The image is a cover page for a progress report. It features a solid blue background. On the left side, there is a vertical orange bar. In the center, there is a large orange circle. Overlapping the right side of this orange circle is a smaller white circle. The text is arranged as follows: 'Think Forward Initiative' is written in white, bold, sans-serif font above the orange circle. Below it, 'Showing the progress' is written in a larger, white, bold, sans-serif font, also within the orange circle. To the right, inside the white circle, the text 'Progress report January 2017' is written in a black, sans-serif font.

**Progress report
January 2017**

Think Forward Initiative
**Showing
the progress**



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INITIATIVE**



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Prologue

This document is the third and last progress report before the 2017 Think Forward Initiative Summit. It describes also the follow up to the 2017 TFI Summit. To make it readable as a stand-alone publication, it contains a similar introduction and description of the TFI as the first and second progress report. For those already aware of what TFI entails, we suggest you start reading from paragraph ‘Overview of activities’ on page 12. The first and second progress report can be found [here](#).

Introduction

The Think Forward Initiative is an open source initiative by ING, CEPR (Centre for Economic Policy Research), Dell EMC, Microsoft, Dimension Data and Deloitte. Its goal is to gain a deeper understanding of financial decision making and to empower people to make financial decisions that are better for them, and ultimately better for society. The Think Forward Initiative brings together a range of academics and researchers to find out how and why people makes 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 would 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 open-source initiative is a platform for conducting and showcasing research, share knowledge, and co-create with academics, policymakers, consumer organisations and leaders from the financial and technology sectors. But also to have 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 set.

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

- enable and execute new research into drivers of financial behaviour;
- develop accompanying practical solutions that help 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 that mean 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?
To respond to disruptive trends a technological aspect is embedded in all the themes.

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

This report is the third progress report of the work of the three working groups. There were three sessions in December 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 & Deliverables

Governance of TFI

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

- The partners
- The 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 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, propose and assess the research directions and the accompanying practical solutions. 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 involves preparing the idea generation and decision making process, moderating the sessions and reporting the outcome. In total, three rounds of working group sessions were planned so far. The main goal for each round is in the table below.

Working Group Session	June Bringing the focus	September Setting the direction	December Showing the progress
Research	<ul style="list-style-type: none"> Agree on promising research project(s), to be validated by the Research Board. 	<ul style="list-style-type: none"> Draft research project plans ready. Assess, improve and sharpen project plans in the working group. 	<ul style="list-style-type: none"> Final research project plan ready, where possible show preliminary results.
Practical Solution	<ul style="list-style-type: none"> Agree on practical solution(s) to be further developed based on accompanying research. 	<ul style="list-style-type: none"> Draft solution description ready. Assess and improve plan in the working group, including the criteria of success. 	<ul style="list-style-type: none"> Final plan and first visual mock-up ready, validating the criteria of success for the next development.

Overview of activities and results in 2017

Period	Milestone	Results	Feedback
February 2016	<ul style="list-style-type: none"> Global kick-off of Summit Brussels 	<ul style="list-style-type: none"> Themes chosen Initial plan Working groups formed 	
May 2016	<ul style="list-style-type: none"> Written questionnaire to working groups 	<ul style="list-style-type: none"> Longlist of research projects and accompanying practical solutions 	
June 2016	<ul style="list-style-type: none"> Bringing the focus first round of working group sessions 	<ul style="list-style-type: none"> Shortlist and brief descriptions of research projects and practical solutions 	<ul style="list-style-type: none"> First Research Board Reflections First Progress Report July 2016
July-August 2016	<ul style="list-style-type: none"> Project teams develop plans for research and practical solutions 	<ul style="list-style-type: none"> Draft project and research plans 	
September 2016	<ul style="list-style-type: none"> Setting the direction second round of working group sessions 	<ul style="list-style-type: none"> Suggestions for improvement of the plans Argumentation on the strong and weak points of the plans 	<ul style="list-style-type: none"> Second Research Board Reflections First round of budget allocation Second Progress Report October 2016
October-November 2016	<ul style="list-style-type: none"> Two rounds of Pressure cookers for practical solutions Finalisation and execution of research plans 	<ul style="list-style-type: none"> Consumer propositions Mock-ups of practical solutions Final research plans 	<ul style="list-style-type: none"> Third Research Board Reflections
December 2016	<ul style="list-style-type: none"> Showing the progress third round of working group sessions 	<ul style="list-style-type: none"> Assesment of alignment between, and key features of, research and practical solutions 	<ul style="list-style-type: none"> Third Progress Report January 2016
January-March 2017	<ul style="list-style-type: none"> Third round of pressure cookers Initial execution of research 	<ul style="list-style-type: none"> Finalised mock-ups, preliminary research results 	<p>Come see it all at the 2017 TFI Summit Munich, March 15th 2017</p>

Originally, 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, given the quality and number of plans, TFI exceeded that plan by proposing a total of five research plans and accompanying practical solutions, all of which have been approved for phase 1, for projects in which phases are applicable.

Overview of activities

In 2016, three cycles of project selection were needed (detailing, development and refining.) That resulted in the combination of five research projects and five accompanying practical solutions. The visualisation on page 11 shows the various steps and their deliverables, and looks forward to the TFI Summit in March 2017.

The activities resulted in a concrete R&D program each of the themes, as listed on the next page. For several of the existing projects, alternative innovative practical solutions may still be developed in the course of the year.

Overview of projects under development

Budgeting, spending and borrowing

1. Intra - household dynamics

Research: a modern typology of households, including their composition, life - cycle changes and effect on decision-making.

Practical solution: app for managing household finance, helping families to reach their financial goals, understand the consequences, stimulate discussions and family finance decision-making.

2. Social media analysis

Research: examine impact of emotions and social influence on borrowing behaviour through social media conversations and machine learning predictive analytics.

Practical solution: early warning system reducing consumer's financial stress, based upon social media behaviour analysis and financial activity.

Savings, investment and retirement

3. Optimal savings

Research: can the savings behaviour of consumers be influenced by applying a social norm nudge to help them reach their optimal levels of saving, to induce increased buffer saving?

Practical solution: a peer comparative savings app helping people to be in control of their savings by reducing the pitfall of having short term pleasures win over long term needs.

4. Future Self

Research: develop a better understanding how people plan, envision and decide on their own future self. Make the future salient to people's present situation.

Practical solution: develop an app that functions as a personal coach, visualising possible future narratives, to help people to plan their own life, stay on track and get financial piece of mind.

Financial literacy

5. Financial education

Research: how to support people through the provision of appropriate financial services as well as financial education to improve their financial capability, getting a better understanding of financial capability, and of the complex relationship between various personal characteristics, financial capability, and actual financial behaviour.

