory MSc specific courses)?
- Is the level of the project challenging enough for a MSc IDE graduating student?
- Is the project expected to be doable within 100 working days/20 weeks ?
- Does the composition of the supervisory team comply with the regulations and fit the assignment ?

Content:  APPROVED  NOT APPROVED

Procedure:  APPROVED  NOT APPROVED

comments

name \_\_\_\_\_ date - - signature \_\_\_\_\_

**Personal Project Brief** - IDE Master Graduation

Design a digital product for positive financial behavior project title

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

start date 20 - 03 - 2020 07 - 09 - 2020 end date

**INTRODUCTION \*\***

Please describe, the context of your project, and address the main stakeholders (interests) within this context in a concise yet complete manner. Who are involved, what do they value and how do they currently operate within the given context? What are the main opportunities and limitations you are currently aware of (cultural- and social norms, resources (time, money,...), technology, ...).

Flow Money Automation B.V. is a FinTech start-up created on 2018 by Daan van Klinken and Niels Mulder. Flow is a dedicated app that features interesting presets that help you automate your money life. If money comes in, Flow can automatically transfer it to other accounts. Flow uses API's to connect to the bank. Currently, Flow handed in the PSD2 application (PISP and AISP) at the Dutch Central Bank, and are waiting to get approval to go live. This graduation project will be completed under the supervision of Flow Money Automation's 'Product' Team, in particular the designer Daan Van Klinken. Daan Van Klinken and Niels Mulder have been working previously in the design studio HikeOne. During the project, there is a significant chance that HikeOne design studio will be involved.

Finance can be difficult. Some people have a knack for it, while others are totally lost when they see too many numbers. Basic financial planning and wisdom are not things that are being taught in schools, hence it really differs on the person and their upbringing if they're capable of planning their finances well. Therefore, there is a big group of people who are not good at financial planning. For them, their bank account is one big black box. And they lack understanding of what comes in and goes out.

As Flow's Figure 1 explains, there are 3 factors that can affect the behavioral change in finances: insights, actions and the behavior feedback. What Flow believes is that, going far in either direction can create a negative impact in influencing financial behavior. For example, showing too many wrong examples of things people did in the past (e.g. spending too much in X) can lead to frustration in their own behavior. During the project, these 3 factors will be researched.

With this graduation project I want to help people (age/financial state to be defined during the research) to improve their financial situation in the long term (e.g. 65 y.o.), by guiding them in what they can do today, right now (e.g. 25 y.o.).

There's a miss-match between the current self, which is focused on short term problems recurring monthly, and the future self, that wants to have enough to fulfill his needs.

For this goal to be achieved, it is important that we can convince the current self the importance of investing and taking care of the future self. Because individuals have their hands full with short term goals, recurring financial problems, they can't focus on investing in themselves for the long term. Introducing advice on what they should do to improve their long term, can have a negative impact on their motivation. Instead, introducing the first steps they can take right way to lift them out of their situation can help them to open their mind for the long term situation.

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introduction (continued): space for images

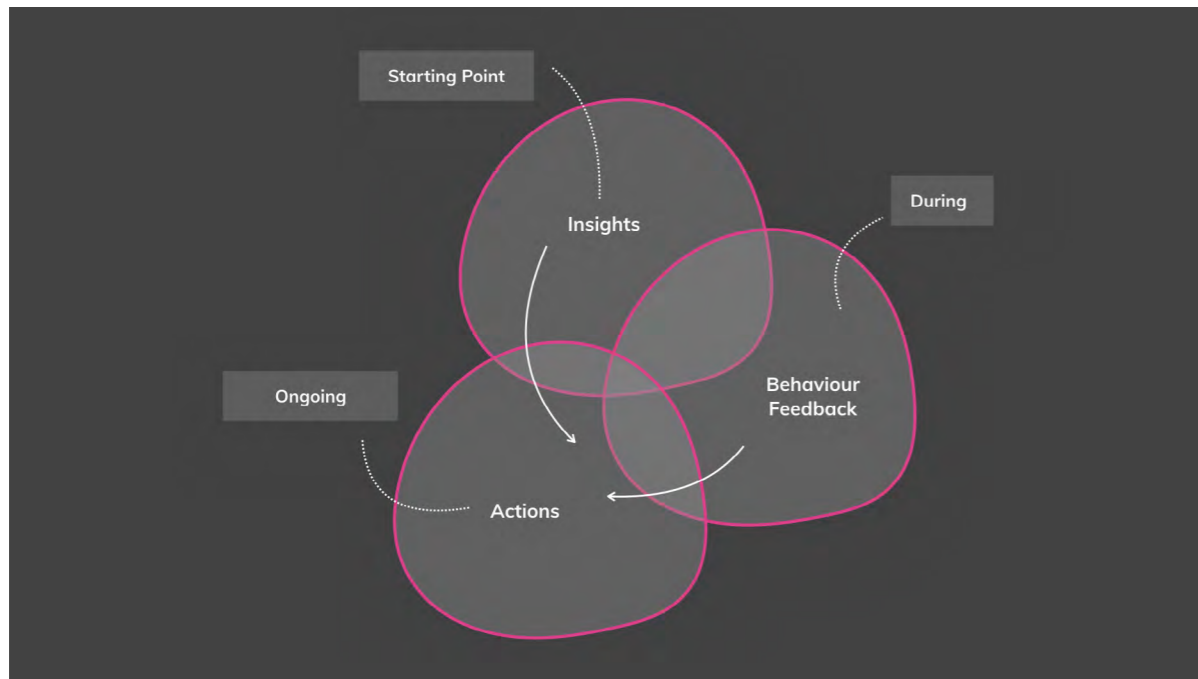


image / figure 1: Flow's 3 factors diagram: insights, actions and behavior feedback in finances.

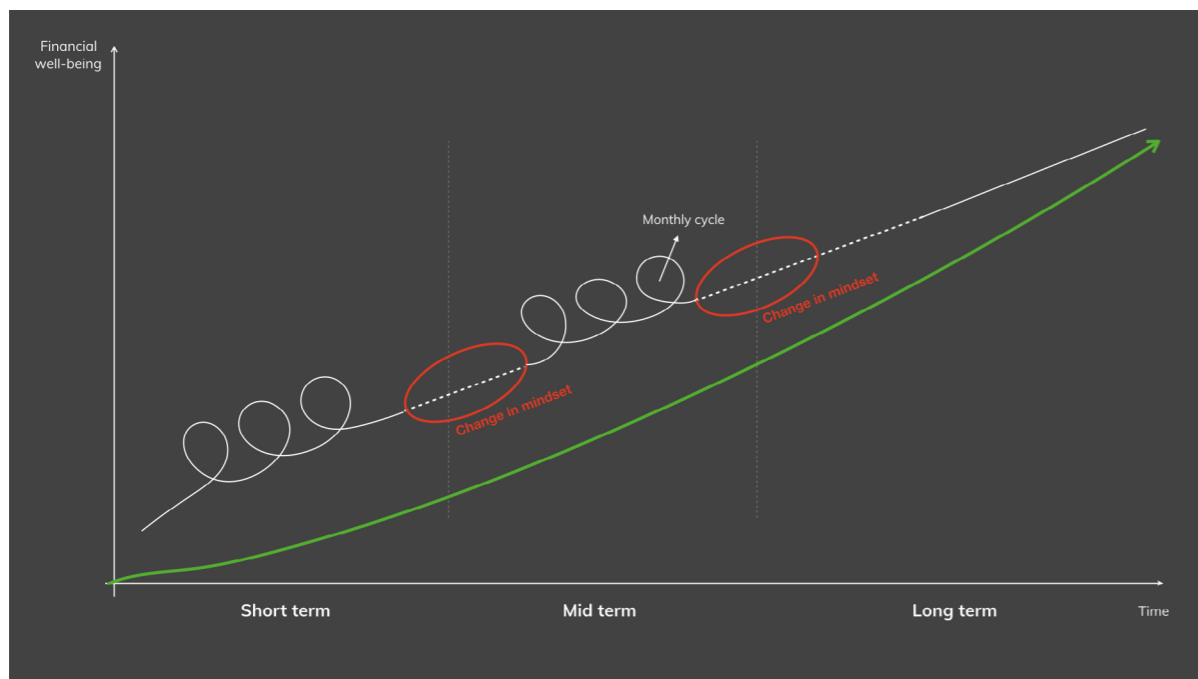


image / figure 2: Flow's financial well-being diagram: Short, mid and long term financial goals

**PROBLEM DEFINITION \*\***

Limit and define the scope and solution space of your project to one that is manageable within one Master Graduation Project of 30 EC (= 20 full time weeks or 100 working days) and clearly indicate what issue(s) should be addressed in this project.

The problem with getting caught in a cycle of short term problems and having difficulties to get out of this cycle, without being able to invest in the future self, leads to not being able to have a long term vision. Therefore, a lack of long term financial vision leads to negative financial experiences.

In this graduation thesis, I want to design a digital product that improves this situation influencing people with a positive financial behavior. This digital tool should help people to look into a long term vision.

How to create a positive influence in people's financial behavior through design?

To answer the main question, sub-questions have been formulated:

1. What is financial behavior? What is a positive/negative financial behavior? How does it differ and why?
2. Why do some people get stuck focusing on short term financial problems, month after month?
3. Which group of people need/want to change their behavior? Why? In which financial state the biggest group is?
4. What is a positive influence? And how to create influence on other people's decisions? What are the limitations?
5. How to create behavioral change in general (brief)? And how to apply this to the domain of financial behavior?
6. How to make people focus on long term financial goals?
7. Are people already following the 'going up' (green light)? If yes, what is their secret?
8. How can the situation be improved through design? How could a digital tool help improving the financial behavior?

**ASSIGNMENT \*\***

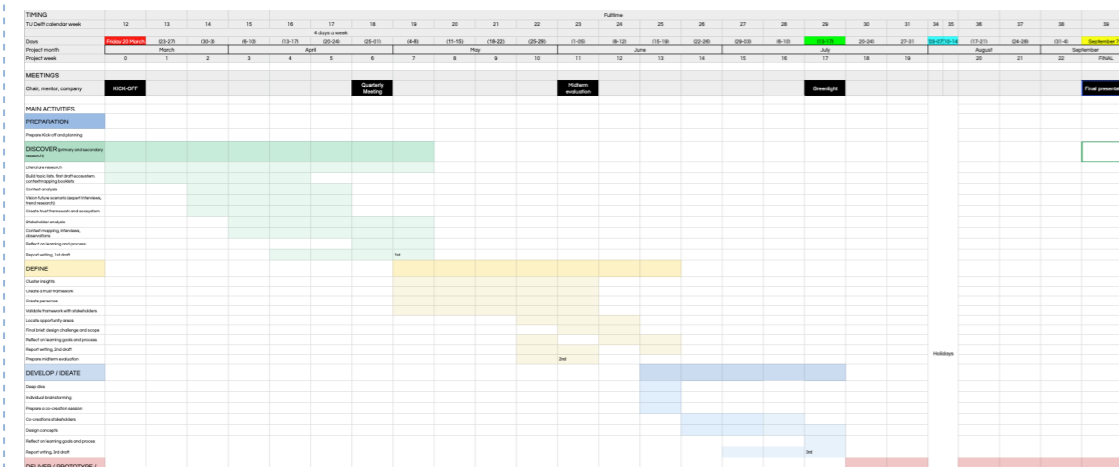
State in 2 or 3 sentences what you are going to research, design, create and / or generate, that will solve (part of) the issue(s) pointed out in "problem definition". Then illustrate this assignment by indicating what kind of solution you expect and / or aim to deliver, for instance: a product, a product-service combination, a strategy illustrated through product or product-service combination ideas, ... . In case of a Specialisation and/or Annotation, make sure the assignment reflects this/these.

I will research the possibilities of influencing people's financial behavior. Insights will be generated from interviews, surveys and generative sessions to find the needs and wishes of the target group. With these insights I will design a digital product/feature that aims to improve the problem.

**PLANNING AND APPROACH \*\***

Include a Gantt Chart (replace the example below - more examples can be found in Manual 2) that shows the different phases of your project, deliverables you have in mind, meetings, and how you plan to spend your time. Please note that all activities should fit within the given net time of 30 EC = 20 full time weeks or 100 working days, and your planning should include a kick-off meeting, mid-term meeting, green light meeting and graduation ceremony. Illustrate your Gantt Chart by, for instance, explaining your approach, and please indicate periods of part-time activities and/or periods of not spending time on your graduation project, if any, for instance because of holidays or parallel activities.

start date 20 - 3 - 2020 7 - 9 - 2020 end date



A variety of tools and methods are going to be used to complete this assignment. Most of these tools will have been taught during the Design for Interaction master degree in the Industrial Design Engineering faculty.

An important part of getting to the solution of a problem with human-centered design is to find usable insights by discovering latent needs co-creating these into a design.

This research is set up in 3 general phases.

First, the preliminary research followed by the primary research and then the creation phase.

During the preliminary research I will be doing literature research on financial behavior and methods to create a positive influence on it, as well as conducting interviews to find out how different people deal with the money management, getting a clear overview of all the tasks, roles, responsibilities and tools.

In my primary research, I will be using path of expression interviewing to gather explicit knowledge and further my insights with generative sessions to find tacit and latent needs (Sanders et al. 2012). During my creation phase I will use creative sessions like co-design and co-create.

# Appendix B: Context Research

**Financial capability:** Having financial knowledge may influence better behaviours that lead to financial well-being.

**Financial inclusion:** Having access to financial services like a bank account, insurance and line of credit, makes it easier for having financial well-being.

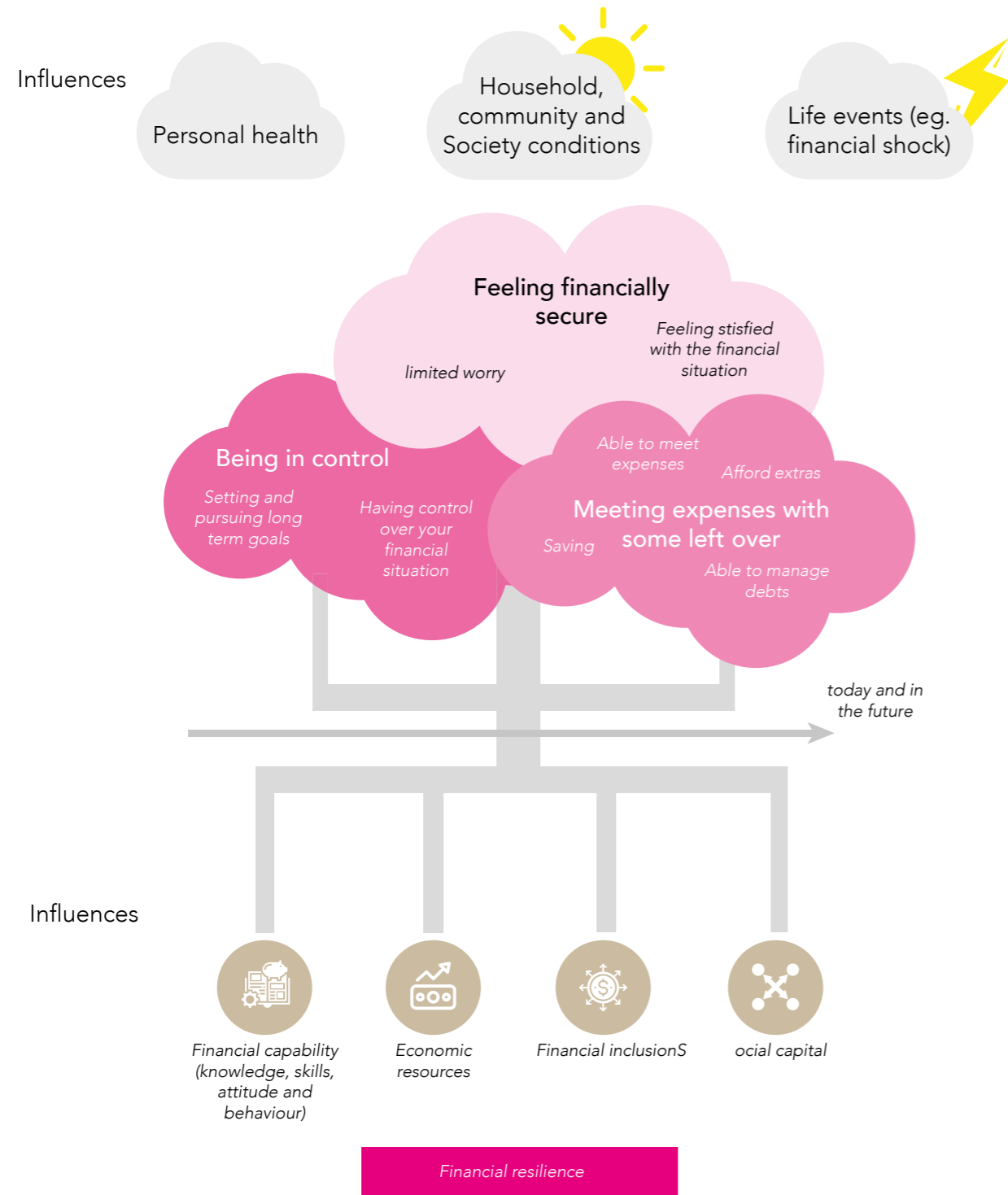
**Social capital** is the support from friends, family and community services to cover basic needs and expenses.

**Economic resources:** Income is fundamental for having financial-well-being. The amount, the stability and the source of the income are relevant.

**Health:** Being healthy inside and outside is important for financial well-being.

**Household:** The socio-economic status of the community or neighbourhood someone lives affects to the financial-well-being.

# Financial health and well-being

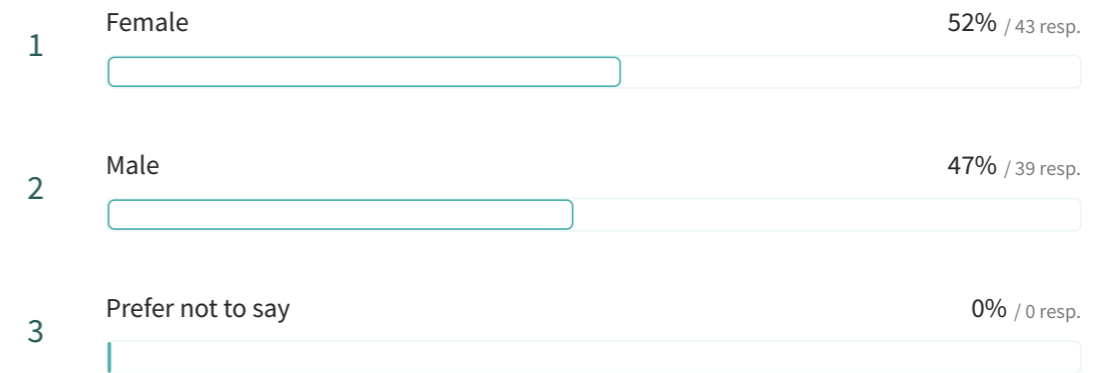


## Survey about Personal finances

82 responses

Sex

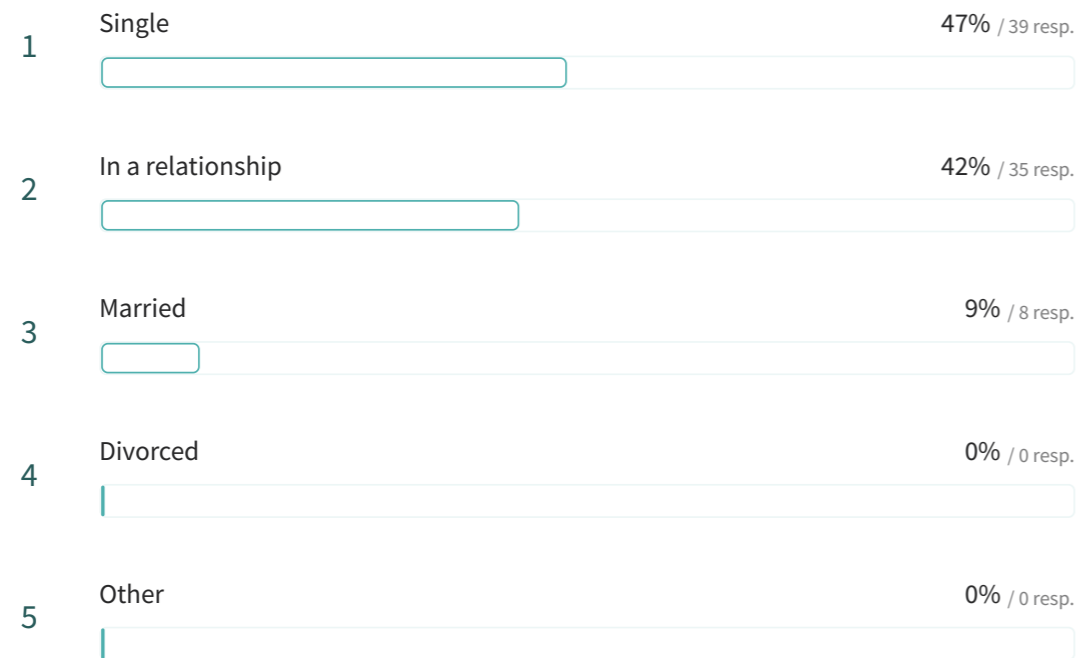
82 out of 82 answered



# APPENDIX C: User research

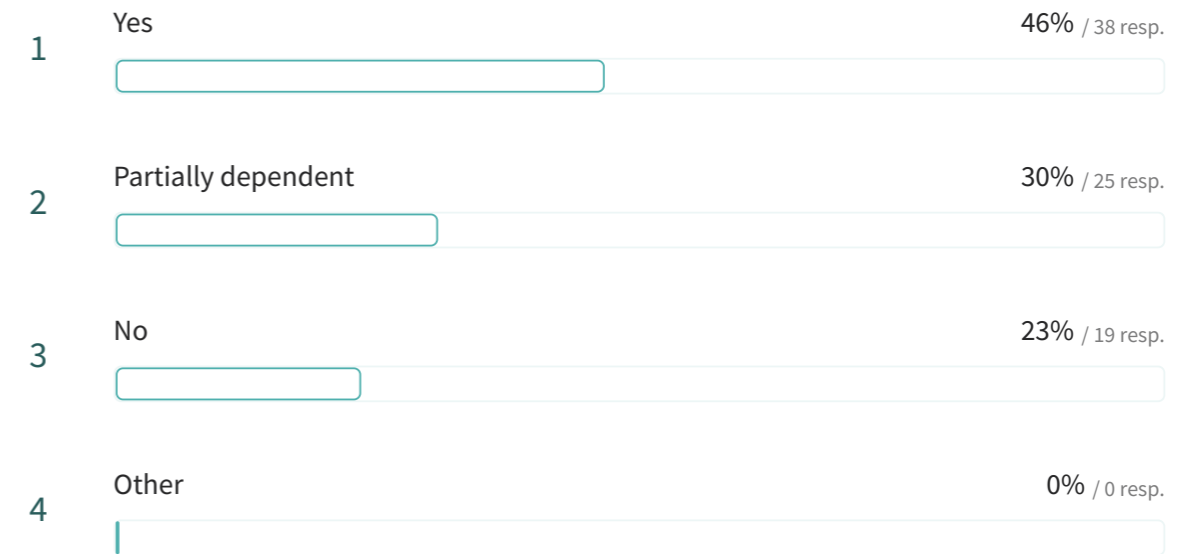
Marital status

82 out of 82 answered



Are you financially independent?

82 out of 82 answered



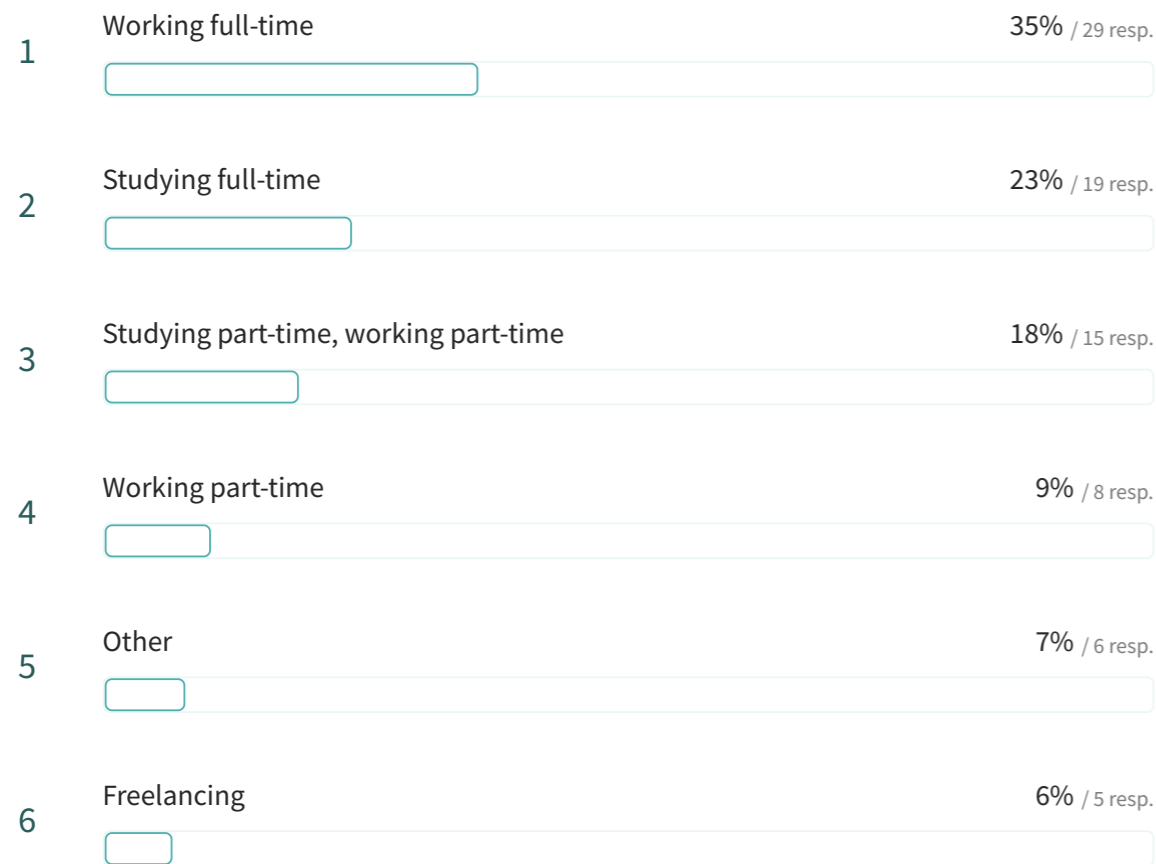
Do you have children?

