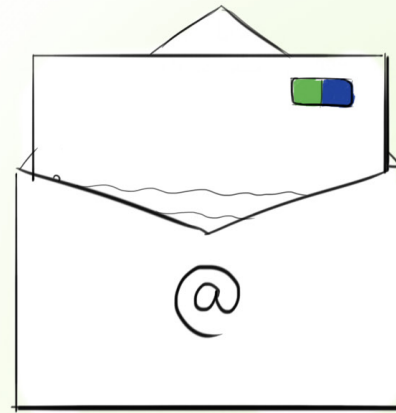# Start your future today

Developing a future self tool based on predictive knowledge
for younger participants to feel more in control of their pension
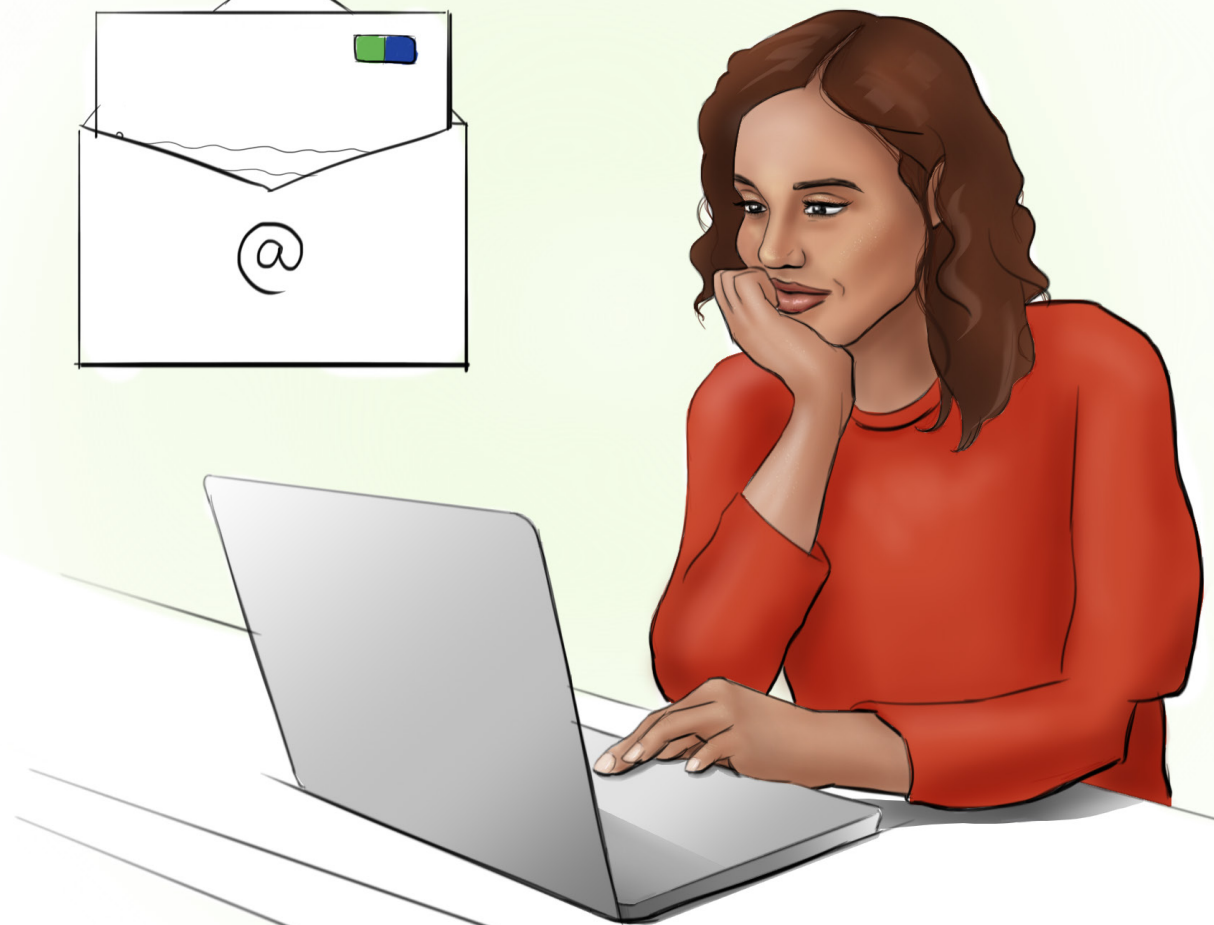
Lisa Stevens

TUDelft   PGGM

"Wie dan leeft, wie dan zorgt."

English: "Who lives by then, cares then."
- PFZW participant (user interviews)

Preface

On the weekends I work as a waitress at an idyllic teahouse. I did not even know that I was already accruing pension until I got an Email saying that my pension would be transferred to a new pension fund. The new pension fund also mentioned an upcoming webinar where they would explain the basics. Me being me, this sparked my interest and I made sure to take notes while watching it. As you can imagine, I never really looked at those notes again afterwards.

Fast forward a few months later, I was looking for a graduation project and stumbled upon this project for PGGM. It drew me in since it was a topic that was still very unfamiliar to me, which meant that I could dive into and unravel it piece by piece until it would start to make sense to me. Being completely honest, I am definitely not a pension expert by the end of this project. The topic remains rather complicated. But I would like to think that I at least have a basic understanding now that will help me navigate the adult world by the time I am officially a graduate.

Without further ado, I present to you my graduation project. I hope you enjoy it and learn something new along the way.

Happy reading!

Lisa Stevens

Executive summary

Do you remember the phrase "they grow up so fast"? Personally when I hear this, I immediately get flashbacks of my grandmother smiling proudly from ear to ear while saying this about me and my siblings. Maybe for you this was a parent, a neighbour, a teacher or a family friend. Or maybe you have a different memory with this phrase altogether.
Babies turn into children, children grow up to be teenagers and before you know it those little munchkins have graduated and found their first 'real' job. Do we not all wish we could be forever young? We are all full of hopes and dreams for the future, never having enough time to do it all. Always studying, working and growing day by day. Some of us may already have dreams like travelling the world for when retirement comes around. Others may have different plans like learning to play the violin. Either way, you want to make sure that you can enjoy your retirement to the fullest, worry-free.

Do you know whether you will have enough saved by then to turn your dreams into reality? Have you ever actually looked into your pension before? And do not lie to me, or rather yourself, now. This is a safe space, no judgements. In fact, most of us have never really bothered to look into it before. So you are definitely not the only one if you have not. But why not?

A new pension system is on its way, which makes this the perfect time to dive deeper into this topic from now on. The upcoming changes should make pension more transparent and personal for participants. One of the consequences of these changes is the fact that the emphasis of pension accrual will be even more so on the start of people's careers. This, along with the fact that they still have plenty of time to accrue their pension and make any changes if preferred, makes it especially interesting for young participants to engage with their pension. This way they can ensure a worry-free retirement. However, especially younger people have a difficult time imagining their future self and making plans for the long term. All these big life decisions can be rather overwhelming.

The goal of this project is to make younger participants [21-35 years] in the care and welfare sector feel more in control of their own pension by making them aware of the impact that they can have on it themselves. The idea is to develop a concept of a 'future self' tool for this that uses predictive knowledge.

A process of literature research, two rounds of interviews with participants and interactive workshops has led to a set of criteria for this 'future self tool'. One of the main findings is that participants, of all ages, are just not that interested in their pension. Some can worry about it or feel bad that they have not looked into it before, but no one really does anything about it. No matter someone's age, it just still feels too far away. This is why a pension specific tool is not going to do the trick here.

The Toekomstplanner (EN: Future planner) therefore does not focus on pension, but rather on the life events that younger participants are interested in already. From the interviews I have learned that especially decisions regarding moving to a new home or career related events are things that the target group already thinks about or even works towards. These decisions also have an impact on a person's future, including their pension.
The Toekomstplanner is an add-on to a participant's Email platform. Participants can use the tool to create a checklist for a life event they plan to look into. The Toekomstplanner uses predictive knowledge to help the participant make a checklist for this life event that fits their current and future personal situation well. Pension tasks related to the life event are included in the checklist to introduce the participant to their pension in a more low key way. Next the Toekomstplanner again uses predictive knowledge to help the participant find a suitable moment to sit down and work on the checklist.
In addition, The Hooked model by Nir Eyal was applied to the concept to design for a habit-forming tool that is ingrained in participants' daily lives.

When people are more knowledgeable, this decreases negative emotions like worry and increases their feeling of being in control. When people feel more in control they are also more likely to prefer delayed rewards like pension over instant gratification. Positive experiences with the Toekomstplanner elevate PFZW's customer satisfaction to a new level and the tool provides PFZW with an easy way to connect with this younger target group that is relatively hard to reach for the pension fund.

The concept of the Toekomstplanner is not ready for implementation yet. The discussion section of the report reflects on the concept so far and presents recommendations for further research and exploration.

hollandsnieuwe.

08:25
vr 25 februari

Afgelopen dinsdag heb je aan de checklist 'Verhuizen' gewerkt.

Wil je later hier verder aan werken?

| Ja | Nee, ik ben klaar |

Table of contents

1. Introduction

PFZW has heard from their older participants that in hindsight they would have preferred to have looked into their pension earlier, so they would have been able to accrue more pension. Most people just assume pension funds work everything out and they do not really actively look into their own pension until a few years before retirement. Should they feel like they will not have enough by the time they retire, there is not a lot of time left to make changes that would contribute to their pension. PFZW wishes for every participant to be able to enjoy a worry-free retirement. And as PFZW's pension fund service provider, PGGM makes an effort to make this possible for the participants through the investments they make and other projects they execute.

Younger people just starting their work in the care and welfare sector still have plenty of time to accrue their pension and look into additional ways of saving pension for example if preferred. Considering this, along with the fact that the emphasis of pension accrual in the new pension system will be on the start of people's careers, **it would benefit young people to already start getting involved in their pension.**

The **goal** of this graduation project is to make younger people [21-35 years] in the care and welfare sector feel more in control of their own pension by making them aware of the impact that they can have on it themselves. The idea is to develop a concept of a 'future self' tool for this that uses predictive knowledge.

Reader's guide
The first chapters dive deeper into the context of this project and provide insight into the process that in the end has led to a concept future self tool (chapter 7).

Chapter 2 gives an idea of the environment that PGGM and PFZW operate in, using a 4C analysis. In the next chapter, the reader is presented with information about the current Dutch pension system, the upcoming changes and people's behaviour regarding their pension. Chapter 4 gives an introduction into what technologies like predictive knowledge and collaborative filtering are and could mean for this project.
After the literature reviews in the first chapters, chapter 5 describes the user interviews that were executed to get to know the target group and find out their criteria for the future self tool. Chapter 6 briefly describes the iterative ideation process, before chapter 7 presents the outcome of this project: a concept future self tool called the Toekomstplanner (EN: Future planner).
The conclusion in chapter 8 briefly summarises the project, while the discussion in chapter 9 evaluates the concept based on its criteria and discusses recommendations for further development.

4C analysis

1 **Company**

2 **Competitors**

3 **Consumer**

4 **Context**

2. The Four C's

This first chapter consists of a 4C analysis which is a framework that can be used to **analyse the environment that a company operates in**. The four C's stand for: Company, Competitors, Customer and Context (Hultink [lecture for a branding and product commercialisation course], 2020).

The result of a 4C analysis is a relatively concise chapter that introduces the scope of this project before getting to the slightly tougher and more in depth information in the rest of the literature research.

2.1. Company

PGGM is a Dutch not-for-profit cooperative **pension fund service provider** that manages the pensions of various pension funds, the affiliated employers and their employees. You can find their office in Zeist and their motto is "A solid value in health and welfare". The main services they provide pension funds with are asset management, pension management and policy recommendations (PGGM, n.d.)[1].

They have multiple clients of which **PFZW,** the pension fund for the care and welfare sector, is by far the biggest one. This means that most of PGGM's business is focused primarily on PFZW and therefore the participants in the care and welfare sector (PGGM, n.d.)[2].

PGGM and PFZW

The relationship between PFZW and PGGM is rather special. PGGM was founded in 1969 as Pension Fund for Health, Mental and Social Interests. However due to a change in legislation in 2008 the organisation split into two: PGGM and PFZW (pension fund for care and welfare). Since then the title of pension fund has been transferred to PFZW and PGGM functions as its pension provider (PFZW, n.d.)[1].

PGGM's goal is first and foremost to **provide participants with good and sustainable pensions**. In addition, they aim to contribute to a more sustainable world and a healthy life for the participants, both during their working life as well as when getting older (PGGM, n.d.)[1].

On the next page you will find an overview of the main **stakeholders** that play a role in the pension context and can have an influence on a PFZW participant their pension behaviour (Figure 2).

Figure 1. *PGGM office in Zeist* (photo taken by L.Stevens)

Stakeholder overview

Figure 2. *Overview of the most important stakeholders when it comes to the pension context*

2.2. Competitors

As mentioned before PGGM is a pension service provider. This means that they take care of the pension administration, they invest participants' premiums and take care of the payment of benefits when someone retires among many other things (AFM, 2022). The services they provide vary per pension fund. The pension funds are the ones who have a relationship with their participants. And in turn the pension funds have a kind of client-supplier relationship with the pension service providers.

Competition among **pension funds** is different from competition between other kinds of businesses. Not all employers are free to choose a pension fund for their employees. PFZW is a sectoral pension fund, which means that they execute the pension scheme for one or more business sector(s). Usually the government has made it obligatory for certain sectors to be affiliated with a particular sectoral pension fund (AFM, 2022). Most business sectors within care and welfare are obligated to accrue pension for their participants through PFZW. Sectors that do get to choose their pension fund can also choose for PFZW. In that case they can join by contract if they meet the requirements (PFZW, n.d.)2. So the clientele of PFZW consists of both organisations that are obligated to be affiliated as well as organisations who choose to join PFZW.

This makes it complicated to get a clear image of the competitive landscape. Nevertheless one can make a distinction between the different levels of competition as described by Lehmann and Winer (2008):
1) product form competition, 2) product category competition, 3) generic competition and 4) budget competition.

In this case the first layer would consist of other pension funds and pension providers that offer similar pensions (see Figure 3 on the next page) and the second layer could consist of e.g. other companies like insurance companies that also provide pensions. The third layer is focused on different ways of fulfilling the same need, which is ensuring a sufficient income for after retirement in this case. Examples of competitors here are companies that offer products like annuities or a purchase price, banks that offer interest on your savings or companies that enable you to invest money yourself. Organisations in all three layers could benefit from (younger) people engaging more with their own pension. The fourth layer would consist of all other things you could buy and do with an amount of money that you add to step by step. Since the possibilities are endless here, this layer is left out of the overview for clarity.

While this overview makes the competition a smidge more comprehensible, keep in mind that it is never as black and white. As long as the same rules hold, PFZW only competes directly with others for the organisations that do get to choose which pension fund they want to be affiliated with. Important factors here are the cost price per participant and customer satisfaction (Innovation manager at PGGM, personal communication, January 27, 2022).

The **pension service providers** do directly compete with each other without similar restrictions (circle 4 in Figure 3). In theory pension funds like PFZW can choose to switch to another pension provider.
An example which shows the grey area here is the fact that MN, which is another pension service provider, has made a deal with PGGM to use the same software for their execution since this was deemed beneficial for both parties (Van Wijk, 2021).

Levels of competition

1. Pension funds
2. Companies that offer pensions
3. Companies that offer a way to ensure a sufficient income for after retirement

4. Pension service providers
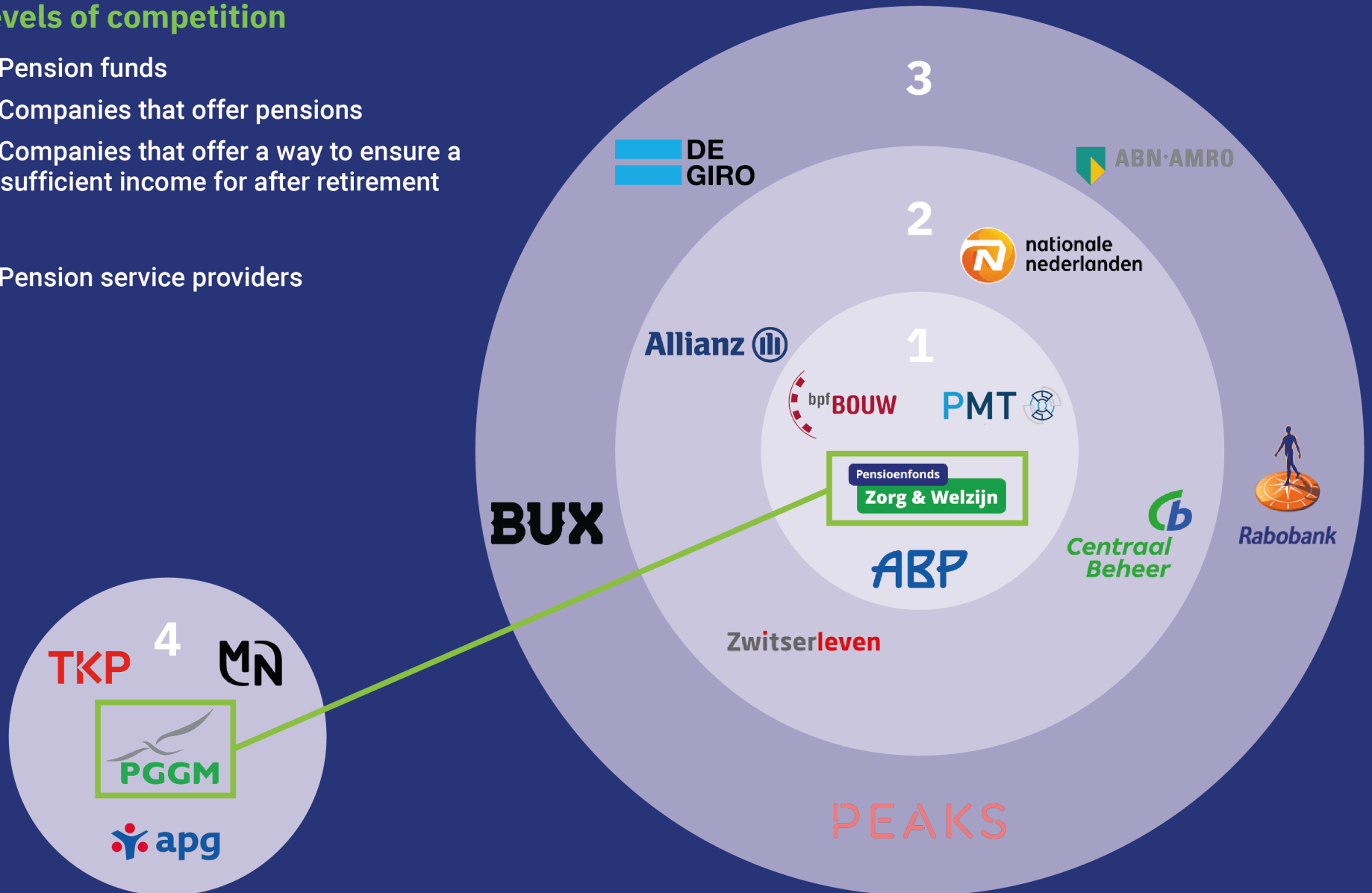
Figure 3. *Overview of the levels of competition*

2.3. Consumer

PFZW's participants mostly work in the care and welfare sector as mentioned before. This includes organisations like nursing homes, home care, day care for children, hospitals, care for the mentally handicapped and so on. Most participants really have a **'care heart'** as they describe it. They love working with people and find it important that they can contribute to other people's lives in a positive way. They also enjoy the variety of their job, no day is the same as the previous one (findings from interviews with twelve participants aged 21-35 years old, see paragraph 5.2).

