Progress report
October 2016

Think Forward Initiative

Setting the direction

The Argumentation Factory
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Prologue

This document is the second progress report of the Think Forward Initiative (TFI). To make it readable as a stand-alone publication, it contains a similar introduction and description of the TFI as the first progress report. For those already aware of what TFI entails, we suggest you start reading from paragraph ‘Results from round 1, June Sessions’ on page 11.
The first progress report can be found here.

Introduction

The Think Forward Initiative is an open source initiative by ING, CEPR (Centre for Economic Policy Research), EMC, Microsoft, Dimension Data and Deloitte. Its goal is to empower people to make financial decisions that are better for them, and ultimately better for society by gaining a deeper understanding of how people make financial decisions. The Think Forward Initiative brings together a range of experts and researchers to find out how and why we make financial choices. The lessons learned will be a springboard for action to help consumers.

Managing personal finances has always been tough. Emotions that people have, and the social situations that they are in, often hinder smart financial decisions. We like to see ourselves as sensible and logical decision-makers. If only that were true. Study after study shows that our decisions are driven by many other (often subconscious) factors. That's something to take into consideration, because big financial decisions can have a large and lasting impact on our lives.

Why exactly do we make bad financial decisions? Is it because it's too hard to imagine and consider our future needs over our current needs? Does the abundance of choice help us or hinder us? The Think Forward Initiative examines these questions and more. When it comes to making financial choices, it's obviously important to understand what you're choosing, but it's equally vital to know why you're choosing it. What are the deeper reasons behind our financial behavior and choices?

This is an open-source initiative and a joint effort. We see it as an opportunity to share knowledge, and have a platform for conducting and showcasing research. To interact and co-create with academics, policymakers, consumer organisations and leaders from the financial and technology sectors. But also to have an access to the latest developments and best practices in the area of financial decision-making, fintech innovations and financial literacy. Ultimately you could set the agenda and be part of the solution.

The first step of the TFI was taken at the Think Forward Summit on 25 February in Brussels, which gathered more than 120 academics, European and national policy-makers, consumer-organisation representatives, and leaders from the financial and technology sectors in a "meeting of the minds".

In a series of plenary and break-out sessions, the general direction for TFI was reached.

The TFI has one overarching goal: Empower people to make better financial decisions. To do that TFI will do the following:

- Enable and execute new research into drivers of financial behavior;
- Develop accompanying practical solutions that aid in making better financial decisions;
- Provide policy recommendations to regulators;
- Increase awareness.

In addition, as a result of the summit, the focus was limited to three themes:

1. Budgeting, borrowing and spending: How can we enable people to feel comfortable in their spending and budgeting decisions? How do people borrow? Why do they borrow? How do people make decisions?
2. Savings, investment and retirement: How do people set goals for themselves and what does than means for the financial wellbeing of different people?
3. Financial literacy: How can individuals be reached in a timely and personally relevant way to keep them financially healthy?

An additional dimension was also added; Responding to disruptive trends. This technological aspect is embedded in all the themes.

Finally, the decision was made to set up a working group for each theme, with each working group tasked to develop the theme further into plans for appropriate research and accompanying practical solutions.

This report is the second progress report of the work of the three working groups. There were three sessions in September 2016, one for each theme, held in Amsterdam, Brussels, and Frankfurt. The participants for each session are listed at the end of this report.

Governance & Process

Governance of TFI

The TFI program governance consists of four elements at this time:

- The partners
- The Research Board (Research Board)
- The three working groups
- The TFI facilitating team.

The partners provide funding and, if needed and possible, facilities like access to transaction databases, and knowledge of, and access to IT infrastructure, technology counseling and associated research. Partners will also provide the application mock ups of practical solutions and help the working groups in developing the practical solutions.

The role of the Research Board is to evaluate and improve research proposals and make a coherent research program over time. The Research Board is also responsible for the overall progress and planning. The Research Board also decides on the allocation of the TFI research budget. That budget currently stands at euro 100,000 incl VAT per year. That budget is the sum over which the research board has discretionary control. If research projects are identified that need additional funding beyond the discretionary budget, an accompanying business case must be developed and submitted as a proposal to the partners.

Separately, there is a discretionary budget of euro 80,000 incl VAT per year (for the period of 1H16 to 1H17) for the development of the practical solutions. This budget is divided equally over the working groups projects. As practical solutions are accompanying the research projects, this budget will be equally split up over the accompanying practical solutions for the research projects that were (will be) approved by the Research

Board, and thus represents possible additional funding to the allocated research budget.

The working groups formulate and propose the research directions, the accompanying practical solutions, assess the research and solution plans and a selection of the members of the working group are members of project teams. For working group participants TFI aims to provide an opportunity to share knowledge, and provide a platform for conducting, publishing and showcasing research. To interact and co-create with academics, policymakers, consumer organizations and leaders from the financial and technology sectors. To have access to the latest developments and best practices in the area of financial decision-making, fintech innovations and financial literacy.

The TFI facilitating team (currently manned by staff from the partners) is responsible for the day to day management of the project.

Process

The TFI team hired The Argumentation Factory to facilitate the working group process over the course of 2016. This process

Working Group Session	June Bringing the focus	September Setting the direction	December Showing the progress
Research	○ Agree on promising research project(s), to be validated by the research board.	○ Draft research project plans ready. Assess, improve and sharpen project plans in the working group.	○ Final research project plan ready, where possible show preliminary results.
Practical Solution	○ Agree on practical solution(s) to be further developed based on accompanying research.	○ Draft solution description ready. ○ Assess and improve plan in the working group, including the criteria of success.	○ Final plan and first visual mock-up ready, validating the criteria of success for the next development.

involves preparing the idea generation and decision making process, moderating the sessions and reporting the outcome. In total, three rounds of working group sessions are planned so far. The main goal for each round is in the table on the left page.

After the September session, the Research Board aimed to decide on one research project and one accompanying practical solution per theme. This makes for a total of three research projects and three practical solutions in this first phase of the TFI. However, it was not excluded to do more than one project per theme, this is dependent on the quality of the plans.

Results from Round 1: the June sessions

The results of the first round consisted of the selection of seven research projects and seven accompanying practical solutions. The selection meant that the working group members were asked to develop a research plan and an accompanying practical solution description for each of the proposed projects. Project teams were formed between June and August. These teams drafted the research plans and descriptions of the practical solutions. In that process, one research plan, and one accompanying practical solution was dropped, because of its general nature. The project 'Meta-Analysis' in theme Financial Literacy has therefore not been developed further.

Round 2: Working Group Sessions & Deliverables

Goals of Round 2

The main goal of round 2 was twofold; to improve the research plans and accompanying practical solution descriptions and to identify the strengths and weaknesses of each project, to enable the Research Board to prioritize and sequence the projects. To support those goals, the secondary goals of the round was to get all of the working group participants on an equal footing and synchronize the understanding of the projects, and identify the critical conditions for success of each project.

Step 1

Before the sessions started all research plans and accompanying practical solution descriptions were sent to the Argumentation Factory. A summary chart for each theme was made and sent out to all participants of the working group sessions, including

the complete original plans as drafted by the project teams. The summary chart was used as a starting point for the discussion. Note also that research plans and accompanying practical solutions were not assessed separately, but jointly as one project.

Deliverable
The summary charts have been slightly amended and sharpened as a result of the working group sessions. They can be found under heading 'A' of the Outcomes chapter. These charts represent a brief overview of the research plans and accompanying practical solutions.

Step 2

In the sessions themselves, the topic owners for each project gave a brief pitch. We then divided the working group into three person teams with the question "How can the project be improved and what are the critical conditions for success?" Then, in the plenary, we took inventory of all improvements and critical conditions for each project. These were all discussed briefly. After all improvements and critical conditions were complete, the topic owners were given the opportunity to briefly reflect on the suggestions provided by the working group.

Deliverable
The results of that first part of the sessions have been combined into one chart for each theme. They can be found under heading 'B' of the Outcomes chapter. These charts represent the improvements needed and risks associated with each project as assessed by the working group.

Step 3

In the second half of the session we focused on the arguments for and the arguments against each project. We divided the working group into three person teams with the question "What are arguments for and against each project?" Then, in the plenary, we took inventory of all arguments and these were discussed briefly. We prioritized the arguments for the projects through an auction system, asking all participants what arguments they felt should be weighted most. Finally, we asked the participants which project they thought should be executed first. Although the results in each group were clear cut, many

participants felt that the projects were of such a different nature, that such a decision could not be made at this point.

Deliverable

The results of the second part of the sessions have been combined into one chart for each theme. They can be found under heading ‘C’ of the Outcomes chapter. These charts represent the arguments for and against each project as assessed by the working group and can thus be used as input for further decision making going forward.

Results

Outcome of theme Budgeting, Spending & Borrowing

A Summary 16
B Suggested improvements 20
C Argumentation 22

Outcome of theme Saving, Investments & Retirement

A Summary 24
B Suggested improvements 28
C Argumentation 30

Outcome of theme Financial Literacy

A Summary 32
B Suggested improvements 36
C Argumentation 38

How can the project INTRA-HOUSEHOLD DYNAMICS be summarized?

Challenge

- We do not know enough which influences determine the quality of decision making.
- This is especially true of how household dynamics influence decision making.

Proposed research

- Authors have provided an overview of current research on this theme.
- Authors propose a sequenced project based on five interlinking hypotheses in three phases.

Goals

- Test the following five hypotheses:
  - 1. Pooling versus keeping incomes separately leads to different types of decision making and agreements about spending.
  - 2. Households have to make decisions about education, jobs, working hours, and income. For poor households, these decisions are crucial for avoiding financial problems and for survival.
  - 3. Financial decision making used to be in the husband's domain, but this is now changing, either into a joint decision or a separate decision, depending on the type of financial decision and the financial literacy of the partners.
  - 4. The search for alternative options may be incomplete and thus the decision suboptimal in joint decision making, assuming that the partner has done the task completely.
  - 5. The type and quality of household financial decision making contributes to responsible financial behaviour, and this, in turn, contributes to health and well-being of the household members.

Practical solution

Household financial management tool

- Allows household consolidated view of finances.
- Allows multi bank view through PSD.
- Allows the creation of a 'family CFO'.
- Allows layered spending mandates.

Household budget coach

- Allows household members to chat about finances.
- Chatbot interjects with tips and advice.

See next page

General approach

Data sources

Study plan

Timeframe

Costs

This chart represents a summary of the project proposals of the working group on Budgeting, Spending & Borrowing. It is used as a preparation for the working group sessions and to inform those without access to the full proposals on their general nature. The summary has been prepared by the Argumentation Factory.

Budgeting, Spending & Borrowing - Intra-household dynamics

See previous page

Challenge

Proposed research

Goals

Practical solution

How can the project INTRA-HOUSEHOLD DYNAMICS be summarized?

General approach

Phase A

- Test Hypotheses 1, 2
- Work toward a modern typology of households, including their composition, and the life-cycle changes of households. How do households manage these incomes, and how does this affect spending, saving, and borrowing decisions? And how do relatives, close friends, contribute to financial management?

Phase B

- Test Hypotheses 3, 4
- How many and which household members are involved in decision making on spending, saving, borrowing, buying financial products (mortgage, insurances, pension plan)? Who is doing the tax declaration and paying the bills? Task specialization, roles, or joint decision making?