82 out of 82 answered



### Your current professional situation

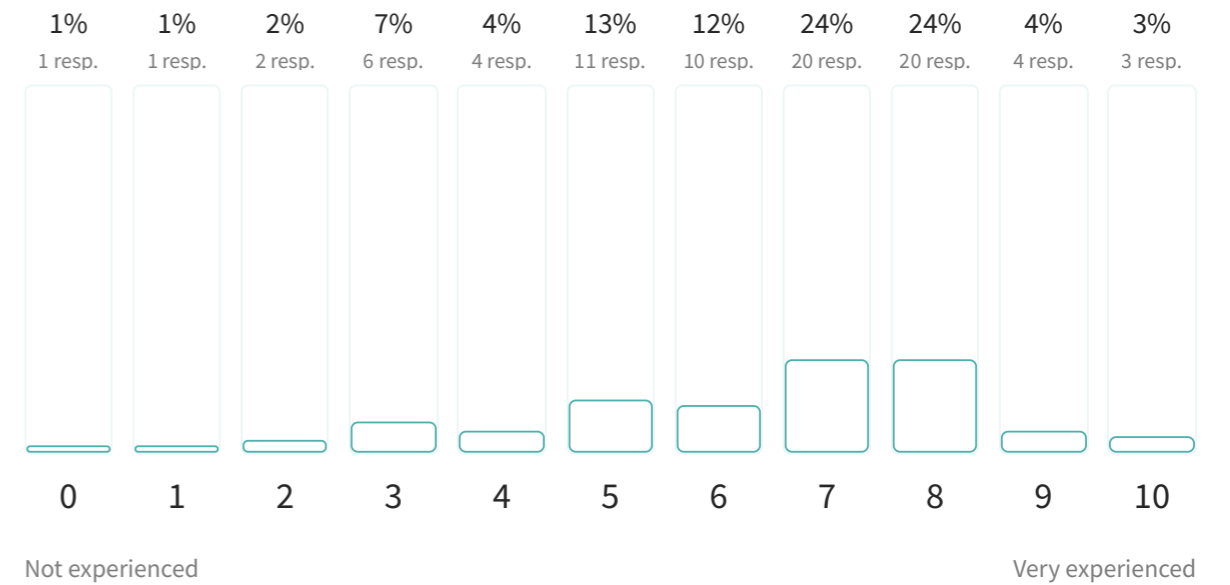
82 out of 82 answered



### How experienced are you with personal finance. Please rate from 0 to 10.

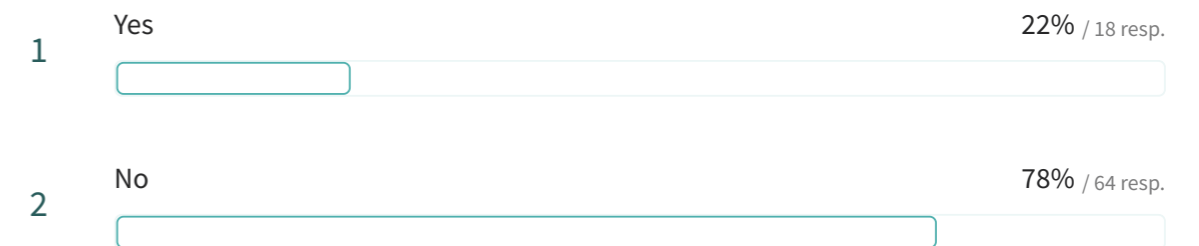
82 out of 82 answered

#### 6.3 Average rating



### Have you ever taken any professional advice on managing your personal finances?

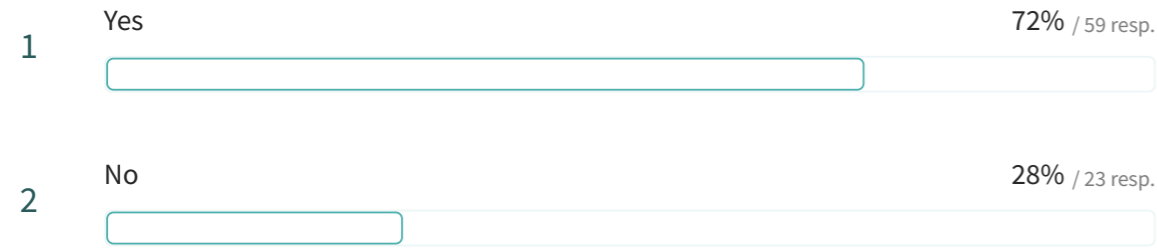
82 out of 82 answered





Have you ever felt negatively surprised when looking at your bank account?

82 out of 82 answered



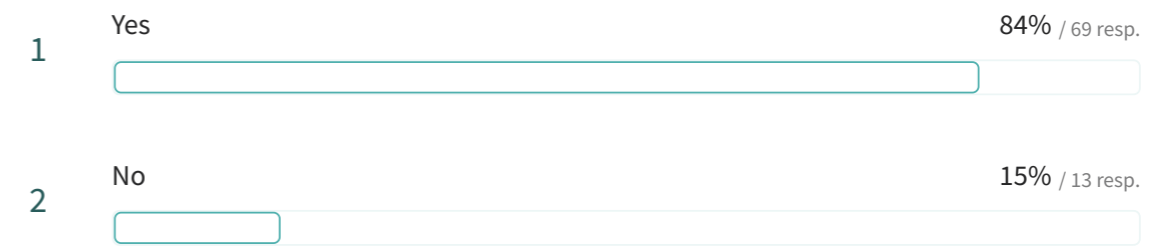
Have you ever made mistakes with your money?

82 out of 82 answered



Do you save money?

82 out of 82 answered



If not, why don't you save?

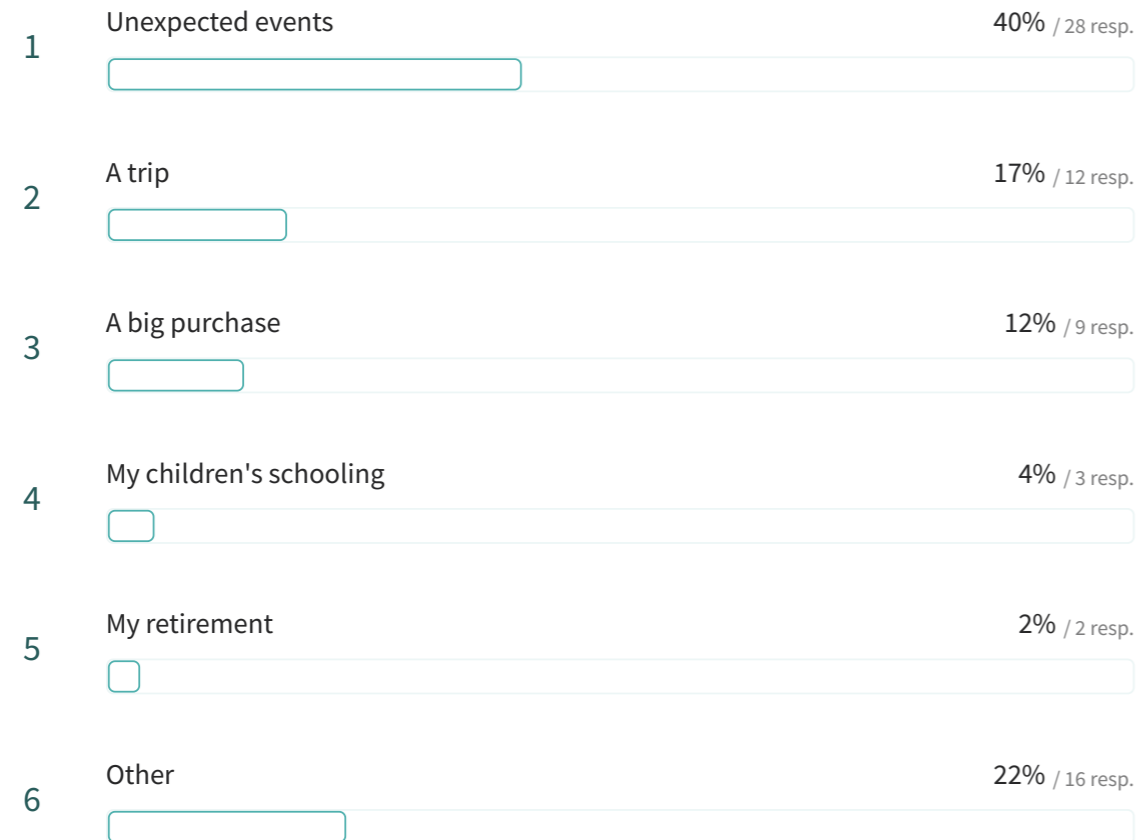
0 out of 82 answered

Nobody answered this question yet



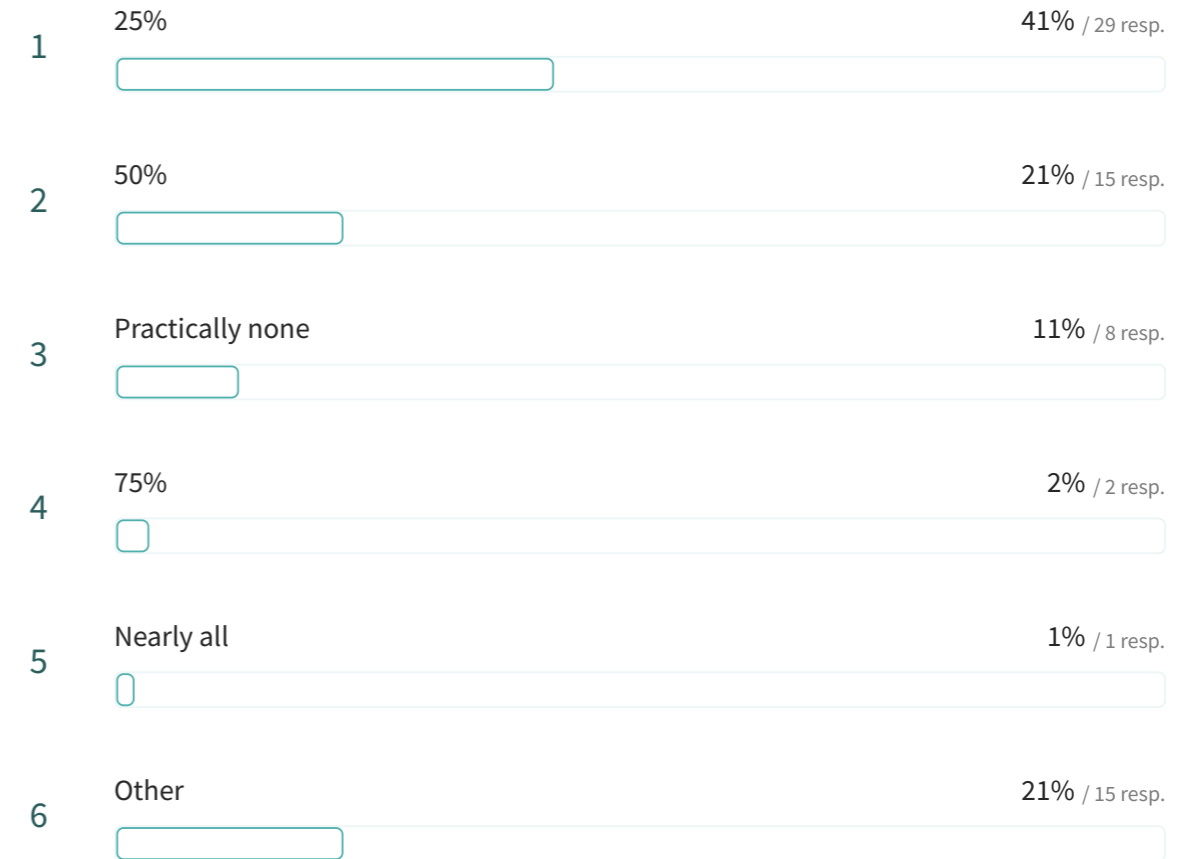
If yes...Great! What are you saving for?

16 out of 82 answered



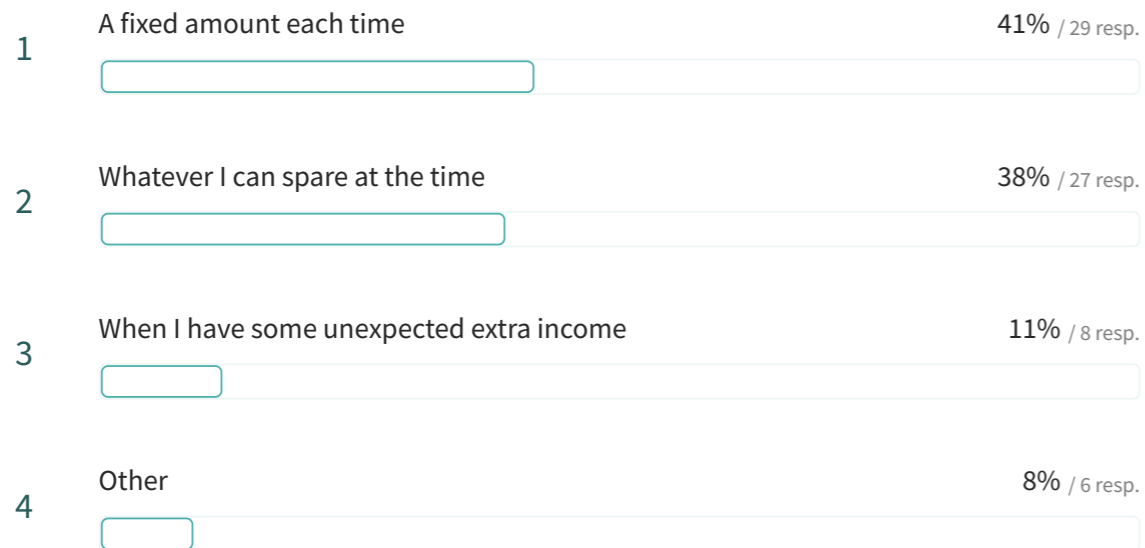
If yes, what proportion of your income do you generally try to save?

15 out of 82 answered



If yes, how do you save?

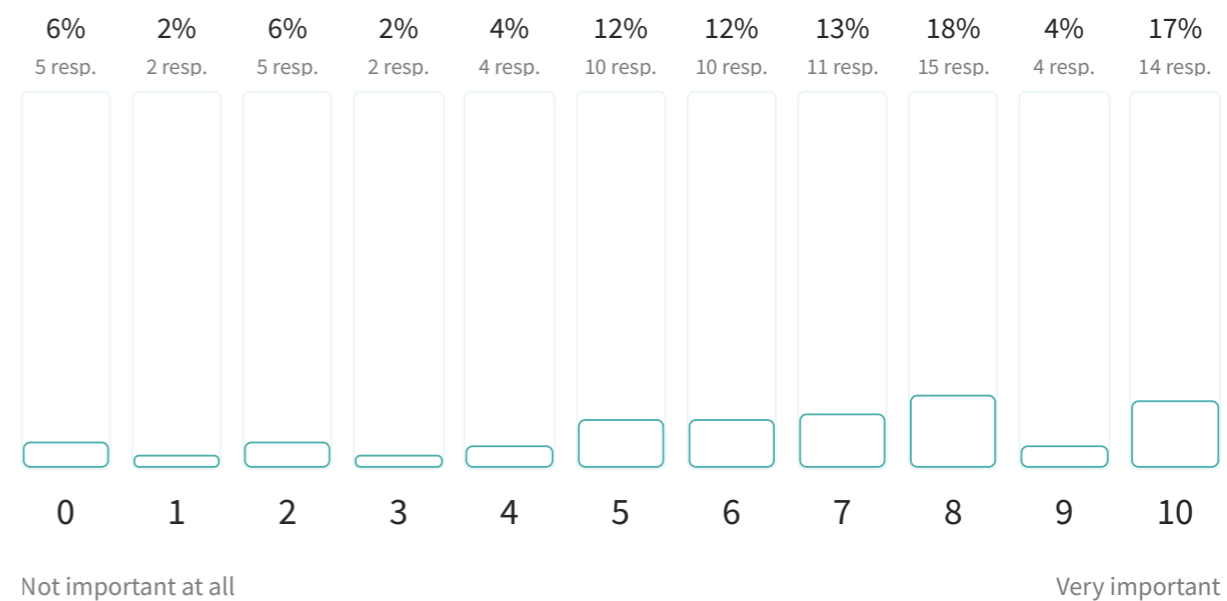
6 out of 82 answered



How important is it for you to save for retirement?

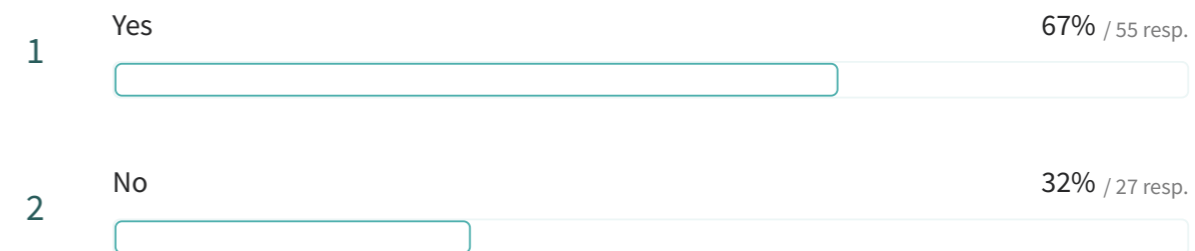
82 out of 82 answered

### 6.3 Average rating



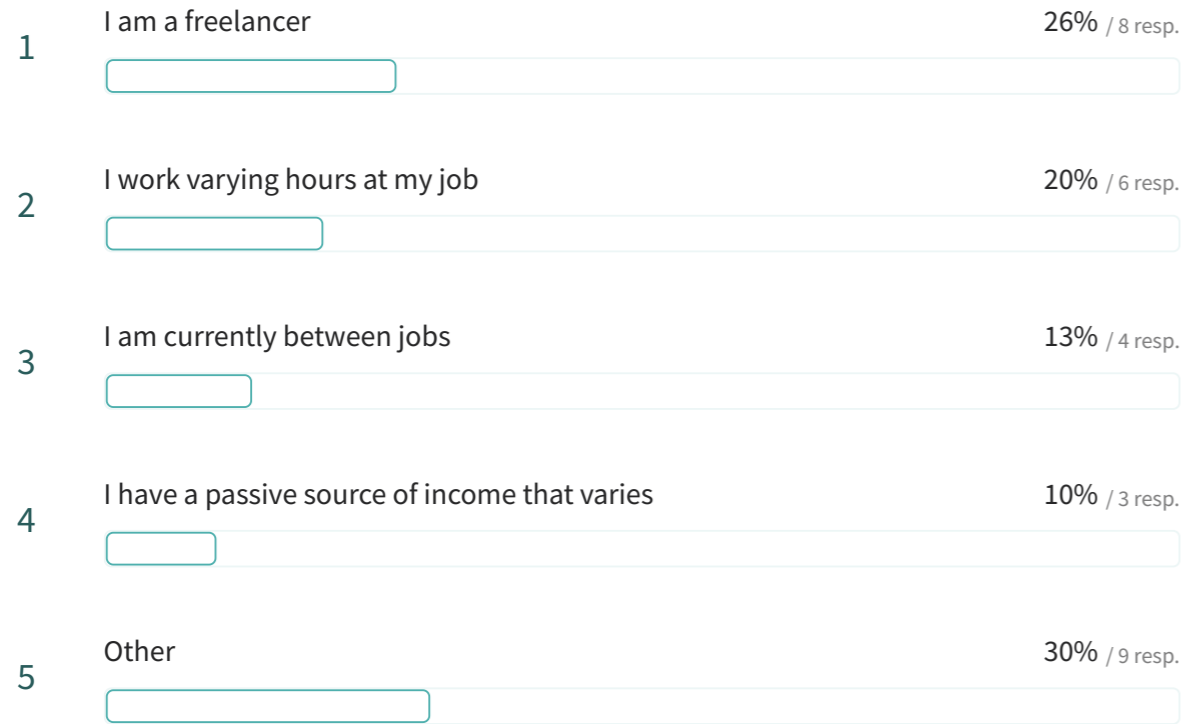
Do you have a regular source of income?

82 out of 82 answered



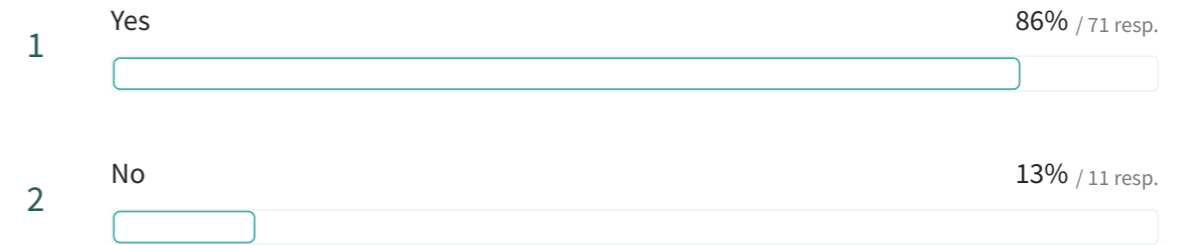
If not, why is your income irregular?

9 out of 82 answered



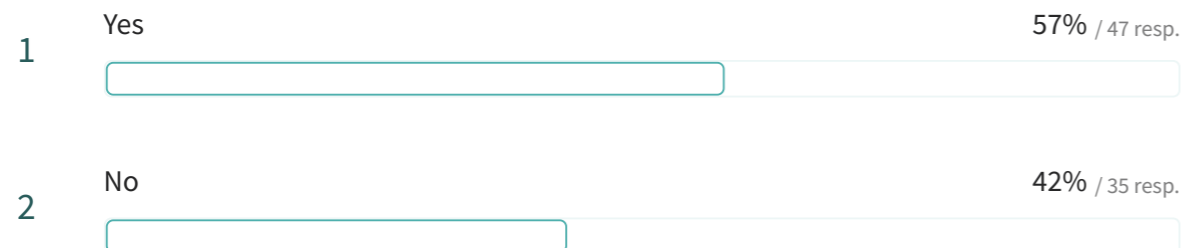
In general, do you consider that you have self-control?

82 out of 82 answered



Do you budget your expenses?

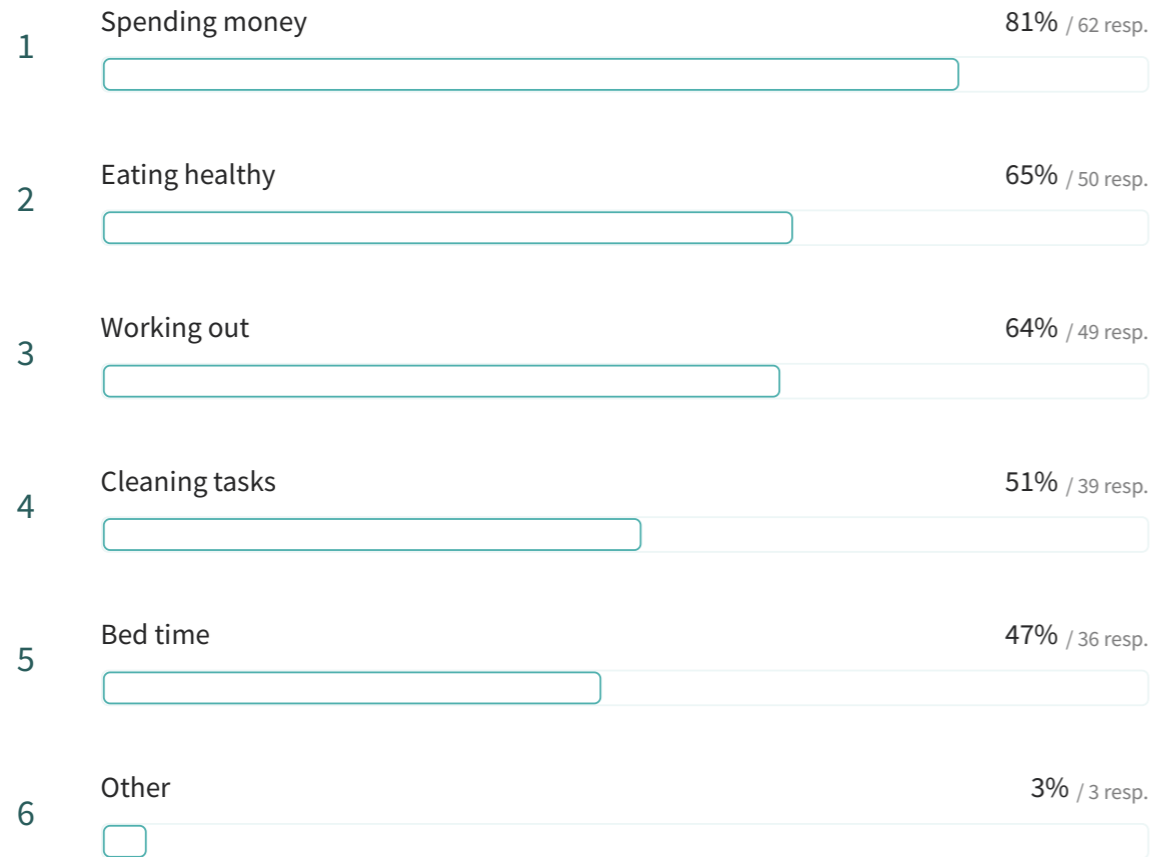
82 out of 82 answered





If yes, mark the moments you apply the self-control:

3 out of 82 answered



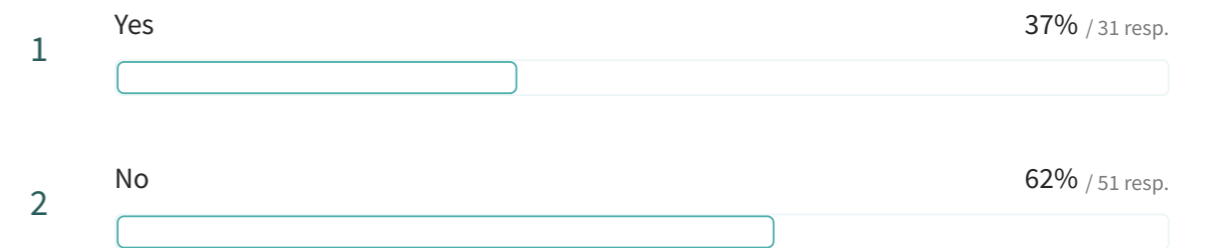
Does your banking app help you reach your goals of saving money?

82 out of 82 answered



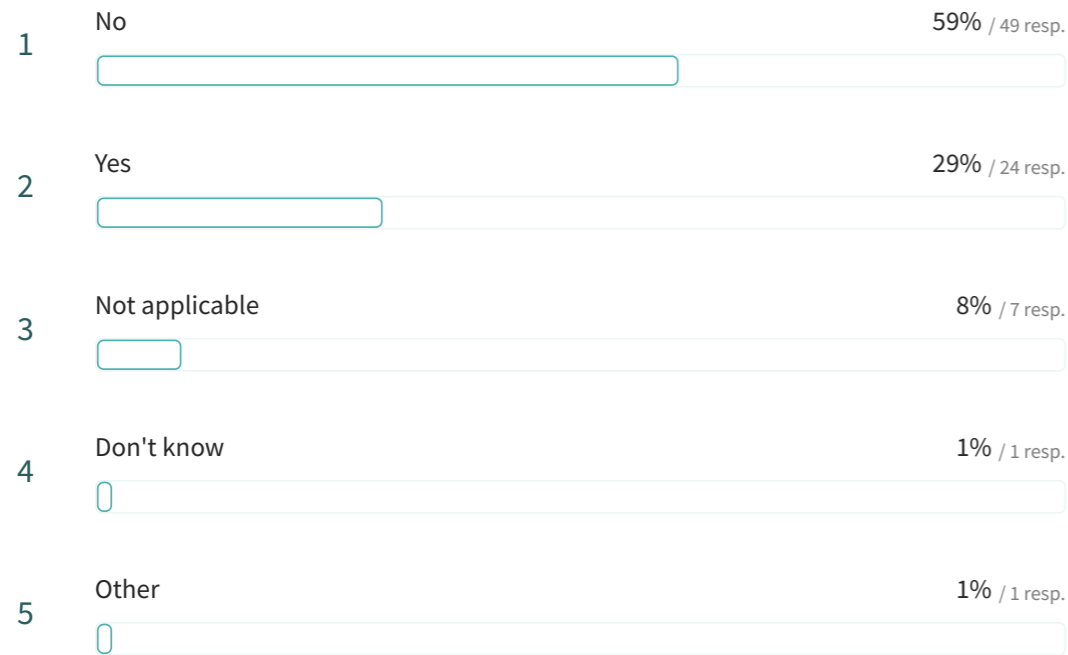
Do you think that, in general, you spend too much money?