The participants' functions and education levels vary. When it comes to gender, 85% of PFZW's participants is female and most do not work full time. When it comes to pension, the most important values for them are control and trust (Lang, Poley & Jansen, 2021).

For this project the focus is specifically on the younger **target group aged 21-35 years old**. Younger people just starting their work in the care and welfare sector still have plenty of time to accrue their pension and make changes if preferred. Considering this, along with the fact that the emphasis of pension accrual in the new pension system will be on the start of people's careers (more information will follow in chapter 2), it would benefit young people to already start getting involved in their pension. This younger target group makes up **32,5% of PFZW's participants**. In addition, every year one in five of these younger participants experiences a life event where the decisions made could impact their pension to varying extent. These life events are moments where people transition to a new status, like getting married or divorced, buying a house, starting a new job, getting a child and disablement (Luhmann et al., 2012).
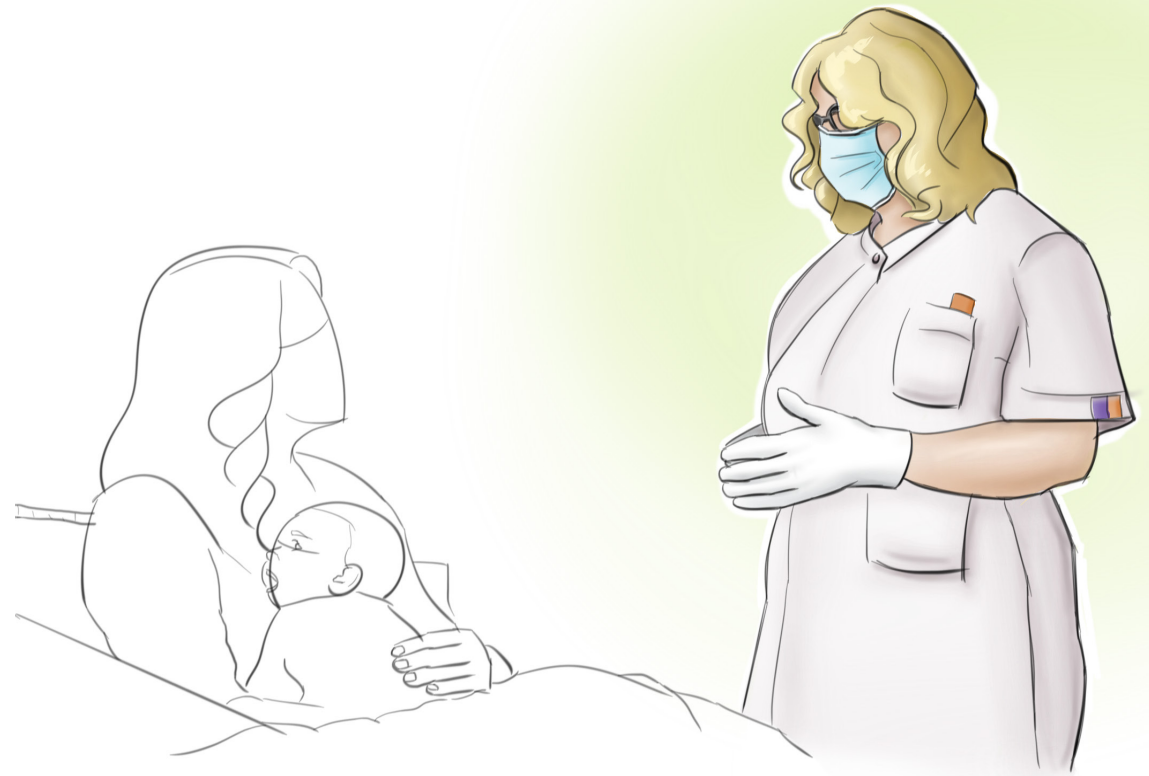
2.4. Context

Currently, the care and welfare sector is under a lot of pressure. One of the reasons for this is the **care gap** that has been growing steadily over the last couple of years. Partly due to the ageing population there is a discrepancy between the rising amount of people who need care and the decreasing amount of people able and available to provide this care. This makes it harder to organise the work and increases pressure on the employees. For most of the people interviewed during this project (25 in total with different occupations within care and welfare) it is considered normal to work extra hours. The **Covid-19** situation that has been going on for two years now does not make it any easier. On one hand it increases the workload for people working in hospitals due to an increase in patients for example. On the other hand, especially with the Omicron variant nowadays, it also means more and more employees find themselves stuck in quarantine and unable to work. This means colleagues or flex workers have to take over their tasks.

Over the last few years the **climate crisis** has gained momentum. The pressure to be more climate conscious has also reached PFZW and PGGM (since PGGM manages the investments). One of PFZW's biggest competitors ABP had declared to stop investing in fossil fuels after demands by action groups (ABP, 2021). As of the 16th of February PFZW has also announced that they will **stop investing in businesses in the fossil energy sector**, unless they contribute to limiting the climate crisis and adhere to the Paris agreement and COP26 (Habermehl, 2022). In addition, PFZW has also decided to **sell their Russian investments** due to the recent invasion of Ukraine (PFZW, 2022).
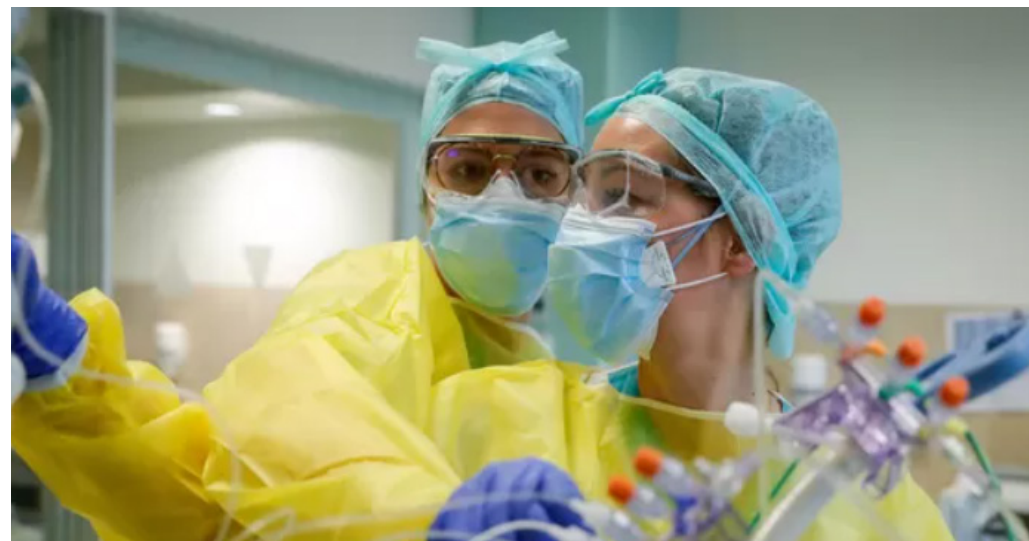

Figure 4. *Nurses in a hospital during the Covid-19 pandemic* (EPA, 2021)

Figure 5. *Action groups protesting at ABP* (Extinction Rebellion, 2021)

40%

gender gap in the occupational pension in The Netherlands

(Van Marwijk Kooy, Been, Knoef & Kali, 2021)

In addition, economically now is not the easiest time for young participants (in care and welfare) either. The growing **inflation** is a cause of worry. According to the Central Bureau of Statistics the inflation was 6,4% in January 2022, which is the highest it has been since 1982. Especially energy and food have become more expensive (CBS, 2022). The purchasing power of households is expected to decrease in 2022 with an average of €40 per month (Bos & Verberk-de Kruik [Nibud], 2022). **Housing prices** are also at an all time high and are expected to increase even more in the upcoming years (Bokeloh [ABN AMRO], 2022). This makes it very expensive for young employees to either hire a decent place to live or invest in buying a house. When it comes to **pension**, there is a **gender gap** of 40% in the occupational pension in The Netherlands. This is caused for the most part by the fact that women generally work less than men and women more often work in sectors where the pension schemes are less generous (Van Marwijk Kooy, Been, Knoef & Kali, 2021). Since 85% of PFZW's participants is female, this is a relevant concern for the organisation (Lang, Poley & Jansen, 2021).

A technological megatrend is the rise of **Artificial Intelligence**. The benefits for organisations have become more clear over the years (Goasduff [Gartner], 2020) and organisations use it more and more to add to existing products and develop new ones. Gartner expects that 70% of organisations will have made AI an integral part of the way the organisations conduct business by 2025 (Goasduff [Gartner], 2021). The data science department at PGGM is well on its way with their AI programme that has recently acquired more funding (Program manager AI at PGGM, personal communication, 26 January, 2022).

Finally, there is a problem of **growing illiteracy** in The Netherlands, also among the younger people. In 2020 one in every four young people was not able to read a letter sent by the municipality. In addition, especially illiterate people develop an anxiety of formal communication. They do not understand exactly what the communication describes and are afraid to make mistakes because it could lead to unfavourable consequences (Lang, Poley & Jansen, 2021).

2.5. Conclusion

This 4C analysis gives a first glance into the current landscape that the project exists in. PGGM is the pension fund service provider for PFZW (amongst others), the pension fund for the care and welfare sector. This project is intended for PFZW's participants.

The competition landscape is rather complicated, both for pension fund service providers as well as pension funds. As of now most companies in the care and welfare sector are automatically affiliated with PFZW, so the pension fund does not experience much competition when it comes to the participants in the care and welfare sector. PFZW however is free to switch their pension fund service provider in theory, so PGGM does actively compete with other pension fund service providers.

In addition, the crazy times we live in now have both an effect on the participants as well as PGGM and PFZW. The Covid-19 pandemic and care gap put extra strain on participants. Next to that, recent events like climate protests and the invasion of Ukraine by Russia have impacted PGGM's investments quite a lot in a short time.

Target group
This project focuses on PFZW's younger participants, aged 21-35 years old, who work part-time. The focus is on younger people, since they still have to accrue most of their pension, which means that any changes they make now potentially have more impact on their pension. Especially since the emphasis of the pension accrual will be on the start of people's careers in the new pension system (more information will be provided in paragraph 3.3), it is beneficial for this group to already make informed decisions about their future now. The 21-35 year olds also make up almost a third of PFZW's participants, which comes down to approximately 430.000 people (PFZW, 2020).

Most of these participants work part-time and the majority is female. Since women in The Netherlands generally accrue less pension and most of PFZW's participants are women, it is especially interesting for them to look into what their pension looks like. There is a bigger chance that they might not accrue enough pension as of now to be able to meet their needs by the time that they retire. As a pension fund PFZW wants to help their participants secure a sufficient future income so everyone gets to enjoy a worry-free retirement.

3. The Dutch pension system

Beside the aforementioned changes in the context of PFZW and its participants, one of the biggest developments is the upcoming new pension system. This chapter will explain more about the current system, the upcoming changes and why they are needed. It also dives into to what extent people are involved with their own pension and why people find it difficult to imagine their future self. It also mentions multiple factors that influence (young) people's motivation to look into their pension.

3.1. An introduction to the Dutch pension system

The current Dutch pension system is quite complex to fully understand, hardly anyone does. This paragraph briefly outlines the basics. The current Dutch pension system essentially consists of three pillars, as you can also see in Figure 6 on the next page:

1. The first one is the **AOW**, the Dutch state pension. Every Dutch citizen is automatically eligible for this. The amount of the pension depends on the developments of the minimum wage.
2. The second pillar consists of the pension that you contribute to together with your **employer**. Usually 2/3 of the premium is paid by the employer and 1/3 by the employee. When you work five days a week, usually one of those days goes to your pension.
3. The third pillar consists of any **additional ways of saving money** in the form of i.e. bank savings, annuities or a purchase price.

The money put aside for your pension in the second pillar automatically goes to a pension fund, like PFZW in the care and welfare sector. A pension fund, or its pension provider, invests this money in order to increase the value. By the time a participant retires, this money bag is used to provide the participant with a monthly benefit as long as they live (Pensioenfederatie, n.d.).

The current pension system is an **average system**. This means that every participant pays the same premium and accrues the same percentage of pension. There is no difference in age, gender, income level etcetera (Algemeen Burgerlijk Pensioenfonds, n.d.).

All rules for pensions in The Netherlands are noted in the pension law and guarded by the central bank of the Netherlands and the Dutch Authority for Financial Markets (De Rijksoverheid, n.d.)[1].
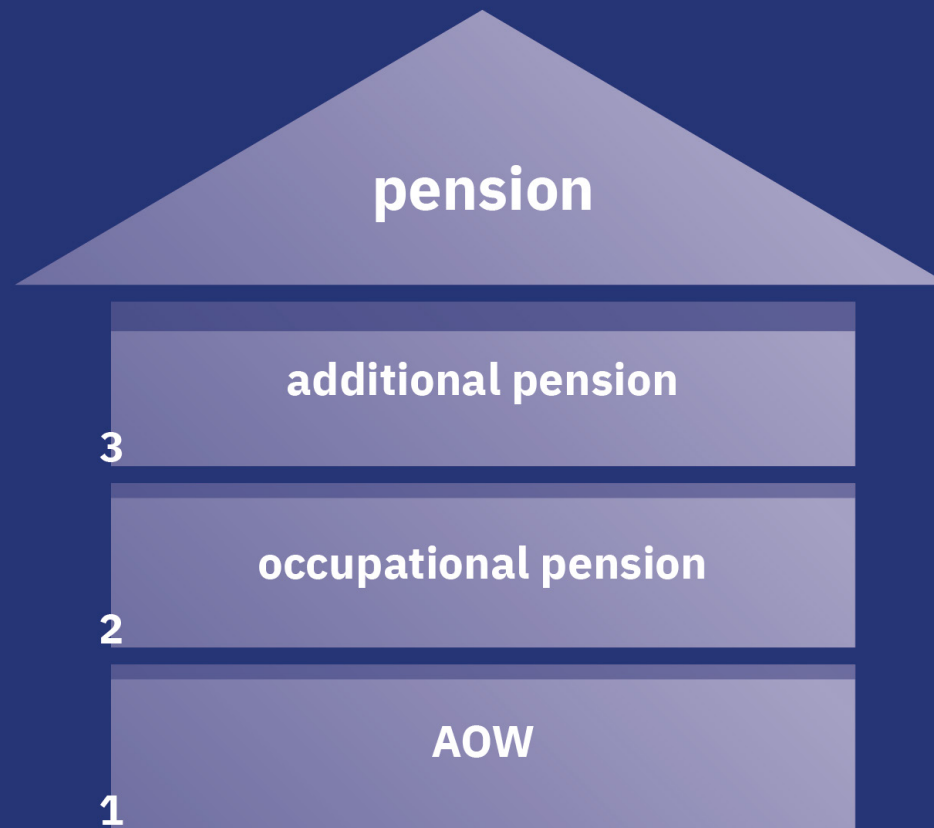
Figure 6. *Overview of the current Dutch pension system*

3.2. Problems with the current pension system

Due to changes in e.g. demographics and the job market, the **current pension system does not fit our society well anymore**. We all know the mega trend of the ageing population. People get older and older, which means that they also need more years of pension benefits. This evidently costs more money (De Rijksoverheid, n.d.)[2].

In addition, there are less working people compared to the amount of retired people. Due to the average nature of the pension system, currently both younger and older employees pay the same premium and accrue the same percentage of pension as aforementioned. The premium of younger people can be invested for longer, so it can get higher returns. This would be fine if people worked for the same employer for their entire lives. This way younger people would be compensated for their higher contribution decades later by the young working generation of that time. However, **nowadays people of all ages switch jobs more often, do not work or work less for a certain period of time or even start for themselves** (De Rijksoverheid, n.d.)[2]. The current system is not built for this.

Moreover, the system is quite difficult to understand for the average Joe. It takes quite some time and effort to start to have an idea of how the system actually works.

Finally, even though we have one of the best pension systems in the world according to the Global Pension Index, generally Dutch people do not really trust the pension system and the pension funds (Vogels, 2020).