Practical solution: the app that facilitates better informed financial decisions, help people to keep their heads above the water, personalised tips & tricks grounded in academic research; context awareness (tips & tricks given at the right time and location); big decisions broken down in manageable chunks.

Pressure cookers

Process of developing the practical solutions

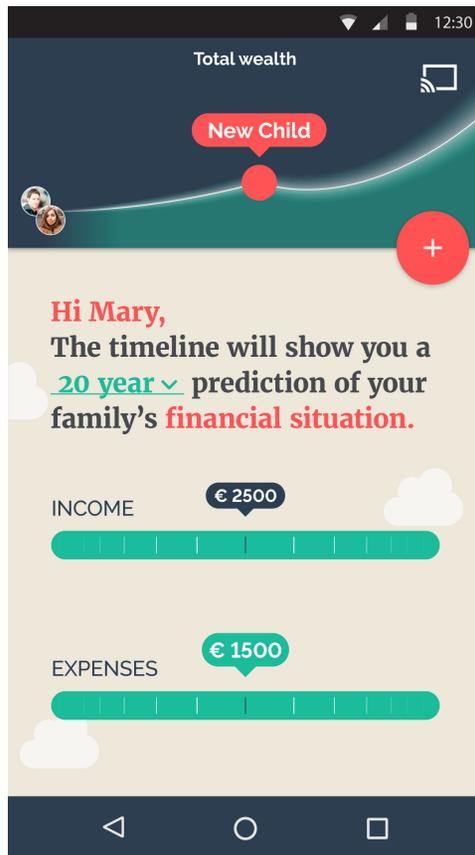
The practical solutions are being developed to become helpful tools for better financial decision making. With over twenty participants, five teams have been working to design, validate and improve the practical solutions in the last months. This has been done in two pressure cookers sessions, each session is a 1.5 working day. All teams were guided to think about the consumer that is being helped and about the functionalities of the practical solution. Up until now we have had two pressure cookers and one will take place on February 2 and 3 2017.

The first pressure cooker was all about understanding the consumer and then fine-tuning the practical solution to fit the needs of this consumer. At the end of the pressure cooker all teams did street interviews to validate the needs and the solution.

The second pressure cooker focused on making the practical solution really concrete by designing the ideal consumer experience. On the second day there were in-depth interviews to understand how consumers deal with the problem now and

whether they would use the practical solution as a better offer. All these insights were taken back and designers that were present helped to visualize the functionalities of the practical solutions.

In the December working group sessions the practical solutions teams presented their designs up until now. We discussed the chosen functionalities before starting the development of the practical solutions.

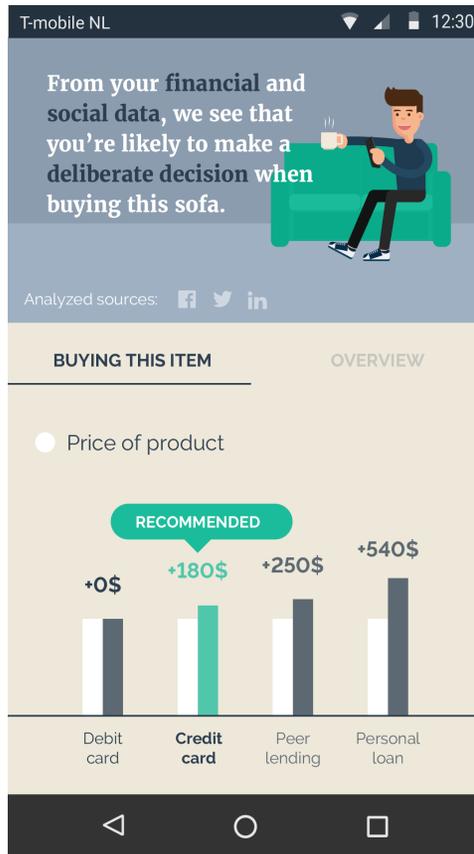


Practical solutions

Intrahousehold dynamics

Financial decisions are the topic of discussion in a lot of households. It might be the amount of shoes a spouse buys or whether they should buy or rent a home. Most couples will use some financial management for this, but these tools don't always help in having the right discussion within the household. This practical solution therefore helps in having this discussion, because it delivers a playful environment in which the partners can add life events (such as buying a house, having a child) add to the timeline and it shows the effect on income and expenditures. Using this tool helps get the conversation going.

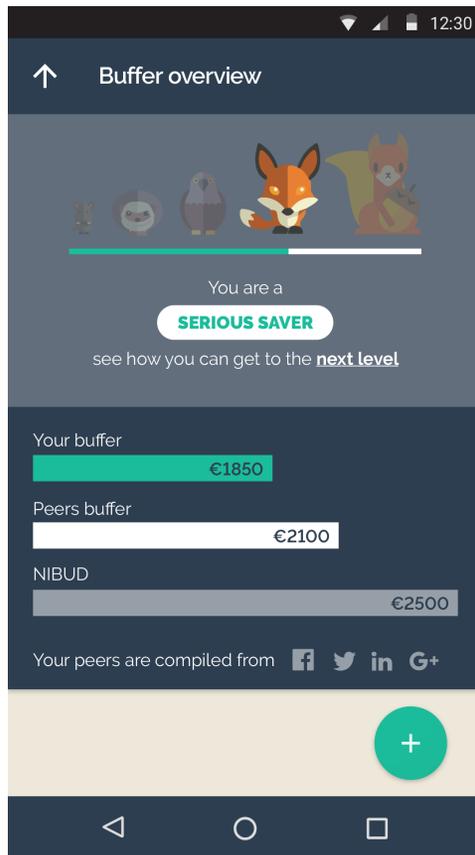
Young couples that both are financially independent (and have separate bankaccounts) are the consumers in focus for this practical solution.



Can I afford this?

Just picture this: you are looking online to buy a new couch. You are wondering if you can afford it and want to know if you have enough funds, but also if you will not feel uncomfortable afterwards. You have taken store credit before and felt like this was something you didn't really need compared to the risk you have taken. That is where *Can I afford this?* comes in. It is a built-in tool that helps you while browsing to determine whether you can afford it by simply saying "yes", "no" or "maybe". It will lead you to the answer and explanation. The answer is based on the willingness (from social media profiling) and the ability (your Phico score and/or banking data).