82 out of 82 answered



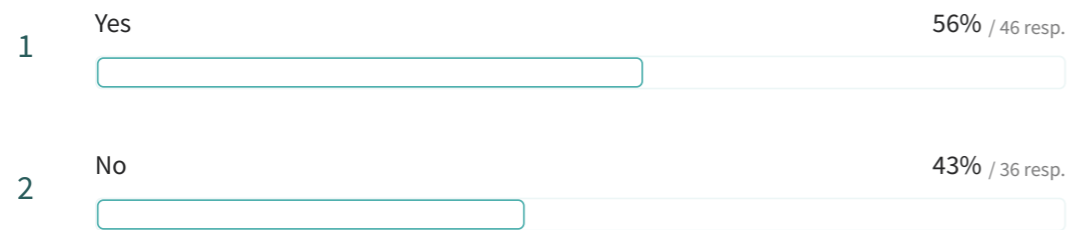
Sometimes people find that their income does not quite cover their living costs. In the last 12 months, this has happened to you?

82 out of 82 answered



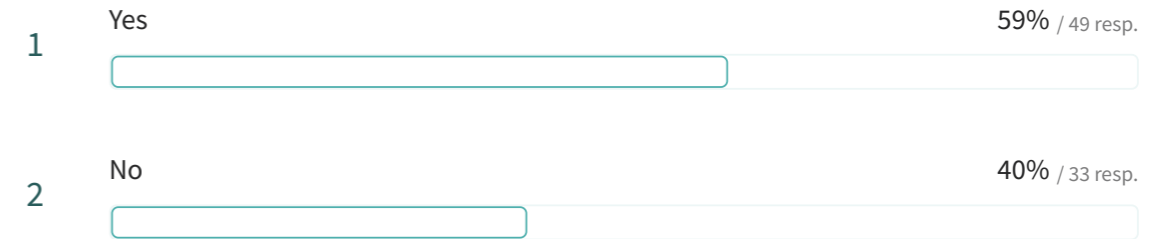
Do you have short term financial goals?

82 out of 82 answered



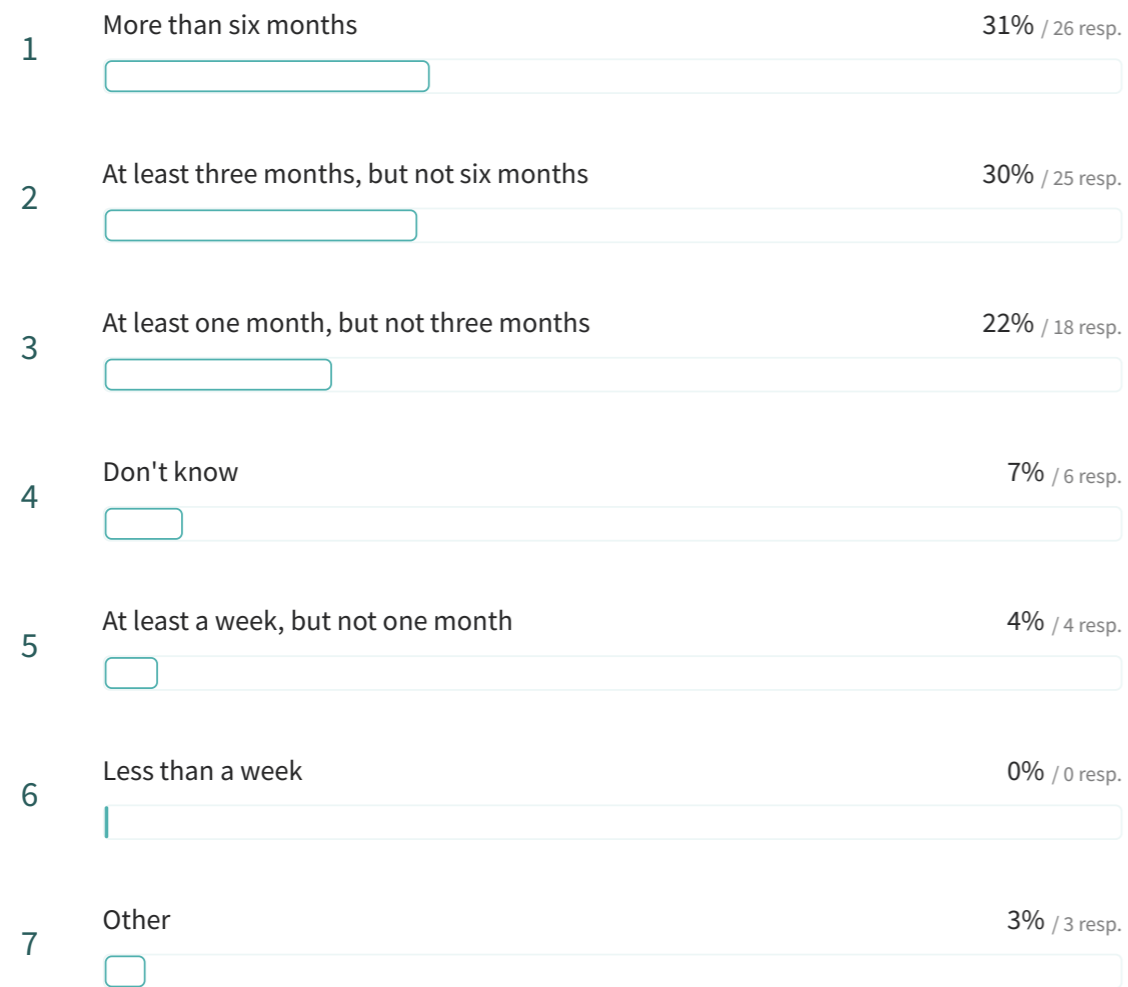
Do you have long term financial goals?

82 out of 82 answered



If you lost your main source of income how long could you continue to cover living expenses, without borrowing any money?

3 out of 82 answered



What would describe best your approach to future financial goals?

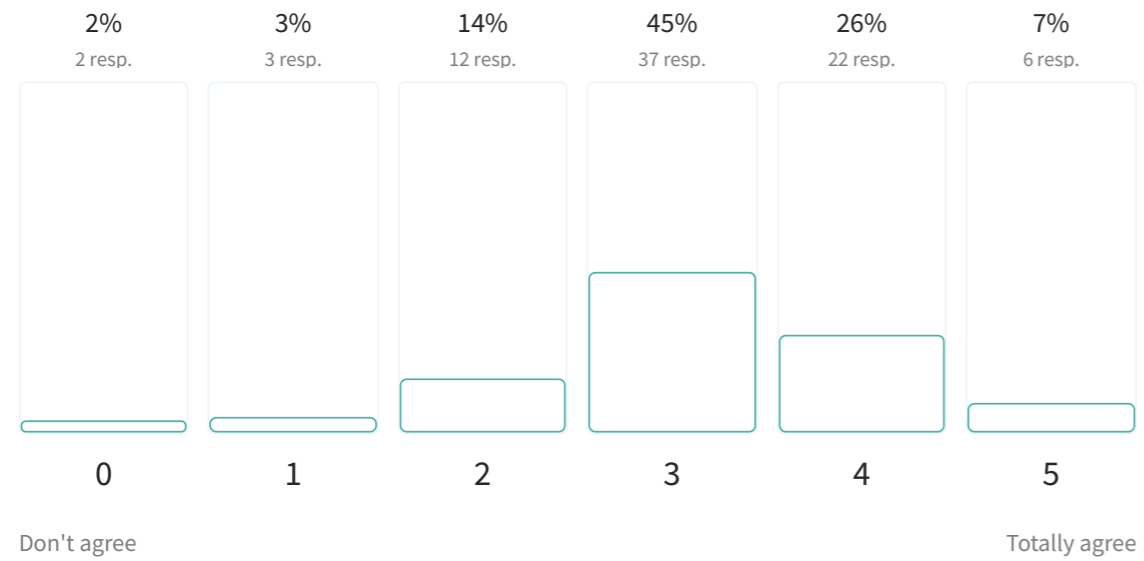
1 out of 82 answered



Money is there to be spent

82 out of 82 answered

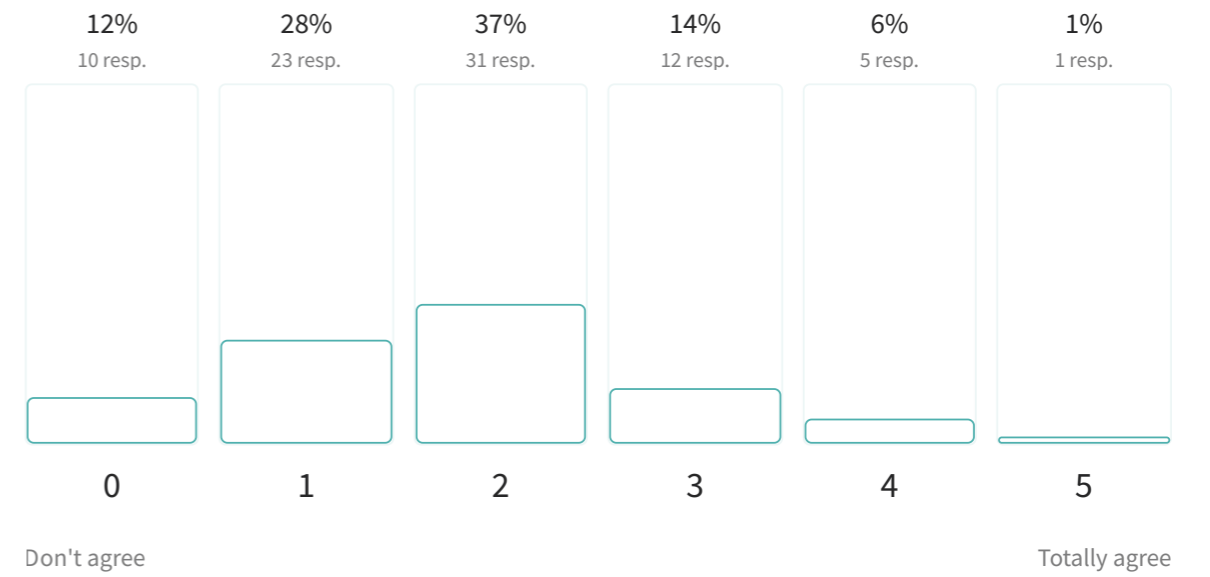
### 3.1 Average rating



I tend to live for today and let tomorrow take care of itself

82 out of 82 answered

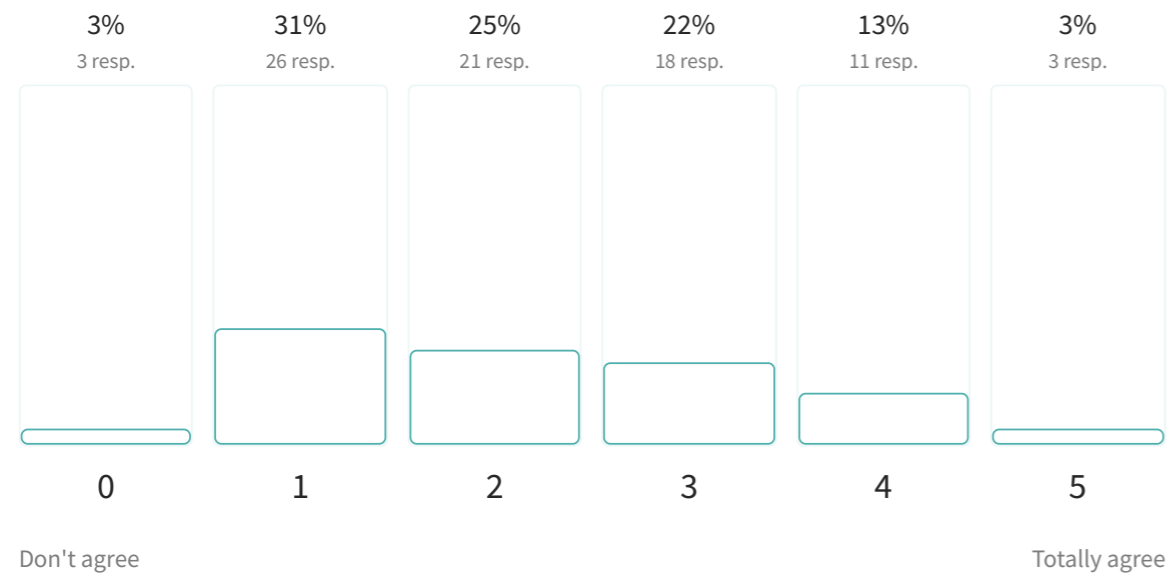
### 1.8 Average rating



I find it more satisfying to spend money than to save it for the long term

82 out of 82 answered

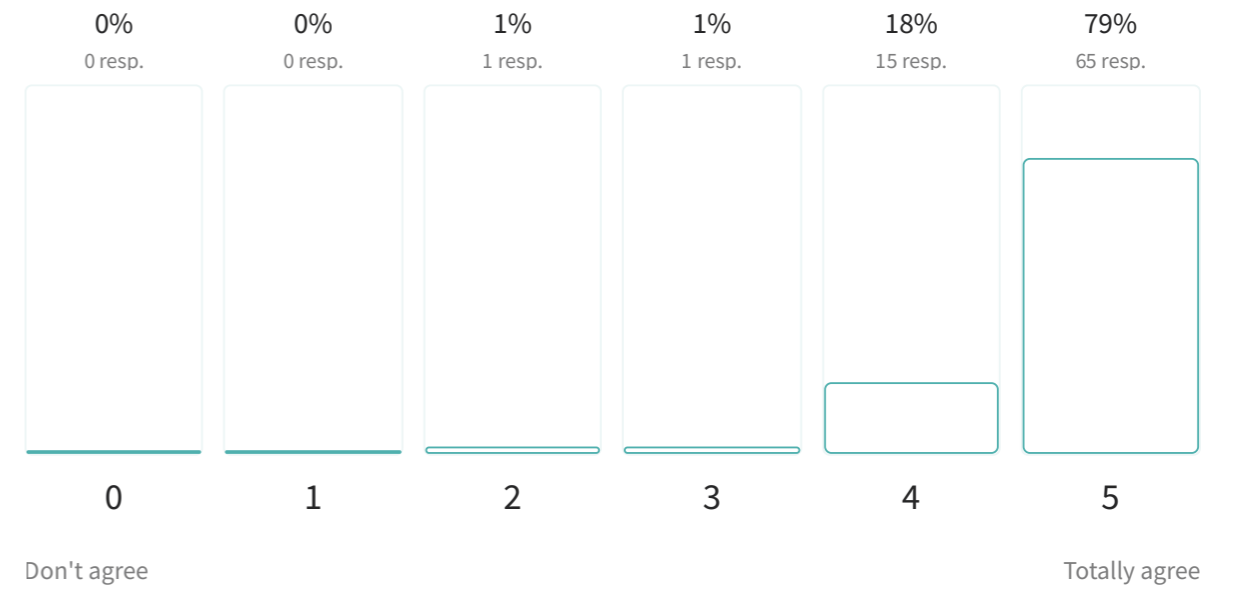
### 2.2 Average rating



I pay my bills on time

82 out of 82 answered

### 4.8 Average rating

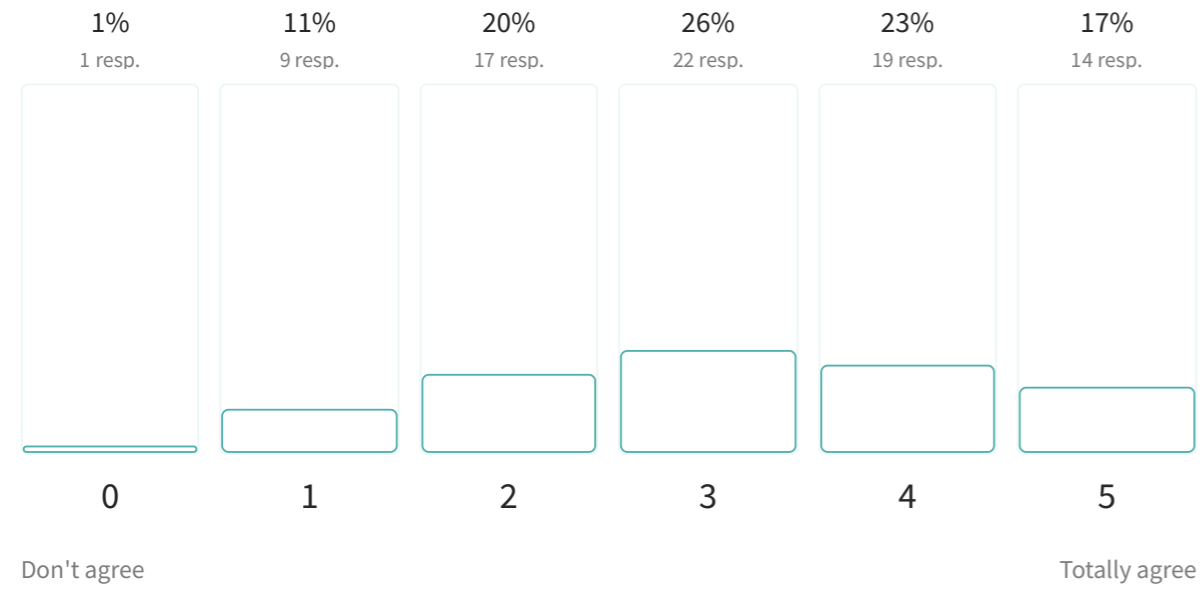




I am prepared to risk some of my own money when making an investment

82 out of 82 answered

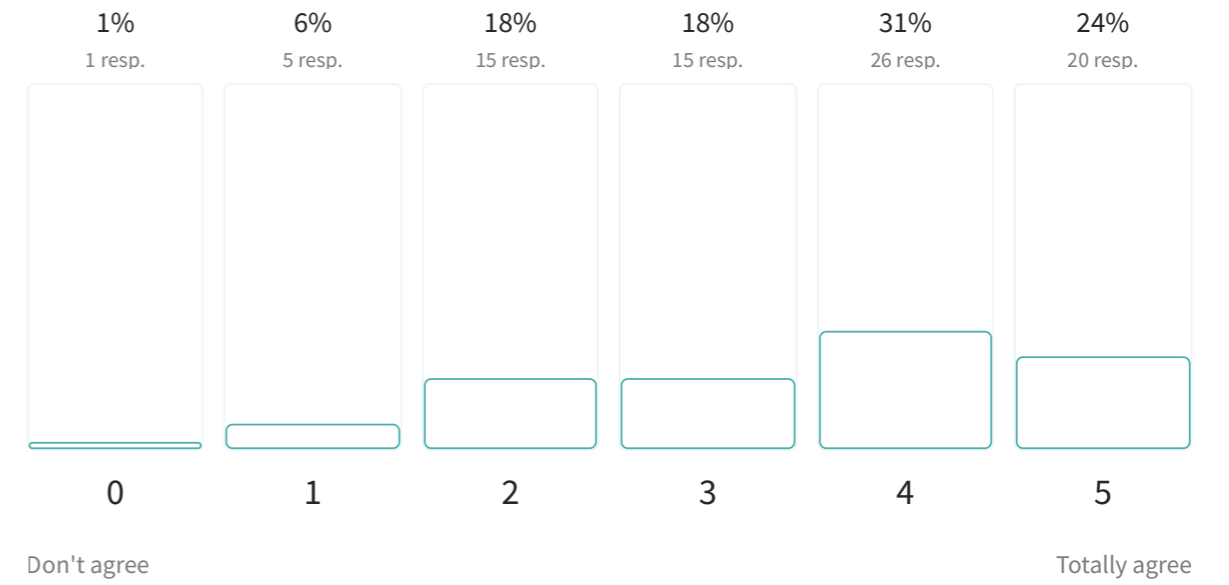
### 3.1 Average rating



I keep a close personal watch on my financial affairs

82 out of 82 answered

### 3.5 Average rating



# APPENDIX D: User interviews

## Interview about Personal Finances

Hi there! Thank you for taking the time to participate in this interview.

The goal of this interview is to answer the main research questions for my master thesis. The topic is 'Design a digital product for personal financial behaviour'.

In this interview, there is no right or wrong answer. I'm not testing your ability to do something, but my hypothesis about the financial behaviour of people.

Name (optional)	
Age	
Nationality	
Sex	
Education	
Occupancy	
Civil state	

*Personal questions (questions to be asked in an informal conversation).*

- Can you tell me about your hobbies?
- Do you work out regularly?
- Could you please tell me about your marital status? Do you have kids?
- Do you rent a house? Or do you own a house?
  - When did you buy it?
- Are you living alone, or with someone else?
- Could you tell me 3 favourite apps you use on a daily basis?
- Do you use any app/website to help you manage your money?
- What does a typical week look like? And a weekend?
  - Do you have breakfast at home? Or on-the-go?
  - Do you buy groceries online? Or how?
  - Do you eat out regularly?
  - How do you get to work?
- Could you tell me what you do for a living? Are you employed or freelancing?

- If freelancer, do you have a regular freelance income? Or a variable?
- If freelance, what kind of projects do you do?
- If freelancer, How do you pay yourself as a freelancer? Do you give yourself a salary? How did you come up with this number?
- If they say yes, ask the question; So what's your net salary you give yourself?

*Of course, I am working on a financial topic, so I have some questions that are a bit more personal. You know we are working for a company that takes privacy very seriously, so all information will be treated confidentially.. Let's talk about your financial situation.*

#### *Financial behaviour*

- Could you rate from 1-10 your financial knowledge? Why?
- Do you think that money is important? Why?
- Do you think you manage well your money? What could be improved?
- What money mistakes have you made along the way that others can learn from?
- How often do you look at your bank account? Why?

#### *Zooming in...*

- Could you tell me about your monthly income? (Netto, "the money you actually receive on your account every month").
  - A. Less than 1k/month
  - B. Between 2k-3k
  - C. Between 3k-4k
  - D. Between 4k-5k
  - E. More than 5k
- Do you know how much you spend every month?
  - How do you feel about that?
  - Do you know how come / what the causes are for this?
  - Do you know how to fix it?

#### *Spending and saving money*

- What triggers you to spend money?
  - In what things do you like to spend your money?
    - Do you know how much money you spend on a regular day?
      - And in groceries?
      - And eating out?
      - And in life maintenance (mortgage,etc)?

- And in apps/technology?
    - And in transport?
  - Which is your guilty pleasure to spend money on?
    - Do you know how much money you spend on coffee?
  - Do you think you spend too much money? On which things? Why?
  - How could you spend less money? What would you change?
  - How do you feel when you spend money?
  - Tell me about what went through your head the last time you bought something expensive?

- Do you save money?
  - Why?
  - Do you have a strategy for this?
  - Do you save a specific amount/percentage every month to save money?
  - What triggers you to save money?
    - What do you plan to do with the money you are saving?
    - What would you do in the short term with the money saved?
    - And what would you do in the long term with the money saved?
    - How did you feel the last time you reached your saving goals?
  - Do you consider yourself a person with self-control, when talking about money?
    - In which other things do you apply self-control?

#### *The future self*

- Do you have plans for your own future?
  - Do you know how to achieve that?
  - Are taking steps/actions towards that already?
  - Do you feel you are on the right track?
  - Why/why not?
  - Do you know what you should change?
- Do you invest money? How do you do it? Why/why not?
- Did you think about your pension?
  - Would you like to retire at age x? Or sooner?

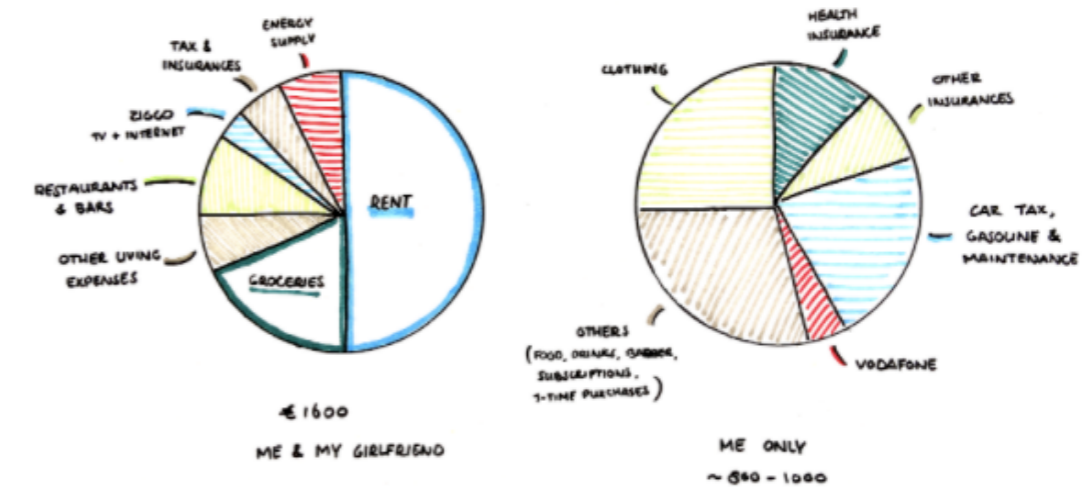
## Tools

- Have you looked into solutions to manage your money better?
- Have you thought about budgeting?
- Would you like to use an app that could help you reach your goals?
- How would you imagine this app?
- From the 3 apps that you mentioned before, what do you like so much about them?
- Do you use any tools to help you save money? Why/why not/ which ones?
  - Do these tools help you to reach your financial goals? Why or why not?
  - What did you like most about them?
  - And what did you dislike the most?

## Hypothetical situations

- What would you do if you won a prize of 10k euros?
- What would you do if you would win the 1M euros?
- Do you know about the FIRE movement? Imagine that your goal is to be FIRE (financially independent, retired early) which strategy would you follow?

## Draw a map of your finances



## My desired financial management

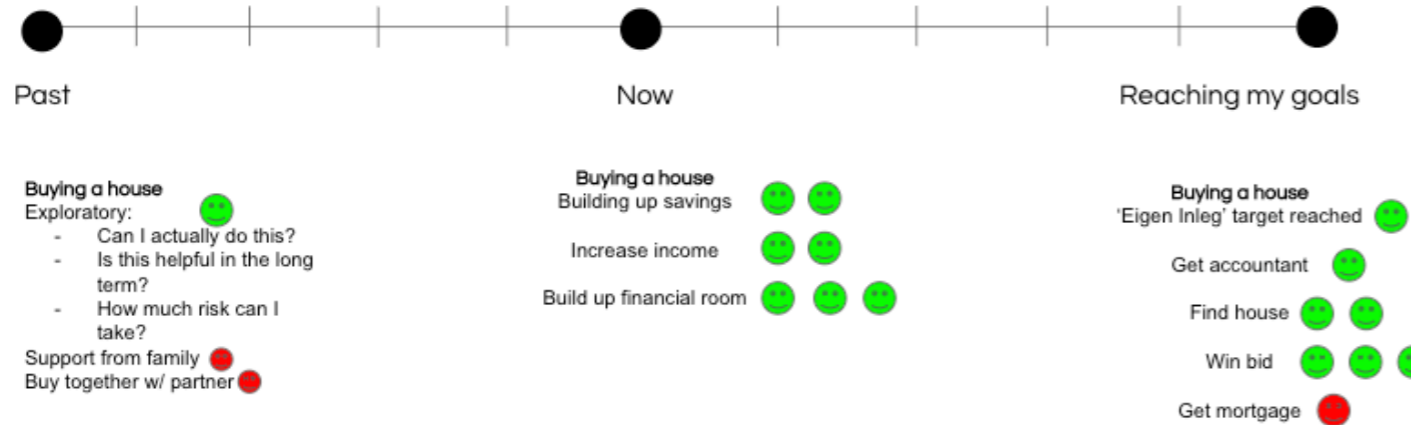
Describe 3 desired qualities that your ideal money management tools will be. Put them on the box below and explain your idea

Title	In-control	Automated buckets	Make it visual
Visual			
Explanation	I want a system that works for me and automates as much as possible. I want smart suggestions, but in the end I always want to be in-control. I want to be confident about my finance.	When money is coming in, I want it in the right buckets directly. Also I want my payments coming out of the right bucket, so I don't have to worry about that.	Numbers are quite abstract. "How am I doing?" might translate better to a clear and motivating visual than to a single number. Also think about things like social proof, "How am I doing compared to my peers?", "How much money do I need for a 3-week vacation?", etc.

# A route towards my financial goals



Do you have long term financial goals? Which ones? **Buying a house;**  
 Could you draw in the following format, the different actions you have been taking in the past, now, and planning to take in the future in order to reach your financial goals?  
 Please mark with a Red or Green color each action depending on if it is a positive or negative emotion.