3.3. Upcoming changes in the Dutch pension system

There are six main goals for the new pension system, the first one being that it should be more transparent and personal for participants. Also, the age at which an individual becomes eligible for their AOW payments should increase less quickly. A law for this was already accepted in 2020 (Mijnpensioenoverzicht.nl, n.d.).
Next, there will be better pension agreements for people in tough professions, as well as for the survivor's pension. In addition, self-employed working people will be obliged to be insured against occupational disability. Finally, everyone will get one extra choice when they retire. They can choose to have a maximum of 10% of their pension be paid to them at once; as long as it still adheres to certain rules (Mijnpensioenoverzicht.nl, n.d.).

The old system gets quite a reboot. **The bag of money consisting of the invested premiums will fluctuate more** based on the economical developments. Also after retirement the pension will remain fluctuating. This means that the pension payments will not be stable, but can vary every month. Participants will however be able to choose a stable payment every month instead if preferred (Koolmees, 2020).

Moreover, the aforementioned average system will be abolished. This average system meant that every participant would pay the same premium and accrue the same percentage of pension (Algemeen Burgerlijk Pensioenfonds, n.d.). In the new system **the average premium will still exist, but the accrual will be different**. The idea is that premiums of younger people will be invested in for example stocks that carry a higher risk but also have a chance at high returns. Since their contributions are invested for a longer period, this has less impact overall. The money of older people however is more likely to be invested in more stable options like obligations with lower risks, but also generally lower returns (Market researcher at PGGM, personal communication, October 14, 2021).

This does mean that the emphasis of the pension accrual is on the first years of people's working life. **Hence why it becomes extra important for younger people to look into their pension already**. This way they can see whether they want to change anything, like working more hours or finding additional ways of saving for pension for example. In addition, currently it is expected that the interest will be low in the upcoming years as well. This puts pressure on the returns and the cover ratio of the pension funds. This also mostly affects younger people who still have to accrue most of their pension. Low returns mean a decline in the spending potential. Future consumption becomes relatively expensive compared to consumption at a younger age. (Ciurila et al., 2020)

There are also discussions about a collective solidarity fund. A part (10%) of everyone's contributions to the pension will go to this fund. The idea is that this fund will be used in bad financial times in addition to the pension payments of the people who are retired then. This safety net is needed because pension benefits still fluctuate and thus are variable. Some retire in worse financial times than others. With this safety net, in the end they are not worse off than the people who retire in better financial times (Koolmees, 2020).

Moreover, the age at which people start to receive AOW benefits will gradually increase up until 67 years in 2024. From 2025 on, the idea is that the age is dependent on life expectancy. With every additional year of life expectancy the AOW retirement age will increase by eight months and people will get four months of AOW pension more on average (Koolmees, 2020).

Finally, There will be more possibilities for people with tough professions to turn supplements into individual voluntary pension accrual. This way there could be more possibilities for workers to choose from when it comes to their retirement age (Koolmees, 2020).

3.4. What impact do participants have on their own pension in the new system?

Now we know why the current pension system needs an update and what the most important changes will be. This paragraph gives a brief overview of the impact that participants can have on their own pension in this new pension system.

In the new pension system, social partners like pension funds get to pick between two flavours of this system so to say: the **New Pension Contract** (NPC) and the **Improved Pension Scheme** (WVP).
The main difference here is that in the NPC participants have a personal pension within a collectively invested pension pot, while in the WVP the participants have an individual pension pot that is invested based on the risk profile the participant chooses (PGGM, n.d.)[3]. I will not bore you with further details here. The point is that the choice for one of these flavours makes a difference in the different ways a participant can have an impact on their own pension. On the next page you can see an overview of this (Figure 7).

The board of PFZW has until 2023 to make their final decision between these two (PGGM, n.d.)[3].

New Pension Contract (NPC)

- Strategic life event choices (like the choice of buying vs. renting a house, or switching jobs)

- Choose to work more or less hours a week

- Choose to retire earlier or later

- Choose to get 10% of the pension at once at the time of retirement (Koolmees, 2020)

- Find a way to create an additional personal money pot by saving, insurances, investing etc.

- In case of a tough profession: more possibilities to turn supplements into individual voluntary pension accrual (Koolmees, 2020)

Improved Pension Scheme (WVP)

- Strategic life event choices (like the choice of buying vs. renting a house, or switching jobs)

- Choose to work more or less hours a week

- Choose to retire earlier or later

- Choose to get 10% of the pension at once at the time of retirement (Koolmees, 2020)

- Find a way to create an additional personal money pot by saving, insurances, investing etc.

- In case of a tough profession: more possibilities to turn supplements into individual voluntary pension accrual (Koolmees, 2020)

+ Choose their own risk investment profile, also called a lifecycle (PGGM, n.d.)[3].

+ Choose whether they want their pension benefits to be stable or variable based on the returns when retired (PGGM, n.d.)[3]

3.5. Current lack of pension consciousness

Of the Dutch working population 37% lies awake at night at times because of their pension. The most common reasons are being **worried that their pension will be lower than expected** (52%) **or not enough to make ends meet** (45%). Other reasons for worry are the fact that their income will be less than it is now (35%), as well as the fact that they feel like they have no control over the amount of their pension income as an individual (18%). Over a third (35%) of the Dutch working population does not expect to have enough pension by the time they retire to continue living the lifestyle they enjoy now (Wijzer in geldzaken, 2020).
The people who worry are mostly people with a lower level of education and people who have a below average income. People who do not worry about it either have managed their pension well, believe it is still too far away or live in the present. There are also some who do not worry about it, because they expect to inherit a sum of money from their relatives (Wijzer in geldzaken, 2020).

Ignorance breeds intolerance: most people have a negative view of the pension system. Of the PFZW participants, 60% believes the pension myth that their contributions go to the people who have already retired. Next to that, only 15% is convinced that they will eventually get more pension than the premiums they paid (Lang, Poley & Jansen, 2021). This is sad, because these unjust views paint a more negative perspective of the pension system. **When people have more knowledge about their pension, they generally also worry less about it** (Vogels, 2020).
In addition, the view that an individual has of a certain topic determines the way they read a text about it. When they have a negative view for example, they can misinterpret pension information or simply not believe what is written (Van Hekken & Nell, 2021).

Over time **more people have become conscious about their pension**, either consciously worrying about it (25% in 2020 compared to 19% in 2018) or consciously not worrying about it (42% in 2020). Either way, nowadays 56% of the Dutch working population does claim to find it important to be familiar with their financial situation after retirement (compared to 46% in 2016). However, still 59% of the Dutch working population had not checked their employer's pension plan when starting their current job (Wijzer in geldzaken, 2020).
People who have thought about their income and expenses after retirement are generally older and more often men than women. **Half of the Dutch working population indicates that they should look more into their financial situation after retirement.** Of the 55+ year olds, 38% regrets starting too late with looking into their pension and taking precautions. Of people with a lower education, 52% regrets not taking precautions at a younger age. Among respondents with a below average income 54% shares this regret (Wijzer in geldzaken, 2020).

In general, people realise that their actions and decisions now do somehow influence their pension income later on, but they also **feel like they are not in control of their pension income**. One third of the Dutch working population (34%) feels like they have no control over the amount of their pension income themselves. People who are more optimistic and do feel more in control are generally self-employed entrepreneurs (who are not joined automatically in a pension fund and thus can choose to join a fund or have to arrange it themselves), people younger than 35 and/or those with an above average income (Wijzer in geldzaken, 2020).

34%

**of the Dutch working population feels like they have no control
over the amount of their pension income themselves**

(Wijzer in geldzaken, 2020)

3.6. Future thinking about pension

Another graduate master student wrote her thesis in 2016 for Netspar about the predictors that motivate young people (24-35 years old in her thesis) to look into their pension. She did a study with participants based on the motivation/willingness part of the Capacity-Willingness-Opportunity Model for Financial Planning for Retirement (FPR) by Hershey (2004, see Figure 7). She found three direct predictors for the motivation of young people to look into their pension and validated these using a survey:

1. the extent to which the individual is future oriented;
2. the extent to which the individual experiences risks;
3. the expected complexity of the task.

So the more an individual is future oriented, is comfortable taking risks and perceives the task of looking into their pension as simple, the higher their motivation to do so (Buijsman, 2016). Another indirect predictor that Buijsman found was the social environment of the individual. Talking with colleagues about pension also increases the motivation (Buijsman, 2016). Another thing that could increase motivation for people to start looking into their pension is the **ideal version of themselves** that they have in mind. This is the most important **driver of intentional change in one's behaviour**, emotions, perceptions and attitudes (Boyatzis & Akrivou, 2006). It gives a sense of hope for the future (Topa, Lunceford & Boyatzis, 2018).

Hershey's model (2004) does not only focus on the motivation/willingness, but also looks into the dimensions of capacity and opportunity. In the end it comes down to the ability of a person to delay gratification for a long term goal or dream.
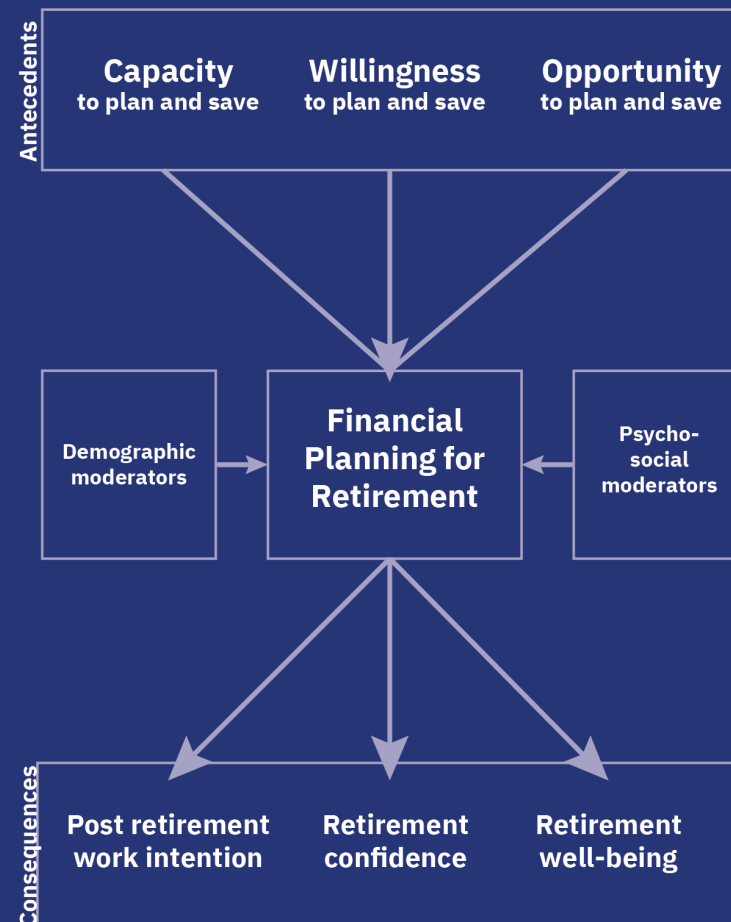

Figure 7. *Simplification of Hershey's model of Financial Planning for Retirement (Hershey, 2004)*

3.6.1. Why most people procrastinate looking into their pension

People are naturally myopic, which means they are more focused on the short term, rather than the long term. This is also why **people generally prefer short term rewards over delayed rewards**, even if these delayed rewards are larger. A reward similar in value will become more and more attractive the closer it is to the moment of decision-making (Soman et al., 2005). Pension is still so far in the future for young people, that it is just not attractive for them to deal with now. It still takes decades before they can see the concrete benefit of accruing a good pension. It also does not help that most individuals believe that they will be less busy on a given day in the distant future than they will be in the present (Soman et al., 2005). Therefore they might feel like they still have plenty of time to figure their pension out some time in the future. According to a senior marketing and communication advisor at PGGM, the average horizon of people for future thinking is 20 years. Further than that it is impossible to imagine for an individual. According to him, this is why a lot of people start actively engaging with their pension when they are approximately 45 years old. Pension does not feel relevant for younger people (Senior marketing and communication advisor at PGGM, personal communication, October 19, 2021).

The choice of a person for a delayed reward is related to higher self control; depending on their perceived stability of their environment. When people feel like their social situation is reliable, they are more likely to choose delayed rewards over immediate rewards (Adamkovič & Martončik, 2017). According to Strömbäck et al. (2017), people with higher self control generally have better **financial behaviou**r, are less anxious about financial matters and are more stable in both their current and future financial situation. They also mention how being optimistic and thinking deliberately are two other factors that contribute to better financial behaviour. Another important factor that influences adolescents their financial behaviour especially is what they have learned about finances from their parents (Trzcinska & Goszczynska, 2015).

People who prefer larger delayed rewards generally have a higher income, are healthier and have a longer life expectancy, as well as a higher financial literacy (Adamkovič & Martončik, 2017). This corresponds with the finding of Wijzer in geldzaken in paragraph 2.4 that especially a lot of people with a lower income and/or lower education regret starting too late with looking into their pension and also generally worry more about it. In addition, negative effects like **stress and sadness generally lead to a preference for immediate, lower rewards**. Positive emotions generally increase the preference for higher, delayed rewards. Another interesting finding is the fact that people generally are more sensitive to losses than rewards. They would risk more to avoid a loss than to gain a reward (Adamkovič & Martončik, 2017).

This tendency to prefer immediate outcomes over delayed outcomes is less prominent in older adults compared to younger people (Löckenhoff, 2011). This is partly explained by "an age-related tendency to perceive one's future emotions as more continuous with present feelings" (Löckenhoff O'Donoghue, & Dunning, 2011). People have generally already experienced more different life phases and change less when they are older according to these researchers. They are likely to still have similar personality traits, personal values, preferences and core social networks (Rutt & Löckenhoff, 2016). Because older people have already experienced more life events and versions of themselves so to say, it is easier for them to imagine themselves X years into the future than for younger people. **For younger people, when thinking about their future self in the far future, it almost feels like thinking about another person rather than an extension of who they are in the present.**
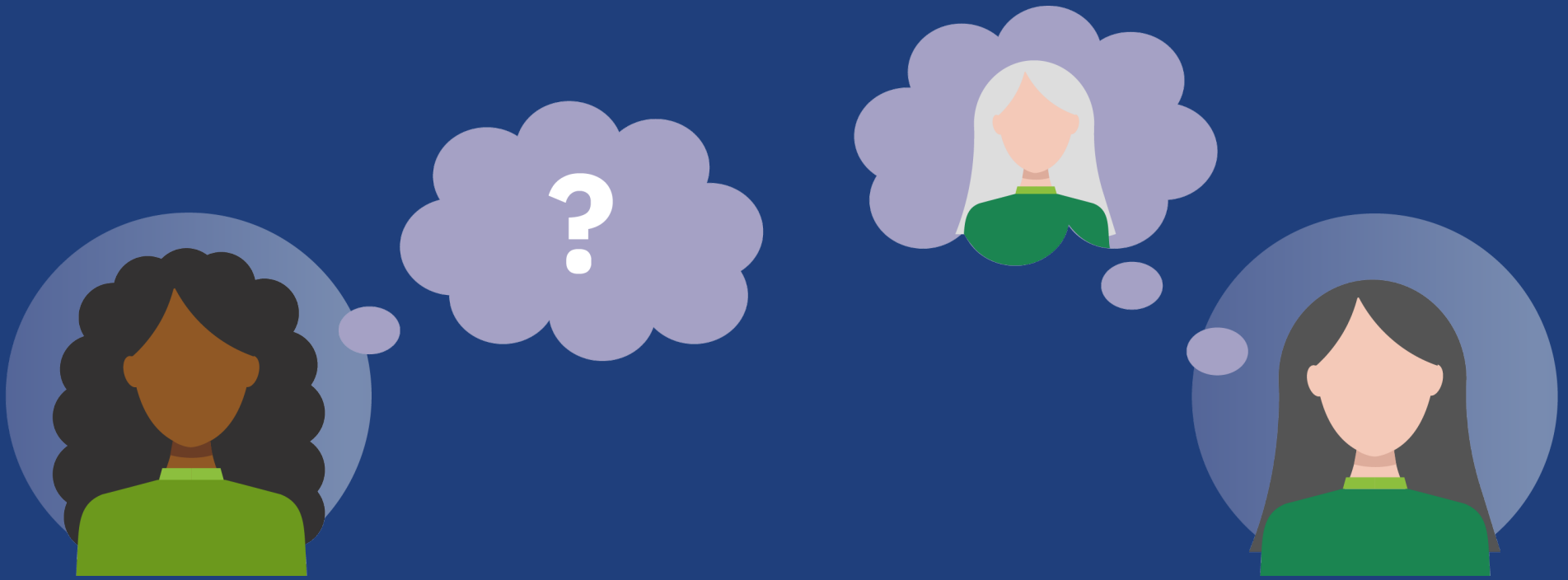
3.7. Conclusion

The current pension system does not meet today's needs anymore (De Rijksoverheid, n.d.)2. Hence why a new pension system is under way. Due to the upcoming changes in the pension system, the emphasis of the accrual will be even more on the start of people's careers. This is why it becomes extra important for younger people to look into their pension already. This way they have plenty of time to take measures to increase their pension if needed, so they can enjoy a worry-free retirement.

As of now, most Dutch working people are not engaged with their own pension, especially when their retirement age is still decades away. The people who do think about their income after retirement are generally older and more often men than women (Wijzer in geldzaken, 2020). Younger people also experience more difficulty when trying to imagine themselves in the future than older people (Löckenhoff O'Donoghue, & Dunning, 2011). So the younger women who make up most of the target group for this project are not likely to be interested in their pension. The first criterion of the to be designed tool is as follows:

1. The tool should increase participants' motivation to look into their own pension.

In this chapter several factors were mentioned that contribute to increasing people's motivation to look into their pension, including the ideal version of themselves that people have in mind (Boyatzis & Akrivou, 2006), the extent to which the individual is future oriented, the extent to which the individual experiences risks and the expected complexity of the task of looking into one's pension (Buijsman, 2016). Other factors are talking about pension with colleagues (Buijsman, 2016) and what people have learned from the financial behaviour of their parents (Trzcinska & Goszczynska, 2015).

