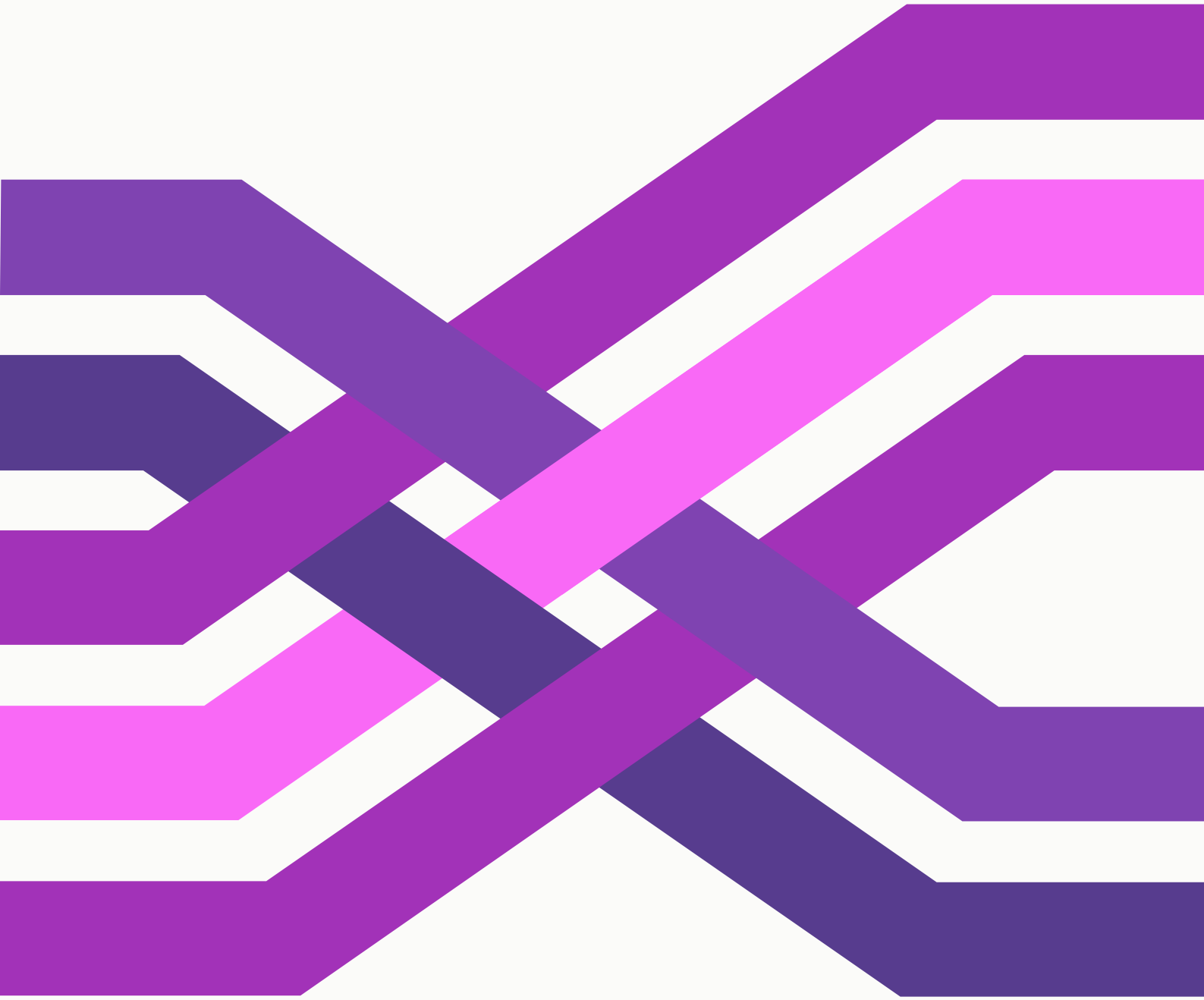
18 March 2026

Empowering young women as investors

Reimagining investment onboarding through a reflective AI companion



By Anouk de Boer

TU Delft Rabobank

Empowering young women as investors

Reimagining investment onboarding through a reflective AI companion

Delft University of Technology
March 2026

Master Thesis
MSc. Strategic Product Design
Faculty of Industrial Design Engineering

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Abstract

Young adults face growing financial pressure due to rising living costs, inflation, housing shortages, and unstable employment. In this context, investing is becoming increasingly important for long-term financial resilience, yet participation remains low among young adults, particularly young women.

This project explores how generative AI could responsibly support young women in taking their first steps into investing within the context of Rabobank's investment services. A human-centred design approach was applied, combining qualitative and quantitative research methods, including focus groups, co-creation sessions, surveys, and concept evaluations with young adults and Rabobank stakeholders.

The project resulted in a concept that reimagines the onboarding journey of Rabobank's SimpelBeleggen service, transforming it from a rigid linear flow into a circular interaction model that mirrors how young women approach financial decision-making: exploring, comparing, and reflecting before committing. As the project's research revealed that young women often seek external reassurance in financial decision-making, the concept introduces a reflective AI companion that helps users explore investing at their own pace and in relation to their personal context, such as financial goals and personal values, while building confidence in their choices. In this way, onboarding shifts from a compliance-driven funnel into a supportive decision-making framework.

The project highlights the importance of designing investment services that better support underserved groups and demonstrates how AI can be integrated as a reflective companion to enable more confident investment decision-making.

In doing so, it provides a practical foundation for financial institutions seeking to design investment services that are more accessible and inclusive.

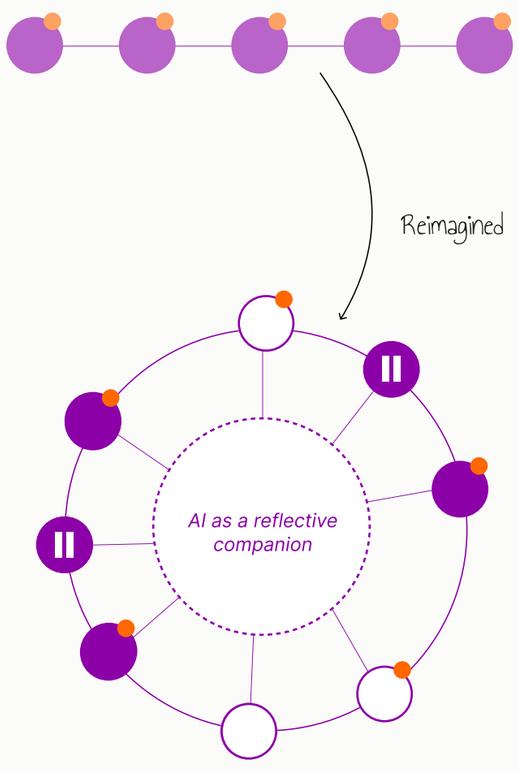

Figure 1: From linear onboarding to circular investment exploration

Acknowledgements

This thesis marks the end of my journey as a student, and I look back on this path with immense pride. Completing this project has been both a challenge and a reward, and the final result would not be what it is today without the support of the people around me.

First and foremost, I want to thank my TU Delft supervisors, Peter and Sander. Even with their busy schedules, they always made time for our conversations and served as valuable sounding boards. Their questions and critical reflections pushed me to sharpen my thinking and strengthened the outcome of this work. I am particularly grateful to Peter for our open and inspiring talks about the future of AI; I often left his office feeling energized to explore the topic from fresh perspectives. I also want to thank Sander for his sharp critique and strategic guidance. He encouraged me to look beyond the "obvious" and explore directions beyond the organization's immediate capacity, allowing me to add the most value as a student with an outside perspective.

At Rabobank, I would like to thank Tom for his guidance. He consistently looked for ways to help me use the bank's resources to strengthen my project and made me feel like a genuine part of the team. A big thank you to Evi for helping me find my way within the organization and connecting me with the Investments Tribe, and to Deborah for her valuable advice along the way. To the rest of the team: thank you for your time, your feedback, and for making me feel so welcome from day one.

I also want to thank everyone who participated in my research activities, from the sessions to the surveys. Your openness and willingness to share your stories helped ground this work in real user needs. Finally, to my family and friends: thank you for always being there to cheer me on, especially during the project's most challenging moments.

Taking this project from a blank page to these final conclusions has been a learning journey both academically and personally. It confirmed that while technology like AI is the "what," the people I spoke with, from colleagues to users, are always the "why."

I truly hope you enjoy reading this thesis as much as I enjoyed the process of creating it!

A de Boer

Anouk de Boer

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Introduction.

This section introduces the foundation of the project by outlining the context in which the research takes place and clarifying the scope of the graduation assignment. It situates the project within the intersection of personal finance, digital banking, and emerging AI technologies, and explains the relevance of supporting young adults in taking their first step into investing, with a particular focus on young women who remain underrepresented in investment participation. In addition, the chapter introduces the key stakeholders involved, presents the research assignment guiding the project, and addresses the ethical considerations associated with conducting research and design within the financial domain. The chapter concludes with an overview of the project approach that structured the research and design process.

1. Project context

Personal finance has become an essential life skill in an increasingly digital and complex financial environment. In the Netherlands, inflation, market volatility, and rising living costs have made financial stability more challenging. Although overall financial health has slightly improved, it is declining among young adults aged 18 to 25. This group is particularly vulnerable due to temporary employment, housing shortages, and high living expenses. Their stronger short-term focus further increases financial risk, as long-term planning often receives less attention (Deloitte, 2025).

Saving has long been a common approach to managing personal finances and remains important as a buffer for unexpected expenses. However, sustained inflation has reduced its effectiveness for long-term wealth accumulation. As a result, investing is increasingly recognized as a key strategy for building wealth and achieving financial independence.

At the same time, the investment landscape is rapidly evolving. Digital platforms and fintech solutions have lowered traditional barriers by reducing costs and increasing market access. Yet technical accessibility does not automatically translate into participation, as many young adults remain hesitant to invest. This hesitation is largely driven by psychological and knowledge-related barriers. Research shows that non-participation is mainly explained by a lack of knowledge, perceived risk, uncertainty about where to start, and the belief that investing is too complex (Prins et al., 2021). These factors contribute to delayed or avoided participation, despite the potential long-term benefits of starting early.

Importantly, intention to invest is highest among 18- to 24-year-olds compared to older age groups (Prins & Vrieselaar, 2025). This suggests that although barriers persist, young adults represent a segment with strong latent potential if these obstacles can be effectively addressed.

> *"It is somewhat concerning that many Dutch people want to invest but have no idea how to go about it. It is, after all, a common way to build your financial future."*
>
> Yorck Naeff
> CEO of BUX

The underrepresentation of young women

Investment participation in the Netherlands is not evenly distributed. Individuals with greater financial resources and higher levels of education are more likely to invest, highlighting the role of socioeconomic position. Most notably, a substantial gender gap persists: 31% of men report having investments, compared with only 18% of women (Prins & Vrieselaar, 2025).

Multiple studies confirm that women invest less frequently and tend to start later than men (ABN AMRO & Ipsos, 2023; N26, 2022; Peaks, 2024; Poets, 2025). This pattern is also visible within Rabobank's client base, where young women aged 18 to 25 are underrepresented. Delayed participation reduces their ability to benefit from compound growth and may widen wealth inequalities over time. As investing can support long-term financial self-reliance, this highlights the need for targeted support that enables young women to take their first step into investing with confidence.

The potential of an AI-driven solution

Investing is closely tied to major life goals, and many individuals value guidance that reflects their personal situation. While human advisors can provide tailored and empathetic support, they are often inaccessible to young women due to high costs. More affordable and scalable alternatives are therefore needed.

As the financial sector becomes increasingly digital, Artificial Intelligence (AI) is increasingly embedded in financial services. AI broadly refers to computer systems designed to perform tasks that typically require human intelligence, such as learning, reasoning, and decision-making. Within this broader field, Generative AI represents a subset of AI systems capable of producing new content, such as text, explanations, or recommendations, based on patterns learned from large datasets (Stryker & Kavlakoglu, 2024). This enables more adaptive and conversational interactions with users. In this project, the term AI refers specifically to Generative AI unless stated otherwise.

Although AI is widely adopted in banking and the market continues to grow (Kearns, 2023), most applications focus on operational accuracy and efficiency rather than customer-facing support (OECD, 2023). This creates an opportunity to explore AI as an accessible way to provide personalized guidance that helps young women gain confidence in taking their first step into investing.

A human-centered design approach

Adopting a human-centered lens, this report investigates how AI can narrow the investment participation gap by transforming existing obstacles into design opportunities that foster financial confidence among young women.

Focus of the study

The field of Industrial Design Engineering (IDE) focuses on bringing together people, technology, and organisational strategy in a meaningful way. This graduation project puts that idea into practice (see Figure 2). It looks at the needs and behaviors of young adults (ages 18–25) within the context of Rabobank. By using the fast-developing potential of generative AI, the research explores new ways to create value where the organization and its users meet.

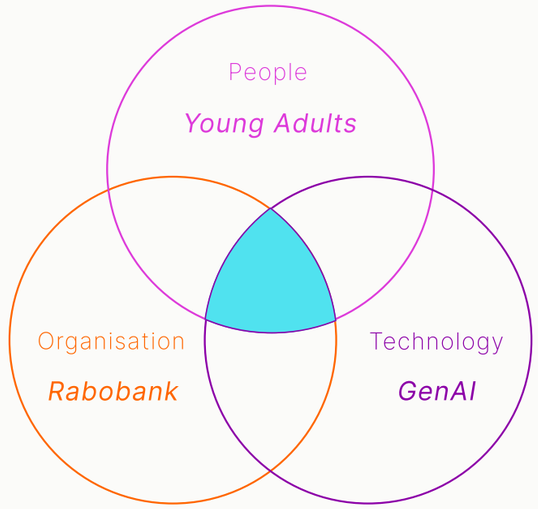


Figure 2: Focus of the study

“Investing is an effective pathway to get people from where they are to where they want to be.

To fully reap the benefits of investing, people must have access to the tools they need and be able to educate themselves throughout their investing journey.”

World Economic Forum report 2022

2. Stakeholders

This research is conducted in collaboration with Rabobank and focuses on young adults aged 18–25 years, under the academic supervision of TU Delft. Rabobank is the primary organizational stakeholder and provides the practical context for the study. The primary end users are young adults aged 18–25 years, whose needs and perspectives form the central focus of this research. TU Delft acts as the academic supervisor, ensuring the quality, rigor, and relevance of the research.

Rabobank

This research is conducted in collaboration with Rabobank, an international cooperative bank with Dutch roots. Originating in the late 19th century as a network of agricultural credit cooperatives, Rabobank has developed into a full-service financial institution. As a member-owned cooperative without shareholders, the bank is able to prioritize long-term value creation and societal impact over short-term profit maximization. Its mission, “Growing a better world together,” reflects this commitment.

One of Rabobank’s key societal themes is supporting financially healthy lives. Within this theme, the bank aims to enhance the financial self-reliance of young people and guide them toward responsible financial and investment decisions, enabling them to achieve their goals. Attracting younger customers is strategically important to prevent an aging customer base and to build sustainable, long-term relationships.

Internal stakeholders within Rabobank

Within Rabobank, I was positioned in the Design Chapter while working on a project for the Investments Tribe. The Tribe represents a vertical business domain focused on investments, whereas the Chapter is a horizontal discipline-based group that brings together design professionals across different domains (see Figure 3). The internal stakeholders involved in this project can be divided into three levels based on their degree of involvement (see Figure 4).

The Scope Team consisted of my supervisor and the two designers working on investments, with whom I collaborated on a daily basis. The Scale Team included the additional designers from the Digital and Customer Interactions (DCI) team, as well as the product owners, business analysts, and developers within the Investments Tribe. These stakeholders were consulted periodically to gather feedback and ensure alignment with business objectives and technical feasibility.

The outer layer consisted of the leads of the Design Chapter and the Investments Tribe, who were not directly involved in the project but benefit from its strategic implications.

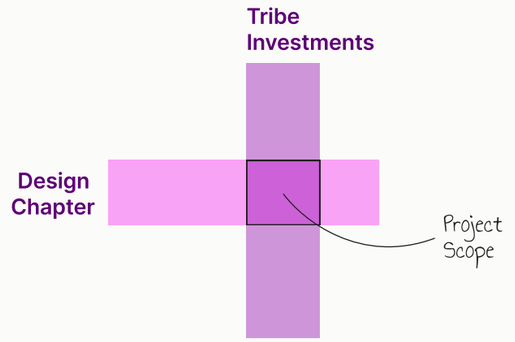


Figure 3: Organizational context of the project

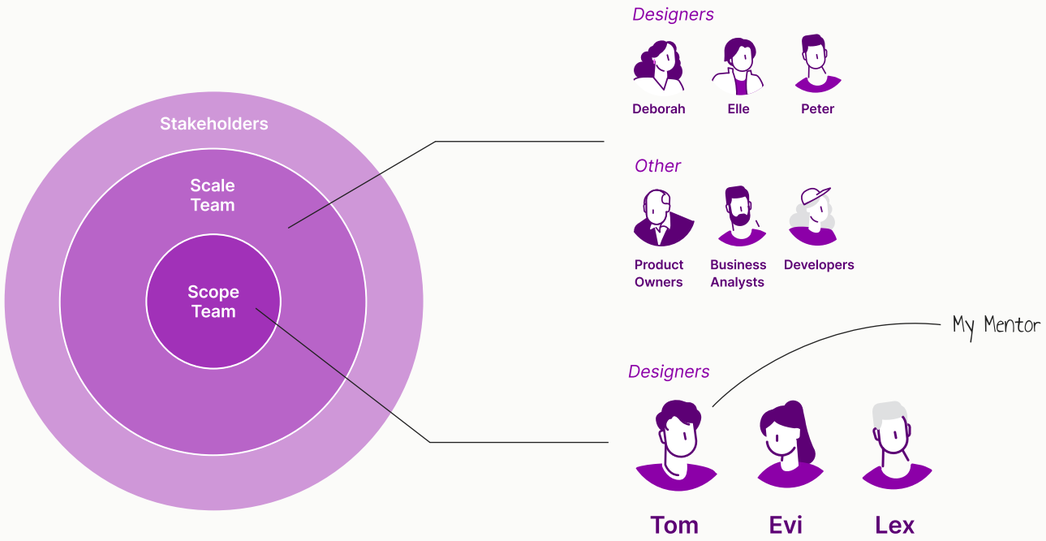


Figure 4: Project team context diagram

3. Project assignment

Client assignment

This project was initiated by Rabobank to explore how the future investing experience for young adults could be designed. The assignment focused on understanding how investment products and services can support young people in achieving long-term financial goals, such as purchasing a home, in ways that feel accessible and relevant to them. A central objective was to identify the barriers that prevent young adults from starting to invest and to explore how they can be effectively supported in taking that first step.

In addition, a key component of the assignment was to investigate whether Artificial Intelligence (AI), specifically Generative AI, could create new opportunities to guide and support young adults in taking their first investing decisions. While this defined the initial scope, the strategic direction evolved iteratively in response to emerging insights.

Research assignment

This research explores how Generative AI could support young women who are not yet investing in taking their first responsible step into investing. Despite increasing access to digital financial services, many young adults remain hesitant to start investing due to perceived barriers. Young women are particularly underrepresented among investors, highlighting the need to better understand how emerging technologies, such as Generative AI, could help them overcome these barriers and navigate early investment decisions. In this research, young women refer to individuals aged 18–25. The central research question guiding this project is:

How can Generative AI support young women in taking a responsible first step into investing?

To answer this question, the research is structured into three sub-questions. These first explore the barriers and support needs young women experience in relation to investing, then examine the potential role of Generative AI in addressing these barriers and needs, and finally translate these insights into a tangible design prototype.

RQ1: What barriers and support needs influence young women's willingness to start investing?

This subquestion aims to build a deep understanding of the factors that shape young women's hesitation or willingness to start investing. It examines the practical, emotional, and cognitive influences underlying this hesitation, as well as the types of support that could make taking a first step feel manageable. The insights gained form the foundation for identifying meaningful opportunities for support in the remainder of the project.

RQ2: How can Generative AI address the identified barriers and support needs to help young women in starting to invest?

This subquestion investigates how Generative AI can address the identified barriers and translate young women's support needs into accessible forms of guidance. Rather than assuming technology can solve all challenges, it aims to identify where AI can meaningfully contribute based on real user needs. These insights define the potential role of AI, which later forms the basis for the interaction reflected in the final design concept.

RQ3: How can the identified barriers, support needs, and AI opportunities be translated into a prototype demonstrating how Generative AI can support young women in starting to invest?

This subquestion focuses on synthesizing the research findings into a tangible design outcome. It explores how the identified barriers, support needs, and AI opportunities for young women can be translated into a prototype. The goal is to make the proposed contribution concrete and demonstrate how Generative AI could support young women in an applicable investing context.

4. Ethical considerations

In this study, I focus on young adults between the ages of 18 and 25, a group I consider financially vulnerable. Many are at the beginning of their earning careers, often with limited income, little financial buffer, and limited experience with long-term financial risk. At the same time, this research addresses investing, which inherently involves uncertainty and the possibility of loss. This creates an ethical tension: how can I responsibly encourage investing among a group that may not yet be financially stable?

For me, the answer lies in nuance. My intention is not to promote speculative or high-risk behavior, but to encourage financial literacy and long-term thinking. I believe investing should be presented as a structured, long-term strategy aimed at sustainable financial well-being, not as a quick way to make money. By introducing young adults to responsible investing early on, I aim to contribute to the development of healthy financial habits and discipline, and a focus on long-term goals rather than short-term gains.

I am also aware that this target group is highly susceptible to digital influence. Whereas in the past, advertising might have reached them through a poster at a bus stop, today they are exposed to targeted messages all day long through their smartphones. On social media, “finfluencers” often portray investing as easy and highly profitable, without adequately addressing the risks. I believe this can create unrealistic expectations.

In this context, I see Rabobank as a potential counterbalance, a trustworthy source that provides transparent information and clear communication about risks. In this project, I therefore focus on investing in diversified funds rather than individual stock picking or active trading, as research shows that self directed individual investors often underperform (AFM, 2015; Barber & Odean, 1998). A focus on broadly diversified funds aligns more closely with responsible risk management and long term wealth building.

Finally, I acknowledge a legal consideration. In the Netherlands, individuals become financially responsible at 18, but parents remain legally obligated to provide financial support until the age of 21 (Nationale Nederlanden, 2026). Since this project targets 18 to 25 year olds taking their first steps in investing, it is important to remain aware that financial consequences before the age of 21 may also indirectly affect parents.

Overall, I approach this topic with caution and responsibility. My goal is not to encourage risk taking, but to support informed decision making and long term financial resilience among young adults.

5. Project approach

To answer the research question, this project follows a design-driven research approach. The process is structured using a “triple diamond” framework, which builds on the well-known Double Diamond model commonly used to illustrate design processes. This structure organizes the project into iterative phases of exploration, synthesis, and development, allowing insights to gradually evolve into a tangible design outcome. The following sections describe the methods used within each phase and explain their purpose in addressing the research questions.

From double diamond to triple diamond

This project uses the Double Diamond, a design framework developed by the UK Design Council and widely recognized as a universally accepted depiction of the design process (UK Design Council, 2005). The framework consists of four phases: Discover, Define, Develop, and Deliver, and alternates between divergent thinking, used to explore a broad range of insights, and convergent thinking, used to narrow these insights into a clearly defined problem and appropriate solutions. In this way, it supports first understanding the right problem before developing the right solution.

While the Double Diamond provides a clear structure for design processes, this project introduces an additional diamond between the Define and Develop phases to explore the potential role of Generative AI (see Figure 5). This step ensures that AI opportunities are examined only after the barriers and support needs of young women have been identified. By separating this exploration from solution development, the process prevents technology from being applied for its own sake and ensures that any AI intervention is grounded in real user needs before being translated into a design concept. As a result, the three diamonds structure the project into understanding user needs, exploring the role of AI, and translating these insights into a design concept.

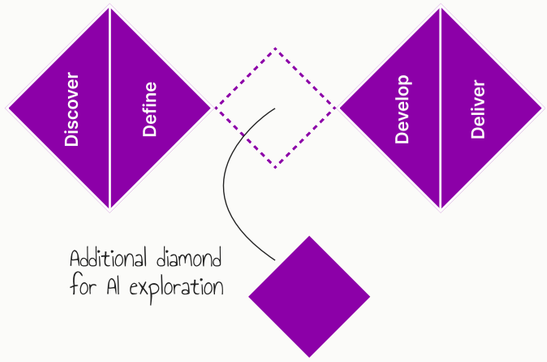


Figure 5: From a double diamond to a triple diamond framework

Translating the framework to the project context

While the Double Diamond provides a clear structure for design processes, the terminology of its phases is adapted to better reflect the context of this graduation project (see Table 1). The phases are therefore described using terms that more closely match the focus of the research and design activities carried out in this project.

In this project, the first diamond focuses on understanding the problem space and consists of three phases: Uncover, Synthesize, and Focus. These stages involve uncovering barriers and support needs related to investing, synthesizing insights into overarching themes and an investment journey framework, and narrowing the scope to young women as the primary target group. The second diamond explores the role of AI in addressing the identified needs, while the final diamond translates these insights into a tangible design concept.

Table 1: Adaptation of the Double Diamond framework to the project process

Double Diamond phase	Project phase	Goal of the phase
Discover	**Uncover**	Reveal barriers and support needs related to starting investing through human-centred research.
Define	**Synthesize**	Connect insights into overarching themes, structure them within an investment journey framework, and derive design principles for each phase of the journey.
Define	**Focus**	Narrow the scope to young women as the primary target group and translate female-specific insights into a Female Design Lens.
Additional diamond	**Role of AI**	Explore how Generative AI could meaningfully support the needs identified in the Female Design Lens.
Develop	**Develop**	Generate and explore different solution directions based on the identified insights and AI opportunities.
Deliver	**Deliver**	Present the final concept, showing how the solution translates insights into a concrete user interaction.

Approach per phase

The following sections elaborate on each phase of the process, describing the methods used and how they contributed to answering the subquestions and ultimately the central research question. For a full overview of the phases, see Figure 6.

Uncover

The Uncover phase aimed to gain a broad understanding of the barriers and support needs related to starting investing (RQ1). Because these barriers are often shaped by perceptions, emotions, and personal experiences (Duraj et al., 2025), a human-centred research approach was adopted to capture these perspectives directly from people. At this stage, the exploration focused broadly on young adults rather than exclusively on young women, allowing barriers to be understood within a wider context before later narrowing the scope to a female-specific perspective.

To gather these insights, several exploratory methods were conducted with different stakeholder groups. A focus group with Rabobank employees within the young adult target group provided insight into attitudes, concerns, and experiences related to investing. In addition, a co-creation session with TU Delft students further explored common barriers and expectations regarding support for first-time investors. Finally, a brainstorming session with Rabobank employees contributed industry perspectives on common customer challenges and opportunities related to

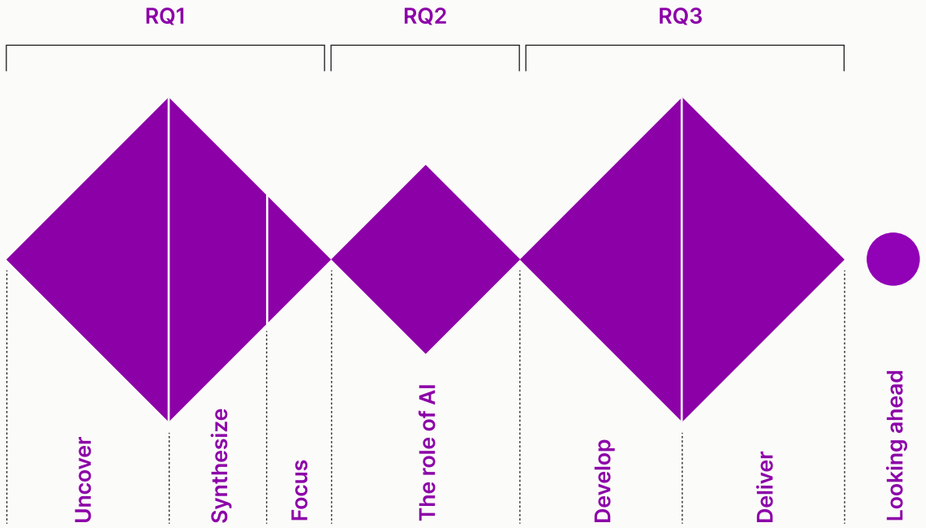


Figure 6: Overview of the project process and its phases

taking a first step into investing. Together, these methods enabled the identification of key barriers and support needs, forming the foundation for a user-centred design outcome.

Synthesize

The Synthesize phase focused on structuring and interpreting the insights gathered during the Uncover stage. Because the exploratory methods generated a wide range of insights, synthesis was necessary to identify underlying patterns in the barriers and support needs related to taking a first step into investing. The insights were clustered into overarching themes and then grounded through a focused review of relevant academic literature and industry practices to better understand the mechanisms behind the identified barriers.

These grounded themes were then structured within an investment journey framework, illustrating the stages young adults go through when approaching their first investment decision. The framework was validated through two additional focus groups with young adults to confirm the barriers and support needs associated with each stage. Based on these validated insights, design principles were derived for each phase of the journey, providing guidance for the next stages of the design process. Structuring the insights within the investment journey framework helped define the specific moment where the design intervention would take place.

Focus

The Focus phase narrowed the scope of the research to young women as the primary target group. While the previous phases explored barriers to investing among young adults more broadly, focusing specifically on young women enabled a deeper understanding of gender-specific experiences and needs. Insights from the previous phases were therefore re-examined through a female perspective and translated into a Female Design Lens, capturing the key needs that shape how young women approach investing. This framework helped translate broader insights into tangible criteria. To ensure the lens was well grounded, the insights were triangulated with relevant literature and existing research on gender differences in investing. In addition, a market analysis was conducted to examine how current financial solutions address these needs. This helped identify remaining gaps and informed strategic decisions about where AI could add meaningful value in the next phase.

The role of AI

The Role of AI phase explored how Generative AI could address the identified barriers and support needs (RQ2). Because answering this question requires understanding both the capabilities of AI and how users perceive and accept AI-driven support, a combination of analytical and user-focused methods was used. First, a general analysis examined how AI could provide reassurance in financial decision-making and identified potential risks associated with such support.

To examine the conditions under which AI support would be trusted, a survey was conducted to test trust-influencing mechanisms derived from existing literature on robo-advisors. As trust is a key factor in the adoption of AI-driven financial services, this step helped identify the most critical constructs shaping trust in AI-based financial guidance. Based on these insights, AI trust-building principles were formulated to guide the responsible design of the concept. In addition, a second survey explored how AI could be welcomed by the target group within the investment decision process and what role it should take. These insights informed the development of an AI persona, translating the expectations and preferences of young women into a concrete interaction style implemented in the final concept.

Develop

The Develop phase translated the previously defined insights and AI role into concrete solution directions (RQ3). Because this stage required moving from abstract research findings to feasible product concepts, the exploration was grounded in a real product context. Rabo SimpelBeleggen, Rabobank's most accessible investment product, was selected as the development environment due to its low entry requirements and relevance for first-time investors. The existing onboarding flow was reviewed and used as a starting point for discussion during the ideation activities, helping to ground the exploration of reassurance needs in a realistic decision context.

To explore how reassurance could be translated into product features, several ideation methods were conducted. A brainwriting session with the target group identified reassurance needs at different decision moments in the onboarding process. Based on these insights, two ideation sessions with Industrial Design Engineering students and Rabobank employees explored potential concept directions to address these needs. Finally, semi-structured interviews compared a static onboarding flow with a more conversational alternative to explore how interaction could be shaped to better reinforce reassurance during the decision-making process. Together, these activities identified key design elements that were later integrated into the final concept presented in the Deliver phase.

Deliver

The Deliver phase translated the accumulated insights from the previous phases into a tangible design concept (RQ3). Rather than developing a fully functional prototype, this stage focused on visualising how the identified design elements could be integrated into a coherent concept within the context of Rabo SimpelBeleggen. The concept

brings together the outcomes of the previous phases by combining the identified reassurance needs, the defined role of AI, and the explored concept directions into a concrete depiction of how the investment decision process could be supported.

To clearly communicate the proposed solution, the concept was developed across three design layers: interaction, communication, and content. These layers illustrate how users interact with the system, how AI communicates within this context, and which tools support users in exploring investment decisions. The concept was evaluated against the relevant design principles, the Female Design Lens, and trust-building AI principles to assess whether it addresses the identified user needs. It was further assessed through the innovation sweet spot of desirability, feasibility, and viability to examine its fit within the broader context.

Overview of research methods

Table 2 provides an overview of the research and design methods used throughout the project. For each method, it indicates its purpose, the project phase in which it was applied, and the chapter where the results are presented. Purple text indicates where AI-driven tools were used in the research process.

Table 2: Overview of research and design methods used in the project

Method	Purpose	Phase	Chapter
Focus group with young adults (Rabobank interns)	Explore perceptions, experiences, and barriers related to taking a first step into investing. *ChatGPT assisted in naming thematic clusters. Microsoft Copilot was used to generate illustrative visuals for the themes.*	**Uncover**	Chapter 6
Co-creation session with TU Delft students	Identify common barriers and explore expectations regarding support for first-time investors. *ChatGPT assisted in naming thematic clusters. Microsoft Copilot was used to generate illustrative visuals for the themes.*	**Uncover**	Chapter 6
Brainstorming session with Rabobank employees	Explore internal assumptions about customer barriers, assess alignment with the target group, and generate early ideas on how support for first-time investors could be shaped. *ChatGPT assisted in naming thematic clusters. Microsoft Copilot was used to generate illustrative visuals for the themes.*	**Uncover**	Chapter 7
Thematic clustering	Structure the insights gathered during the human-centred sessions and identify core themes of barriers to starting investing. *ChatGPT assisted in naming thematic clusters. Microsoft Copilot was used to generate illustrative visuals for the themes.*	**Synthesize**	Chapter 8
Literature review	Theoretically ground the identified themes in academic and grey literature and uncover psychological, behavioural, and structural mechanisms underlying the barriers.	**Synthesize**	Chapter 9
Mapping the investment journey	Structure barriers across stages people go through when approaching their first investment decision and identify moments most relevant for targeted design interventions.	**Synthesize**	Chapter 10
Focus group with young adults	Validate the investment journey framework and identify more specific needs emerging at each stage of the decision-making process. *Microsoft Teams Copilot was used for automated transcription.*	**Synthesize**	Chapter 11
Deriving design principles	Translate the identified needs into design principles that guide the development of solutions reflecting the needs of the target group.	**Synthesize**	Chapter 13
Customer base analysis (Rabobank data)	Analyse gender representation within Rabobank's investment customer base to assess the underrepresentation of young women and establish the strategic relevance of focusing on this target group. *Lovable AI was used to assist in visualising the customer base gender gap data.*	**Focus**	Chapter 14
Literature review (gender & investing)	Examine academic and grey literature on women and investing to contextualise the importance of supporting young women in starting to invest.	**Focus**	Chapter 14
Deriving the Female Design Lens	Recluster human-centred insights to identify female-specific needs and structure them into a Female Design Lens.	**Focus**	Chapter 15
Literature review (triangulation)	Triangulate and strengthen the insights of the Female Design Lens using academic and grey literature on gender differences in financial decision-making.	**Focus**	Chapter 16
Market analysis of female-focused investment solutions	Analyse existing female-focused investment solutions to understand how identified needs are currently addressed and identify gaps to inform the strategic focus of the AI intervention.	**Focus**	Chapter 17
Literature review (AI and reassurance)	Examine how AI can provide reassurance in decision-making contexts and assess its potential to address the identified reassurance needs.	**Role of AI**	Chapter 19
Survey on trust formation in robo-advisors	Test literature-derived trust influencing mechanisms using validated scales to identify constructs shaping trust in AI-driven financial guidance.	**Role of AI**	Chapter 20
Deriving AI trust-building principles	Translate identified trust constructs into design principles supporting trustworthy AI interaction design.	**Role of AI**	Chapter 21
Survey on the desired role of AI	Explore how the target group perceives AI support in the investment decision process and identify roles AI could take.	**Role of AI**	Chapter 22
Synthesis of Design & AI symposium insights	Summarise expert insights on risks such as companionship behaviour to contextualise ethical implications of AI guidance.	**Role of AI**	Chapter 22
Qualitative analysis of survey responses	Analyse open-ended survey responses to identify nuanced differences in preferred AI roles between male and female participants.	**Role of AI**	Chapter 23
Constructing an AI persona	Translate qualitative insights into a female-focused AI persona reflecting the desired role and behaviour of AI support.	**Role of AI**	Chapter 23
Analysis of Rabobank's investment product portfolio	Analyse Rabobank's investment products to identify a suitable development context and ensure practical relevance; Rabo SimpelBeleggen was selected.	**Develop**	Chapter 24
Brainwriting session with young women	Identify reassurance needs emerging during onboarding decision moments and translate these into design implications and "How Might We" questions.	**Develop**	Chapter 25
"How Might We" ideation session	Generate multiple concept directions based on the most relevant ideation questions derived from the brainwriting session.	**Develop**	Chapter 26
Sketching session with Rabobank designers	Explore interface design approaches that could provide reassurance to young women during the onboarding process.	**Develop**	Chapter 27
Semi-structured interviews with low-fidelity prototypes	Compare static and conversational onboarding interaction styles to identify interaction design elements supporting reassurance in investment decisions. *Figma Make was used to create the prototypes. Microsoft Teams Copilot was used for automated transcription.*	**Develop**	Chapter 28
Interaction visualisation	Visualise a shift from a static onboarding flow toward a more circular and reflective decision process adapted to the needs of young women.	**Deliver**	Chapter 29
Interface design (mobile app concept)	Illustrate how the proposed interaction and communication elements could be implemented within a mobile interface for Rabo SimpelBeleggen. *Lovable AI was used to assist in developing the interface concepts.*	**Deliver**	Chapter 29

Method	Purpose	Phase	Chapter
Content tool design (iterative prototyping)	Develop and refine tool concepts that support reassurance and reflect the investment needs of the target group. *Lovable AI was used to assist in developing the tool concepts.*	**Deliver**	Chapter 29
Feasibility validation (expert interview & document analysis)	Assess whether the proposed concept can be implemented within Rabobank's current technical infrastructure and organisational capabilities.	**Deliver**	Chapter 30
Strategic and tactical roadmap development	Outline a future vision and concrete actions through which Rabobank could scale and evolve the proposed concept, gradually integrating AI into the investment experience while making investing more accessible to a wider audience.	**Looking Ahead**	Chapter 32

Key topics across the triple diamond

Figure 7 illustrates the triple diamond design framework applied in this project, capturing the key topics that emerged and evolved across each phase of the design process.