Phase C

- Test Hypothesis 5
- Which ways of financial management and decision making lead to more responsible/sustainable financial behavior and to higher well-being?

Data sources

- Qualitative interviews, Cantrill scale for measuring well-being, online longitudinal measurement of self-control, self-evaluation, and happiness (smartphone).
- Surveys, and experimental simulation of joint/separate decision making.

Study plan

- No input yet.

Timeframe

- The project will not be able to show results in time for March 2017 Summit.

Costs

- Euro 20,000

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Budgeting, Spending & Borrowing - Analysis of social media

How can the project ANALYSIS OF SOCIAL MEDIA be summarized?

Challenge

- Consumers base their decisions partly on emotional drivers.
- Research in this area using questionnaires is expensive and not always reliable.
- The advent of Social Media opens up a new and promising research avenue.
- Potentially making research on emotional drivers less expensive and more reliable.

Proposed research

- Build a database of social media conversations on personal borrowing decision making.
- Collect, as part of this process, information on the socio economic characteristics of the individuals involved in the conversations.
- Employ advanced machine learning methods to construct models which predict aggregate borrowing behaviour based upon individual social media posts.

Goals

- Identify the key indicators for an imminent borrowing decision.
- Identify and weigh the emotional and social factors individuals consider when making borrowing decisions.
- Enabling engagement with individuals at an emotional level to help them make better borrowing decisions.

Practical solution

Three promising practical solutions have been identified

- Tool to help segment groups of individuals by their patterns and preferences of borrowing, planning and spending.
- Tool to improve he underwriting process by identifying risky borrowers and provide early warning signals though social media monitoring.
- Engage with consumers through social media using chatbots triggered by real time social media analysis.

See next page

General approach
Data sources
Study plan
Timeframe
Costs

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Budgeting, Spending & Borrowing - Analysis of social media

See previous page

- Challenge
- Proposed research
- Goals
- Practical solution

How can the project ANALYSIS OF SOCIAL MEDIA be summarized?

General approach
- Analysis of social media data, including user content and networks of users, will be grounded in social psychology and neuroscience and conducted using advanced language and network processing algorithms.
- Search for the significant drivers of borrowing decisions by leveraging fundamental findings of social psychology and neuroscience rather than ex ante assumptions about these drivers.

Data sources
- Twitter message database.
- Initially in two countries.
- Aggregate borrowing data from public sources.

Study plan
- Data collection and pre-processing by harvesting Twitter messages.
- Twitter message analysis using SSEL framework.
- Predictive modelling based on the results the Twitter message analysis.
- Analysis of borrowing decision making.

Timeframe
- Pilot ready by march 2017.
- Follow up research already identified.

Costs
- Euro 40,000-50,000 for the research.

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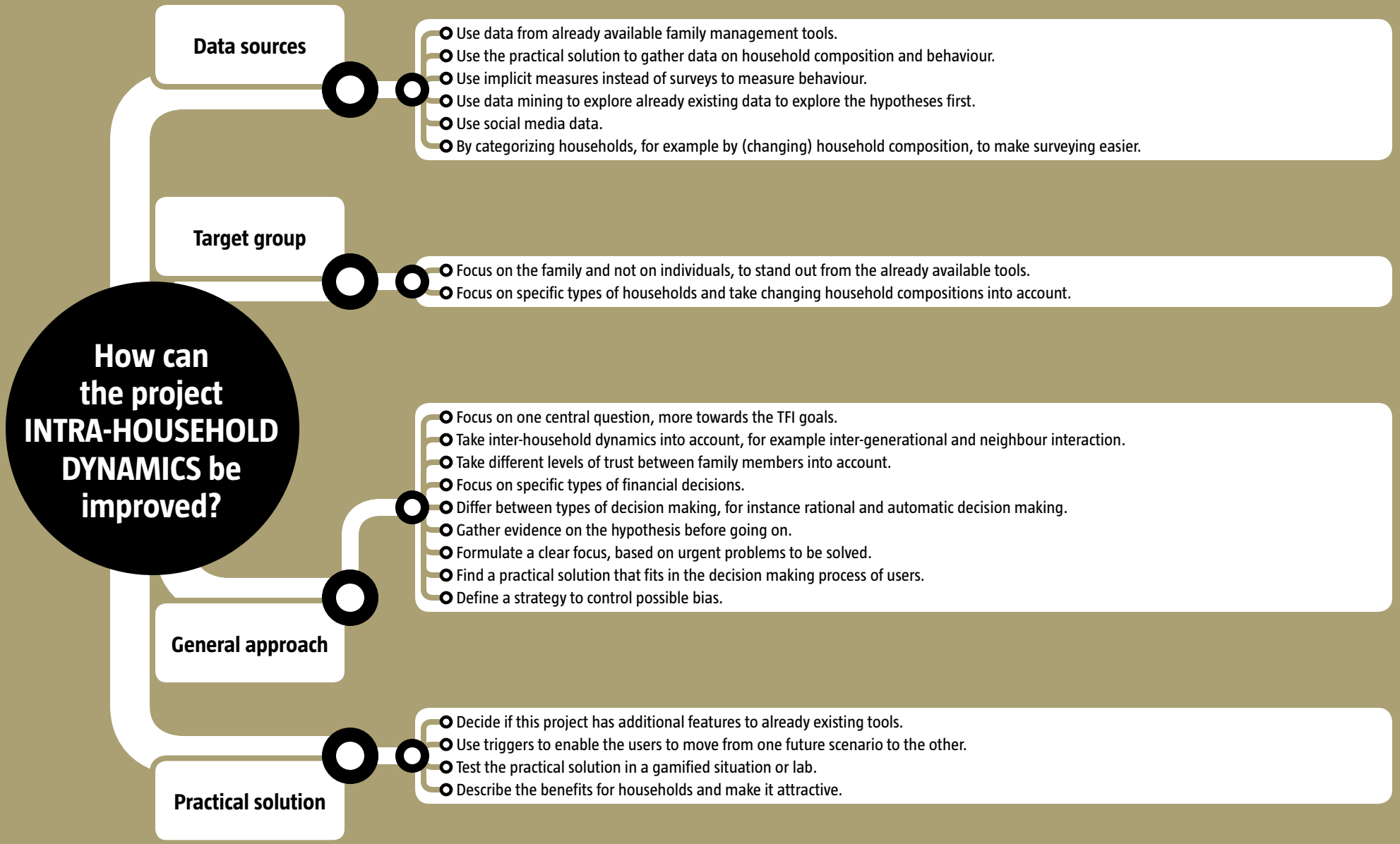
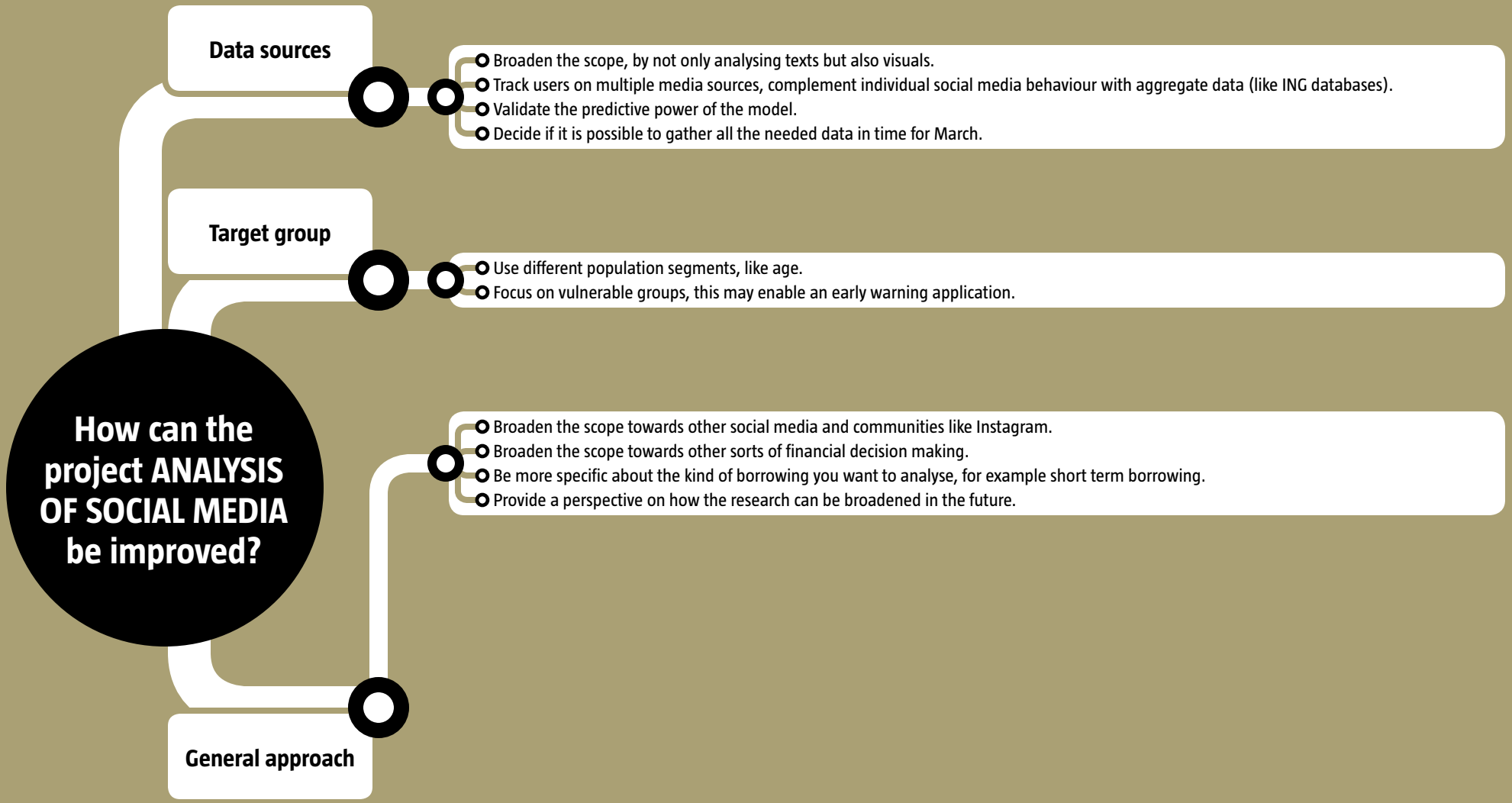


This chart represent the improvements suggested by the working group during the sessions.
It gives guidance to the project team for further development.