Next, currently one third (34%)of the Dutch working population feels like they have no control over their pension income themselves (Wijzer in geldzaken, 2020). In addition, 37% worries that their pension will not be enough to make ends meet by the time they retire (Wijzer in geldzaken, 2020). When people have more knowledge about their pension, they generally worry less about it and feel more in control (Vogels, 2020). In turn, when people experience less negative emotions like worry, this also increases their preference for delayed rewards like a pension (Adamkovič & Martončik, 2017). Therefore the second criterion of the future self tool is:

2. The future self tool should contribute to participants feeling more in control of their pension, by making it more concrete for them.

Criteria for the future self tool

1 The future self tool should increase participants' motivation to look into their own pension.

Factors that contribute to increasing people's motivation to look into their pension:

- The ideal version of themselves that they have in mind is the most important driver of intentional change in one's behaviour, emotions, perceptions and attitudes (Boyatzis & Akrivou, 2006).

- The extent to which the individual is future oriented (Buijsman, 2016).

- The extent to which the individual experiences risks (Buijsman, 2016).

- The expected complexity of the task of looking into one's pension (Buijsman, 2016).

- Talking about pension with colleagues (Buijsman, 2016).

- What people have learned from the financial behaviour of their parents (Trzcinska & Goszczynska, 2015).

2 The future self tool should contribute to participants feeling more in control of their pension, by making it more concrete for them.

4. An introduction to predictive knowledge

4.1. What is predictive knowledge?

With the rise of IoT (Internet of Things), more and more products nowadays are smart and connected objects. In an **adaptive system** the object would be able to use knowledge it has gathered about the user as well as behavioural patterns of the object based on its own previous actions. However, if predictive knowledge is added to the object, it also has access to knowledge of forecasted phenomena (like weather forecasts) and knowledge from similar connected objects that have experienced similar use cases. **This way the interplay between another object and a human can help the first object to make better decisions** (Smit, 2021). This does not only hold for physical objects, but also for digital systems (Smit, n.d.). In the rest of this report the word 'object' can thus either refer to a physical product or a digital system.

An object that works with predictive knowledge "connects with an existing network, collects real-time data and acts proactively" (Smit, 2020). Having access to all this data means that **the object is likely to know more about potential future developments than the human user does** (Smit, 2020). This means that the object can be quite unpredictable from a user's point of view (Redström & Wiltse, 2015). It is not always easy for the user to understand why these objects make and execute certain decisions.

Knowing this, the question is: **to what extent would a user be willing to delegate agency to a smart object?** Should the object just provide the user with more information that could affect their decision (situation a in Figure 8 on the next page)? Or should the object be able to prescribe behaviour (situation b in Figure 8)?

When it comes to pension, a lot of people lack the knowledge to make well-informed decisions as of now. In addition, 34% of the Dutch working population feels like they have no control over the amount of their pension income themselves (Wijzer in geldzaken, 2020). If people already feel like they have no control over their pension and are worried about it, would that then make it either easier or harder for them to give more agency to a more knowledgeable system?

On one hand the system would theoretically probably be better at making financial sound decisions for these individuals. But on the other hand they would have to trust a system to make decisions for them, while not understanding why it makes these decisions and whether those are any good. This is an important topic to discuss during the interviews and workshops with the target group.
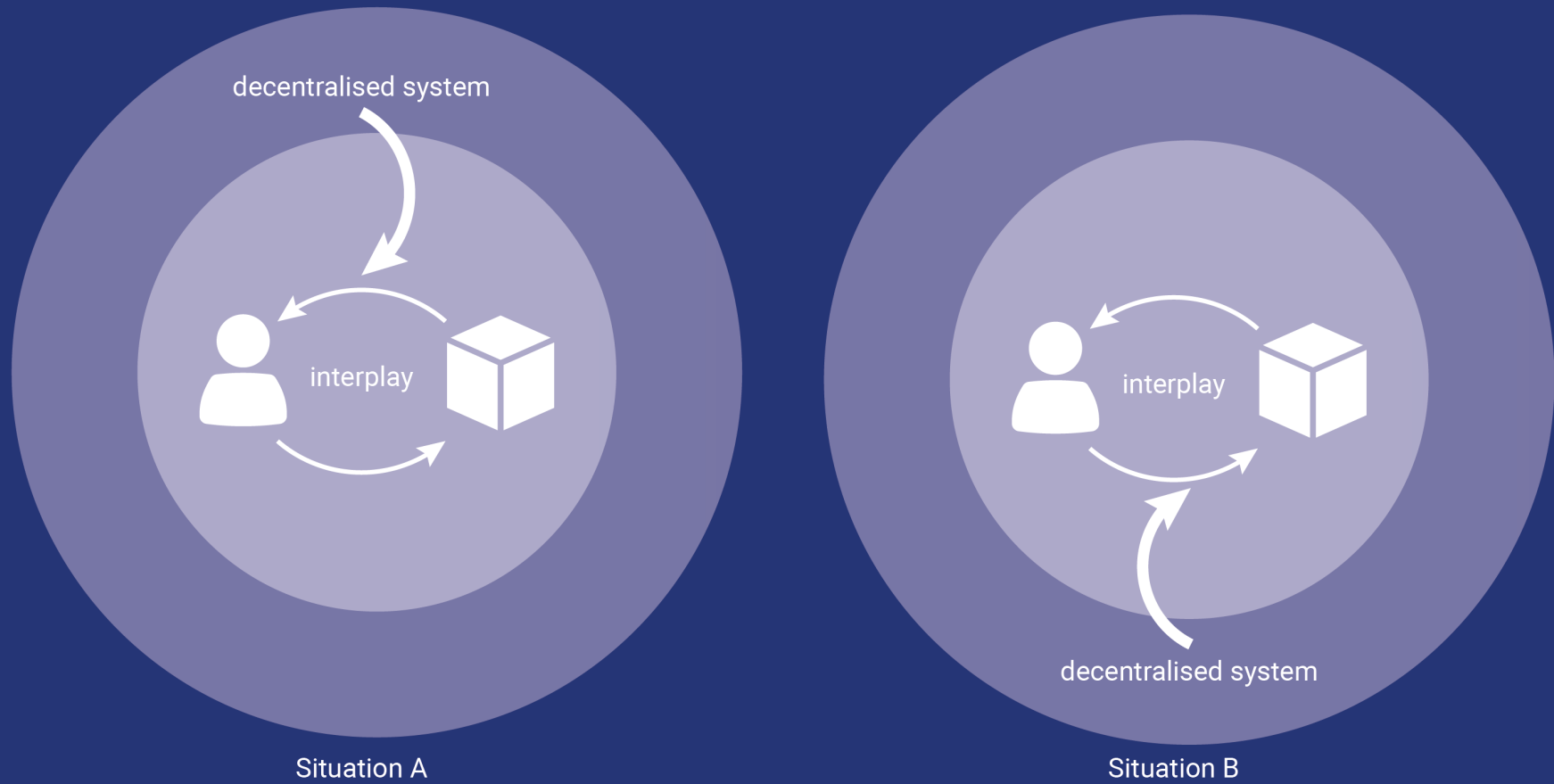
Figure 8. *Model of predictive relations and how the decentralized system is informing the user to make decisions (A) or prescribing behaviour (B)* (Smit, 2021)

4.2. Explaining adaptive and predictive systems using PFZW products as an example

The current financial planners of PFZW, like the "Toekomstverkenner", do not fall into the category of adaptive systems yet. This planner reacts to the input that a user gives and helps for example to calculate the value of the user's pension if they were to retire at a certain age. It does not however learn and become smarter through the accumulation of experiences with the user.

If an **adaptive layer** would be added to the planner, it could learn from previous interactions with the user. For example, a user has previously added their partner to their pension fund in order to be eligible for a survivor's pension in case the situation arises. By the time the user switches jobs and a new pension fund is added to the overview, the planner could suggest the user to also add their partner to the new fund, since the planner has learned from the previous experience that the user finds this important. So instead of only relying on relatively static information the user has to provide every time the user logs in, the planner now also learns from previous experiences and becomes a better personal fit for the user.

When **predictive knowledge** is added to a system like a pension planner, next to the adaptive qualities it also has access to knowledge of forecasted phenomena (similar to weather forecasts) and knowledge from connected systems that have experienced similar use cases. This way the interplay between another system and a human can help the first system to make better decisions (Smit, 2021). In the case of the financial planner, this could mean that the planner has knowledge on the decisions that other PFZW participants have made and their consequences. This way it could advise a user or maybe even make decisions for them based on these predictions. Since younger participants have an especially hard time imagining their future self (paragraph 3.6.1), **predictive knowledge could help them envision a potential future self, contributing to their motivation to look into their pension.**

The current versions of pension planners rely on information from NIBUD to predict individual pension needs. NIBUD however, only serves users with estimates for the average Joe. Since this is too average for most users, it does not feel like a personal forecast (Innovation manager at PGGM, personal communication, 21 December 2021). By providing users with insights derived from people that are more alike, forecasts can be made that are more personal to the user.

4.3. Co-performance

Rather than either keeping the agency with the user or delegating it to the object, the notion of **co-performance considers objects to be "capable of performing and exerting agency together with people in the carrying on of social practices."** (Kuijer & Giaccardi, 2018). The agency of the object is then a result of the embodied learning from the interplay with humans in various situations. Due to this division of agency between humans and objects, appropriateness is one of the main focus points for co-performance. How to execute a performance appropriately given the circumstances is usually a human judgement. For co-performances, what is deemed appropriate is "shaped through repeated co-performances of the practice in which appropriateness is (re-)interpreted in the situation at hand, and changes over time" (Kuijer & Giaccardi, 2018).

There are limits to what aspects of the situation an object can detect and consider in their decision-making process. So naturally, they have to make some assumptions. When the object stumbles upon a new unique situation, there is always a risk of the performance becoming inappropriate without intervention by the user (Kuijer & Giaccardi, 2018).

Co-performance could be a valuable way for people to get help with their decisions regarding their pension without delegating all agency to a digital system. This way t**he digital system could complement rather than replace the individual.** Both the unique capabilities of the digital system and the unique capabilities of humans could be combined in a sense.

4.4. Collaborative filtering

Collaborative filtering is not necessarily the exact same thing as predictive knowledge, but it does share similarities. Objects based on predictive knowledge act proactively based on the predictions. Collaborative filtering is more of a method to make predictions that can be presented to a user. The user is then still in charge of making decisions based on these predictions, or rather recommendations in this case. Collaborative filtering focuses on the relations between different items and different users to come up with user specific recommendations (Koren & Bell, 2015). This works well, because **recommendations by like-minded people carry ten times more weight for the average user or consumer,** compared to recommendations by salespeople (Mackenzie, Meyer & Noble, 2013). It is exactly how online retail websites recommend more products to you or how Netflix recommends other movies or series, or Spotify new music. Interestingly enough, network sites and apps like LinkedIn (Wu, Shah, Choi, Tiwari & Posse, 2014) and Tinder (Harding, 2021) use a similar method. They use collaborative filtering to match people based on several parameters like demographic variables, interests etcetera.

Since people are more likely to listen to recommendations from like-minded people as aforementioned, there is a **possibility that participants are more receptive to pension information provided by like-minded people, rather than more official organisations like pension funds or the government**. This also corresponds with the fact that people are more motivated to look into their pension when talking about it with their colleagues, as Buijsman found in her master thesis (Buijsman, 2016).

4.5. Conclusion

Predictive knowledge can be added to the future self tool to make it smarter and more personal to the user. One user's tool is then connected to a network with tools of similar people, through which it can collect real-time data to act upon (Smit, 2020). This way the interplay between another tool and a human can help the first tool to make better decisions (Smit, 2021).
The notion of co-performance could be a valuable way for people to get help with their decisions regarding their pension without delegating all agency to a digital system. This way the digital system could complement rather than replace the individual. Both the unique capabilities of the digital system and the unique capabilities of humans are then combined (Kuijer & Giaccardi, 2018). Therefore the third criterion is as follows:

3. The future self tool should use predictive knowledge to make it more personal for the individual, in such a way that it complements the individual rather than replacing them.

Since people are more likely to listen to recommendations from like-minded people (e.g. Mackenzie, Meyer & Noble, 2013; Buijsman, 2016), it is likely that participants are more receptive to pension information provided by like-minded people, rather than more official organisations like pension funds or the government. Therefore criterion number four is:

4. The future self tool should include recommendations from like-minded people.

Criteria for the future self tool

1 The future self tool should increase participants' motivation to look into their own pension.

2 The future self tool should contribute to participants feeling more in control of their pension, by making it more concrete for them.

3 The future self tool should use predictive knowledge to make it more personal for the individual, in such a way that it complements the individual rather than replacing them.

4 The future self tool should include recommendations from like-minded people.

5. User interviews

After literature research I have executed two rounds of user interviews in order to find out to what extent these people are engaged with their own future and their pension, as well as to learn what criteria are important to them for an effective future self tool.

5.1. Interviewing participants aged 45+ years old

During the first round I interviewed twelve people still working in care and welfare aged 45 years and older. Generally ten to fifteen interviews should reveal approximately 80% of the target group's needs (Van Boeijen, Daalhuizen & Zijlstra, 2020). So even though the number is not representative, it should give a decent first impression.

Interview objectives
In paragraph 2.5.1. it was mentioned by a senior marketing and communication advisor at PGGM how most people start engaging with their pension when they are approximately 45 years old, since the average horizon of people for future thinking is 20 years. With these first interviews the main goal was to see whether this group is indeed more engaged with their pension now compared to younger people. Other goals were to learn whether they would advise the younger people today to approach their pension differently, and to get a better feeling for this group's perspective on their own pension and profession.

Practical setup
For eleven out of the twelve interviews I travelled to either the interviewee's home or work place. This way they were already in an environment in which they felt safe (Van Boeijen, Daalhuizen & Zijlstra, 2020), which might have lowered the threshold for them to open up to me. The twelfth interviewee asked to do an online interview from home using Teams because this fit better into her busy schedule.

Interview results
The interviewees really have a passion for caring for others. They especially enjoy the feeling of meaning something to other people and being valuable to them. Half of the interviewees mention that **they do not like to think so far ahead** and that they would rather just see what the future will bring. They mention thinking that their pension is still some far-off thing in the future (NL: een 'ver-van-mijn-bed show') and use phrases like 'who lives by then, cares then' (NL: **'wie dan leeft, wie dan zorgt'**). The quotes on the next page exemplify this sentiment.

When it comes to handling money, most interviewees save it to some extent. This is mostly because they do not like to be surprised by unforeseen events. They **save money to create a kind of safety net** for whenever something breaks down at home and they have to buy something new. Knowing that they have the money available to replace a washing machine or car when needed gives them peace of mind. They have learned this saving behaviour from their parents. I used the three types of people in financial decision-making by Forrester Research (Doyle, Ensor, Campbell & Blumstein, 2015) to touch upon the extent to which the interviewees preferred to be in control of their decision-making when it comes to financial decisions (see Figure 9 on page 37).

"No, I don't think so far ahead. I can worry about something or look forward to it a lot, and then it might not be that way in the end. So I have learned not to do that anymore."

- Participant aged 45+ years old

"No, actually not. Then I think in ten years... you do not even know what will happen in a year. If you look at all the Covid-19 happenings; I think two years ago around this time of year we would have never even thought of it coming our way."

- Participant aged 45+ years old

"And sometimes I log in to that website and check where things stand. But on the other hand it is still some far-off thing in the future, since I still have 20 years. I am involved to an extent, but you should not ask me right now how much I will get. I would not be able to tell you."

- Participant aged 45+ years old

The **self-directed** type prefers to do their own research and make financial decisions on their own without being told what to do by a financial expert for example. Someone corresponds with the **validator** type when they do still prefer to be in charge of making the decisions, but also like to be advised by other people who are more knowledgeable. The **delegator** type prefers to delegate the task at hand to an expert. They are not very involved themselves and trust the expert to do the job for them (Doyle, Ensor, Campbell & Blumstein, 2015).

As you can see in the overview in Figure 9, two interviewees clearly recognised themselves in the self-directed type, while five of them claimed to be validators. Four people felt like they were somewhere in between the self-directed and the validator. Finally, one person thought themselves to be in between the validator and delegator type.