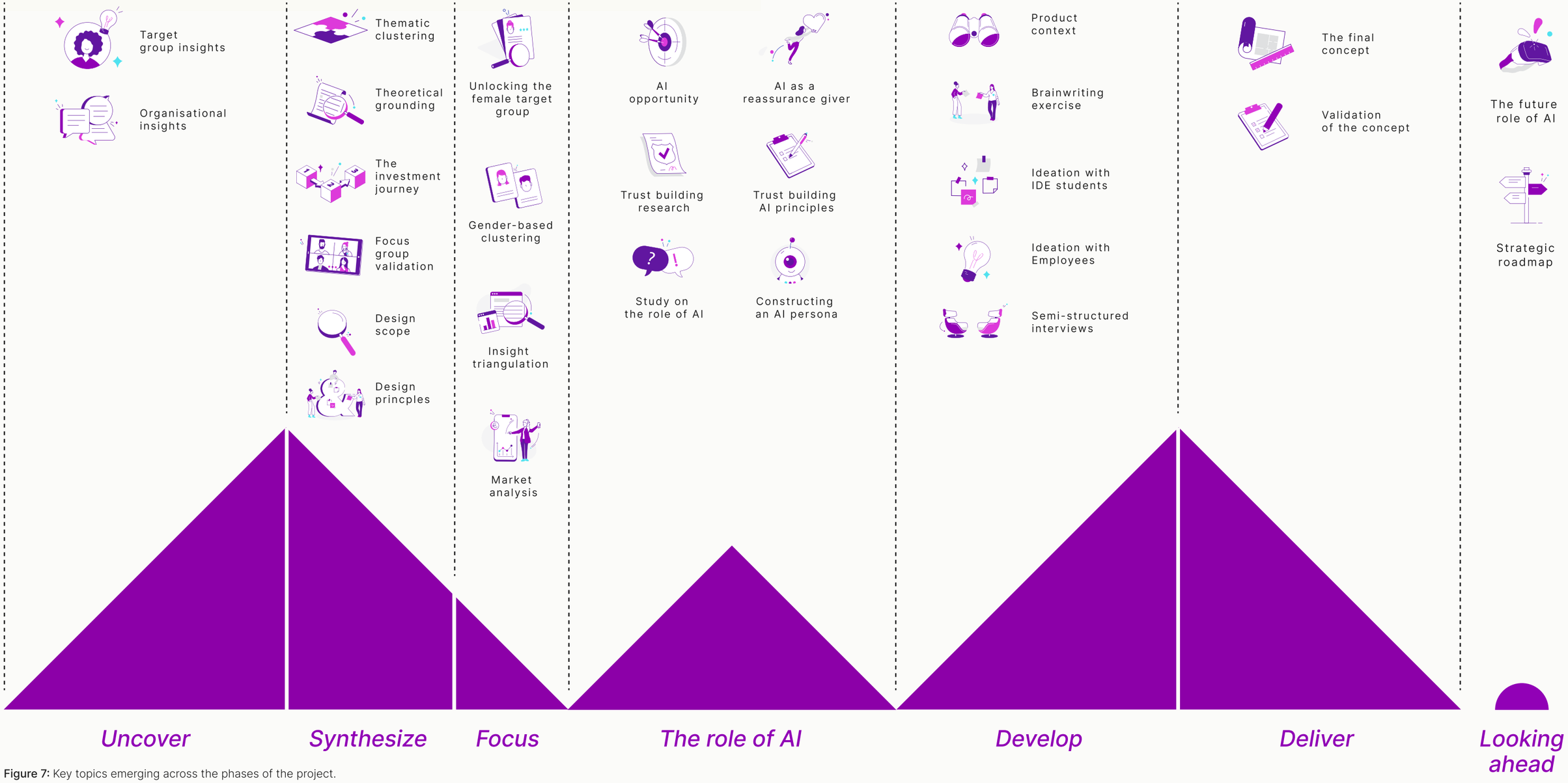


Figure 7: Key topics emerging across the phases of the project.

Uncover.

RQ1 What barriers and support needs influence young women's willingness to start investing?

The uncover phase lays the foundation for this project by taking a divergent, human-centred approach to exploring how AI-driven solutions can empower young adults to start investing. A broad exploration of barriers experienced by young adults was conducted to build contextual understanding, before narrowing the scope to young women later in the project. Rather than starting from technological possibilities, this phase prioritised understanding users' motivations, barriers, needs, and perceptions regarding investing. By grounding the project in real human experiences, it established a solid foundation for designing an AI solution that creates meaningful value for the end-user.

This chapter begins with a focus group and co-creation session with the target group of young adults to identify key challenges and underlying barriers. It is followed by a brainstorming session with Rabobank employees to explore their perspectives and assess how these align with those of the target group. Together, these sessions generated both user and organisational insights, enabling a holistic understanding of the context and highlighting the most prominent barriers to inform targeted design interventions.

Target
group insights

Organisational
insights

6. Target group insights

Focus group with Rabobank interns

To gain direct insights into the experiences and perceptions of the target group, I facilitated a focus group discussion with 14 young adults (18–25 years old), 50% of whom were already actively investing. Including both investors and non-investors allowed for a comparison between experienced and hesitant perspectives, helping to uncover differences in confidence, knowledge, and perceived barriers. The session was designed as an open and interactive conversation, encouraging participants to reflect on their attitudes toward investing and share personal experiences. The central guiding question was:

Now that investing is becoming increasingly accessible, what do young adults really need to dare to take the first step?

The discussion explored three key areas: (1) current perceptions and influences surrounding investing, (2) factors that could increase confidence to start investing, and (3) the perceived role of banks in guiding young investors, both now and in the future. These themes helped uncover underlying motivations and barriers, revealing why some young adults have begun investing while others remain hesitant. All insights were subsequently organised into clusters to provide structure and clarity (see Appendix A).

Why young adults already invest

The focus group highlighted a variety of reasons why young adults already invest. For many, a **parental kickstart** comes early, with parents guiding and setting an example that sparks initial interest. Later, some gain confidence through a **knowledge kickoff**, as their education provides the skills and understanding to get started. They are also often **inflation savvy**, recognizing that low interest rates and rising prices make saving less worthwhile. Some participants start investing because **safe foundations**, such as funds and index investments, make the process feel secure and approachable. Others take advantage of a **dip opportunity**, viewing a market downturn as the right time to begin. A few benefit from a **rewarded start** through financial incentives, while some even use a **loan to grow**, turning student financing into seed money for their first investments.

Why young adults do not invest yet

The focus group revealed several reasons why young adults do not invest yet. **Comfort in saving** plays a major role, as many rely on traditional saving habits and overlook how low interest rates erode value over time. **Festival first** reflects a mindset of prioritizing present enjoyment, with some seeing investing as something for later in life while preferring to spend on experiences now. The **daily grind myth** also deters potential investors, as they assume investing requires constant monitoring and daily management. In addition, **process paralysis** holds some back, as the steps to begin feel complicated and time-consuming. Finally, **scared to lose** captures the emotional barrier many face: the fear of losing money is so strong that it stops them from taking the first step at all.

Beyond individual motivations and barriers, the discussion also revealed an important contextual factor: the role of trust in financial guidance.

Trust and credibility in financial guidance

Trust in banks appears to be relatively low among young adults, particularly in the context of social media communication. Participants indicated that banks often lack credibility in these spaces, as their advice can be perceived as biased or commercially driven. In contrast, influencers who have already built trust and relatability with young audiences were seen as more persuasive and accessible sources of information. Overall, young adults expressed a need for credible and relatable messengers before they are willing to take financial information seriously and feel confident enough to begin investing.

Proposed solutions from the target Group

- **Use financial incentives:** Offer benefits such as two years of free investing, rewards for completing training programs, or referral bonuses. These create a low-barrier entry point and spark motivation.
- **Let them experience it firsthand:** Young adults often need to try something before they believe in it. Give them simple ways to invest small amounts so they can experience early wins and build trust.
- **Make it immediately relevant:** Show how small actions today can already lead to noticeable results in the short term. Connect daily habits to short-term gains, not just distant future outcomes..
- **Link investing to exciting long-term goals:** Frame investing as a path toward goals they care about: stopping work earlier, traveling more, or gaining financial freedom. “Want to stop working early? Start now!”
- **Provide in-app learning modules:** Take inspiration from apps like Revolut, which teach investing gradually. Short, interactive lessons keep learning simple and approachable.
- **Visualize the power of compounding:** Show how compound growth works: e.g., money doubling every ~7 years at certain rates. Explain inflation and how savings lose value over time, while compounding lets their money grow.
- **Keep communication short and simple:** Use clear, benefit-driven messages like “Want to earn more money?” The word investing can feel complex or intimidating; avoid long explanations that may cause them to disengage.
- **Encourage small steps toward healthy money habits:** Avoid talking too much about being 50 or retirement: those feel too far away. Focus on small, doable steps that leave room for what they enjoy today, like festivals or travel.
- **Lower the cost barrier:** Make investing with Rabobank cheaper and more competitive. Many young adults choose platforms like DEGIRO simply because of lower costs.
- **Target parents as well:** Parents often want the best for their children and already save money for them. Engage parents to build credibility and encourage them to pass investment habits along to their kids.

Identified user needs

Based on the proposed solutions, several underlying needs of young adults (18–25) emerged:

1. Financial safety and transparency
Young adults need to start investing in a way that feels financially safe. This means small initial amounts, limited perceived risk, and clear, transparent costs. Uncertainty about potential losses or hidden fees quickly discourages action.

2. Simple and experiential learning
They prefer clear, simple guidance and learning by doing rather than abstract financial theory. Overly complex terminology or information increases cognitive load and discourages engagement.

3. Short-term relevance and feedback
Because long-term financial outcomes feel distant, young adults need short-term relevance and visible progress. Quick feedback helps demonstrate how small actions today contribute to meaningful future results.

4. Connection to personal goals
Investing must relate to personal aspirations such as financial freedom, travel, or working less in the future. Personal goal alignment increases motivation and emotional engagement.

5. Realistic fit with lifestyle
Financial behavior must fit naturally into their social and spending habits. They need solutions that support gradual habit-building rather than demanding strict or unrealistic discipline.

6. Trust and external influence
Young adults often rely on trusted sources, especially parents, when making financial decisions. Credibility and external validation therefore play a significant role.

Co-creation with TU Delft students

To build upon the initial internal insights, I attended a co-creation session at TU Delft that was organized as part of the elective course “Creative Facilitation” (see Figure 8). In this session, two separate teams of four students each worked on the following challenge with different facilitators:

How can Rabo better connect with the world, motivations, and barriers of 18–30-year-olds so they not only save but also start investing?

Rather than actively participating in the session, I adopted an observational role, moving between the groups to document discussions, emerging ideas, and key insights. After the sessions, all collected insights were synthesized and organized into thematic clusters to provide a structured overview of the key barriers to investing (see Appendix B).

Why young adults do not invest yet

The co-creation session with students revealed several additional, as well as a few overlapping, reasons why young adults do not invest yet. **Living for now** reflects a focus on short-term goals and immediate spending, with investing seen as slow and less relevant to their current lifestyle. Closely related is the **waiting game**, where a lack of clarity and patience around timelines, success rates, and returns leads to postponement. Some participants described investing as **out of sight**, as they are unaware of available options or possibilities due to limited promotion or visibility. Misconceptions also play a role, as seen in the **big money myth**, where many believe investing is only for those with large sums of money, and in the **expert-only zone**, which makes the field feel intimidating and reserved for professionals. **The beginner’s barrier** adds to this hesitation, as many feel inexperienced and want more guidance to feel secure and comfortable starting. Others find it **too complex**, unsure where to start or how to navigate the process, while **info overload** leaves them overwhelmed by technical, text-heavy content that fails to engage. This abundance of options also creates **decision paralysis**, which further prevents them from takingaction. Financial limitations further discourage action, with **no money to spare** capturing concerns about affordability, debt, and fear of losing what little they have. Finally, **too many gurus** reflects growing scepticism toward online influencers and self-proclaimed experts.

A Rabobank-specific issue seems to be that many young adults are **loyal elsewhere**: they already invest through platforms or banks they perceive as more relatable or Gen Z–focused.

Figure 8: Co-creation session with TU Delft students

Proposed solutions from the target Group

- **Open investing:** Create a feature that allows users to share and discuss their investment choices publicly, increasing visibility and normalising investing as an everyday habit.
- **Certified social media content:** Develop reels or posts endorsed by Rabobank but created by peers, combining institutional credibility with relatability.

- **RaBuddy (digital companion):** Offer personalised guidance through a digitalcompanion that analyses a user's investment plan and provides tailored recommendations.
- **AI chatbot:** Provide accessible, low-threshold support through a conversational interface that answers frequently asked questions and explains investment concepts in simple terms.
- **Gamified everyday examples:** Make investing more engaging by presenting daily, playful examples or challenges that connect investment principles to real-life situations.
- **Introductory short term investments:** introducing short term investment making the first step into investing rewarding.
- **University lectures:** partner with educational platforms or universities to normalize investing as a life skill though (lunch) lectures.
- **Practice makes money:** provide a learning platform where they can watch videos about investing and where they get 50 euros try-out monet after fiinishing the trial.
- **Learning center:** a platform where you can watch informational videos, join physical events and consult your personal advisor.

Identified user needs

Based on the students' ideas, several key needs emerged:

1. Transparency and openness
Students value open investment options and the ability to discuss choices publicly. Transparency increases understanding and reduces hesitation.

2. Familiarity and accessibility
There is a need for investing to feel familiar and approachable, reflected in the idea of university-led lectures and educational settings they already trust.

3. Personal guidance and support
There is a clear desire for guidance, illustrated by concepts such as the "RaBuddy" and a learning center with access to a personal advisor.

4. Relatability combined with credibility
Students prefer peer-created content, such as social media formats, because it feels relatable. At the same time, they require credibility and reassurance, for example through certification or endorsement by Rabobank.

5. Playfulness and experiential learning
Gamified everyday examples highlight a need for playfulness, while short-term introductory investments and "practice makes money" concepts show a strong preference for learning by doing.

7. Organisational insights

Brainstorming with Rabobank employees

To explore internal perspectives, I facilitated three brainstorming sessions with key stakeholders from the Investment Tribe, including business analysts, developers, and product owners, to assess how organisational assumptions and expertise align with critical user needs (see Figure 9). The sessions were structured around four primary barriers to investing identified in the literature (Prins et al., 2021): lack of knowledge, perceived risk, complexity, and uncertainty about where to start. Building on this framework, participants examined the underlying causes of these barriers and generated initial ideas, particularly focusing on educational interventions and the potential role of AI in lowering the threshold for taking the first step toward investing.

Why young adults do not invest yet

The brainstorming sessions with Rabobank employees surfaced a broad range of perceived reasons why young adults may not yet invest. These insights were subsequently clustered to identify patterns and overlapping factors (see Appendix C). **Parent's job** and **missing role model** were mentioned as factors highlighting the influence of upbringing, as employees suggested that many young adults view investing as their parents' responsibility or lack an example to follow. **Curriculum gap** was identified as reinforcing this early shortfall, with schools seen as providing limited practical financial education.

Lifestyle-related considerations were also emphasised, including **live now, invest later**, **future fatigue**, and **rooted in saving**, reflecting the perception that many young adults prioritise short-term enjoyment or traditional saving habits over long-term investing. The theme of budget barriers referred to a perceived lack of disposable income, while **fear first** and **not fully rational** captured the belief that emotions and risk aversion often outweigh logical decision-making in investment behaviour.

Complexity and overload also emerged across the employee perspectives. The clusters **choice chaos** and **all or nothing** reflect perceived cognitive barriers, pointing to confusion caused by an abundance of investment options and a mindset that investing requires full commitment rather than starting small. The cluster **TikTok effect** highlights the contrast between young adults' preference for short, mobile-first, and visually engaging content and the often complex, text-heavy nature of traditional investment platforms.

Additionally, **misinformation maze** captures the perceived confusion resulting from conflicting or misleading advice from online influencers, leaving young adults uncertain about whom to trust. **Chasing quick gains** reflects the observation that some may be drawn to high-risk, short-term opportunities such as crypto, while **biased advice** indicates scepticism toward guidance provided by banks. Finally, broader cultural and value-based barriers are reflected in **investing isn't cool** and **rich man's game**, suggesting that investing may feel unappealing or exclusive, while **green concerns** point to the belief that investing can be harmful to the environment.

Validation of assumptions

All three groups of employees showed a high level of alignment on the core barriers to investing. All groups acknowledge that young adults struggle with a short-term mindset, limited financial knowledge, fear of risk, and the perception that investing is complex, time-consuming, and only suited for people with more money. Employees also correctly recognize the impact of influencers, the absence of financial education, and the fact that Rabobank's current positioning does not strongly appeal to this demographic and that bank advices feels biased. However, some mismatches appear in the nuances.

While employees believe young adults are "lazy" or uninterested, the target group instead describes feelings of overwhelm, insecurity, and a need for clearer guidance. Similarly, employees assume young adults see investing as something for their parents, whereas the target group frames it more broadly as something for older or expert investors, not specifically parents. Lastly, some employee assumptions, such as investing being 'not cool' or sustainability concerns holding young people back, were not mentioned by the target group.

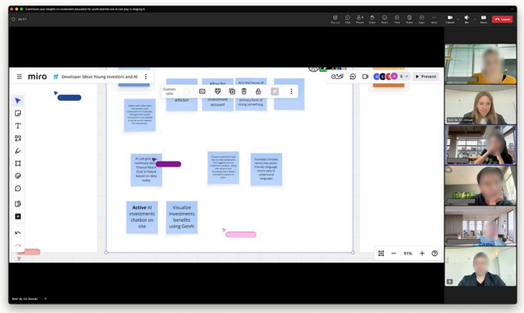
Overall, Rabobank employees' assumptions largely reflect genuine user needs, with opportunities to shift focus from perceived apathy toward addressing users' lack of confidence, guidance, and accessibility.

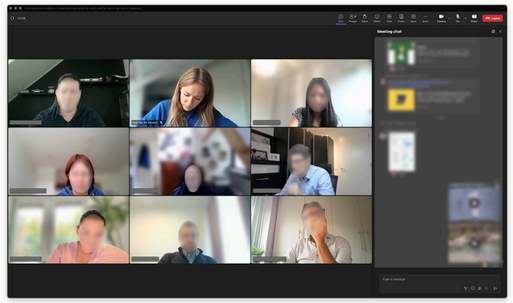
> *"So, it is about how we can make young adults feel comfortable and confident about investing — up to the point where they feel safe enough to take the first step."*

Rabobank employee
Product owner

> *"We often underestimate younger people. Do not think negatively of them by assuming they have a short-term view or a short attention span. They actually know a lot and can create new opportunities."*

Rabobank employee
Business analyst





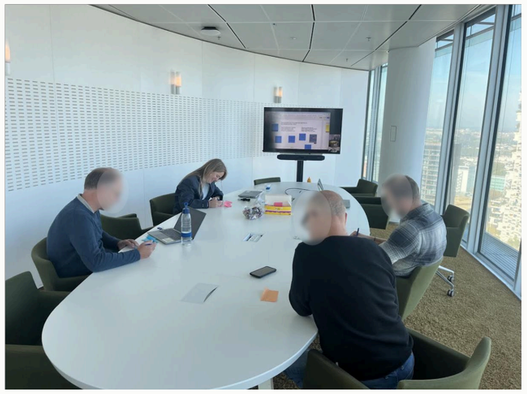


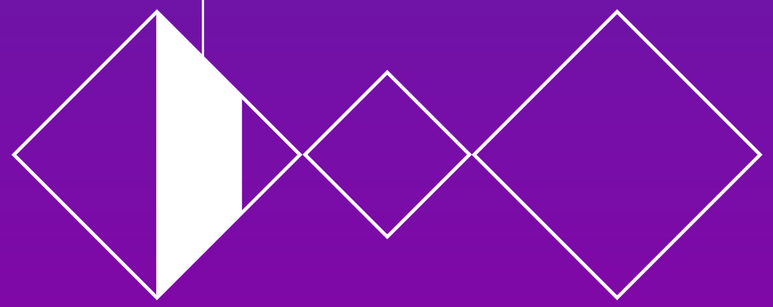
Figure 9: Brainstorming session with Rabobank employees

Idea gallery

Across the three sessions, initial ideas emerged regarding how investing education for young adults could be structured, grounded in the widely recognised knowledge gap in financial literacy identified in both the research and earlier findings. In addition, participants generated ideas about the potential role AI could play in this context, outlining possible AI-driven solutions to guide, inform, and support young adults in the early stages of investing (see Appendix C4).

Synthesize.

RQ1 What barriers and support needs influence young women’s willingness to start investing?



The synthesize phase translates the broad range of human-centred insights from the discover stage into a clear and actionable project direction. It moves from divergence to convergence by identifying patterns in barriers and needs, highlighting the most relevant design opportunities, and defining a focused scope. This ensures the project concentrates on a strategically relevant and designable problem space rather than attempting to address all identified challenges at once.

To synthesise the findings from the focus group, co-creation session, and internal workshop, all insights were clustered to identify common ground. This process resulted in eight overarching themes recurring across sessions. Each theme is supported by scientific grounding to uncover underlying constructs and provide deeper context. From these themes, “strategic spotlights” emerge: concrete focus areas that Rabobank can use to guide strategic decision-making within the project context. The themes are then further synthesised into an investment journey, acknowledging the different stages of barriers individuals move through. This journey ultimately helps narrow the scope to execution-related barriers, deliberately shifting the focus from a broad marketing question toward a more design-oriented intervention.

Thematic clustering

Theoretical grounding

The investment journey

Focus group validation

Design scope

Design princples

8. Thematic clustering

To synthesise the insights gathered across the three human-centred sessions, the findings were thematically clustered (see Appendix E). This process enabled the grouping of specific underlying reasons into broader, overarching concepts. The analysis resulted in eight key themes, which together form the foundation for understanding the challenges young adults face when initiating their investment journey.

Missing role model(s)

> *"My parents opened up an investment account for me and said: Here is €500; experiment with it."*

Many young adults start investing because their parents do and share their experiences with them. Those without such role models often remain unaware of the possibilities. This influence also plays out among peers, as those whose friends do not invest often remain unaware of it unless they actively seek out the topic themselves.

Education gap

> *"I learned investing through my Bachelor's degree, which showed me all the practical steps."*

Young adults lack practical investing education. While some gain confidence from their studies, many leave school without the financial knowledge or skills to start investing. Investing is rarely taught within basic economics, and when it is, it remains theoretical rather than hands-on.

Image of investing

> *"It feels like a place full of experts, so it's scary"*

Young adults often associate investing with wealth, expertise, and older generations. They see it as something for people with money, connections, or professional knowledge, rather than for themselves. This perception makes investing seem exclusive and "not for them".

Saving feels safe

> *"People feel like they're doing enough just by setting money aside. They're not really thinking about interest rates. "*

Many young adults find comfort in saving rather than investing. Saving is a habit taught from a young age and is strongly rooted in Dutch financial culture. Most do not question the low interest rates on their savings accounts or fail to see them in perspective. Investing, on the other hand, is often seen as risky and uncertain, making saving feel like the safer and more reliable option.

Short-term prioritization

> *"I am saving for a trip next year, so not worth the effort for just a year."*

Young adults often see investing as a future concern rather than a current priority. They prefer to use their money for experiences and enjoyment in the present, viewing saving as a way to support that lifestyle. Investing feels slow and distant, something to do later in life when they have more stability. The lack of patience for long-term returns makes quick options like crypto more appealing, as they offer the potential for immediate rewards.

Information chaos

> *"Once you bomb them with investing terms, they're out."*

Young adults often feel overwhelmed when trying to begin investing. Online information is abundant but difficult to navigate, filled with text-heavy content and conflicting advice. The rise of "finfluencers" and course sellers adds to the confusion, making it hard to know which sources to trust. As a result, many feel paralyzed in the process and unsure where or how to start.

Rabobank

Image of banks

> *"De Giro or other sites are more common to use."*

While young adults generally trust banks, they also view them as conservative institutions that do not fully cater to the needs of their generation. They often look for alternatives that feel more aligned with their preferences or offer financial incentives. Some also perceive bank advice as biased or self-interested, which makes them hesitant to rely on it.

Budget barriers

> *"Not have a lot of money to save, want to save this money in a low risk/no risk way."*

One key reason young adults refrain from investing is the (perceived) lack of disposable income. While a minority can allocate part of their student financing to investments, many depend on this income for basic living expenses and therefore have little to no capacity to invest.

9. Theoretical grounding

To theoretically ground the identified themes, each theme was examined through a focused review of relevant academic literature and industry practices. This process aimed to uncover the underlying psychological, behavioural, and structural constructs that explain the identified barriers. By linking empirical insights to established theory and practical examples, each theme was further translated into so-called “strategic spotlights.” These strategic spotlights highlight concrete areas where Rabobank can create value by addressing the root causes of the barriers and supporting young adults in overcoming them.

Missing role model(s)

While research shows that youngsters who regularly discuss money with their parents have better financial literacy (OECD, 2017), a significant risk arises from over-reliance on informal networks. Nearly one third of young adults rely solely on discussions with family, friends, or partners to explore their financial goals (Groen & Prins, 2022). By depending entirely on their direct social circle for this information, they may miss crucial expert knowledge, especially on topics their parents/ friends may not engage with, such as investing.

When examining investment habits among youth aged 16 to 19, research strongly underscores the effect of a parental example. Data shows that while only 10% of young people overall invest, this participation rate increases significantly to 60% among those who have at least one investing parent (Wijzer in geldzaken, 2024). Furthermore, a study by the World Economic Forum found that only 19% of non-investors reported having parents with investment accounts, compared to 59% of investors (World Economic Forum et al., 2022). These findings suggest that when parents do not invest, the likelihood that their children will do so is significantly lower.

A study by DEGIRO among 790 Dutch investors demonstrates the nuanced role of parental influence in introducing investment topics. Parents and caregivers are often the first point of contact, as many respondents first encountered investing at home. However, active learning rarely happens there. Only a small share learned about investing from their family during their youth, meaning most did not receive this knowledge at home. Active support is also uncommon: very few received help with their first investment decisions or were encouraged to open an investment account. This suggests that while awareness of investing often begins at home, practical knowledge is usually acquired elsewhere. Notably, adult investors who received minimal financial education during their youth now recognize the importance of passing this knowledge on. Many believe it is important to teach their children about investing, and a substantial group considers it very important. This points to growing financial awareness among this group, even though parents often struggle with how to effectively pass on this knowledge.

Gen Z investors appear to make investing more of a social topic and show greater transparency about their portfolios compared to older generations. Research across 12 countries supports this: 55% of Gen Z investors (aged 18–27) discuss investments with friends, and 44% talk about them with relatives. In contrast, this openness is much lower among Baby Boomers (aged 60–78), with only 29% discussing investments with friends and 22% with family (eToro, 2024).

In the Netherlands, however, talking about money often remains difficult, as it is still widely seen as a taboo topic (Nationale Nederlanden, 2025). For young adults who did not grow up in households where investing was discussed, openconversations outside the home can therefore play an important role. Discussing money openly helps people validate their understanding, overcome feelings of self-doubt or not being knowledgeable enough, and build the confidence needed to take their first steps into investing (Poets, 2025b).

Strategic Spotlight

While awareness of investing often begins at home, most young adults acquire practical investment knowledge through peers and external sources. Financial institutions like Rabobank can play an important role by facilitating open, social, and non-intimidating conversations about investing, especially for those without financial role models at home.

Education gap

This limited role of schools is also clear from survey results. A study by DEGIRO among 790 Dutch investors shows that investing is rarely taught at school. Only 13% say they learned anything about investing during their education, and those lessons are often seen as not very useful in practice (DEGIRO, 2025). At the same time, many respondents believe schools should spend more time on practical topics such as saving and investing. This suggests that schools could play a much stronger role in improving financial education. This problem is not limited to the Netherlands. Around the world, most retail investors say they were not introduced to investing at a young age. More than half (55%) only learned about investing after they started working, and fewer than 10% learned about it at school. As a result, many investors feel they lack the knowledge they need and would like more opportunities to learn in order to make better investment decisions (World Economic Forum et al., 2022). These findings highlight the importance of early financial education and point to schools as a key setting for addressing this gap.

While financial education often begins at home, schools play a crucial role in reinforcing this knowledge. Research shows that countries where financial education is a mandatory part of the school curriculum consistently perform better in financial literacy (OECD, 2017). In the Netherlands, financial education was until recently not a fixed part of the school curriculum and remains largely focused on traditional economics topics, such scarcity, market dynamics, measures of prosperity like GDP, and the government balance sheet. This focus leaves limited room for practical money management skills. Supporting this view, a recent survey shows that most Dutch secondary school teachers consider explicit money management education essential and express growing concern

about the influence of social media influencers on students' spending behaviour, as well as the impact of buy-now-pay-later services and gambling advertisements (DUO Onderwijsonderzoek & Advies, 2024).

At the same time, the importance of strong financial education is becoming increasingly clear in a digital financial landscape. Nearly one in five 15-year-olds in the Netherlands lack basic financial skills, including planning and understanding the consequences of financial decisions. Recognizing the growing relevance of financial education, the Ministry of Social Affairs and Employment has allocated €10 million from 2026 onwards to support initiatives such as financial lessons in schools, financial support points for students, and guidance for parents in financial education.

Earlier research by Nibud and Wijzer in geldzaken further outlines what effective financial education requires (Nibud & Wijzer in geldzaken, 2017). Their findings emphasize that financial education should be structurally embedded in the school curriculum, as one-off lessons are unlikely to lead to lasting behavioral change. Effectiveness increases when lessons are closely connected to students' daily lives and address recognizable and relevant financial situations. In addition, they highlight the importance of a continuous learning path that aligns with the cognitive, social, and psychological development of children and young people. Finally, they stress that well-trained teachers and the active involvement of parents are essential for financial education to have a meaningful and lasting impact.

In line with these insights, the Dutch Ministry of Education, Culture, and Science is currently collaborating on a new national curriculum that will explicitly include financial education. The updated core objectives will address practical financial skills such as managing income, expenses, savings, and debt, as well as understanding financial risks and

> *"With good financial education, you learn to handle money more consciously and prevent debt. Children develop habits at a young age that lay the foundation for the rest of their lives, including financially. So it truly is: learned young, done old."*
>
> Jurgen Nobel
> Dutch State Secretary

the influence of social media and businesses on financial choice (Wijzer in geldzaken, 2025).

Despite this progress, responsibility for financial education has long remained unclear. There is no consensus on whether schools, government agencies, financial institutions, NGOs, or individuals themselves should ensure adequate financial literacy. Beyond the role of schools, financial institutions increasingly position themselves as responsible actors. As one of Europe's leading online brokers states:

> *"As one of Europe's leading online brokers, we see it as our responsibility not only to facilitate access to capital markets, but also to invest significantly in people's financial education and knowledge. In this way, people are better able to take control of their financial future."*
>
> Oliver Behrens
> CEO flatexDEGIRO

In conclusion, these developments highlight a growing gap between the financial skills young adults need today and the education they have received, particularly regarding practical investing knowledge. Although formal education is gradually evolving, many young adults are already making complex financial decisions without a strong foundation in financial literacy. This creates a clear need for financial education to be offered alongside investment products and services (World Economic Forum et al., 2022), underscoring the important role financial institutions can play in supporting financial education.

Strategic Spotlight

Many young adults entered adulthood without practical financial or investing education, while facing increasingly complex financial choices. As a trusted, cooperative bank, Rabobank is well positioned to complement formal education by offering accessible, practical guidance that builds confidence alongside their investment products.

Shift from product-driven to needs-based financial education

Prioritise explaining the "why" and "how" of investing in relation to life goals, rather than focusing primarily on product features.

Provide practical and actionable learning experiences

Translate investment concepts, asset classes, and associated risks into clear, real-life applications that support informed decision-making.

Take a leadership role in financial literacy

Collaborate with industry peers and policymakers to strengthen foundational financial skills and promote responsible investing as a shared societal responsibility.

Image of investing

The perception of investing does not develop in isolation. The public image of investing is shaped by a broader societal context and influenced by different actors, such as the media, financial institutions, educational systems, governments, regulators, influencers, and financial advisors.

The media plays an important role in how young adults perceive investing. In developed markets, word of mouth and traditional media such as newspapers and television remain influential, although younger investors rely slightly more on social media (World Economic Forum et al., 2022). In recent years, Gen Z has increasingly turned to social media for financial information. On these platforms, investing is often encountered through stories about crypto and Bitcoin hype. These narratives can blur the line between long-term investing and short-term speculation, making it harder for young adults to understand the difference. Research shows that crypto trading is associated with excessive gambling, gaming, and internet use among young people (Delfabbro et al., 2021; Oksanen et al., 2022). Large price swings and stories about crypto millionaires are linked to psychological effects such as fear of missing out, overconfidence, and difficulty stepping away from the market (Delfabbro et al., 2021). This underlines the importance of clearly distinguishing traditional investing from crypto trading.

A large share of crypto-related content on social media comes from influencers who often lack neutrality and transparency. While so-called finfluencers have made financial topics more visible, their reliability is frequently questioned. Followers' interests are not always central, transparency is often limited, and high-risk products may be promoted (AFM, 2021). At the same time, many users overestimate their own financial knowledge, which makes them more vulnerable to misinformation and fraud, especially younger investors who rely heavily on online platforms.

The Dutch education system currently offers limited counterbalance to these narratives. Financial literacy has not been structurally embedded in the school curriculum, and until recently, practical topics such as saving and investing were largely absent. As a result, many students leave school with little understanding of what investing entails. When investing is not discussed at all, it can reinforce the idea that it is complex, risky, or out of reach.

Financial institutions also play a role in shaping the image of investing. The use of technical language, formal visual styles, and complex product structures can make investing feel demanding and exclusive. Young people describe the financial sector as business-like, boring, and elitist, and nearly half believe its image should become more modern and more human (AllesOverHR, 2026). In addition, product information often assumes prior financial knowledge and places strong emphasis on risks and performance metrics, partly due to legal requirements. While necessary, this can discourage beginners and reinforce the idea that investing is only for experts, rather than a skill that can be learned step by step.

Regulation also affects how investing is perceived. Investment promotions are required to include warnings such as "Investing involves risk; you can lose part of your investment." These warnings aim to protect consumers, but they can also trigger fear of loss. This relates to loss aversion, a concept from prospect theory, which shows that people experience losses more strongly than gains (Kahneman & Tversky, 1979). As a result, potential investors may focus heavily on possible losses, while overlooking the gradual loss of purchasing power caused by inflation (Poets, 2025a).

Finally, the broader economic context influences the image of investing as well. Periods of economic uncertainty, such as rising inflation, market downturns, and geopolitical tensions, can reduce trust in financial markets. Research suggests that for new investors, starting during a bear market can discourage future participation (World Economic Forum et al., 2022). In this context, maintaining confidence in investing as a long-term way to build wealth remains a challenge for the financial sector.

Strategic Spotlight

The image of investing is socially constructed, and Rabobank plays an active role in shaping and reinforcing that perception.

Simplify and humanize communication

Reduce jargon and shift toward relatable, engaging messaging that explains why investing matters, not just how it works.

Make investing accessible and inclusive

Highlight low entry amounts, clear risk levels, and simple starting options to lower psychological and financial barriers.

Improve product understanding and choice

Clearly explain the purpose, risks, and role of different investment products, helping investors make informed and suitable choices.

Saving feels safe

Saving is deeply rooted in Dutch culture and financial behaviour. Dutch households tend to keep their money in the bank in exchange for deposit interest. Among young adults, saving is the dominant strategy for achieving financial goals: 97% use saving, and it is applied to 78% of the goals they pursue (Groen & Prins, 2022).

In 2024, Dutch households held over €600 billion in savings, of which €395.3 billion was in easily withdrawable accounts, representing about two-thirds of all bank deposits. Although fixed-term deposits are becoming more popular, most savings remain in regular, highly liquid accounts that do not benefit from higher interest rates (De Nederlandsche Bank, 2025a).

> *"The Netherlands is the country in Europe where the most is saved. We prefer saving to investing."*
>
> Eva de Mol
> Tech Investor

The Dutch are Europe's savings champions, with higher financial buffers than residents of any other country. According to a report by Eurostat and Allianz Research, the Netherlands ranks first among nine EU countries, with average savings of over €150,000 per resident (Allianz Research, 2024).

> *"Saving is regarded as an old national virtue, one that cannot be developed early enough."*
>
> Philip Bloemendal
> Dutch Announcer

Collectively, the Netherlands is among the largest investors in Europe. Few other countries invest a greater proportion of their national wealth in stocks and bonds. The Netherlands as a country may have substantial overall investments through pensions and insurers But if we zoom in on Dutch households, something stands out: they actually invest comparatively little (De Nederlandsche Bank, 2025). According to De Nederlandsche Bank, Dutch households invest only about 23% of their freely disposable assets in investment portfolios, well below the European average of around 36%. In the United States, this figure is much higher at about 79%.