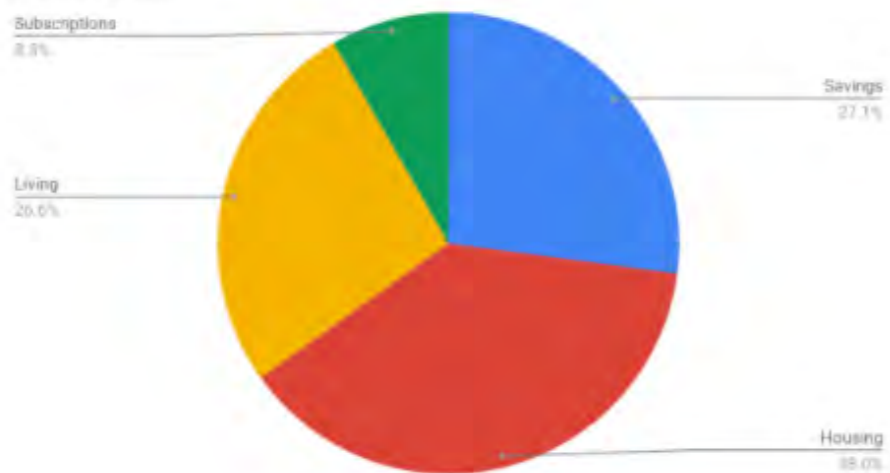


## 25-35 y.o. Target users

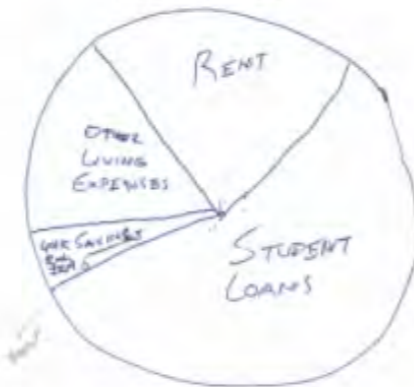
## User experts


# Draw a map of your finances

Points scored




This is an example



# Flow

	<p>"I like the idea of Flow, I would definitely use it. However, there's nothing that I can't do myself that they solve."</p> <p>Ben Jans, 25 y.o., Design student and Freelancer</p>	"Flow is not solving anything that people can't solve themselves"
	<p>"There are a lot of competitors for Flow (Miro, Mural, etc.). The benefit I use is from UX Design (dealing with customers in the front-end, but still a lot of competition."</p> <p>Leonard Kuper, 26, Consultant</p>	"UX Design is one of flow's strengths."
	<p>"I would definitely use a tool that automates my money. It would help me to calculate what my budget is. However, I like to use apps that don't require that much time, like Uber or Weather apps. I am also quite hesitant about Data protection."</p> <p>Roger Deerna, Freelance Consultant</p>	"I would like to use a tool that automates my money."
	<p>"I've used Flow in a very early state so I can't say that much about it, but now that Buro released the sorting feature, it's not that necessary to look into Flow."</p> <p>Leonard Kuper, 26, UX design manager at Knab</p>	"Flow is not that necessary now that Buro released the sorting feature."

# Spending



**"I don't budget my money. I just watch how much is left in the end of the month. If it's not enough, then I get money from my savings account."**

*Martha Hedges, 26, Strategic designer at IBM*

**"I don't budget my money. I just watch how much is left in the end of the month. If it's not enough, then I get money from my savings account."**



**"During my first 4 years of working (25-29 yrs.) I used to live short on money; I would spend all my money or more than I earned. When I was 29 yrs., I started worrying about money, because I realized I wasn't saving anything and my income was higher."**

*Guido Brock, 30-35 yrs., CEO at AT&T*

**"During my first years of working, I used to live short on money; I would spend all or more than I earned. When I was 29 I started worrying about money, because I realized I wasn't saving anything and my income was higher."**

# Saving



**"I have automatic payments I don't see different from before."**

*Robert Thomas, 26, Product Designer at IBM*

**"I like automatic payments. I don't see anything different from before."**



**"I use some automatic benefit like for the hospital, for example, paying the membership and, for example, the hospital benefit just some stuff."**

*Robert Thomas, 26, Product Designer at IBM*

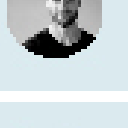
**"When automatically I could do things before, for example, paying the membership of my car, for example, automatically could pay some stuff."**



**"Right now I am doing some automatic payments."**

*Robert Thomas, 26, Product Designer at IBM*


**"I haven't noticed any automatic payments."**



**"I don't have any automatic payments, but I have some automatic payments with money I would have used for something and for retirement, for example."**

*Robert Thomas, 26, Product Designer at IBM*


**"I don't have any automatic payments. I don't have any automatic payments, but I have some automatic payments for my health and for the car."**



**"I use automatic payments for my credit, I would have used for something and for retirement, for example."**

*Robert Thomas, 26, Product Designer at IBM*

**"I use automatic payments for my credit, I would have used for something and for retirement, for example."**



**"I don't have any automatic payments, but I have some automatic payments with money I would have used for something and for retirement, for example."**

*Martha Hedges, 26, Strategic Designer at IBM*

**"I don't have any automatic payments, but I have some automatic payments with money I would have used for something and for retirement, for example."**


# Current tools



**"I'm using apps like my budgeting app, like my budgeting app."**

*Anna Hagedorn, 26, Product Designer at IBM*

**"I'm using apps like my budgeting app, like my budgeting app."**



**"My budgeting app, like my budgeting app, like my budgeting app."**

*Robert Thomas, 26, Product Designer at IBM*


**"My budgeting app, like my budgeting app, like my budgeting app."**



**"My budgeting app, like my budgeting app, like my budgeting app."**

*Anna Hagedorn, 26, Product Designer at IBM*

**"My budgeting app, like my budgeting app, like my budgeting app."**



**"The app helps me to know how much money I have, and it helps me to know how much money I have, and it helps me to know how much money I have."**

*Robert Thomas, 26, Product Designer at IBM*


**"The app helps me to know how much money I have, and it helps me to know how much money I have, and it helps me to know how much money I have."**



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## Financial behaviour

**"I think people still have the concept of a bank account as a place to store money. It's not a tool to manage money. It's a place to store money."**

**James Smith, 35, Freelance Designer**

**"The main reason people have a bank account is to store money. It's not a tool to manage money. It's a place to store money. The main reason people have a bank account is to store money. It's not a tool to manage money. It's a place to store money."**

**James Smith, 35, Freelance Designer**

**"I think the main reason people have a bank account is to store money. It's not a tool to manage money. It's a place to store money. The main reason people have a bank account is to store money. It's not a tool to manage money. It's a place to store money."**

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## Millennials

**"I think people still have the concept of a bank account as a place to store money. It's not a tool to manage money. It's a place to store money."**

**James Smith, 35, Freelance Designer**

**"The main reason people have a bank account is to store money. It's not a tool to manage money. It's a place to store money. The main reason people have a bank account is to store money. It's not a tool to manage money. It's a place to store money."**

## Desired tools

**"It would be interesting to have an app that shows a normal online banking interface and lets you see 20% of your income, in other words, an individual tailored interface."**

**Alexis Bergman, 28, UX Designer**

**"I would love to have an app that shows a normal online banking interface and lets you see 20% of your income, in other words, an individual tailored interface."**

**"There is a big group of people that aren't financially literate. This happens because they don't get education on finance and there is a big lack of tools to make finance easy to understand."**

**David Smith, 35, UX Designer**

**"There is a big group of people that aren't financially literate. This happens because they don't get education on finance and there is a big lack of tools to make finance easy to understand."**

**"I would like to have the app linked to the bank account and everything automated. For me it's especially the budget and the automation that can change my behavior. However, I wouldn't like to see it everywhere, because I would feel bad."**

**Marie Dupont, 35, Strategic Designer**

**"I would like to have the app linked to the bank account and everything automated. For me it's especially the budget and the automation that can change my behavior. However, I wouldn't like to see it everywhere, because I would feel bad."**

**"In the past, when my bank account was in a real loop, I would feel that a tool that would tell me which are the actions I could take and be able to focus on my long-term goals."**

**David Smith, 35, UX Designer**

**"In the past, when my bank account was in a real loop, I would feel that a tool that would tell me which are the actions I could take and be able to focus on my long-term goals."**

**"Before starting automating your money you need to do a lot of work yourself. You need to track people to know about financial literacy. Only if you do that, you can look into variable costs and fix costs."**

**David Smith, 35, UX Designer**

**"Before starting automating your money you need to do a lot of work yourself. You need to track people to know about financial literacy. Only if you do that, you can look into variable costs and fix costs."**

**"My desired tool for money management would be to have a digital accountant. I am extremely distrustful of tech companies and I don't want to see my money in their hands. I don't want to see my money in their hands. I don't want to see my money in their hands."**

**Michelle Park, 28 yrs, Freelance Designer**

**"My desired tool for money management would be to have a digital accountant. I am extremely distrustful of tech companies and I don't want to see my money in their hands. I don't want to see my money in their hands."**

## Money Management

**"I think the main reason people have a bank account is to store money. It's not a tool to manage money. It's a place to store money."**

**James Smith, 35, Freelance Designer**

**"I think the main reason people have a bank account is to store money. It's not a tool to manage money. It's a place to store money."**

**"I think the main reason people have a bank account is to store money. It's not a tool to manage money. It's a place to store money."**

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**"I think the main reason people have a bank account is to store money. It's not a tool to manage money. It's a place to store money."**



# Key information

"People often have a lifestyle inflation. They can't afford to buy a car but they buy it anyway because they want to be in the same level as their neighbours."	"While people think that the income will get much higher, is not the case because the expenses increase."	"I spend most of my money on biking gadgets and trips, not that much money left for eating out."	"I spend most of my money on biking gadgets and trips, not that much money left for eating out."	"Banking apps are not going to fly with our generation."	"I don't have a set amount of income every month, it is flexible normally."	"Flow is not solving anything that people can't solve themselves"	"If I can save something I would do it for the long-term (for example, paying the university of my son), but for the short-term (holidays) I would just use a credit."
"We need to make sacrifices in the short-term in order to benefit in the long-term. I would love to travel, but I need to be aware of my actions and consequences."	"You need to have something that makes you aware of the consequences of your actions and show your trade off. Otherwise you don't realise that you can't spend the money you are spending."	"If you can automate a counsel into a desirable and trustworthy tech product, I bow to you"	"There's a big group of people who isn't financially literate. It happens because the lack of tools that make it easy to understand."	"My banking app doesn't help me to manage my money better."	"I don't budget. I have a monthly allowance in my head. Usually I overspend, I think because I don't track it."	"UX Design is one of flow's strenghts."	"Right now I am living from paycheck to paycheck."
"My step dad had a very comfortable life because of his business. His example gives me a motivation to do it well."	"The important is to have discipline, and about learning that money can generate money over."	"I don't budget my money. I just watch how much is left in the end of the month. If it's not enough, then I get money from my savings account."	"My behaviour could change if a tool would automate my money."	"My budgeting accounts in excel give me inflows and outflows of my finances briefly, and this way I can reach my goals."	"The more you earn, the more you spend. It's really crazy."	"I would like to use a tool that automates my money."	"I don't save the same amount every month. I don't have that much self-control with money. I would like to start investing and to retire when I'm 40."
"Knab is really good at finding something that people look for. People look for financial help, planning, etc. Knab asks the proper questions, not giving for granted that people know what they should do with the money."	Bunq, just assume that you know everything and they just offer the automation options, budgets etc. directly.	"During my first years of working I used to live short on money; I would spend all or more than I earned. When I was 29 I started worrying about money, because I realised I wasn't saving anything and my income was higher."	"Before starting automating your money you need to do a lot of work yourself. You need to teach people to know about financial literacy themselves to look into variable costs and fix costs."	"The ING app helps me because I can take action directly (move money to my savings accounts e.g. trips, mortgage, etc). The other apps helped me get an overview but from the moment I got it I didn't take the action."	"Because of being an entrepreneur, right now I can't focus on long-term goals, just in short-term goals."	"Flow is not that necessary now that Bunq released the sorting feature."	"I am not taking steps to reach my goals. I could spend less, but it's not attractive. I need a motivation, a deadline."
"Paying the bills together with my wife helped me to be more responsible with my money. I wish I had this upbringing from my family before."	"A good B2C banking app doesn't exist yet. ING gets close, the rest is just high-risk stuff."	"Nothing can replace a good counsel."	"My desired tool would be to have a digital accountant. I am extremely distrusting FinTech companies are able to manage security. I don't trust finances apps. I would rather be in control of your finances."	"The ING app makes me do everything manually. I put manually the money on a bucket for my holidays, but that could be automatically done as soon as the income comes in."	"I used to spend all my money when I was in my 30's. When I moved with my partner it positive influenced me in my finances."	"Having the overview of all subscriptions and end day would be awesome"	"I will start saving for my pension when I have my first job. I know it's important but it also feels so far away. I'll look into these things later."
Missing credit card payments, accidental overdrafts on my savings or checking account.	USING PHYSICAL BUDGETTING CARDS Saving goals is helpful, but setting budgets and having individual cards for each budget helps to stick to your goal. Using different colors per card makes it easier to know with which card to pay (green = groceries for example)	Stick to my budget. Also, I want to start investing	Managing my remaining savings to last me till graduation	You can have aims, you can block money outside your current bank account so you don't spend it, they develop patterns telling you where your monthly money goes to (food, house bills, activities, sport, clothing, etc)	When I didn't keep track on my bank balance for a long time and it turned out to be ridiculously low.	The budget for the month was gone when the month was not. Big one-off (for my feeling) tax bills came in. Insurance companies who charge one month ahead (and thus charge double in the first month).	"I really appreciate my mum's effort to save money for my studies since I was a child"
"Saving goals are nice but I mostly use multiple accounts and sorting transactions for budgeting. Apple pay is nice for the fact you can color code cards, 1 card per budget when paying"	Within the Rabobank app you can have "Piggy Banks" for specific targets	Saving and starting to invest, but haven't really put the time into doing it properly.	After graduation, start saving for first payment for my apartment	Paying twice for something that I could have avoided	Sometimes I forget that Healthcare still has to be collected, and then suddenly my account is a little lower than before.	Sometimes. Not accurate enough. Budget the house, the bills, the petrol... I find more complicated to budget food as it depends on seasons, what we eat at the time and spare time to cook.	I do not spend more than I can afford. I do not want to be in a situation where I become dependent on someone else. This probably came from my family teaching me about the value of items and making me feel guilty for asking for money. I do not like feeling and being dependant on anyone.
I spend much more money than I thought in one week, because I had guests over, had to buy books for uni...I spend double the amount in that week compared to usually.	Have an overview of how much I spend and what areas I spend more money on (abh anno)	It lets me set goals and has a progress bar which is satisfying (with excel)	Not many, because I don't have the resources now. But I'm investing my time wisely to educate myself so I become "valuable"	Buying things I don't need, forgetting to cancel subscriptions	Forgot a larger payment and then thought "where did all that money go??"	Too much work/lazy/scared for the realization	I am used from home and from my early childhood that having an overview of your finances is necessary. In my culture it is very common to start a fond for your child early and also that kids collect the money they get as gifts for a longer period of time in order to be able to be pay for something bigger at one point.
Dont tend to have too many to worry now. Exc I have no mortgage, kids, education bills etc to pay for	I use bunq for budgets and ING for saving goals. They do help me. But I have to do manual labour to fill them, thats why I need/use Flow.	REVOLUT: It has very nice Analytics dashboards + Vault and investing features	RABOBANKI just told them how much did I want to save every month and it's "blocked" money.	I can separate my money into subaccounts in ING bank, splitting the money makes it seem like you have less	I tend not to look often at my bank account because I am not so good with money. This means that whenever I open my bankaccount the amount is usually lower than expected.	It takes a lot of time to do it manually. I know there are apps for that but I don't trust them since they should get the permission to access my bank account	I learned from a Young age to work for money if I wanted to buy things. That taught me the value and I kept an eye on my finance.
My biggest mistake was studying in the UK as the degree was not worth the £27000 debt	"The overview of my expenses/balances helps me (FINTONIC)."						

# APPENDIX E: Analysis



# Categories

<b>Financial behavior</b>	"People often have a lifestyle inflation. They can't afford to buy a car but they buy it anyway because they want to be in the same level as their neighbours."	"We need to make sacrifices in the short-term in order to benefit in the long-term. I would love to travel, but I need to be aware of my actions and consequences."	"While people think that the income will get much higher, is not the case because the expenses increase."	"The important is to have discipline, and about learning that money can generate money over."
<b>Financial education</b>	"My step dad had a very comfortable life because of his business. His example gives me a motivation to do it well."	"There's a big group of people who isn't financially literate. It happens because the lack of tools that make it easy to understand."	"I really appreciate my mum's effort to save money for my studies since I was a child"	"I do not spend more than I can afford. I do not want to be in a situation where I become dependent on someone else. This probably came from my family teaching me about the value of items and making me feel guilty for asking for money. I do not like feeling and being dependent on anyone."
	"Before starting automating your money you need to do a lot of work yourself. You need to teach people to know about financial literacy themselves to look into variable costs and fix costs."			"I am used from home and from my early childhood that having an overview of your finances is necessary. In my culture it is very common to start a fund for your child early and also that kids collect the money they get as gifts for a longer period of time in order to be able to be pay for something bigger at one point."

<b>Millennials</b>							
<b>Living in the moment</b>	Making life decisions that had a big financial impact. Like giving up everything to travel 3 months only to come back a pay to start over (housing, fridge, car, etc). Should be more conservative.	Dont tend to have too many to worry now. Exc I have no mortgage, kids, education bills etc to pay for	"I plan to start saving when I finish my studies and I have a job".	After graduation, start saving for first payment for my apartment	Not many, because I don't have the resources now. But I'm investing my time wisely to educate myself so I become "valuable"	Managing my remaining savings to last me till graduation	I think I have very simple needs in life and in general, I don't spend tirelessly. So, I assume I don't need a regular budgeting
<b>Starting a family</b>	"Paying the bills together with my wife helped me to be more responsible with my money. I wish I had this upbringing from my family before."						
<b>Regretting a purchase</b>	Spend unnecessary items because sometimes I buy stuffs with pulse	Paying twice for something that I could have avoided	Buying things I don't need, forgetting to cancel subscriptions	My biggest mistake was studying in the UK as the degree was not worth the £27000 debt			
<b>Hobbies</b>	"I spend most of my money on biking gadgets and trips, not that much money left for eating out."						
<b>HIGH AMBITIONS AND WILLING TO CHANGE</b>	Saving and starting to invest, but haven't really put the time into doing it properly.	Stick to my budget. Also, I want to start investing					

<b>Current tools</b>	It allows me to compare my expenses through the month as well as my overall income. It's very helpful also to be able to track how much I spend on a regular basis (with membership or subscription fees) and those expenses that are punctual.		
<b>Pain points current tools</b>	"Banking apps are not going to fly with our generation."	"My banking app doesn't help me to manage my money better."	
<b>Flow</b>	"Flow is not solving anything that people can't solve themselves"	"UX Design is one of flow's strengths."	"Flow is not that necessary now that Bunq released the sorting feature."
<b>BUNQ</b>	Bunq, just assume that you know everything and they just offer the automation options, budgets etc. directly.	USING PHYSICAL BUDGETTING CARDS. Saving goals is helpful, but setting budgets and having individual cards for each budget helps to stick to your goal. Using different colors per card makes it easier to know with which card to pay (green = groceries for example)	
<b>KNAB</b>	"Knab is really good at finding something that people look for. People look for financial help, planning, etc. Knab asks the proper questions, not giving for granted that people know what they should do with the money."		
<b>ING</b>	"The ING app makes me do everything manually. I put manually the money on a bucket for my holidays, but that could be automatically done as soon as the income comes in."	"The ING app helps me because I can take action directly (move money to my savings accounts e.g. trips, mortgage, etc). The other apps helped me get an overview but from the moment I got it I didn't take the action."	I can separate my money into subaccounts in ING bank, splitting the money makes it seem like you have less
<b>RABOBANK</b>	Within the Rabobank app you can have "Piggy Banks" for specific targets	RABOBANK just told them how much did I want to save every month and it's "blocked" money.	Use bunq for budgets and ING for saving goals. They do help me. But I have to do manual labour to fill them, that's why I need Use Flow.
<b>ABN AMRO</b>	Have an overview of how much I spend and what areas I spend more money on (abn amro)		
<b>EXCEL</b>	It lets me set goals and has a progress bar which is satisfying (with excel)	"My budgeting accounts in excel give me inflows and outflows of my finances briefly, and this way I can reach my goals."	My spreadsheet! Created it myself, use it all the time, love it. Also, the fact that I can separate my money into sub accounts in my ING app is something I really make use of. I already put away money in them for things I am saving for, and splitting your money up makes it seem like you have less :)
<b>FINTONIC</b>	"The overview of my expenses/balances helps me (FINTONIC)."		
<b>REVOLUT</b>	REVOLUT: It has very nice Analytics dashboards + Vault and investing features		

<b>Solutions</b>	"You need to have something that makes you aware of the consequences of your actions and show your trade off. Otherwise you don't realise that you can't spend the money you are spending."	"Nothing can replace a good counsel."		
<b>Desired tools</b>	"If you can automate a counsel into a desirable and trustworth tech product, I bow to you"	"Having the overview of all subscriptions and end day would be awesome"	"Setting budgets (e.g. groceries) but using only one pay card. (e.g. apple)"	"My behaviour could change if a tool would automate my money."
	"A good B2C banking app doesn't exist yet. ING gets close, the rest is just high-risk stuff."	"I would like to use a tool that automates my money."	"Saving goals are nice but I mostly use multiple accounts and sorting transactions for budgetting. Apple pay is nice for the fact you can color code cards, 1 card per budget when paying"	"I don't want to sort the data in the spending categories myself."
	"It should be clear what's happening to my data in terms of privacy and security".	"The app needs to add value to my life."	"A system that works for me and automates as much as possible."	"Being in control"

<b>MM pain points</b>			
<b>Being caught in the short-term</b>	"During my first years of working I used to live short on money; I would spend all or more that I earned. When I was 29 I started worrying about money, because I realised I wasn't saving anything and my income was higher."	"I don't have a set amount of income every month, it is flexible normally."	
<b>Living from paycheck to paycheck</b>	The budget for the month was gone when the month was not. Big one-off (for my feeling) tax bills came in. Insurance companies who charge one month ahead (and thus charge double in the first month).	"I don't budget my money. I just watch how much is left in the end of the month. If it's not enough, then I get money from my savings account."	"The more you earn, the more you spend. It's really crazy."
<b>Budgeting problem</b>	Sometimes, Not accurate enough. I Budget the house, the bills, the petrol... I find more complicated to budget food as it depends on seasons, what we eat at the time and spare time to cook.	Too much work/lazy/scared for the realization	"I used to spend all my money when I was in my 30s. When I moved with my partner it positive influenced me in my finances."
<b>Negative surprises</b>	Sometimes I forget that Healthcare still has to be collected, and then suddenly my account is a little lower than before.	When I didn't keep track on my bank balance for a long time and it turned out to be ridiculously low.	Forgot a larger payment and then thought "where did all that money go?!"
<b>Bad financial planning</b>	I spend much more money than I thought in one week, because I had guests over, had to buy books for uni... I spend double the amount in that week compared to usually.	Missing credit card payments, accidental overdrafts on my savings or checking account.	Did not make long term planning, so I did not have a buffer for a big expense because I spent more than I could have afforded during holidays instead

# Insights

## Current tools

There are multiple solutions for getting an overview, budgeting or setting goals and multiple solutions to take action. Not so many solutions that merge this functionalities.

"The ING app makes me do everything manually. I put manually the money on a bucket for my holidays, but that could be automatically done as soon as the income comes in."

I use bung for budgets and ING for saving goals. They do help me. But I have to do manual labour to fill them, that's why I need use Flow.

"The ING app helps me because I can take action directly (move money to my savings accounts e.g. trips, mortgage, etc). The other apps helped me get an overview but from the moment I got it I didn't take the action."

Most of the users say that banking apps don't help to manage the money

"Banking apps are not going to fly with our generation."

"My banking app doesn't help me to manage my money better."

Feelings related to money management. Splitting money = seems less. Progress bar = satisfaction

Splitting your money up makes it seem like you have less ;)

It lets me set goals and has a progress bar which is satisfying. (with excel)

There is a step behind automating your money, which is knowing what you can actually do with the money you have. Most of the FinTech apps give this step for granted.

Bung, just assume that you know everything and they just offer the automation options, budgets etc. directly.

KNAB Very good at finding something that people look for: Financial help, planning, etc. Asking the proper questions, not like BUNQ giving for granted that people know what they should do with the money.

Visualising the numbers and making them visual could help motivating the people to save.

Numbers are quite abstract. How am I doing? Might translate better to a clear and motivating visual than to a single number.

## Solutions

## Money management pain points

A lack of budgetting the money usually leads to overspending

Sometimes I forget that Healthcare still has to be collected, and then suddenly my account is a little lower than before.

When I didn't keep track on my bank balance for a long time and it turned out to be ridiculously low.

Forgot a larger payment and then thought "where did all that money go?!"

I tend not to look often at my bank account because I am not so good with money. This means that whenever I open my bankaccount the amount is usually lower than expected.

Missing credit card payments, accidental overdrafts on my savings or checking account.

"I don't budget. I have a monthly allowance in my head. Usually I overspend, I think because I don't track it."

Most of the people think that they are doing good with their finances (surviving). Sometimes they add a little to their savings, sometimes they take something out. But if they zoom out: they're going nowhere with their money (caught in the short-term), not helping themselves in the future.

"I don't budget my money. I just watch how much is left in the end of the month. If it's not enough, then I get money from my savings account."

"During my first years of working I used to live short on money. I would spend all or more than I earned. When I was 29 I started worrying about money, because I realised I wasn't saving anything and my income was higher."

The budget for the month was gone when the month was not. Big one-off (for my feeling) tax bills came in. Insurance companies who charge one month ahead (and thus charge double in the first month).

"I don't have a set amount of income every month, it is flexible normally."

"The more you earn, the more you spend. It's really crazy."

"I used to spend all my money when I was in my 30's. When I moved with my partner it positive influenced me in my finances."

Some people struggle trusting the fin-tech apps. They would like a individual and personalised smart tech product that act like a counsel/accountant, that automates their money.

"Nothing can replace a good counsel."

"A system that works for me and automates as much as possible."

"If you can automate a counsel into a desirable and trustworthy tech product, I bow to you"

"My behaviour could change if a tool would automate my money."

"I would like to use a tool that automates my money."

"You need to have something that makes you aware of the consequences of your actions and show your trade off. Otherwise you don't realise that you can't spend the money you are spending."

Most of the users want to use a tool that adds value to their life, that makes them feel in control and that respects privacy and security.

"It should be clear what's happening to my data in terms of privacy and security".

"The app needs to add value to my life."

"I want to feel like being in control"

"A good B2C banking app doesn't exist yet. ING gets close, the rest is just high-risk stuff."

"Having the overview of all subscriptions and end day would be awesome"

"Setting budgets (e.g. groceries) but using only one pay card. (e.g. apple)"

## Postponing responsibilities

Most of the young adults plan to start saving/investing when X happens. They do want, but in the future, when the condition changes and then it's too late.

"I plan to start saving when I finish my studies and I have a job".

"I would like to start saving and starting to invest, but haven't really put the time into doing it properly."

"I will start saving for my pension when I have my first job. I know it's important but it also feels so far away. I'll look into these things later."

"Because of being an entrepreneur, right now I can't focus on long-term goals, just in short-term goals."

## Living in the moment

Most of the young adults are living in the moment, without worrying about finances and without thinking about long-term goals.

"I used to make life decisions that had a big financial impact. Like giving up everything to travel 3 months only to come back a pay to start over (housing, fridge, car, etc). I should be more conservative."

"I tend to buy things I don't need, forgetting to cancel subscriptions, etc."