It seems that multiple people have difficulty figuring out what financial decision would be best for them on their own. They are not always able to find information on the topic that they understand well enough and need to ask someone else to help them, either someone they know or a professional. The information presented to them by official authorities is **not always easy to understand**, both for natives with a higher education as well as for migrants who are not as well versed in the Dutch language:

"I always ask someone to help me. Because there are a lot of things that I do not understand here. That is difficult for me. Usually I do make the decisions myself, but I ask someone to explain things to me and give me advice. About money and things like that, you cannot just make all decisions on your own."
 - Participant aged 45+ years old

Three types of people in financial decision-making
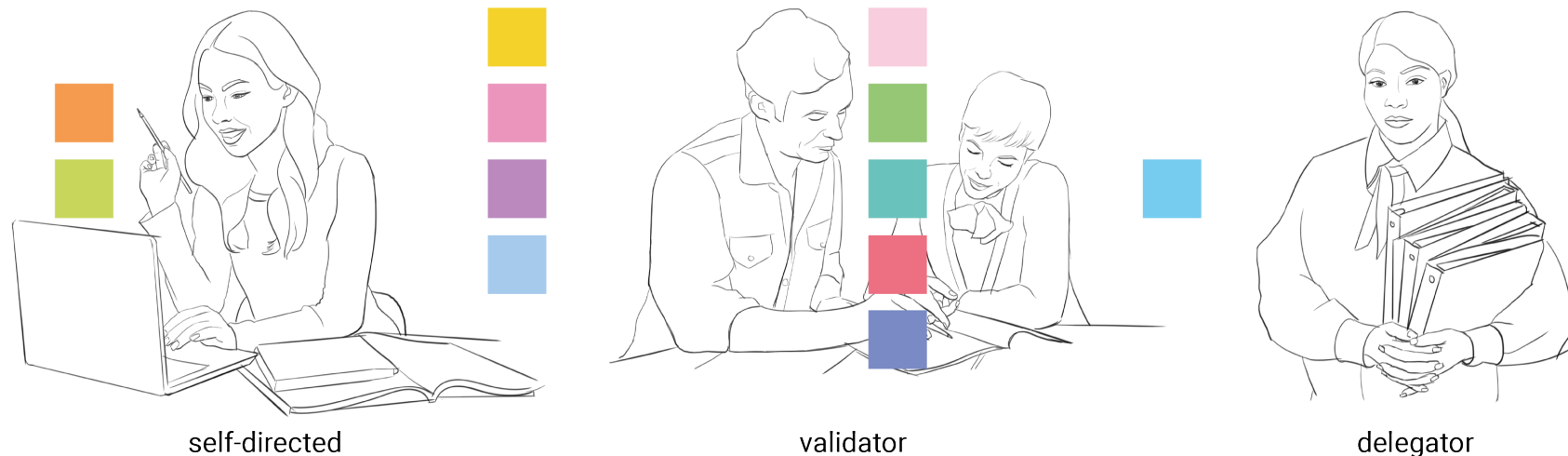Based on the segmentation by Forrester Research (Doyle, Ensor, Campbell & Blumstein, 2015)

self-directed   validator   delegator

Figure 9. *Overview of the interviewees projected on the types of financial decision makers by Forrester Research. Each coloured square represents one interviewee.*

Half of the interviewees are **worried about their pension**. They especially worry about the uncertainty they experience when it comes to their pension. They do not know if they will have enough money by the time they retire, see the quotes on the right. **None of the twelve interviewees are very involved with their pension**. One has always put it off, since it felt so far away into the future. Six interviewees are not very involved because they feel like everything is arranged for them and they do not really have an input:

"I would not know what to change anyway. It all just happens. The government takes the decisions and I cannot do anything about it on my own."
- Participant aged 45+ years old

They think it is all right this way and have faith that their pension will be enough for them to live from when they retire. The thing about pension that three people do actively keep in mind is the **early retirement scheme** that they can save up days for. One of the three, who is 62 years old, already plans to make use of that scheme. The other two are 46 and 57 years old and do find the scheme interesting, but they do not know yet if they want to retire early.

Most interviewees do not specifically have any extra savings or insurances intended for their pension, but mention using their money to pay off their **mortgage** as soon as possible. Finally, five interviewees (also) mention the savings that they have as a **safety net for unforeseen events**. If needed, some of that could be used for their pension, although it was not originally intended for this.

No interviewees regret their pension approach looking back. Most interviewees do a**dvise young people to look into their pension from the start**, even though the extent of their advice varies.

"Well, I always say I am lucky that my husband works too. If you work in care and welfare, you do not earn enough to make ends meet. I was able to save some money before we had children, but now that's history."

- Participant aged 45+ years old

"Firstly, I really dread it. I know the pension fund care and welfare, well it is not a fortune. And I do think that is regrettable. Because we worked so hard for it. One can say that you will have less expenses and that might be so, but you still have to pay your fixed costs. You have to pay them from your pension and then what is left over? Is that what you grew old for?"

- Participant aged 45+ years old

Conclusion

The interviewed participants aged 45+ years old are closer to their retirement age wise than the actual target group of this project. Nevertheless **they are not more involved with their future, let alone their pension**.
They feel like it is still too far away to think about. Most interviewees do save money for their future in some way, either in the form of a mortgage on a house or in the form of a safety net for unforeseen events. They have learned to do this from their parents.

Most interviewees prefer to have some kind of **control over their financial decision-making**, claiming themselves to be either self-directed or validators in Forrester's scheme. On the other hand it is mentioned that information presented to them by official authorities is not always easy to understand and that they have to **ask others for help** every now and then.
This confirms the need for criterion 3; participants do prefer agency over their decisions, but would also appreciate help when they have reached the limit of their own capabilities. Therefore the future self tool should complement the capabilities of the user when needed and not replace the user as the decision maker.

3. The future self tool should use predictive knowledge to make it more personal for the individual, in such a way that it complements the individual rather than replacing them.

All interviewees would advise the younger generation to look into their pension or rather their financial well-being from the start of their career. The extent of their advice varies, but in short it comes down to finding a good **balance between consciously handling your money now and saving for the future**.

If the participants aged 45 years and older already think their retirement is too far away to consider now, we can assume that the target group of this project (aged 21-35 years old) will think so as well. In the next interviews we will learn more about to what extent these participants envision their future self and what does motivate them to engage with their future.

Limitations

Since it was a qualitative study, a limitation of this round of interviews is the fact that only twelve people were interviewed. This means the results and the conclusions drawn from this are not representative for the entire target group. In addition, the diversity of the group is slightly limited by the fact that only women were interviewed. Although 85% of PFZW's participants are female (Lang, Poley & Jansen, 2021), talking to male participants could have added value. You can find an overview of the age, gender, occupation and working hours of the group in Appendix A.

In addition, due to a limit in time and costs, all interviewees were found with the help of my own network. So even though I had not met any of the interviewees before, the fact that they know someone close to me might have slightly affected their view of me and the way they answered the questions. Finally, the variety in the occupations (see Appendix A) of the participants could have been bigger. During this round mostly nurses were interviewed, either working in a nursing home, hospital, home care or in a facility for the mentally handicapped.

All things considered, I do believe it was a valuable way to get a first impression of the people who have been working in care and welfare for some time and their perspective on the future and their pension.

5.2. Interviewing participants aged 21-35 years old

During this stage of the project I conducted interviews with twelve people working in the care and welfare sector, aged 21-35 years old.

Interview objectives
The goal of these interviews was bilateral. On one hand it was to find out **to what extent the target group already thinks about and works toward their future**. What factors do motivate them to look into their future already?
On the other hand it was to find out what important criteria are for a future self tool that helps them make decisions regarding their pension.

Practical setup
Again **interviews** were chosen over other methods like questionnaires and focus groups to really dive into the individual experiences and opinions of the participants without being influenced by others (Van Boeijen, Daalhuizen & Zijlstra, 2020). Especially with topics like the future and pension, I did not want potential feelings of unease or uncertainty to lead to people simply agreeing with others.

The interviewees were sent **online sensitising material** to work on the week before their interview. Sensitising material is often used in the contextmapping method and consists of small exercises that people can do from home. It motivates participants to reflect on their experiences and thoughts regarding the subject of choice beforehand. This way they are already primed so to say and it lowers the threshold to dive deeper into the subject during the interview itself (Sanders & Stappers, 2012).

The actual interviews were **online** this time using Zoom or Microsoft Teams. Due to the rising number of people infected with Covid-19, I thought it unwise to see twelve different people in real life within the span of a week and a half.
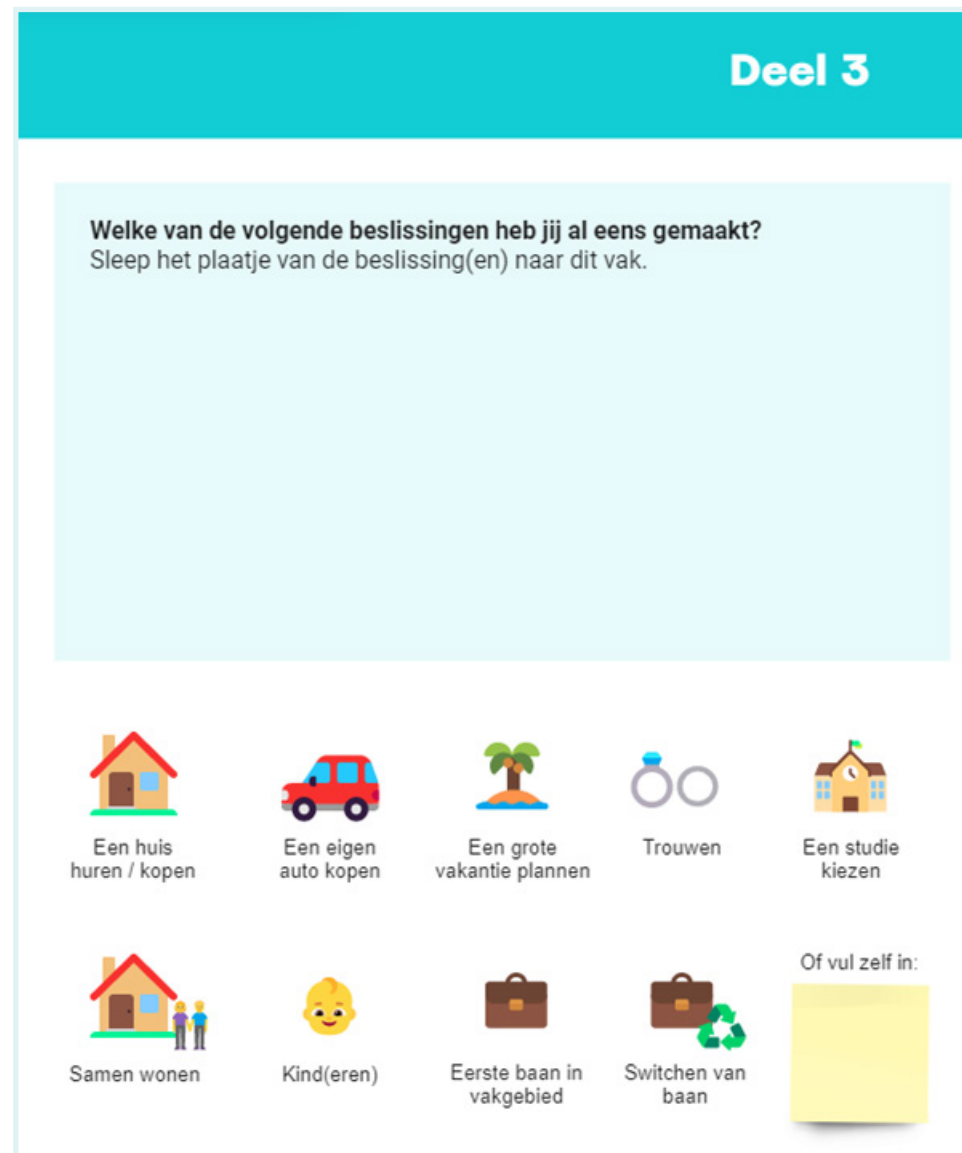

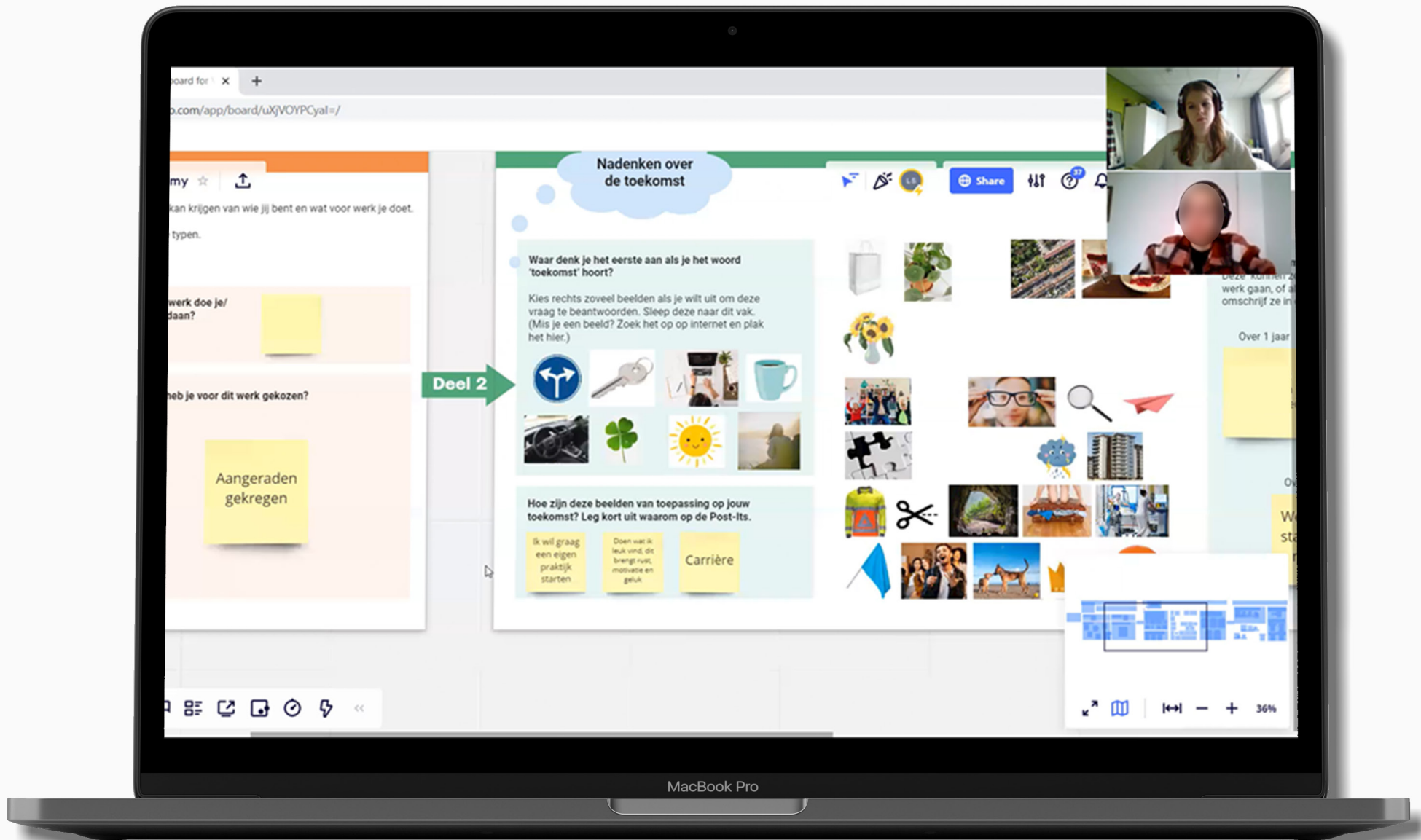**Figure 10.** *Snippet of one of the sensitising exercises. All sensitising boards can be found in Appendix C.*

Figure 11. *An impression of one of the online interviews with a participant*

Interview results

I asked the participants about their first associations with the word 'future' (Nl: 'toekomst'). Most participants mentioned having plans or dreams to move to **a new home**. Apparently it is one of the first things that most interviewees think about when being asked about their future. Some are already saving up specifically to be able to afford to buy a house. Others want to move to a bigger house at some point, but do not have concrete plans for it yet.

Another thing that is prevalent among this group is the fact that the majority is not necessarily lost, but rather still wandering so to say. Not everything is set in stone yet and there are still quite a few choices regarding the future that still need to be made. However, their **career** is one of the factors that does motivate them to engage with their future. They hope that they will find a job where everything will come together and they feel like they fit there. It seems to be the trend nowadays to switch jobs more often in order to find this dream job.

In addition, in the care and welfare sector especially there is always **still plenty to learn**. Quite a few interviewees plan to or are already enrolled in educational programmes that will help them move a level up and get more responsibility and/ or become a specialist. All interviewees have mentioned aspiring some kind of growth in their career. Partly due to this reason, most interviewees in this age group **do not work full time yet**. Some feel like it is not interesting to look into their pension until they do work full time and feel like their accrual actually contributes to a substantial pension:

"If I work somewhere for a year now, they usually say that the pension accrual is so little and ask if I just want it on my bank account. Then I get the feeling that what I do now does not really have a large impact yet on my pension. So I want to feel like it will really have an impact and not like it is just something temporary. And I think that secretly they just want to pay it so they can be done with it."
 - Participant aged 21-35 years old

Most interviewees mentioned that they do think about their **near future** and can also make plans for this. They can imagine what their future will look like in one year, five years and sometimes even ten years. But when it comes to twenty years or even **further into the future**, that is where most interviewees really **experienced difficulty to make concrete plans**.

Some used terms like 'dream' or 'fantasy' when talking about their plans for the future to indicate the fact that the future still feels like this kind of **magical other dimension** to them. The quotes on the next page illustrate this difficulty.

Most interviewees mentioned feeling mostly optimistic about the future. Some look forward to their future because they cannot wait for the plans they have made for their future to come true. On the other hand, another interviewee looks forward to their future because nothing is set in stone yet. They like the **unexpectedness** and the fact that there are still so many possibilites.

This optimistic view does not mean that there are no concerns at all. These top of mind **concerns** vary quite a bit, from money and health concerns to being afraid that they will not find the perfect job. One interviewee also mentioned being concerned about the fact that there is a shortage of staff in most areas of care and welfare even though the number of people who need care seems to be growing. This leads to extra pressure on the employees and makes working over hours the new normal. You want to watch your mental health and decline some extra shifts once in a while, but knowing that a colleague of yours will have a more demanding shift if you decline, does not make it an easy decision. Another interviewee also mentioned that she has exceeded her own limits before when they were short staffed. Her main concern is also to take care of herself a bit more in the future and try to prevent a burnout.

"I have to admit that the first time that I did the exercise I wrote down 'I have no idea' for over twenty years and 'Help…' for even later. Then I thought Lisa can't work with this, so I have to try it again. So I looked at it again a few hours later and then I thought okay now I do have something. But just like I said before, I do not really think about that. I can think about what happens in a year or five, but in ten or twenty years, that's a little too much to ask."

- Participant aged 21-35 years old

"I can think about it now like it is some kind of dream or something like that, but I do not really feel the urge yet to take concrete steps for it, since I am not in that phase yet."

- Participant aged 21-35 years old

Criteria for a trustworthy future self tool

Pension is a subject that most participants do not know a lot about yet. They would have to look into it more before making any decisions. One of the most important factors for a source of information for such a serious matter is the perceived **trustworthiness**. The most important aspect of a trustworthy tool according to most of the interviewees is the source. The organisation behind the tool must be **unbiased** and the writer of the information must be knowledgeable on the subject. Five of these interviewees also mentioned preferring sources that they are **familiar** with or sources referred to by other organisations familiar to them.