Retail investment in Europe has historically been low. To strengthen long-term financial resilience, the European Commission launched the Savings and Investment Union, aiming to redirect more European savings into capital markets. The Commission argues that money currently held in savings and payment accounts could be used more productively to strengthen the European economy.

Strategic Spotlight

An opportunity lies in positioning investing as a better way to save by making stronger use of the existing product offering that enables small, recurring, and adjustable investments. By framing investing as a natural extension of saving behaviour and clearly communicating the impact of inflation versus savings interest, Rabobank can encourage Dutch savers to take the next step.

Short-term prioritization

Despite Gen Z's digital fluency and access to financial tools, significant gaps remain in the foundational knowledge, confidence, and behavioural consistency required for long-term financial resilience (Abdul Raman et al., 2025). Investing, by definition, requires a future-oriented perspective. Thinking about money for the future involves setting financial goals, and without structured planning, long-term goals are difficult to define or achieve.

> *"Fostering an investment culture requires engaging people in a way that helps them view investing within the broader context of their financial needs."*
>
> Sheila Nicoll
> Head of Public Policy, Schroders

Among young adults aged 18–30, almost every respondent reports having multiple financial goals, averaging 8.6 goals each. In general, the top three most important financial goals are: saving for unforeseen expenses, funding recreational activities, and buying a house (Groen & Prins, 2022). These goals fit their stage of life as they are at the beginning of adulthood. Their primary focus is on having enough money to live comfortably in the short term and avoid financial trouble. This often short-term focus can increase their financial risk (Deloitte, 2025).

When looking at young adults from a developmental perspective, they are generally more receptive to immediate rewards. In behavioural economics, this is known as present bias: the tendency to prefer immediate rewards over larger future ones. This bias is particularly strong among younger people, as impulse control and long-term planning skills are still developing. As a result, short-term benefits are often prioritised over long-term financial goals (Xiao & Porto, 2019).

Most young adults (18–30 years) are actively engaged with their finances. However, research suggests they would benefit from more structured guidance to pursue their goals in a focused and well-informed manner (Groen & Prins, 2022). Although many young adults demonstrate proactive saving behaviour, their financial planning tends to be more reactive. While a large majority set money aside and have a general idea of how much they need to reach their goals, many neglect important preparatory steps such as actively seeking information or carefully estimating timelines. This suggests that financial actions are often taken without a comprehensive plan.

A large majority of young adults (83%) acknowledge a gap in their financial knowledge and express a need for further guidance. The most frequently mentioned need is practical advice on achieving financial goals (43%). In addition, 38% seek information about the capital required to reach their goals, and an equal proportion value examples of peers who have successfully achieved them. Around one-third would like better insight into tracking their progress, while 26% indicate a need for more information about financial products.

Taken together, these findings illustrate that while young adults are motivated and financially active, present bias, reactive planning, and acknowledged knowledge gaps prevent them from transforming short-term financial engagement into long-term resilience.

Strategic Spotlight

Access to financial tools alone is insufficient for young adults, who express a clear need for structured guidance. Rabobank can respond by developing goal-based solutions that transform short-term financial priorities into structured long-term investment pathways. Behaviourally informed tools, such as automatic tracking, milestone framing, and personalised nudges, can help overcome short-term bias and drive sustained investment behaviour.

Information chaos

When it comes to investment information, including how to invest, what to invest in, and why to invest, sources are numerous and fragmented. Identifying the most impactful and accessible forms of education is therefore a key challenge, as is verifying the reliability and accuracy of the information in the absence of a single, authoritative source.

Financial education is delivered through a wide range of sources, including media, personal advisers, literature, organisations, robo-advisers, subscription-based investment services, and in-app tools. While these diverse channels increase accessibility, they also make it difficult for consumers to navigate information consistently and recognise their own knowledge gaps. The growth of social media and digital advisory platforms has further expanded access to financial guidance, but it has also raised concerns about reliability and regulation. Moreover, although there is an abundance of information on fundamental investing principles, much of it is not tailored to non-investors or designed to build initial trust in capital markets (World Economic Forum et al., 2022).

More investors are relying on online financial information to make their own investment decisions. A retail investor survey shows that nearly one-third of investors rely on more than three information sources when deciding what to invest in (World Economic Forum et al., 2022).
Social media's ability to spread information quickly and widely has changed who influences how financial information is gathered and acted on. The easy access to free financial information poses challenges and can have serious consequences for retail investors and the wider system. Information on investing is often misleading when presented on social media by uncredited sources. It is therefore crucial for young adults to have strong media literacy in order to distinguish reliable from unreliable information in the large amount of content available online and on social media. Although they are digital natives, being constantly online does not automatically mean they can recognise or resist misinformation. Adolescence is a period of cognitive development in which critical thinking and reflection skills are still maturing. As a result, young people often rely on intuition or familiarity, making repeated information seem credible. At the same time, their curiosity and willingness to learn make them receptive to education that strengthens critical thinking (Ma et al., 2026).

Investment advice should begin with basic financial planning and guidance. In the absence of accessible foundational financial services, many people turn to social media to learn about personal finance. Online "finfluencers" have attracted millions of followers by presenting financial content in simple and easily digestible formats.

However, when making investment decisions, retail investors show a clear preference for accredited sources of information. The two most relied-upon sources are both linked to financial institutions: 47% depend on guidance from financial advisers or wealth managers, while 41% rely on educational resources provided by financial institutions (World Economic Forum et al., 2022).

While financial institutions provide a range of support and educational resources, these efforts are often siloed within and across firms and do not always resonate with investors. The new wave of retail investors has different expectations regarding how educational content is delivered. They seek information that is personalised, concise, and accessible through the digital channels they actively use. However, rapidly evolving media preferences and emerging platforms are outpacing institutions' ability to adapt.

Strategic Spotlight

Investment information is fragmented and often difficult to understand, and verifying its reliability is challenging in the absence of a single trusted source. Rabobank can respond by strengthening its position as an accredited and trustworthy source of information, delivering content in formats that resonate with users and ensure that credible information reaches a wider audience.

Start with foundational financial planning

Provide clear, comprehensible guidance that addresses basic financial needs before moving to complex investment advice.

Deliver concise, relatable content through existing digital channels

Use apps and online platforms customers already engage with.

Tailor communication to the investor's level of experience

Deliver the right content to the right audience at the right time through the appropriate channel.

Create one coherent customer journey

Integrate education, guidance, and products into a seamless experience rather than offering disconnected services across silos.

Establish a trusted certification standard

Introduce an independent professional certification for responsible investing information to help investors identify reliable sources.

Image of banks

For Millennials and Gen Z, technology is not just a convenience, it is an expectation. Having grown up in an era of smartphones, social media, and instant access to information, these generations prioritize seamless digital experiences in every aspect of their lives, including banking. These heightened digital expectations are also reshaping how younger generations evaluate and trust financial institutions.

The trust landscape in financial services is undergoing a significant generational shift. Traditional banks, once regarded as pillars of financial security, are increasingly struggling to maintain credibility among Millennials and Gen Z. Research indicates growing scepticism toward traditional banks, which are often perceived as bureaucratic, associated with hidden fees, and slow to innovate. In contrast, fintech firms have gained the trust of younger consumers by emphasising accessibility, transparency, innovation, personalised experiences, and value-driven missions (Williams, 2025).

In Europe, banks appear to be responding along two distinct paths: traditional institutions build on their heritage to reinforce trust and stability, while neobanks expand beyond core banking services with lifestyle-focused offerings aimed at younger, tech-savvy customers. At the same time, banks must innovate within strict regulatory rules. Although these regulations ensure security and stability, they can slow down progress and make it challenging to meet rising digital expectations. To develop strong digital capabilities, banks need careful planning and close cooperation with regulators (Cowell & Scales, 2025).

Among Gen Z and millennials, satisfaction no longer guarantees loyalty. Although satisfaction levels are comparable to those of older generations, younger consumers show a significantly higher willingness to switch banks. With fewer financial products, shorter banking histories, and lower switching friction, the perceived cost of moving providers is minimal. As a result, loyalty has become more conditional, and even small moments of friction can trigger switching (Cowell et al., 2026).

The growing use of specialised financial apps signals a shift in how banks are perceived. For Gen Z and millennials, banking is no longer a singular institutional relationship but part of a broader digital ecosystem. As apps expand to manage multiple aspects of daily life, banks are increasingly viewed not as traditional financial authorities, but as one platform among many in a competitive digital marketplace (Cowell & Scales, 2025).

The Dutch banking landscape is also changing rapidly. While traditional banks such as Rabobank, ING, and ABN AMRO have long dominated the market, digital-first banks like bunq, Revolut, and N26 are gaining ground. Their mobile-first approach, lower fees, and seamless international transfers particularly appeal to expats, digital nomads, and younger users, but also resonate with a broader group of customers seeking greater flexibility and lower costs (Banken.nl, 2026). Notably, the average age of Revolut customers is around 39 years (Revolut, 2022), indicating that value propositions initially associated with Gen Z also attract older segments. At the same time, Revolut reportedly spends around €90 per customer on marketing, while Rabobank spends approximately ten times as much yet acquires fewer new customers (Rabobank, 2025).

Ultimately, the generational shift in expectations is redefining what it means to be a bank, moving the focus from institutional authority to digital performance and customer experience.

Strategic Spotlight

Rabobank's heritage remains a strategic strength, but it can no longer rely on historical trust and satisfaction alone. In a market defined by digital expectations, low switching barriers, and rising competition, relevance and experience are decisive. To remain competitive, Rabobank must be prepared to disrupt its own model and redefine its value proposition. The key question is not why customers should stay, but why they should actively choose Rabobank in the first place.

Engage younger consumers in their native environments

Deliver transparent, value-driven experiences through the digital channels they already use and trust.

Adopt a mobile-first mindset

Design fast, intuitive, and user-centric mobile experiences, as ease of use is a primary driver of product adoption.

Implement iterative development cycles

Experiment, prototype, test, learn, and refine continuously to respond quickly to customer feedback and evolving expectations.

Simplify and modularise onboarding

Lower switching barriers by allowing customers to use specific products, such as investment services, without requiring a full banking relationship.

Experiment beyond the core brand

Develop and test innovative offerings outside the traditional Rabobank portfolio, potentially under a separate brand to enable agility and manage reputational risk.

Move from regulatory compliance to regulatory collaboration

Co-develop innovation-friendly frameworks that preserve trust while enabling speed and experimentation.

Budget barriers

Financial stress and difficulty making ends meet can have a significant impact on people's lives, including young adults. Evidence from the Netherlands indicates that one in five young people aged 18 to 26 experiences serious payment problems, compared to 8 percent of the adult population (Schors et al., 2019). Research further indicates that young people with stronger planning skills and higher self-efficacy, defined as confidence in their own abilities, are better able to manage their finances effectively (Horssen et al., 2022).

Exposure to investing can promote future-oriented financial thinking. It may help young people strengthen long-term planning skills and gain better control over their finances. Investing is naturally a riskier form of wealth accumulation than saving. Saving remains essential to maintain a financial buffer for unexpected expenses. At the same time, investing is important to protect purchasing power over the long term, particularly against inflation. In recent years, digital platforms and mobile applications have made investing more accessible by lowering traditional entry barriers, reducing costs, and expanding access to financial markets. Today, individuals can start investing with relatively small amounts, sometimes as little as 10 euros.

Research shows that more than 40% of non-investors in the US and Japan believe they do not have enough money to invest, despite the availability of low-fee investment options and the possibility to start with small amounts (World Economic Forum et al., 2022). In the Netherlands, Nibud finds that 19% of non-investors aged 18 to 30 report that they do not have sufficient funds to begin investing (Prins et al., 2021). This may suggest a gap in awareness regarding accessible investment options with low entry thresholds. At the same time, starting to invest with small amounts can help foster responsible financial habits that lay the foundation for long-term financial well-being.

Strategic Spotlight

Rabobank can strengthen communication around its proposition Rabo SimpelBeleggen by more clearly emphasising the possibility of starting to invest with low minimum amounts. So far, limited marketing has been directed at broad awareness. Although the product saw rapid initial growth, this customer base likely consisted mainly of individuals who were already familiar with investing.

The larger opportunity lies in reaching those who believe they do not have enough money to start. Through targeted campaigns and relatable content, Rabobank can demonstrate that investing with small amounts is accessible and manageable. By lowering this psychological barrier, Rabo SimpelBeleggen can help young adults begin thinking about money for the future and gradually build financial self-reliance.

10. The investment journey

Based on the eight overarching themes, the insights were organised into a non-linear investment journey (see Figure 10). This framework shows that starting to invest is not a single decision, but a gradual process shaped by different types of barriers. Together, the stages move from what limits awareness, to why action is resisted, to how taking action becomes complicated, showing that barriers exist across awareness, motivation, and execution. The stages are presented in a circular format, emphasising that the process is not strictly linear. Young adults can enter at different points and move back and forth depending on their situation and level of readiness.

The foundational filter: What

This foundational filter of the young investor's journey identifies the core reasons for non-engagement, consisting of three reinforcing influences: their social environment (**missing role models**), the broader cultural **image of investing**, and the **education gap** in formal schooling. Together, these forces act as a powerful initial filter. By limiting early exposure and creating unclear or negative associations with investing, they leave many young adults unaware, uncertain, or unprepared to see investing as a viable financial path. As a result, a large group is blocked before any active decision-making can even begin.

The motivational wall: Why

This stage captures the moment when young adults, aware of investment options, face the significant hurdle of behavioural change.

This phase is characterized by behavioural inertia which is a resistance to moving away from established financial habits. The core conflict is defined by the themes **saving feels safe** (risk aversion and comfort in traditional saving) and **short-term prioritization** (a focus on immediate spending and quick rewards). **Budget barriers** also play a role here: when young adults feel they have too little disposable income, the idea of setting money aside for investing feels unrealistic, reinforcing the tendency to postpone action. Together, these obstacles form a motivational wall that delays or prevents action. The long-term, compounding benefits of investing are perceived as too slow, too uncertain, or incompatible with current financial realities, compared to the immediate certainty of saving or spending. This is the point where most young adults quit or lose momentum, struggling to make the shift or "jump" in mindset needed to take the first step into investing.

The execution maze: How

This stage addresses the execution challenges faced by young adults who have successfully overcome their motivational barriers and decided they want to invest. Here, the challenge shifts from why to how. This stage is characterized by analysis paralysis driven by information overload and complexity. The barrier **where to start?** reflects the difficulty of navigating the flooded digital l landscape: a maze of unverified claims from finfluencers, an abundance of (conflicting) information and too many available options. Concurrently, the **image of banks** barrier reflects institutional scepticism, where young adults perceive traditional providers as biased or unsuited to their needs. This complicates the crucial choice of a trustworthy platform for responsible action.

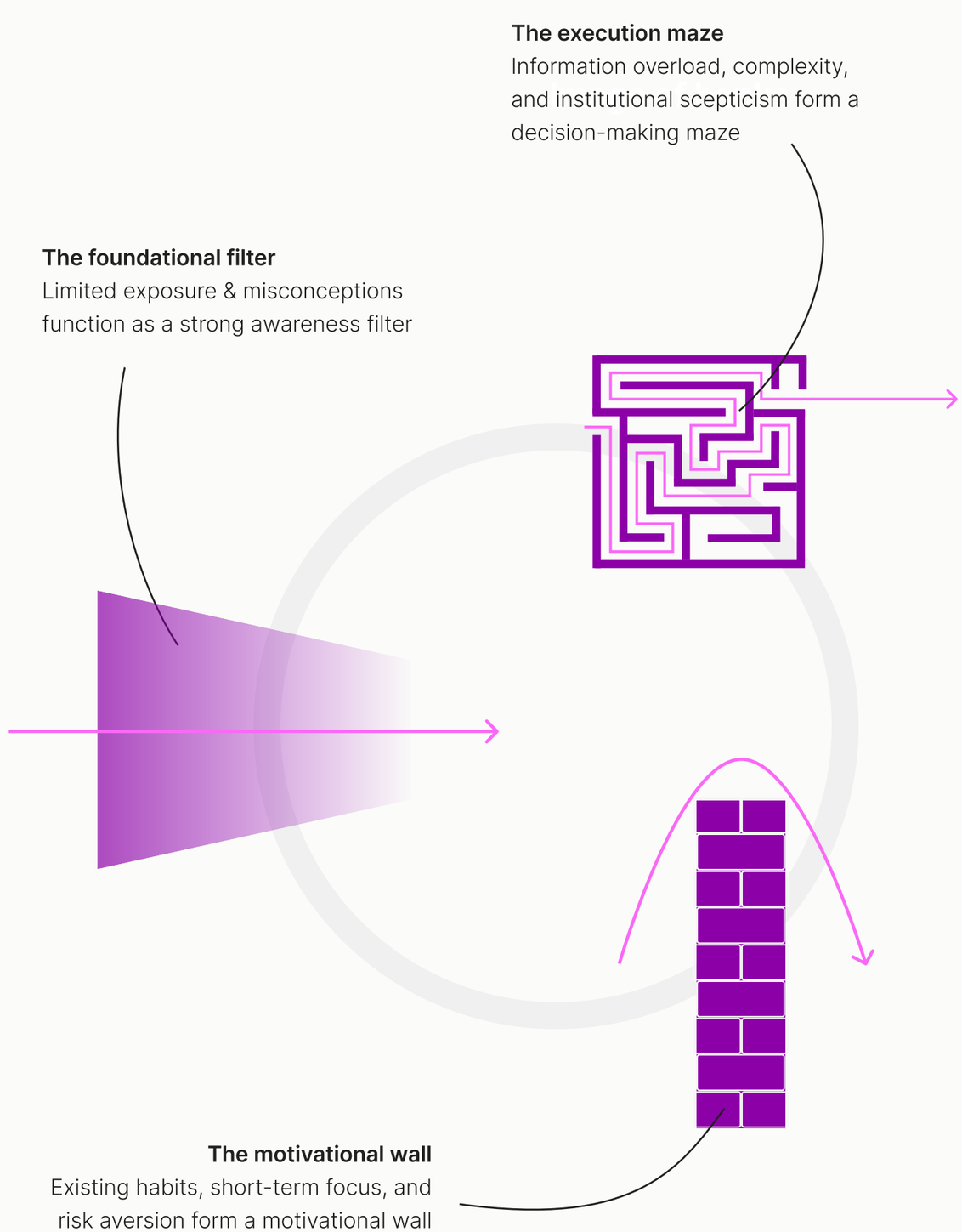
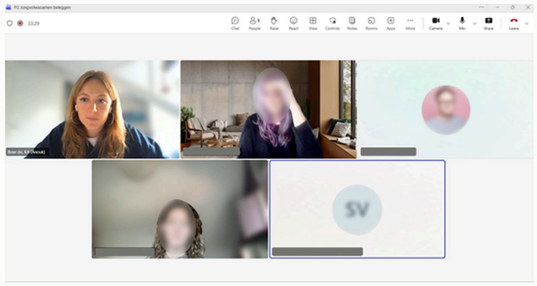


Figure 10: The investment journey and its stages

11. Focus group validation

To ensure that the developed investment journey framework accurately reflects real experiences and captures the emotional and cognitive barriers young adults face, two focus groups were conducted (see Figure 11). The findings provide qualitative validation of the identified stages and offer insight into the specific needs that emerge within each stage. See Appendix F1 for the discussion guide.



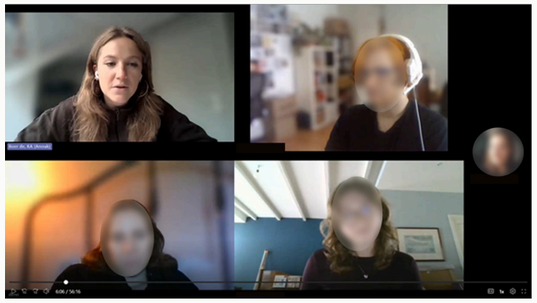


Figure 11: Screenshot of the virtual focus group sessions

The foundational filter

The specific needs identified within the Foundational Filter stage are outlined below. For a complete overview of the underlying insights and supporting qualitative data, reference is made to Appendix F2.

Awareness & understanding

- Need for awareness of what investing is and why it matters.
- Need for basic, foundational understanding to make investing feel less abstract.
- Need for confidence that they know “enough” to avoid uninformed mistakes.

Trust & credibility

- Need for clear differentiation between responsible investing and speculation.
- Need for credible, unbiased, and trustworthy information sources.
- Need for reassurance that investing is legitimate and not a scam.
- Need for transparency about risks (not hype or promises).

Social support & relatability

- Need for guidance from trusted people (family, friends, or reliable institutions).
- Need for relatable examples that feel close to their own situation.
- Need for social proof that others like them invest successfully and responsibly.
- Need for a sense of belonging or relevance, to feel that investing “is for people like me”.

The motivational wall

The needs identified within the Motivational Wall stage are outlined below. A comprehensive overview of the supporting insights and detailed findings can be found in Appendix F3.

Safety & sense of control

- Need for emotional safety
- Need for simple, clear financial structure that makes decisions feel controlled, manageable, and easy to oversee.
- A need for financial space that allows them to experiment without fear of losing essential money.
- Need for stability that enables them to reach their goals.

Purpose & payoff

- Need for a push that makes investing feel urgent, rewarding, and worth committing to.
- Need for financial choices that feel worthwhile today, not just someday.
- Need for emotional reward and fairness

Financial flexibility

- Need for flexibility and access to their money when they need it.
- Need for a flexible approach to money that adapts when their situation changes.

The execution maze

The needs emerging from the Execution Maze stage are presented below. For a detailed overview of the underlying insights and supporting findings, see Appendix F4.

Transparency

- Need for trustworthy, transparent information that clearly shows both risks and benefits, enabling an informed and independent decision.

Immediacy

- Need for guidance in familiar, financial contexts
- A need for responsive, human-like guidance that provides immediate clarity.

Accessibility & practicality

- Need for simple, accessible information that is easy to find and easy to understand.
- Need for practical, actionable guidance that shows how to apply knowledge in real situations

12. Design scope

The circular investment journey can be linked to the traditional marketing funnel by mapping its three barriers onto funnel stages. The foundational filter aligns with awareness, where limited exposure and misconceptions prevent people from seriously considering investing. The motivational wall corresponds to consideration, where investing feels relevant but habits, short-term focus, and risk aversion hold people back. The execution maze maps onto conversion, where individuals want to invest but struggle with complexity, information overload, institutional scepticism, and uncertainty about how to begin (see Figure 12).

Although awareness is primarily a communication challenge addressed through branding and marketing, the main opportunity for this graduation project lies in the transition from consideration to conversion. Many young adults already show interest in investing, yet experience friction when trying to act on that intention. The execution maze reveals structural and interactional barriers such as platform complexity, choice paralysis, and lack of procedural clarity. These are design challenges rather than purely marketing issues. At the same time, elements of consideration such as risk perception and motivation remain relevant and can be addressed within the execution phase through supportive design interventions. By focusing on this critical moment where intention should become behaviour, the project shifts from a broad marketing question to exploring how friction can be reduced to help motivated young adults convert to using Rabobank's investment products.

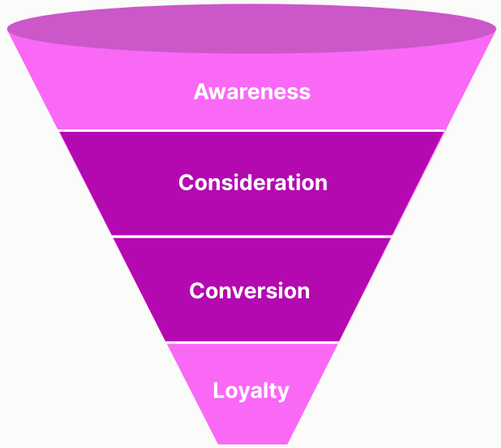


Figure 12: The marketing funnel and its project focus

13. Design principles

Building on the needs identified across the three stages of the investment journey, these insights are translated into a set of core design principles for investing in the context of young adults. The principles synthesise the key barriers and expectations uncovered throughout the research and provide clear direction for solution development. They serve both as guiding criteria during the design process and as an evaluative framework to assess whether the final concept remains aligned with the needs, perceptions, and realities of the target group.

The principles are structured according to the identified investment decision-making journey. Principles 1–3 focus on how Rabobank should **approach** young adults, Principles 4–6 address how young adults can be **motivated** to consider investing, and Principles 7–9 focus on how they can be **guided** in navigating their first steps into investing. As the scope of the design intervention focuses on supporting the transition from consideration to action, the principles related to guiding young adults are particularly relevant for evaluating the final concept.

Approach

1. Build knowledge into confidence

2. Earn trust through clarity, not hype

3. Make investing feel social and relatable

Build knowledge into confidence

Give young adults the foundational knowledge and the assurance that they know "enough" to begin, replacing fear with genuine confidence for their first steps.

Earn trust through clarity, not hype

Prioritize transparent, credible information over hype. Clearly explain the risks involved to build trust and teach young adults how to distinguish responsible investing from risky speculation or scams.

Make investing feel social and relatable

Provide guidance through people they trust, examples they can recognize themselves in, and proof that others like them invest responsibly.

Motivate

4. Design for emotional safety

5. Turn long-term benefits Into short-term wins

6. Design for flexible commitment

Design for Emotional Safety

Young adults need financial decisions to feel safe, controlled, and low-risk. They look for clear structure, protection of essential money, and a sense of stability that allows them to take small first steps without fear of negative consequences.

Turn Long-Term Benefits Into Short-Term Wins

Young adults need investing to feel meaningful now, not only in the distant future. By creating early wins, we turn long-term benefits into short-term motivation and momentum.

Design for Flexible Commitment

Make investing feel adjustable, accessible, and easy to step in or out of, so young adults never feel “locked in” and can adapt their choices when life changes.

Guide

7. Empower choice with transparency

8. Guide them where financial decisions happen

9. Make investing practical & doable

Empower choice with transparency

Give young adults clear, trustworthy information that shows both risks and benefits, so they can make their own informed decisions without persuasion or hidden motives.

Guide them where financial decisions happen

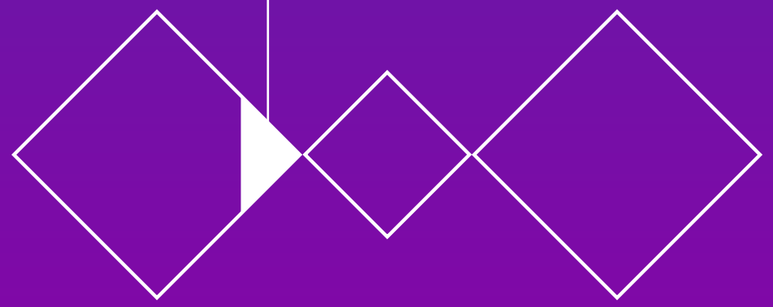
Provide human-feeling, responsive guidance exactly where young adults already manage their money, helping them get clarity instantly instead of searching or guessing.

Make investing practical & doable

Young adults don’t just need explanations, they need clear, simple guidance that shows them exactly what to do next, in a way that feels doable and applicable to real life.

Focus.

RQ1 What barriers and support needs influence young women's willingness to start investing?



The focus chapter sharpens the project direction by selecting a specific demographic within the broader group of young adults aged 18–25. Based on data analysis, women aged 18–25 were chosen as the primary design focus, as they are underrepresented in Rabobank's client base, particularly within Rabo SimpelBeleggen. This presents a strategic opportunity to explore whether this segment is underserved and how its barriers can be addressed. Although young women serve as the design lens, the insights generated may later be applicable to a wider audience.

To substantiate this focus, a customer base analysis was conducted, revealing a clear gender gap in investment participation. This was followed by an exploration of why unlocking this segment is relevant, positioning investing as a potential mechanism to strengthen long-term financial self-reliance among young women. A gender-based reanalysis of the focus group insights then identified patterns and barriers specific to female participants, which were compared with existing literature to validate and deepen the findings. The chapter concludes with a market analysis of existing investment solutions for young women, creating space to reflect on unmet needs and inform the strategic direction of the project.

Unlocking the female target group

Gender-based clustering

Insight triangulation

Market analysis

14. Unlocking the female target group

Research on investment behaviour among young Dutch adults shows a clear gender gap. A survey conducted among 1,600 individuals aged 18–30 found that men participate significantly more in both traditional and cryptocurrency markets, while women are significantly more likely to refrain from investing altogether, see Table 3 (Prins et al., 2021). At the same time, a study conducted by Trade Republic in collaboration with Ipsos among more than 1,000 respondents found that 60% of potential investors are women (Ipsos, 2022). Together, these findings indicate that within the Dutch investment market, the female demographic represents a target group with substantial yet largely untapped potential.

Table 3: Percentage of young adults investing across gender and age

		Invests in traditional assets (n=481) %	Has crypto investments (n=418) %	Does not invest (n=917) %
Gender	Male	38	36	53
	Female	24	17	65
Age	18-24 years	28	27	59
	25-30 years	33	26	58

Rabobank's customer base

When examining Rabobank's investment customer base, the gender gap identified earlier is also clearly visible, particularly within the younger target group. This confirms that the broader market pattern is reflected within Rabobank's own customer base and highlights considerable potential to better engage the female demographic. At the same time, it raises the question of why women invest significantly less than men and how Rabobank can more effectively support young women in taking their first steps into investing.

The data shows a consistent gender gap in investment participation across both age groups and product categories (see Figure 14). [redacted]

Confidential

Figure 13: Gender distribution for Rabo Simpelbeleggen (Age 18–25)

[redacted]

Based on this data analysis, women aged 18–25 were selected as the primary focus for the design.

Confidential

Figure 14: Percantage of young adults investing across gender and age

Relevance

Structural vulnerabilities and the necessity of wealth accumulation for women

Despite significant societal progress, financial independence remains a challenge for many women in the Netherlands. Currently, approximately half of all women are not financially self-sufficient, relying instead on a partner or government assistance to cover their living expenses (Tilburg, 2021). This situation is rooted in the widespread nature of part-time employment and an unequal distribution of income, both of which contribute structurally to women's financial vulnerability. Only a quarter of Dutch women work full-time, and half earn less than the legal minimum wage, making it structurally difficult for them to live on their own income. Often, cultural norms regarding caregiving lead women to work fewer hours which is a pattern that typically becomes established early in a relationship and persists over time.

These employment choices are frequently made without a complete understanding of their long-term consequences, such as lower lifetime earnings and reduced opportunities for wealth accumulation. This lack of autonomy becomes a critical vulnerability during major life transitions, such as separation or divorce. When a woman has limited personal income and has not built up sufficient individual savings, her stability is at risk (Tilburg, 2021).

Consequently, it is vital for women to adopt a long-term perspective on their financial health. In this context, starting to invest at an early stage in life serves as an essential tool for planning for the future, ensuring that women can build and maintain their own financial self-reliance regardless of what life events may occur.

> *"Financial self-reliance is thinking about the future."*

Marianne Bruijn
Former brand strategist, Rabobank

Women as effective investors

Although women participate in investing at lower rates, existing research suggests they possess several characteristics associated with successful investment performance. Women tend to seek more information before investing in a particular product, meaning that when they do invest, they are generally better informed and more aware of the risks, leading to more well-considered decisions (Wei Lu et al., 2016).

Research also indicates that women are more likely to adopt a long-term perspective (Barber & Odean, 1999), making them less prone to impulsive trading. Finally, women tend to be less overconfident than men, especially in complex and ambiguous environments such as financial markets. Since overconfidence is associated with excessive trading and lower long-term returns, this trait can result in better investment outcomes (Barber & Odean, 1999).

An underserved group

The industry has not yet fully recognized the specific goals and preferences of female investors. The wealth management industry has only marginally adapted to their needs, goals, and preferences. While many institutions have introduced dedicated events or marketing campaigns targeting women, few have made meaningful changes to their actual offerings, value propositions, or approaches to relationship management. Most firms still market products to women in much the same way they have marketed to men for decades. However, women's interests, priorities, and characteristics often differ significantly from those of men. Recognizing and understanding these differences is essential for developing more effective strategies to better serve and attract this underserved group of potential female investors (McKinsey & Company, 2025).

> *"Financial institutions that build targeted strategies based on the specific needs and objectives of young engaged female investors will be best positioned to become their long-term wealth advisors."*

(McKinsey & Company, 2025)

SDG 5: Gender equality

At the current pace, achieving global gender equality will take another 136 years, despite the commitment of 193 United Nations member states to reach the Sustainable Development Goals (SDGs) by 2030. Gender equality is SDG 5, which aims to ensure equal rights and opportunities for women and men by 2030. While gender equality is essential for a just, prosperous, and sustainable society, progress remains slow.

The Netherlands ranks at the bottom among 22 Western European countries, North America, New Zealand, and Australia in terms of gender equality, particularly in economic participation and political empowerment. The gender pay gap persists, with men earning on average 14% more than women in comparable roles. In addition, 50% of women in the Netherlands are financially dependent on a partner or the government. Such financial dependency reinforces unequal power dynamics and limits long-term economic security. Supporting women in building financial independence and accumulating wealth is therefore essential, and investing can serve as a key strategy in achieving this (Marianne Bruijn, 2022).

15. Gender-based clustering

Differentiating financial services requires an understanding of gender-related differences in attitudes, behaviours, and needs. While variation also exists within groups, research shows that, on average, women and men differ in their approach to financial advice, approach to investment, decision-making style, and risk profile (McKinsey & Company, 2022). Without stereotyping individuals, Rabobank may benefit from recognizing patterns more frequently observed among female respondents.

Building on this perspective, a gender-based reanalysis of the focus group data was conducted to better understand the specific needs, goals, and barriers of young female participants. By isolating gender-specific patterns, this chapter aims to identify factors that may shape women's engagement with investment products and inform more targeted service design and communication strategies.

Female Design Lens

The female-specific findings were translated into a structured framework, which captures the key needs and barriers shaping women's engagement with investing (full findings are provided in Appendix G). The analysis indicates that the identified barriers converge into four overarching needs that define the conditions under which women feel confident enough to start investing. Financial confidence does not operate as a single barrier; rather, it emerges when women experience peace of mind, feel able, feel in control, and receive reassurance. In this sense, confidence is the outcome of sufficiently addressing interconnected emotional, cognitive, social, and agency-related needs.

When these needs are met, women become psychologically ready to take initial steps toward investing.

The Female Design Lens reflects this logic in layers (see Figure 15). The innermost circle represents core values that women prioritize in a financial context. The second layer groups the main barrier categories, showing how friction is structured. The third layer outlines the specific barriers identified in the research, clarifying where obstacles arise. The outer layer captures the psychological readiness states required for financial confidence to emerge. Together, the model illustrates that confidence is not a prerequisite for engagement, but the result of adequately addressing underlying needs.

Figure 15: The Female Design Lens framework

16. Insight triangulation

To strengthen the insights, the focus group findings were compared with existing literature. This assessed whether the identified patterns align with prior research on gender differences in financial behaviour and investing. Linking the findings to established studies reinforces their validity.

Peace of mind

Empirical studies show that women tend to be less optimistic about expected investment returns and experience higher levels of stress related to potential financial losses than men, two factors that often go hand in hand and translate into greater risk aversion among women (Bjuggren & Elert, 2019; Fehr-Duda et al., 2004). As a result, women are more likely to perceive investing as risky or speculative, even when considering long-term, diversified investment strategies. This heightened sensitivity to potential losses is associated with greater risk aversion, which can discourage participation in investment markets altogether (Teker et al., 2023). Consequently, women more frequently prefer savings products over investment solutions, despite the long-term erosion of purchasing power caused by inflation.

Even among those who do invest, women tend to take less risk than men. Research shows that women are more likely to adopt a risk-averse investment profile. According to ING customer data, women more often have a defensive profile, while men more often have a dynamic one. Only 17% of female investors have a dynamic or active risk profile, compared with 27% of men. Women are also more likely to have a moderate or balanced profile (Poets, 2025).

In addition, women perceive investing as riskier than men. For example, 42% of women agree that “the stock market is like a casino,” compared with 27% of men, even though long-term, diversified investing based on basic principles is not gambling. Women also invest a lower proportion of their total savings than men. On average, women invest slightly more than a quarter of their total savings, whereas men invest approximately one-third (J.P. Morgan Asset Management, 2021).

At the same time, evidence suggests that women are willing to invest under supportive conditions. ABN AMRO conducted a pilot investment trial in which participants could learn to invest in a safe environment with no direct financial risk. The initiative allowed beginner investors to understand how investing works and become familiar with potential risks. Data from this pilot indicate that 44% of participants were women (Sanders, 2024).

> *“Within pilot investing, women did manage to find their way to investing. … Women are more likely to start investing in a safe environment where there is also the opportunity to gain experience.”*
>
> Judith Sanders
> Investment Strategist, ABN AMRO

Furthermore, female savers report that they would be more inclined to invest if they could start with small amounts on a regular basis and earn higher returns than on their cash savings (J.P. Morgan Asset Management, 2021), suggesting that gradual and accessible entry points may encourage them to begin investing.

Feeling able

Women often report lower confidence in their financial knowledge. This lower self-assessed competence contributes to greater hesitation toward investing and a higher likelihood of postponing or avoiding investment decisions altogether. Research indicates that women are more likely than men to assess their financial knowledge as insufficient, even when objective knowledge differences are relatively small (Bjuggren & Elert, 2019). This perceived lack of competence increases hesitation and raises the threshold for engaging in investing, making women less inclined to participate.