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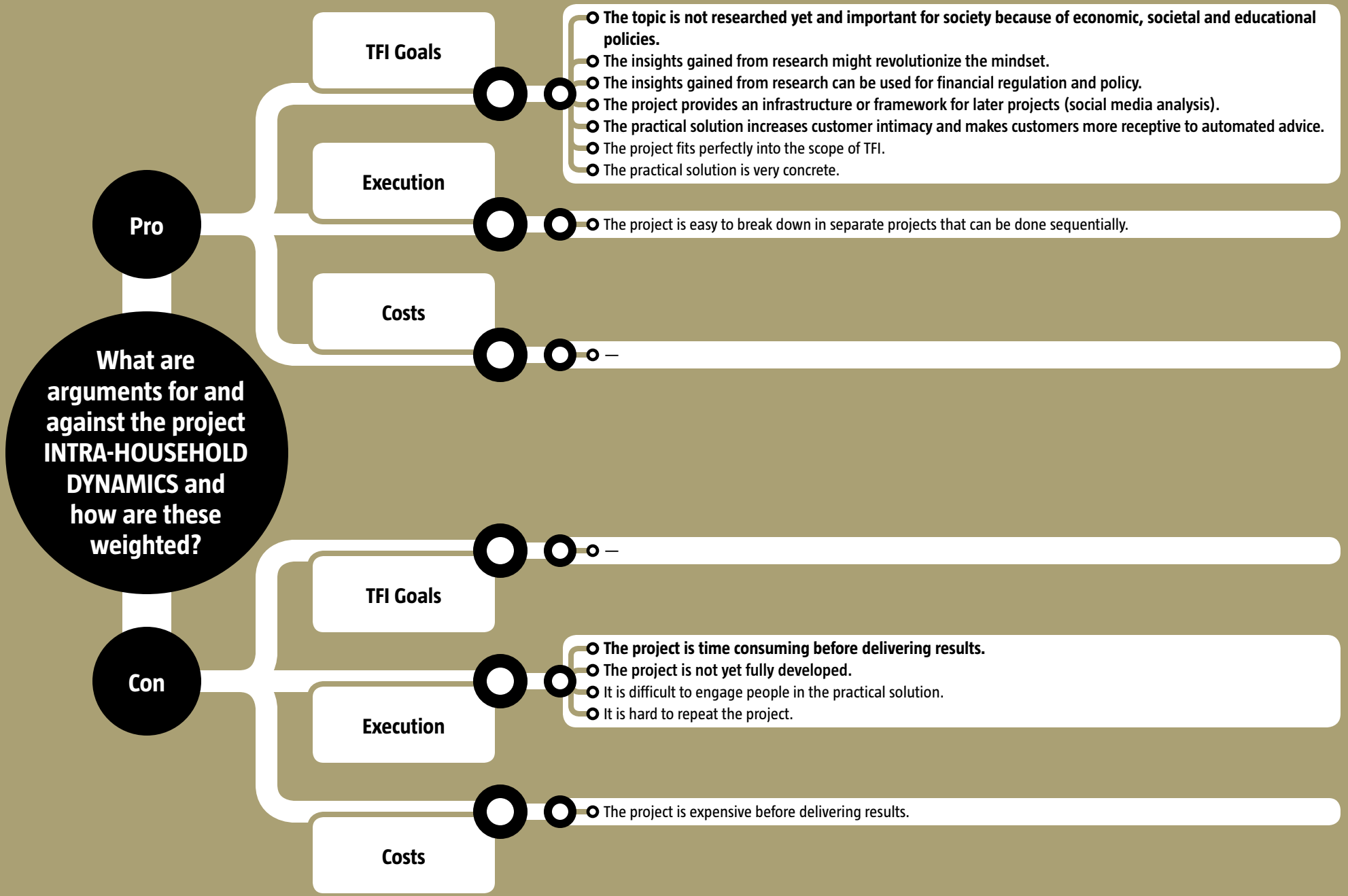
Budgeting, Spending & Borrowing - Intra-household dynamics



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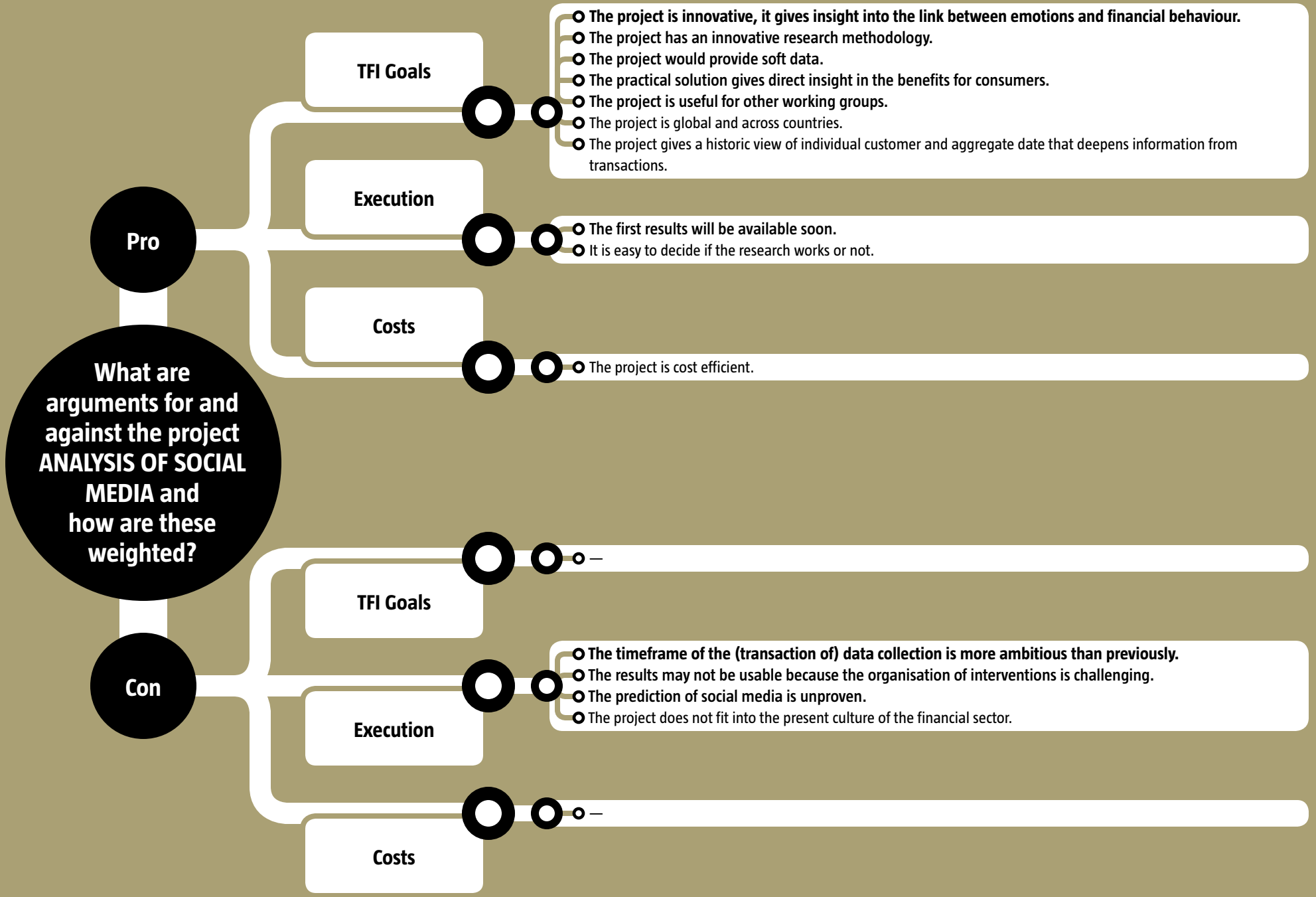
Budgeting, Spending & Borrowing - Analysis of social media



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Savings, Investments & Retirement - Optimal savings

How can the project OPTIMAL SAVINGS be summarized?

Challenge

- A substantial group of consumers save too much or too little.
- Even consumers who rationally know this about themselves do not alter their actual behaviour.

Proposed research

- To evaluate the possible effectivity of using social norms in improving individuals' saving behaviour.
- To obtain a better understanding whether peoples' saving habits (mainly those for emergency buffers) can be influenced by social referencing (social comparison) regarding three elements:
  - 1. How much others are saving;
  - 2. How others allocate their savings to different goals (emergency buffer, retirement etc.);
  - 3. Via what means people save (what type of products).

Goals

- To test whether informing individuals that they do not save adequately in comparison to their peers can be successfully used to induce increased saving.

Practical solution

- Messaging service within e-banking application to inform consumers on the comparison of their behaviour with the relevant peer group.
- This practical solution is also the data gathering tool.

See next page

- General approach
- Data sources
- Study plan
- Timeframe
- Costs

This chart represents a summary of the project proposals of the working group on Savings, Investment & Retirement. It is used as a preparation for the working group sessions and to inform those without access to the full proposals on their general nature. The summary has been prepared by the Argumentation Factory.

See previous page

- Challenge
- Proposed research
- Goals
- Practical solution

How can the project OPTIMAL SAVINGS be summarized?

General approach

- Use a subset of ING clients and their savings behaviour.
- Based on selection criteria which are to be determined, subdivisions are made within the subset, of which the mean savings level are determined.
- By comparing their behaviour to 'others like them', messages can be constructed which inform them that they save less than, more than or exactly the average amount in comparison with their peers.
- These individuals can then be sent a message via the mobile banking app of ING, informing them of their behaviour.
- The research question will be: "Can the savings behaviour of clients of ING who save inadequately be influenced by applying a social norm nudge via ING mobile banking app?"

Data sources

- Using data sets containing demographic and financial information at the individual level of people who use the ING app and can be tracked in terms of their savings behaviour.

Study plan

1. Determine the amount of nudges to be applied.
2. For each subgroup, randomize the individuals within it over the nudges and a control group.
3. Observe the behaviour of the (non-)recipients of the nudge(s).
4. Gather and analyse the data.
5. Derive the results and conclude on the outcome.

Timeframe

- The timeframe is 8 months (2 months of preparation, 3 months of testing, 2 months of analysis and report).

Costs

- One or two interns.
- Developing the project further together with colleagues.
- It is possible to do the research within the available budget.
- Practical solution: to be determined later.

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Savings, Investments & Retirement - Future self

How can the project FUTURE SELF be summarized?

Challenge

- People find it hard to picture themselves in the far-away future or are too optimistic about their (financial) future.
- For many it is difficult to assess future life events such as career choice, marriage, illness and divorce.
- Without knowing the future goals of people it is impossible to advise on smart financial decisions.

Proposed research

- Developing and testing a multi-dimensional model of the human self, which includes different goals, time horizons, personality types and unexpected life events.
- Developing scenarios to assess future life events, to make the future salient to people's present situation and to make a comparison with their goals.
- Using theoretical dimensions:
  - (a) present bias in time orientation;
  - (b) risk estimation;
  - (c) self-regulation of behaviour;
  - (d) feedback on behaviour;
  - (e) hierarchical levels of acts and behaviour.

Goals

- To better understand how people plan, envision and decide on their own future self.
- Giving guidance to people, provide a level of comfort and help to avoid the biggest mistakes.
- Collecting further data using the app that will ultimately be used to inform users.

Practical solution

- A personal coach (app) that functions as a guidance tool and helps to avoid major mistakes concerning savings and investments.
- It helps consumers to:
  - 1. Envision their future over different time horizons;
  - 2. Develop multiple scenarios to plan your own life cycle;
  - 3. Different goals on different time horizons and see that translated to saving levels;
  - 4. Avoid making the biggest mistakes concerning savings and investments.

See next page

General approach

Data sources

Study plan

Timeframe

Costs

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Savings, Investments & Retirement - Future self

See previous page

- Challenge
- Proposed research
- Goals
- Practical solution

How can the project FUTURE SELF be summarized?

General approach

1. Develop a useful and actionable classification of people with differing goals.
2. Develop life scenario's for each class of consumer.
3. Enriching those scenario's that take current and future life events in account.
4. Allow consumers to develop their own scenario's using the app.
5. Use the usage of the app as input to improve the app.