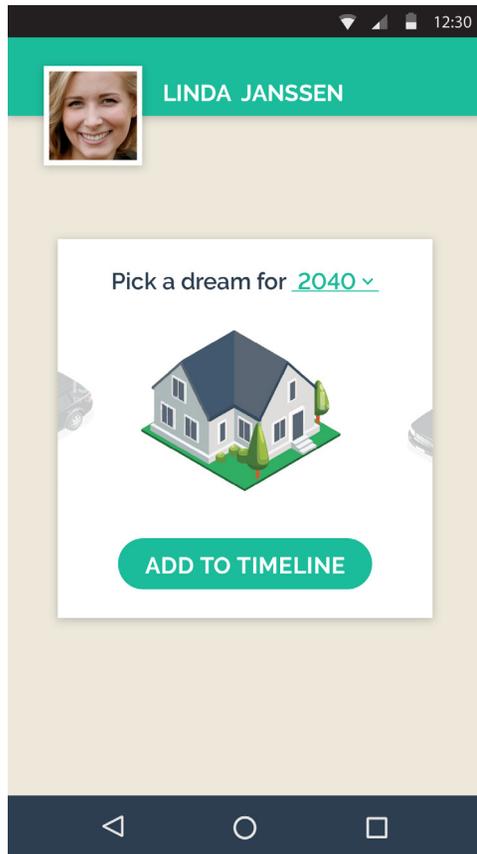
The consumers for this practical solutions came out of a first data analysis on who take out loans in the US, these consumers are: between 25-35 years, continually employed and less educated. They are frustrated about their credit score and credit card delinquencies.



Peer comparison app

Do you have any idea if you have enough buffer savings? Perhaps you think you do, because you know that Nibud advises you to have a certain amount saved for unexpected events. Unfortunately most people are not aware about their optimal savings amount and save insufficiently. That is why the practical solution helps people in making their savings goal really concrete (by selecting a personal goal) and by making it possible to compare to either Nibud advise or to the savings of peers. The game-like environment motivates you to reach the goal and sets up levels to make the steps smaller towards reaching the goal.

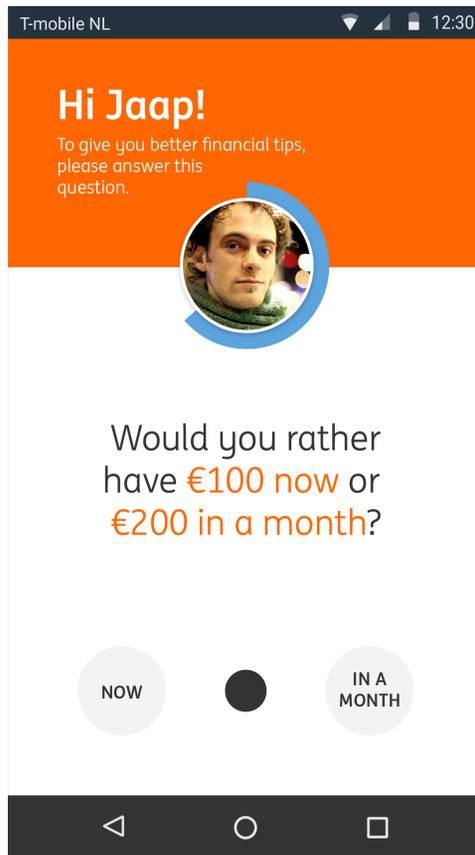
The peer comparison is built for people with a job between the ages of 25-45, where age is not the main differentiator, but the solution is mainly aimed at people willing to increase their buffer savings.



Future self

Picture your future self. Is it hard to think about your future goals? How do you picture yourself in 20, 30, 40 years? Perhaps it is possible to set some goals, but do you have a clue on how you will reach those goals? The practical solution of future self helps you in determining your future self by setting your goal and visualizing it by showing you your future (Facebook like) timeline. Perhaps you want to own a house someday, then the timeline shows you all the events, such as temporary roommate, repairs on the roof up until the moment that you own the house for 100%.

The practical solution focuses on consumers who are young (in their first job), have a higher education level and that feel the need in defining and realizing their future goals, such as buying a house, building a company etc.



Financial literacy

Living from paycheck to paycheck is a harsh reality that some people face. This practical solution helps those people take more control by teaching them on how to make better financial decisions. The solution provides tips and tricks. The tips and tricks are personalized to the user's specific profile. The tips and tricks are even more valuable, because they are context aware. They will be provided based on the user's location or future desired activities. The practical solution helps those consumers struggling to keep their heads above water, regardless of their exact income positions.

Round 3: Working Group sessions & deliverables

Goals

The main goals of round 3 were; to improve the research plans and accompanying practical solution descriptions, assess the alignment between the two, and present the preliminary results where possible. The secondary goals of the round was to gain the working group insights into their preferences for the TFI program and Summit going forward.

Step 1

Before the sessions started, visual mock ups and consumer propositions were made in the pressure cooker sessions hosted by Deloitte. Research plans were finalized by the respective research teams. At the start of each session, presentations were held on the finalized research plans, progress, and the visual mock ups of the accompanying practical solutions. We then divided the working group into four-person teams with the question “How do we assess the alignment between, and the key features of, the research plan and the accompanying practical solutions?” Then, plenary, we took inventory of all comments for each project. These were all discussed briefly.

Deliverable

The charts with all the comments can be found in the Results chapter. These charts represent the assessment of the current project status by the working groups.

Step 2

We then moved to an entirely different question. On an individual basis, we asked the participants in the working groups: “What are your goals and expectations for the TFI Summit in 2017 and beyond?”.

Deliverable

The results of that second part of the sessions have been combined into two charts. One for the March 2017 Summit, and one for the future ambition of the TFI program beyond the Summit. They can also be found in the Results chapter. These charts represent the directions in which the TFI Summit and program may evolve.