A **pension fund** could be considered a reliable source as well, but when asked if they know what their own pension fund is, not all interviewees can answer this question. Next to a reference by a reliable source, some kind of quality mark by an overarching organisation also adds to the trustworthiness:

"When it comes to pension and money, I would really like to see something like that it is certified by the government or something like that for example. That you can see that it is a recognised organisation, that it will not pull stunts that I would regret later so to say."
- Participant aged 21-35 years old

Five interviewees also mentioned that they would like to get clear information on **what they can do for their pension themselves** as well as the consequences of decisions that they can make. Pension is a topic that most interviewees are not very familiar with in general, so it was also mentioned by five interviewees that they would like some more information when it comes to this topic.

Another concern is that the tool should not be too general. Two interviewees explicitly mentioned that it is important to them that the information or advice presented to them **fits them personally**. Especially their occupation and life phase are important aspects here:

"I think it is more trustworthy when the tool has more information about me or I can search for similar situations. It should not be too general. When advice is given… it might be really different when you are a doctor compared to when you work in home care. So this is why it is important that it is specific for your occupation, and also for the phase of life you are in."
- Participant aged 21-35 years old

Three interviewees also mention preferring to be able to read **experiences of other people**. The experiences referred to here are on one hand about how others experience their pension and the decisions they have made for this. On the other hand, it is more about reviews that explain how other participants have experienced the tool itself. Not only referral by official authorities, but also recommendations from other people contribute to people's willingness to use a tool like this.

In addition, it is also important to three interviewees in particular that they can get in contact with someone to **ask questions**. One interviewee moved here from Iraq years ago and she mentions preferring to call someone over writing everything down in an Email. This way she can also get an answer right away when she does not understand something. Especially with an unfamiliar topic like pension, people value personal interaction.

A final nice-to-have mentioned by two interviewees is a kind of **checklist** that helps people to have an overview of what they have to think of and what tasks they should/could execute. One interviewee mentions that she usually makes lists like this herself and that it gives her peace of mind. However, for a topic like pension it is a bit harder to do this yourself since you are less knowledgeable. Therefore it would be nice for the tool to provide things like this that break the difficult topic into smaller steps.

We also discussed what aspects can make an online tool come across as untrustworthy. This is where the **looks of the tool** are especially important. The interviewees mention that the tool should look professional. For them this means that there are no spelling or grammar mistakes and that the information presented is correct.

Fonts and colours also play a role in the looks of the tool. According to the interviewees the tool should look **well-balanced** and radiate tranquillity. It should also not have too many nonsensical pictures as one interviewee mentions. Advertisements are an absolute no go as well for a serious and trustworthy tool (five interviewees). One interviewee summarises these things as follows:

"Actually, a trustworthy website usually looks boring, with lots of text."
- Participant aged 21-35 years old

Presentation of the pension information

As a final aspect of the interview I asked the interviewees what kind of information they would prefer to be provided with when making an important decision: **informational text, a comparison of options or a personal advice**. I asked them first to decide on this for the important decision they have made before. Later on in the interview I asked them if their answer was still the same if the decision to be made was about their pension.

Interestingly enough we can see a difference here. For the **experienced life decision** three interviewees chose an informational text, one chose both the informational text and a comparison, five interviewees chose the comparison and finally one interviewee chose both a comparison and an advice (see the screenshot below; each colour represents a different interviewee).
However, when we switch the context to **pension** only one interviewee prefers the informational text, another one chose both the comparison as well as an advice and a total number of seven interviewees preferred an **advice**. Reasons for their change of mind were the fact that a pension decision does not feel as concrete yet, the lack of knowledge most interviewees experience when it comes to their pension, as well as the fact that an advice gives them a starting point to think about. One interviewee explains it as follows:

"But financial matters… that is more far removed from my personal life now (Dutch: een ver-van-mijn-bed show), so then it would be nice to also get an advice, instead of having to try and interpret it all on your own."
- Participant aged 21-35 years old

Motivators to look into their pension that interviewees mention themselves

As a final question, I asked the interviewees what they thought would motivate them to look into their pension more. Nine of the interviewees were able to formulate a personal motivator. You can find their answers below in no particular order:

"Pension would interest me more:
- because I think it is stupid of me that I have not looked into it before;
- if I would see people around me struggling with their pension;
- if it would be more simple and clear;
- if it would be taught in school;
- when I get a full-time job;
- if I would want to retire early;
- when I get older and I get closer to the retirement age;
- when I have a more clear view of what I can do with it;
- if it were linked with my life now and the goals I have."

Limitations of this round of interviews

Since it was again a qualitative study, a limitation of this round of interviews is the fact that only thirteen people were interviewed. This means the results and the conclusions drawn from this are not representative for the entire target group. This time two out of the thirteen participants were male (see Appendix B), which makes the male/female distribution more similar to the overall distribution of PFZW's participants. In addition the occupations were also more varied this time, including employees in child care, youth care and day care (see Appendix B). Both these extensions did not necessarily lead to significant differences in people's answers and thoughts. In addition, due to a limit in time and costs all interviewees were found with the help of my own network. This means that there were relatively more participants belonging to the younger half of the target group. However, the interviewees who were relatively older were not necessarily more engaged with their future or their pension. If one would be interested in testing the findings on representativeness this older half of the target group should be more present.
The fact that some of the interviewees knew me [the interviewer] personally this time could also have led to a bias. Even though it did not feel like the interviewees were holding back on their honesty, this should be considered when evaluating the results.

5.3. Conclusion

The target group does make plans for their near future, but finds it more difficult when asked about 10 or 20 years in the future or even further. This corresponds with the finding in paragraph 2.5.1. that mentions how their future self feels more like a stranger, rather than an extension of themselves for younger people (Löckenhoff O'Donoghue, & Dunning, 2011).

This is part of the reason why **the interviewees are not engaged with their pension at all**. Since they do not have an intrinsic motivation to engage with their pension, or their long-term future in general, another motivator is needed to hook these people and introduce them to the topic of their pension. The most prevalent factors that **do motivate these interviewees to engage with their future are the goal to buy their own house and their career goals**, including finding the perfect job. Since these are goals that contribute to people's **ideal version of themselves**, this should work as an effective driver for intentional change (Boyatzis & Akrivou, 2006; see paragraph 2.5). Goals like these give people hope for the future (Topa, Lunceford & Boyatzis, 2018). This is why criterion five is as follows:

5. The future self tool should focus on the things in the future that participants are already intrinsically interested in now, like life events such as moving to a new home and career related events.

Most interviewees do not work full time (yet), which demotivates them to look into their pension. This is because they feel like the premiums they accrue now do not have that much of an impact yet on their pension.

One of the most important factors for a source of information for a serious matter such as pension is the perceived trustworthiness. **The source of the information** is the most important factor when it comes to a trustworthy future self tool that could help them make decisions regarding their pension. The pension fund is considered to be a trustworthy and knowledgeable organisation for this by the interviewees. Not all interviewees know the name of their pension fund by heart though. So PFZW's top of mind awareness is not very high currently. Criterion six is as follows:

6. The source of the information should be trustworthy: knowledgeable and unbiased.

In addition, participants find it important to know what they can do themselves and what the consequences are of their actions and decisions:

7. It should be clear in the tool what impact participants can have on their pension themselves.

Next, the participant's experience of the tool should be focused on their personal situation. Examples mentioned during the interviews were the occupation and phase of life. Criterion 8 is as follows:

8. The information should fit the personal situation of the participant.

Moreover, participants would like to be able to take the experiences of other people into account in their decision-making process. This again confirms the finding in paragraph 4.4 that people especially value recommendations from like-minded people (e.g. Mackenzie, Meyer & Noble, 2013; Buijsman, 2016), which confirms the need for criterion number four:

4. The future self tool should include recommendations from like-minded people.

Regarding the type of information, **some kind of advice** is preferred in the pension context. Not necessarily as something they will execute immediately, but more so as a **starting point** for looking into their pension. Interestingly enough, this is different from other life decisions where they prefer to get more static information and interpret it themselves. As of now pension funds are not officially allowed to advise their participants, but the nuance here might change in the upcoming years with the changes to the Dutch pension system (Innovation manager at PGGM, personal communication, February 10th, 2022). Based on this, criterion nine is as follows:

9. The future self tool should provide participants with a starting point for their pension information search.

Next to these more substantive criteria, the interviewees were also concerned with the layout and navigation of the tool. The looks of the tool can make or break the perceived degree of professionalism and trustworthiness. In addition, it should be made tangible and easy to use for the participants. The interviewees also mentioned to value an opportunity to ask questions. All this leads to the tenth and final criterion for now:

10. The tool should be accessible for the participants.

Motivators to look into their pension that interviewees mention themselves
Some of the motivators that interviewees mentioned themselves align with one or more of the ten criteria. For example, the third motivator "Pension would interest me more if it were more simple and clear" has to do with the concreteness of criterion 2, the clarity of personal impact of criterion 7, the starting point of criterion 9 and the accessibility in criterion 10.

The next page provides an overview of the ten criteria and nine personal motivators. The criteria are divided into two categories: criteria that are focused on the content of the tool and criteria that are more focused on the form of the tool. The numbers in front of the personal motivators show the criteria the motivators are related to, where these connections exist.

The criteria and personal motivators in this overview form the basis for the ideation phase. But before we get to that, I'd like to introduce you to Jaycee. Read on to meet an archetypal representation of PFZW's target group based on the findings so far.

5.4. Persona

Next to the ten criteria, I have also summarised the findings of the Consumer part of the 4C analysis (paragraph 2.3) and the interviews with the target group in the form of a persona. This persona can be found on page 49 and provides an archetypal representation of the target group. It helps to have a consistent understanding throughout the project of what the participant is like and what they find important (Van Boeijen, Daalhuizen & Zijlstra, 2020). Along with the criteria and personal motivators, it also functions as a starting point for the ideation phase.

Content criteria

1 The future self tool should increase participants' motivation to look into their own pension.

2 The future self tool should contribute to participants feeling more in control of their pension, by making it more concrete for them.

5 The future self tool should focus on the things in the future that participants are already intrinsically interested in now, like life events such as moving to a new home and career related events.

Form criteria

3 The future self tool should use predictive knowledge to make it more personal for the individual, in such a way that it complements the individual rather than replacing them.

4 The future self tool should include recommendations from like-minded people.

6 The source of the information should be trustworthy: knowledgeable and unbiased.

7 It should be clear in the future self tool what impact participants can have on their pension themselves.

8 The information should fit the personal situation of the participant.

9 The future self tool should provide participants with a starting point for their pension information search.

10 The future self tool should be accessible for the participants.

Personal motivators

"Pension would interest me more:

because I think it is stupid of me that I have not looked into it before;

4 if I would see people around me struggling with their pension;

2 7 9 10 if it would be more simple and clear;

9 10 if it would be taught in school;

5 when I get a full-time job;

5 if I would want to retire early;

when I get older and I get closer to the retirement age;

7 when I have a more clear view of what I can do with it;

5 8 if it were linked with my life now and the goals I have."

48

Jaycee

Age: 26 years old
Gender: female
Nationality: Dutch
Living situation: lives alone

- Jaycee has finished a bachelor education in nursing of four years at HBO level.
- She works 28 hours a week as a **nurse at the oncology department** of a hospital in The Hague.
- She plans to start a **part-time education** in a few months that will make her an official oncology nurse so she can help the patients even better.
- She lives in an apartment and drives to her work, but **hopes to buy a house** closer to the hospital soon so she can cycle to work.
- She does make plans for the near future, like the education and house mentioned before. But she finds it difficult to think about what her life will look like in 10 years from now or even later. She has some **dreams** like starting a family and travelling more, but does not know yet when that will happen.
- She feels optimistic about the future and does not really have any worries about the future now.
- She finds it important to **make decisions for herself**, but does not hesitate to **ask her boyfriend and parents for help** when something is not clear to her.
- Her most important values are: trust, positivity, compassion, responsibility and fun.
- She knows that there is a decent pension fund for the care and welfare sector, but does not remember its name. She gets the mail, but has never opened the envelopes before. She feels like she should probably look into it more, but **she would not know where to start**.

"When I was twelve years old, my grandmother passed away from cancer. And I have seen for myself the kind of care that she got. And what that meant for not only my grandmother, but also my grandfather. And I have always said I wanted to be a nurse ever since."

"I love this job, because I have the chance to help other people. The oncology department is kind of intense and not everyone can be helped. But also when they will not get better anymore, you can help them with that process and help make it as comfortable as possible for them. So you can always contribute in some way."
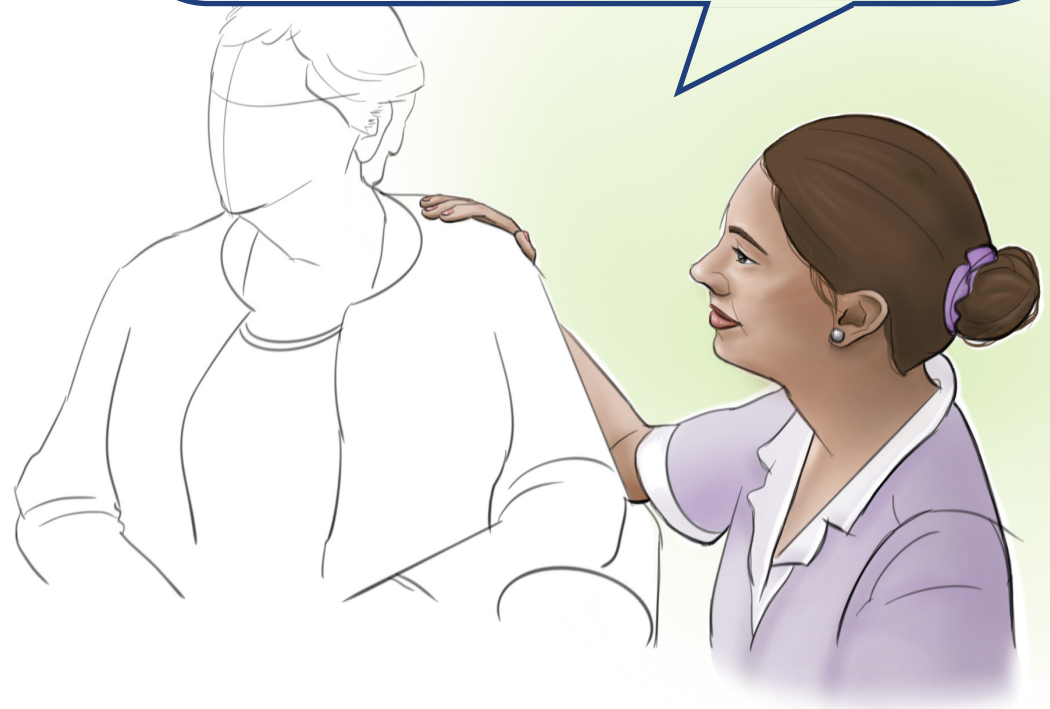
6. Ideation

6.1. A brief analysis of existing offerings

Before using the aforementioned criteria to design solutions, I had a look at some of the existing offerings aimed at motivating (young) people to engage with their pension.
Of course there is **mijnpensioenoverzicht.nl** where you can find an overview of your accrued pension (from different pension funds) so far as well as what you will get when you retire. This is a tool specifically focused on pension that is relatively simple and easy to navigate. It also provides you with basic information about the new pension system as well as what you can already do for your pension.

In addition, PGGM has developed the **Pensioen Checker**, which is a mobile application that uses the information from mijnpensioenoverzicht. nl . Both the Pensioen Checker and mijnpensioenoverzicht.nl give a concrete idea of what changes if participants were to make certain decisions like retiring at a different age or saving extra money themselves. The app focuses on the need behind criterion seven:

7. It should be clear in the future self tool what impact participants can have on their pension themselves.

The form of an app makes it more accessible for people to use on their phone whenever they want. As of February this year the app has been downloaded 100.000 times. I do not have a full overview of all the factors that contributed to this success, but it is likely that this accessibility has played a big part, which confirms the need for criterion ten:

10. The future self tool should be accessible for the participants.

Figure 12. *Snippet of the website mijnpensioenoverzicht.nl (Mijnpensioenoverzicht.nl, n.d.)²*
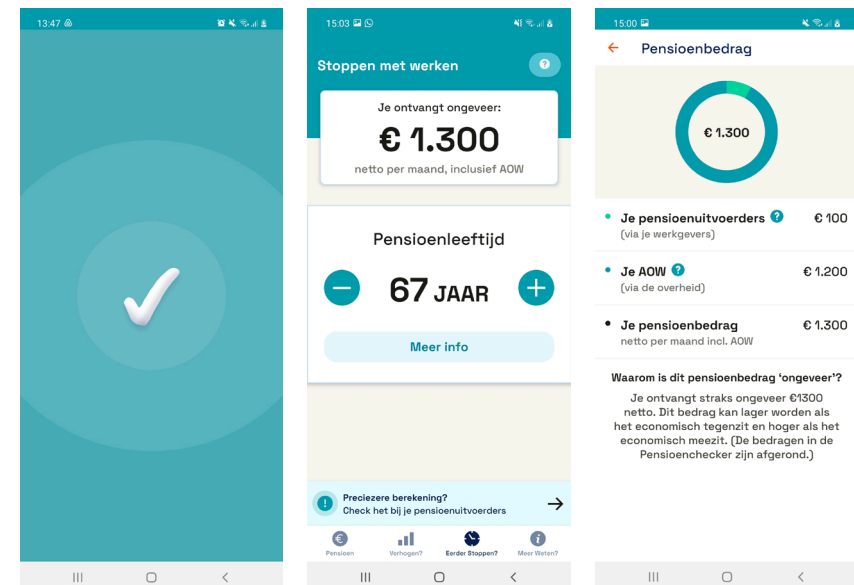
Figure 13. *Snippets of the Pensioen Checker app (Pensioenchecker, 2022)*

PFZW also has a printed magazine called **Goed Bezig** targeted at the participants aged 18-42 years old, along with an online platform where people can watch videos about other people working in the care and welfare sector amongst other things. The magazine has been evaluated with participants.