Data sources

- Classify people with differing goals with upcoming Motivaction report (September 2016).
- Include the Dunkel and Kempelman 5 future orientation types.
- Using existing and new aggregate data from the country of interest, forming a database.
- Using (big) data or social media profiles of consumers to determine their personality type.
- The study will involve initially one EU country, ideally a second country will be added in 2017.

Study plan

No extra detail beyond general approach yet.

Timeframe

No input yet.

Costs

No input yet.

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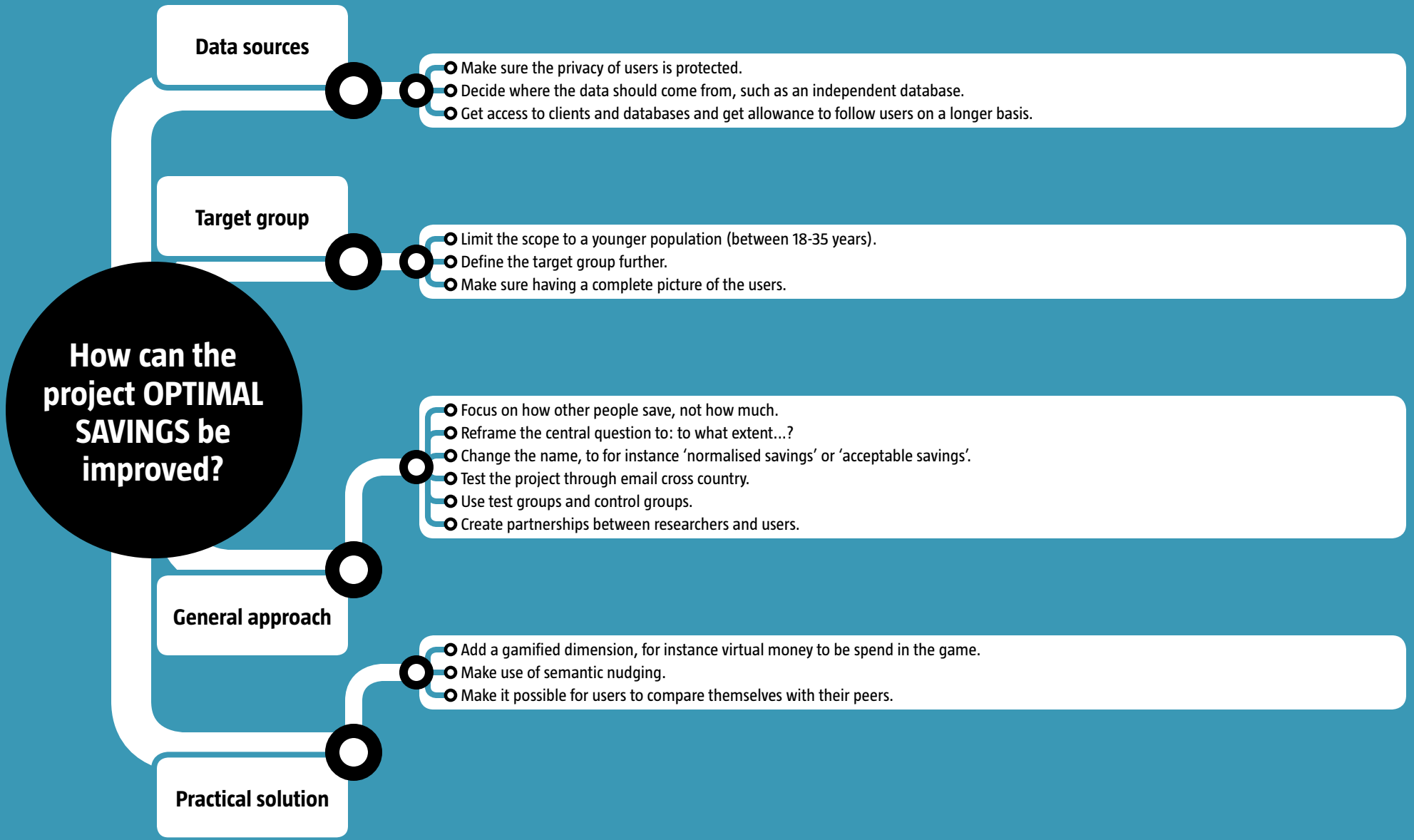
Savings, Investments & Retirement - Optimal savings



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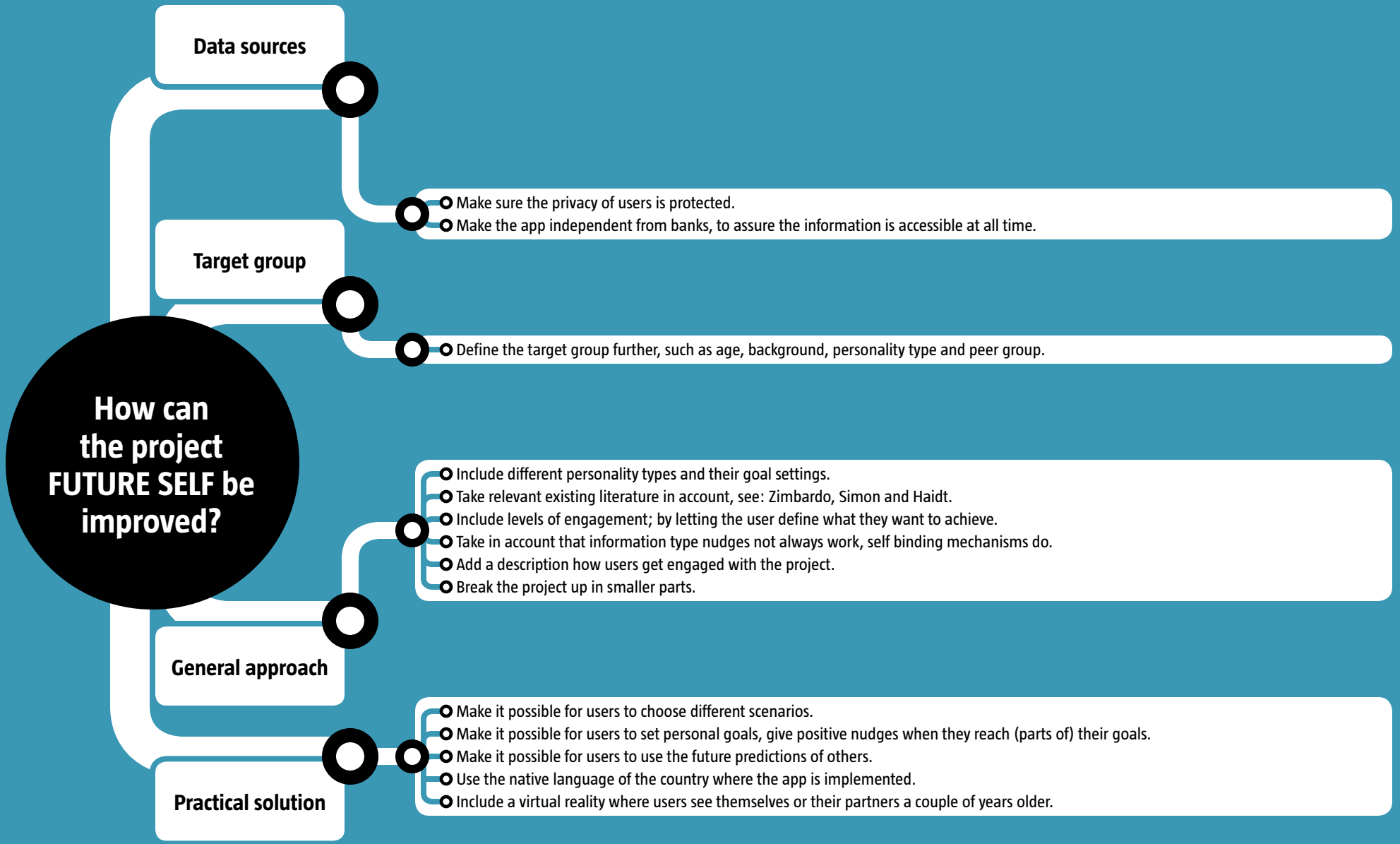
Savings, Investments & Retirement - Future self



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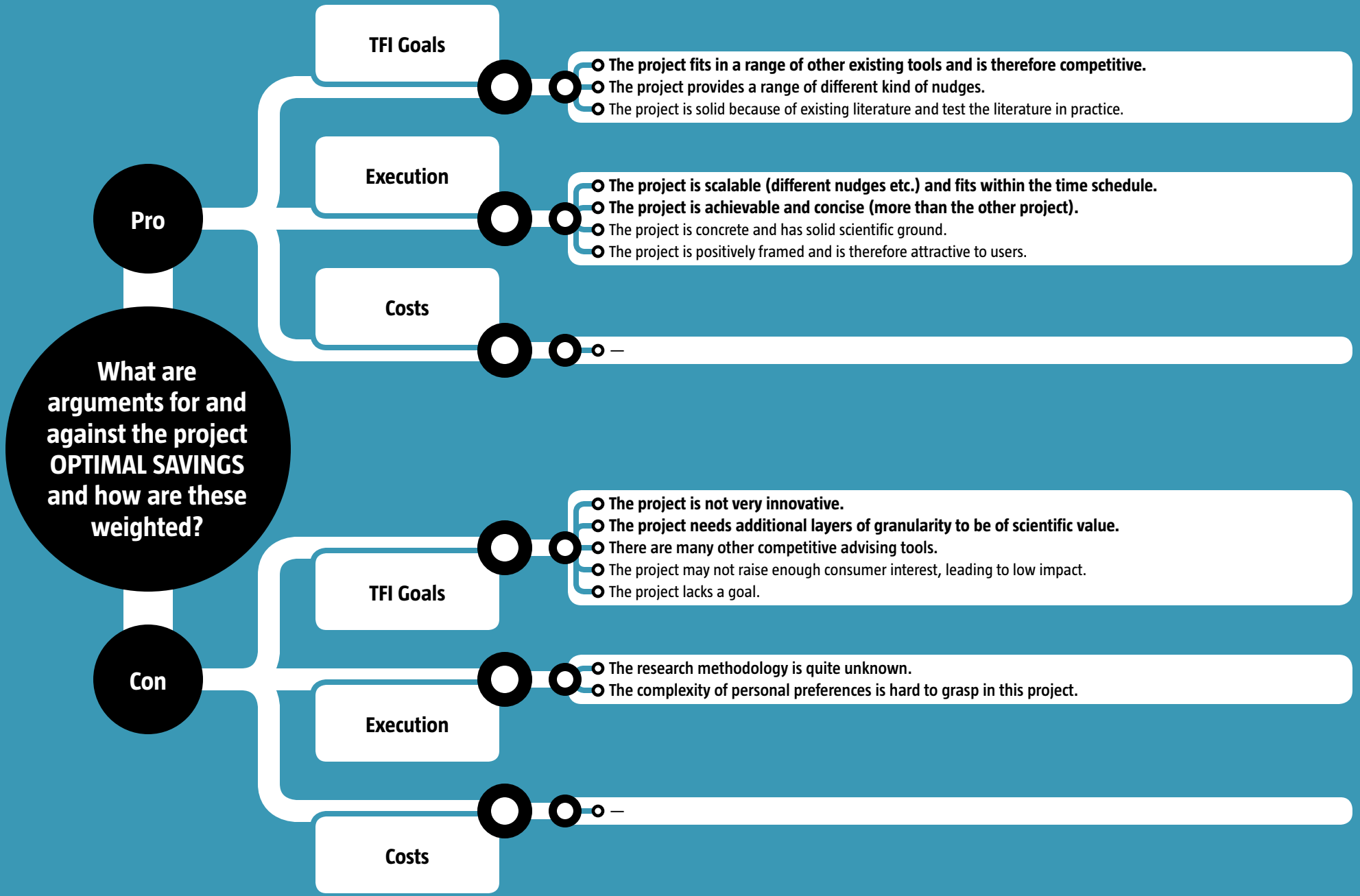