I think I have very simple needs in life and in general, I don't spend tirelessly. So, I assume I don't need a regular budgeting."

## Social influence

Most of the millennials tend to compare to others. Social proof (compare to others that are in the same situation) can help to motivate the users to organise/save money.

"Paying the bills together with my wife helped me to be more responsible with my money. I wish I had this upbringing from my family before."

"I am not taking steps to reach my goals. I could spend less, but it's not attractive. I need a motivation, a deadline."

"Thinking about things like social proof, how I am doing compared to my peers? How much money do I need for a 3-week vacation? Could help me a lot."

## Knowing, not acting

There is a big group of young adults that are aware that they're not acting according to their long-term financial goals but they don't (want to) act to change it.

"Right now I am living from paycheck to paycheck."

"I don't save the same amount every month. I don't have that much self-control with money. I would like to start investing and to retire when I'm 40."

"During my first years of working I used to live short on money; I would spend all or more than I earned. When I was 29 I started worrying about money, because I realised I wasn't saving anything and my income was higher."

## Financial behaviour

### Current tools

#### Banking apps

Most of the users believe that banking apps are going to fly with our generation because they don't help to manage their money.

"Banking apps are not going to fly with our generation."

"My banking app doesn't help me to manage my money better."

#### ING - Lack of actions

There are multiple solutions for getting an overview, budgeting or setting goals and multiple solutions to take action. Not so many solutions that merge these functionalities.

"The ING app makes me do everything manually. I put manually the money on a bucket for my holidays, but that could be automatically done as soon as the income comes in."

"I use bunq for budgets and ING for saving goals. They do help me. But I have to do manual labour to fill them, that's why I need/use Flow."

"The ING app helps me because I can take action directly (move money to my savings accounts e.g. trips, mortgage, etc). The other apps helped me get an overview but from the moment I got it I didn't take the action."

#### Visualising the insights

Visualising the numbers (of saving and spending) could help motivating young adults to save money and to reach their personal goals.

"Numbers are quite abstract. How am I doing? Might translate better to a clear and motivating visual than to a single number."

"The use of progress bars to visualise the goals makes me feel satisfaction".

#### Basic financial literacy

There is a step behind automating your money, which is knowing what you can actually do with the money you have. Most of the FinTech apps give this step for granted.

"Bunq, just assumes that you know everything and they just offer the automation options, budgets etc. directly."

"KNAB is very good at finding something that people look for: Financial help, planning, etc. Asking the proper questions, not like BUNQ giving for granted that people know what they should do with the money."

#### Postponed gratification

Low financial health normally happens when young adults are only thinking in the short-term, until they realise that they want a lifestyle inflation and they can't afford it - Oh shit moment.

"We need to make sacrifices in the short-term in order to benefit in the long-term. I would love to travel, but I need to be aware of my actions and consequences."

#### Learning finances at a young age

People that have a good example from someone that managed the money well in life tend to be more motivated to (normally their family) manage their money well. However, it can cause the opposite effect. There's also people that grow up in a very wealthy context, therefore they don't understand the value of money.

"My step dad had a very comfortable life because of his business. His example gives me a motivation to do it well."

"There's a big group of people who isn't financially literate. It happens because the lack of tools that make it easy to understand."

"I am used from my early childhood that having an overview of your finances is necessary. In my culture it is common to start a fund for your child early and that kids collect the money they get as gifts for a period of time in order to be able to pay for something bigger at one point."

"I learnt from a Young age to work for money if I wanted to buy things. That taught me the value and I kept an eye on my finance."

#### A step before automating

People need to learn about financial literacy before starting automating their money. They need to know what part of their costs are variable and fixed.

"Before starting automating your money you need to do a lot of work yourself. To teach people about financial literacy themselves to look into variable costs and fix costs."

"The important is to have discipline, and about learning that money can generate money over."

### Money management

#### Poor Money Management

Most of the people think that they are doing good with their finances (surviving). Sometimes they add a little to their savings, sometimes they take something out. But if they zoom out: they're going nowhere with their money (caught in the short-term), not helping themselves in the future.

"I don't budget my money. I just watch how much is left in the end of the month. If it's not enough, then I get money from my savings account."

"During my first years of working I used to live short on money; I would spend all or more than I earned. When I was 29 I started worrying about money, because I realised I wasn't saving anything and my income was higher."

"I don't have a set amount of income every month, it is flexible normally."

"I used to spend all my money when I was in my 30's. When I moved with my partner it positive influenced me in my finances."

"The more you earn, the more you spend. It's really crazy."

#### A lack of budgeting

A lack of budgeting the money usually leads to overspending

"I don't budget. I have a monthly allowance in my head. Usually I overspend, I think because I don't track it."

"I tend not to look often at my bank account because I am not so good with money. This means that whenever I open my bank account the amount is usually lower than expected."

"When I didn't keep track on my bank balance for a long time and it turned out to be ridiculously low."

## Solutions

### Money automation

People would like a individual and personalised smart tech product that act like a counsel/accountant, that automates their money.

"A system that works for me and automates as much as possible."

"My behaviour could change if a tool would automate my money."

"You need to have something that makes you aware of the consequences of your actions and show your trade off. Otherwise you don't realise that you can't spend the money you are spending."

### A trustworthy service

Most of the users want to use a tool that adds value to their life, that makes them feel in control and that respects privacy and security.

"It should be clear what's happening to my data in terms of privacy and security".

"The app needs to add value to my life."

" I want to feel like being in control"

"A good B2C banking app doesn't exist yet. ING gets close, the rest is just high-risk stuff."

"Having the overview of all subscriptions and end day would be awesome "

### Combining physical cards

The use of a physical card linked to the budgeting accounts makes it easier to respect those budgets.

"Setting budgets (e.g. groceries) but using only one pay card. (e.g. apple)."

"Saving goals are nice but i mostly use multiple accounts and sorting transactions for budgetting. Apple pay is nice for the fact you can color code cards, 1 card per budget when paying."

## Financial behavior

Low financial health normally happens when young adults are only thinking in the short-term, until they realise that they want a lifestyle inflation and they can't afford it - Oh shit moment.

"People often have a lifestyle inflation. They can't afford to buy a car but they buy it anyway because they want to be in the same level as their neighbours."

"We need to make sacrifices in the short-term in order to benefit in the long-term. I would love to travel, but I need to be aware of my actions and consequences."

"While people think that the income will get much higher, is not the case because the expenses increase."

People that have a good example from someone that managed the money well in life tend to be more motivated to (normally their family) manage their money well.

However, it can cause the opposite effect. There's also people that grow up in a very wealthy context, therefore they don't understand the value of money.

"My step-dad had a very comfortable life because of his business. His example gives me a motivation to do it well."

"There's a big group of people who isn't financially literate. It happens because the lack of tools that make it easy to understand."

"I really appreciate my mum's effort to save money for my studies since I was a child"

I do not spend more than I can afford. I don't want to be in a situation where I become dependent on someone else. This came from my family teaching me about the value of items and making me feel guilty for asking for money. I do not like feeling and being dependent on anyone.

I am used from my early childhood that having an overview of your finances is necessary. In my culture it is common to start a fund for your child early and that kids collect the money they get as gifts for a period of time in order to be able to be pay for something bigger at one point.

I learned from a Young app to work for money if I wanted to buy things. That taught me the value and I kept an eye on my finance.

People need to learn about financial literacy before starting automating their money. They need to know what part of their costs are variable and fixed.

"Before starting automating your money you need to do a lot of work yourself. To teach people about financial literacy themselves to look into variable costs and fix costs."

"The important is to have discipline, and about learning that money can generate money over."

## Millennials

The use of a physical card linked to the budgeting accounts makes it easier to respect those budgets.

"Saving goals are nice but i mostly use multiple accounts and sorting transactions for budgetting. Apple pay is nice for the fact you can color code cards, 1 card per budget when paying"

There is a big group of people that are aware that they're not acting according their long-term goals but they don't change it

"Right now I am living from paycheck to paycheck."

"I don't save the same amount every month. I don't have that much self-control with money. I would like to start investing and to retire when I'm 40."

Using social proof (compare to others in the same situation) can help to motivate the users to organise/save money.

"Paying the bills together with my wife helped me to be more responsible with my money. I wish I had this upbringing from my family before."

"If I can save something I would do it for the long-term (for example, paying the university of my son), but for the short-term (holidays) I would just use a credit."

"I am not taking steps to reach my goals. I could spend less, but it's not attractive. I need a motivation, a deadline."

Thinking about things like social proof. How I am doing compared to my peers? How much money do I need for a 3-week vacation? Could help me

Most of the young adults are living in the moment, without worrying about finances and thinking about long-term goals.

I use to make life decisions that had a big financial impact. Like giving up everything to travel 3 months only to come back a pay to start over (housing, fridge, car, etc). Should be more conservative.

I think I have very simple needs in life and in general, I don't spend tirelessly. So, I assume I don't need a regular budgeting

Don't tend to have too many to worry now. Ex: I have no mortgage, kids, education bills etc to pay for

I tend to buy things I don't need, forgetting to cancel subscriptions

Most of the young adults plan to start saving/investing when X happens. They do want, but in the future, when the condition changes and then it's too late.

"I plan to start saving when I finish my studies and I have a job"

After graduation, start saving for first payment for my apartment

"Because of being an entrepreneur, right now I can't focus on long-term goals, just in short-term goals."

Not saving now, because I don't have the resources now. But I'm investing my time wisely to educate myself so I become "valuable"

I would like to start saving and starting to invest, but haven't really put the time into doing it properly.

"I will start saving for my pension when I have my first job. I know it's important but it also feels so far away. I'll look into these things later."

Figure [FR6]

# How to's

## Millennials

There is a big group of people that are aware that they're not acting according to their long-term goals but they don't change it

Using social proof (compare to others in the same situation) can help to motivate the users to organise/save money.

Most of the young adults are living in the moment, without worrying about finances and thinking about long-term goals.

Most of the young adults plan to start saving/investing when X happens. They do want, but in the future, when the condition changes and then it's too late.

How to make people that are aware about their behaviour to act according to the long term?

How to create behavioural change with the use of peer pressure or comparison to others?

How to make young adults to focus on their future too, and not think that it's too late?

How to encourage young adults to start NOW to save money, and not when X happens?

## Current tools

There are multiple solutions for getting a money overview, budgeting or setting goals and multiple solutions to take action. Not so many solutions that merge these functionalities.

Most of the users say that banking apps don't help them to manage the money

Feelings related to money management. Splitting money = seems less. Progress bar = satisfaction

There is a step behind automating your money, which is knowing what you can actually do with the money you have. Most of the FinTech apps give this step for granted.

How can a digital solution merge these functionalities? (overview, budget, automation)

What service could improve the experience of the bank, and help people to manage their money?

How can design create positive emotions for actions like saving money?

How to teach people to learn the 'step behind' before automating their money?

## Financial behaviour

People need to learn about financial literacy before starting automating their money. They need to know what part of their costs are variable and fixed.

People that have a good example from someone that managed the money well in life tend to be more motivated to (normally their family) manage their money well. However, it can cause the opposite effect. There's also people that grow up in a very wealthy context, therefore they don't understand the value of money.

Low financial health normally happens when young adults are only thinking in the short-term, until they realise that they want a lifestyle inflation and they can't afford it - Oh shit moment.

How to teach people financial literacy?

How can low financial healthy people learn from others to manage better their money?

How to make young adults avoid the oh-shit moment?

## Money management pain points

A lack of budgeting the money usually leads to overspending

Most of the people think that they are doing good with their finances (surviving). Sometimes they add a little to their savings, sometimes they take something out. But if they zoom out: they're going nowhere with their money (caught in the short-term), not helping themselves in the future.

How to help people to budget their money?

How to make realise to people that they are going nowhere with their money?

## Solutions

Some people struggle trusting the fin-tech apps. They would like a individual and personalised smart tech product that act like a counsel/accountant, that automates their money.

Most of the users want to use a tool that adds value to their life, that makes them feel in control and that respects privacy and security.

The use of a physical card linked to the budgeting accounts makes it easier to respect those budgets.

How to build trust within fin-tech apps? How to create a smart digital accountant?

How to make people feel in control with their money while using a fin-tech app?

How to create a digital card that helps changing the behaviour of spending money?



## Design opportunities



## The use of gamification

Gamification in finances is getting more and more common every day. Many people use financial apps to set future financial goals and track their progress. There are many FinTech apps that use the gamification as a strategy to engage customers.

### Market analysis

**Monzo** [2] is millennials favourite bank launched in 2015, that uses gamification as a strategy to transition customers into using Monzo as their main account.

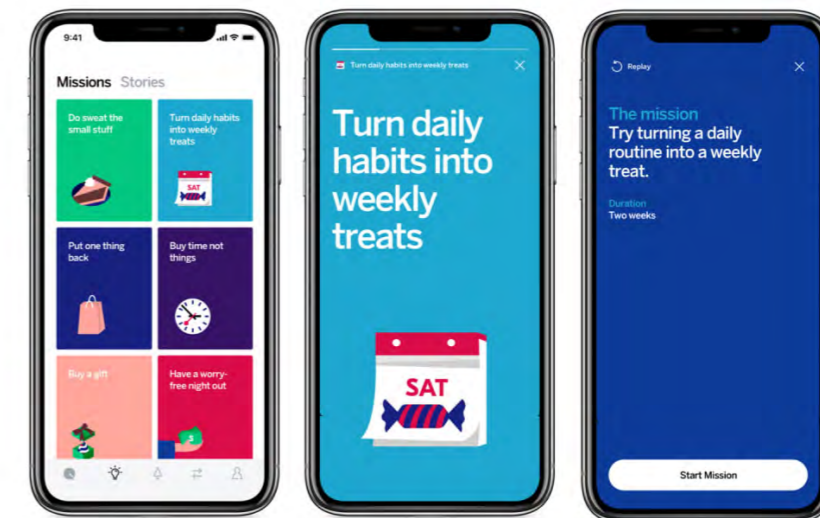
**Capital** [3] is a financial app that offers a variety of different tools to help people to manage their money better. It uses gamification to make doing it more fun. It's possible to create both short-term goals and long-term investment goals, or even set up Joint Goals with

others. Furthermore, it is also possible to set "rules" that trigger saving.

**Givling** [4] uses gamification as a core of their product. Givling is an app that has the goal to help people reducing their student debt by the use of gamification. Each day, the user can go to the app to play trivia games.

### Opportunities

Some people feel sceptical about gamification for financial services. However, gamification can help to bring surprising approaches to customers and experiences. As a design opportunity for this project, gamification could be part of the futures of the final design solution as in user experience interactions, but not as a core of the solution for the project.





# Graduation project **CREATIVE SESSION: Design a digital tool for positive financial behaviour**

Hike One x Flow x TU Delft

## APPENDIX F: Creative session



### DATE / DURATION

**When?**  
Friday June 12th  
**Duration:**  
4 h (13 pm - 17pm)



### TOOLS

**Zoom** - Group online meeting  
**Miro** - Whiteboard  
**Google slides** - Presentation material  
\* **To prepare** - **Sketching material**



### APPROACH

- 1. Introduce design goal and design vision**
- 2. Introduce user personas to participants**
- 3. Creative session**
  - Warm-up exercise (example: flower association)
  - **How to's:** method based on problem generation. Participants will be asked to think any possible solution. The How to's will be prepared before the creative session.
  - **Ideation:** Individual ideation. Delivering a concept per participant and final group discussion.

**What will my role be?**

- Introduction of the project
- Moderator
- Time keeper
- Prepare how to's



### PARTICIPANTS

7 - 10 persons

- Flow Money Automation (4)
- Hike One (3) visual designers, interaction designers or product/service designers
- TU Delft - Industrial Design Faculty (3)



### GOAL

1. Inspiration for design
2. Refine design goal and interaction qualities during the process



### OUTCOME

The desired outcome is to finish the session with at least 5 interesting concepts  
There is the possibility to organise a second ideation session for the final concept but will be discussed during the conclusion of the first ideation session.

### Questions?



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# Appendix How to's

- Discarded How to's
- Most voted how to's
- How to's that weren't relevant

How to make it usable for everyone?	How to help people to decide what they want and what they need?	How to motivate people through a sense of achievement?	How to use gamification for this?	How to make people aware that this is a problem about their spending habits and not about their paycheck amount?	How to tell people that they have the 'Oh shit moment' coming up?
How to help people to find their best tailored solution for them?	Should it always be fun?	How to educate people on financial health?	How to make people feel at ease with their long-term goals?	How to make people reflect on their financial goals?	How to help people that cannot save?
How do they feel about automatic budgets?	How do people feel about automatic budgets?	How to make it a part of your everyday habits?	How to show people the impact of their money saved?	How to show their route towards their financial goals?	How to show people the value of saving?
How to feel confident about your decisions?	How to relieve tensions between autonomy and guidance?	How to motivate people to keep on going?	How to make people financially literate, understand what is going on and not just follow the app?	How to provide a sense of scale on people's financial progress?	How to make these healthy habits scalable? When the paycheck gets bigger for example.
How do they manage their money right now?	How to show them the insights of their made actions?	How to Duolingo?	How to do it together with your partner?	How to gradually map out the current situation without overwhelming and preventing decision fatigue?	How to make people cope with the emotions connected to failing?
How to get them out of the shit?	How to use Flow when the income is not regular?	How to decide on a realistic target to save each month?	How to co-create a view on financial health with the person?	How to make people positively reinforce for the savings?	How to make people cope with the emotions connected to failing?
How do we know what 'OSM' are for people?	How to overcome the initial fear that people might feel regarding finances?	How to keep it fun to do? not too easy and not too hard!	How to make positively reinforce for the savings?	How to make people cope with the emotions connected to failing?	How to make people cope with the emotions connected to failing?
How to make a large goal, like buying a house, more reachable?	How to get friends and family to recommend Flow?	How to make the whole journey more fun not only just reaching the goal?	How to show people the value of saving?	How to get people trust a financial app?	How to get people trust a financial app?
How to show the value of the baby steps?	How to reach out people disappointed by other solutions?	How to motivate people to save through social interactions?	How to motivate people towards taking action?	How to present Flow as an option to help them with their finances?	How to present Flow as an option to help them with their finances?
How do they feel about this? anxiety, chill, etc.	How to create different experiences for different levels of mastery?	How to enable/stimulate the word of mouth communication?	How to inspire a goal setting from small to huge?		

# Appendix How to's

This is Fieke, a 28 y.o. dutch freelance designer.	Fieke lives the moment fully. She loves travelling and enjoying the time with her friends.	For her, money is there to be spent. She doesn't have control over her finances, like for example, a savings or investing account.	Often, she is stuck financially, and she lives from paycheck to paycheck.
How to make people aware that this is a problem about their spending habits and not about their paycheck amount?	How to tell people that they have the 'Oh shit moment' coming up?		
One day, she considers buying a house, and she realizes that her financial situation is worse than what she ever imagined. (Oh Shit Moment)	Fieke realizes that the situation needs to be changed. She is motivated, but she doesn't know how to start.	She asks for advice to her family/friends, and she tries out multiple solutions but none of them works well for her.	Finally Fieke finds Flow, and she downloads it because she likes that they offer a personal and tailored solution for her situation.
How do they manage their money right now?	How to show the value of the baby steps? How do they feel about this? anxiety, chill, etc.	How to get people trust a financial app?	How to make it usable for everyone?
How to get them out of the shit?	How to inspire a goal setting from small to huge?	How to get friends and family to recommend Flow?	How to help people to find their best tailored solution for them?
How do we know what 'OSM' are for people?	How to motivate people towards taking action?	How to reach out people disappointed by other solutions?	How do they feel about automatic budgets?
How to make a large goal, like buying a house, more reachable?	How to show people the value of saving?	How to create different experiences for different levels of mastery?	How to feel confident about your decisions?
		How to motivate people to save through social interactions?	
		How to present Flow as an option to help them with their finances?	
Fieke likes using Flow because she can automate her money and it makes it easier to not overspend.	Using Flow for a while makes Fieke understand her spending behaviour and to have a budget reality.	After using Flow for a while, Fieke has her monthly groceries budget under control.	Fieke manages for first time in her life, to have some extra money by the end of the month.
	How to motivate people through a sense of achievement? How to educate people on financial health? How to make it a part of your everyday habits? How to motivate people to keep on going?	How to use gamification for this?	How to make people reflect on their financial goals?
	How to Duolingo?	How to make people feel at ease with their long-term goals?	How to help people that cannot save?
	How to decide on a realistic target to save each month?	How to show people the impact of their money saved?	How to show their route towards their financial goals?
	How to keep it fun to do? not too easy and not too hard!	How to make people financially literate, understand what is going on and not just follow the app?	How to provide a sense of scale on people's financial progress?
	How to make the whole journey more fun not only just reaching the goal?	How to make people cope with the emotions connected to failing?	
This action is repeated several times, until she starts saving more and more every month.		After a couple of years, Fieke becomes financially healthy. She now has control over her finances, has some money saved and she started investing monthly.	
How to do it together with your partner?		How to make these healthy habits scalable? When the paycheck gets bigger for example.	
How to co-create a view on financial health with the person?			
How to make positively reinforce for the savings?			
How to gradually map out the current situation without overwhelming and preventing decision fatigue?			



**Panel 1:** This is Fieke, a 28 y.o. dutch freelance designer.

**Panel 2:** Fieke lives the moment fully. She loves travelling and enjoying the time with her friends.

**Panel 3:** For her, money is there to be spent. She doesn't have control over her finances, like for example, a savings or investing account.

**Panel 4:** Often, she is stuck financially, and she lives from paycheck to paycheck.

**Panel 5:** One day, she considers buying a house, and she realizes that her financial situation is worse than what she ever imagined. (Oh Shit Moment)

**Panel 6:** Fieke realises that the situation needs to be changed. She is motivated, but she doesn't know how to start.

**Panel 7:** She asks for advice to her family/friends, and she tries out multiple solutions but none of them works well for her.

**Questions for Panel 1:**

- How to make people aware that this is a problem about their spending habits and not about their paycheck amount?
- How to tell people that they have the 'Oh shit moment' coming up?

**Questions for Panel 5:**

- How do they manage their money right now?
- How to get them out of the shit?
- How do we know what 'OSM' are for people?
- How to make a large goal, like buying a house, more reachable?

**Questions for Panel 6:**

- How to show the value of the baby steps?
- How do they feel about this? anxiety, chill, etc.
- How to inspire a goal setting from small to huge?
- How to motivate people towards taking action?
- How to show people the value of saving?

**Questions for Panel 7:**

- How to overcome the initial fear that people might feel regarding finances?
- How to get friends and family to recommend Flow?
- How to reach out people disappointed by other solutions?
- How to create different experiences for different levels of mastery?
- How to motivate people to save through social interactions?
- How to enable/stimulate the word of mouth communication?

**Questions for Panel 8:**

- How to get people trust a financial app?
- How to present Flow as an option to help them with their finances?

**Panel 8:** Finally Fieke finds Flow, and she downloads it because she likes that they offer a personal and tailored solution for her situation.

**Panel 9:** Fieke likes using Flow because she can automate her money and it makes it easier to not overspend.

**Panel 10:** Using Flow for a while makes Fieke understand her spending behaviour and to have a budget reality.

**Panel 11:** After using Flow for a while, Fieke has her monthly groceries budget under control.

**Panel 12:** Fieke manages for first time in her life, to have some extra money by the end of the month.

**Panel 13:** This action is repeated several times, until she starts saving more and more every month.

**Panel 14:** After a couple of years, Fieke becomes financially healthy. She now has control over her finances, has some money saved and she started investing monthly.

**Questions for Panel 8:**

- How to make it usable for everyone?
- How to help people to find their best tailored solution for them?
- How do they feel about automatic budgets?
- How to feel confident about your decisions?

**Questions for Panel 9:**

- How to help people to decide what they want and what they need?
- Should it always be fun?
- How do people feel about automatic budgets?
- How to relief tensions between autonomy and guidance?
- How to show them the insights of their made actions?
- How to use Flow when the income is not regular?

**Questions for Panel 10:**

- How to motivate people through a sense of achievement?
- How to educate people on financial health?
- How to make it a part of your everyday habits?
- How to motivate people to keep on going?
- How to Duolingo?
- How to decide on a realistic target to save each month?
- How to keep it fun to do? not to easy and not too hard!
- How to make the whole journey more fun not only just reaching the goal?
- How to make people cope with the emotions connected to failing?

**Questions for Panel 11:**

- How to use gamification for this?
- How to make people feel at ease with their long-term goals?
- How to show people the impact of their money saved?
- How to make people financially literate, understand what is going on and not just follow the app?

**Questions for Panel 12:**

- How to make people reflect on their financial goals?
- How to help people that cannot save?
- How to show their route towards their financial goals?
- How to provide a sense of scale on people's financial progress?

**Questions for Panel 13:**

- How to do it together with your partner?
- How to co-create a view on financial health with the person?
- How to make positively reinforce for the savings?
- How to gradually map out the current situation without overwhelming and preventing decision fatigue?

**Questions for Panel 14:**

- How to make these healthy habits scalable? When the paycheck gets bigger for example.

# Inspiration board

## Staying motivated

- How to motivate people through a sense of achievement?
- How to motivate people to keep on going?
- How to educate people on financial health?
- How to motivate people to save through social interactions?
- How to Duolingo?
- How to help people to decide what they want and what they need?
- How to use gamification for this?
- How to make it a part of your everyday habits?
- How to feel confident about your decisions?

## Visualising goals

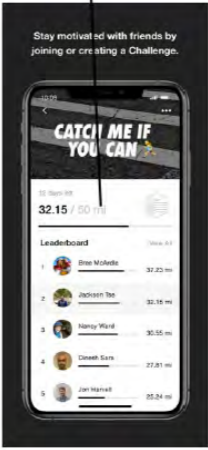
- How to make people reflect on their financial goals?
- How to help people that cannot save?
- How to show their route plan to reach financial goals?
- How to make a large goal, like buying a house, more reachable?
- How to show the value of the baby steps?
- How to make people financially literate, understand what is going on and not just follow the app?
- How to show their route towards their financial goals?
- How to provide a sense of scale on people's financial progress?

## Nike Running Club

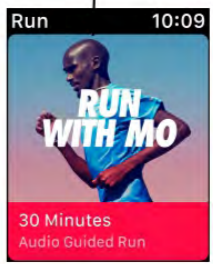
Achievements



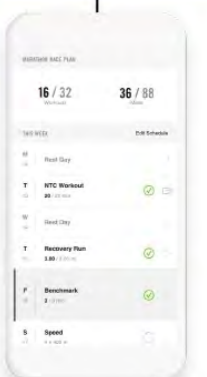
Social motivation



Experience by famous people / Storytelling

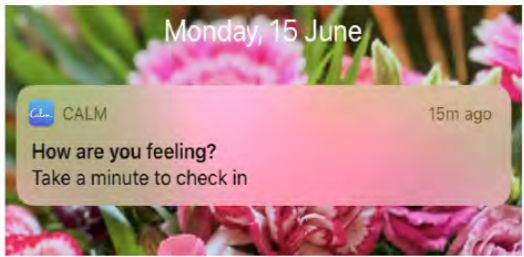


Show route plan towards financial goals



A schedule that can change because real life happens

## CALM

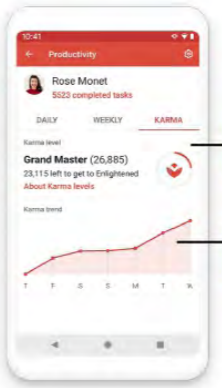


Notifications can be very useful for habits.

Mindfulness reminder: not trying to get the user to go to the app, but to help him in that moment.