The majority of the participants has a low tendency to read magazines. They have other priorities and prefer to spend their time online (Van Bodegom, 2018). Generally they do not feel like Goed bezig is specifically aimed at younger people. Moreover, the ones who do read it are **not very interested in the pension information**. And even if they were, they think the pension information presented in the magazine is rather concise and superficial.

Especially the **personal experiences of employees and the online videos of colleagues** are popular (Van Bodegom, 2021). Again it is confirmed that there is no interest in their pension yet and that participants value the experiences and opinions of people they can relate to. This confirms criteria four and five:

4. The future self tool should include recommendations from like-minded people.

5. The future self tool should focus on the things in the future that participants are already intrinsically interested in now, like life events such as moving to a new home and career related events.


Figure 14. *Snippet of PFZW's magazine called Goed Bezig (PFZW, 2022)²*
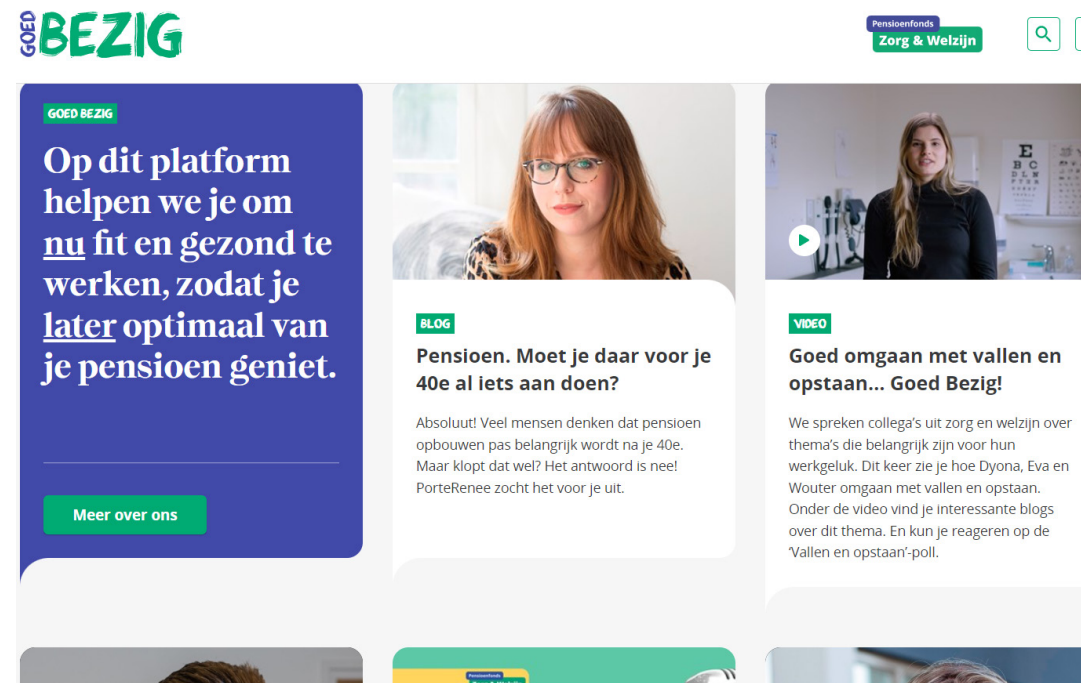
Figure 15. *Snippet of the Goed Bezig online platform of PFZW (PFZW, n.d.)³*

In addition, there is a variety of websites and social media accounts developed by other organisations targeted at young people especially. An example is the website **nuietsdoenaanjepensioen.nl** developed by The Federation of the Dutch Pension Funds. It includes short animated videos, checklists, overview of life events where pension is involved and very short podcast episodes. The design is quite bold and it is relatively difficult to navigate in my opinion. I also showed it to multiple peers and other people around me and nobody had ever seen it before.

The same problem occurs with the different social media pages aimed to inform people about their pension, including the @PFZWpensioen page, the '@pensioenlab' page and an initiative called '@ikbendezorg'. A social media page that is relatively popular is called '**@liefdevoordezorg**'. They have 14.000 followers and mostly share relatable quotes that touch upon the hardships of working in the care and welfare sector and praise the workers. Again not focusing on pension specifically, but rather focusing on what people can relate to and sharing with a like-minded community in this case seem to be effective. This again comes back in criteria four and five:

4. The future self tool should include recommendations from like-minded people.

5. The future self tool should focus on the things in the future that participants are already intrinsically interested in now, like life events such as moving to a new home and career related events.
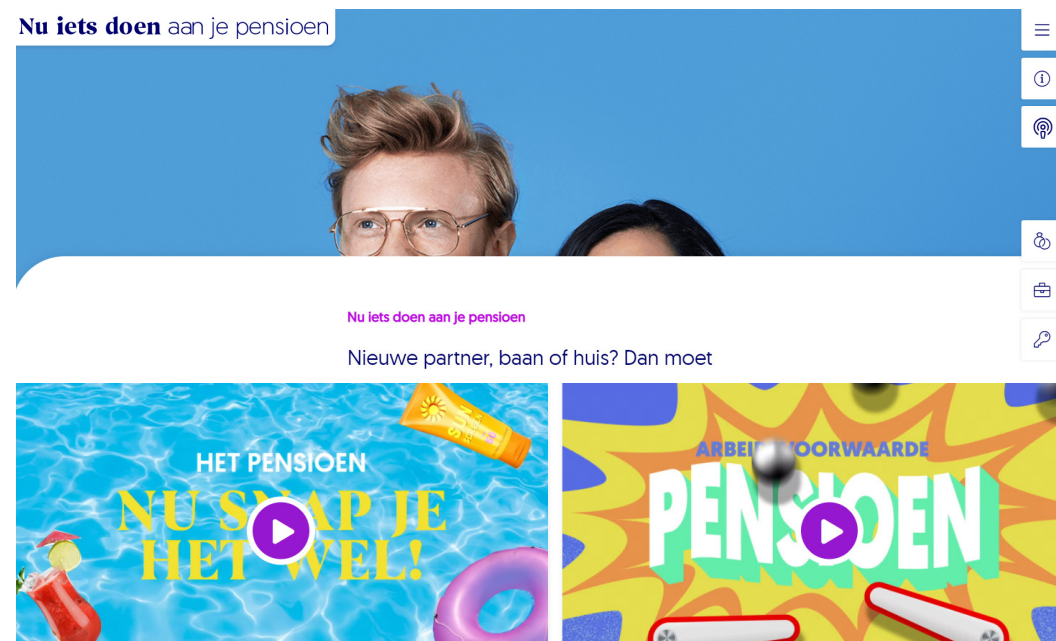
Figure 16. *Snippets of the website nuietsdoenaanjepensioen.nl* (Pensioenfederatie, n.d.)
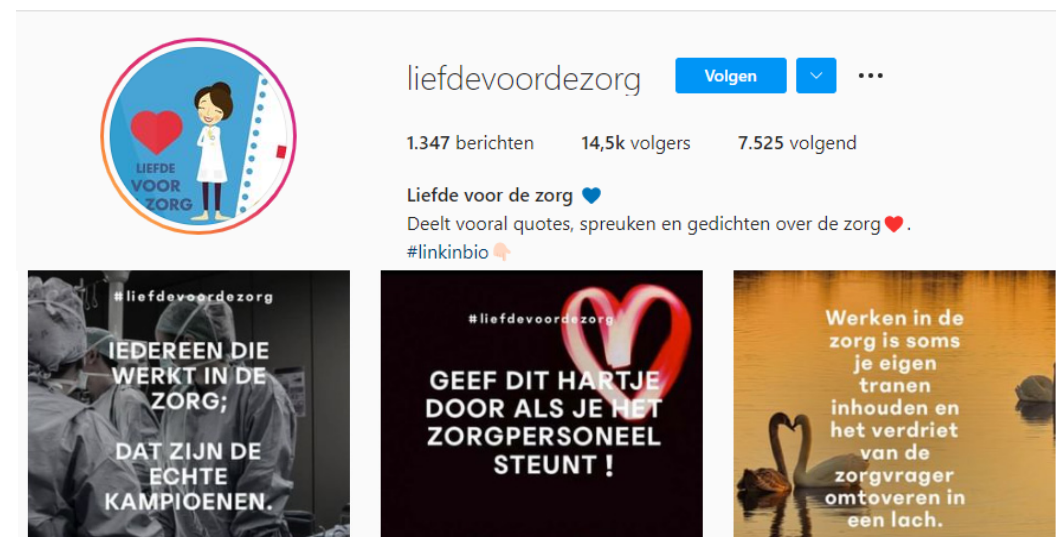
Figure 17. *Snippets of the Instagram account @liefdevoordezorg* (Liefde voor de zorg, n.d.)

Conclusion

All in all, some offerings are more effective than others when it comes to motivating (younger) participants to engage with their pension more. This brief analysis confirms the need for four out of the ten criteria that were deducted from the literature research and user interviews. The main problem why some offerings do not work well is in the focus on pension, which people are just not that interested in. It always feels too far away. This is why a different angle like life events that people are dealing with already is more interesting to them.

In addition, some offerings have potential, but people just do not know about their existence. And how can you use something if you do not even know it exists? Moreover, for the tool to be effective in engaging people more with their future and pension, it should not be something that people just look at once and forget about after. This is where criterion eleven comes in as a final addition to the list:

11. The tool should be integrated into the participant's daily life in a way that it motivates them to come back to use it again.

The final overview of criteria and personal motivators can be found on the next page.

Content criteria

1 The future self tool should increase participants' motivation to look into their own pension.

2 The future self tool should contribute to participants feeling more in control of their pension, by making it more concrete for them.

5 The future self tool should focus on the things in the future that participants are already intrinsically interested in now, like life events such as moving to a new home and career related events.

11 The tool should be integrated into the participant's daily life in a way that it motivates them to come back to use it again.

Form criteria

3 The future self tool should use predictive knowledge to make it more personal for the individual, in such a way that it complements the individual rather than replacing them.

4 The future self tool should include recommendations from like-minded people.

6 The source of the information should be trustworthy: knowledgeable and unbiased.

7 It should be clear in the future self tool what impact participants can have on their pension themselves.

8 The information should fit the personal situation of the participant.

9 The future self tool should provide participants with a starting point for their pension information search.

10 The future self tool should be accessible for the participants.

Personal motivators

"Pension would interest me more:

because I think it is stupid of me that I have not looked into it before;

4 if I would see people around me struggling with their pension;

2 7 9 10 if it would be more simple and clear;

9 10 if it would be taught in school;

5 when I get a full-time job;

5 if I would want to retire early;

when I get older and I get closer to the retirement age;

7 when I have a more clear view of what I can do with it;

5 8 if it were linked with my life now and the goals I have."

6.2. Brainstorming

The criteria from the literature research and interviews formed the basis for a brainstorm session to think of solutions (see Figure 18). During this session me and a peer student bounced ideas off each other. For inspiration we used existing examples to engage people as well as How-Tos to zoom in on specific problems and make it easier to diverge while postponing judgement (Van Boeijen, Daalhuizen & Zijlstra, 2020).

Combining separate ideas around common denominators led to three initial ideas (again in no particular order):

1. An idea for an informative tool that is centred around the **life events** that are most top of mind for the target group, like buying a house and decisions regarding their career. The idea is that a focus on these will make the first page they see already more relevant, creating a hook to grab their attention and invite them to find out more about their pension.
2. An idea where the tool is more engaging rather than just informative. Using a **more interactive setup** should help make the topic more tangible. Experiencing the topic in a way, rather than just reading lots of text. This way this serious topic hopefully becomes less daunting and easier to start with.
3. An idea where the tool is a kind of extension that can be used in your own Email environment. You make a **checklist** around a certain life decision you expect to be making in the near future and send it to your **future self.** Suggestions to expand your checklist are added (using predictive knowledge) as well as a link to where you can find more information. This way it is more of a personal act, tapping into intrinsic motivation to help your future self reach your goals.

In Appendix C you can scroll or leaf through visual representations in the form of mockups of these three initial ideas, along with an explanation of the main steps of the ideas.

Figure 18. *Screenshot of the brainstorming board on Miro*

6.3. Interactive workshops

After a feedback round with innovation managers at PGGM, the three ideas from the previous chapter were used in three interactive workshops with nine participants in total. All nine had participated in an interview before and were thus already sensitised when it comes to the pension topic. Together with a junior designer from Muzus I designed the setup of the workshops. User research is Muzus their specialty and they have done plenty of online and offline interactive workshops before.

The goal of this workshop was to both **gather feedback** on all three ideas and take the extra step of brainstorming suggestions to **make the ideas better together**.

The workshops started off with an introduction exercise and an exercise to motivate a creative mindset. Next I showed them the main criteria from the interviews and had them prioritise which ones were the most important according to them.

After this it was time to start on the three ideas. For each idea they could use the coloured Post-Its to write down pros, cons and things they were wondering about. Next everyone got the chance to write down suggestions for improvement in the clouds above the ideas. The findings of the workshop per idea can be found in Appendix E.

Figure 19. *Screenshot of the Miro board for the interactive workshops with participants*
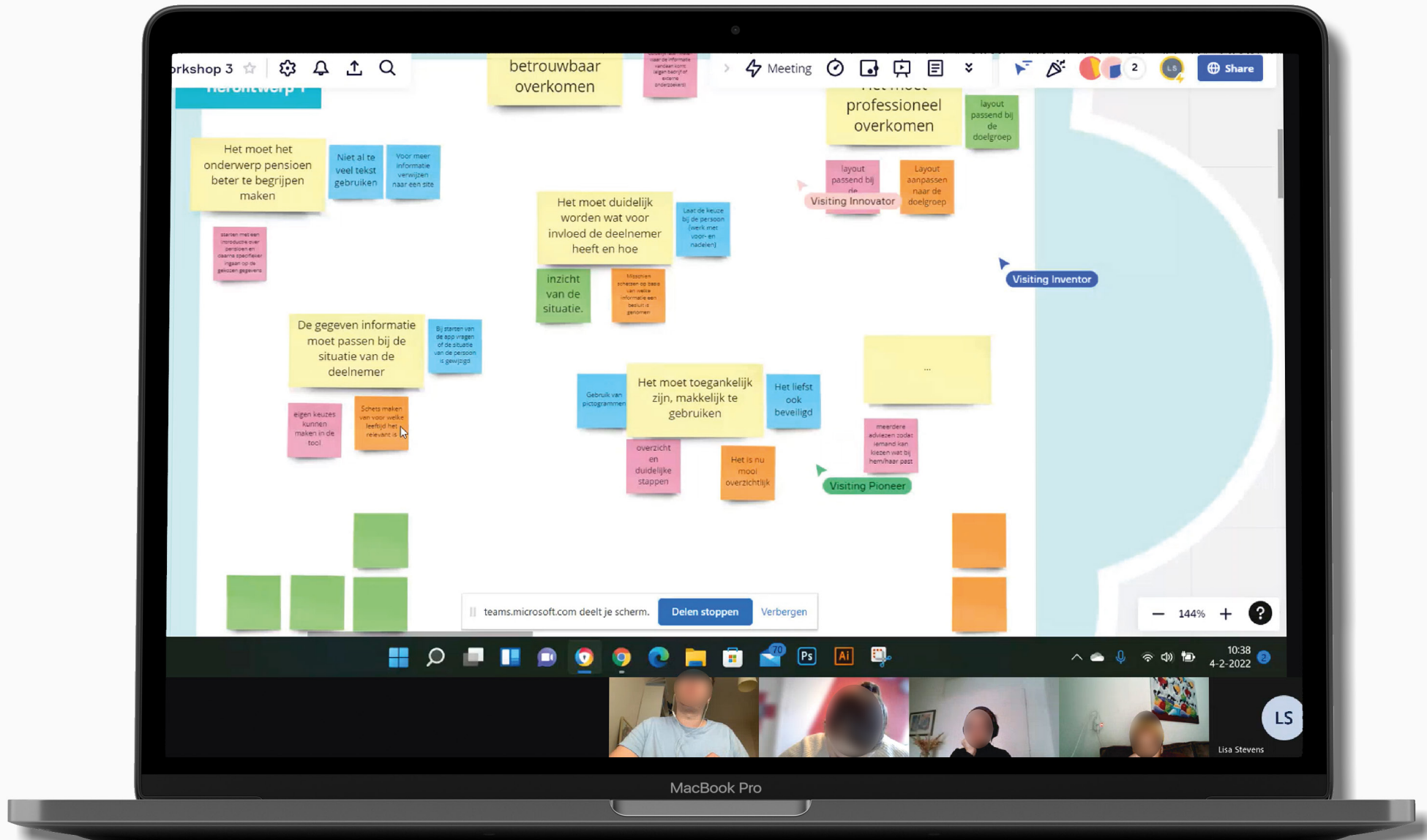
Figure 20. *An impression of one of the online interactive workshops*

6.4. Choosing an idea to elaborate on

Looking back, the three ideas are not exactly for the same moments of use and thus difficult to compare. Idea 1 and 3 are more focused on the content, where idea 2 is mostly focused on the navigation. In hindsight I accidentally combined a concept and interaction test. This is not the worst, since the workshops were of a qualitative nature. It just means that it is not fair to choose an idea based on the preference of the participants. It would not be any way, since it is common by now that customers generally lack the insight or context to know and describe what they want when it comes to innovation.

I would recommend PGGM to use idea 3 as a starting point for further explorations. In Figure 21 you can see to what extent the three ideas meet the eleven criteria that concluded the literature research and user interviews. There are four criteria that idea 3, of sending a checklist to your future self in your own Email environment, can definitely still be improved on as indicated by the orange flashes. However, especially when it comes to making the tool **more personal, accessible and part of an individual's daily life** (as described in criteria 8, 10 and 11), idea 3 scores better than the other two.