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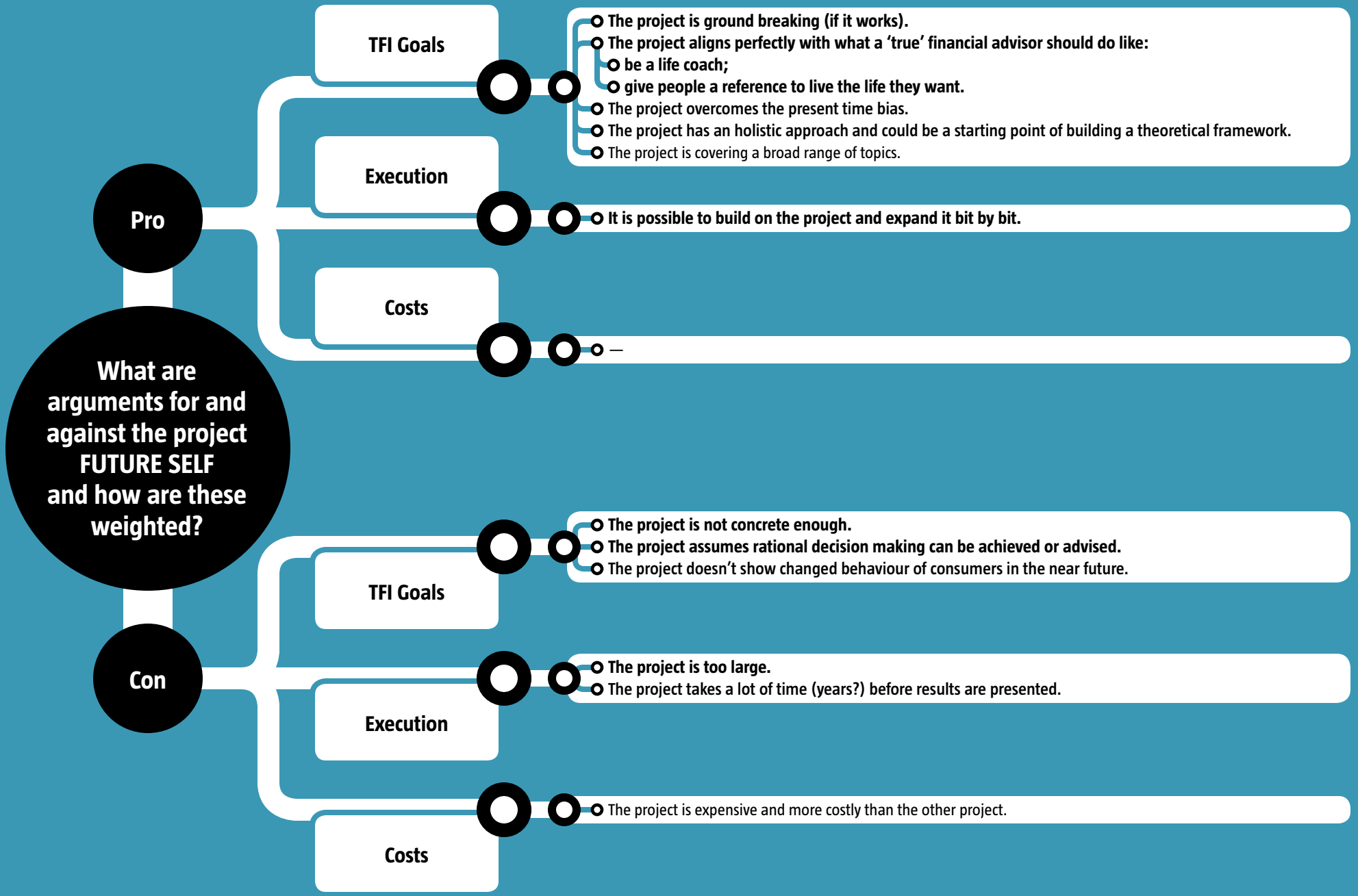
Savings, Investments & Retirement - Future self



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Financial literacy - Financial education

How can the project FINANCIAL EDUCATION be summarized?

Challenge

- Knowing which interventions can help by overcoming a range of social-psychological factors that undermine our ability to manage money well, focusing on millenials.

Proposed research

- There are two hypotheses to test:
  - 1. Awareness of behavioural hurdles and practicing the strategies to work with them will improve objective financial outcomes (e.g. number of time overdrawn in the past x months; number of other adverse financial events).
  - 2. Awareness of behavioural hurdles and practicing the strategies to work with them will improve subjective measures (feeling in control of finances; overall wellbeing).
- The target groups differ across the project. We will focus mostly on were financial education is most effective i.e. early stage working population.

Goals

- Improving the impact of financial education for consumers or students.
- Improving the way financial education matches personal, social and psychological issues.
- To define these challenges and determine what different stakeholders might be able to do to support improved decision making.
- An eventual aim would be to develop and deliver a multi-session financial education course, running a Randomised Controlled Trial to evaluate the effect size of such a course.

Practical solution

Goals

- The app reduces stress around infrequent large purchases, like vacations, which helps in avoiding impulse purchases and mistakes.
- The app creates an overview and provides step by step guidance, this gives the consumer control and less stress.
- The app gives timely and relevant alerts, the consumer is able in time to decide and save money.
- The app provides the user insights in how others in comparable circumstances have decided.
- The app facilitates better informed financial decisions

Stakeholders

- 1. Techs (Microsoft, EMC and DD): Providing a platform
- 2. Financials (ING): Making consumers more financial fit / show innovation with relevance
- 3. Researchers / academics: Getting new data insights from the app
- 4. Civil Organisations: Advancing sound financial behaviour

Future perspective

- The app could also work on other devices besides a smart-phone.
- It would be possible to add extra information sources to the existing ones.
- It would be possible to predict possible choices of the user based on the available data.
- It would be possible to nudge and guide the consumer automatically towards the optimal choice.

See next page

- General approach
- Data sources
- Study plan
- Timeframe
- Costs

Financial literacy - Financial education

See previous page

- Challenge
- Proposed research
- Goals
- Practical solution

How can the project FINANCIAL EDUCATION be summarized?

General approach

1. Exploration

- Review the behavioural hurdles defined in existing research by the RSA, and for each hurdle we will explore how it might be addressed through information, education and other decision making nudges or prompts.
- This exploration will comprise desk research, semi-structured interviews with experts in the field, and/or an in-person or online crowd-sourcing of potential approaches.

2. Proof of concept

- Write up sample lesson plans and pilot them as part of existing programmes being carried out by Aflatoun.

3. Sharing and integration

- Find ways to mainstream these findings both within the bank but also within the wider ecosystem.
- The TFI could provide this back to the broader community to be incorporated into other projects.

Data sources

- Data gathering questionnaire similar to the existing research (by Motivaction for ING) into the role of goal setting.

Study plan

- No extra detail beyond general approach yet.

Timeframe

- Five months.

Costs

- Euro 30,000 for research.

This chart represents a summary of the project proposals of the working group on Financial literacy. It is used as a preparation for the working group sessions and to inform those without access to the full proposals on their general nature. The summary has been prepared by the Argumentation Factory.

Financial literacy - Timing of financial education

How can the project TIMING OF FINANCIAL EDUCATION be summarized?

Challenge

- Academic research has shown that financial education contributes to better financial decision making.
- Finding the right strategies in order to enable people and determine the right moment to intervene in order to ensure maximum impact.
- Delving into the personality of (vulnarable) consumers in order to find out how financial education should take place and at which timeframe.

Proposed research

There are three possible research avenues:

1. Running a mid-/long term impact measurement with target groups, focussing on high-risk target groups.
2. Focussing on younger people (18-) coöperating with local stakeholders to integrate proposed financial education strategies into the school curriculum.
   - The focus will lie on determining the values profile of these people and relating this to short-term and long-term priorities.
   - The insights can be compared to and combined with past research on the effects of upbringing as well as existing literature in the field of developmental psychology.
3. Launch a call-for-ideas (especially towards the education/gaming/publishing industry; established companies and start-ups) and use part of the available budget to fund a limited series of concrete projects (financial education/literacy) for which we can set up a close monitoring of the outcome.
   - The focus will ideally lie on youngsters or vulnerable people.

Goals

- To identify the most crucial moments during which financial education is most desirable and highly efficient.
- To understand the distinction between big decisions (life time events) and small decisions (daily purchases).
- To determine the right timing to employ the tailor-made tools.

Practical solution

There are three possible practical solutions:

1. A toolkit (e.g. application) for different ages and different life goals/targets that can be re-used by participating organizations in different countries. The tool content shall be adapted to the values of the user. The values profile of the user can be easily assessed by filling in an online questionnaire.
2. Implementing a financial education intervention in schools that focuses on the interests and needs of school students in their actual situation as well as their needs when entering the labour market.
   The financial intervention tool could also include an entrepreneurial experience module that functions as a practical application of financial with the aim to build necessary skills for the labour market.
3. Financial planner app. This app will help people to 'break down' their (bigger) decisions into smaller and more manageable ones and add a time frame to these. The objective is to help them to make better-informed financial decisions that take a realistic timeframe into account.

See next page

- General approach
- Data sources
- Study plan
- Timeframe
- Costs

This chart represents a summary of the project proposals of the working group on Financial literacy. It is used as a preparation for the working group sessions and to inform those without access to the full proposals on their general nature. The summary has been prepared by the Argumentation Factory.

Financial literacy - Timing of financial education

See previous page

- Challenge
- Proposed research
- Goals
- Practical solution

How can the project TIMING OF FINANCIAL EDUCATION be summarized?

General approach

- Employ triangulation in order to identify key moments to apply financial education and the factors that influence the timing of financial education.
- The following methods will be used:
  - 1. Literature study on the effects of life progression and other background factors on, among others, goal setting and financial decision making.
  - 2. Interviewing a local experts or a Delphi study in the countries in question to obtain locally-specific insights.
  - 3. Organizing focus groups as part of the call-for-ideas launch.
  - 4. Online survey among selected groups (e.g. 12-18 year olds, people with low-level education/low-earning).
    - A. Map' people's values profile.
    - B. Understand how people make financial decisions and how this relates to their values. The goal orientation scale developed by Lockwood et al. (2002) is an excellent tool in this regard.
    - C. Understand what 'happiness' means to different types of consumers and how this relates to their own values profile and the way they set (financial) goals.
    - D. Find out which types of storytelling (using the power of archetypes) are most appropriate for different types of consumers and develop financial education-specific storylines with experts. Test those storylines on a number of people (using a panel provider) in order to identify those that work best and thereby maximize the impact of financial education strategies.