Moreover, women feel intimidated by the complexity of investing and believe they do not sufficiently understand financial mechanisms. They more often believe that successful investing requires extensive expertise, which further discourages participation (Sharpe, 2004). More women consider being an expert in financial markets the key trait of a good investor, whereas men more often emphasize a long-term approach and regular investing, even with small amounts. Financial research and historical simulations show that these characteristics are more important for investment success than expertise itself (HJ Sims, 2025; Sharpe, 2004).

Importantly, financial knowledge is acquired over a lifetime; however, the perception of insufficient knowledge may discourage women from investing, limiting learning opportunities and reinforcing a self-perpetuating cycle of lower confidence and delayed investment behaviour.

At the same time, it is known that women benefit from different communication strategies than those often used by banks, which were originally targeted at a male demographic and focus primarily on information and logic.

Banks are used to communicating about returns and figures in a highly rational manner, an approach that has proven ineffective for women (Olivier Heimel, 2025). Observations from the field, including those by former Rabobank Brand Strategist Marianne Bruijn, show that financial campaigns in the Netherlands still do not sufficiently connect with the female target group (Leonie Collombon, 2022). Current communication in the financial sector is primarily aimed at male thinking patterns.

To effectively support women in becoming financially self-reliant, a more human-centered and context-driven communication approach is needed, one that aligns with feminine values. Integrating emotional and personal narratives is a crucial strategy for banks and investment firms to reach this audience more effectively (Leonie Collombon, 2022).

> *“Only when we began tailoring our message to the emotional level—such as financial security for the family or support in taking the next steps—did we see women became more active”*

Mylene Samuels
Social Psychologist, ABN AMRO

Effective financial programs for women must challenge stereotypes and be tailored to women’s lives, using appropriate communication to strengthen confidence and long-term financial ambitions. Clear, everyday language promotes better understanding, which is a key step toward investing.

A survey by J.P. Morgan identified areas where a lack of knowledge can put women off investing and highlighted what would be welcome: a simple guide to investing, advice on when to buy or sell, a guide to the language of investing, and regular stock market updates. Furthermore, clearer communication around products is, for women, almost as important as lower fees (J.P. Morgan Asset Management, 2021).

Collectively, these insights highlight that reducing perceived complexity and redesigning communication may be critical levers for increasing women’s participation in investing.

Feeling in control

Women tend to focus on achieving specific goals rather than maximising returns. They place greater emphasis on life goals such as retirement security, healthcare, and lifestyle maintenance (McKinsey & Company, 2025). Investment aims are consistent among those investing and those considering investing, with an emphasis on retirement and growth. The difference therefore appears not in goals, but in confidence. Women who invest are more likely to have a financial plan with clear long-term priorities, while non-investors tend to have less defined and shorter-term goals. They also save a higher proportion of their income on a monthly basis, indicating that structured financial planning is associated with greater confidence to invest (J.P. Morgan Asset Management, 2021).

Women also seek a sense of control, which is closely linked to investment confidence. Cash savings feel flexible and accessible, reinforcing this sense of control, whereas investing can feel restrictive. Increasing flexibility within investment products and reducing the feeling of being ‘stuck’ in unsuitable investments, alongside confidence in a clear financial plan, can therefore lower barriers and facilitate the decision to start investing.

Beyond control and flexibility, purpose also plays a role in women’s investment engagement. Sustainable investing is a strong attraction, particularly for women. It is seen as a way to contribute to positive change and is more important to women than to men. Many women believe sustainable investing makes a societal difference, and more sustainable options would be welcomed (J.P. Morgan Asset Management, 2021).

Making goals explicit within a structured financial plan helps transform investing from an abstract and potentially intimidating concept into a purposeful and manageable action. Sustainable investment options can further reinforce this by aligning financial decisions with personal values. Together, accessible long-term planning and value-aligned investment opportunities may strengthen women’s sense of control, thereby potentially lowering the threshold to take the first step into investing.

Reassurance

Women investors tend to express a greater willingness to receive guidance than men. A substantial proportion of women investors express a willingness to receive more advice from their financial institutions, particularly through digital channels such as web-based advisory tools and mobile apps. Compared with men, women also show greater openness to receiving advice over the phone from experts or dedicated advisers (McKinsey & Company, 2022).

Women investors recognise the value of professional advisors in providing individual context as the basis of long-term financial planning (J.P. Morgan Asset Management, 2021). Professional advisors provide a financial plan framework, assist understanding of the stock market, give advice on optimising investments, and

offer reassurance. More than a third of all women, compared to a quarter of men, invest through an advisor at their bank. The two main reasons given for using a professional advisor were to provide reassurance and address a lack of knowledge, both of which reflect lower levels of confidence.

These patterns point to a greater need for guidance and reassurance in the investment journey. For example, women are generally less proactive in independently adjusting their portfolios, but more responsive to advice from financial professionals. In addition, women are more likely to share financial decision-making within households, while men are more inclined to make investment decisions individually. Furthermore, more support for first-time investors would be welcomed by a third of women, as they seek reassurance that they can afford to invest (J.P. Morgan Asset Management, 2021).

Overall, reassurance emerges as a key driver in enabling women to move from hesitation to participation in investing.

17. Market analysis

A market analysis was conducted to examine existing female-specific investment offerings and assess whether the identified needs are already addressed in current solutions. The analysis focused on how these products are positioned and how this positioning is reflected in their design, features, and user experience. This provides insight into what is already available in the market and where opportunities for improvement remain.

The market analysis showed that no Dutch financial institutions currently offer investment products specifically designed for women. Their efforts are mainly limited to targeted blog posts or occasional events aimed at female audiences, rather than structural product adaptations (see Figure 16). The only explicitly female-focused investment solutions identified were fintech startups, such as Female Invest and Ellevest, which position women as their primary target group and translate this focus more clearly into their platform design and value proposition.

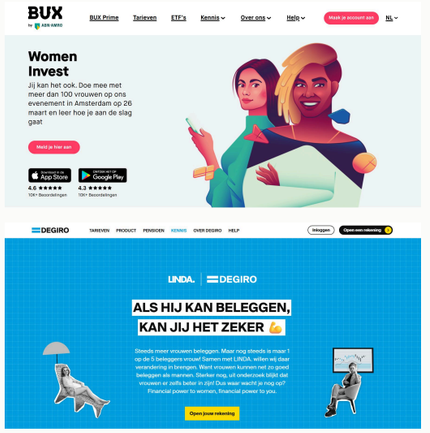


Figure 16: Examples of events and communication targeted at women

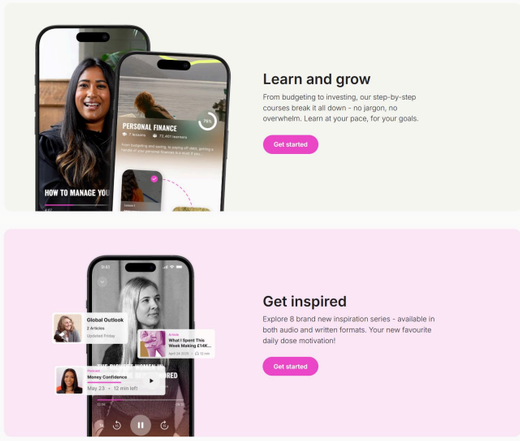


Figure 17: Accessible learning offerings on Female Invest

Female Invest

Female Invest is a learning platform and community focused on money-related topics, aimed at women worldwide. Through its platform, it offers various tools and informational resources specifically targeted at women. In addition, Female Invest organizes paid bootcamps, for example on understanding the stock market and making a first investment (Female Invest, n.d.).

Accessible learning formats

When analyzed through the design lens framework, the platform's offerings clearly reflect the needs identified earlier (see Figure 17). In particular, Female Invest addresses women's often-reported lack of confidence in their financial knowledge by providing accessible and supportive learning opportunities. Its communication emphasizes inclusivity and simplicity, as reflected in the phrase "no jargon, no overwhelm," which

seeks to reduce perceived complexity and psychological barriers to investing. Moreover, the platform provides content in multiple formats, including both audio and written materials, and features female role models to enhance relatability. Investment is also framed in connection to "your goals," thereby linking financial decision-making to personal aspirations and everyday contexts.

Risk-free experiential learning

Female Invest also addresses women's often higher levels of stress related to financial loss and risk aversion by offering a practice environment in which investing can be tested "risk-free" (see Figure 18). This enables experiential learning and makes the typically abstract nature of investing more concrete and accessible, allowing women to familiarize themselves with the topic without facing actual financial risk.

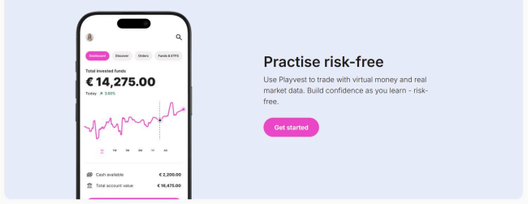


Figure 18: Practice environment on Female Invest

Integration of financial planning

Female Invest also frames its communication around the notion of taking control of one's finances by integrating budgeting education into the broader context of investing (see Figure 19). In addition to investment-related content, the platform provides practical tools to support budgeting, saving, and debt repayment. This suggests a recognition that foundational financial management skills constitute a prerequisite for engaging in investment activities.

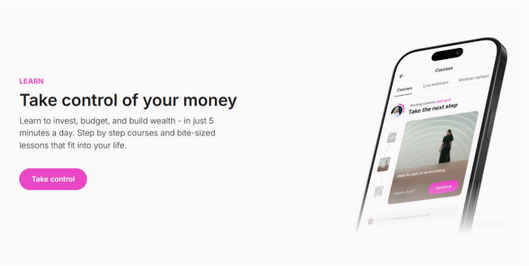


Figure 19: Tools targeted at taking control on Female Invest

Community-based learning

The platform has established a community of female (prospective) investors that serves as a space for interaction and knowledge exchange (see Figure 20). Within this community, members can pose questions to experts as well as engage with peers facing similar financial decisions. By facilitating access to others' experiences, reflections, and actions, the platform fosters social learning and provides reassurance.

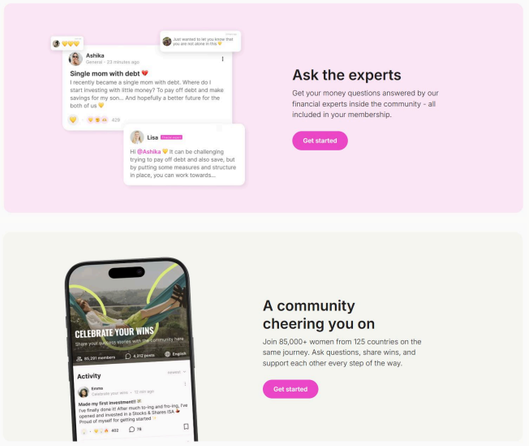


Figure 20: Reassurance opportunities through asking questions on Female Invest

Ellevest

Ellevest is a women-founded and women-led financial services firm established to support women in building wealth through personalized and intentional financial planning and wealth management (Ellevest, n.d.). It is a investing platform that prioritizes real life planning, values alignment, and education.

Originally launched in 2014 by Sallie Krawcheck, Ellevest operated as a robo-advisor providing customized portfolio allocation recommendations aligned with users' financial goals. The platform was created with the mission of "getting more money in the hands of women" and differentiated itself through a "gender-aware" investment model.

As of early 2025, Ellevest has strategically repositioned its business model to focus on high-net-worth individuals and families, introducing a minimum investment requirement of $500,000. At the same time, the firm exited the automated investing market and transferred its robo-advisory accounts to Betterment, a leading online financial advisory platform offering automated portfolio management, retirement planning, and cash management services (Godbout, 2025).

Goal-based and value- based investing

Ellevest's model incorporated structural factors such as gender-specific salary trajectories, longer average female life expectancy, and differing retirement planning patterns, thereby tailoring financial advice to women's lived economic realities and key life transitions, see Figure 21 (Gupta & Chalabi, 2020). Rather than focussing on abstract risk scores, Ellevest structures portfolios around real life goals, making the planning process more intuitive (see Figure 22). Ellevest also integrates values-based investing options, allowing users to align portfolios with social and

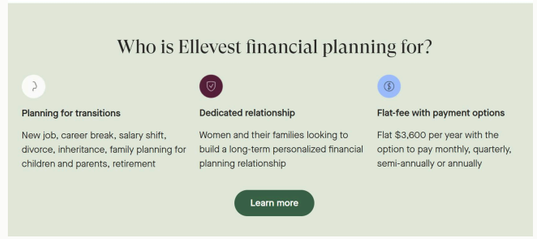


Figure 21: Highlighting planning for key life transitions

Figure 22: Goal-based financial planning on Ellevest

environmental priorities. Ellevest partnered with Ethic to create personalized, values-aligned equity portfolios focused on advancing women's rights and racial justice. Through this collaboration, Ellevest redirected investments away from companies associated with gender, racial, and environmental harm toward companies positioned to generate positive social impact. Additionally, Ethic's platform equips clients with tools like live impact data visualizations and educational resources (see Figure 23), helping them understand how their investments can both pursue financial returns and contribute to combating inequality.

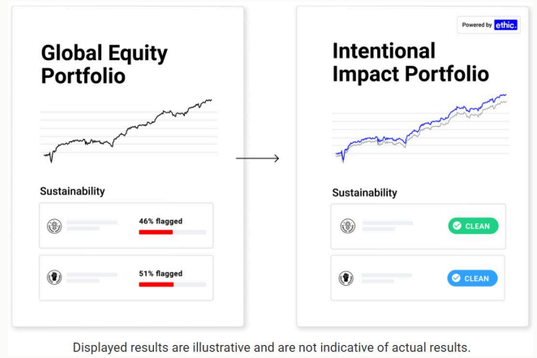
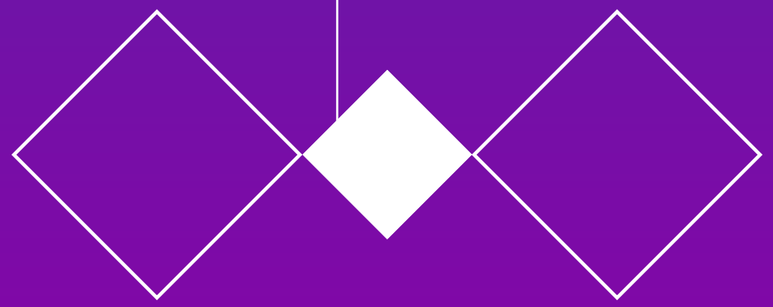


Figure 23: The Ethic Healthcheck, a diagnostic tool that identifies whether current investments align with clients' values

The role of AI.

RQ2 How can Generative AI address the identified barriers and support needs to help young women in starting to invest?



This chapter defines how technology can meaningfully contribute within the strategic focus of this project: young women aged 18–25. Rather than applying AI for its own sake, this chapter examines where its capabilities align with the identified needs of the target group. Based on the market analysis and AI's capabilities, the most relevant opportunity is to address the need for reassurance in the investment decision process. In doing so, AI can provide scalable and cost-effective guidance, making personalised support accessible to a young and cost-conscious demographic.

To shape this role, the chapter first argues why AI is well-positioned to provide reassurance in financial decision-making. It then explores how reassurance can be operationalised through AI, explaining its behavioural mechanisms as well as the potential risks of overreliance and reduced autonomy. Given that trust is essential for the adoption of AI-driven products, the chapter then examines trust formation, identifying trust in the technology itself as more decisive than trust in the vendor. Based on this insight, user-focused AI trust-building principles are formulated to guide responsible design. Finally, an additional survey investigates the role AI should take according to the target group, resulting in the development of a fitting AI persona aligned with their expectations.

AI
opportunity

AI as a
reassurance giver

Trust building
research

Trust building
AI principles

Study on
the role of AI

Constructing
an AI persona

18. AI opportunity

Applying the design lens reveals clear opportunities for AI-driven solutions within each of its four core needs. Market analysis (see Chapter 17) shows that solutions already exist, such as experiential learning tools that build confidence, accessible content formats that reduce jargon through video and simplified language, and budgeting tools that link financial goals to actionable plans.

However, a critical gap remains: the reassurance and personalized guidance many women seek is often locked behind paywalls or requires costly human financial advisers. At the same time, demand for accessible advisory support is substantial. According to the World Economic Forum (2022), 37% of non-investors and 53% of current investors would be more likely to invest if they had access to automated advice or a robo-adviser. This strong demand is also reflected in observed user behavior, as many individuals already rely on general AI chatbots to ask investing-related questions, as evidenced by findings from a Rabobank survey (see Figure 24).

This imbalance between strong demand for guidance and limited access to affordable, trustworthy financial advice is particularly pronounced among young adults. Young engaged investors tend to be cost-conscious, prefer digital services, and expect hyper-personalized financial experiences. Yet few institutions have succeeded in delivering modular, personalized advice and education at low incremental cost (McKinsey & Company, 2022).

Artificial intelligence may offer a scalable and accessible way to provide the reassurance female need during financial decision-making in the investment context (see Figure 25).

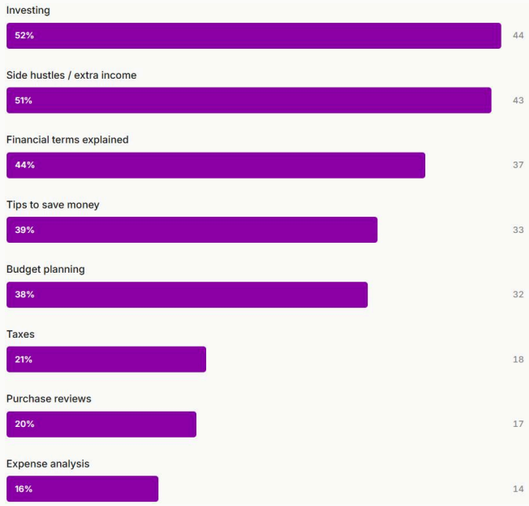


Figure 24: Money-related topics for which AI chatbots were consulted among respondents of all ages (Rabobank, 2026)

Chatbots in finance

Chatbots are now widespread in banking, primarily handling routine inquiries. However, many still rely on rigid interaction flows and limited resolution capabilities, which can frustrate customers and prompt a preference for human support.

> *"Today's banking chatbots may frustrate some. Tomorrow's will likely advise, anticipate, and act."*
>
> Deloitte Insights

As AI-driven chatbots become more advanced and personalized, banks have the opportunity to extend their role from primarily informational support to transactional and advisory functions (Jasińska & Puczyk, 2026). However, this transition is not without challenges. Evidence suggests that trust remains a significant barrier, with only 27% of respondents in one study indicating that they trust AI for financial advice (J.D. Power, 2024).

Closing the gap between convenience and confidence therefore requires moving beyond basic automation toward adaptive, trust-building systems that support the end-to-end customer experience (Korzekwa et al., 2025).

> *"It should include deliberate investment in trust-building, smarter use cases, and deeply human-centered design."*
>
> Deloitte Insights

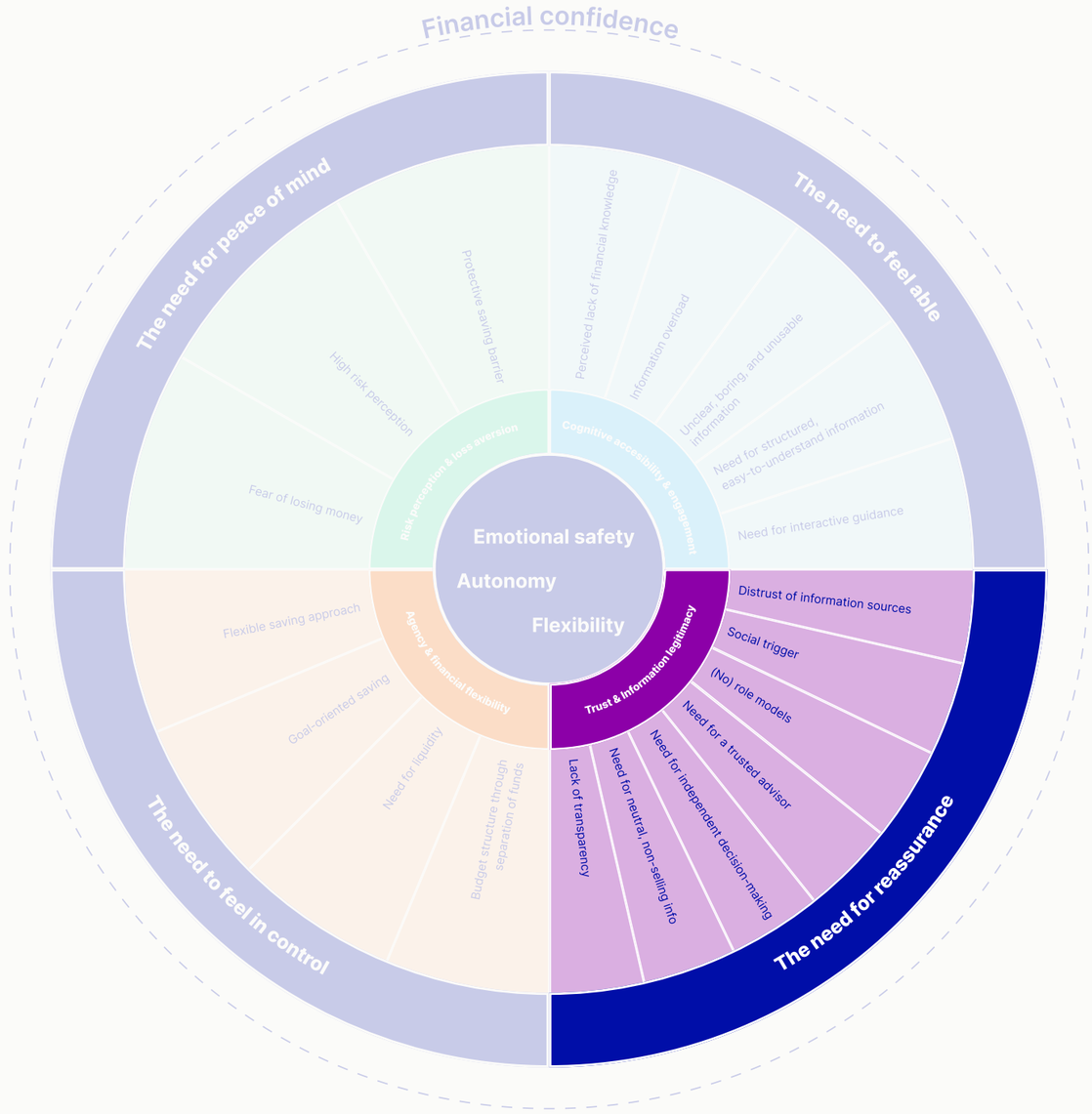


Figure 25: Opportunity for AI to play a role

19. AI as a reassurance giver

Artificial intelligence has the potential to provide a scalable and accessible source of reassurance for women during financial decision-making, particularly in investment contexts. This chapter examines how AI delivers such reassurance, the psychological mechanisms that make it effective, and the ethical risks related to autonomy and overreliance.

AI and emotional design

As digital interactions become more complex, systems must go beyond functionality and respond to users' emotions. People increasingly expect digital platforms to feel supportive, not just efficient. For companies, integrating emotional intelligence into design is therefore no longer optional. Emotional design shifts the focus from pure performance to building trust and connection. Artificial intelligence is particularly relevant in this context, as AI-powered systems can detect and adapt to users' emotional states. As these systems advance, they can recognize emotional vulnerability and respond with immediate validation and tailored feedback (Sethi & Jain, 2024).

The psychology behind AI-driven reassurance

Unlike traditional search engines, conversational AI feels more like a dialogue. It mirrors our language, detects emotional cues, and responds in ways that seem attentive. Humans are highly sensitive to social feedback, and even simple signals of understanding, such as feeling heard, can reduce stress. Notably, this effect occurs even when users know the system is neither conscious nor truly relational (Guchait, 2026). The brain responds to the structure of the interaction rather than to the nature of its source.

When people return to chatbots, they often seek confirmation that their thoughts are reasonable, their reactions are normal, or that they have not overlooked something important. While the accuracy of the answer matters, the reassurance it provides can be equally significant (Starcevic & Berle, 2013).

Small signals such as clarity, confirmation, or relief are often enough to shape behavior. When a chatbot offers reassurance at the right moment, that relief can become memorable. Over time, the brain begins to associate uncertainty with resolution, reinforcing the expectation that when uncertainty arises, the system will provide relief (Montag et al., 2019). This mechanism helps explain why people repeatedly turn to AI during moments of doubt, stress, or indecision. It is not that every response is perfect, but that some arrive precisely when uncertainty feels hardest to tolerate (Guchait, 2026).

duolingo

Example in practice

An example of how emotional connection can be fostered through design is the language-learning platform Duolingo. The platform uses gamification elements to create an encouraging and supportive learning environment. Its friendly mascot, Duo, acts as a reassuring figure, reinforcing progress through positive feedback and playful reminders. These emotional cues do not only motivate learners but also help form a bond between the user and the platform, encouraging repeated interaction and continued engagement. In addition, design features such as streaks, reminders, and personalized goals further strengthen this connection by making progress feel visible and personally meaningful.

Risks of emotional reassurance in AI systems

It is important to consider the ethical implications of emotionally responsive design. There is a fine line between supporting users and manipulating their emotions. While reassurance can improve engagement, it can also lead to overreliance on technology and reduced user autonomy.

This reflects a growing trend in which users unintentionally hand over parts of their decision-making to digital tools (Passi & Vorvoreanu, 2022). Such psychological dependency must be carefully considered, especially in high-stakes contexts such as financial decision-making. It is therefore crucial to design interfaces that balance reassurance with mechanisms that encourage users to engage critically with the content and maintain confidence in their own judgment (Buçinca et al., 2021).

The same psychological mechanisms that make AI feel comforting also introduce risks. Rapid reassurance can replace reflection, and the polished language AI systems often use may mask uncertainty. The relief users experience can gradually reinforce reliance on AI for decision-making. For this reason, AI should allow space for uncertainty, provide insight alongside reassurance, and encourage users to combine AI input with human judgment and connection (Guchait, 2026).

20. Trust building research

Trust is essential for the adoption of AI-driven products. If customers do not trust the outputs of AI systems, they will not use them (McKinsey & Company, 2024). This is particularly important in the context of Rabobank, where maintaining customer trust is fundamental to the banking relationship, as the bank itself emphasizes: "trust is the new currency."

Trust has long been central to banking, shaping customers' willingness to deposit funds, borrow, and plan for the future. Today, Millennials and Gen Z approach financial institutions with greater skepticism, prioritizing transparency, ethical conduct, and strong digital experiences (World Economic Forum et al., 2022). As a result, building and maintaining trust has become a key competitive advantage, particularly in attracting and retaining younger consumers.

> *"While people see technology providers leading the pack on innovation and ease of use, banks still lead on trust — a fundamental requirement for people to take actions with their finances."*
>
> Jim Marous
> CEO of the Digital Banking Report

Trust in the (Rabo)bank

Customers in the Netherlands report relatively high levels of trust in banks. Overall, 74% trust the top three Dutch banks with their personal data, compared to 78% for Rabobank specifically. Similarly, 69% trust the top three banks to act in their best interest, while 70% say the same of Rabobank (Accenture, 2025).This raises an important question: can this strong institutional trust also extend to AI-driven or robo-advisory solutions?

Trust influencing mechanism

According to Cheng et al. (2019), trust in a robo-advisor is built indirectly through two sources: trust in the vendor and trust in the underlying technologies. Customers first develop confidence in the organization providing the service and in the AI-driven technologies that power it, and these two forms of trust then transfer to shape overall trust in the robo-advisor itself, with trust in the vendor having a slightly stronger influence. To examine how this mechanism works in the context of a robo-advisor for Rabobank, a survey was conducted to test this effect in an academic manner.

Survey study

A quantitative study was conducted to test the research model presented in Figure 26. The following hypotheses were examined:

- **H1:** Trust in the vendor positively affects customer trust in robo-advisors.
- **H2:** Trust in technologies positively affects customer trust in robo-advisors.
- **H3:** Attitude toward AI positively affects customers' trust in technology.

All constructs were measured using validated academic scales. Trust in the vendor was measured using items from Fang et al. (2014). Attitude toward AI was measured using items

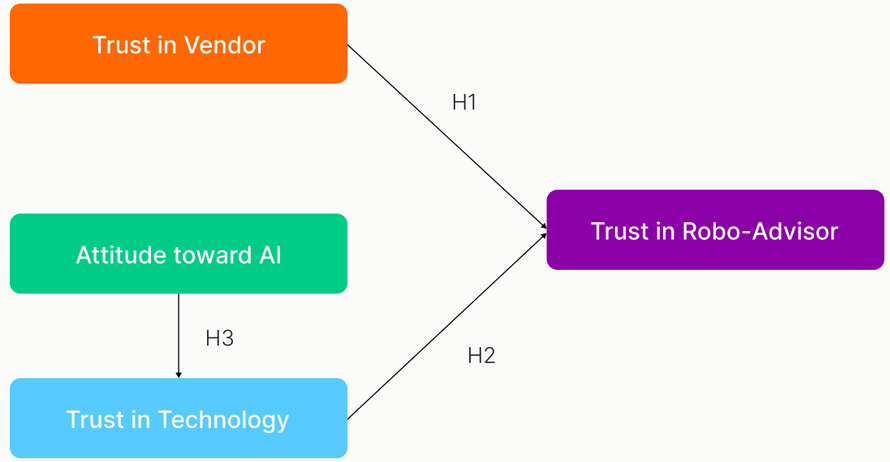


Figure 26: Research model of the trust influencing mechanism of robo-advisors

based on Parasuraman (2000). Trust in technologies was measured using items from Cheng and Macaulay (2013). Finally, trust in the robo-advisor was measured using items adapted from McGrath et al. (2025).

Method

A cross-sectional online survey design was used to test the research model (Figure 26). Data were collected through the platform Maze. For the full survey setup, see Appendix I.

The sample consisted of 127 respondents (55.1% men, 44.9% women) with a mean age of 22.4 years (SD = 2.0; range = 18–25). The target population comprised young adults between 18 and 25 years old. Sampling was conducted through two separate panels within this age group, one male and one female panel. Most participants had completed university education (38.6%), followed by secondary school (22.8%) and higher professional education (21.3%). Approximately 34.6% of respondents reported being customers of a neobank, and the same proportion indicated being customers of Rabobank. Descriptive statistics of the sample characteristics are presented in Table 4. To assess trust in the robo-advisor, participants were shown an interface design of a potential Rabobank robo-advisor (see Figure 27) before answering the robo-advisor-related questions.

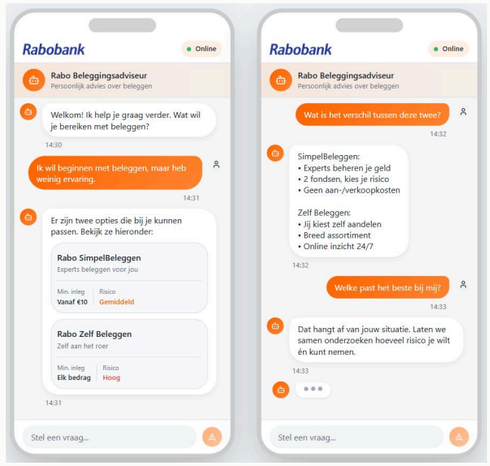


Figure 27: The Rabo-advisor prototype

Table 4: Descriptive statistics of sample characteristics

Variable	Category	n	%
Gender	Male	70	55.1
Gender	Female	57	44.9
Education	Primary School	1	0.8
Education	Secondary School	29	22.8
Education	Vocational Education (VMBO/MBO)	21	16.5
Education	Higher Professional Education (HBO)	27	21.3
Education	University (Bachelor, Master)	49	38.6
NeoBank customer	Yes	44	34.6
NeoBank customer	No	83	65.4
Rabobank customer	Yes	44	34.6
Rabobank customer	No	83	65.4

All constructs were measured using previously validated academic scales, adapted to fit the context of a Rabobank robo-advisor. Each construct was measured with three items using a 5-point Likert scale ranging from 1 (disagree) to 5 (agree).

Data were analyzed using R.

Results

Descriptive statistics

Overall, respondents reported a moderately positive attitude toward AI (M = 2.97, SD = 0.96) and moderate trust in robo-advisors (M = 3.17, SD = 0.97). Trust in technology was relatively low to moderate (M = 2.54, SD = 0.88), whereas trust in the vendor was comparatively high (M = 4.15, SD = 0.65). Table 5 provides descriptive statistics for the study variables.

Hypothesis 1

A linear regression analysis showed that trust in the vendor significantly and positively predicted trust in robo-advisors (β = 0.40, SE = 0.13, p = .002), explaining 7.2% of the variance. The effect remained significant after controlling for gender

Table 5: Descriptive statistics of study variables

Variable	N	Mean	SD
Trust in the Vendor	127	4.15	0.65
Attitude toward AI	127	2.97	0.96
Trust in Technology	127	2.54	0.88
Trust in Robo-Advisors	127	3.17	0.97

and age, while neither control variable was significant. Thus, H1 was supported.

Hypothesis 2

A linear regression analysis showed that trust in technology significantly and positively predicted trust in robo-advisors (β = 0.59, SE = 0.08, p < .001), explaining 29.2% of the variance (R^2 = .29). The effect remained significant after controlling for gender and age, while neither control variable was significant. Thus, H2 was supported.

Combined regression model

A combined regression analysis including trust in the vendor and trust in technology showed that trust in technology remained a strong and significant predictor of trust in robo-advisors (β = 0.55, SE = 0.09, p < .001), whereas the effect of trust in the vendor was reduced and became marginally significant (β = 0.22, SE = 0.12, p = .057), indicating that trust in the vendor explains limited unique variance once trust in technology is taken into account. The model explained 31.3% of the variance in trust in robo-advisors (R^2 = .31). A mediation analysis (5,000 bootstrap samples) further showed a significant indirect effect of trust in the vendor on trust in robo-advisors through trust in technology (ACME = 0.18, p = .005), while the direct effect was no longer significant (p = .080), indicating that trust in technology largely mediates this relationship (45% mediated).

Hypothesis 3

A linear regression analysis showed that attitude toward AI significantly and positively predicted trust in technology (β = 0.69, SE = 0.06, p < .001), explaining 56.4% of the variance (R^2 = .56). The effect remained significant after controlling for gender and age, while neither control variable was significant. Thus, H3 was supported.

Exploratory analysis: gender

An exploratory regression analysis examined gender differences in attitudes toward AI. Women reported slightly less positive attitudes than men, but this effect was only marginally significant (β = −0.29, p = .093) and became non-significant when controlling for age (p = .109). Overall, gender differences in attitudes toward AI were small and not robust.

Exploratory analysis: education

An exploratory regression analysis examined whether educational level was associated with attitudes toward AI. Education showed a marginally significant positive effect in the bivariate model (β = 0.14, p = .052) and remained significant when controlling for gender and age (β = 0.23, SE = 0.08, p = .006), explaining 8.1% of the variance (R^2 = .08). Higher education was associated with more positive attitudes toward AI.

An additional exploratory analysis examined whether educational level was associated with trust in technology. Education showed a small but significant positive effect when controlling for gender and age (β = 0.18, SE = 0.08, p = .020), explaining 4.5% of the variance (R^2 = .05). As these analyses were exploratory, the findings should be interpreted with caution.

Exploratory analysis: Customer relationship and vendor trust

An exploratory regression analysis showed that being a Rabobank customer was not significantly associated with trust in the vendor (β = 0.16, p = .204; R^2 = .02). This suggests that prior customer status does not appear to be a major determinant of vendor trust in this sample.

Exploratory analysis: self-perceived investing knowledge

An independent-samples t-test showed that women reported significantly lower self-perceived investing knowledge than men (M_women = 1.96, M_men = 2.87), t(122.71) = 5.37, p < .001. A regression analysis confirmed that women rated their knowledge on average 0.91 points lower than men (p < .001). These findings indicate that women feel significantly less confident about their investing knowledge than men.

Exploratory analysis: objective investing knowledge

Gender differences in objective investing knowledge were examined using a chi-square test and logistic regression. A significant association was found between gender and correctly answering the knowledge question, $\chi^2(1) = 19.33$, p < .001. Logistic regression showed that women were significantly less likely than men to answer correctly (OR = 0.12, p < .001). Descriptive results indicated that this difference was primarily driven by higher levels of uncertainty among women (36.8% selected “don’t know”) rather than incorrect answers (7.0%), whereas most men answered correctly (91.4%). Thus, the gender gap appears to reflect greater uncertainty rather than misinformation.

Conclusion

Taken together, the findings show that trust in AI driven investment solutions is primarily shaped by attitudes toward AI and trust in the underlying technology rather than institutional trust. Within the studied group of young adults aged 18 to 25, no significant demographic differences were found. Although trust in the vendor initially appears important, its effect is largely mediated by trust in

technology. Even small hesitations toward AI can meaningfully reduce overall trust.

In this study, Rabobank acted as the vendor, and participants only evaluated a static robo advisor interface without interacting with it. Even in this limited exposure setting, trust in technology was a key determinant of overall trust, indicating that pre existing beliefs about AI strongly shape trust formation.

For Rabobank, this implies that building technological trust should be a strategic priority when introducing AI based financial services to young adults. Clear explanations of how the technology works, transparency about data use and decision processes, and directly addressing concerns about AI are likely to foster trust more effectively than relying solely on institutional reputation.

21. Trust building AI principles

The previous chapter showed that trust in robo-advisors among young adults is driven primarily by confidence in the technology itself rather than institutional credibility. These findings underline the need to embed trust-building AI principles directly into system design and communication, particularly in contexts where automated financial advice influences important financial outcomes. The following chapter therefore outlines key AI trust-building principles for robo-advisory systems, focusing primarily on principles that are reflected in user interface design and user interaction rather than underlying technical infrastructure.