Results

Outcome of theme Budgeting, Spending & Borrowing

Assessment Chart Intra Household Dynamics

20

Assessment Chart Social Media Analysis

21

Outcome of theme Saving, Investment & Retirement

Assessment Chart Fine-tuning Social Norm Nudges for Buffer Savings

22

Assessment Chart Future Self

23

Outcome of theme Financial literacy

Assessment Chart Financial literacy

24

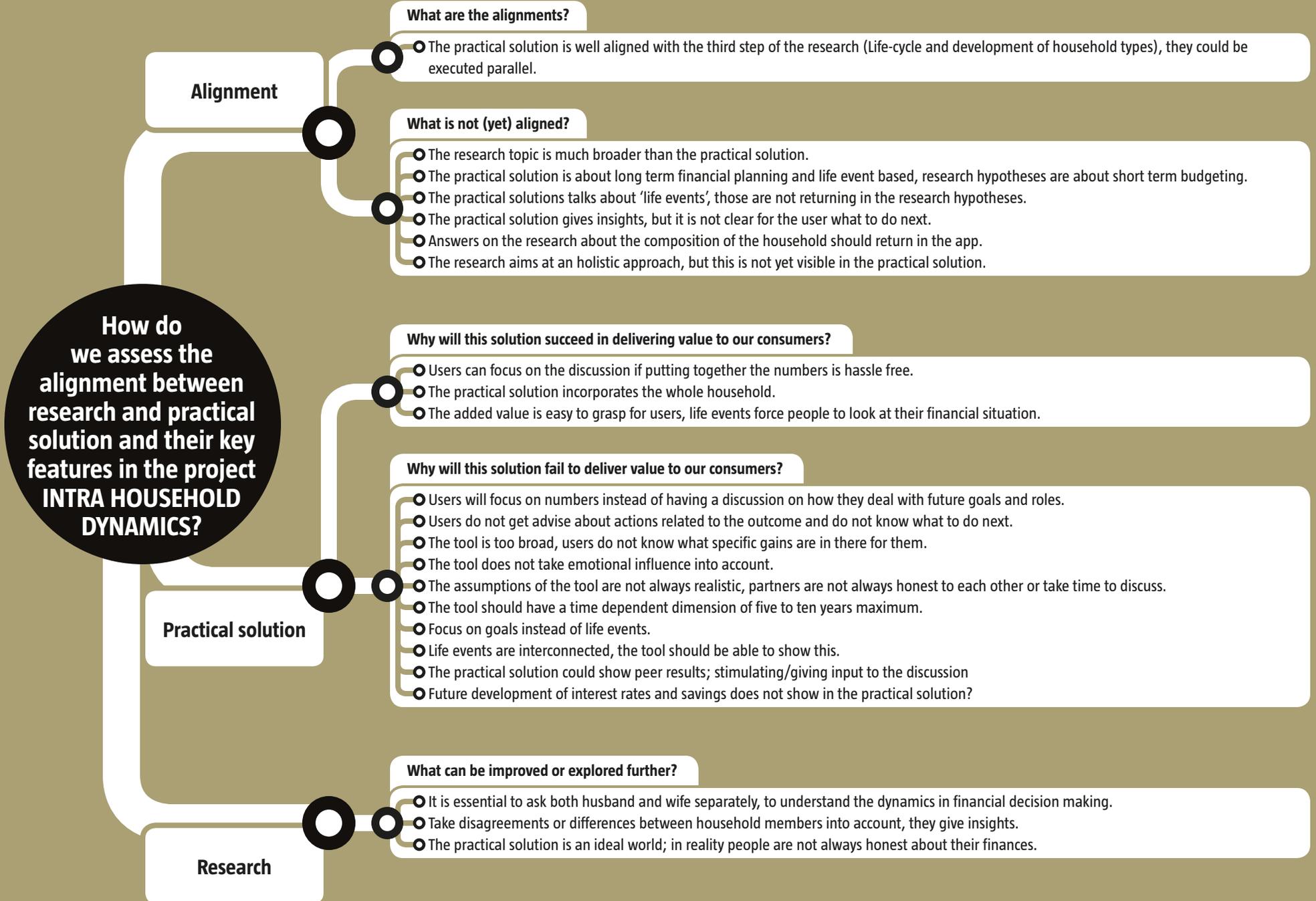
Outcome of 2017 Outlook

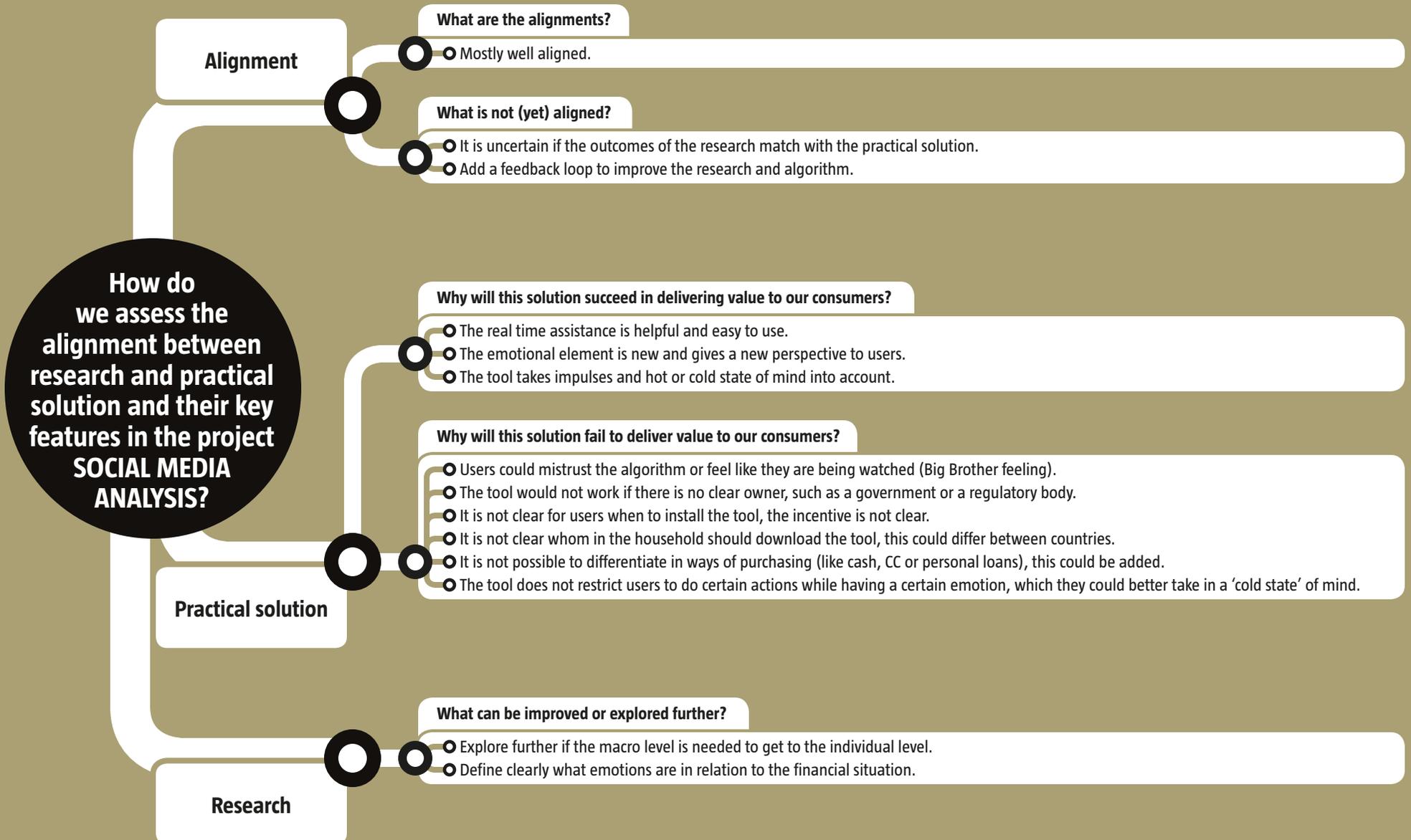
Outlook Chart 2017 Summit

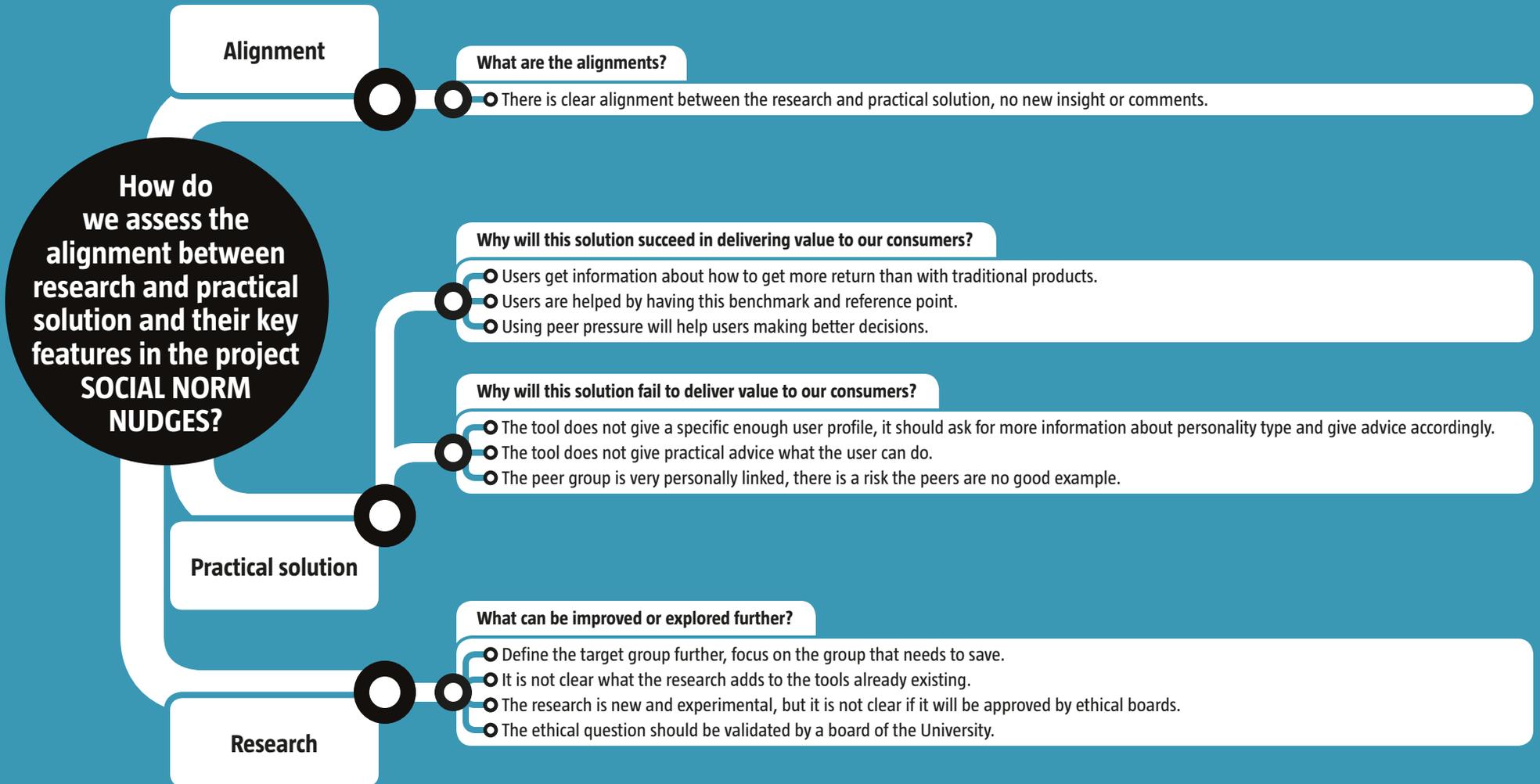
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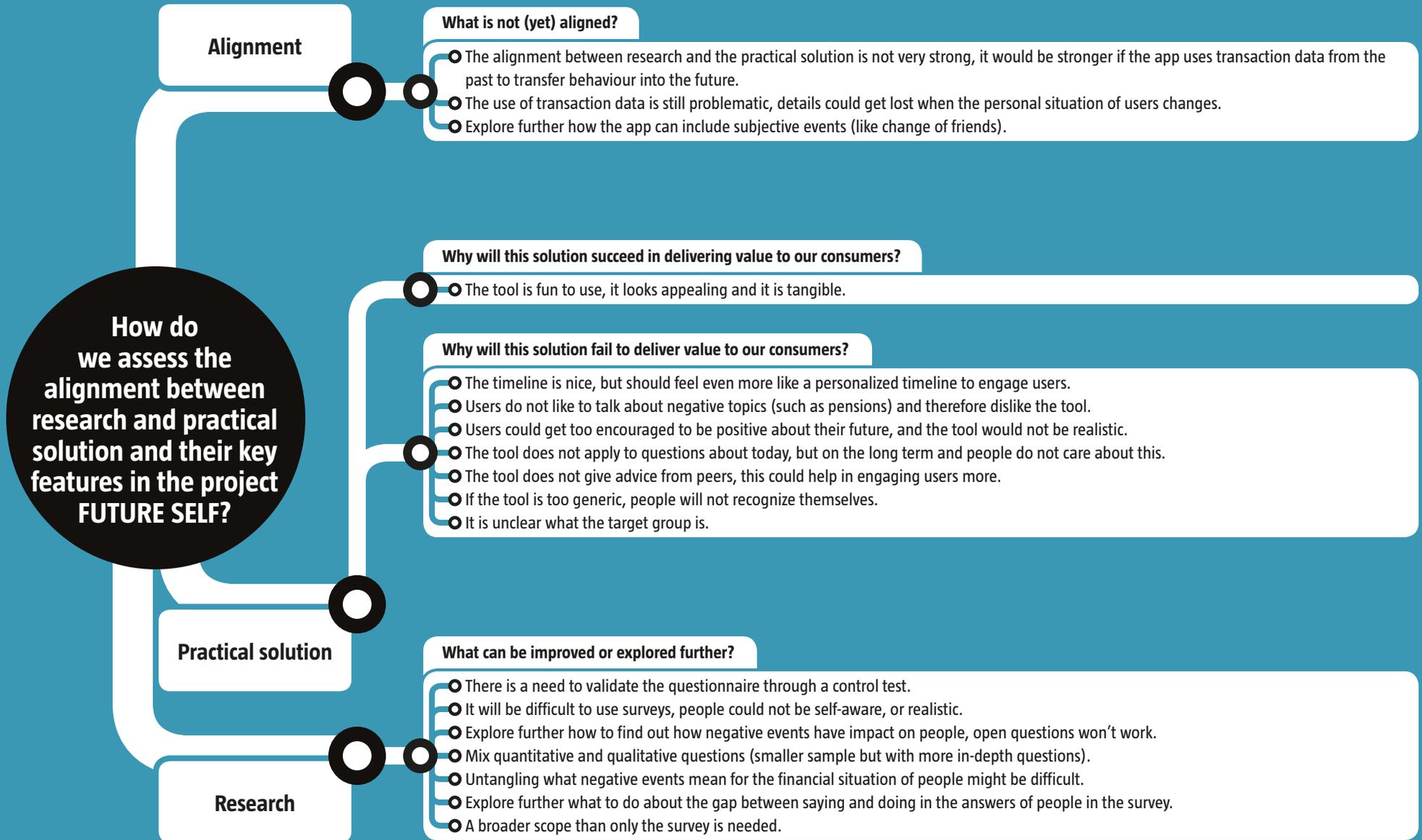
Outlook Chart 2017 and beyond