Data sources

- Surveying among various target groups. There are organizations that possess a representative sample of respondents, which allows generalizing the results of the research. The survey can be used for both determining people's values profile as well as in the impact measurement process.
- Academic literature to frame the survey findings (e.g. literature in the field of developmental psychology).
- CYFI's (Child & Youth Finance International) worldwide multi-sectoral network. It will bring us in touch with local stakeholders to obtain locally-specific insights.
- IFF (Institut für Finanzdienstleistungen) has a database of indebted households and school contacts.

Study plan

- No extra detail beyond general approach yet.

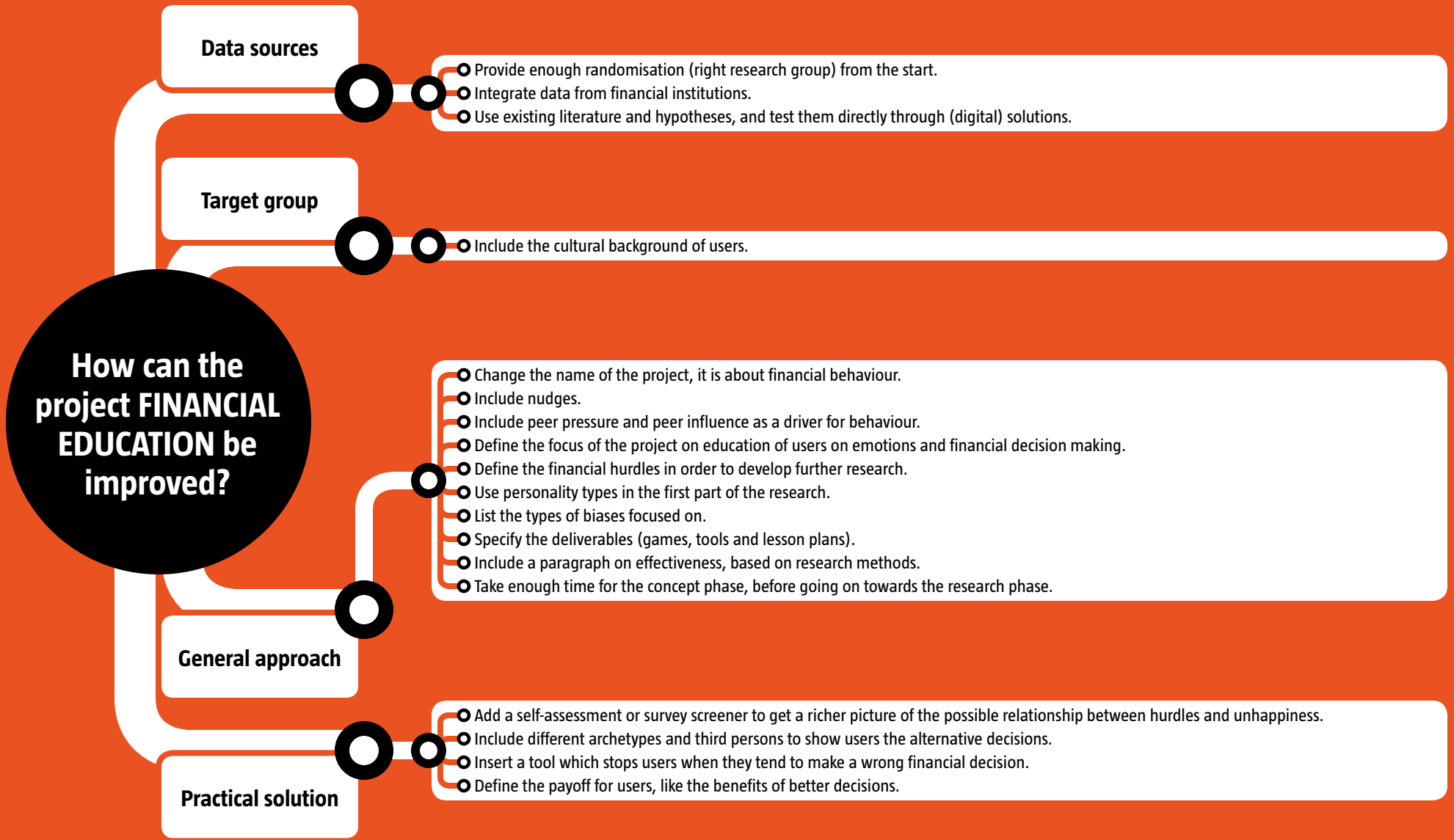
Timeframe

- Timing is dependent research structure of the project and how many of the research avenues it includes.

Costs

- No input yet.

This chart represents a summary of the project proposals of the working group on Financial literacy. It is used as a preparation for the working group sessions and to inform those without access to the full proposals on their general nature. The summary has been prepared by the Argumentation Factory.



This chart represent the improvements suggested by the working group during the sessions.
It gives guidance to the project team for further development.

Financial literacy - Timing of financial education

How can the project TIMING OF FINANCIAL EDUCATION be improved?

Data sources

- Decide if there is enough data with high enough quality to continue with this project.
- Provide a 'continuous lab' to gather data.
- Target group.

Target group

- Differentiate between users who are receptive of advice and those who aren't.
- (Re)define the target group, not everyone has access to apps, or the ability to use them.
- Redefine the target group to vulnerable groups like youngsters or lower educated people.
- Focus on types of financial decisions (for example buying a house) instead of age groups.

General approach

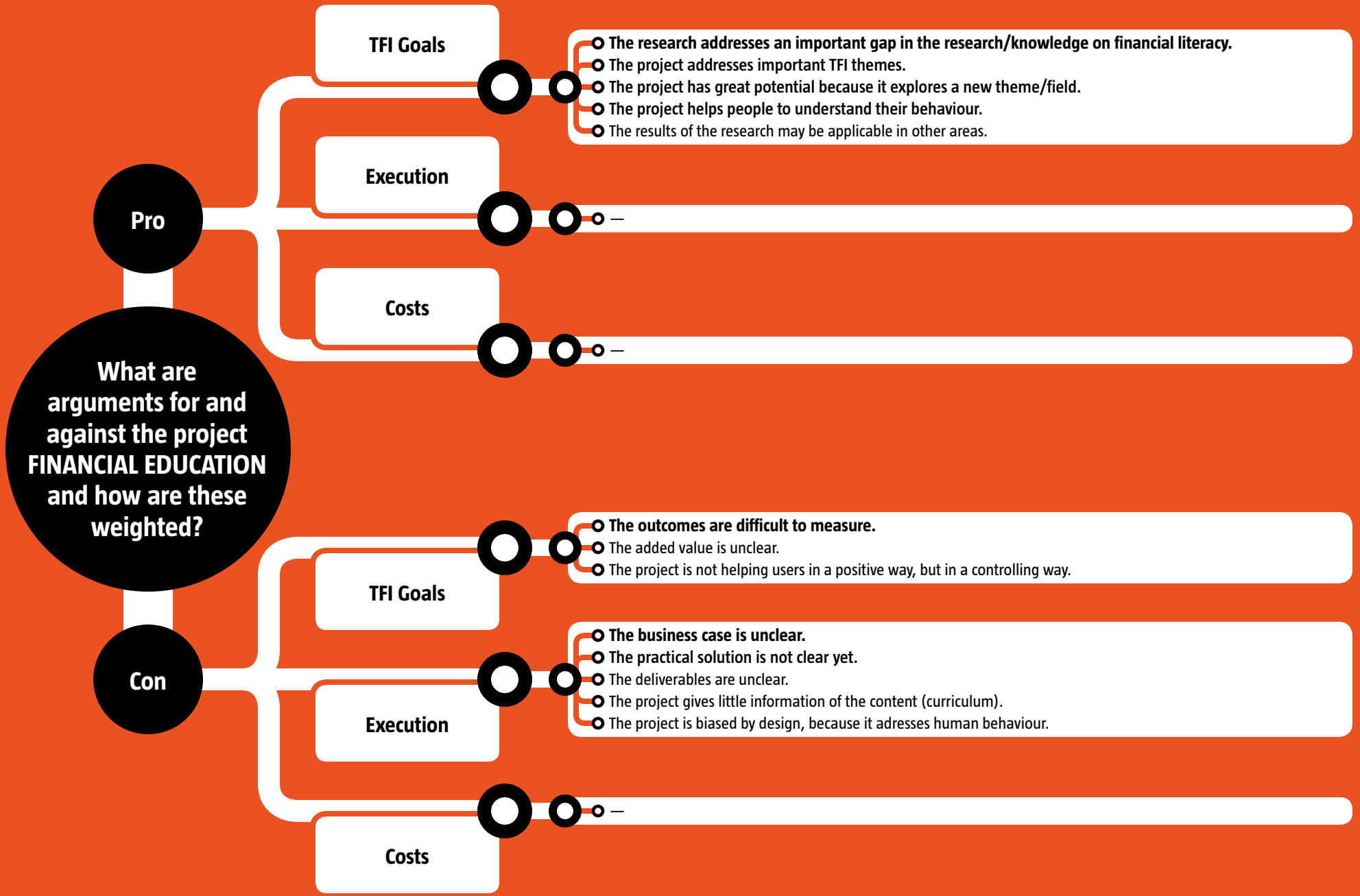
- Focus on the timing of financial education, and define the goal.
- Take the differences between countries into account.
- Develop alternative types of education, like trial and error-games.
- Make the underlying assumptions more explicit, define and operationalise the term 'receptiveness' further.
- Include objective measurements like KPI's.
- Include research on knowledge about when people are receptive for receiving information.
- Remove the inconsistencies between the concepts of receptiveness and practical solutions.
- Take in mind the differences between big and small decisions.
- Get a firmer idea of current effectiveness of financial education.
- Decide if the project focus is on the long or short term.
- Break the project into smaller parts.
- Leave the implementation into the school curriculum out, this takes too much time.

Practical solution

- Include the opportunity costs or trade of, to illustrate some of the effects of the financial decision.
- Focus on financial wellbeing, not on consumption.
- Take into account that happiness is a broad and fuzzy concept, this needs to be further developed.