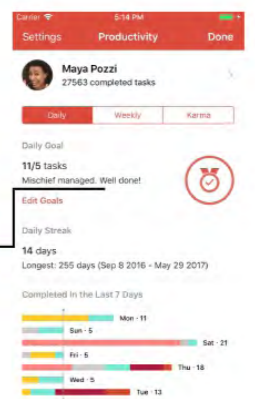
Honesty

## Todoist

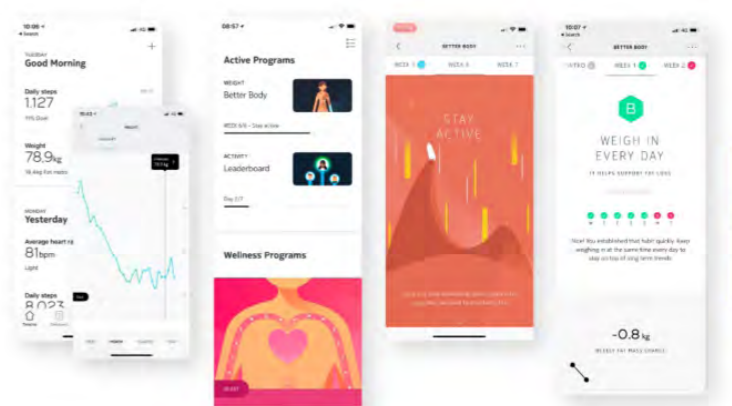


Points/karma for your own tasks

Display own progress and reward it



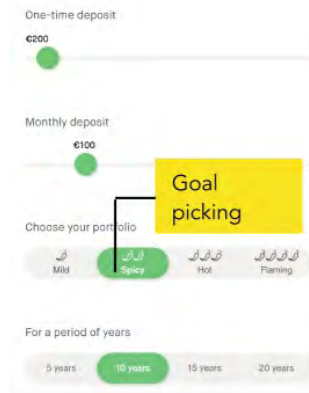
## Health mate



Habit reminder. Step by step you reach the goals.



## Peaks



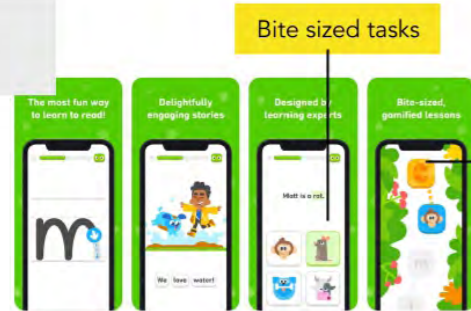
Goal picking



Simplicity: Spicy, hot, flaming

Visualise roadmap

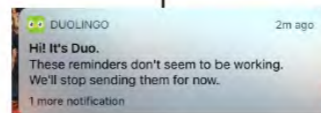
## Duolingo



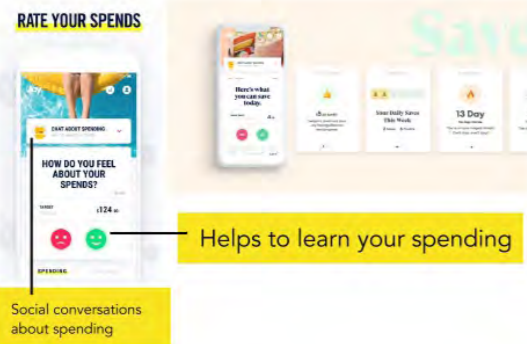
Bite sized tasks

Use of gamification

Passive aggressive



## JOY



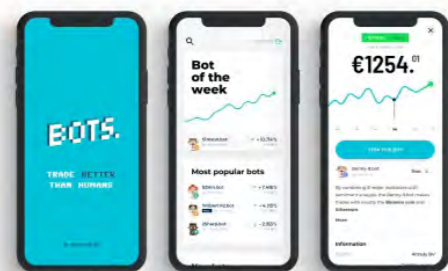
Helps to learn your spending

Futuristic FinTech

Fun and functional

## BOTS

A bot that invests your money.



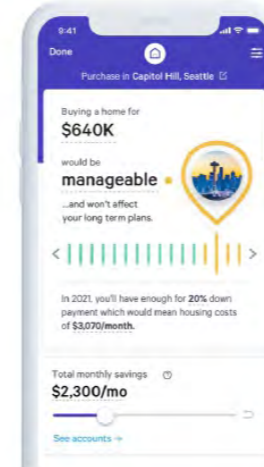
Making something technical Human Friendly

Balance between human and botness

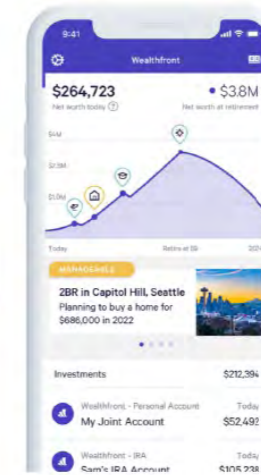
Show who's behind it: credibility

## Wealthfront

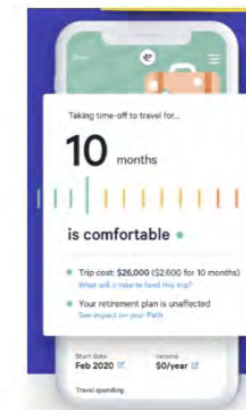
upgrade system: what things can you do while still being on track?



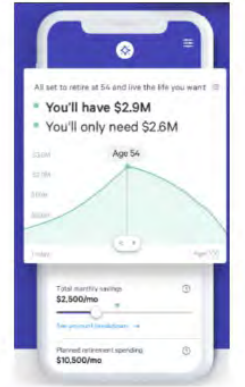
Visualising the roadmap with the future goals



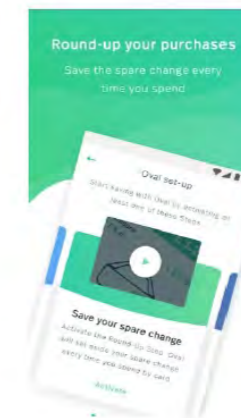
Translating long term goals into an understandable metaphor



Small advice: taking some time off is comfortable



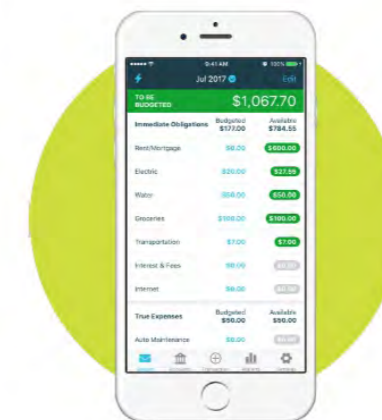
## OVAL Money



Gamification that actually helps! e.g. setting aside money every time is spent in the same category.

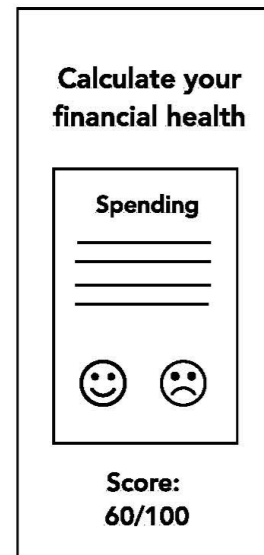
Similar to Flow 1 cent challenge

## YNAB

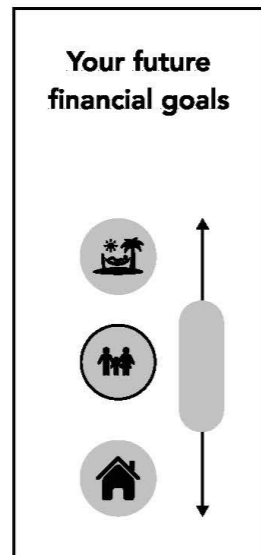


Forces the user to make choices and reflect about their financial goals

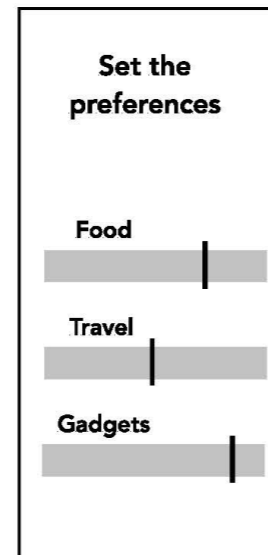
# Concept



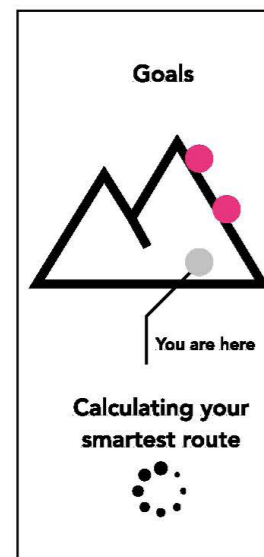
1. Calculating financial health by using the example of happy spend.



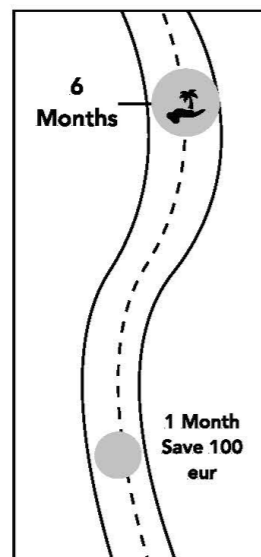
2. Set future goals and timing



3. Visualising the future goals in a mountain



4. Set up preferences



5. Starting small, big picture

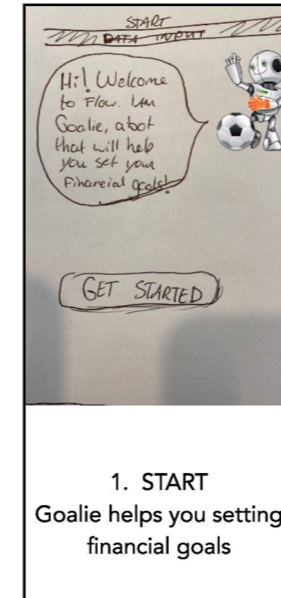


6. Notifications to keep you motivated.

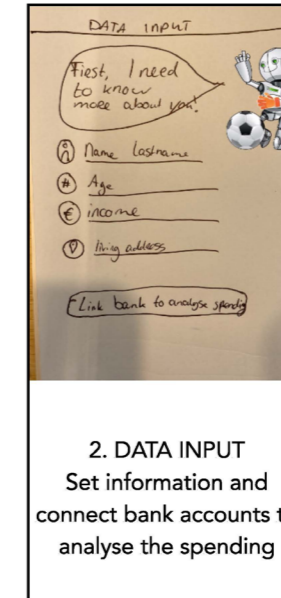
## TAKE AWAYS

- > Test to calculate financial health could be interesting / or to calculate the level of satisfaction towards their financial life
- > Visualising goals in a mountain
- > Showing financial goals route with small milestones until reaching the bigger goals
- > Notifications to keep up the motivation of the people

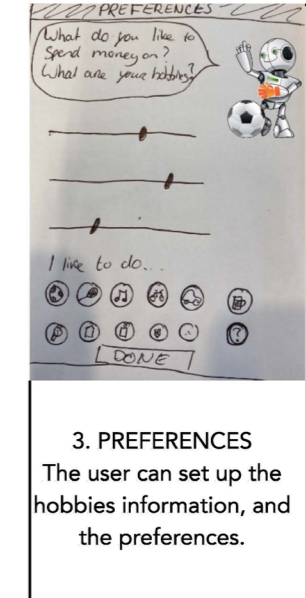
# Concept



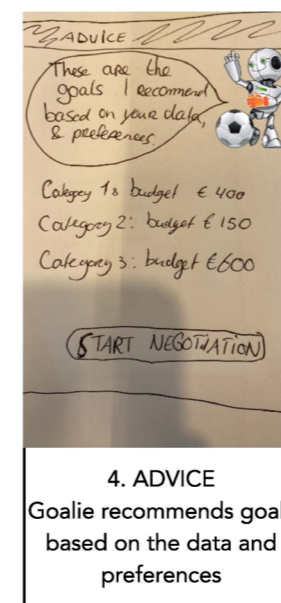
1. START  
Goalie helps you setting financial goals



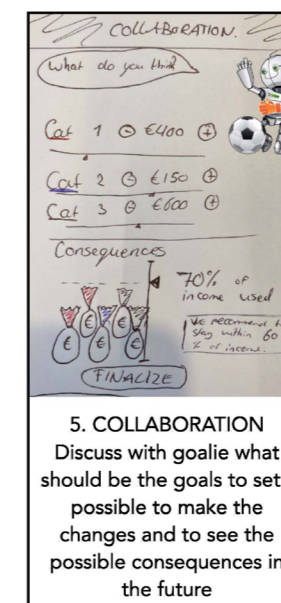
2. DATA INPUT  
Set information and connect bank accounts to analyse the spending



3. PREFERENCES  
The user can set up the hobbies information, and the preferences.



4. ADVICE  
Goalie recommends goals based on the data and preferences

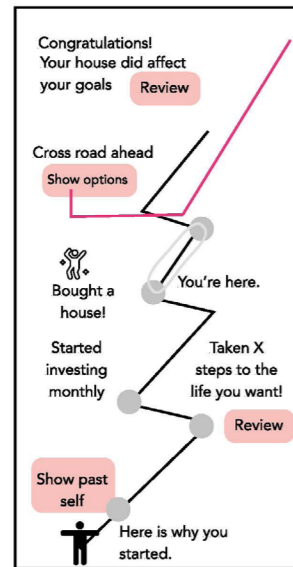


5. COLLABORATION  
Discuss with goalie what should be the goals to set - possible to make the changes and to see the possible consequences in the future

## TAKE AWAYS

- > personalised robot/buddy/advisor, that helps you setting the goals and connecting your present to the future
- > Gamification: The buddy has a 'name' and a 'fun shape'. Maybe a goal keeper is a bit out of tone, but what about a 'Mum' or a 'advisor'.





Roadmap showing the big picture, the achievements, the next steps, etc.

### Cross road

Minimal mortgage payment + Invest	Paydown quicker
+ Goal meeting - More debt	+ Less debt - Retire at 55

**Your principles / Priorities**

1. Freedom to retire
2. Investing
3. Minimise my debt

Help me prioritise

Cross road: if you want to reach your goal faster, which actions should you take?

### Current ETA

> On track to retire at 40  
Your goal was at 50. You are way ahead!

**Change destination**

> Retire luxurious at 50  
> Make 40 my new goal  
> Let's blow some money

Showing the current 'estimation time of arrival' just as google maps would do. Giving the options of modifying the route or changing the destination.

### Actions taken by you

Continue? T / :)

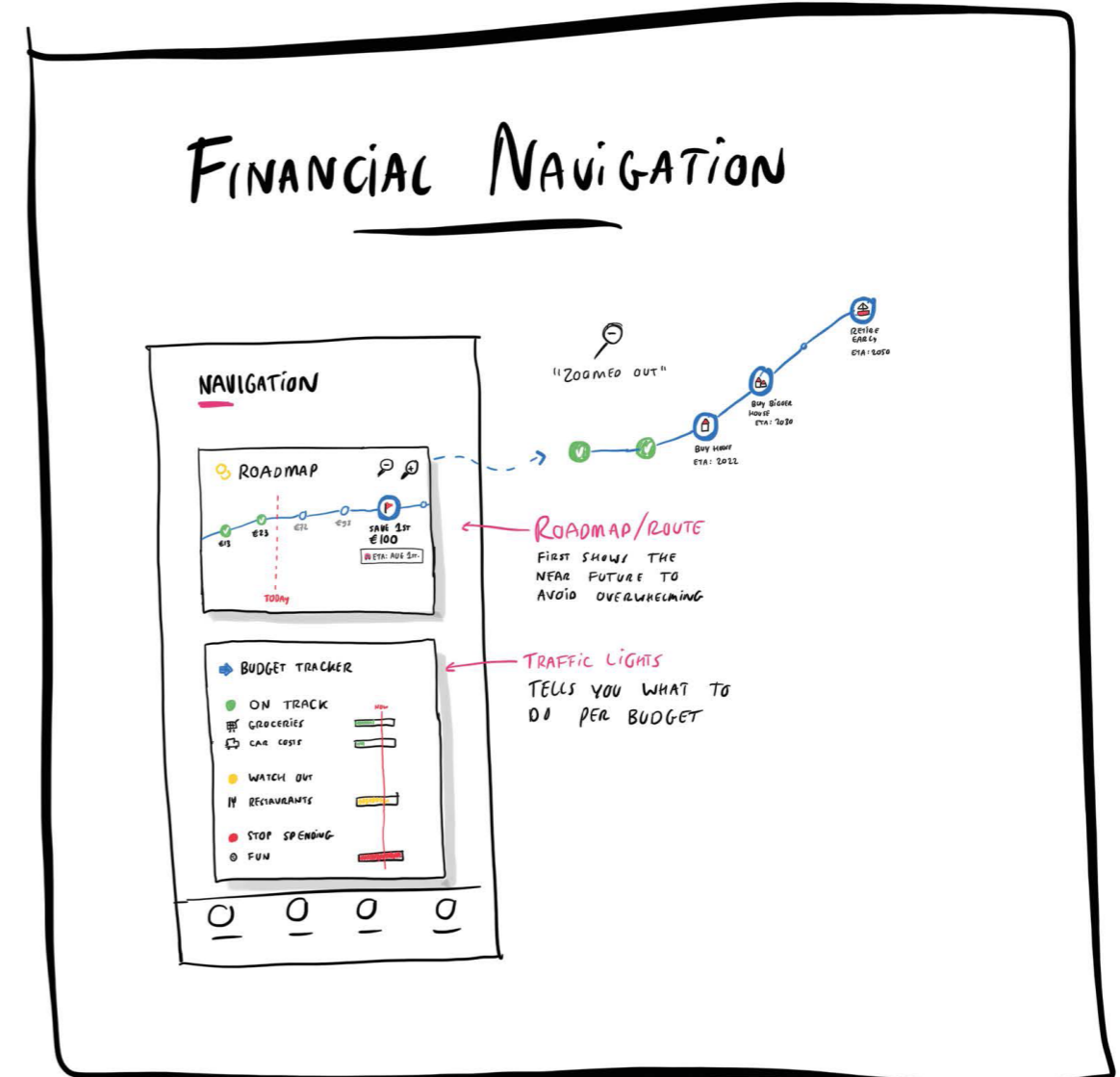
Stopped smoking	Y/N	45	▲+	▲
Use gym membership	Y/N	20m	▲▲▲	▲▲▲
Investing 300/month	Y/N	45y	4-	1 =

Adjust journey / Show tips / Improve

Showing the actions that the user has taken in order to improve their financial situation. Not only things like investing but also, gym memberships or stopping smoking. > useful for the motivation part.

## TAKE AWAYS

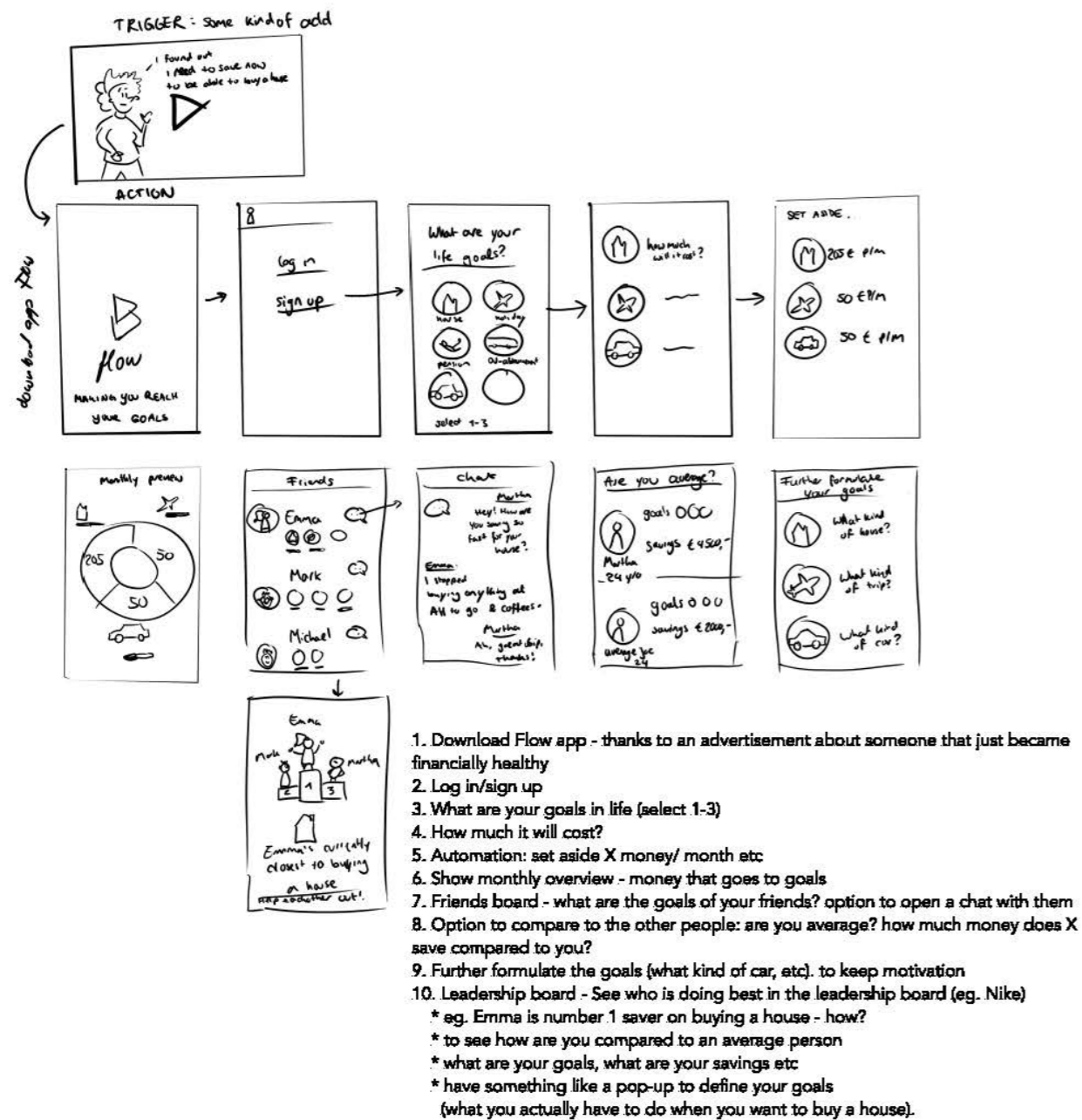
- > Showing the roadmap with options to see the starting point, the WHY you started with this roadmap, and the achievements you already took until today.
- > Option of 'cross road' and to give the 'buddy' the option to help you prioritize your goals.
- > In general I really like the roadmap with the achievements and the big picture of the financial situation. It feels like a game, where you can see the achievements.
- > Change destination option: giving the user the control over their life. Buddy as supportive and giving the user the ability and keeping the motivation up.



- \* 2 cards
- \* roadmap cards: goal and a route towards it
- \* budget tracker cards: use for this month, kind of traffic lights
- \* option to zoom in and out
- \* not zooming too far out because it can be overwhelming?

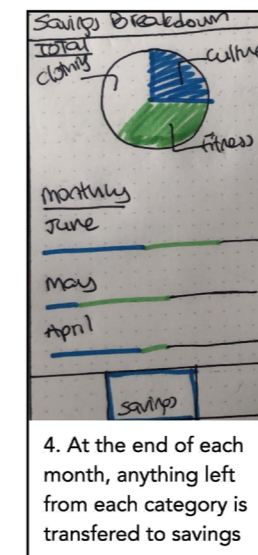
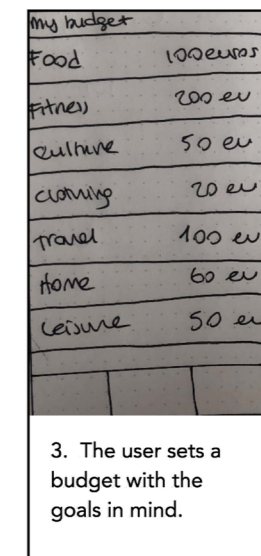
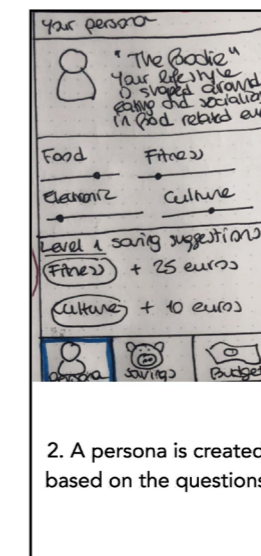
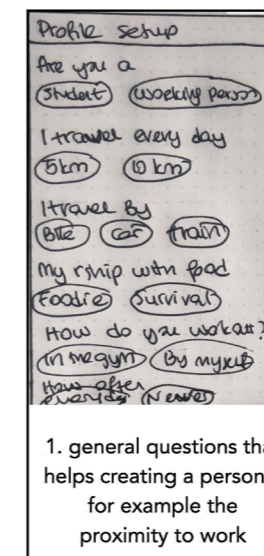
## TAKE AWAYS

- > The option of zooming out visualising the goal and also the ETA.
- > STEP BY STEP ROADMAP: first showing the near future to not overwhelm
- > Using traffic lights for budget tracker



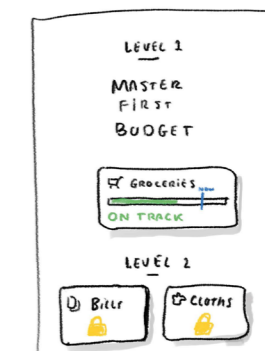
## TAKE AWAYS

> Social sharing goals was one of the research insights already, and it's interesting to keep people motivated through comparing to their friends / family. However it should be important to not make it an obligation because a lot of people don't like to share their money insights.



When the goals are achieved, consecutively a level up is suggested!