Human agency & oversight

Human agency and oversight require that AI systems support human autonomy and allow meaningful human control over their impact (Kowald et al., 2024). Human agency refers to the idea that individuals, as intentional actors, should remain in control of important aspects of their lives, such as their finances. Users should be able to influence automated outputs and fairly evaluate or question the AI system. Decisions should be made independently and voluntarily, without manipulative nudging that undermines autonomy. For example, providing supplementary tools, such as displaying the probability of reaching a financial goal, can enhance user control without restricting autonomy. Human control also requires that users remain free to determine the level of AI involvement (Brüggen et al., 2024).

Human oversight relates more specifically to how AI systems are used. AI systems should not operate entirely autonomously but should function within processes where humans remain in a supervisory and decision-making role (Kowald et al., 2024). Oversight includes observing, interpreting, and intervening in AI operations where necessary, and also requires that service providers oversee the advisory process (Brüggen et al., 2024).

Elements such as explaining decision-making processes are essential for enabling agency and oversight and directly support the principle of transparency and explainability discussed next.

> *"If you put people more in control and let them make more choices, they become the owner of the journey to their goal."*
>
> (Brüggen et al., 2024)

Design principle

To build trust, AI systems should embed human agency and oversight by design, ensuring that users retain meaningful control, can question AI outputs, determine the level of AI involvement, and ultimately remain the final decision-makers.

Transparency & explainability

This principle concerns transparency and responsible disclosure to ensure that people know when they are interacting with AI and can challenge its outcomes. Transparency requires clear communication about when AI is used and how it operates, without disclosing proprietary

code or data. It is widely recognized as a key precondition for building trust in AI systems (OECD, 2024; UNESCO, 2021).

Explainability ensures that individuals understand the main reasons behind decisions that affect them, especially adverse ones. By helping people understand decisions and challenge them when necessary, explainability supports trust, particularly in high-stakes areas such as finance where decisions can have significant consequences (Brüggen et al., 2024).

Design principle

Transparency and explainability should be embedded in AI systems by design to build trust by ensuring that users understand when AI is involved and how AI-generated advice and recommendations are produced.

Design principle

Personalisation in AI systems should be responsibly designed to enhance relevance while preserving user autonomy and avoiding overly directive interactions.

Personalisation

Consumers increasingly rely on AI cues, such as the accuracy of recommendations, the tone of a chatbot, and how well advice aligns with their personal goals, to assess whether a platform is reliable and trustworthy (Mani et al., 2025). Relevant and well-calibrated personalisation can strengthen trust by making the system appear competent and responsive to individual needs (Komiak & Benbasat, 2006; Sipos, 2025). However, personalization should not become intrusive or overly directive, as this may undermine autonomy and contribute to “algorithmic fatigue,” where repetitive, highly curated content and limited transparency reduce trust (Yang et al., 2024). Personalisation should therefore enhance personal relevance without overwhelming users or restricting their ability to make independent choices.

22. Study on the role of AI

Understanding what role artificial intelligence should play in financial decision-making is central to this project. The role AI can take depends on two key dimensions: the balance between human control and AI autonomy, and the visibility of AI within the interaction. To explore how this applies in the investment context, a non-academic survey study among young adults was conducted. The aim was to explore the desired role of AI across different stages of the investment process and examine how individuals prefer to balance human control and AI involvement.

To structure the analysis of these preferences, the Accenture 2×2 framework was used as a conceptual lens. This framework (see Figure 28) distinguishes different AI roles based on the two key dimensions of decision authority (human-led versus AI-led) and visibility (foreground versus background interaction). By applying this framework to the investment process, it becomes possible to map how respondents position AI across different stages and to assess which configurations of control and interaction are perceived as most appropriate.

Survey study

Method

A cross-sectional online survey design was used to explore the desired role of AI. Data were collected through the platform Maze. For the full survey setup, see Appendix J.

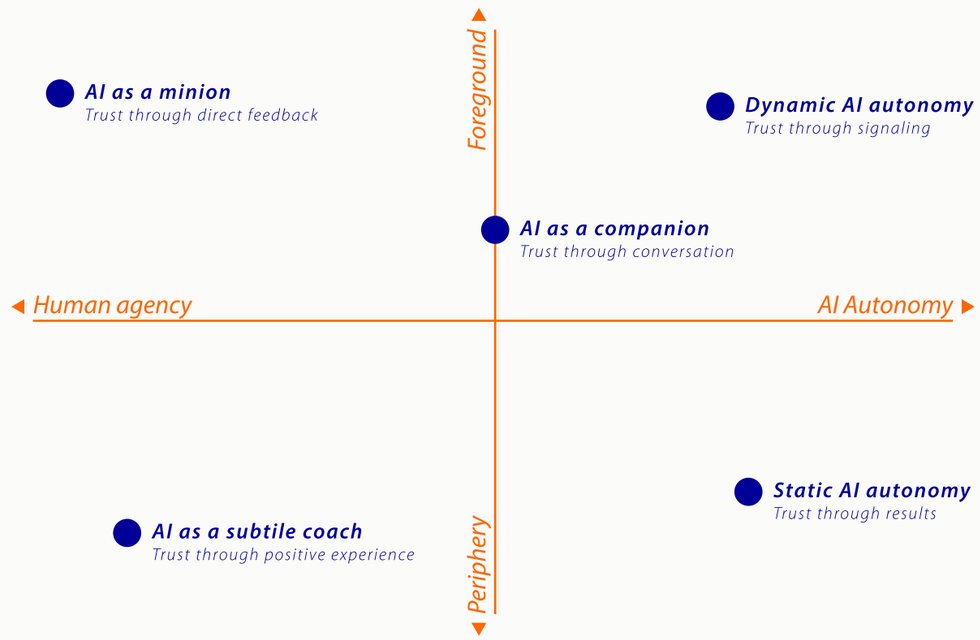


Figure 28: Framework presented by Accenture at Design&AI Symposium 2025

The sample consisted of 140 respondents (52.9% men, 47.1% women) with a mean age of 22.46 years (SD = 1.93; range = 18–25). The target population comprised young adults between 18 and 25 years old. Sampling was conducted through two separate panels within this age group, one male and one female panel.

To examine preferences regarding the role of AI in the investment decision-making process, respondents evaluated four steps: (1) defining investment goals, (2) determining risk appetite, (3) selecting investment products, and (4) monitoring investments (see Figure 29).

For each step, two dimensions were assessed using five-point Likert scales. The first dimension measured decision authority, ranging from 1 ("I choose it myself") to 5 ("AI can do it automatically"), with intermediate values reflecting shared decision-making. The second dimension measured AI presence and interaction, ranging from 1 ("AI works in the background; only the end result is visible") to 5 ("AI helps step by step"), with intermediate values indicating increasing levels of visibility and interaction.

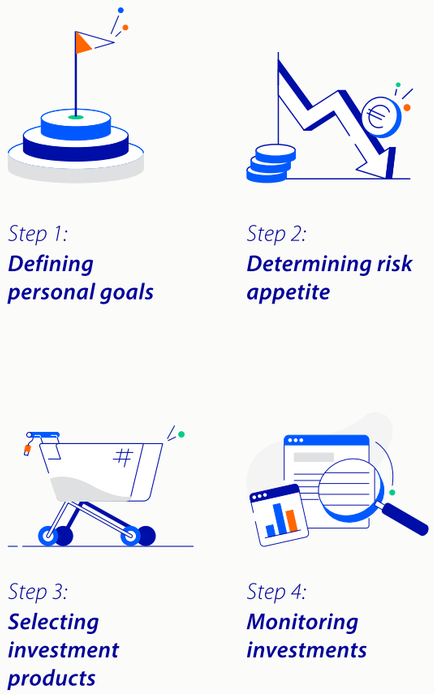


Figure 29: Steps in the investment journey that were explored

Results

To jointly analyse the two dimensions, responses were visualised using two-dimensional quadrant heatmaps (see Figures 30-33). The horizontal axis represents decision authority (human-led to AI-led), and the vertical axis represents AI presence (low to high interaction), with the midpoint dividing each plot into four governance configurations, as in the Accenture framework (see Figure 28). Colour intensity indicates response concentration. In addition, a centroid was calculated using weighted means and visualised as a white dot to indicate the average position of responses. Together, these visualisations illustrate preferred balances between human control and AI involvement across investment steps.

Conclusion

Although no significant gender differences were found, a consistent pattern emerges regarding preferred levels of AI decision-making and interaction across the investment steps. The average responses indicate that respondents prefer to retain decision-making autonomy while welcoming supportive AI involvement. This configuration aligns most closely with the *AI as a companion role*, in which users remain in control but can engage with AI when needed. In this role, trust is built primarily through transparent, conversational interaction rather than full automation. As this analysis was exploratory and not formally tested, the findings should be interpreted with caution.

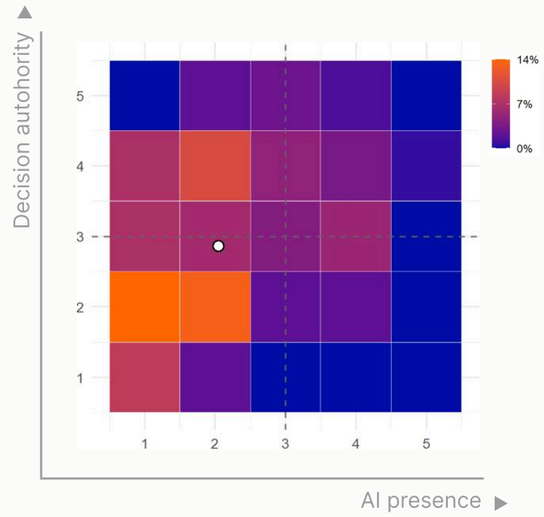


Figure 30: Preferred AI role in defining investment goals

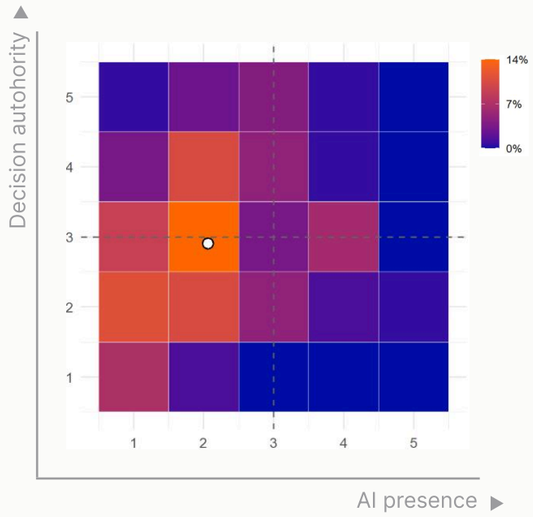


Figure 31: Preferred AI role in determining risk appetite

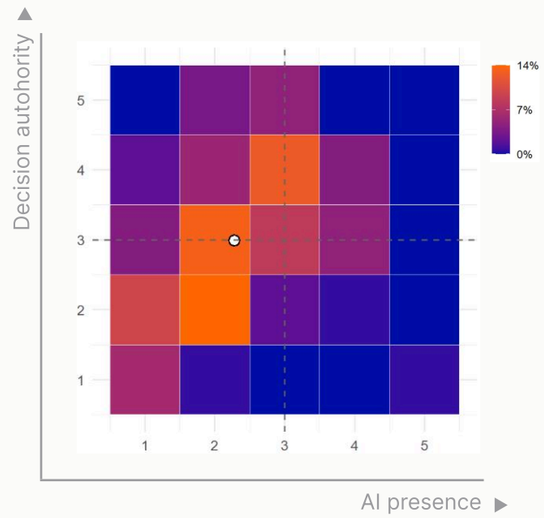


Figure 32: Preferred AI role in selecting investment products

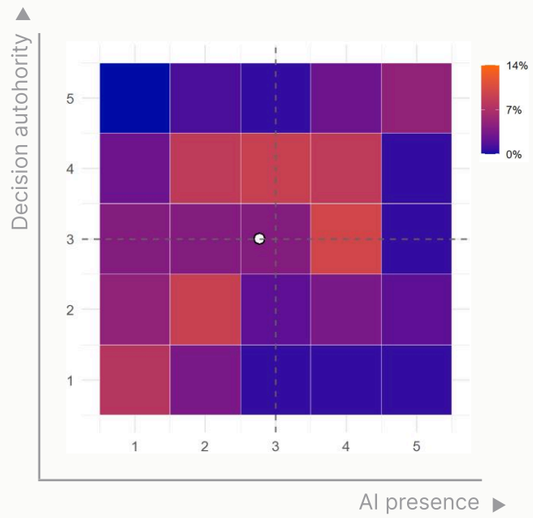


Figure 33: Preferred AI role in monitoring investments

Risk in companionship behaviour

The findings indicate that respondents most strongly prefer an AI as a companion configuration, in which users retain decision-making autonomy while engaging with AI through supportive, conversational interaction. While this role appears to align well with users' trust preferences, it also warrants careful consideration. AI is no longer merely a functional tool; it is increasingly experienced as a social presence. As designers, we therefore carry responsibility not only for performance and usability, but also for the emotional dynamics that emerge through interaction. Research shows that people can form emotional bonds with Large Language Models (LLMs), sometimes perceiving them as companions, friends, or even therapists. This emotional attachment can emerge even unintentionally, driven by the interface's tone and context. Therefore, it is essential to carefully consider the potential risks associated with positioning AI as a companion.

The inverse safety curve

Research by Hugging Face shows a consistent behavioral pattern in large language models (Pistilli, 2025). Systems such as Gemma, Phi, Claude, and ChatGPT tend to reinforce companionship more often than they maintain clear boundaries. Their responses frequently deepen emotional connection by showing empathy, mirroring feelings, or adopting a friendly tone, while less often setting limits by reminding users that they are interacting with an AI or encouraging contact with other people. Models tend to set boundaries mainly in low-stakes situations, creating what researchers describe as an inverse safety curve: boundary-setting decreases as user vulnerability increases. When users express profound loneliness or romantic feelings, models often respond more intimately, meaning empathy rises precisely when greater caution would be appropriate. This pattern appears linked to how these systems are designed, as they are often optimized to sustain engagement rather than to regulate emotional dependency.

Designer responsibility

This has important implications for designers, particularly in the context of financial decision-making. Interface tone, wording, and interaction design shape how users perceive the AI, not merely as a functional investment tool, but as a supportive presence. In the context of starting to invest, where users may experience uncertainty or lack confidence, emotional reassurance can play a constructive role in building trust and reducing hesitation. However, supportive interaction should not evolve into emotional dependency. Designers therefore carry the responsibility to create an interaction environment that provides reassurance while maintaining clear boundaries, ensuring that users remain confident decision-makers rather than reliant on the AI as an emotional substitute.

Strategies for responsible design

Designers must move beyond reactive measures and take proactive steps to ensure emotional safety. First, the "always here" affordance should be reconsidered. Presence does not have to mean constant availability. Designing for conversational pacing can help regulate user emotions and prevent overreliance on the AI.

Second, designers should account for emotional scaling. The AI's tone and responses can be adjusted based on the user's emotional state or level of vulnerability. When vulnerability is higher, the system should respond with greater caution and clearer boundaries, ensuring that reassurance remains supportive without encouraging dependency.

Third, boundaries should be made visible. Language, feedback, and clear interface cues can signal emotional or conversational limits. This can include reflection prompts such as "Would you like to talk to someone human?" or gentle pop-ups when interaction becomes prolonged, such as "You've been chatting for a while, are you okay?" These signals help maintain clarity about the AI's role and prevent excessive reliance.

Finally, responsible design requires collaboration across disciplines. Psychologists, ethicists, and user researchers should be involved in the co-design process to ensure emotional safety is embedded into the core of the system rather than added as an afterthought.

Conclusion

Designers are not merely creating interfaces, but shaping relationships. Research demonstrates that companionship behaviors emerge even in general-purpose models, not only in explicitly social or therapeutic applications. Recognizing these tendencies is essential for responsible design. Rather than reacting to unintended consequences, designers must proactively anticipate the emotional dynamics AI systems may create and safeguard users' emotional well-being.

23. Constructing an AI persona

Building on the exploratory findings on the desired role of AI, this chapter translates participants' qualitative responses into the design of a concrete AI persona. It examines how the AI should interact to build trust and confidence among young female adults taking their first steps into investing. Based on participants' reasons for their preferred balance between autonomy and support, key characteristics are derived for an AI persona that is reassuring yet respects user control, supports responsible decision-making, and strengthens users' sense of competence, taking into account the female design lens developed in Chapter 15.

Value-based analysis

Method

Qualitative responses were first analysed using a directed thematic approach. Initial codes were derived from existing literature on human–AI decision-making (Afroogh et al., 2024; Cheong, 2024; Li et al., 2024), including themes such as trust, control, accountability, efficiency, expertise, risk, transparency, privacy, and personalisation. These predefined values provided a structured framework for systematically categorising participants' reasoning.

To examine which values underpin preferences for human- versus AI-led decision-making, responses were grouped into human-led (scores 1–2) and AI-led (scores 4–5) categories, excluding neutral responses (score 3). The frequency of values mentioned in participants' explanations was then compared between the two groups.

Results

The results reveal a clear distinction. AI-led preferences are primarily associated with expertise, efficiency, and transparency, suggesting that AI is favored for technical and optimisable tasks. In contrast, human-led preferences are driven by control and personalisation, indicating that participants value agency and contextual judgement in more personally meaningful decisions. Values such as risk, trust, privacy, and accountability appeared in both groups but did not clearly differentiate preferences. The difference plot (Figure 34) visualises these contrasting value patterns. As group sizes were unequal (human-led n = 353; AI-led n = 97), the findings should be interpreted as showing general patterns rather than exact effects.

Overall, the analysis suggests that AI-driven design should prioritise user control and personalisation, as these values appear central to maintaining agency and acceptance in financial decision-making.

Qualitative analysis men vs women

While the value comparison reveals broad patterns in delegation preferences, deeper insights emerge when examining how participants describe the kind of support they expect from AI. To further explore these patterns, a qualitative analysis of the open-ended responses was conducted using the large language model ChatGPT to assist in identifying recurring themes and reasoning patterns. These qualitative nuances, particularly across gender, provide important guidance for persona development.

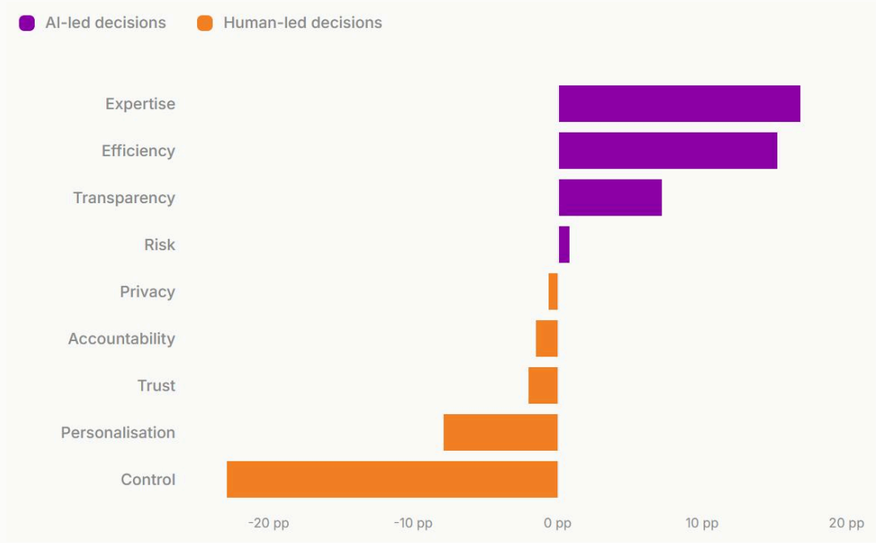


Figure 34: Percentage point differences in value mentions (AI-led minus human-led)

When looking at the qualitative insights from both women and men, it becomes clear that both groups strongly value autonomy and want to stay in control of their financial decisions. In general, participants were open to using AI as long as it did not take over decision-making. The key difference lies not in whether AI should be involved, but in how its support is expected to function. Women more often described AI as a tool that helps them understand their options, reflect on their choices, and feel confident in decisions they make themselves. Men, on the other hand, more frequently frame AI as a tool for efficiency, analysis, and optimisation within the decision-making process. These differences show that the nature of meaningful AI support varies by gender and form the foundation for a female-focused AI persona that prioritises reflective facilitation over directive guidance, supporting self-aware decision-making. In the following section, illustrative quotes from female participants are presented per step of the investment process to demonstrate how they envision AI support and where they perceive its added value.

Illustrative female quotes

Defining goals

- "I find it important that I choose my own goals, but it is helpful if AI explains the consequences of those goals."
- "I sometimes find making decisions a bit difficult; I think it works with the right advice."
- "This way I stay in control myself while having someone who thinks along with me."
- "I want to make my own choices, but I can always use tips."
- "I think choosing my own goals is important, but AI can help think about their feasibility."
- "Then it does not choose what I want to do, but rather helps as support."
- "AI can provide me with detailed information to help me make a well-considered decision."
- "I get to prioritise what is important to me, as AI cannot do that. However, it can offer helpful prompts or ideas about what others are doing."

Determining risk appetite

- “When it comes to risk, I feel that I should make the choices myself. But in those moments, I would still like to receive advice.”
- “I want to be the final decision-maker, but with help and clear explanations.”
- “Risk is ultimately my own choice, but a bit of confirmation is good.”
- “I choose myself and then check with AI whether it fits me.”
- “I make the decisions myself and hear from AI what the risks look like.”
- “I want to retain the autonomy to determine how much risk I want to take, but AI could help by explaining certain risk profiles.”
- “I would like justification from AI, but still make the decision myself.”
- “I need help assessing things, but in the end I want to make the choice myself.”
- “I do not like taking a lot of risk, but maybe I am being too cautious. That is why it seems helpful if AI thinks along with me.”
- “Because I do not know much about investing, it would be useful if AI helps me by providing information.”
- “AI could possibly, although it can hallucinate which would be absolutely undesirable in this case, explain how risky a strategy is and why.”
- “I need more information before I want to make a decision.”
- “I do not know much about how risky certain investments are, so I would like help from AI with that. With that information, I can then determine which of the explained risk profiles best fits my investment strategy.”

Selecting investment products

- “I already know something about investment products, but I think AI knows much more about them and can help me better.”
- “It feels better to receive help.”
- “Sometimes it is difficult to find a good product on your own.”
- “I want to choose which product suits me and research it myself. AI can help explain things, but I need to truly understand what I am choosing.”
- “Looking at it together, but choosing myself with some tips and tricks.”
- “This way I gain clarity and help in choosing a product that fits me best.”
- “AI can again help in the thinking process to make a good decision that you stand behind. It can suggest things you had not thought of yourself.”
- “I just need something to get me started.”
- “I prefer to receive some guidance from AI, but the final choice is mine.”
- “I do not really know what I am doing, but I still want to have a lot of influence over it. So I want to choose myself, but with explanation from AI so I can make better-informed decisions.”
- “If AI can explain whether it fits and what I will gain from it, I can more easily make a decision afterward because of the extra information.”
- “An explanation of why would help with my decision.”

Contextualized definition of reassurance

Based on the quotes of the female participants presented above, reassurance in the context of interacting with an AI can be defined as helping users build confidence in their choices through *validation* and *personal alignment*, without removing their agency by declaring decisions “right” or “wrong.”

In this context, *validation* means acknowledging and affirming a user’s feelings and reasoning as understandable and legitimate, without implying that a choice is objectively correct. Second, *personal alignment* means responding in ways that resonate with the user’s values and priorities, making the support contextually relevant.

AI persona

The AI is a calm and trustworthy reflective companion. It supports women in making investment decisions without ever taking control. By clarifying information, comparing options, and encouraging moments of reflection, it helps users better understand their goals, risk tolerance, and product choices. The AI does not decide on behalf of the user; instead, it creates space for thoughtful consideration and confident, self-directed decisions.

“I help you understand and weigh your options, so that you can confidently make your own decisions.”

Tone of voice

- Calm and composed
- Clear and jargon-free
- Encouraging but not persuasive
- Neutral rather than directive
- Reflective rather than solution-imposing

Interaction style

- Uses reflective prompts
- Encourages comparison
- Asks clarification questions

Emotional positioning

- Builds confidence
- Reduces overwhelm
- Validates uncertainty
- Normalizes not knowing

Decision authority

- AI never makes the final decision
- AI never auto-selects without confirmation
- AI always reinforces ownership

It should avoid:

- Overconfidence (“This is the best choice.”)
- Authority framing (“Trust me.”)
- Urgency (“You should act now.”)
- Emotional dependency cues (“I’m always here for you.”)

Examples:

“How does this option align with your goals?”
“Would you like to compare these options side by side?”

Examples:

“You’re asking the right questions.”
“It’s completely reasonable to take your time with this.”

Examples:

“You are the one making the decision.”

AI persona

Who the AI is

Helps understand.

Providing and clarifying information.

"I need more information before I want to make a decision."

Facilitates reflection.

Stimulating thoughtful thinking.

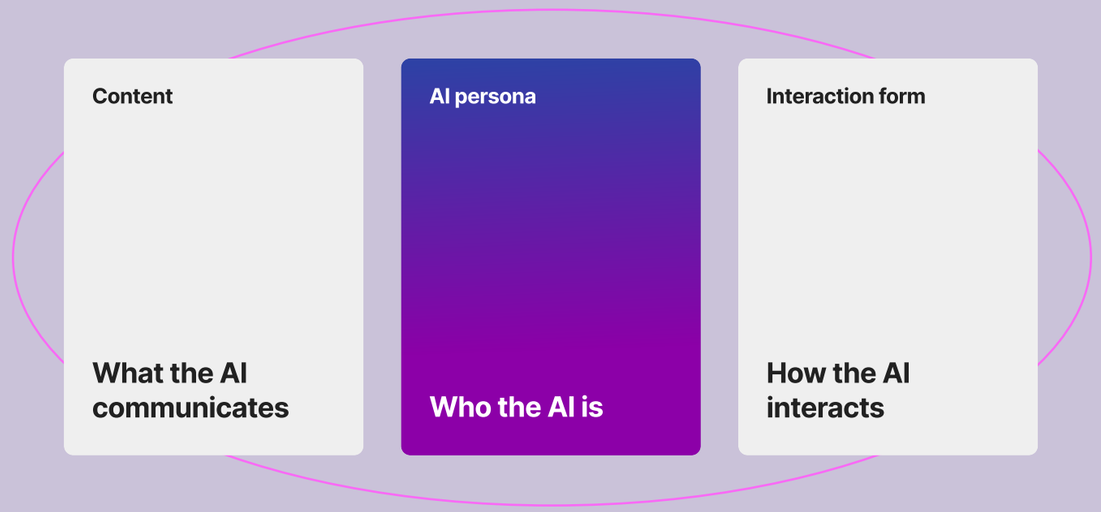
"I just need something to get me started."

Enables decision-making.

Supporting decision ownership.

"I sometimes find it hard to make decisions by myself, but I think it will be okay with the right guidance."

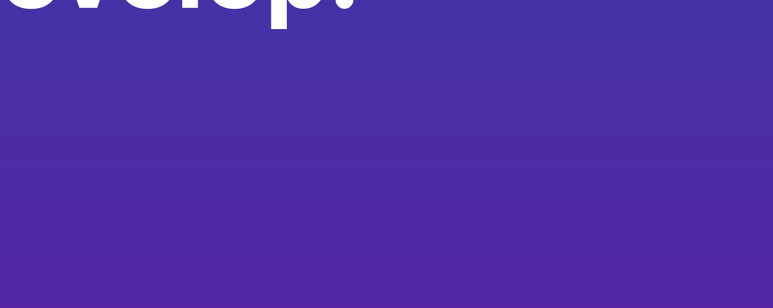
With the role of the AI defined and the persona articulated to support young female adults in the investment context, it is now clear who the AI should be. The remaining question is how this role translates into concrete communication and interaction. The following chapter therefore moves into the development phase, where content, persona, and interaction mechanisms are brought together to shape an integrated concept.



Develop.

How can the identified barriers, support needs, and AI opportunities be translated into a prototype demonstrating how Generative AI can support young women in starting to invest?

RQ3



The develop phase translates the defined direction into concrete solution directions within a clear product context. Rabo SimpelBeleggen is selected as the development environment, as it is Rabobank's most accessible investment product and aligns with the needs of the target group. This ensures that the outcomes are relevant and implementable in practice. The stage focuses on exploring and refining ideas that inform the eventual concept development.

The chapter first outlines Rabobank's current product architecture, clarifying how Rabo SimpelBeleggen is positioned within the broader ecosystem. It then provides a detailed description of the existing onboarding flow, which serves as the primary context for design intervention. A brainwriting session with the target group then uncovered specific reassurance needs within this onboarding process. Two follow-up ideation sessions explored potential product manifestations to address these needs. The chapter concludes with insights from semi-structured interviews comparing the current static onboarding flow with a more conversational alternative, highlighting how interaction should be carefully balanced between structure and dialogue.

Product context

Brainwriting exercise

Ideation with IDE students

Ideation with Employees

Semi-structured interviews

24. Product context

To ensure the development stage is grounded and practically applicable, the project moves from abstract insights to a concrete case study context. The concept is therefore developed within Rabobank's most accessible investment product to date, SimpelBeleggen, as it offers a low-barrier entry into investing due to its low costs and accessible starting requirements.

Overview of Rabobank's Investment Options

Rabobank offers several options on its website for customers who want to start investing. These are divided into two main categories: 'Decide for Yourself' (*Zelf Beslissen*) and 'Outsource Investing' (*Beheerd Beleggen*).

In the first category, 'Decide for Yourself' (*Zelf Beslissen*), customers choose how to invest their money. They determine their own risk level and investment mix. Within this category, Rabobank offers two products: the newly launched Simple Investing (*Rabo SimpelBeleggen*), launched in September 2025, and Rabo Self-Directed Investing (*Rabo Zelf Beleggen*).

In the second category, 'Outsource Investing' (*Beheerd Beleggen*), Rabobank invests on behalf of the client. Investment experts make the decisions and manage the portfolio. Within this category, Rabobank offers four products: Rabo Managed Investing Basic (*Rabo Beheerd Beleggen Basis*), Rabo Managed Investing Active (*Rabo Beheerd Beleggen Actief*), and Rabo Future Investing (*Rabo ToekomstBeleggen*).

Given its low costs and accessible entry requirements, Simple Investing (*Rabo SimpelBeleggen*) is selected as the product context for further development, as it best aligns with the financial position and needs of the target group of young women (see Figure 35).

The current product architecture

An analysis of the website of Rabobank shows that although multiple investment products are available, the differences between them are not always clearly communicated (for the current product architecture, see Figure 36). The absence of a comparison tool makes it difficult for customers to evaluate the options side by side. According to a former employee from the investment department, this lack of direct comparison is intentional, as the bank seeks to avoid customers selecting products purely based on price. For instance, within the 'Outsource Investing' category, customers might opt for Rabo Managed Investing Basic (*Rabo Beheerd Beleggen Basis*) over Rabo Managed Investing Active (*Rabo Beheerd Beleggen Actief*) due to lower visible costs, while the extent to which the active strategy differs from the Basic option, and justifies its additional costs, is not clearly articulated.

As a result, the current structure may create friction in customer decision-making and reduce clarity within the investment offering. Rabobank is therefore exploring a transition towards a simplified product structure, in which managed investment products are integrated into a 'Simple Investing' (*Rabo SimpelBeleggen*) model. This would allow customers to start with an accessible entry-level product and gradually move to higher service levels as their invested capital increases. From a strategic perspective, this positions Simple Investing (*Rabo SimpelBeleggen*) as a logical and future-oriented starting point within Rabobank's evolving investment ecosystem.

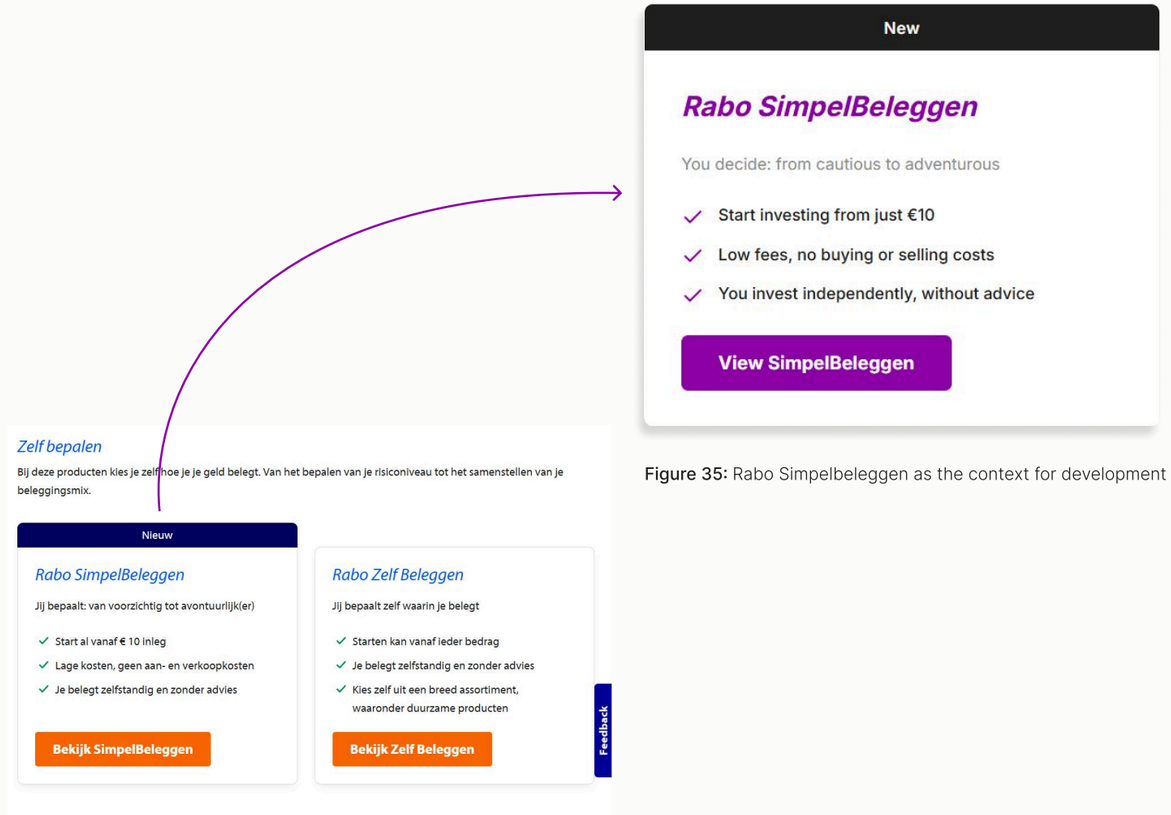


Figure 35: Rabo Simpelbeleggen as the context for development

Figure 36: Current product architecture of Rabobank's investment offering

The onboarding flow

The onboarding flow of Rabo SimpelBeleggen guides new users through the process of opening an investment account. To evaluate its performance, a conversion funnel is included showing the full onboarding journey and page visits per step (see Figure 37). Additionally, Figure 38 presents the first seven onboarding steps and their corresponding interfaces, providing visual context to the funnel analysis.