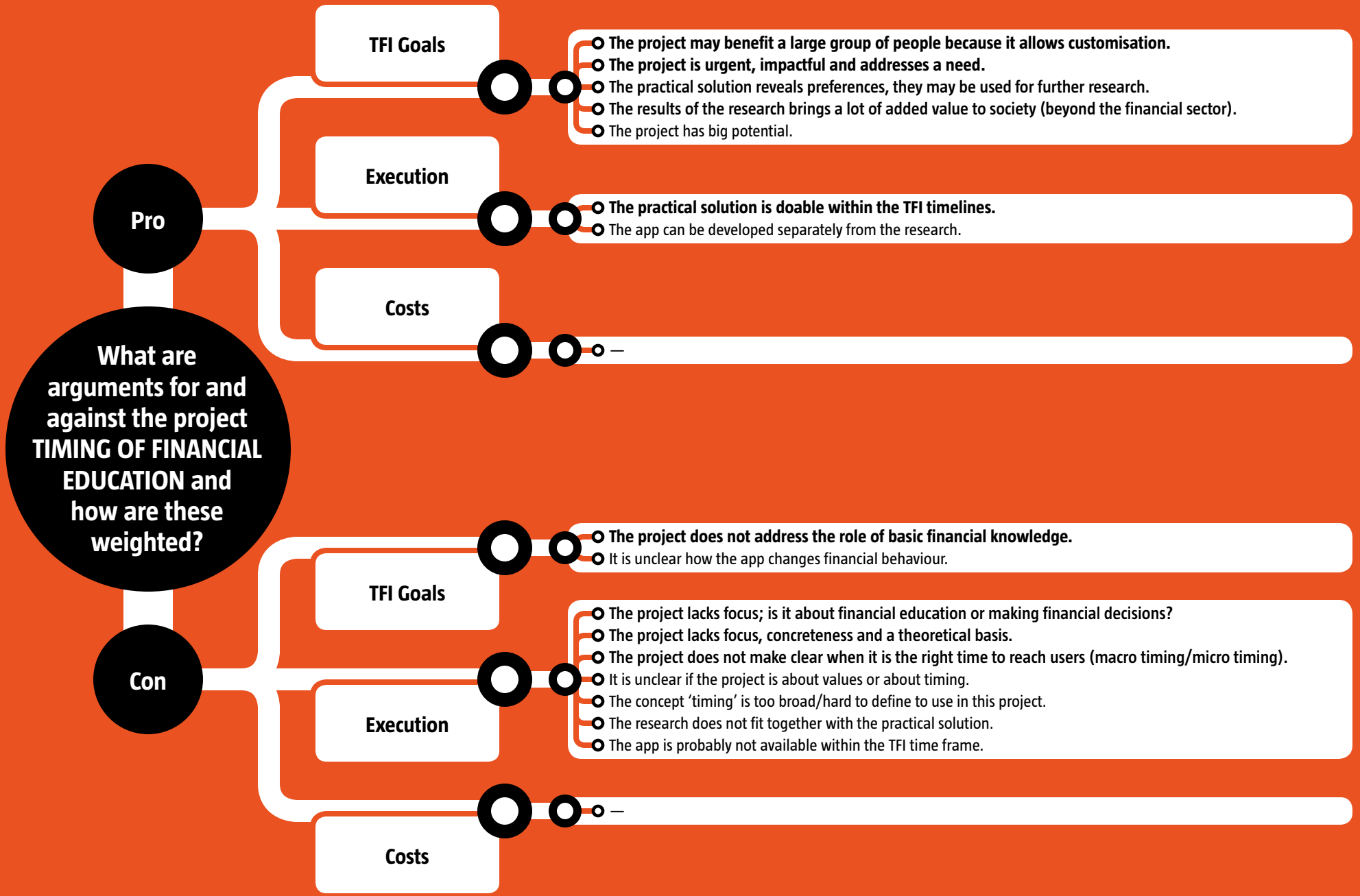
This chart represent the improvements suggested by the working group during the sessions.
It gives guidance to the project team for further development.

Financial literacy - Financial education



This chart represents arguments for and against each project as set by the working group during the sessions. The visual emphasis of the arguments represents their relative weighting. It can be used as a basis for decision making and to identify strenghts and weaknessess.

Financial literacy - Timing of financial education



This chart represents arguments for and against each project as set by the working group during the sessions. The visual emphasis of the arguments represents their relative weighting. It can be used as a basis for decision making and to identify strenghts and weaknessess.

Extra support for next step: Pressure cookers for practical solutions

In August 2016, Deloitte has joined TFI as a new knowledge and innovation partner. Deloitte will apply their proven innovation approach to help develop the practical solutions. Core of the approach are three pressure cooker sessions with representatives from the working groups. The result of these pressure cookers will be visual mock-ups of the practical solutions, tested and validated with consumers. The results will be presented at the March 2017 summit. The pressure cookers are scheduled for: October 20 and 21, November 17 and 18, February 2 and 3. We have a great group of participants. The current list of participants can be found in Annex D. More participants are welcome, If you wish to participate, please contact the TFI facilitating team.

Additional to the scheduled pressure cooker workshops, that are designed to support the development of the practical solutions, there is a discretionary budget of euro 80,000 incl VAT per year (for the period of 1H16 to 1H17) for the development of the practical solutions. This budget is divided equally over the working groups projects. As practical solutions are accompanying the research projects, this budget will be equally split up over the accompanying practical solutions for the research projects that were (will be) approved by the Research Board, and thus represents possible additional funding to the allocated research budget.

Research Board reflection

Budget allocation decisions

Based on the prepared research proposals, the Research Board has decided to allocate budget to two projects. Project “Analysis of social media” for the sum of euro 30,000 incl VAT and project “Intra-household dynamics” for the sum of euro 20,000 incl VAT to execute the first stage, the survey. The Research Board considers these projects to be specific enough on the research part to be allocated a budget now. The Research Board kindly requests the project teams of the two projects to go ahead with the execution of the research part as soon as possible. In addition, the teams are also requested to develop the project plan further with regards to the practical solutions and the later stages of the research.

As a result, the Research Board cannot fully allocate the available budget for the period 1H16 to 1H17 of euro 100,000 incl VAT. The remaining research budget of euro 50,000 incl VAT can only be allocated once the remaining project plans have been revised, improved and agreed upon.

Budget and allocation overview

Amounts in euro 1,000, incl VAT	Within Research Board mandate
2016	From TFI budget, for research
Total budget	100
Allocated now	50
To be allocated later	50

	For period up to H1-2017	Allocation
1	Intra-household dynamics	20
2	Financial education	–
3	The future self	–
4	Analysis of social media	30
5	Timing of financial education	–
6	Optimal savings	–
	Total	100

General reflections from the Research Board

Before additional budget can be allocated, the project plans should be improved, i.e. made more specific, including more specified project budgets (with a clear indication for which activities the funding is requested), team compositions, planning, concrete steps to be taken and a description of the envisaged outcome. The Research Board requests the project teams to submit the improved project plans at the end of November, before the next December working group round, in order to provide a more specific and fuller project picture so they can be assessed by the December working groups and afterwards by the Research Board in the first half of January. If ready, at the start of 2017, budget will be allocated and the execution phase towards the Think Forward Summit 2017 and beyond can start.

More specifically (and additionally to the abovementioned), all project teams and topic owners are requested to address the following issues:

- Existing research
  Project plans should include a paragraph on which research already exists to build upon and specify that in the project plan.
- Data collection
  Project plans should be specific about the exact data collection: method, scale and external validity.
- Social experiments
  Project plans involving social experiments (involving e.g. peers) should provide enough comfort how these experiments would reflect/simulate reality closely enough regarding three aspects:

1. The particular social circle;
2. What social expressions do respondents observe/receive/ register/look for
3. External validity in two ways:
   a) would their peers share in reality what is reflected in the experiment?
   b) do we not impose behaviour on respondents?

- Existing practical solutions
  For the practical solutions side, all corporate TFI partners' colleagues involved in the projects, are strongly encouraged to assess which similar projects are already undertaken/ underway within their companies and include that in the project plans where relevant.
- Alignment of research and practical solution, project teams are also asked to keep a clear alignment between the research project and accompanying practical solution (including the pressure cookers outcomes).
- Synergies
  If possible, make use of potential synergies between the projects. This can also be picked up after the Summit.

Project by project assessment

Intra-household Dynamics

The Research Board considers this to be more a research program than research project.

This is a topic of foundational importance to the TFI, which is under-researched and of importance to society, with various potential interesting policy implications.

The project plan needs to be further developed: sequenced and made more actionable. The methodologies should be more comprehensively described. Also which household types and decision types are focused upon per project within the program. For example, at the first stage, only on couples and bigger decisions.

The topic owner is requested to activate the rest of the team to help with gathering relevant data, from various aggregate data sources as well as surveys on behavioral and social aspects. In the data sets, the household should be clearly distinguishable from the individual. There should also be enough granularity in the breakdown of household composition.

Decision and next steps

The topic owner and project team are asked to prepare the next version of the project plan and start the project execution by the end of November, so that the progress can be discussed at the next working group, 6 December; and validated by the Research Board thereafter. If ready, at the start of 2017, the execution phase can fully begin.

At the WG, the topic owner proposed to start with a survey which would cost euro 20,000. The Research Board allocates euro 20,000 incl VAT now to the project, for the survey to take place by early 2017.

Financial Education & Timing of Financial Education

The Research Board considers Financial Education to be more a research program than a research project.

The Research Board wants Timing of Financial Education to be merged into and be developed into a relevant part of the overall program. Timing is an important aspect of financial education (in a broad sense of FE, including financial behavior). Awareness is an important aspect in the hypotheses of current project plan 2. If FE is regarded as building-up of human capital, the fact that people forget ("decay of human capital") makes "timing" a crucial part of the overall program. Timing of Financial Education contains a practical solution (app) that can be of use to inform the research part within the program.

There has to be more clarity on what the projects will be exactly about. Is it about identifying behavioral biases or about using financial education to ameliorate them, or both? Behavioral hurdles must be more clearly defined.

It is important that the TFI performs activities in the Financial Education domain. The Research Board therefore continues to consider this an important project. A link or causal impact analysis including size of impact between education and behavior is regarded as interesting.

It is of crucial importance that projects make a clear distinction between different types of decisions. Which do they zoom in on? Either small, frequent, habitual ones, which have to do with system 1-type challenges. For the "timing of" part of the project this would make more sense.

There is some concern about the idea of developing lessons at schools, and how that could be connected to system 1-type challenges. School children probably would profit from bite-size

education involving small decisions. In a school curriculum, repetition is an important element of education.

The alternative would be to focus on longer term/big decisions, e.g. on retirement, which have more to do with system 2-type challenges. The problem there would be the fact that it is already heavily researched. Also then, the analysis may take a long time, unless you would have a smart way for looking at historical data.

Timing of Financial Education needs to specify the exact decision-making process and explain clearly when the best moment would be to provide information. The decision-making process of a big decision differs from that of small, frequent decisions.

- The Research Board is concerned if measureable results can be achieved within a reasonable period.
- Who would produce the educational materials? When and how often are they offered and repeated to students/pupils?
- How do the topic owners envisage that an app if developed at commercial organisations such as a bank could be made available to schools?

The project proposal should contain literature studies and references to research that has already been done on FE.
The Research Board suggests that the topic owners inform themselves of a survey by the Bank of Spain that investigates the effects of FE.

A second suggestion is to look at an existing platform for students and teachers that can be accessed online, also from the Bank of Spain. It contains financial education material that can be accessed by students and teachers in registered schools. The efficacy of the platform is currently being tested by Olympia Bover and Ernesto Villanueva using randomised field experiments, in which the achievements in FL of treated students before and after the FL module were compared to those of students who did not attend the course.

Third, the PISA study was mentioned. Fourth, Australia has developed a comprehensive system of financial education at school, which involves repetition and augmentation as students move to higher grades. Given the fact that these materials are in English, they can be used/adapted for use internationally. Topic owners should inform themselves about this.

Fifth, if the project would go into behavioural aspects, this would be very broad. In that case, the topic owners are suggested to consult recent work by Victor Stango and Jonathan Zinman, who currently are conducting a project "From proliferation to parsimony in behavioural economics: new elicitation methods, summary statistics, and links to real world outcomes" in order to avoid reinventing wheels. Sixth, the topic owners should inform themselves of ING project Genoma and My Money Coach/Coach Épargne/Kijk vooruit.

Seventh, in The Netherlands, 'Wijzer in geldzaken' is currently negotiating with educational publishers on course materials on financial education for several school and age levels.

Decision and next steps

The topic owners and project teams of the two projects are requested to reach out to each other to prepare the next version of the project plan, by the end of November, so that it can be discussed at the next working group, 12 December; and validated by the Research Board thereafter. If ready, at the start of 2017, the execution phase can start.