## BONUS: GAME

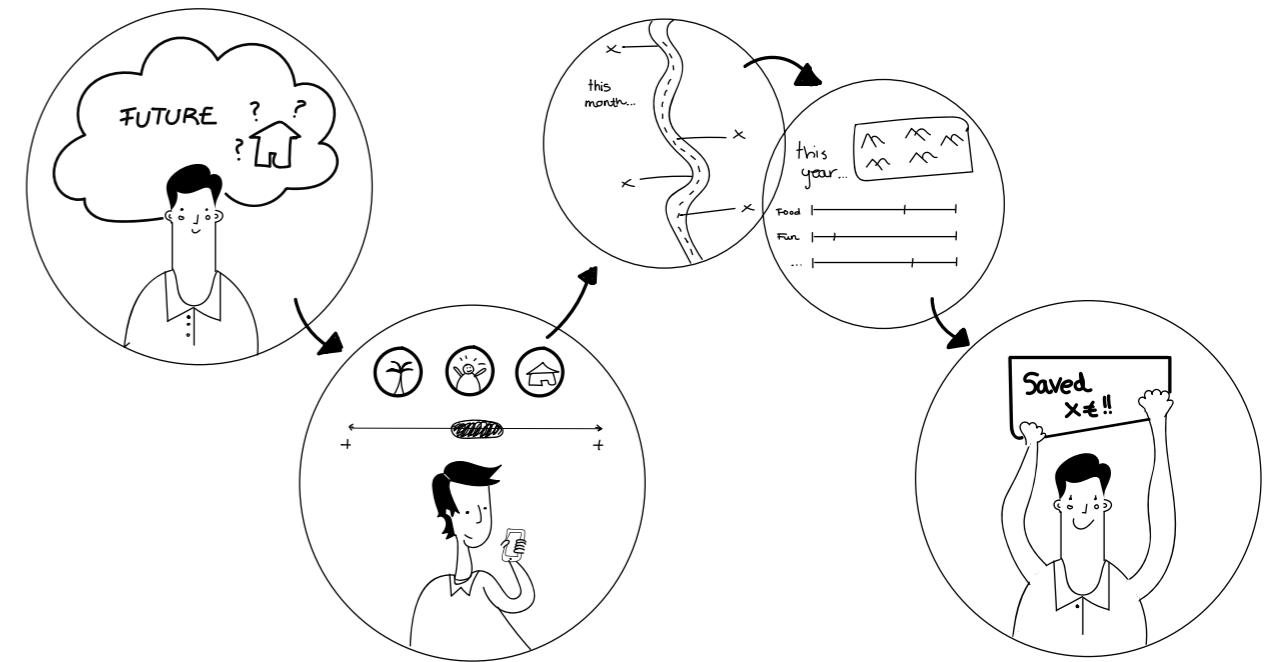


## TAKE AWAYS

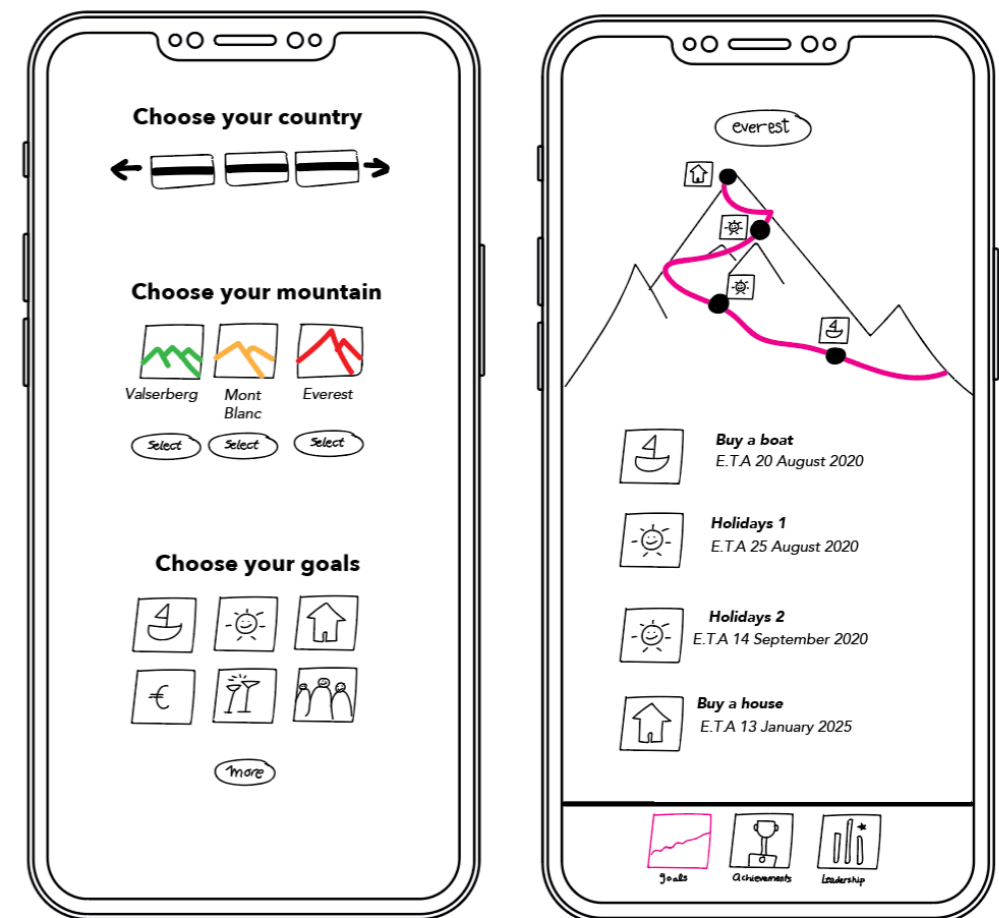
> Gamification: levels up when goals are achieved. Makes it fun to work towards the goals.

> Creating personas is interesting to explore, it could make it simpler to create the personalised tailored solution

# CONCEPT 1: FUJI



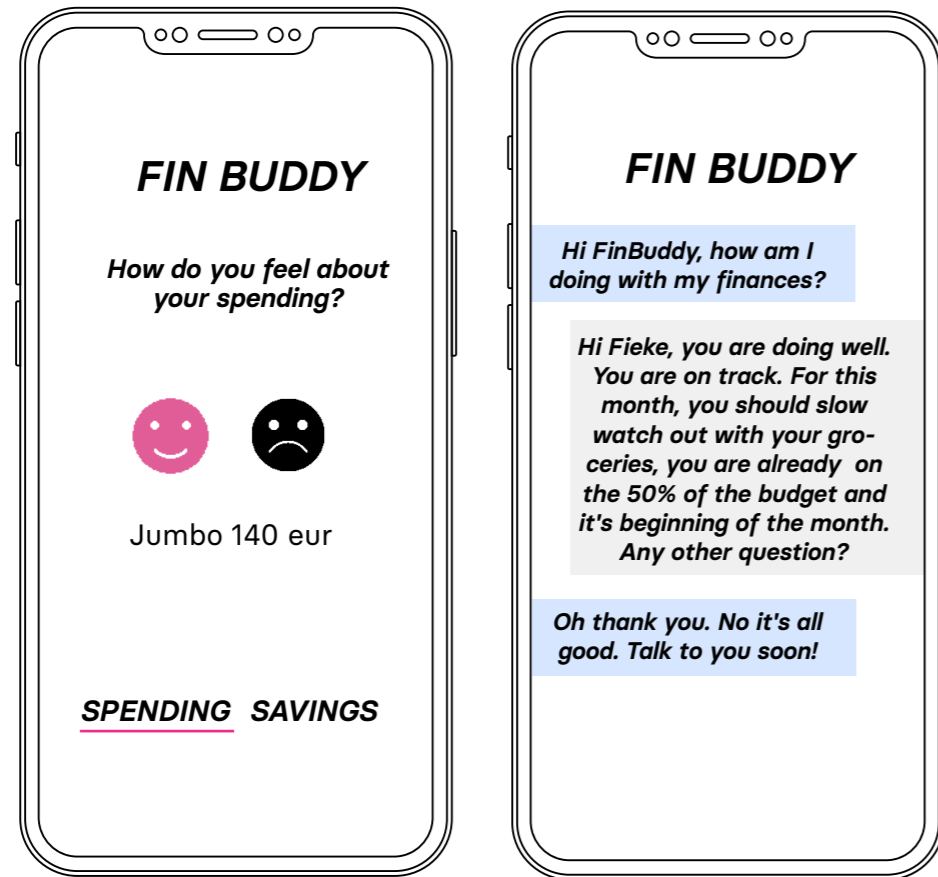
## APPENDIX G: Conceptualization





# CONCEPT 2: FINBUDDY

Using this concept would help me to improve my financial situation



Fieke is looking for a personal advisor to help her improve her financial situation. She downloads FinBuddy!

FinBuddy asks her several questions related to her spending behaviour and her preferences for the future.

The questions about their personality can be asked using a 'tinder format' were they can agree or disagree

There are 3 types of persona. The app calculates what is your best match.

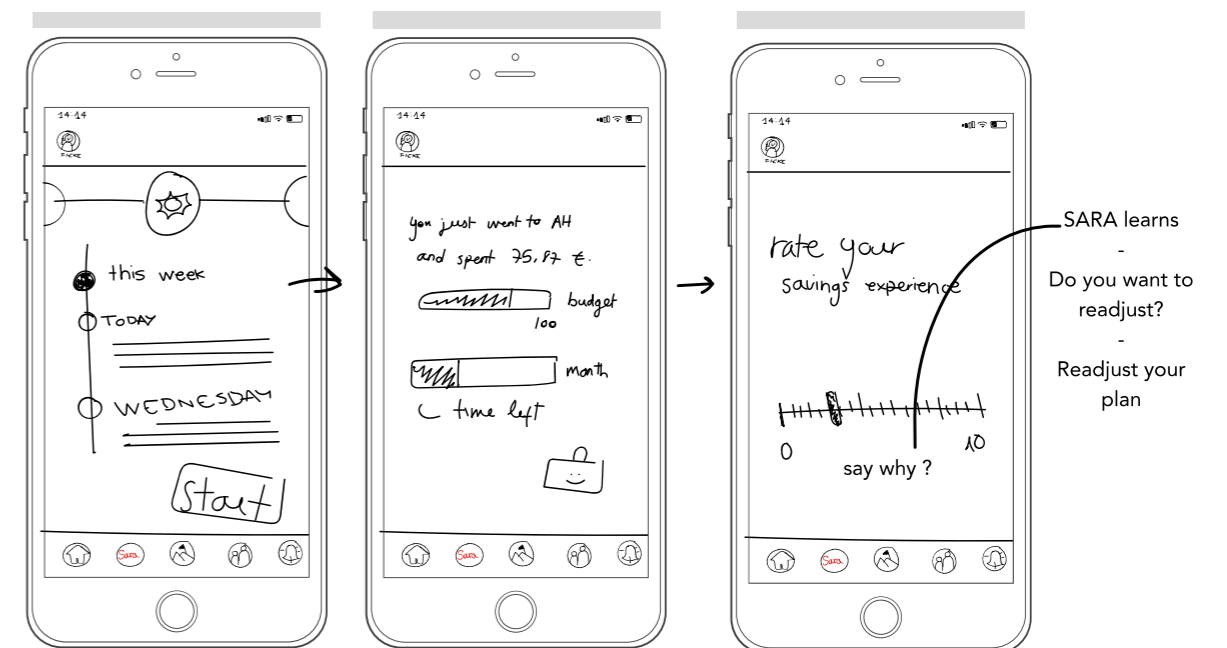
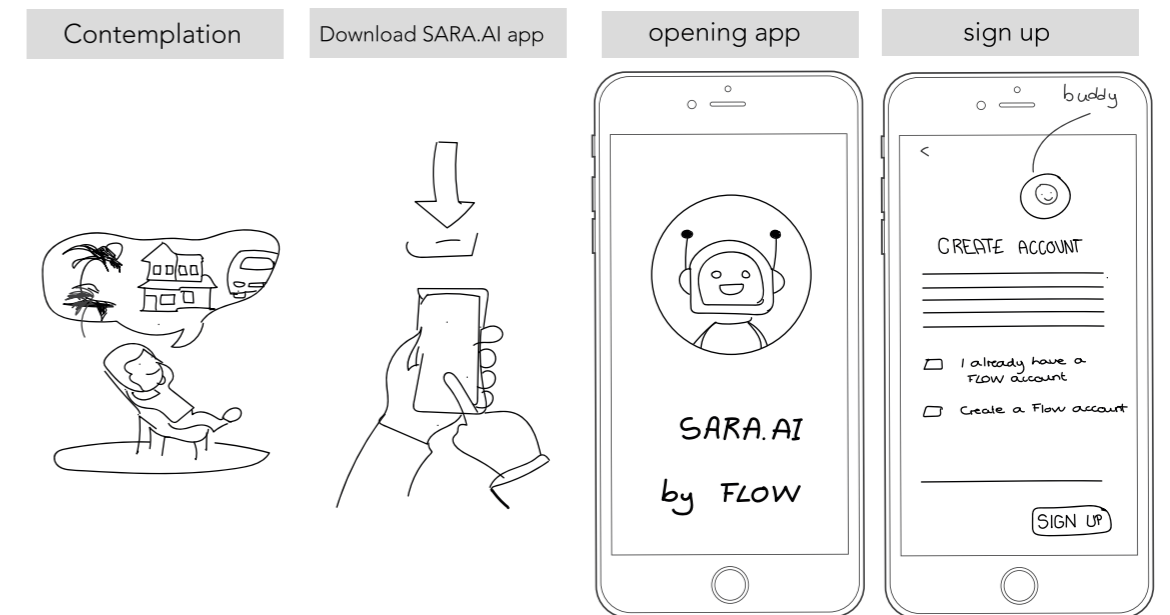
**FUJI** is a concept with the vision of reaching financial goals comparing it to climbing a mountain. It's about setting preferences of financial goals and visualizing them in a 'mountain' view.

**FIN-BUDDY** is a robot advisor that gives personal advice and coaching by bot interaction. The user can ask questions to **FIN-BUDDY** in order to get financial support, answer questions or simply ask questions.

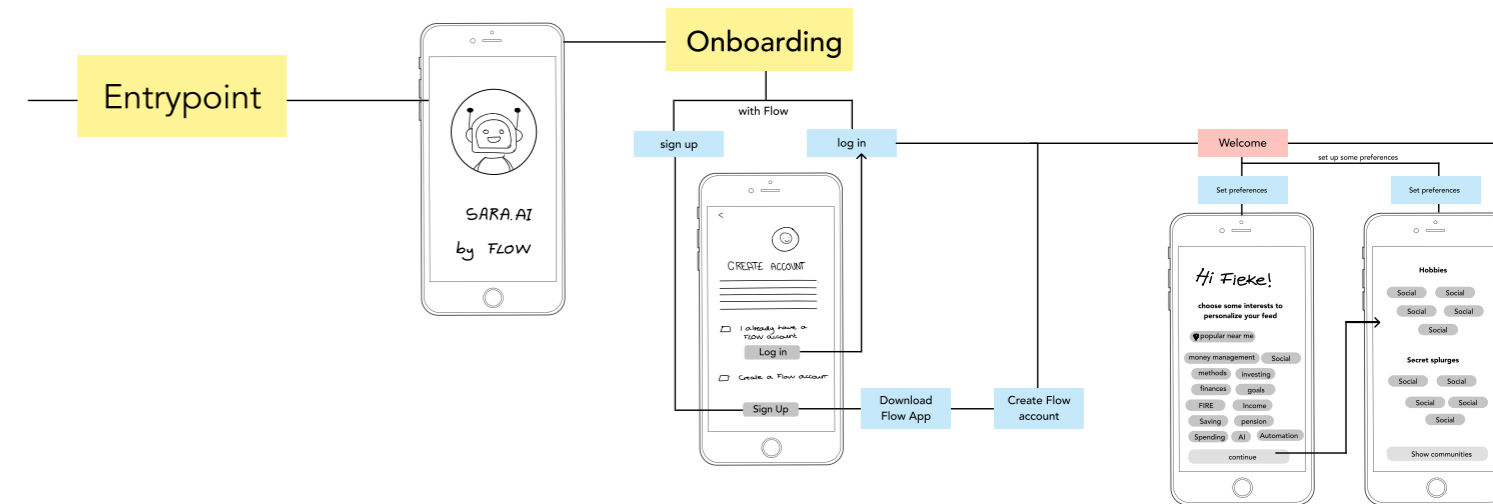
FINBUDDY and FUJI were combined in a new concept, were the features of Artificial Intelligence and Visualising financial goals are implemented.

# FIRST CONCEPT

A third concept is designed based on the best qualities of the previous two concepts FUJI and BOTBUDDY, The concept SARA.AI brings together the idea of visualizing the financial goals and the artificial smart financial advisor that supports the user. SARA is designed to bring together the key qualities defined in the ideation: motivation, trust, balance of control and freedom, future guidance, personalization, social interaction and providing a sense of scale.

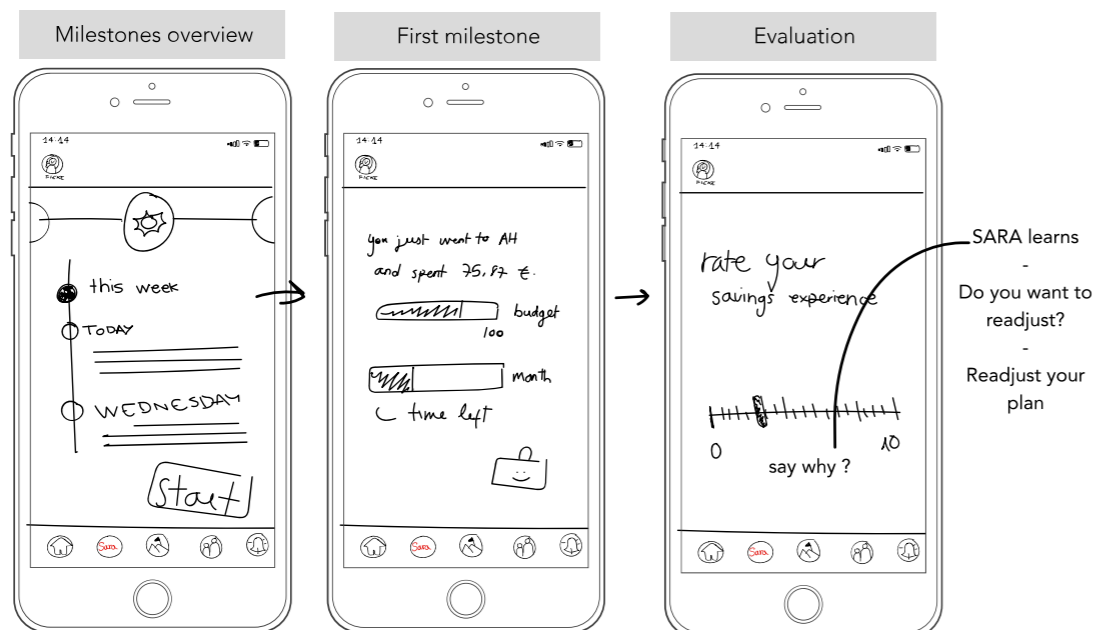
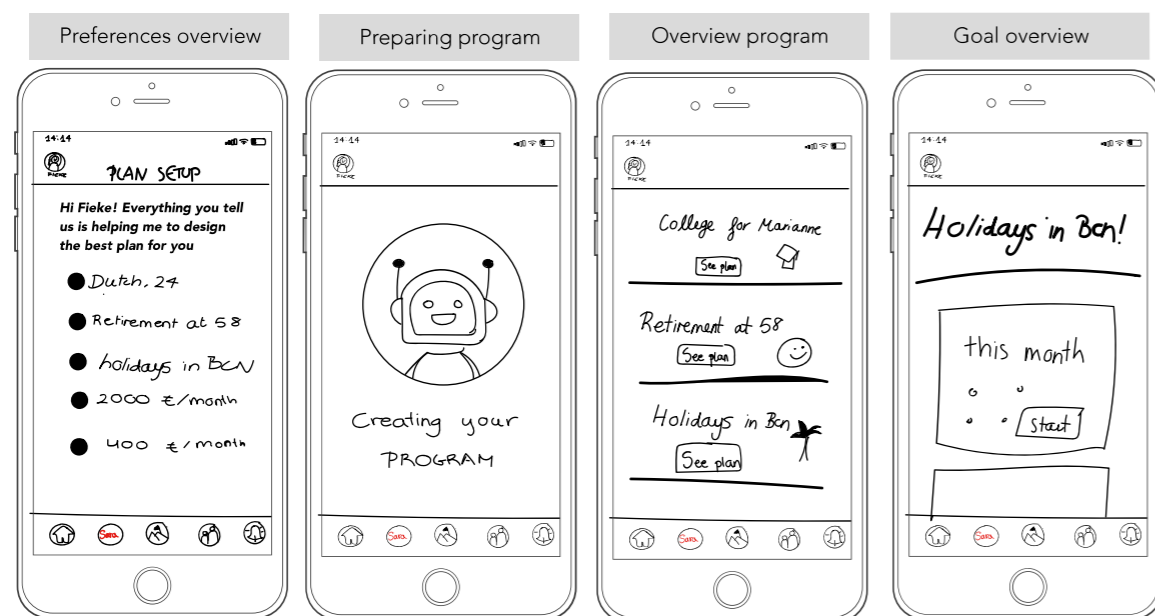


**SARA (Saving Automation Road-map Artificial Intelligence) is a user-centered financial Robot-Advisor that helps users to set and reach their financial goals by the creating a tailored budget and savings plan that adapts to their circumstances in life. After SARA analyses the users' current financial habits, she'll tell you how to save more, how to choose or adjust the future financial goals in order to keep on track.**

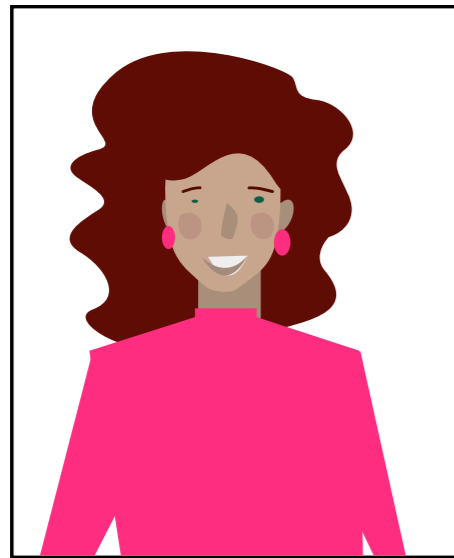


## INFORMATION ARCHITECTURE

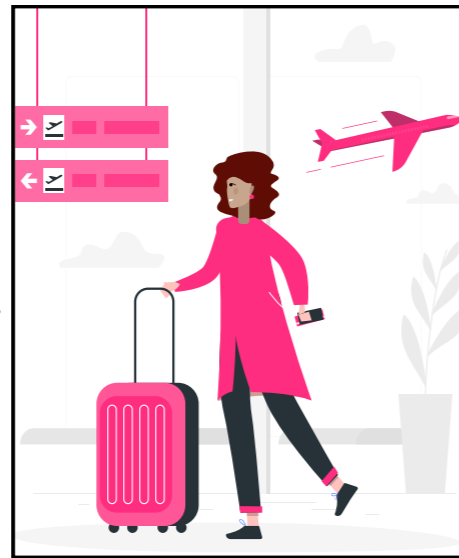
The information architecture of the low-fidelity concept shows different parts that could be developed to solve the problem. The information architecture includes the on-boarding, feed, social, selecting a plan, setting user preferences, setting goals, creating a plan, visualization goals and evaluating the experience. For the low-fidelity concept, the whole flow was tested in order to understand which were the most important interactions from the whole. The next pages explain the detail of each one of the parts of the Flow.



# STORYBOARD



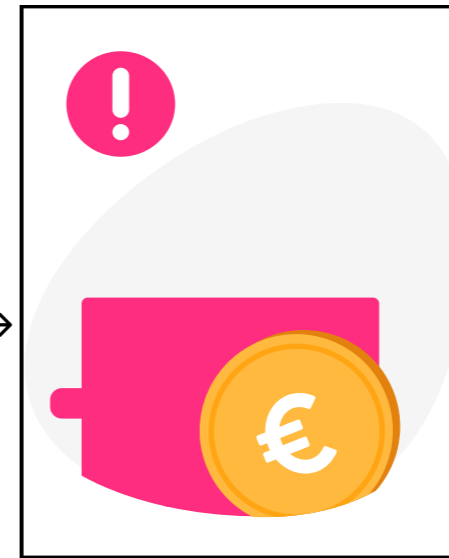
This is Fieke, a 28 y.o. dutch freelance designer.



Fieke lives the moment fully. She loves travelling and enjoying the time with her friends.



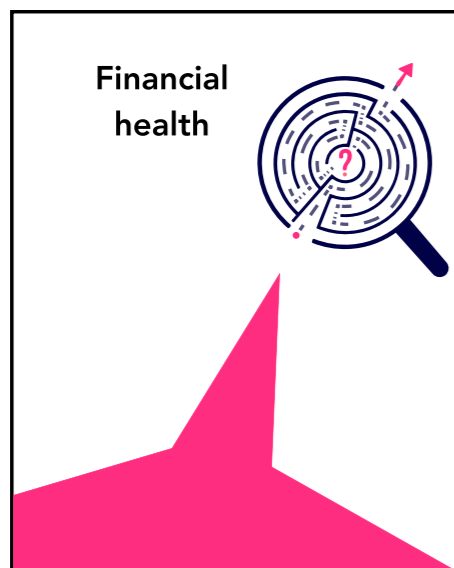
For her, money is there to be spent. She doesn't have control over her finances, like for example, a savings or investing account.



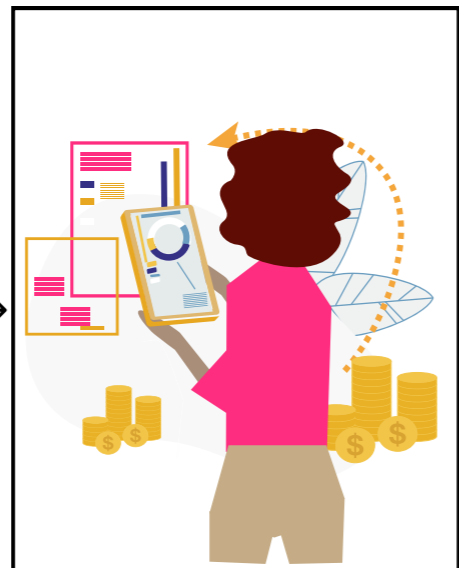
Often, she is stuck financially, and she lives from paycheck to paycheck.



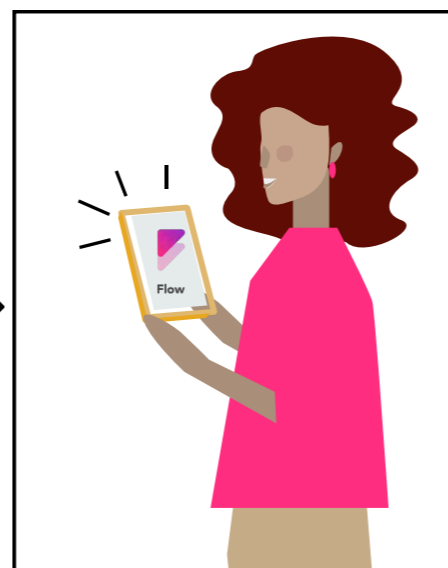
One day, she considers buying a house, and she realises that her financial situation is worse than what she ever imagined. (Oh Shit Moment)



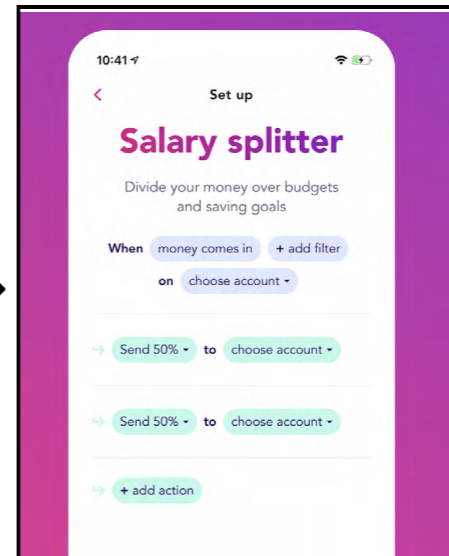
Fieke realises that the situation needs to be changed. She is motivated, but she doesn't know how to start.



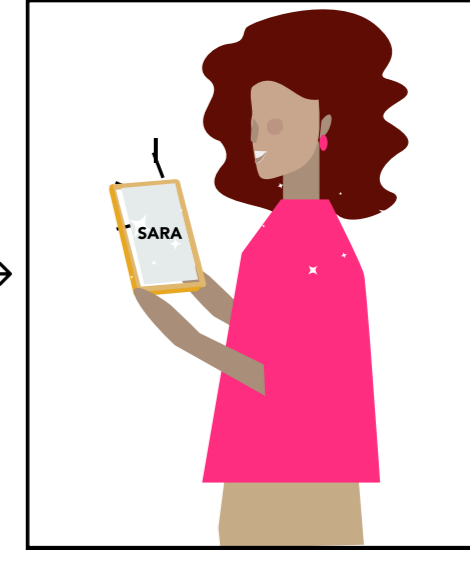
She asks for advice to her family/friends, and she tries out multiple solutions but none of them works well for her.



Finally Fieke finds Flow, and she downloads it because she likes that they offer a personal and tailored solution for her situation.