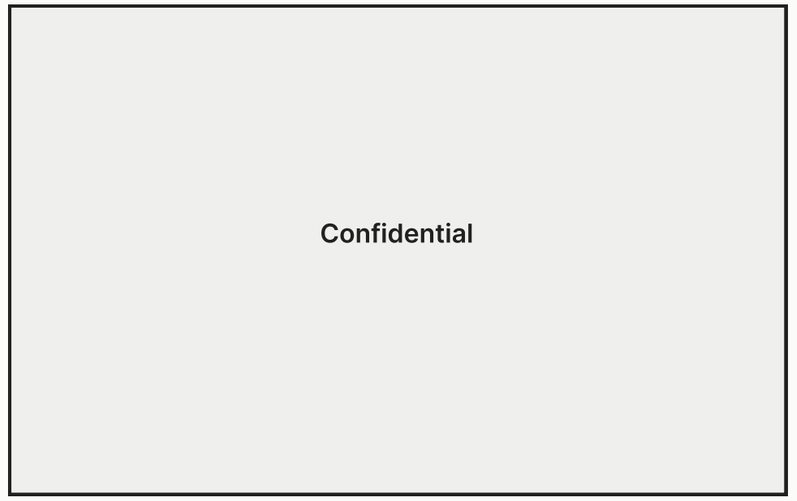


Figure 37: Conversion funnel for Rabo SimpelBeleggen (30 December 2025 – 26 January 2026)

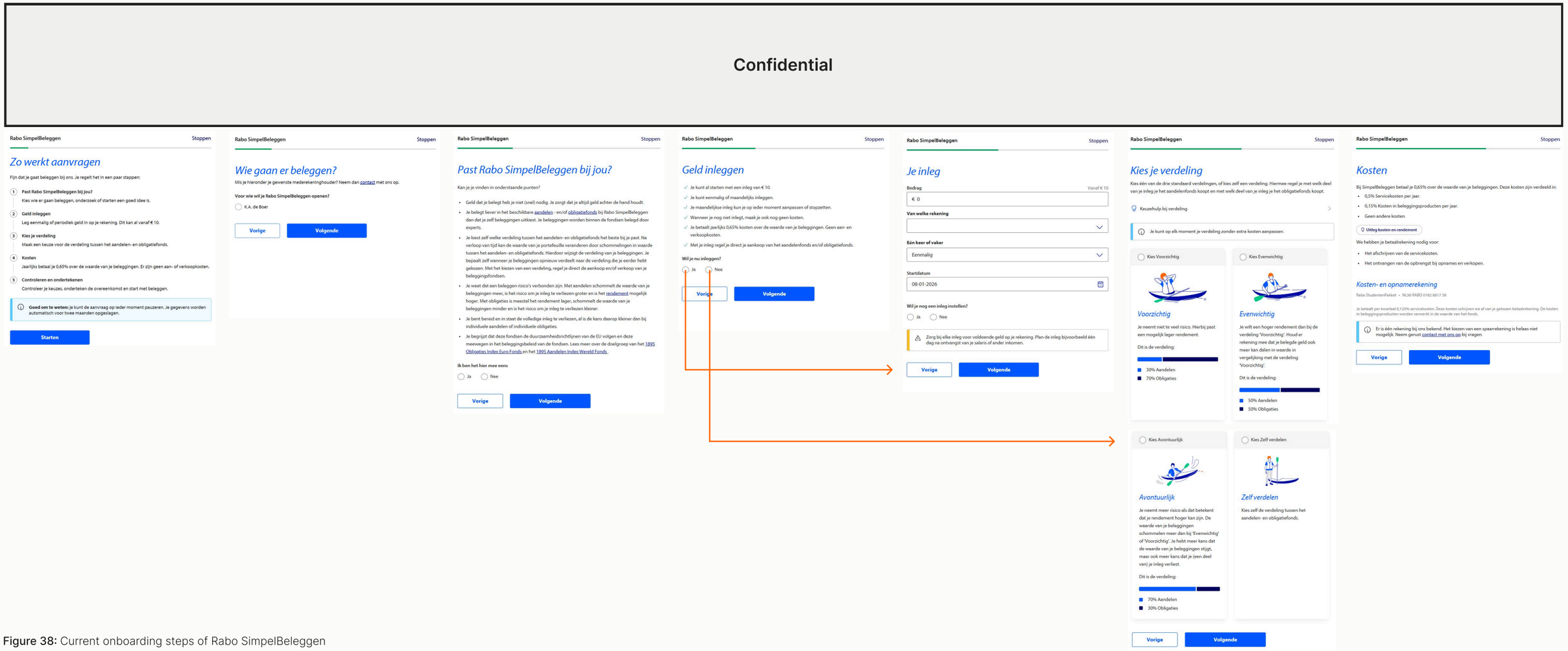


Figure 38: Current onboarding steps of Rabo SimpelBeleggen

25. Brainwriting exercise

To translate earlier research insights into concrete product implications, a brainwriting session was conducted (see Figure 39). This session specifically focused on identifying the content needs of women aged 18–25 during the decision-making process within the onboarding flow of Simple Investing (Rabo SimpelBeleggen). The objective was to uncover which uncertainties arise at different decision moments, what reassures users sufficiently to continue, and how this reassurance can be translated into tangible product and content interventions within the onboarding experience.

Methodological setup

The brainwriting session lasted approximately 1.5 hours and included seven female participants aged between 22 and 25. It focused on four key decision-making moments that recur within the onboarding flow of Simple Investing (Rabo SimpelBeleggen). These moments structured the session:

1. Is investing right for me?
2. How much money should I invest, and when?
3. What level of risk can and do I want to take?
4. What asset allocation do I want for my investments?

For each decision moment, participants were first given approximately five minutes to individually write down the questions and uncertainties that came to mind. Afterwards, the group engaged in a 15-minute discussion to share, elaborate on, and refine their insights. During the session, the generated insights were clustered into overarching themes to identify recurring patterns across the different decision moments.

Figure 39: Brainwriting session with seven female participants

By the end of the session, clearer patterns had emerged regarding the type of content and reassurance women need in order to make informed and confident decisions during the onboarding process.

Insights

The insights are structured around the four key decision-making moments within the onboarding flow of Simple Investing (Rabo SimpelBeleggen), highlighting the main uncertainties and reassurance needs at each stage. For a full overview, see Appendix H.

Is investing right for me?

As this is a broad and foundational decision moment, it generated a wide range of questions, from which three overarching themes emerged.

My financial breathing room

Participants were unsure whether they were financially ready to start investing, questioning how much they could invest, how much should remain in savings, and whether they might need the money in the near future. This highlights the need for reassurance about their financial "breathing room" and clarity on a manageable starting amount.

Do I know "enough"?

Participants questioned whether they know "enough" about investing, including whether they have access to the right information and can make a well-informed decision. This highlights the need for reassurance that they have sufficient and appropriate information to confidently make an investment decision.

Can I handle the risk?

It reflects uncertainty about emotional comfort with risk and the ability to cope with market fluctuations. Women therefore need reassurance that the risk level they choose truly aligns with their personal comfort with uncertainty and reflects what feels manageable to them.

How much money should I invest, and when?

During this decision moment, three overarching themes emerged.

Knowing what's "safe" to spend

It reflects uncertainty about future income and expenses, making it difficult to determine what amount is safe to use or set aside. This highlights the need for reassurance that the chosen amount is manageable within their personal financial situation.

Starting the "right" way

Participants were unsure about the correct way to start investing, including how much to invest, when to begin, and how to structure investments over time. This highlights the need for reassurance that there is no single correct strategy and that starting gradually and flexibly is a responsible choice, reinforced by examples of what is common among peers in similar life stages.

Money for now and later

Participants were unsure how long they could commit their money and how future plans, such as living independently or buying a home, should influence their decisions. This highlights the need for reassurance that their investment choices are responsibly aligned with their personal life goals and timelines.

Starting the "right" way

Participants were unsure about the correct way to start investing, including how much to invest, when to begin, and how to structure investments over time. This highlights the need for reassurance that there is no single correct strategy and that starting gradually and flexibly is a responsible choice, reinforced by examples of what is common among peers in similar life stages.

Synthesis of key insights

The discussion showed that the women involved were strongly motivated to make responsible decisions and frequently questioned what would be the "smart" choice, indicating a desire to act thoughtfully and well-considered. At the same time, they struggled to translate this intention into action due to limited insight into their own financial situation.

What level of risk can and do I want to take?

During this decision moment, four overarching themes emerged.

The future in mind

It reflects uncertainty about long-term stability, including job security, future income and expenses, and how life choices such as career and housing may evolve. This shows that women actively take these uncertainties into account when making investment decisions and need reassurance that their chosen approach appropriately reflects their future outlook.

What people like me do

It reflects uncertainty about whether their investment choices are reasonable, particularly without knowing what is typical for someone in a similar age or financial situation. This highlights the need for reassurance through relatable examples that provide context for their own decisions.

Knowing what to expect

It focuses on uncertainty about how much of an investment could be lost and what returns can realistically be expected. This highlights the need for reassurance through clear reference ranges that show how an investment might perform over time.

Money I can truly miss

It focuses on uncertainty about risk tolerance, including whether investing feels acceptable at all, when money might be needed, and how much loss would still feel manageable. This highlights the need for reassurance that the amount invested is money they can genuinely afford to miss without compromising their financial security or future plans.

Synthesis of key insights

The discussion showed that participants consistently placed their investment questions in the context of their future, for example by asking, "What if I have children?" or "What if I end up living on my own?" This indicates that investment decisions are strongly evaluated against anticipated life changes and a desire for stability. In addition, participants emphasized the value of relatable examples from peers and insights from knowledgeable sources. They also expressed a need for trusted role models, described as "someone who won't screw you over," to feel confident in their decision-making process.

What asset allocation do I want for my investments?

During this decision moment, three overarching themes emerged.

Investing without big swings

It reflects a desire for calm and stability in investing, including spreading money across multiple investments, preferring broad funds over individual stocks, and avoiding options that feel highly volatile. This highlights the need for reassurance through a portfolio that feels stable and limits large swings that could cause stress or uncertainty.

Investing in line with my values

It reflects concerns about where money is invested and whether investments align with personal values, including preferences for European markets, sustainability, respect for human rights, and avoiding industries such as weapons or war. This highlights the need for reassurance that their investments reflect their values and do not contribute to causes they fundamentally disagree with.

Wanting my investments to grow

It reflects the expectation that investing should generate returns, including questions about which investments perform well and whether investing will realistically lead to profit. This highlights the need for reassurance that their investments have genuine growth potential rather than simply serving as a place to store money.

Synthesis of key insights

At this stage, participants questioned whether they still needed to write down additional questions, as many already had a clear preference for diversification in order to ensure stability. They expressed strong awareness of their values and explicitly connected their investment choices to avoiding "bad practices." While returns were discussed, they played a less dominant role in the conversation and were largely considered a basic prerequisite rather than the primary driver of decision-making.

The identified themes provide a clear foundation for translating these user concerns and reassurance needs into concrete implications for the design of the onboarding experience.

Value orientation of Gen Z women

During the discussions, women appeared highly value-driven in their decision-making. This aligns with broader societal trends: Ipsos research shows a widening ideological gap between Gen Z men and women, with young women becoming significantly more progressive on social and equality-related issues compared to both previous generations and their male peers (Ipsos, 2025). This divide is visible globally, with gaps of 25 to 30 percentage points in countries such as the United Kingdom, Germany, and the United States (The Financial Times, 2024). This gap is also reflected in online behaviour, where a fragmented media landscape and algorithm-driven content offer additional opportunities for young men and women to diverge further into distinct ideological niches.

This broader value orientation is important to acknowledge in this context, as it helps explain why alignment with personal and societal values plays a significant role in how young women approach investment decisions.

Design implications

Financial safety & breathing room

Core question:

"Am I financially okay if I do this?"

Underlying concern:

Not risking money that is needed for daily life, savings, or near-term security.

Design direction:

The onboarding experience should actively help users assess their financial breathing room before investing.

Time, life plans & the future

Core question:

"How does this fit into my life later?"

Underlying concern:

Making choices that do not block future options such as housing, career changes, or independence.

Design direction:

Investment decisions should be contextualised within life timelines.

Meaning, values & purpose

Core question:

"Does this align with who I am?"

Underlying concern:

Moral comfort and knowing money supports causes they stand behind.

Design direction:

The product should make value alignment visible and tangible.

Confidence in understanding & decision-making

Core question:
"Do I understand enough to make a responsible choice?"

Underlying concern:
Wanting clarity, guidance, and reassurance that there is no "wrong" first step.

Design direction:
The onboarding flow should prioritise clarity over complexity.

Risk, uncertainty & emotional comfort

Core question:
"Can I live with what might happen?"

Underlying concern:
Avoiding stress, surprises, and volatility that feels overwhelming.

Design direction:
Risk communication should focus on emotional manageability.

Social context & validation

Core question:
"Is this normal for someone like me?"

Underlying concern:
Wanting reassurance that decisions are reasonable for their life stage.

Design direction:
Provide relatable benchmarks and peer context.

26. Ideation with IDE students

To translate the identified design implications into concrete product opportunities, an ideation session was conducted (see Figure 40). The session involved two Industrial Design Engineering (IDE) students to introduce fresh and creative perspectives. To provide focus and direction, three "How Might We" questions were formulated based on the key design implications derived from the brainwriting exercise. These questions served as the guiding framework for the session.

Figure 40: Ideation session with two IDE students

To structure the ideation session, three "How Might We" questions were defined:

- How might we help women feel confident about how much money they can safely invest?
- How might we help women make investment decisions that fit their life plans and circumstances?
- How might we help women make investment decisions that align with their personal values?

These questions translated the identified reassurance needs into focused innovation challenges and provided direction for idea generation.

Ideas from ideation

How might we help women feel confident about how much money they can safely invest?

Smart Starting Amount

- Provide an accessible calculation tool that gives insight into income and expenses to determine a suitable investment amount.
- Highlight that even small investment amounts can make a meaningful start.
- Visualize how different investment amounts grow over time to demonstrate long-term impact.

Transparent Money Journey

- Increase transparency about where invested money goes and how it is distributed across different investments.
- Provide a short tutorial video explaining clearly and concretely what happens to your money after you start investing.

Flexible Investing

- Clearly communicate how and when money can be accessed or withdrawn if needed.
- Reinforce that investing is not a permanent or irreversible decision.
- Emphasize that investors do not need to decide on a fixed amount upfront and that starting small is possible.

How might we help women make investment decisions that fit their life plans and circumstances?

Strategy Before Product

- Present a clear overview of different investment strategies before requiring users to choose a product.
- Show how each investment approach connects to specific life goals, such as buying a home or starting a family.
- Present investment options in a comparison-style table, allowing users to evaluate differences side by side to increase confidence in their decision.

Future Timeline Planning

- Recommend an investment strategy that matches the user's stated life goals and expected financial changes.
- Add a timeline that visualizes future income, expenses, and major financial events.
- Allow users to incorporate anticipated changes, such as career shifts or inheritance, into their planning.

How might we help women make investment decisions that align with their personal values?

Visible Impact

- Show exactly which companies are included in the investment portfolio.
- Clearly explain which industries and activities the portfolio invests in.
- Clarify what "sustainability" means in practice, using concrete and measurable criteria.
- Quantify the real-world impact of investments where possible, for example whether it translates into fewer trees being cut down or improved recycling outcomes.
- Group investments into recognizable categories such as nature, technology, or economic impact, supported by visual cues like icons.

Other ideas

Peer Perspective & Normalisation

- Encourage open conversations about investing to reduce the taboo around discussing money.
- Stimulate peer discussions, for example with colleagues, who can provide perspectives from different life stages due to the mix of younger and older individuals in the workplace. Colleagues can offer a useful balance: they are less emotionally close than family or friends, which may reduce bias, while still being trusted enough to share practical experiences.
- Provide diverse user profiles that illustrate how others invest, why they choose certain strategies, and how these link to long-term goals.
- Offer reference points on typical investment amounts to give context for what is common for people in similar life stages.

Institutional Credibility & External Validation

- Address skepticism toward banks by incorporating neutral or third-party validation, such as references to governmental or regulatory institutions (e.g., De Nederlandsche Bank), to strengthen perceived credibility and trust.

Making Investing the New Normal

- Increase the visibility of investing within the banking app instead of positioning it as a separate or hidden feature.
- Integrate investing into existing financial actions, for example by prompting users to invest when transferring money to savings ("Would you also like to invest a part of this amount?").
- Frame investing as a routine financial habit, similar to saving, rather than as a complex or exceptional activity.
- Explore default-based approaches, where investing becomes a standard option and opting out requires an additional step.
- Enable investing through employers to embed it more naturally into everyday financial life.

Cultural Activation & Awareness

- Launch targeted campaigns aimed at young people to increase awareness of traditional, long-term investment strategies.
- Reframe investing in a culturally relatable way to make it feel attractive and accessible rather than formal or distant.
- Leverage popular cultural concepts (e.g., "girl math") to connect investing to everyday financial behaviour.
- Introduce a round-up-and-invest feature that automatically invests small amounts from daily purchases, linking present spending to future growth.

AI-driven solutions

- Introduce a digital personal investment coach that guides users throughout the decision-making process.
- Position the coach as a conversational partner rather than a purely technical advisor.
- Combine financial guidance with attention to emotions, doubts, and personal comfort levels.
- Explore goals, spending behavior, and values together with the user to co-create a financial plan aligned with their life.
- Make the coach accessible and low-threshold, providing expert-like support without the pressure of speaking to a human advisor.
- Enable open "money conversations" in a safe digital environment, particularly for users who find discussing finances with others difficult.

On gender-specific design

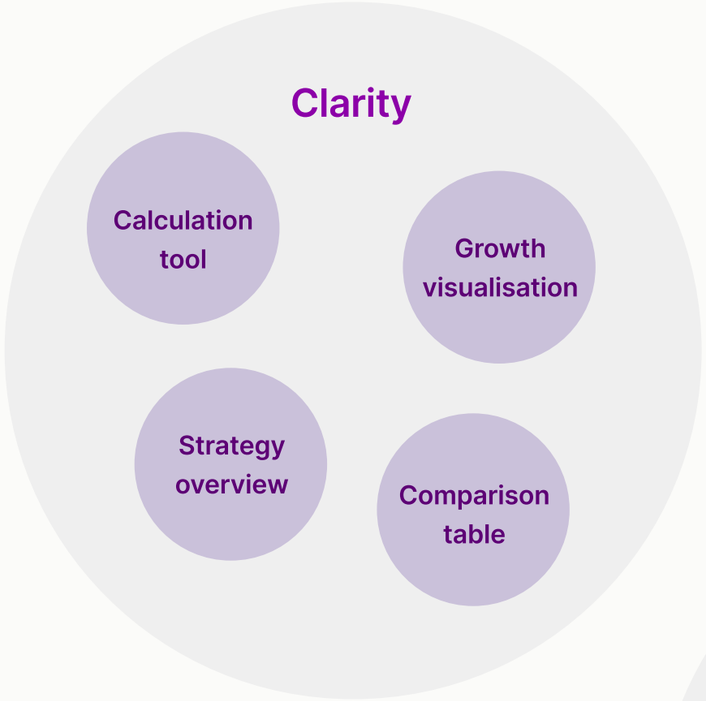
Although this project focuses on the needs of young women, the product itself should not be explicitly gendered. Participants indicated that they do not seek a "female" version of investing, as this would reinforce perceived differences rather than promote equality. Instead, they prefer a shared starting point in which all users are treated equally.

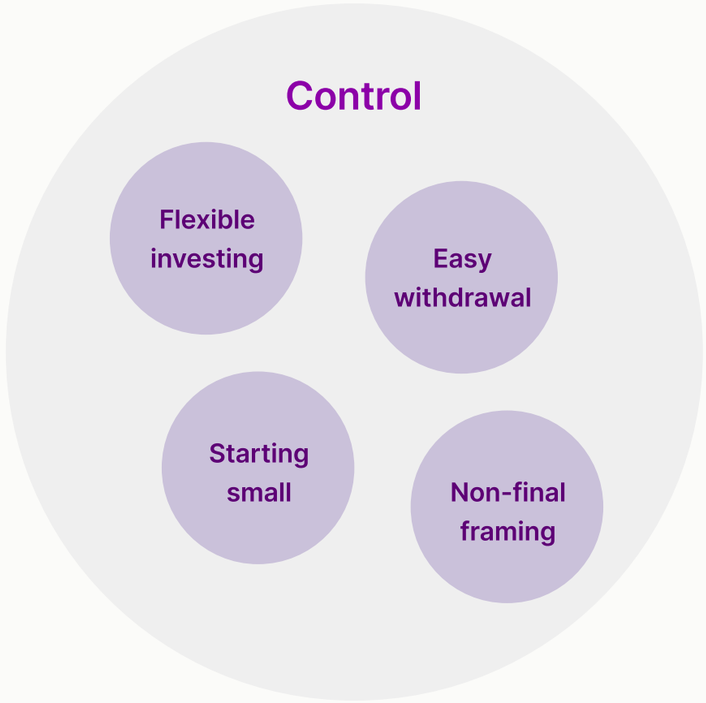
While different concerns may lead users into different experience flows, these should be based on individual needs rather than gender. It is likely that more women may resonate with certain reassurance-oriented features, but many men could equally benefit from the same approach. Therefore, personalization should occur at the level of concerns, preferences, and values, rather than through explicit gender segmentation.

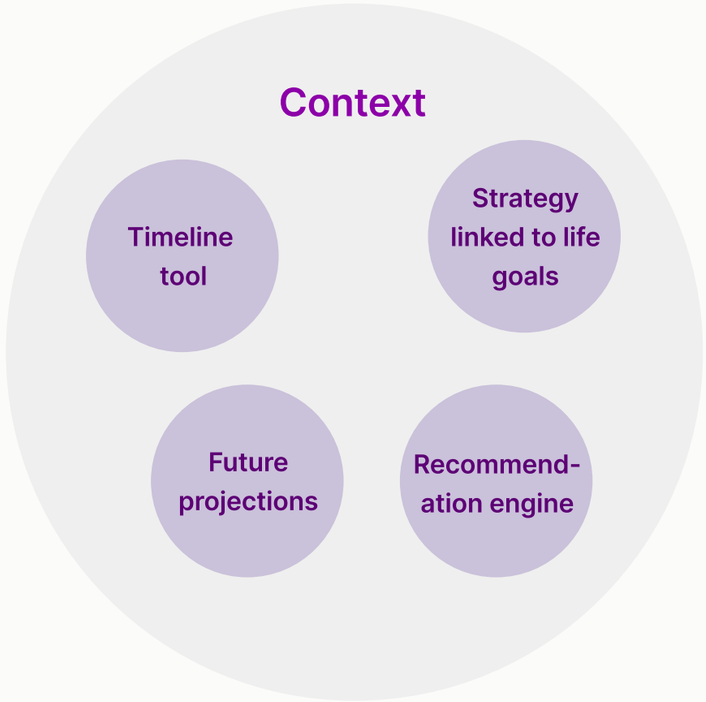
Designing in this way ensures inclusivity without amplifying gender distinctions.

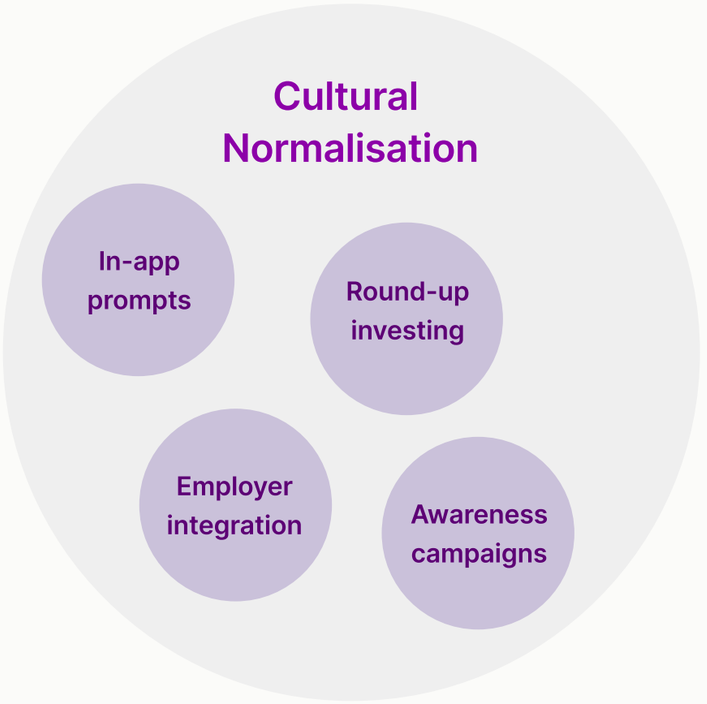
Summary of ideas

Based on the ideation session, the individual ideas can be synthesized into five overarching design pillars that address the core reassurance needs identified earlier.









27. Ideation with employees

This chapter presents the outcomes of a sketching session with Rabobank designers, explicitly focused on exploring the potential of AI to provide reassurance to women during onboarding. After aligning on the purpose of the session, each participant developed individual concepts. The resulting sketches are presented in Figure 41.

Insights

The concepts developed during the session can be grouped into five overarching themes:

Social proof and representation

Several sketches emphasised reassurance through relatability and representation. Ideas included:

- Social proofing and persuasive design principles
- Highlighting that investing is not exclusively male (e.g., referencing research that female investors often outperform men)
- Expert or influencer advice (e.g., “Patricia ensures she invests at least 20% in ETFs”)
- Relatable starter profiles based on demographics or behaviour (e.g., “Careful Karen”, “Susie Spend-All”)
- Acknowledging doubts through stories of others
- Clarifying when content is designed from a female perspective (e.g., less pushy tone)

These concepts aim to normalise investing and reduce uncertainty through identification and shared experience.

Conversational and human-centred AI

Many participants positioned AI as a supportive, more human presence:

- A personalised chatbot (e.g., “Robin: Investa!”)
- Integrating Rabobank Investing with a familiar conversational interface (e.g., ChatGPT)
- A more human tone of voice
- The ability to choose the level or type of AI involvement

Here, AI is not framed as a purely technical tool, but as a relational guide that builds trust gradually.

Adaptive guidance and personalisation

Reassurance was frequently linked to flexibility and personal adaptation:

- AI proposing portfolios based on confidence level
- Conversational portfolio configuration (including awards or sustainability labels)
- Focus on personal intent and goals
- A decision-tree structure
- Step-by-step guidance that is dynamic rather than static
- Opportunity to ask questions, simplify, or translate financial terminology at any moment

These ideas emphasise reducing cognitive overload and adapting complexity to individual needs.

Gradual commitment and reduced pressure

Several sketches challenged the current “front-loaded” onboarding model:

- Tweaking the portfolio after initial setup rather than requiring extensive reading upfront
- Finalising decisions only at the end
- A to-do list function to continue later
- Creating a shareable summary or “receipt” to reflect on or discuss with others

This theme reflects the need for time, reflection, and lower perceived pressure in financial decision-making.

Goal-oriented framing

Finally, multiple concepts reframed investing in familiar terms:

- Positioning investing as goal-based (similar to savings jars)
- Explicitly asking: “What is your goal?”
- Structuring choices around intentions rather than products

This approach shifts the focus from financial instruments to personal aspirations, enhancing contextual relevance.

Figure 41: Sketches of ai-driven onboarding concepts developed by Rabobank designers

28. Semi-structured interviews

To further explore how onboarding design can support reassured decision-making, semi-structured interviews were conducted to compare two different onboarding interaction styles. This comparison was particularly relevant given earlier insights that highlighted the importance of reassurance, clarity, and guidance in the decision-making process.

The first prototype was a low-fidelity reconstruction of the current Rabo SimpelBeleggen onboarding flow, serving as a static and structured version (see Figure 42). The second was a low-fidelity conversational prototype designed in a chatbot style, where responses were predefined and participants selected answers to continue the dialogue (see Figure 43). This format aimed to simulate a more supportive and interactive experience, resembling a digital conversation partner.

In total, three interviews were conducted with women aged between 23 and 25. To reduce order effects, the sequence in which the two prototypes were presented was alternated across participants. For the full interview script, see Appendix K.

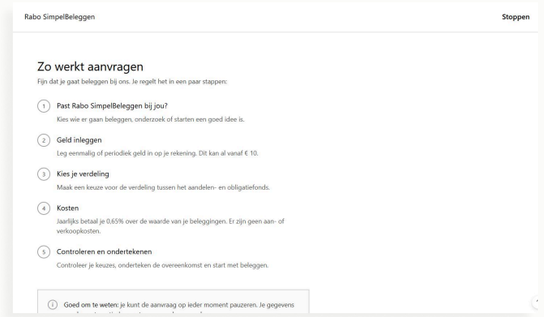


Figure 42: Static onboarding prototype

Figure 43: Conversational onboarding prototype

Comparative insights

Personalisation vs. overview

The conversational style was perceived as more personal and adaptive. Participants felt that it adjusted to their needs and preferences, creating the impression that “they are taking my needs into account.” The step-by-step dialogue fostered a sense of being guided through a process tailored to their context.

However, this came at the cost of overview. Because options were not visible simultaneously, participants found it difficult to compare alternatives or weigh them against each other. The absence of a clear structure or endpoint sometimes made the process feel opaque.

In contrast, the static version provided immediate overview. Seeing all options at once allowed participants to compare and evaluate more easily. However, it was experienced as more generic and less tailored.

Design implication:
The onboarding experience should integrate conversational personalisation with clear structural overview, ensuring users feel both personally guided and fully aware of available options.

Digestibility vs. process control

Participants appreciated the conversational format for breaking information into smaller, digestible steps. The “bite-sized” presentation lowered the threshold to read content carefully and made the process feel manageable.

At the same time, the chat interface sometimes felt definitive. The visible chat history created the impression that answers were fixed, reducing the feeling of freedom to explore different scenarios. Participants expressed a desire for clearer visibility of where they were in the process and what was still to come.

The static flow provided stronger process control. Clear steps, separate pages, and visible navigation offered reassurance about what information was required and how far along they were. The ability to easily go back and change answers strengthened the sense of control.

Design implication:
The onboarding flow should combine stepwise, digestible guidance with visible structural transparency, ensuring users understand where they are in the process and can easily revise their choices at any time.

Emotional reassurance vs. formal structure

Both prototypes highlighted the importance of revisability. Participants valued being able to scroll back, navigate freely, and adjust their answers throughout the process.

However, the conversational format reduced the perceived flexibility of the experience. Because answers were embedded in the chat history and could not easily be modified, decisions felt more definitive and less open to exploration. This limited the sense of being able to experiment with different scenarios.

In contrast, the static format more clearly communicated that answers could be adjusted at any time. The ability to navigate back and change selections made the experience feel more flexible and less final.

Design implication:
The onboarding experience should make flexibility and revisability explicit, ensuring users can easily adjust their choices at any stage to maintain decision confidence.

Additional insights

Comparison before commitment

Participants emphasised the importance of comparing options before making a definitive choice. Seeing advantages and disadvantages side by side increased confidence by clarifying trade-offs and differences. They preferred to explore alternatives before being asked to commit.

Design implication:
The onboarding flow should enable side-by-side comparison of options and make trade-offs explicit before requiring users to commit to a decision.

Scenario exploration

Participants wanted to understand the consequences of their choices. Simulations, example calculations, and worked examples helped them visualise impact and increased confidence in their decisions.

Design implication:
The onboarding experience should make the consequences of choices visible through simulations or example calculations, enabling users to explore scenarios before making a decision.

Flexible navigation

Participants questioned the linear structure of the onboarding flow. They did not always want to make decisions, such as investment amount, before fully exploring risks and options. Instead, they preferred a more flexible and explorative structure that allows them to decide when to commit.

Design implication:
The onboarding flow should allow flexible navigation, enabling users to explore information and determine the timing and sequence of their decisions rather than enforcing a fixed linear order.

Time for reflection

Participants expressed the need for reflection moments, as investing was not seen as a decision to complete within minutes. They valued the possibility to pause, return later, receive reminders, or discuss their choices externally before committing.

Design implication:
The onboarding experience should allow users to pause, return later, and reflect on their choices, creating space for deliberate decision-making without time pressure.

Layered & on-demand Information

Participants preferred concise, straightforward core information with the option to access deeper content on demand. While too much additional information could create uncertainty, the ability to expand sections, hover for clarification, or ask questions in the moment was highly valued.

Design implication:
The onboarding experience should provide layered, on-demand information, offering clear core explanations with optional depth that users can access when needed.

Social validation & normalisation

Participants expressed a need for reassurance through relatable examples. Peer behaviour and benchmarks were seen as helpful reference points, reducing the feeling of making decisions in isolation. As one participant noted, “If others can do it, I can do it too.”

Design implication:
The onboarding experience should incorporate relatable peer examples and benchmarks to normalise investing decisions.

Visible progress

Participants wanted clarity on where they were in the process and what was still to come. Visible progress indicators, step numbering, and clear endpoints increased comfort. The ability to pause and resume reinforced flexibility.

Design implication:
The onboarding experience should make progress and process structure visible, providing clear steps, defined endpoints, and the ability to pause and resume.

Money journey transparency

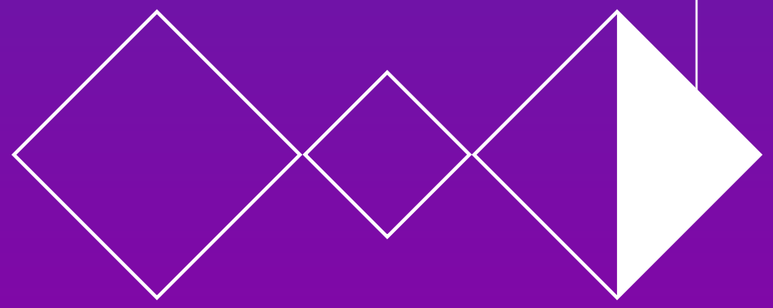
Participants wanted clarity on where their money goes, how easily it can be withdrawn, what costs are involved, and what happens after investing. Understanding the “road of my money” was perceived as helpful in navigating uncertainty.

Design implication:
The onboarding experience should clearly communicate where money is invested, how liquid it is, and what users can expect after investing.

Deliver.

How can the identified barriers, support needs, and AI opportunities be translated into a prototype demonstrating how Generative AI can support young women in starting to invest?

RQ3



The deliver phase translates all accumulated insights and implications into a tangible concept. It proposes a more circular and reflective decision-making process, enabling users to pause, revisit steps, and explore topics in greater depth before committing. In doing so, it moves away from a rigid linear onboarding flow toward an experience that supports exploration and confidence-building rather than simply driving product uptake.

The final concept is described across three levels: interaction, communication, and content. Together, these layers define how the onboarding flow should be structured, how AI should communicate within this context, and which tools are required to make the content relevant to the target group's investment approach. Each layer is visually illustrated to demonstrate how Rabo SimpelBeleggen can better align with the needs of young women. The chapter concludes with a validation of the concept against the earlier defined design principles and implications, and assesses its desirability, feasibility, and viability.

The final concept

Validation of the concept

29. The final concept

Building on insights from the brainwriting exercise, ideation sessions, and prototype evaluations, the final concept translates identified reassurance needs into a cohesive onboarding experience. It combines interaction, communication, and content to better align the investment journey with the needs of young women.

Concept framework

The concept is structured as three interconnected layers that together shape the overall onboarding experience (see Figure 44). Visualised as an onion model, the layers distinguish between how users interact with the system, how information is communicated, and what content is provided.

The outer Interaction Layer concerns the overall interaction format of the onboarding experience. Within this layer, artificial intelligence functions as a supportive technology that enables personalisation, adaptive guidance, and conversational interaction throughout the process.

The middle Communication Layer defines how content is conveyed within this interaction structure. Here, information is delivered through a carefully designed AI persona that aligns with the tone, reassurance, and communication style appropriate for the target group.

At the core lies the Content Layer, which addresses the specific support needs of young women when starting to invest. This layer includes tools and mechanisms that make investing more contextually relevant, such as financial clarity features, life-plan alignment, comparison tools, and value-based transparency.

Together, these three layers ensure that the concept addresses not only what information is provided, but also how it is delivered and experienced.

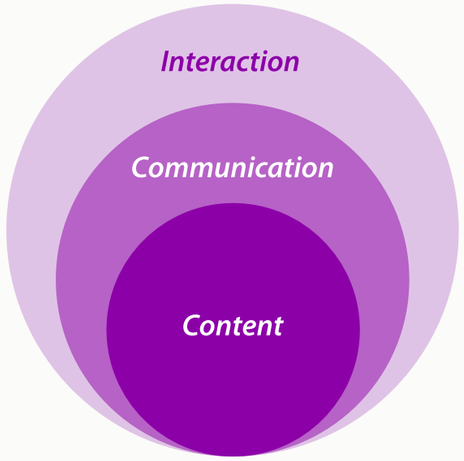


Figure 44: Layered model of the proposed onboarding concept

Interaction layer

Insights from the semi-structured interviews guided the development of a differentiated interaction model for the onboarding process of Rabo SimpelBeleggen, balancing conversational guidance with structural clarity.

From linear to circular interaction

The interaction model shifts from a linear flow to a circular structure. A circular model better reflects how young women make financial decisions: revisiting information, doubting, comparing options, and pausing to reflect. In this concept, the onboarding experience for Rabo SimpelBeleggen is therefore designed as an iterative and revisitable journey. Rather than being pushed through a fixed sequence of steps, users navigate a structured yet explorable set of topics in their own preferred order.

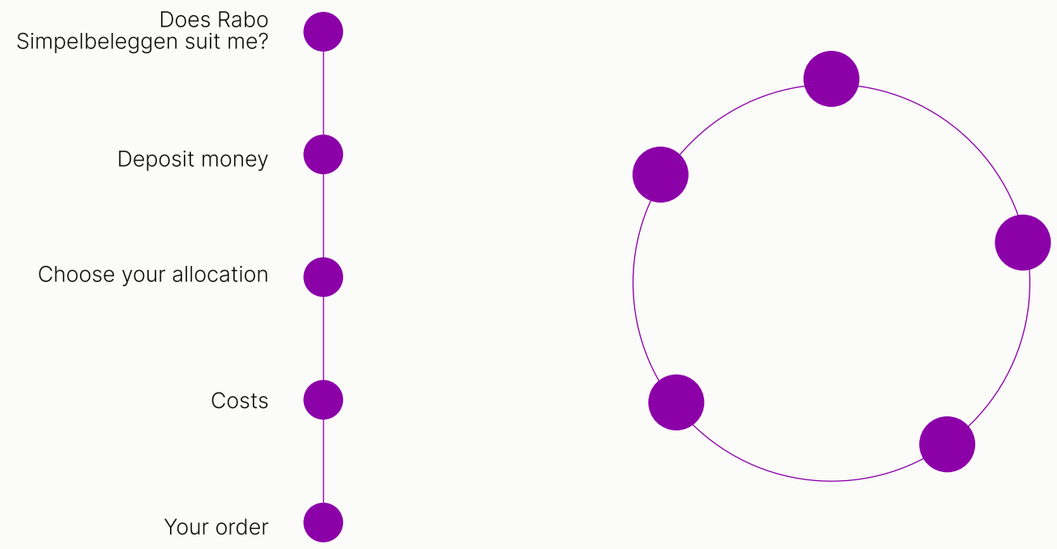


Figure 45: From a linear to a circular interaction model

As shown in the current onboarding flow (see Figure 45), the decision on investment amount is positioned at the beginning of the process. Requiring users to commit at this early stage can be premature, particularly for those still orienting themselves. Many first want to understand the product, explore options, and build confidence before making a financial decision. A circular, non-linear onboarding flow addresses this by allowing users to explore topics in any order, skip questions, and revisit information before committing.

In this way, onboarding shifts from a decision funnel to an exploratory environment. It lowers the barrier to entry, provides a clear framework of what users need to know and consider, and enables commitment once confidence is established.

Expanding the onboarding scope

While onboarding must include mandatory steps for legal and regulatory compliance, these requirements should not define the entire experience. Beyond data collection, the flow should allow users to explore additional topics identified in the research as relevant for young women, such as understanding financial breathing room, linking investments to personal goals, and aligning portfolios with personal values.