The Future Self

Project 3 is more a programme than a project.

Need to be more concrete what is done and what not.

The project plan should be made more concrete and in it sharper choices should be made what is done and what is not done. The steps within the project plan need to be sequenced in a logical order.

The first stage would require a lot of hard data about the financial impact of planned and unplanned events. The next stages would probably have to be about visualisation and scenario planning. The project plan should also say more about the methodology: experimental environment.

The project needs to differentiate itself more from what will be the merged projects 2 & 5. The proposal needs to contain some discussion about how it relates to behavioural economics, e.g. hyperbolic discounting and overconfidence. A number of studies have been done on time perspectives and how they relate to savings, retirement planning and investments. The proposal should refer to and build on those.

Big life events

In essence the project plan should specify that it focuses on the big life events. Goal setting and life planning should be at the heart of the tool, giving people references to lead the life they want. The project should find out and specify the financial impact of life events. It should assess the impact of planned and unplanned events on both the individual level and on the household level.

The project should test the hypothesis if visualisation actually changes behaviour. It should of course be broader than the visualisation aspect that Dan Goldstein talked about at the TFI Summit 2016.

The project should also assess how people would respond in the present time to the possibility of concrete scenarios materializing in the future. This would answer the research question what is salient to people (what do they discount, and what do they take for granted as something that they have no control over if it would happen and do not want to deal with in the present situation). For that aim, people should be put into different situations (loss of spouse, health conditions, etc.).

The Research Board continues considering this as an important project as it would help overcome the present time bias.

Next steps

The topic owners and project team are asked to prepare the next version of the project plan by the end of November, so that it can be discussed at the next working group, 14 December; and validated by the Research Board thereafter. If ready, at the start of 2017, the execution phase can start.

Analysis of Social Media

Of all six projects discussed in the 3 working groups, this one is the most advanced/concrete and has the best chance to demonstrate results in the short term (to keep the momentum for the TFI).

The project is innovative, as it gives more insight into the link between emotions and financial behavior. The methodology can be broadened at a later stage to aspects other than borrowing.

There are some question marks around the predictive power of social media; how can the evidence be provided that an

expression on social media leads an accompanying financial transaction.

There are some question marks how well the social media expressions reflect the real situation regarding borrowing (or saving) behavior. This is different from conspicuous purchases. So, the topic owners are asked to go into the question: which features of individuals influence their willingness to share their borrowing behavior on social media.

The timeframe of (transaction) data collection will be more ambitious than previously assessed. The topic owners would ideally want to make use of existing surveys to get aggregate data via ING (to be looked into), but are (also) asked to actively search other potential sources. They also indicated that the initial focus would be on credit and debit cards.

Decision and next steps

The topic owners and project team are asked to prepare the next version of the project plan and start the project execution by the end of November, so that the progress can be presented at the next working group, 6 December; and validated by the Research Board thereafter. As soon as possible, but not later than the start of 2017, the execution phase may continue.

At the working group, the topic owners said that the project would cost GBP 40,000 (roughly euro 50,000). The Research Board allocates euro 30,000 incl VAT now, so that the project has a chance to be finalized or at least show important progress by the TFI Summit of March 2017. The remaining euro 20,000 incl VAT is suggested to come from the practical solutions budget.

Optimal Savings

The project title should be changed, and be free of the word “optimal”, as it would imply that the theory would say what is optimal and that practice should follow that – which is not what the project aims to do. These remarks are fully in line with the WG discussion. A suggested title would be “savings nudging”. Apart from determining the amount of nudges to be applied, the project plan also needs to specify what type of nudges. There should be a clearer distinction between perception (subjective) and objective measurement. The peer group should be more clearly defined, to ensure that the relevant comparisons are made.

The project plan and mind map suggest that with use of transactions data, behavior can be tracked. The execution of that will probably be preceded by an investigation stage if that can be organized. Therefore, a first stage could be, to do lab or online experiments to validate social referencing.

Next steps

The topic owners and project teams are asked to prepare the next version of the project plan by the end of November, so that it can be discussed at the next working group, 14 December; and validated by the Research Board thereafter. If ready, at the start of 2017, the execution phase can start.

Next Steps for TFI

The Research Board and TFI facilitating team find the ideas underlying all proposed projects are promising potential contributors to the goals of TFI. Not being able to allocate budget to certain projects at this point does not reflect on the quality of the ideas or teams, but is mainly a reflection of the relatively short time that teams had to develop their project plans. These should be made more specific, including more specified project budgets, team compositions and planning. The TFI facilitating team would strongly advise all project teams to start improving their project plans, but also to continue other work on the project, including the pressure cooker sessions on the practical solutions.

So if project teams feel they would like to perform additional activities, beyond delivering the improved project plans including the requirements as asked by the Research Board, they are encouraged to do so. The TFI facilitating team welcomes these initiatives to further work on the projects to provide a fuller project picture and to make sure to show enough progress towards the December working group sessions and to show preliminary results towards the Think Forward Summit in March.

The Research board decided that at this stage budget can be allocated to Intra-household dynamics and Analysis of social media. The pressure cookers will start working on the practical solutions and visual mock ups.

For the working group on Budgeting, spending and borrowing and the one for Savings, investment and retirement, both practical solutions will be developed in the upcoming

pressure cooker sessions. For Financial literacy, the current ideas for practical solutions will be merged into one practical solution.

Over the course of October, conference calls have been planned between the TFI facilitating team and the working groups to coordinate work going forward. Generally, the next steps to be taken, as currently planned until the March 2017 summit, are as follows:

Who	What	When, completed by	Deliverable
Research Board	○ Reflect and Rate the outcome of the sessions, decide on budget allocation. ○ Decide on strategy going into 2017.	○ Completed and in this report.	○ Guidance to working groups on how to proceed. ○ Guidance on work to be done in and before December round.
TFI Facilitating team	○ Contact working group participants to coordinate process going forward.	○ Early October	○ Project teams per project, planning, and so forth.
Project teams, project owners, partners	○ Improve research plans. Start execution. ○ Develop prototypes, visual mock-ups of practical solutions in pressure cooker process.	○ December 2016, March 2017 ○ December 2016, March 2017	○ Research plans, preliminary results. ○ Working model or mock-ups, value proposition canvas, business model canvas.

Working Group Participants & Research Board

Savings, investment and retirement

Participants	Organisation
Arends, Joep	Deloitte, practical solutions facilitator
Bakas, Adjiedj	Trend Office Bakas
Bellovi, Roberto	NTT Everis, Head of Digital (UK)
Blom, Marieke	ING, Chief Economist at ING Netherlands
Bos, Hans	Microsoft, National Technology Officer
Cliffe, Mark	Chief Economist ING Group
de Vos, Hannie	AFM, Strategy and Policy Advisor
Groothedde, Eric	NVB, Advisor Consumer Affairs (Retail Banking)
Hamers, Ralph	ING, CEO ING Group
Kaastra, Japke	ING, Manager Financial Planning
Koedijk, Kees	Tilburg University, Professor
Lierman, Frank	Belgium Financial Forum, ChiefEditing Officer
Loon, Peter van	Deloitte, partner Financial Institutions
Mul, Clemence	Deloitte, practical solutions facilitator
Paemen, Joep	Flow Design Works, Managing Partner
Raaij, Fred van	Tilburg University, Professor
Rozemuller, Martijn	Think ETF's, Co-founder and Managing Director
Schmalzried, Martin	Financial Services Users Group (FSUG) and EBA member
Schuerz, Martin	Oesterreichische Nationalbank
Simonse, Olaf	OECD, Member of Advisory Board of INFE

Participants	Organisation
Schmidt, Klaus Oskar	Investors Marketing Management Consultant
Staehr, Karsten	Tallinn University of Technology, Professor
Swinkels, Rob	NTT Dimension Data, Enterprise Architect
Timmerman, Hans	EMC, CTO EMC Netherlands
van Woelderen, Stefan	ING, Principal Economist
Ulbricht, Dirk	Institute for financial services, managing director
Watkins, Nick	Money Advice Service, Consumer and Market Insight
Zielonka, Piotr	University of Warsaw, Professor

Budgeting, spending and borrowing

Participants	Organisation
Arends, Joep	Deloitte, practical solutions facilitator
Ayers, Adam	ING, Cofounder of the ING Innovation Studio
Bouyon, Sylvain	Centre for European Policy Studies, Research Fellow
Brzeski, Carsten	ING, Chief Economist ING-DiBa
Cliffe, Mark	ING, Chief Economist ING Group
Colbaugh, Richard	Periander, Partner
De Rock, Bram	Université Libre de Bruxelle, Professor
Doornweerd, Yorick	Gartner, Global Client Director
Garcia, Sergio Hermida	NTT Everis, Digital Banking Manager
Graffeo, Michele	University of Trento, Researcher Behavioural Economics
Kukk, Merike	Tallinn University of Technology, Research Scientist
Meerburg, Roy	Humanitas, Project Manager
Mohan, Devie	FinTech Market Strategist and Industry Researcher
Mul, Clemence	Deloitte, practical solutions facilitator
Ormerod, Paul	Volterra Partners, Academic
van Grinsven, Bo	ING, Behavioural Economist
van Raaij, Fred	Tilburg University, Professor
Wall, Neville	EMC, Client Director

Financial literacy

Participants	Organisation
Arends, Joep	Practical solutions facilitator at Deloitte
Bailey, Simon	Head of programmes and research at Aflatoun
Bright, Ian	Managing director and group research at ING
Caron, Hans	Head of market research at ING
Derickx, Roelof	Global account director at NTT, Dimension Data
Friedman, Renee	The Economist
Ledent, Philippe	Senior economist at ING
Nuyens, Bruno	Manager events, Everis
O'Brien, Aidan	Senior director at EMC
Papadongonas, Panos	Researcher at Motivaction
Penner, Jared	Director of thought leadership at Child and Youth Finance International
Reitsma, Arthur	Director retail banking at Dutch Banking Association
Sartorio, Dafne	Global partnership development director at AIESEC International
Schellhove, Anne	Scientific associate at German Institute for Financial Services
Spencer, Nathalie	Senior researcher, social brain team at RSA
Ubhi, Satinder	NTT, RMA, CTO
van Campenhout, Geert	Professor at KU Leuven
van Garderen, Marten	Senior economist at ING
Van Raaij, Fred	Tilburg University, Professor
Wolk, Alexandra	Strategic partnerships at Three Coins

Research Board

Members	Organisation
Cliffe, Mark	ING, Chief Economist ING Group
Haliassos, Michael	CEPR Network on Household Finance, Director
Ormerod, Paul	Volterra Partners, Academic
Tristani, Oreste	ECB, Senior Advisor
van Raaij, Fred	Tilburg University, Professor

Deloitte pressure cooker suggested team members by theme

Savings, investments & retirement:
Japke Kaastra
Joep Paemen
Martijn Rozemuller
Martin Schmalzried
Saskia Smulders
Rob Swinkels
Hans Timmerman
Hannie de Vos
Nick Watkins
Piotr Zielonka

Budgeting, spending & borrowing:
Adam Ayers
Yorick Doornweerd
Sergio Hermida Garcia
Kristin Glass
Bo van Grinsven
Devie Mohan
Lei Pan
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Financial literacy:
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