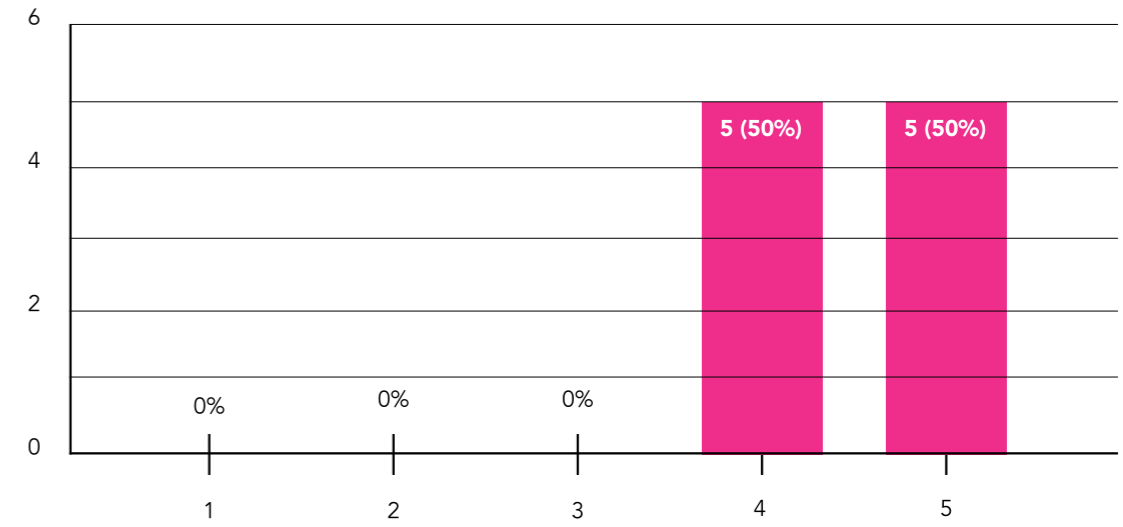


Fieke likes using Flow because she can create budgets and understand the money she can use for saving or investing.

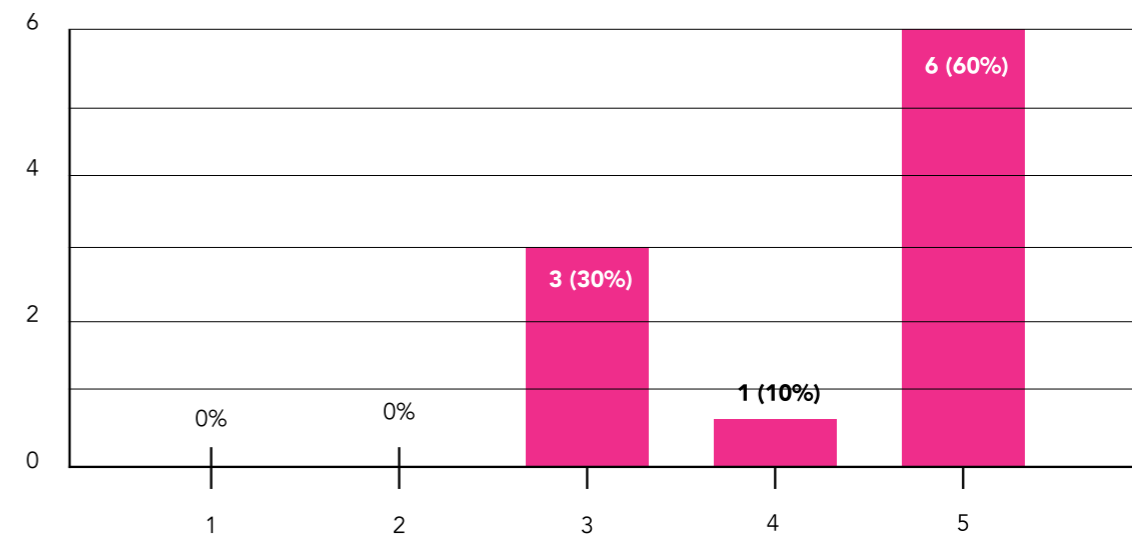


Flow suggests Fieke to use SARA.AI, an app they created to focus on financial goals and to gain financial health.

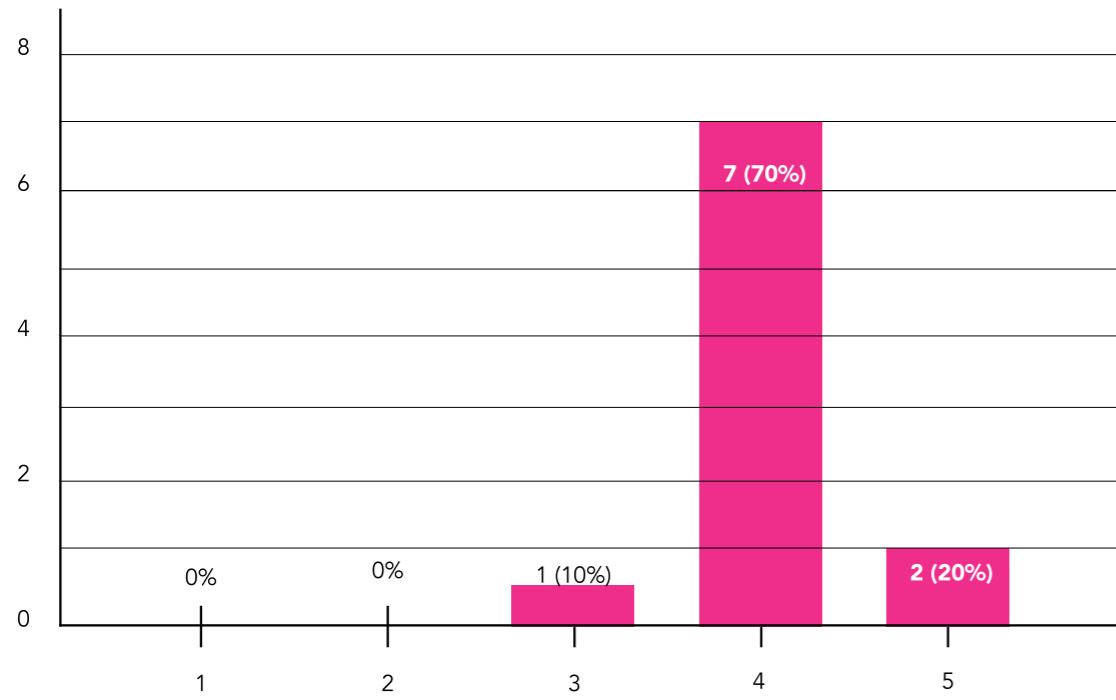
# APPENDIX H: Evaluation



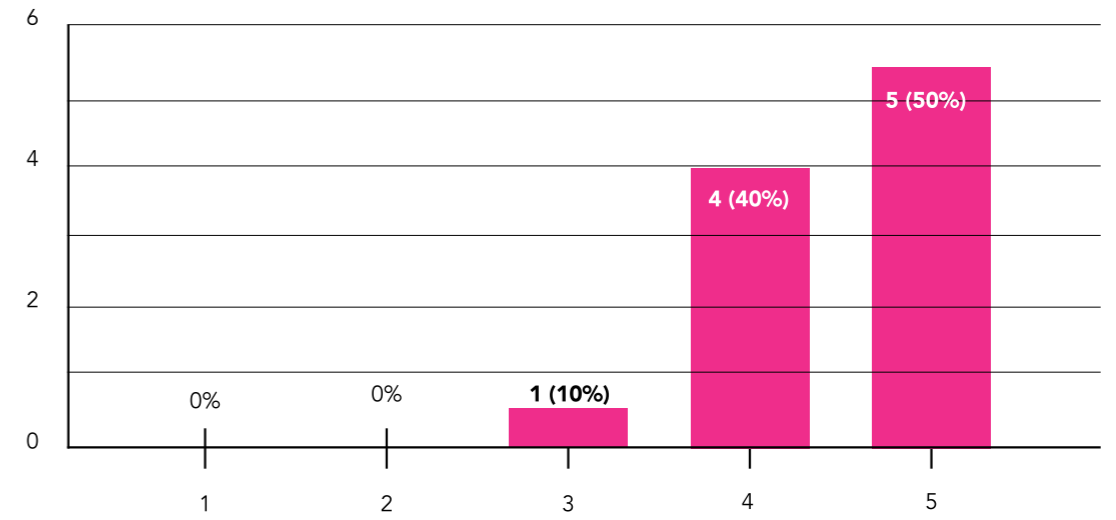
*This concept would keep me motivated to save money*



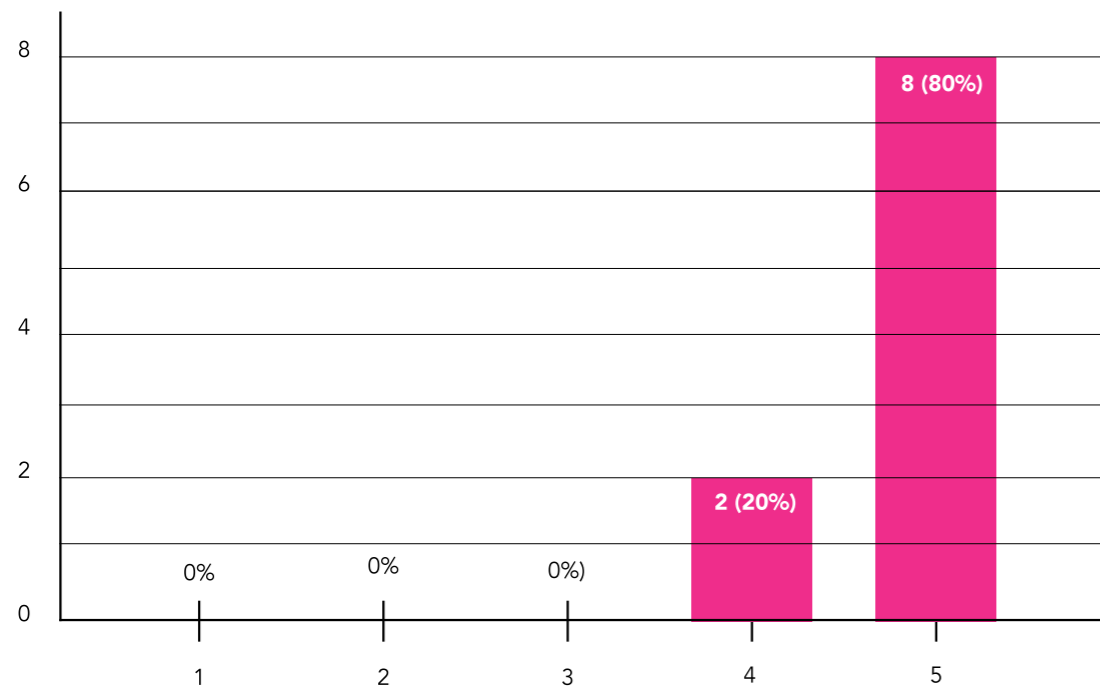
**By using this concept I would feel that I am in control of my finances**



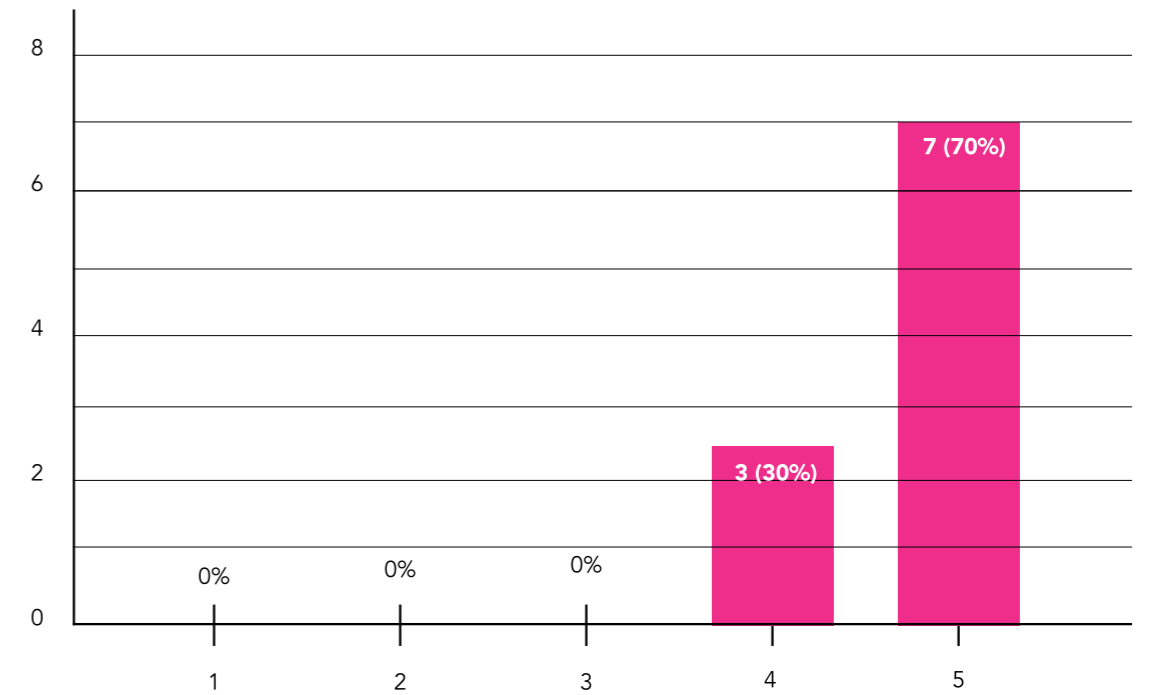
**Using this concept would make me think about my financial goals**



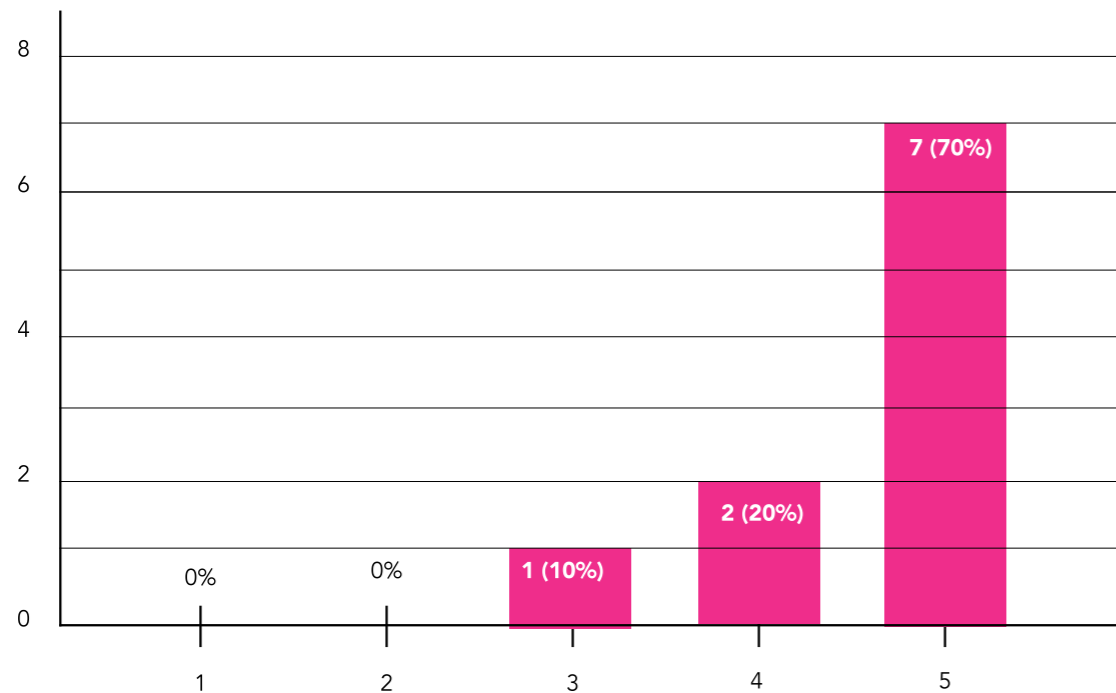
**Using this concept would make me think about my financial goals**



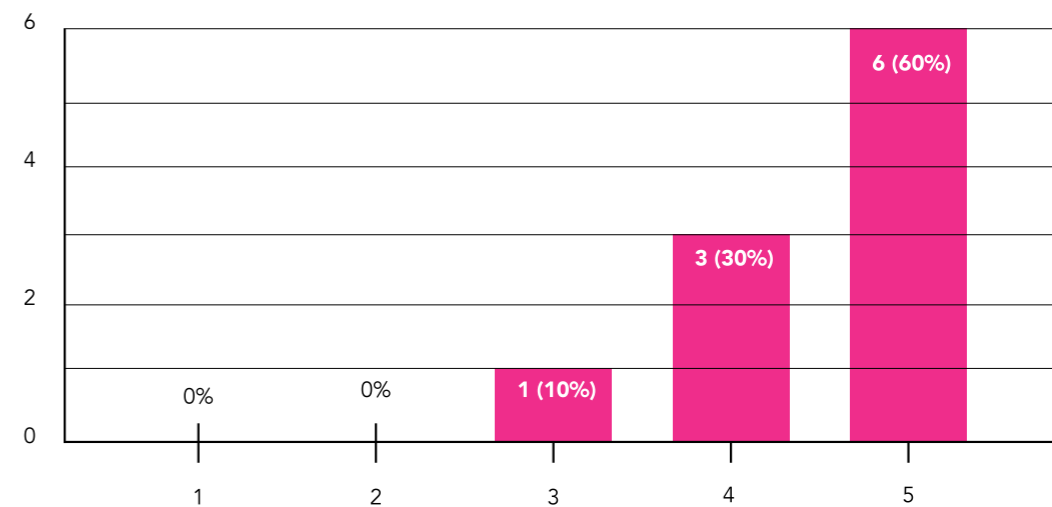
**I find this concept interesting**



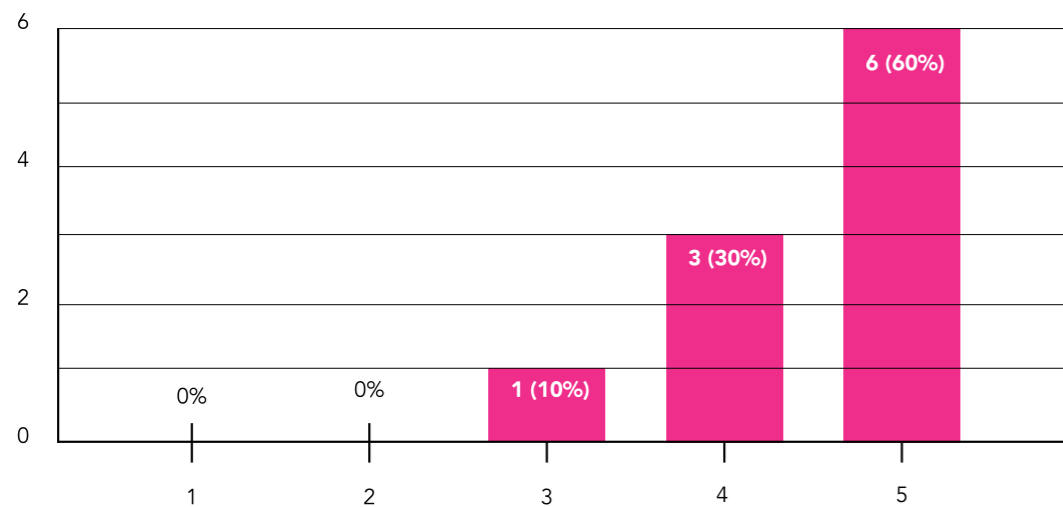
***I would use this concept***



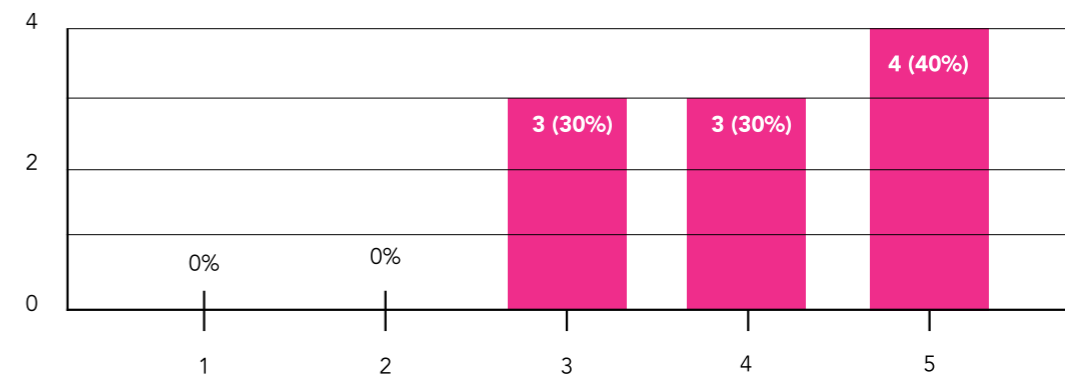
***This concept feels like having a financial plan tailored for me***



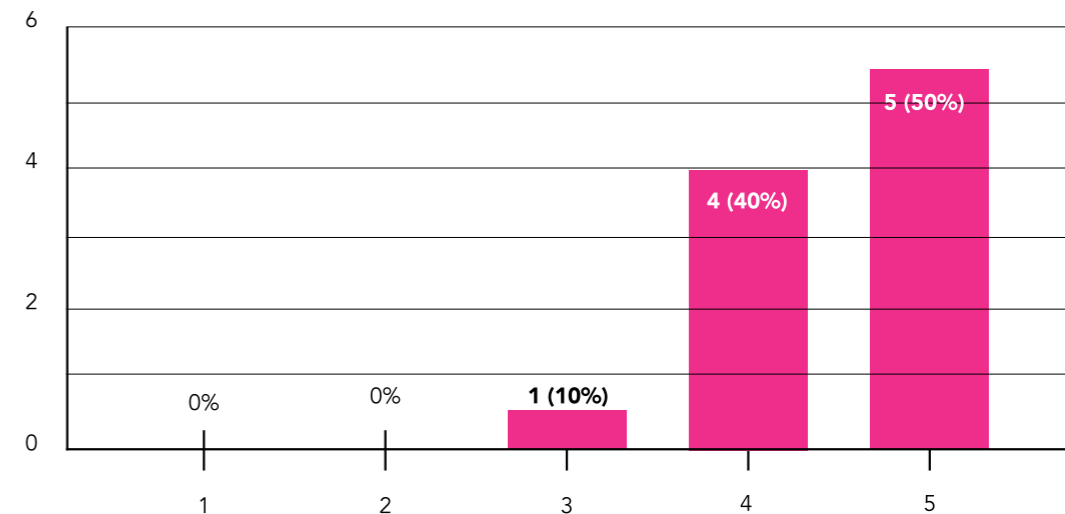
***This concept is coherent and understandable***



***This concept is innovative***



***This concept provides me guidance to reach my goals***



## PROS

<i>"This app keeps the user motivated and incentives user to set financial goals. "</i>	<i>"It teaches me to look at new things, it has a social element makes money less of a taboo to talk about."</i>
<i>"Personalised, well thought out, absolutely love the social aspect think it is the game changer of this idea."</i>	<i>"The SARA.AI is friendly and informative, roadmap is helpful, and the challenges with friends could keep me motivated."</i>
<i>"It considers multiple factors when providing an advise for future financial goals."</i>	<i>"The social part makes it fun to use. "</i>
<i>"I like the social part of the platform. By sharing you become more committed with your own goals. Also money and savings is a topic that we rarely discuss among friends but should be something that we talk about more often as it affects everyone's life. Furthermore, the social part would keep you engaged with the app on a daily/ weekly basis."</i>	<i>"SARA looks cute and helpful. I would love a personalised plan and goals. The main thing that I like is that it would keep me engaged with my finances throughout the month rather than look every once in a while."</i>
<i>"I like the easiness of the flow to start it up. It already knows your data and gives you recommended goals, so it is very easy to follow the initial process and set up a goal. You're in already without realizing."</i>	<i>"It considers multiple factors when providing an advise for future financial goals."</i>
<i>"The SARA.AI is friendly and informative, roadmap is helpful, and the challenges with friends could keep me motivated."</i>	<i>"That it tries to understand my goals and behaviour before suggesting me what to do. it feels like it's for me and not for everyone."</i>

## CONS

<i>"What i dislike is the fact that it is integrated inside another app."</i>	<i>"too many functionalities and parts can make it feel overwhelming. I want to first focus on the more important things and not have distractions."</i>
<i>"Maybe starter/int/adv not quite clear yet, what kind of stepping stones will those levels offer."</i>	<i>"I would like to have more personalisation input."</i>
<i>"I'm not sure about which information would be relevant for me. Of course is my money and I want to get to know everything but too much might make me obsessed with saving and having all percentages and bars full and green."</i>	<i>"Nothing in particular. I would like to see the roadmap / progress visualised more clear.."</i>
<i>"I was afraid the AI is taking too much out of my hands."</i>	<i>"I would evolve the names of the plans. For examples, as a beginner I wouldn't like to have the "starter pack" but something that makes me feel I am already doing something more than starting..."</i>

## WHICH OF THE CONCEPT EXPERIENCES ARE THE MOST IMPORTANT TO IMPROVE THE FINANCIAL SITUATION?

<i>"The milestones, they keep the user motivated to keep going."</i>	<i>"Questionnaire, and reflecting on if you are starter or advanced because that really changes what is important. e.g. don't go investing if you have no emergency fund."</i>
<i>"Budget track that seamlessly integrates and recommends/rewards you."</i>	<i>"Set monthly expense plans per section (food, fun...)."</i>
<i>"The jar pots. Knowing exact amounts divided on categories (fun, groceries). Because putting a number there makes it so easy to stick to it."</i>	<i>"The saving challenges, which would be nice to do them with friends too. reading suggested articles about saving money and different mindsets I can adopt. it's about learning different behaviours and turning them into new habits."</i>
<i>"Roadmap and rewards."</i>	
<i>"To propose an accurate financial plan."</i>	<i>"The roadmap visualisation."</i>



## Social motivation

Users like the social feature for two reasons: it helps with keeping up the motivation and it normalises a taboo topic.

However, the social features should be about challenges, connections and stories but not about amount of euros, salary, etc. It can be a delicate topic. The social part is very innovative and highly desired by the users.

"The social part makes it fun to use."

"Personalised, well thought out, absolutely love the social aspect think it is the game changer of this idea."

"I like the social part of the platform. By sharing you become more committed with your own goals. Also money and savings is a topic that we rarely discuss among friends but should be something that we talk about more often as it affects everyone's life. Furthermore, the social part would keep you engaged with the app on a daily/ weekly basis."

"The SARA.AI is friendly and informative, roadmap is helpful, and the challenges with friends could keep me motivated."

"It teaches me to look at new things, it has social element makes money less of a taboo to talk about."

## Tailored

Users like to give their needs and ambitions before receiving suggestions and to receive a personalised tailored solution instead of a general solution that could be adapted for everyone. They like to be in control and to feel unique.

"I like the easiness of the flow to start it up. It already knows your data and gives you recommended goals, so it is very easy to follow the initial process and set up a goal. You're in already without realizing."

"That it tries to understand my goals and behaviour before suggesting me what to do. it feels like it's for me and not for everyone."

"I would like to have more personalisation input."

## Personalisation

Users like to give their needs and ambitions before receiving suggestions and to receive a personalised tailored solution instead of a general solution that could be adapted for everyone. They like to be in control and to feel unique.

"I like the easiness of the flow to start it up. It already knows your data and gives you recommended goals, so it is very easy to follow the initial process and set up a goal. You're in already without realizing."

"That it tries to understand my goals and behaviour before suggesting me what to do. it feels like it's for me and not for everyone."

"I would like to have more personalisation input."

## Roadmap to future goals

90% of the users answered to the question "which of the concept parts are more important to improve your financial situation?": the roadmap and its features. This is one of the core experiences of the concept and should be improved the way that it's visualised or how the information presented in order to make it more clear and understandable for the users.

"SARA.AI is friendly and informative, roadmap is helpful, and the challenges with friends could keep me motivated."

"It considers multiple factors when providing an advise for future financial goals."

"I would like to see the roadmap / progress visualised more clear."

"Too many functionalities and parts can make it feel overwhelming. I want to first focus on the more important things and not have distractions."

"The milestones, they keep the user motivated to keep going."

## Plan levels

The plans aren't clear enough the way they are right now. Variations should be done in a conceptual level: what is the goal of using them? Can people reflect about their situation with target them in a plan?

"I would evolve the names of the plans. For example, as a beginner I wouldn't like to have the "starter pack" but something that makes me feel I am already doing something more than starting..."

"Maybe starter/int/adv not quite clear yet, what kind of stepping stones will those levels offer."

"Questionnaire, and reflecting on if you are starter or advanced because that really changes what is important. e.g. don't go investing if you have no emergency fund."