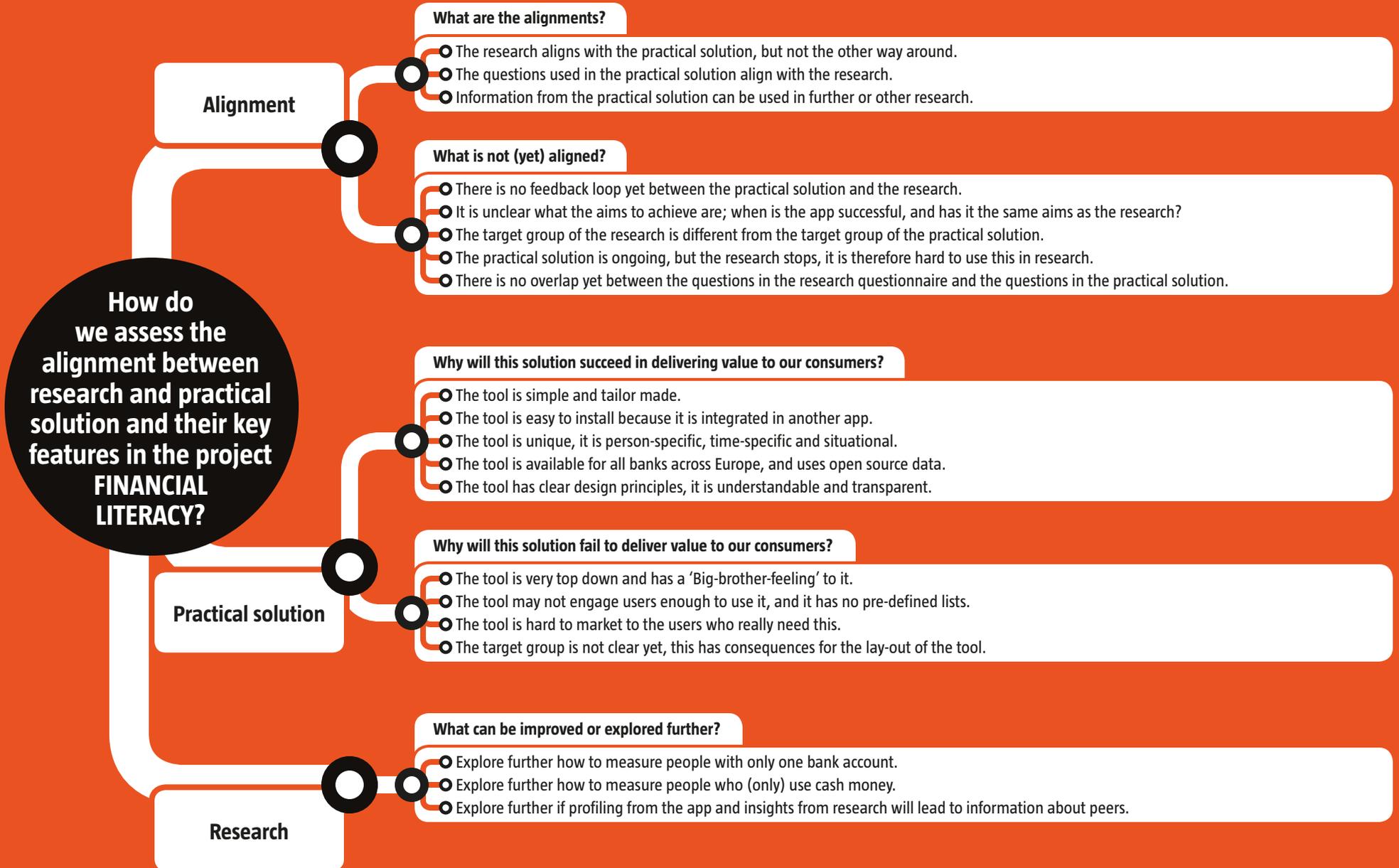
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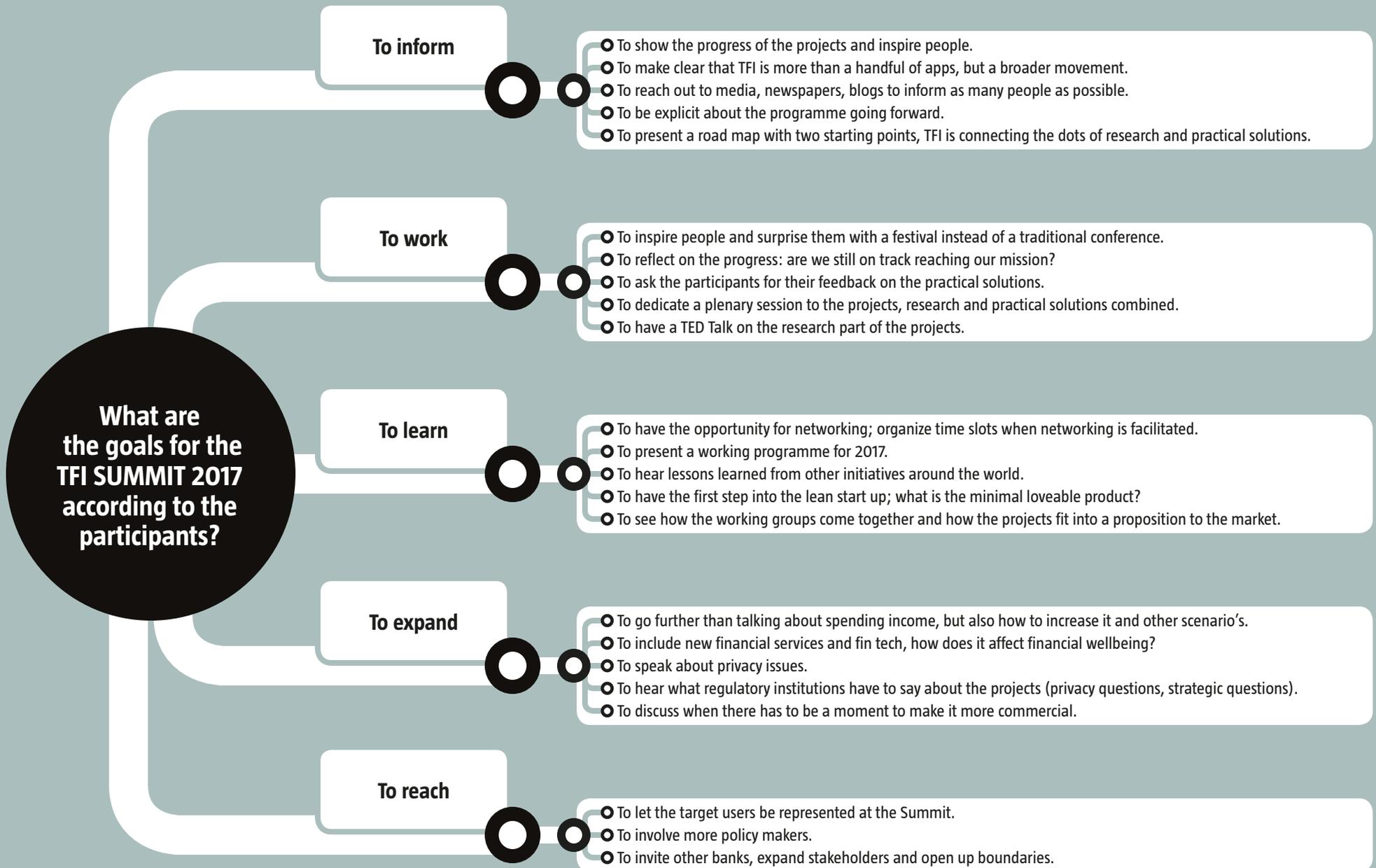