Rather than serving solely as a compliance funnel, onboarding becomes a broader decision framework that reflects the wider considerations involved in starting to invest. In this way, it functions as a supportive and confidence-building entry point rather than merely a formal requirement.

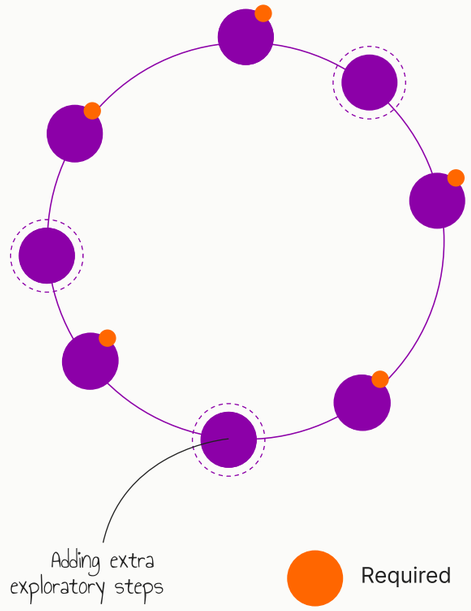


Figure 46: Adding exploratory steps alongside required steps

Visible progress

Confidence-building can be reinforced by making users' exploration progress visible. Indicating which topics have already been explored and which remain available helps users feel oriented and in control of the process, while also allowing them to track their progress in the overall decision-making journey.

For example, filled circles could represent explored topics, while unfilled circles indicate areas that can still be reviewed or revisited before making a final decision. Making progress tangible supports informed, self-paced decision-making, enabling users to commit once they feel sufficiently informed.

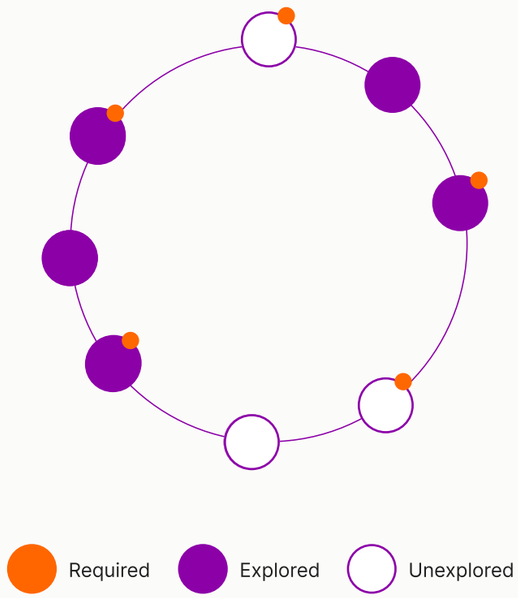


Figure 47: Making progress visible through visual indicators

Time for reflection

The onboarding experience should create space for reflection, allowing users to pause, step away, and return when they feel ready to continue. Investing is not a decision that is always made in one sitting, and the interaction model should reflect that.

Users should be able to pause specific topics and mark them for later consideration, with progress automatically saved. Gentle reminders can support re-engagement without creating pressure, encouraging users to reflect further or discuss their considerations with others before returning with greater clarity and confidence.

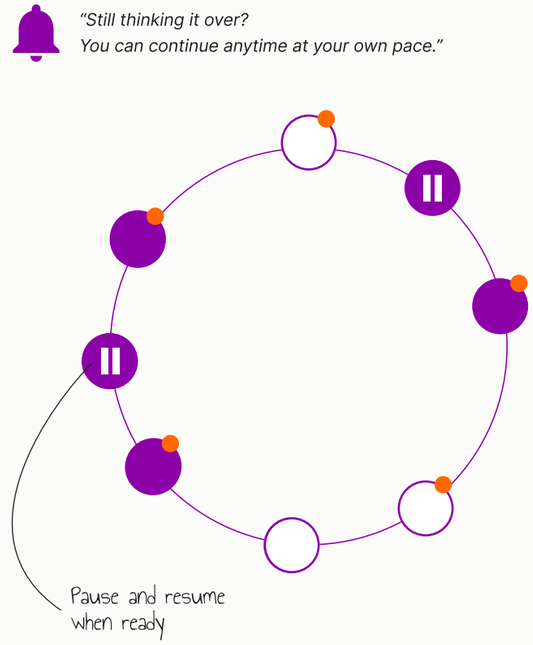


Figure 48: Supporting reflection through pauses and reminders

AI as a reflective companion

While structural overview is essential for young women to feel in control of the process, access to deeper information on demand is equally important. The core flow therefore remains clear and concise, with AI enabling additional layers of exploration for users who seek more detail.

Within each topic, users can engage AI to ask questions, request clarification, and personalise explanations to their own situation. AI can also connect information across topics, helping users understand how different decisions relate to one another. In this way, AI functions as a reflective companion within the onboarding process, supporting understanding and strengthening readiness to decide.

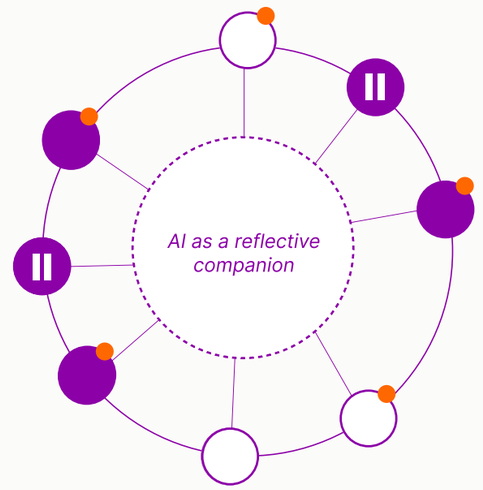


Figure 49: An AI companion encouraging reflection across steps

Communication layer

Insights gathered throughout the project informed the development of a differentiated communication model for the onboarding process of Rabo SimpelBeleggen, integrating emotionally resonant communication styles, AI trust-building principles, and a carefully designed AI persona shaped by qualitative insights from the target group (see Figure 50).

Reframing investment communication

Communication around investing is traditionally framed in rational, product-driven, and technical terms. This concept reframes that approach by introducing a more human-centered and context-driven communication style. Rather than focusing solely on financial logic, it integrates emotional resonance and relatable narratives to make investing personally meaningful and accessible.

> *"This investment is one way to support the life you are building, whether that includes living independently, exploring new career opportunities, or starting a family."*

Building trust

The concept is grounded in clear trust-building principles that prioritise human agency and oversight. The user remains in full control of the process and is always the final decision-maker. AI has a supplementary role and can be accessed on the user's own terms, allowing individuals to decide whether and to what extent they engage with it.

Transparency is central to this approach. The interface clearly communicates when AI is involved, and the system explains how it arrives at its responses. By making its reasoning visible, AI supports critical reflection rather than replacing independent judgement.

Personalisation is designed responsibly and only occurs at the user's request. Users can ask the AI to adapt explanations to their personal context, thereby determining the level of personalisation themselves. To avoid becoming directive, the AI presents information as scenarios and possible implications rather than recommendations, reinforcing that decisions remain the user's responsibility.

AI persona

The AI is positioned as a calm and composed guide that communicates in clear, jargon-free language. Its tone is encouraging but not persuasive, aiming to support rather than steer decisions. Instead of presenting answers as definitive, it uses reflective prompts and clarification questions to help users weigh their options and consider different perspectives.

The persona builds confidence by validating uncertainty and normalising not knowing, while reducing feelings of overwhelm. It supports exploration by highlighting trade-offs and perspectives, rather than prescribing a preferred direction. Throughout the process, it consistently reinforces user ownership by making clear that the final decision always remains with the individual.

Guided prompts for reassurance

To further support reassurance, the concept incorporates pre-defined answer options within the conversational interface. These prompts help users articulate questions and explore relevant topics without having to formulate everything themselves. By lowering the cognitive effort required to engage, the interface guides users toward meaningful reflections, reducing hesitation, and lowering the threshold to ask questions.

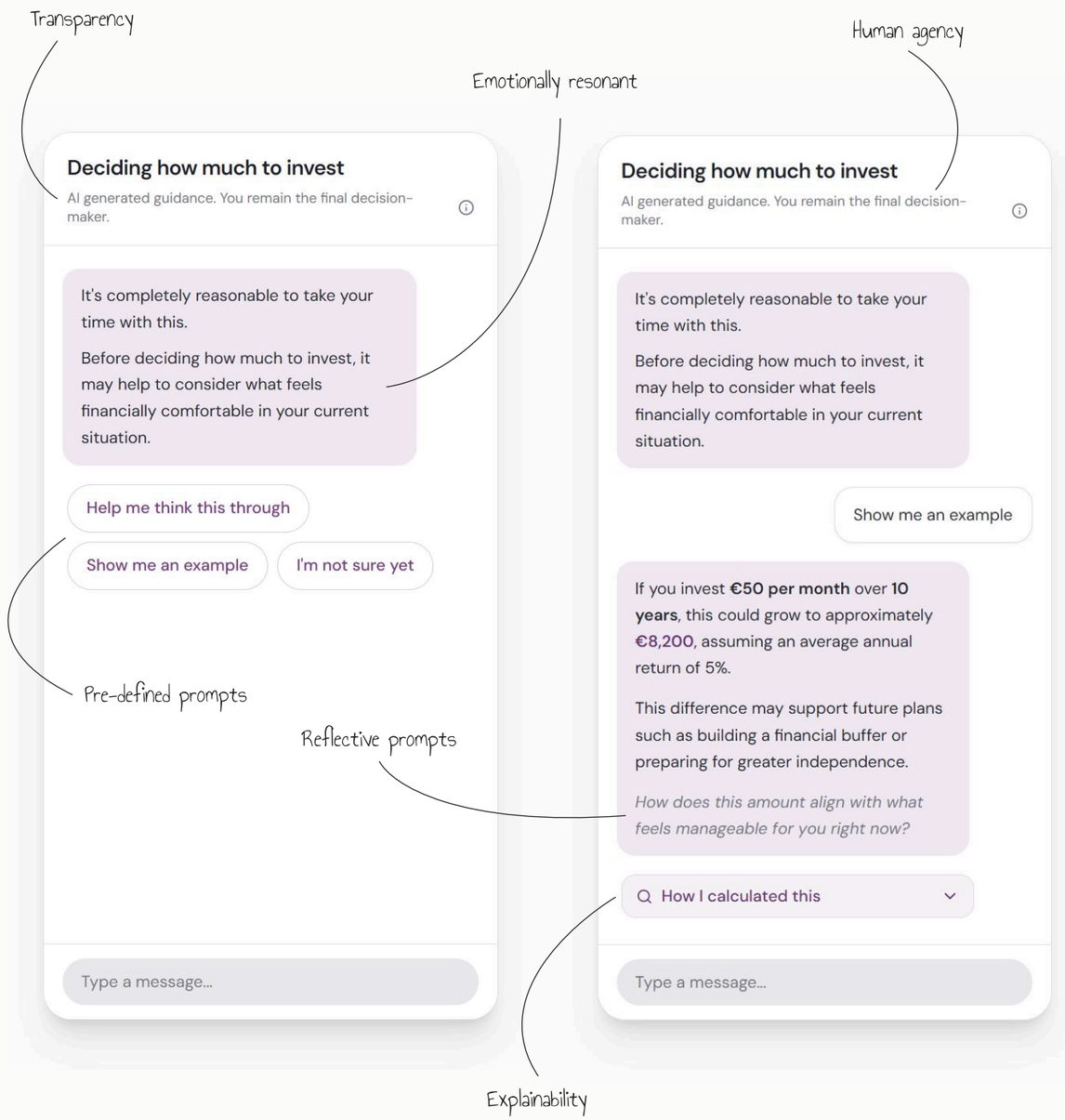


Figure 50: Example of AI communication style

Content layer

The content layer responds to the foundational needs identified among young women in the context of investing. These extend beyond financial knowledge to include financial safety, alignment with future life plans, personal values, emotional comfort with risk, social validation, and the ability to make informed trade-offs between different options.

Financial breathing room tool

Target moment: “I want to invest, but I don’t know how much I can safely miss.”

Justifying a starting amount

Helps first-time investors translate their personal financial situation into a realistic amount they can invest without compromising everyday financial security (see Figure 51).

Not locked in, but adjustable

Frames investing as a flexible first step rather than a permanent commitment, reinforcing that investment amounts can be changed over time (see Figure 52).

Exploring outcomes through simulation

Shows what different investment amounts could mean over time, helping users understand potential long-term impact without implying guarantees (see Figure 53).

Sense-checking through others

Provides examples of how people in comparable life stages begin investing, helping users feel confident and justified in their initial decision (see Figure 54).

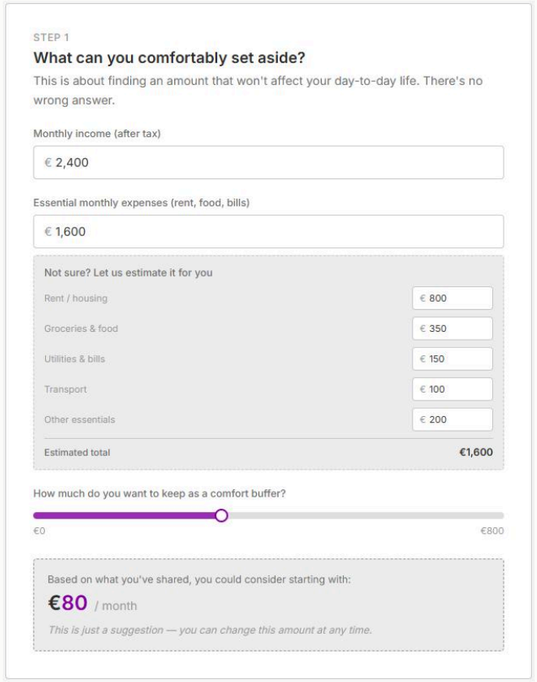


Figure 51: Helps decide on a starting amount

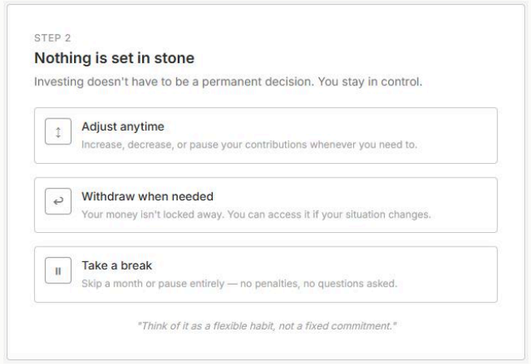


Figure 52: Investing is like saving but different

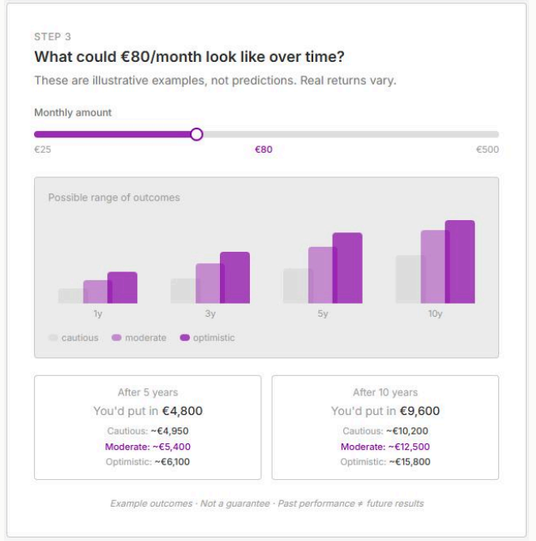


Figure 53: Exploring different scenarios through simulation

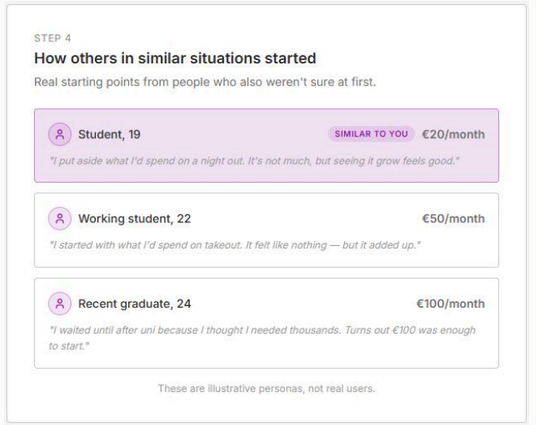


Figure 54: Social validation through stories/examples of others

Outcome-based investment advice

Target moment: “I want to invest, but I don’t know how it fits into my future life, plans, and changing circumstances.”

Connect investing to your life goals

Positions investing as a strategy to support self-defined life goals rather than as a financial product, helping users understand why they invest (see Figure 55).

See progress toward what matters

Visualizes how investment amounts and projected growth contribute to filling goals over time, emphasizing progress rather than market performance.

Anticipate future life changes

Surfaces expected income, expenses, and major life events over time to help users understand how investing fits into changing life circumstances (see Figure 56).

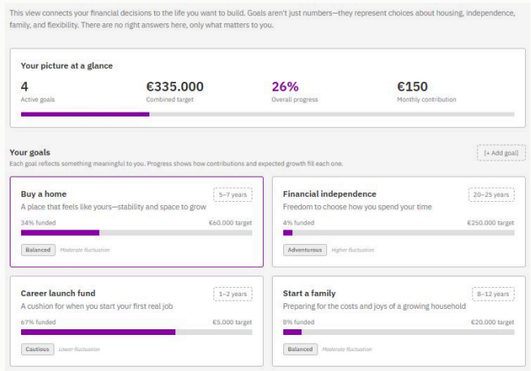


Figure 55: Goal-based investment overview

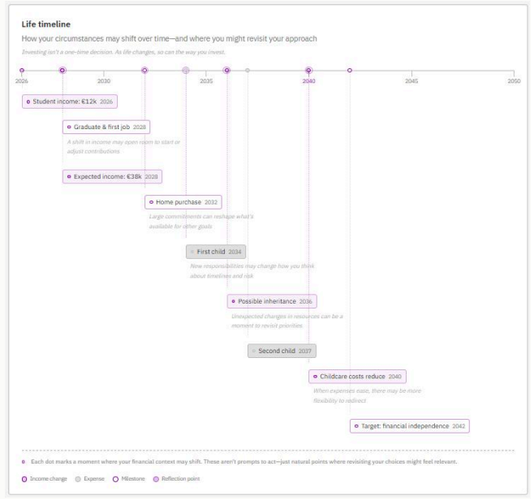


Figure 56: Investment decisions across life events

Choose strategies that fit each goal

Explains how different financial strategies, including investing and saving, align with specific goals, time horizons, and risk levels, helping users justify why a particular approach fits a given goal (see FIgure 57).

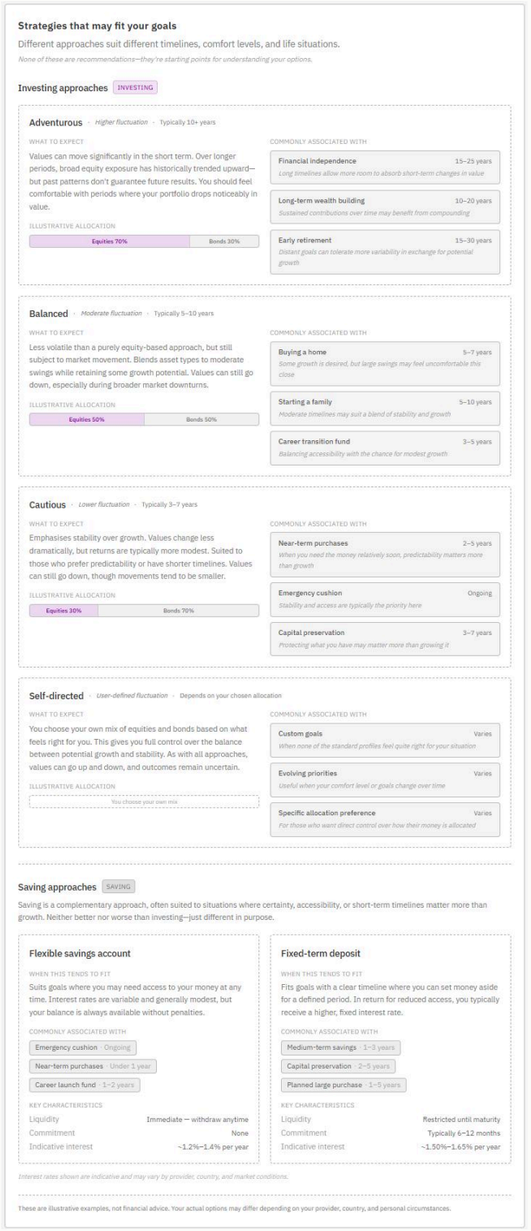


Figure 57: Linking goal type to (investment) strategy selection

Architecting the future

Target moment: "I want my investments to reflect who I am and what I care about."

Build a value-based portfolio

Enables users to select the values that matter to them, such as sustainability or supporting women-led companies, and allocate portions of their investment portfolio to reflect those priorities (see Figure 58).

Reflect on the impact you've made

Provides a yearly summary that translates value-based allocations into understandable impact indicators, such as the number of women-led companies supported or estimated CO_2 emissions avoided (see Figure 59).

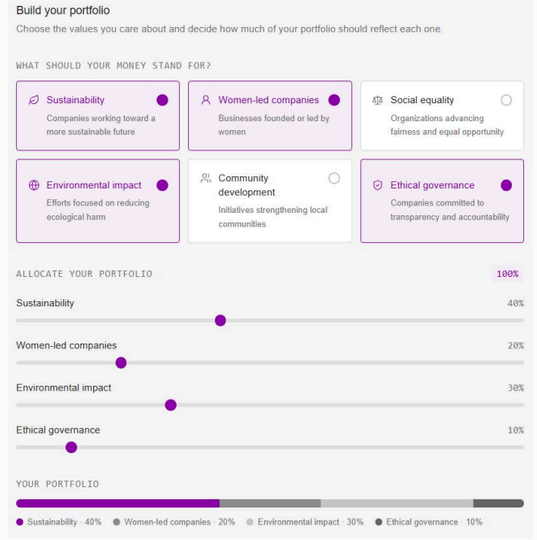


Figure 58: A value-based portfolio

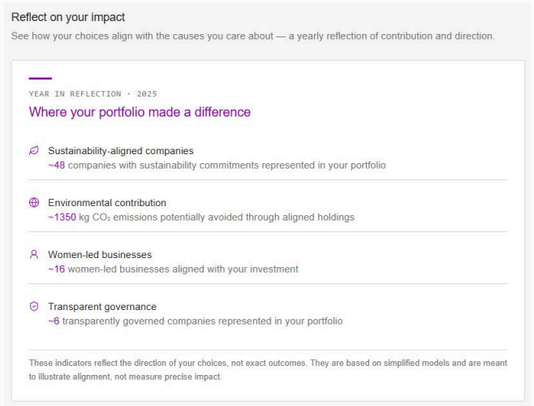


Figure 59: Annual portfolio impact summary

Comparison tool

"I want to start investing, but I'm unsure which option fits me best."

Compare before you commit

Enables users to compare different investment scenarios side by side, clarifying potential returns and making trade-offs more tangible worked examples before committing (see Figure 60).

Visualise consequences

Provides interactive simulations and example projections that translate choices into tangible long-term outcomes, helping users understand trade-offs and future impact.

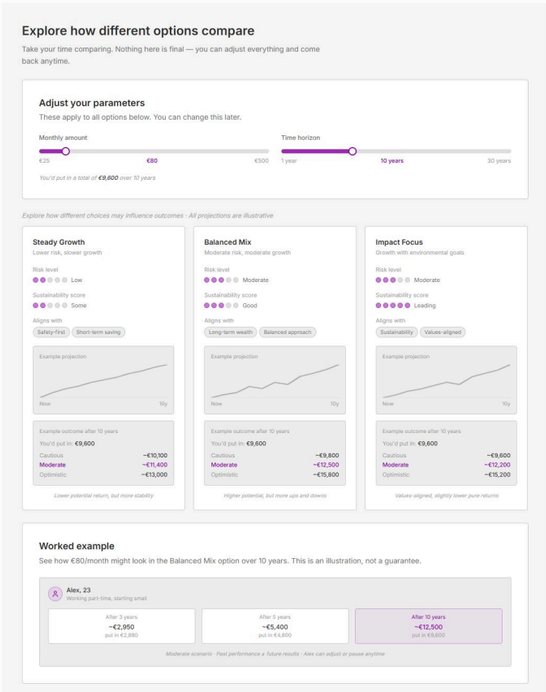


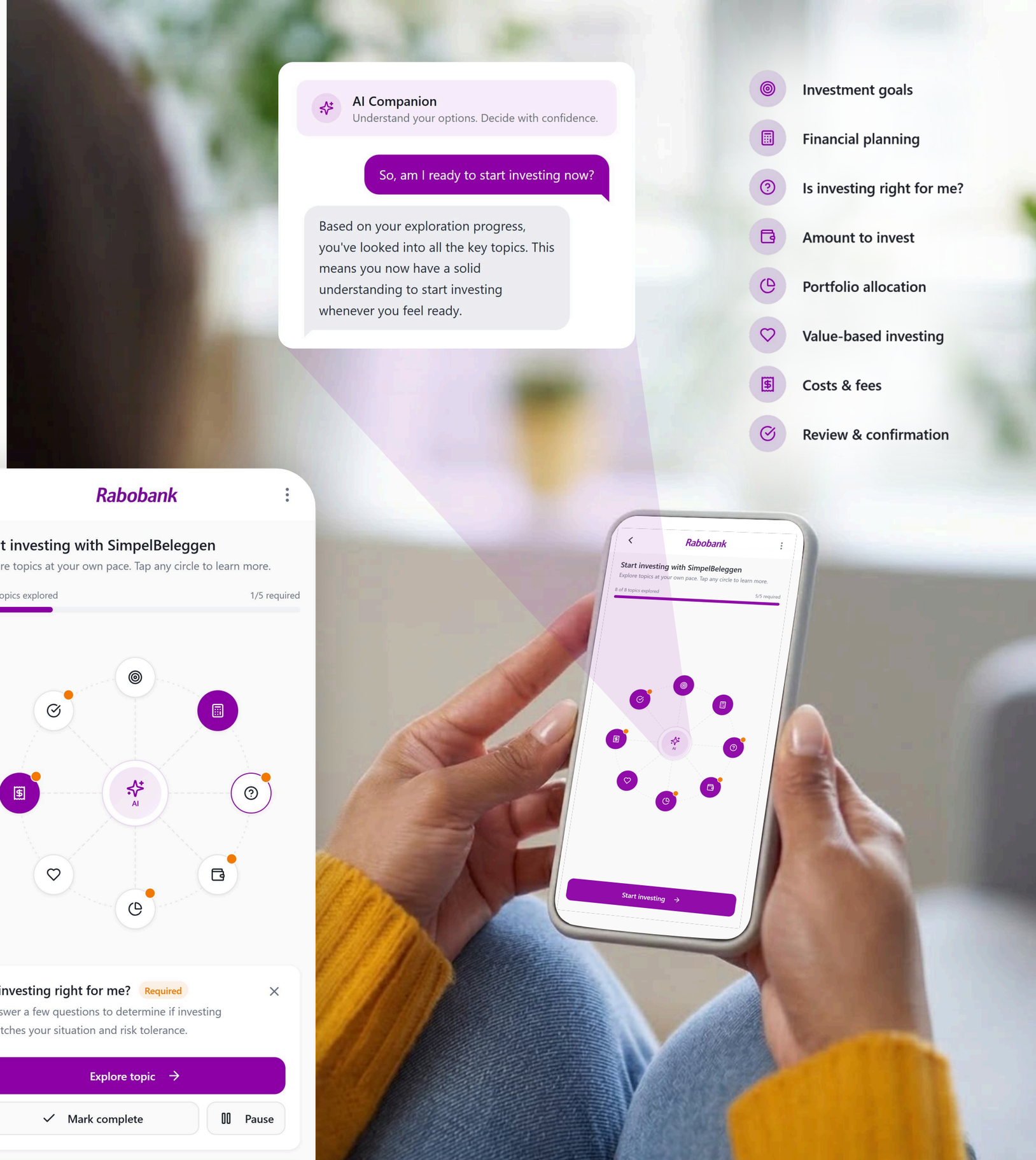
Figure 60: Comparative investment scenarios with projected outcomes

Concept 1-pager

Rabobank Simpelbeleggen
Onboarding concept

Your AI companion to confident investing

- Explore investing at your own pace
- Understand what fits your goals
- Reflect before making decisions
- Invest with confidence



Is investing right for me?

We ask a few questions to determine whether investing suits your situation and risk tolerance.

AI Companion
Have a question? Ask AI for clarification.

Please confirm you understand the following:

- I will only invest money I do not need soon.
- My investments are managed within Rabobank funds.
  You prefer to invest in the available stock and/or bond funds at Rabo SimpelBeleggen rather than selecting investments yourself. Your investments are managed within the funds by experts.
  Ask AI about this →
- I choose the allocation between stock and bond funds.
- I understand that investing involves risk.
- I may lose part or all of my investment.
- These funds follow EU sustainability guidelines.

30. Validation of the concept

This chapter evaluates the proposed concept to assess how well it aligns with the key insights and requirements identified throughout the project. The concept is first assessed against the guiding design principles, followed by an evaluation using the Female Design Lens and the trust-building AI principles. Finally, the concept is reflected upon through the innovation triad of desirability, feasibility, and viability.

Design principles

During the project, nine design principles were formulated based on the research insights to inform the design of investment experiences for young adults (see page 60). Among these, three principles specifically address how young adults should be guided when navigating investment decisions. As the final concept centers on guiding young women in their first investment decisions, these three principles are particularly relevant for evaluating the concept. Therefore, the concept is assessed against these principles, as presented in Table 6.

Table 6: Evaluation of the concept against the guiding design principles

Design Principle	Concept Implementation
Empower choice with transparency	This principle is implemented through a reflective AI companion that provides clear explanations about investment options, including both potential benefits and risks. Acting as a neutral source of information without personal incentives, the AI supports users in understanding the implications of different choices, enabling them to weigh options and make their own informed decisions.
Guide them where financial decisions happen	This principle is implemented by embedding responsive guidance directly within the onboarding journey in the mobile banking app. Because exploration is integrated into the decision-making flow, users receive explanations and support at the moments when investment decisions are being considered. This allows them to gain clarity in the moment rather than having to search for information elsewhere.
Make investing practical & doable	This principle is implemented through financial tools that help users assess their own situation and explore their goals before making investment decisions. The AI companion personalizes explanations to the user's context, while examples and simulations illustrate how investment choices could play out in practice, helping users understand how investing can be applied in real life.

Female Design Lens

In addition to the guiding design principles, the concept is evaluated using the Female Design Lens developed in this project (see page 68). The lens identifies four key needs that contribute to confidence in financial decision-making among young women: reassurance, feeling in control, peace of mind, and feeling able. As the concept aims to support young women in their first investment decisions, it is relevant to assess how it addresses these needs. Therefore, the concept is evaluated against the dimensions of the Female Design Lens, as presented in Table 7.

Table 7: Evaluation of the concept using the Female Design Lens

Female Design Lens Dimension	How the Concept Contributes
Reassurance	Reassurance is supported through the reflective AI companion, which provides guidance during the exploration and onboarding journey at moments of uncertainty. Users can ask questions and reflect on whether their considerations or doubts about investment decisions are reasonable, or whether they may have overlooked something important. This reflective interaction helps users clarify uncertainties and approach their first investment decisions with greater confidence.
Feeling in control	A sense of control is created by allowing users to explore the onboarding journey at their own pace. The interface makes progress and process structure visible by showing clear steps, defined endpoints, and the ability to pause and resume, enabling users to understand the process and remain in control of how and when they proceed. Financial tools provide insight into users' financial situation and investment possibilities, while communication emphasizes the flexibility of investing, reinforcing that users can adjust their approach over time and remain in control.
Peace of mind	Peace of mind is supported by gradually easing users into the investment process. The exploration phase allows users to build understanding before committing to investment decisions, reducing pressure and perceived risk. Interface design encourages reflection by allowing users time to think through information and revisit topics when needed, making the process feel less overwhelming.
Feeling able	Feeling able is reinforced by making investment information more accessible and easier to understand. The reflective AI companion adapts explanations to the individual user, translating complex concepts into clearer and more relevant information. By lowering the cognitive effort required to understand the topic, users have more mental space to explore investment options and build confidence in their own knowledge.

Trust building AI principles

In addition to the design principles and the Female Design Lens, the concept is also evaluated against trust-building AI design principles (see page 87). As the concept incorporates an AI companion to support users during the exploration and onboarding process, it is important to assess how this interaction is designed to foster trust. Therefore, the concept is evaluated in relation to three principles: human agency and oversight, transparency and explainability, and personalisation, as shown in Table 8.

Table 8: Evaluation of the concept against the guiding design principles

Trust-Building AI Principle	How the Concept Contributes
Human agency & oversight	Human agency is preserved by positioning AI as a reflective companion rather than a decision-maker. The user remains in control of the process and is always the final decision-maker. AI has a supplementary role and can be accessed on the user's own terms, allowing users to decide whether and to what extent they engage with it.
Transparency & explainability	Transparency is embedded by clearly communicating when AI is involved and by explaining how the system arrives at its responses. By making its reasoning visible, the AI supports users in understanding the information provided and reflecting on it critically.
Personalisation	Personalisation occurs only at the user's request. Users can ask the AI to adapt explanations to their personal context, thereby determining the level of personalisation themselves. To avoid directive interactions, the AI presents information as scenarios and possible implications rather than recommendations.

Innovation sweetspot

Finally, the concept is evaluated using the desirability–feasibility–viability framework (see Figure 61). This framework assesses whether the concept addresses user needs, can realistically be implemented with current technologies, and aligns with organisational capabilities. The evaluation of the concept across these three dimensions is presented below.

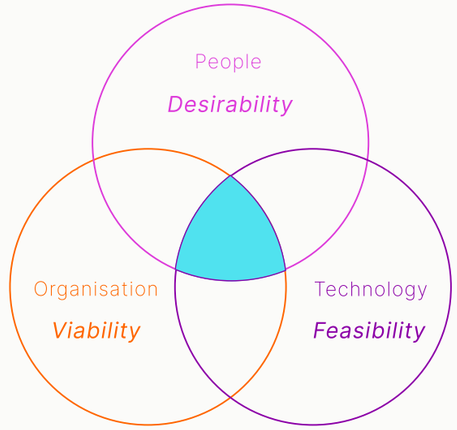


Figure 61: The innovation sweetspot

Desirability

As this project followed a human-centred design approach, the desirability of the concept is grounded in the continuous involvement of the target group throughout the design process. Insights from focus groups, co-creation sessions, surveys, and concept explorations ensured that the concept directly responds to the needs and barriers identified among young women considering investing. In addition, the concept was evaluated against the established design principles derived from the broader target group and the Female Design Lens, which specifically reflects the needs of young women (see pages 136 and 137). Assessing the concept through these constructs ensured that the proposed interaction aligns with the identified user needs, thereby demonstrating the desirability of the concept. If Rabobank were to further explore the development of this concept, additional user testing with the target group would be recommended to further refine and validate the interaction and experience in practice.

Viability

Rabobank's growth strategy increasingly focuses on attracting and retaining younger customers, particularly within the 0–30 age segment. As switching costs in digital banking are relatively low, banks must actively engage younger generations to remain competitive (Cowell et al., 2026). As a result, significant efforts within the organization are directed toward understanding and serving Generation Z in an evolving digital banking landscape.

The concept aligns with Rabobank's strategic focus on the 0–30 customer segment, as it targets 18–25-year-olds who are at the beginning of their financial journey. By making investing more accessible and understandable, the concept aims to engage young adults early in their investment journey. Because investing typically involves a long-term financial strategy, attracting young adults to Rabobank's investment products positions the bank to become a long-term financial partner in their financial lives (McKinsey & Company, 2025).

In addition, the concept addresses an important growth opportunity by making investing more accessible to young women, a group that remains underrepresented in the current investment landscape. By lowering psychological and informational barriers to investing, the concept could enable Rabobank to unlock significant

growth potential within this segment, as female-held capital is expected to rise in the coming years (McKinsey & Company, 2025).

Future relevance

Retaining these young customers within the Rabobank ecosystem will depend on the bank's ability to continue innovating and responding to evolving expectations in digital financial services. To further explore how the concept may remain relevant in the future of banking, the chapter "**Looking Ahead**" examines how developments in technology, financial markets, and digital customer expectations may influence the long-term evolution of the concept.

Feasability

To assess the feasibility of the concept within Rabobank's current organizational structure, an interview with my Rabobank mentor was conducted alongside a review of internal documentation on AI governance and development processes.

The concept extends the SimpelBeleggen onboarding experience by introducing AI-driven personalized guidance. As the concept proposes an AI-driven feature within Rabobank's digital investment environment, it must comply with the bank's internal governance for AI development.

AI governance and development process

Due to the sensitive nature of financial data and increasing regulatory requirements, AI solutions within the banking sector are subject to strict governance and oversight. AI initiatives within Rabobank are coordinated by the Global AI chapter and follow the AI Way of Working, a structured stage-gate process designed to ensure compliance with Rabobank's risk framework and regulations such as the European AI Act.

The AI Way of Working structures the development of AI solutions into four phases: Idea, Exploration, Develop & Test, and Usage (see Figure 62). Progression between these phases is controlled through stage gates, where use cases must demonstrate that specific requirements have been met before moving forward. For example, already in the transition from the Idea phase to the Exploration phase, teams must demonstrate that a valid AI use case has been defined and that several requirements have been met.

One of the key requirements in this stage is the demonstration of team capabilities, meaning that a dedicated and mature multidisciplinary team must already be in place with the expertise necessary to build and maintain the AI solution (see Figure 62).