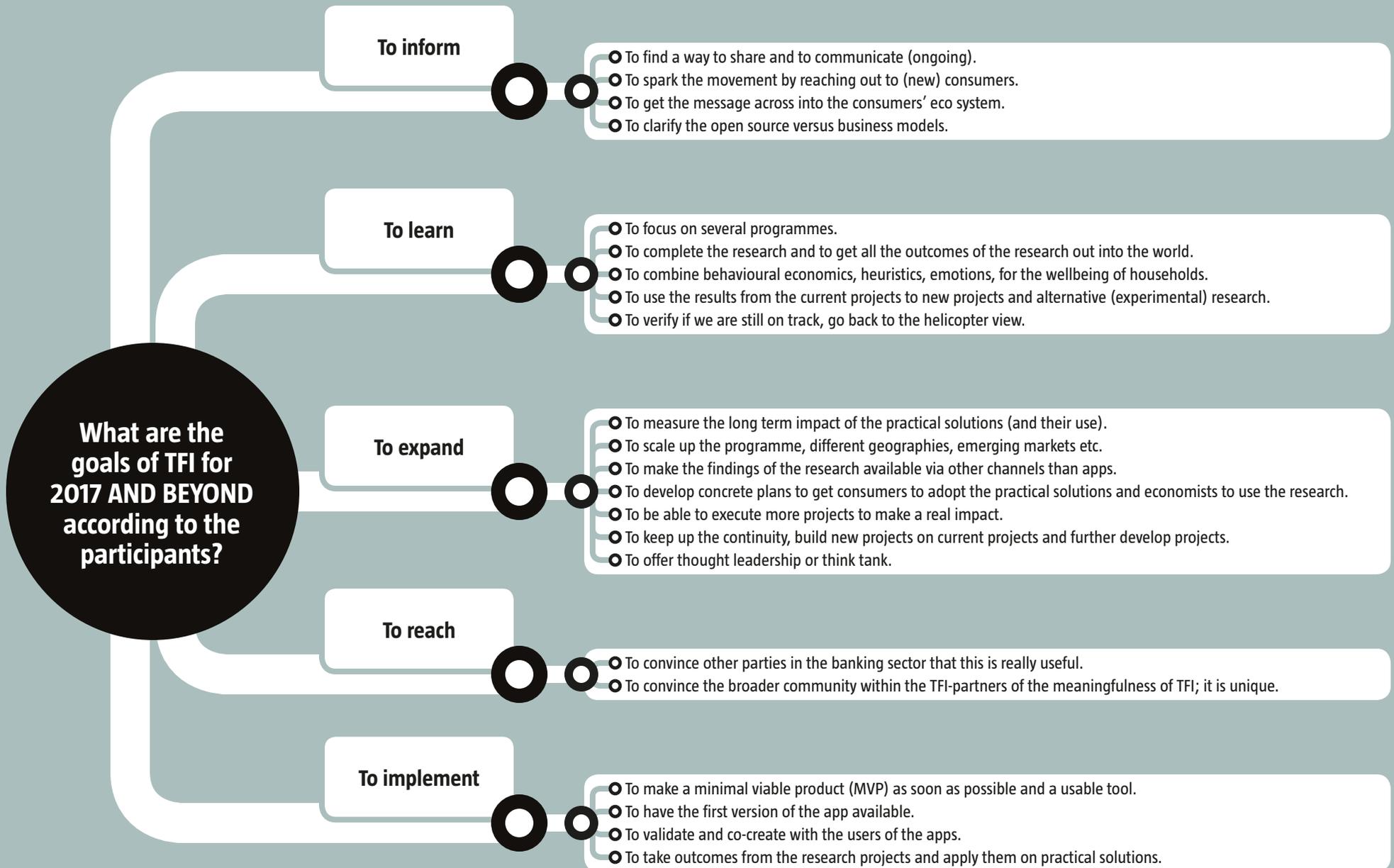




Goals for the TFI Summit 2017



Goals of TFI for 2017 and beyond



Epilogue

Research Board decisions and reflections

The Research Board convened right before and after the third round of working group sessions and gave approval on the budget for all five projects. The RB also gave feedback to all projects how they should be improved from a research point of view.