Feasibility implications

As a large organization, Rabobank possesses extensive in-house technical capabilities that could support the development of the AI system behind the concept. The main challenge therefore does not lie in technological feasibility, but in bringing together the right multidisciplinary team.

This requirement can form a bottleneck for design-driven concepts such as the one proposed in this project. Because the concept was developed as part of a design exploration rather than by an existing product team, the technical and data expertise required to develop the AI system are not yet embedded within the project. A suitable team would therefore first need to be assembled from the relevant technical, data, and product expertise.

At the same time, current AI initiatives within the bank largely focus on internal efficiency and cost-reduction use cases, such as improving internal workflows and automating routine tasks. In this context, the Design Chapter is well positioned to identify and shape customer-facing AI opportunities, bringing customer value into Rabobank's AI use case development. However, because the chapter itself does not possess the technical capabilities to build AI systems, successful development depends on collaboration with technical and data teams.

Rabobank could therefore benefit from creating more room for early experimentation, allowing designers and technical teams to collaboratively shape AI use cases before entering the formal stage-gate process. In a highly regulated environment such as banking, governance structures are necessary to ensure compliance and risk control. However, Rabobank could explore ways to create a less bounded innovation space, where early-stage concepts can be tested with end users before having to pass through the full set of governance requirements. Such an approach could enable rapid prototyping and shorter learning cycles, which are particularly valuable in a context where AI capabilities are evolving rapidly.

According to Rabobank's AI governance blueprint, AI use cases are typically developed within their respective business domains, meaning the concept would most likely be further developed within the Investments Tribe. For this to happen, the design concept must first be translated into a clearly defined technical AI use case that aligns with the requirements of the AI Way of Working. Because the concept originated from a design exploration rather than from within an existing product team, potential collaborators may initially feel limited ownership over the concept, which can make it more difficult to build the momentum needed to move the idea forward within the organization.

Overall, the concept appears feasible within Rabobank's existing technological and organizational capabilities. Its realization depends on successfully translating the design concept into a clearly defined AI use case and building sufficient ownership within the Investments Tribe to advance it through the AI Way of Working. This illustrates that the feasibility challenge lies less in technological capability and more in aligning design-driven innovation with existing AI governance structures.

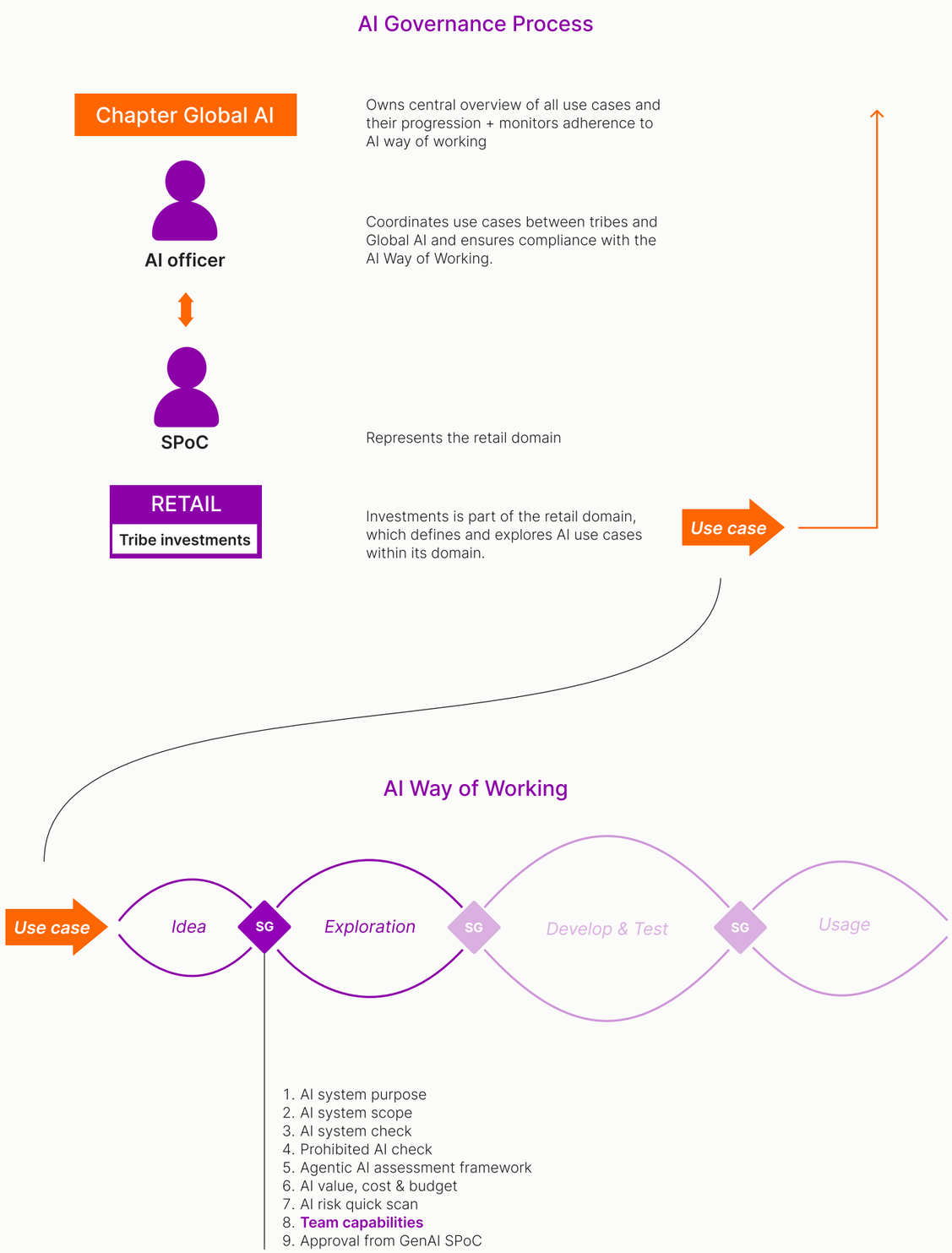
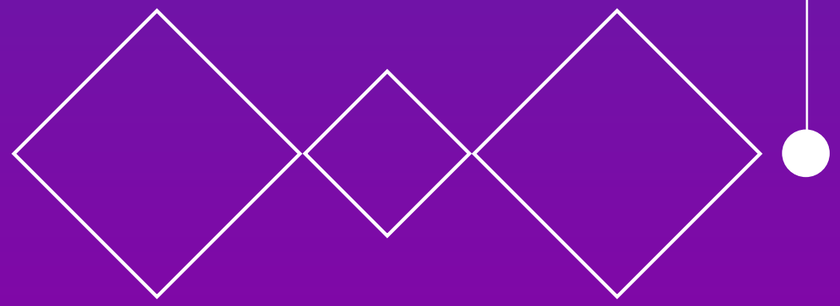


Figure 62: Governance structure and use case development process at Rabobank

Looking ahead.



This final chapter reflects on how the project's insights extend into the future of banking. It explores how the identified reflective role of AI could gradually evolve into a more orchestrating role, aligning with users' growing expectation that financial services are seamlessly embedded in daily life. This shift supports a move from product-led banking toward outcome-led experiences centred around users' personal goals. In this vision, Rabobank transitions from being primarily a product provider to becoming a continuous financial partner.

To illustrate this direction, the chapter first explores the evolving role of AI in banking and how this may shift Rabobank's positioning toward a more orchestrating role within customers' financial lives. Building on these insights, the chapter then translates the findings of this project into a strategic roadmap for Rabobank, outlining key opportunities and implications identified throughout the research. To make these directions more tangible, the strategic roadmap is complemented by a tactical roadmap that illustrates how these developments could gradually be explored in practice.

The future role of AI

Strategic roadmap

31. The future role of AI

For now, a reflective role of AI seems the most fitting approach. It supports users in understanding their options, building confidence, and making decisions at their own pace. Over time, however, as trust grows and systems mature, this role can expand. AI may gradually move from a reflective assistant toward a more orchestrating role that shapes a broader, outcome-led financial experience.

The evolving role of AI

In this next stage of development, AI moves beyond reflection and begins to orchestrate the financial journey. With consent, AI could connect relevant data, run calculations, compare scenarios, and generate insights through specialized agents. This enables a shift from product-led to outcome-led banking: the journey starts with what the user wants to achieve, such as financial security or a life goal, and products are positioned as tools to get there.

> *"When AI understands user intent and context, financial services can be surfaced only when they meaningfully support what the user is trying to achieve."*

AI and embedded finance

As a next step, this orchestrating role can extend into embedded finance, where financial services are integrated into broader digital environments rather than offered as standalone products (Ramamurthy et al., 2023).

In a super app context, users manage multiple aspects of their lives, such as housing, mobility, or planning a holiday, within one ecosystem. Rather than structuring the experience around separate financial products, the bank structures it around users' goals, life events, and moments of need.

AI enables this shift. By understanding a user's goals, behaviors, and changing circumstances, it can surface relevant financial actions at the right moment. Investing or saving no longer appears as a separate flow, but as a supportive tool embedded within broader journeys. For example, when planning future goals or responding to changes in financial breathing room.

This reinforces the outcome-led model: users do not "enter" an investing process; investing becomes a natural extension of what they are trying to achieve. AI orchestrates complexity in the background, while embedded finance ensures financial capabilities are available wherever they add value.

In doing so, orchestration and embedded finance could position Rabobank not merely as a product provider, but as a continuous financial partner embedded in people's daily lives. This may prepare the bank for a future in which banking is no longer a destination, but a trusted presence that supports decisions across life stages, channels, and ecosystems.

> *"This approach prepares Rabobank to move from selling financial products to being a trusted financial partner embedded in everyday life."*

32. Strategic roadmap

This chapter translates the evolving role of AI into a strategic outlook for Rabobank's investment services. It outlines a future vision in which AI supports more outcome-led and personalized financial experiences around users' goals. To move toward this vision, a strategic roadmap is presented consisting of three horizons that describe strategic actions Rabobank can take to make investment products more accessible to a wider audience while gradually enabling a stronger role for AI in the investment experience.

Future vision

The future of digital banking is moving toward seamless access, hyper-personalized services, and financial management that fits naturally into people's daily lives (Agarwal & Shniderman, 2026). Rather than interacting with isolated financial products, customers increasingly expect integrated ecosystems that allow them to manage different aspects of their finances on their own terms (Cowell et al., 2026). In this future, Rabobank can act as a trusted financial partner embedded in everyday life, enabling people to navigate financial decisions with confidence through guidance that is accessible, personalized, and contextually relevant.

Horizon 1: Open the door

"Investing is for people like me."

In the first horizon, Rabobank can focus on increasing awareness and accessibility of its investment products, positioning investing as something that can realistically fit into people's lives. By highlighting low entry amounts, clear risk levels, and simple starting options, Rabobank can help lower both psychological and financial barriers that often prevent first-time investors from taking action.

Communication plays an important role in this step. Product information can move away from technical, product-driven explanations toward more relatable and emotionally resonant messaging that explains why investing matters in relation to life goals and financial planning. By reducing jargon and encouraging open, non-intimidating conversations about investing, Rabobank can make the topic more approachable, particularly for individuals who lack financial role models or prior exposure to investing.

In addition, Rabobank can support early exploration by providing accessible educational resources and simulation environments that allow people to learn about investing by doing. Beyond improving its own product communication, Rabobank can also contribute to broader financial awareness by collaborating with industry partners and educational institutions to strengthen foundational financial skills from a young age onwards.

Enabling technologies

Several existing technologies can support this first step toward making investing more accessible. Customer Relationship Management (CRM) systems can help identify potential investors and reach relevant audiences (Kavlakoglu et al., 2021). Content recommendation systems can surface educational investment content that aligns with users' interests and questions (Lops et al., 2011). Generative AI can support the creation of tailored and emotionally resonant communication around investing (Hayes & Downie, 2024).

In addition, interactive simulation environments can allow users to explore investing in a safe setting and gain familiarity with investment concepts before committing real funds (eToro, n.d.; Plus500, n.d.; Saxo, n.d.; Trading 212, n.d.).

Horizon 2: Make it matter

"Investing fits into my life and goals."

In the second horizon, Rabobank can focus on making investing more personally relevant by improving digital advisory capabilities at scale. The goal is to provide accessible guidance that helps customers place investing within their broader financial lives. Rather than presenting investing as a standalone product, advice can become more outcome-oriented, helping users understand how investing supports their personal goals and long-term financial planning.

To achieve this, Rabobank can contextualize investment advice within the individual circumstances of each customer. By considering factors such as income, liquidity needs, risk tolerance, and life goals, digital advice can support the creation of personalized financial plans that integrate both short- and long-term objectives. This allows investment strategies to be tailored to each customer's situation while helping them understand how different products contribute to achieving their goals.

In addition, personalization can extend to customers' values and priorities. For example, investment choices can reflect preferences such as sustainability or other societal considerations, enabling customers to align their portfolios with what matters to them. By supporting more customized portfolio construction and goal-oriented financial planning, Rabobank can make investing more meaningful and relevant to a wider range of customers.

Enabling technologies

Advanced data analytics and generative AI can enable more personalized and goal-oriented investment guidance by translating customers' financial situations, goals, and preferences into tailored recommendations (Yang & Lee, 2024). By leveraging customer data responsibly, Rabobank can create more personalized digital banking experiences that help users understand how investing fits within their broader financial plans. In addition, portfolio personalization technologies such as direct indexing can allow investors to customize their portfolios more precisely. With direct indexing, investors hold the individual securities that make up an index rather than a single fund tracking it, allowing them to adjust allocations, exclude certain companies or industries, or increase exposure to sectors they believe in (Knowles, 2024). This enables portfolios to better reflect individual goals, preferences, and values such as sustainability.

Horizon 3: Connect the dots

"My finances work together seamlessly."

In the third horizon, the focus shifts from individual financial products toward the broader financial lives of customers. Rather than treating banking services as separate offerings, Rabobank can move toward a connected financial ecosystem in which investments, savings, spending, and financial planning work together to support customers' overall goals. Financial decisions are no longer experienced in isolation but become part of a continuous financial journey that reflects the user's full financial situation.

The first step in this transition is integrating financial products into a connected ecosystem so they no longer operate in isolation but support a unified financial experience. Building on this foundation, financial data can increasingly be connected across different providers, enabling customers to combine information from multiple institutions and gain a more complete overview of their finances. Younger generations increasingly expect this level of flexibility and are willing to share financial data when it results in more meaningful services, such as better recommendations or easier financial management (Cowell et al., 2026). Research also shows strong demand for integrated financial experiences, with especially many young consumers interested in connecting third-party tools and managing their finances through a single digital platform (MX, 2024).

> *"The real value of digital banking is not about the number of features squeezed into an app, but how well it serves customer needs at a given moment."*
>
> (Cowell & Scales, 2025)

With a more complete financial picture available, financial services can increasingly be coordinated to present the most relevant insights, recommendations, or actions at the right moment. At the same time, financial services can extend beyond traditional banking channels by integrating into the digital environments where customers already spend their time, enabling more seamless and contextual financial experiences.

Enabling technologies

Several technologies can support Rabobank in moving toward a more connected financial ecosystem. First, integrating financial products requires a shared digital infrastructure that allows data and services from different banking domains, such as payments, savings, and investments, to interact rather than operate in isolation. Building on this foundation, open banking infrastructure and application programming interfaces (APIs) enable financial data to be securely shared across different providers, allowing customers to combine information from multiple institutions into a more complete overview of their finances (Goodwin, 2024). With this connected financial picture available, agentic AI systems can help coordinate financial services by directing user requests to the most relevant tools and surfacing appropriate insights or actions at the right moment (Chorev, 2025). Finally, embedded finance enables financial services to extend beyond traditional banking channels by integrating them into the digital environments where customers already spend their time (Ramamurthy et al., 2023).

A strategic pathway forward

Together, these horizons outline a possible pathway for how Rabobank could evolve its investment services toward a more connected and user-centered financial ecosystem. The strategic roadmap on page 150 provides a high-level overview of this direction, while the tactical roadmap on page 152 translates these ideas into more concrete steps. These roadmaps should be seen as a guiding framework rather than a fixed plan. How these directions are implemented will ultimately depend on further exploration and decisions within Rabobank.

Future vision

Rabobank is a trusted financial partner embedded in everyday life, enabling people to navigate life's decisions with confidence through guidance that is accessible, personalized, and contextually relevant.

Open the door

Making investing understandable, relatable, and attainable by explaining its purpose and relevance in everyday life, enabling more people to see investing as something for them and take their first step.

0-1 year

Make it matter

Personalizing investment strategies to reflect individuals' goals, values, life plans, and financial realities, making investment decisions more meaningful and relevant.

1-3 years

Connect the dots

Bringing financial services together across products, providers, and platforms, moving beyond product-led banking toward more connected, seamless, and outcome-oriented financial experiences.

3-5+ years

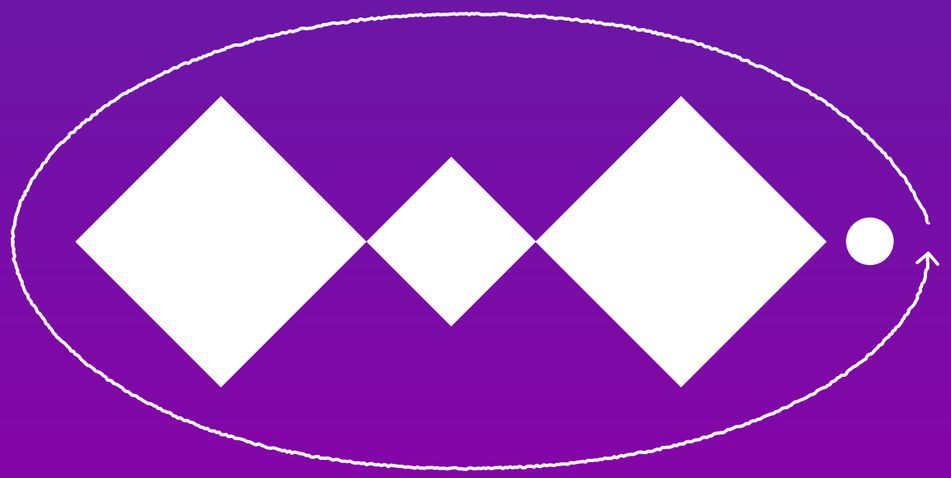
Rabobank

Strategic Roadmap

	Open the door *0-1 year*	Make it matter *1-3 years*	Connecting the dots *3-5+ years*	**Future vision**
User value	Confidence → Confidence → Confidence Accesibility Clarity Relatability	Personal relevance Control Decision guidance → Proactive guidance	Seamlessness Holistic overview	
Key activities	Increase awareness and accesibility Humanize communication Provide education and safe exploration	Connect investing to personal goals Personalize digital investment guidance Align portfolios with personal values	Integrate financial products internally Connect financial data across providers Orchestrate financial insights and services Extend finance into everyday environments	Rabobank is a trusted financial partner embedded in everyday life, enabling people to navigate life's decisions with confidence through guidance that is accessible, personalized, and contextually relevant.
Enabling technologies	**CRM** for identifying potential investors **Content recommendation systems** to show relevant investing content **Generative AI** for tailored marketing commmunication **Simulation environment** to let users safely explore investing	**Financial planning visualization tools** for goal-based financial planning **Generative AI** & financial **data analytics** for personalized guidance **Direct indexing** for customizable portfolios	**Shared digital infrastructure** for integrated financial services **Open banking & APIs** for connected financial data **Agentic AI systems** for orchestrated financial guidance **Embedded finance** for contextual financial services	
Partners	**Educational institutions -** strengthening financial literacy from a young age **Industry partners -** joint initiatives promoting responsible investing and financial awareness	**Data and analytics providers -** supporting personalized insights and ESG integration **Fintech & wealth technology partners -** enabling digital advice and portfolio personalization	**Open banking & data partners -** enabling secure financial data sharing **Digital platform partners -** enabling embedded financial services	
Business value	Market expansion Competitive positioning	Stronger customer engagement Increased assets under management Customer retention and loyalty	Expanded ecosystem presence New distribution channels Higher customer lifetime value	

Rabobank
Tactical Roadmap

Evaluation.



This chapter reflects on the outcomes and process of the project by first evaluating the results in relation to the research objective. It brings together the key insights gained throughout the study and considers their meaning, implications, and limitations, followed by the conclusion and a personal reflection on the project as a whole.

The chapter begins with the discussion, in which the main findings are interpreted in a broader context. This section reflects on their significance, addresses the limitations of the research and design approach, and outlines implications for practitioners and future research. Following this, the conclusion answers the central research question, How can Generative AI support young women in taking a responsible first step into investing?, by synthesizing the key insights from the research and design process into a clear, final answer. Finally, the chapter ends with a reflection on the project process, offering a personal perspective on working within the financial domain and in collaboration with Rabobank, reflecting on the experience of designing with AI, and closing with broader final thoughts on the project and its outcomes.

34. Discussion

The main findings

The findings reveal that barriers to investing are not only informational but also emotional and structural, forming an foundatinal filter, motivational wall, and execution maze across the investment journey. For young women, confidence to start investing develops when peace of mind, feeling able, feeling in control, and reassurance are supported together. Among these needs, reassurance proved particularly difficult to fulfil within the current investment landscape for first-time investors. The capabilities of Generative AI were therefore explored as a way to address this gap, leading to the positioning of AI as a reflective companion within a more exploratory onboarding experience.

Beyond the knowledge gap

Much of the existing discourse on the investing gap frames a lack of financial knowledge as the primary barrier preventing young adults from investing (Poets, 2025; Prins et al., 2021). However, the findings of this research challenge this mainly knowledge-focused perspective. While financial literacy plays a role, the results indicate that barriers to investing are more complex and should be understood as a combination of emotional, social, and structural factors.

In particular for young women, reassurance emerges as a key factor, shaping how they approach and navigate investment decisions. This suggests that the challenge is not only about informing users, but about supporting them in feeling confident and in control when taking action. As a result, designing more accessible investment solutions requires addressing the broader emotional and behavioural dimensions that shape financial decision-making.

Trust in technology as a design challenge

An important insight from this research is that technological trust plays a central role in shaping engagement with AI-driven investment services. While existing literature often emphasises trust in financial institutions (Cheng et al., 2019), the findings suggest that for young adults interacting with digital banking interfaces, trust in the underlying technology may be even more decisive. Institutional credibility alone may therefore not be sufficient to encourage engagement if the technological interaction does not feel trustworthy.

This shift can be understood in the context of Gen Z, the current generation of young adults, who have grown up with seamless digital services and increasingly evaluate financial institutions through the quality of their digital experiences (Williams, 2025). As financial services become part of a broader digital ecosystem, banks are increasingly perceived not only as institutions but also as digital service providers competing with fintech and technology companies (Cowell & Scales, 2025). For traditional banks such as Rabobank, this implies that maintaining trust among younger generations requires designing digital interactions that actively foster trust in the technology itself, for example through transparency, maintaining human agency, and responsible personalisation that is explainable and respects user control.

From linear funnels to exploratory onboarding

In the banking industry, onboarding processes are typically designed to minimise friction and guide users as quickly as possible toward product adoption. This approach assumes a linear decision process in which customers first learn about a product, then choose, and finally commit.

However, the findings of this research suggest that financial decision-making is often more exploratory, with individuals moving between exploring, comparing, and reflecting before committing. When onboarding experiences fail to accommodate this exploratory process, users may disengage or leave the flow to seek information elsewhere. This perspective challenges the prevailing industry focus on ever-shorter conversion funnels. Rather than simply reducing steps, onboarding could remain structured and concise while allowing exploration on demand. In discussions with Rabobank employees, this circular approach to onboarding was perceived as a novel perspective, suggesting opportunities for banks to rethink how investment onboarding supports exploration and gradual decision-making.

The research approach

In this project, an additional design step was introduced after identifying user needs to explicitly explore the role of AI within the solution space. This proved valuable, as AI differs from many traditional technologies by acting as an active presence in interactions, with behavioural characteristics that shape how users experience and trust the system. Exploring the role of AI therefore enabled the translation of identified needs, such as reassurance, into an appropriate interaction approach. By defining the intended role of AI before moving into concept development, the project ensured that human needs guided design decisions, rather than allowing available AI capabilities to dictate the design of the solution.

In addition, starting with human-centred exploration rather than a literature-first approach allowed for a more open understanding of users' needs and perceptions. This reduced the risk of framing the problem through existing assumptions about the target group or the technology, and instead grounded the project in lived experiences. As a result, AI was consistently positioned as a means to support user needs, rather than as the starting point or end goal of the design.

Limitations

Despite the project being grounded in user research and close collaboration with Rabobank and TU Delft mentors, several limitations should be acknowledged.

First, the research focused on the Dutch context. Financial behaviours are strongly shaped by cultural norms, and the Netherlands is characterised by a strong saving culture, with households investing less frequently than the European average (De Nederlandsche Bank, 2025). As a result, the findings should be interpreted with caution when applied to other geographical contexts, where financial attitudes and investment behaviours may differ.

Second, the participant samples in the human-centred sessions contained an overrepresentation of students. While this group represents an important segment of the target audience of young adults, it may not fully reflect the diversity of financial situations and experiences within the broader population aged 18–25.

Third, the proposed AI concept was not technically implemented. The prototypes used in the testing phase relied on simulated AI interactions rather than a functioning AI system. While this allowed participants to evaluate the interaction conceptually, it may not fully capture how users would respond to a live AI system in practice.

Fourth, the research focused specifically on young women, as this group is currently underrepresented in investment participation.

While this focus enabled a deeper understanding of their specific barriers and needs, further research is required to examine whether the proposed concept can also support a broader audience of young adults.

Finally, as the project was conducted by a single researcher acting as both designer and analyst, the interpretation of qualitative data may have influenced how problem areas were framed and prioritised. This is reflected in the clustering of qualitative insights, where interpretive decisions shaped how themes were grouped and translated into a specific problem framing. While user feedback and triangulation helped to mitigate this, the interpretive nature of qualitative research means the findings are not entirely neutral. Future research could involve multiple researchers or more participatory forms of analysis to broaden perspectives and reduce subjective influence.

Practical implications

The findings of this research offer several implications for traditional banks and practitioners.

First, investment services should move beyond a purely informational approach and instead be designed to actively build users' confidence to act. This requires addressing the underlying drivers of confidence rather than focusing on knowledge provision alone. For young women, this includes cognitive, relational, agency, and emotional factors, indicating that effective solutions must go beyond education to support how decisions are experienced and made.

Second, for traditional banks, trust should be designed at the level of the digital interaction, not only at the institutional level. While banks such as Rabobank benefit from established institutional credibility, the findings suggest that this alone may not be sufficient to engage younger users. In thecontext of AI, practitioners should ensure that users remain in control of decisions, understand how AI contributes to outcomes, and experience personalisation as supportive rather than directive. Embedding these qualities into digital interactions is essential, as trust in the technology directly shapes how users perceive and engage with the product itself.

For practitioners, this project further highlights several implications for user-centred research and the design of AI-enabled products.

First, collaborative research formats such as focus groups and co-creation sessions can be valuable for uncovering shared insights, as participants build on each other's perspectives. This can help identify common pain points and highlight which barriers are most prominent across users.

Second, when designing AI-enabled products, practitioners should explicitly define the role of AI early in the design process. Clarifying how AI should support users before developing solutions helps ensure that design decisions are guided by user needs, rather than by available technological capabilities.

Finally, presenting the concept at a relatively conceptual level proved beneficial for initiating conversations with stakeholders. By not embedding the concept within Rabobank's existing interface, branding, or infrastructure, immediate concerns related to feasibility and implementation were avoided. This created space to reconsider current structures and sparked new thinking among stakeholders. In practice, this suggests that keeping early concepts intentionally abstract can reduce initial resistance and encourage exploration of new possibilities before aligning with existing systems.

Future research

This research opens several avenues for future research. First, further research is needed to examine whether the proposed concept can be applied to a broader audience. Although the concept was developed from a female-driven perspective, participants indicated that they would not prefer a gendered investment product, as this could reinforce feelings of difference. Future research should therefore explore how these underlying design choices can be integrated into general investment onboarding in a way that addresses the needs of young women while remaining relevant for a broader audience.

Second, the concept should be further developed and tested in a technically implemented environment. The current evaluation relied on conceptual prototypes with simulated AI interactions. Future studies should investigate how users interact with a functioning AI system and how trust develops during real use over time.

Finally, future research could explore differences in investment needs across life stages. While this project focused on young women as a group and their gender-specific needs, variations may also exist within this group based on life stage. For example, someone starting their career may require different guidance and tools than someone who has already built greater financial stability. Further research is therefore needed to explore how the investment experience can be further personalised to account for these differing needs.

Together, these directions highlight the opportunity to further develop AI-supported investment experiences that are both inclusive and responsive to the diverse and evolving needs of users.

33. Conclusion

This thesis set out to explore the following research question:

How can Generative AI support young women in taking a responsible first step into investing?

Human-centred research shows that young adults face several interconnected barriers to investing beyond commonly cited challenges such as lack of knowledge or perceived risk. Across the investment journey, these barriers manifest as three stages: an initial filter, a motivational wall, and an execution maze. Limited financial education, missing role models, and socially constructed perceptions together create the initial filter. Strong saving norms and life-stage constraints, such as limited budgets and short-term focus, form the motivational wall. Finally, fragmented information combined with scepticism toward financial institutions creates an execution maze that complicates taking the first step into investing.

While these barriers affect young adults more broadly, this research examined how they manifest for young women, a segment that remains structurally underrepresented in the current investment landscape. The analysis shows that these barriers translate into four key needs: peace of mind, feeling able, feeling in control, and reassurance, which shape women's confidence to start investing. The Female Design Lens shows that confidence develops when these interconnected emotional, cognitive, social, and agency-related needs are addressed together.

Reassurance emerged as a key need during financial decision-making. Generative AI is well-positioned to provide this reassurance through conversational interaction, offering accessible support in moments of uncertainty. The findings show that this support is most effective when AI takes on a companion role, allowing women to remain in control while engaging with AI when needed. In this role, AI acts as a reflective facilitator rather than a directive advisor, helping them clarify options and build confidence in their investment decisions.

The design intervention focuses on helping young women move from consideration to action when starting to invest. The concept reimagines the investment onboarding of Rabobank SimpelBeleggen, shifting from a rigid linear flow to a circular interaction model that mirrors how young women make financial decisions: exploring, comparing, and reflecting before committing. Instead of requiring early commitment, users can navigate topics in their own order, revisit information, and engage with topics relevant to their decision-making, such as personal goals and value alignment. The onboarding maintains a clear structure while AI enables deeper exploration on demand: users can ask questions, personalise explanations, and connect decisions across topics. In this way, AI acts as a reflective companion, transforming onboarding from a compliance-driven funnel into a supportive decision-making framework.

Generative AI can therefore support young women in taking a responsible first step into investing by serving as a reflective companion that provides reassurance while enabling a more exploratory, confidence-building onboarding experience. Grounded in human-centred insights, aligned with Rabobank's internal capabilities, and focused on the underrepresented segment of young female investors, the resulting concept is both practical and strategically relevant.

In a digital banking landscape where customers can easily switch between providers, banks must move beyond offering products alone. This concept represents a first step toward Rabobank's evolution into a trusted financial partner embedded in people's everyday lives.

35. Reflection

The financial sector and investing

At the start of this project, I did not feel a strong affinity with the financial sector. I perceived it as bureaucratic, complex, and not a domain where innovation or design would play a major role. However, working within the context of Rabobank gradually changed this perception. Seeing that Rabobank's Design Chapter consists of more than one hundred designers and continues to grow was both surprising and inspiring, demonstrating that even a highly regulated sector like finance offers significant opportunities for design-driven innovation.

Throughout the project, I also became increasingly aware of how central money is to people's lives. Financial decisions shape opportunities, security, and long-term wellbeing, yet money often remains a difficult topic to openly engage with. This made me realise that designing for finance is not just about money, but about helping people shape the opportunities and security in their lives.

Engaging with the topic of investing during this project also became a personal learning journey. Before starting my graduation project, I had never seriously considered investing myself. To truly understand the topic, I had to start from scratch. Reading extensively and listening to podcasts helped me build a basic understanding, but at some point I realised that the only way to fully grasp investing was to experience it myself. I therefore decided to take my own first step into investing.

Through this process, I began to see investing in a broader light. Money is one of the most powerful mechanisms shaping our world. It determines what grows and what slowly fades away. Investing enables individuals to build their own financial independence while simultaneously directing capital towards innovations that move society forward. I am grateful that this graduation project gave me the opportunity to explore this topic so deeply and to discover the potential that investing can have, particularly for young women, a group that I also belong to.

> *"When you invest, you become an architect of the future."*
>
> Jacqueline van den Ende
> The Female Fix Podcast

At the same time, this project was also confronting. I realised how surprising it was that I had never seriously thought about investing before, nor had I ever discussed it openly with others. Seeing how large the gender gap in investing still is further strengthened my motivation to contribute to change.

This became particularly tangible when I involved my own social circle, especially my friends, in the concept development process. What began as research conversations quickly turned into open discussions about investing, a topic many of us had never talked about before. Simply starting the conversation lowered the barrier significantly. Seeing how these discussions encouraged some of my friends to explore investing themselves gave me a strong sense of fulfilment, as it showed how powerful it can be to make financial topics more open and discussable.

Designing with Artificial Intelligence

AI presents an overwhelming number of possibilities, which can easily shift attention toward what the technology can do rather than what users actually need. Throughout this project, I learned that the true potential of AI lies not only in efficiency or automation, but also in its ability to combine functional capabilities with emotional engagement. When applied thoughtfully, AI can enable products to become more personal, adaptive, and supportive, strengthening the relationship between users and the systems they interact with.

I also experienced this dynamic myself during the design process. At one point, my supervisor Sander jokingly mentioned that I might need my own reassuring AI. In many ways, I realised that I had already been using AI-driven conversational tools in this way. While I often already had a direction in mind, discussing ideas with AI helped me challenge my own reasoning and feel more confident in my decisions. Although AI also raises valid concerns about its societal impact, including the replacement of certain jobs, this project helped me see that it can also have meaningful applications that support people not only functionally but also emotionally. This reinforced an important lesson for me as a designer: even when working with emerging technologies, human needs and experiences must remain at the centre of innovation, ensuring that AI is designed to support and empower people rather than replace them.

Before starting this project, I set myself the goal not only to explore the strategic role of AI in solving user problems, but also to actively experiment with the technology myself. Throughout the project, I used tools such as ChatGPT, Gemini, Loveable AI, and Figma Make to support writing, thinking, and prototyping. This hands-on experimentation helped me better understand both the possibilities and limitations of AI in the design process.

One way AI proved particularly valuable in my design process was as a conversational partner. It functioned as an always-available sparring partner that helped me reflect on ideas, explore alternative directions, and challenge my own reasoning during decision-making moments. One of the competencies I aimed to improve at the start of this project was working at a higher pace, rather than getting stuck on the same issue for too long. In this regard, AI proved especially helpful. It allowed me to quickly transform doubts and uncertainties into possible directions to explore, helping me maintain momentum in the design process.

AI-driven tools played an important role in rapid prototyping during this project. As my expertise lies more in strategic product design than interface design, tools such as Figma Make and Loveable AI helped me quickly translate conceptual ideas into interactive prototypes. This allowed me to explore interaction design, particularly in the semi-structured interviews where participants could experience the interaction flows. At the same time, I deliberately kept the prototypes at a relatively low-fidelity level and avoided fully integrating the concept into Rabobank's app environment. This allowed the prototypes to function as conversation starters with stakeholders. While AI helped visualise ideas efficiently, relying on these tools may also have limited the exploration of alternative ways the content-specific tools could have been designed.

Another limitation I experienced when using AI in the design process is that it can create a false sense of feasibility. Because tools such as vibe-coding make it possible to visualise concepts very

quickly, ideas can appear easier to implement than they actually are. While temporarily setting aside technical constraints can be valuable during early exploration, I noticed that this sometimes shifted my attention away from the technical implications of certain design choices. Especially in a highly regulated and technically complex environment such as banking, it is important to consciously reflect on how concepts would fit within existing infrastructures.

Lastly, I want to reflect on the role of AI as a thinking partner in this project. While AI was a valuable tool for exploring ideas, I also became aware of the risk of relying on it too much. Because AI is designed to keep conversations engaging, it often tends to agree rather than challenge your thinking. This made me realise how valuable the conversations with my TU Delft supervisors, Peter and Sander, were throughout this project. Their willingness to question assumptions and challenge ideas pushed my thinking to a deeper level. For me, this reinforced an important lesson: while AI can support the design process, critical human dialogue remains essential.

Some final thoughts

Looking back on this project, one of the key lessons for me has been experiencing the difference between designing in academia and in practice. At university, there is a lot of freedom to explore ideas creatively and shape your own design approach. In contrast, designing within a large organisation such as Rabobank requires adapting to established ways of working, priorities, and constraints. Finding the right balance between maintaining your own design perspective and aligning with organisational structures can be challenging. This highlighted the need to intentionally create space for exploration alongside established ways of working.

On a personal level, this project helped me become more confident in speaking up and trusting that my perspective has value. As someone at the beginning of her career, it can feel difficult to contribute in established environments, but I have come to realise that fresh perspectives are exactly what organisations need.

Finally, this project shaped my view on the future of AI. The coming years will be crucial in defining how AI is integrated into our lives. What once felt new is already part of everyday routines. While the shift towards more agentic AI offers many opportunities, it also raises important questions. AI may be “book-smart, but not street-smart,” highlighting the need to keep human judgement involved. In this way, the difference between theory and practice also applies to AI: what works in theory does not always translate directly to real-life contexts. Ensuring that human thinking remains part of these processes will be essential in shaping meaningful and responsible applications of AI.

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