Next Steps for TFI Program

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	<ul style="list-style-type: none"> ● Reflect and rate the initial results of the research. ● Decide on strategy going into 2017. 	<ul style="list-style-type: none"> ● March 2017 	<ul style="list-style-type: none"> ● Guidance to working groups on how to proceed. ● Guidance on work to be done in 2017.
TFI Facilitating team	<ul style="list-style-type: none"> ● Contact working group participants to coordinate process going forward. ● Define 2017 strategy, working program. 	<ul style="list-style-type: none"> ● January 2017 	<ul style="list-style-type: none"> ● Project teams per project, planning, and so forth. ● Not defined yet.
Project teams, topic owners, partners	<ul style="list-style-type: none"> ● Start execution on research. ● Refine and build prototypes, visual mock-ups of practical solutions in third round of pressure cooker process. 	<ul style="list-style-type: none"> ● March 2017 ● February 2017 	<ul style="list-style-type: none"> ● Preliminary results, Summit presentation. ● Working model or mock-ups, value proposition canvas, business model canvas, Summit presentations.

Working group participants & Research Board

Budgeting, Spending & Borrowing

Participants

Arends, Joep
Ayers, Adam

Bomans, Loes

Brzeski, Carsten

Cocuzzo, Carlo

Colbaugh, Richard

Doornweerd, Yorick

Glass, Kristin

Kukk, Merike

Organisation

Deloitte, practical solutions facilitator

ING, Cofounder

of the ING Innovation Studio

ING, Global digital on-boarding

ING, Chief Economist ING-DiBa

ING, Researcher

Periander, Partner

Gartner, Global Client Director

Periander, Researcher

Tallinn University of Technology,
Research Scientist

Participants

Mohan, Devie

Mul, Clemence

Ormerod, Paul

Pan, Lei

Romensen, Gert-Jan

Heever, Steve van den

Grinsven, Bo van

Raaij, Fred van

Woelderren, Stefan van

Wall, Neville

Organisation

Burnmark, FinTech Market Strategist
and Industry Researcher

Deloitte,

practical solutions facilitator

Volterra Partners, Academic

ING, Senior Economist

University of Groningen

Dimension Data, Global Director

Financial Services

ING, Behavioural Economist

Tilburg University, Professor

ING, Principal Economist

Dell EMC, Client Director

Saving, Investment & Retirement

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Blom, Marieke

Bos, Hans
Busschere, Stijn de

Derickx, Roelof

Groom, Jez

Groothedde, Eric

Hamers, Ralph
Kaastra, Japke
Mavridis, Dimitris

Mihm, Oliver

Organisation

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ING, Chief Economist at ING
Netherlands

Microsoft, National Technology Officer
ING Innovation Office, Retail Product
Specialist

Dimension Data, Global Account
Director

Cowry Consulting, Chief Choice
Architect

NVB, Advisor Consumer Affairs (Retail
Banking)

ING, CEO ING Group
ING, Manager Financial Planning
University of Luxembourg, Research
Assistant

Investors Marketing Management
Consultants

Participants

Mul, Clemence
Muyldermans, Christiane
Paemen, Joep
Pan, Lei
Paradowski, Piotr

Pollmann, Monique

Porino, Guilia

Prast, Henriette

Raaij, Fred van

Sierminska, Eva

Schmidt, Klaus Oskar

Swinkels, Rob

Thirion, Jean-Philippe

Timmerman, Hans

Organisation

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KBC, Counsel Regulatory Affairs
Flow Design Works, Managing Partner
ING, Senior Economist

Luxembourg Income Study, Data
Expert and Research Associate

Tilburg University, Assistant Professor

Finance Watch, Coordinator Officer

Tilburg University, Professor

Tilburg University, Professor

Luxembourg Institute of Socio-
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Investors Marketing Management
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Architect

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Dell EMC, CTO Netherlands

Participants

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Weirauch, Andrea

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Institute for financial services,
managing director

Dutch Pension Federation, Campaign
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KU Leuven, Consumer behaviour
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Warsaw University of Life Sciences,
Professor

Financial literacy

Participants

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Bomans, Loes

Bradbrook, Ruth

Bright, Ian

Caron, Hans

Jorna, Remco

Mul, Clemence

Muyldermans, Cristiane

Norden, Katharina

O'Brien, Aiden

Papadongonas, Panos

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ING, Global digital on-boarding

Developing Youth Practice,
Co-founder and Director

ING, Managing Director and Group
Research

ING, Head of Market Research

Microsoft, Global Account Technology
Strategist

Deloitte, practical solutions facilitator

KBC, Counsel Regulatory Affairs

Three Coins, CEO

EMC, Senior Director

Motivaction, Researcher

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Riitsalu, Leonore

Roelfsema, Marieke

Rooij, Claire de

Sartorio, Dafne

Spencer, Nathalie

Gardenen, Marten van

Raaij, Fred van

Organisation

Dutch Banking Association, Director
Retail Banking

University of Tartu, Lecturer of
financial literacy and behavioural
finance

UNICEF, Senrio Programme Office

UNICEF Netherlands, Partnership
manager

AIESEC International, Global
partnership development director

ING, Behavioural Scientist

ING, Senior Economist

Tilburg University, Professor

Research Board

Members

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Haliassos, Michael

Ormerod, Paul

Tristani, Oreste

van Raaij, Fred

Organisation

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CEPR Network on Household Finance,
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Volterra Partners, Academic

ECB, Senior Advisor

Tilburg University, Professor

Deloitte pressure cooker team members by theme

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Kristin Glass	Periander
Bo van Grinsven	ING
Devie Mohan	FinTech
Lei Pan	ING
Neville Wall	Dell EMC

Savings, investment & retirement:

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Joep Paemen	Flow Design Works
Martijn Rozemuller	ThinkETF
Martin Schmalzried	European Banking Authority
Saskia Smulders	Dell EMC
Rob Swinkels	NTT Dimension Data
Hans Timmerman	Dell EMC
Hannie de Vos	Autoriteit Financiële Markten

Nick Watkins
Piotr Zielonka

Money Advice Service
Warsaw University of Life Sciences

Financial literacy:

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Aiden O'Brien
Marten van Garderen
Bruno Nuyens
Jared Penner
Dafne Sartorio
Anne Schellhove

Aflatoun
Dell EMC
ING
Everis
CYFI and Thought Leadership
AIESEC International
German Institute for Financial
Services
ING

Nathalie Spencer