It was mentioned multiple times by the participants during the interactive workshops that choosing people's Email as the platform for the tool lowers the threshold to start using it, since they are familiar with this platform already and use it on a daily basis. Moreover, this idea encourages a dialogue between the participant, their future self and the pension fund, whereas in idea 1 and 2 using a new type of website is more of a one-time interaction. And a one-time interaction is less likely to change an individual's behaviour and motivate them to engage with their pension more.

Finally, the idea taps into the intrinsic motivation of people to really work on their own goals. These goals are linked to the ideal version of themselves that people strive to work towards. The ideal version of themselves is the most important driver of intentional change in one's behaviour, emotions, perceptions and attitudes (Boyatzis & Akrivou, 2006). This is one of the ways mentioned in paragraph 3.6 to meet criterion 1 and increase participants' motivation to look into their pension.

The next chapter explains the final concept and dives deeper into the reasoning behind certain decisions as well as theories for designing products that people come back to in their daily lives.
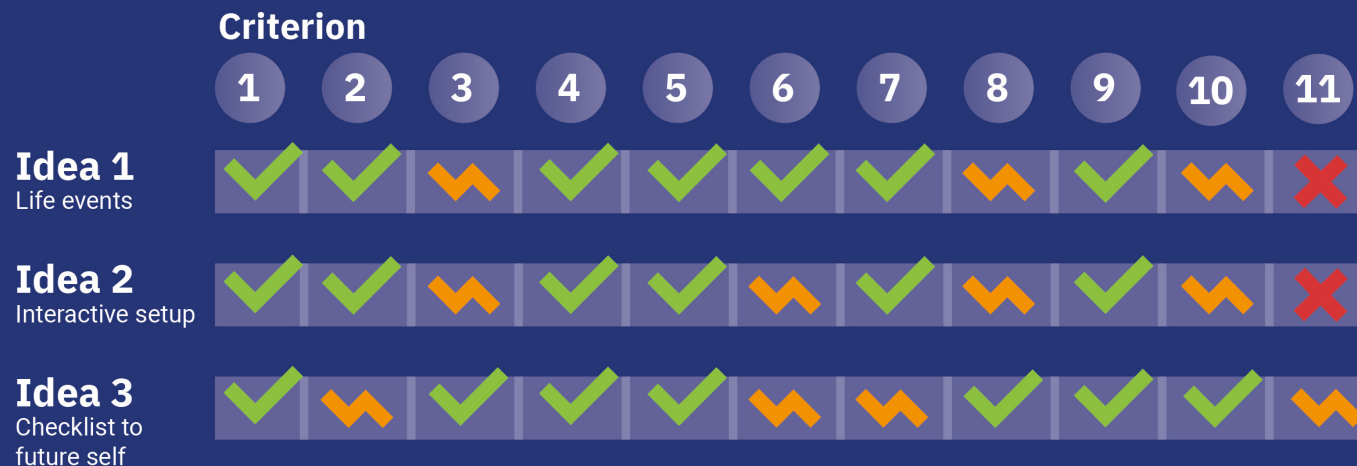
Figure 21. *Overview of the degree to which the three ideas meet the eleven criteria*

7. The Toekomstplanner

In this chapter you will meet the **Toekomstplanner** (EN: Future planner), the final concept of the future self tool for this project. I used idea 3 of **sending a checklist to your future self via Email** as the basis for this concept.
Taking into account the criteria, as well as the feedback from the participants in the interactive workshops and feedback from my coaches and innovation managers at PGGM, I improved the idea through multiple iterations.
In the first paragraph I introduce the essence of the Toekomstplanner and its workings. The next paragraphs dive deeper into how the Toekomstplanner works step by step and how it came to be the concept it is now. It explains the reasons behind certain design decisions and the theory for developing a habit-forming product that users come back to time and time again.

7.1. Meet the Toekomstplanner

The Toekomstplanner is an add-on to a participant's Email environment. It is a tool that helps you make a checklist around a certain life event or decision and send it to your future self. It breaks down life decisions like moving to a new home, starting a new job etc. (see paragraph 2.3) into concrete tasks. The tool helps participants make sense of the implications of these decisions for both the short and long term, including the consequences for their pension. In addition it helps the participant plan a suitable moment to work on their checklist.

This way the Toekomstplanner has two main functions. First of all, it provides participants with a **starting point** for their information search, and thus lowers the threshold for them to start figuring out important decisions. This way people become more knowledgeable, which decreases their worries and makes them feel more in control again (see paragraph 3.5). By taking away negative sentiments like uncertainty and stress, participants are more likely to prefer delayed rewards over immediate rewards (Adamkovič & Martončik, 2017; see paragraph 3.6.1). This means they are more likely to engage with and invest in decisions that they can reap the benefits from in the future, like their pension.

Secondly, the Toekomstplanner helps participants **find a moment to sit down and work on this checklist**. Participants can indicate an estimated time frame for when they expect the checklist to be relevant for them. By the time this time frame is near, the Toekomstplanner makes use of its predictive technologies to suggest suitable moments.

Using relevant life events to introduce pension to participants
The number one learning from conversations with the participants is that they, both young and old, are just not that interested in their pension (see paragraph 5.3). It still feels too far away for everyone. However, there are life events, like finding a home and the perfect job, that the younger participants are already thinking about and working towards. The decisions made for these life events do impact a participant's pension in different ways. Using this angle of life events in the concept helps participants feel in control of their decisions and introduces them to the consequences for their pension in an unobtrusive way, without forcing them to dive into difficult pension knowledge unguided.

Value for PFZW
First of all, since the new pension system is more focused on the individual, pension funds are even **more obligated to inform their participants well** (De Rijksoverheid, n.d.)[2]. Participants are generally not interested in pension information, so a tool that uses the angle of life events is likely to be a more effective way to reach participants.
Helping participants feel more in control of their future is also beneficial for PFZW in the way that it contributes to **customer satisfaction**. PFZW is not very well-known among its participants, as confirmed in the user interviews. Becoming more of a part of participants' daily lives with a tool like this, could increase their **brand awareness**. It offers a great way for PFZW to reach their target group in a more low-key manner.

Especially since PFZW is a social organisation as a pension fund, it is important that both clients and participants are content with their service. In addition, customer satisfaction is also a strategic asset. You never know what the future will bring. Happy clients and participants lead to a decent retention rate should any system changes happen in the future, like a cancellation of the mandatory participation in care and welfare for example. This way customer satisfaction could lead to a competitive advantage over other pension funds.

7.2. The Toekomstplanner step by step

When people graduate and start their first job in a sector like care and welfare, a lot changes in their lives which can be rather overwhelming. A new workplace, new colleagues, maybe a new home and tons of things to think about. But where do you start? The Toekomstplanner aims to help PFZW's participants navigate big life events like these and become more knowledgeable on the implications of the choices they make.

On the next page you will find a visualisation of the basic steps a participant goes through when using the Toekomstplanner. These steps are also briefly explained on the right.

Step 1. When people start their first job in care and welfare, PFZW sends them a welcome email where the Toekomstplanner is introduced.

Step 2. The participant can easily add the Toekomstplanner to their own Email platform.

Step 3. The participant starts an Email for their future self to create a checklist for a certain life event. Tapping on the PFZW icon activates the Toekomstplanner.

Step 4. The Toekomstplanner recognises the type of life event based on the information in the Email and suggests a checklist with things to look into and do to make a well-informed decision about the life event.

Step 5. The checklist is added to the Email and the participant can send the Email to their future self.

Step 6. The participant chooses a wider time frame for when they expect the checklist to be relevant for them.

Step 7. The Toekomstplanner uses predictive technologies to find suitable moments for the participant to sit down and work on their checklist, within the wider time frame. The participant can choose to agree or disagree with this moment.

Step 8. By the time the chosen moment comes around, the participant gets a notification on their phone and their Email with the checklist back. This way they can get started on their checklist.

By the time the user is done for the moment, they can either close the checklist or choose a new time frame to send the list again and work more on it later. An example of this is visualised in the form of a mockup in Figure 23 on page 63.
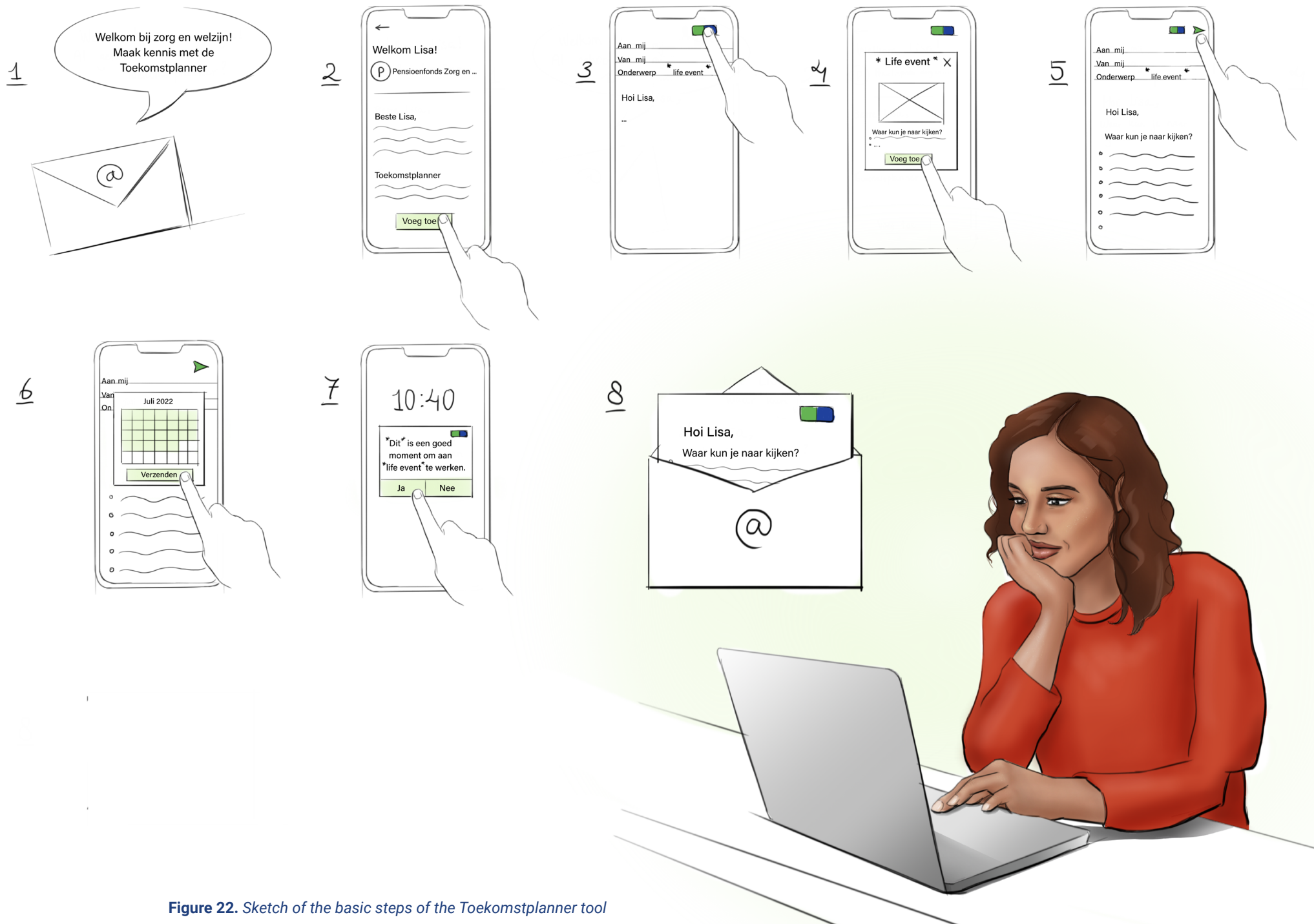
Figure 22. *Sketch of the basic steps of the Toekomstplanner tool*

Now you have a basic understanding of what the Toekomstplanner is and how participants can use it to break life decisions down into concrete tasks. The next paragraphs dive deeper into the way the concept for the Toekomstplanner works and what the reasons are behind the most important design decisions.

In the next few paragraphs an **example** of a participant journey is used to make it easier to imagine how the tool works and helps the participant. In this example the participant is someone who just graduated and started working in the care and welfare sector. She plans to move closer to the place where she works and is looking for a new home. **Mockups are used to create a lifelike visual representation**. This does not mean this is the final version of the tool, the concrete representation makes it easier to discuss. A first example can be found on the next page. Here the participant is asked whether they are done with their checklist or want to work on it some more at another moment in the future.

As mentioned in criterion 11, it is important that the Toekomstplanner is designed in such a way that **the participant comes back to use it again**. This way the tool is more likely to have a lasting effect on the participant's motivation to engage with their future, and their pension. Therefore I have looked into theories on how to design a tool that creates user habits. The next paragraph explains these theories and shows how they can be applied to the concept.

7.3. Hooked: designing a habit-forming future self tool

7.3.1 The theory behind the Hooked model
The Hooked model is a practical model to use for designing habit-forming products. It is based on various theories and models about human behaviour and habit formation, of which the behaviour model by Fogg (2009) is the most prominent one.

Fogg (2009) explains that behaviour occurs when three factors are present at the same moment: motivation, ability and triggers. Increasing one or more of these factors decreases the threshold between intention and behaviour and thus makes it easier to start a certain action.

Motivation: Fogg defines three dimensions of motivation that drive an individual to act. According to him all humans seek pleasure and avoid pain; seek hope and avoid fear, and seek social acceptance and avoid rejection by others (Fogg, 2009).

Ability: the easier it is for people to perform a behaviour, the more they will do it. According to Fogg this simplicity of a behaviour consists of a chain of six parts: time, money, physical effort, mental effort, social deviance and non-routine (Fogg, 2009). This relates to the finding from Buijsman's thesis (2016) that the more an individual perceives the task of looking into their pension as simple, the higher their motivation to do so. It also captures the capacity and opportunity factors in Hershey's model (2004) for Financial Retirement Planning (see paragraph 3.6).

Trigger: a trigger is a kind of cue that must be present to activate the behaviour. Fogg defines two kinds of triggers: a trigger that motivates the user is a spark and a trigger that increases the ease of performing a behaviour is called a facilitator (Fogg, 2009).
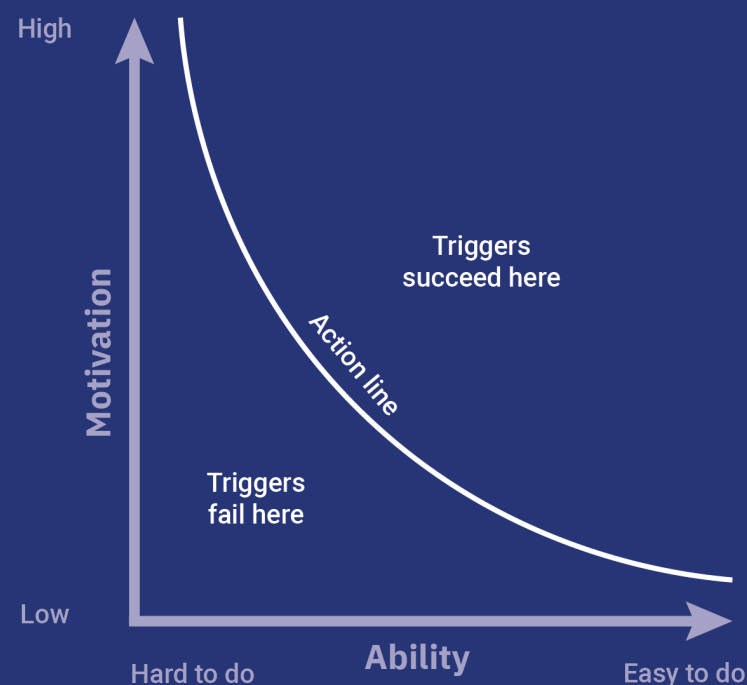
Figure 23. *Fogg's behaviour model (2009) as visualised by Ackermann et al. (2018)*

Fogg's model explains what factors are needed for an individual to bridge the intention-behaviour gap and start a behaviour. However, it does not touch upon what is needed to turn this behaviour into a habit yet. To my knowledge, a coherent model about habit formation has not been formed as of yet.

However there are various papers that discuss part of the process. In essence there are **four steps an individual goes through in the process of forming a new habit:**

1. intention formation;
2. intention-behaviour gap;
3. repetition of the behaviour and;
4. automaticity

(Lally & Gardner, 2013).

This four-stage process is usually triggered by a cue from the context that the individual is in (Verplanken, 2006; Wood & Neal, 2007) or by a previous action. Behaviours are often sequences of linked actions that trigger each other (Graybiel, 1998).

In the next paragraph I will explain the four steps of the Hooked model. The Hooked model uses an approach similar to the steps mentioned above. Here you will see how the Hooked model is linked to Fogg's behaviour model as well as the steps above. I will also explain how the steps of the Hooked model can be applied to the concept.

7.3.2 Explaining and applying the Hooked model step by step

The **Hooked model** is explained in a more practical way than the theoretical models mentioned before. It is less focused on just the steps of habit formation themselves and more so on what is needed to progress to the next steps. According to the Hook Model, a user usually goes through four phases when building a habit around a product: 1) a trigger to start using a product, 2) an action to satisfy that trigger, 3) a variable reward for the action and 4) a kind of investment that in the end makes the product or system more valuable to the user (Eyal, 2014; see Figure 24 on the next page).

Trigger

Triggers are the first step in the Hooked model. They are the cues for users to take action, similar to how Verplanken (2006) and Wood and Neal (2007) describe it. Eyal (2014) distinguishes two types of triggers: internal triggers and external triggers.

Internal triggers are usually tied to the user's emotions or thoughts and they are formed automatically in your mind. These internal triggers are related to Fogg's dimensions of motivation that were mentioned before. Especially negative emotions can be effective internal triggers (Eyal, 2014). The target group of this project experiences several negative emotions or thoughts when it comes to thinking about their future and pension. Examples are worries about not knowing where to start on serious topics like their future, worries about finding a new home, the perfect job or feeling stupid because they believe that they should have looked into the topic of pension sooner (see paragraph 5.2).
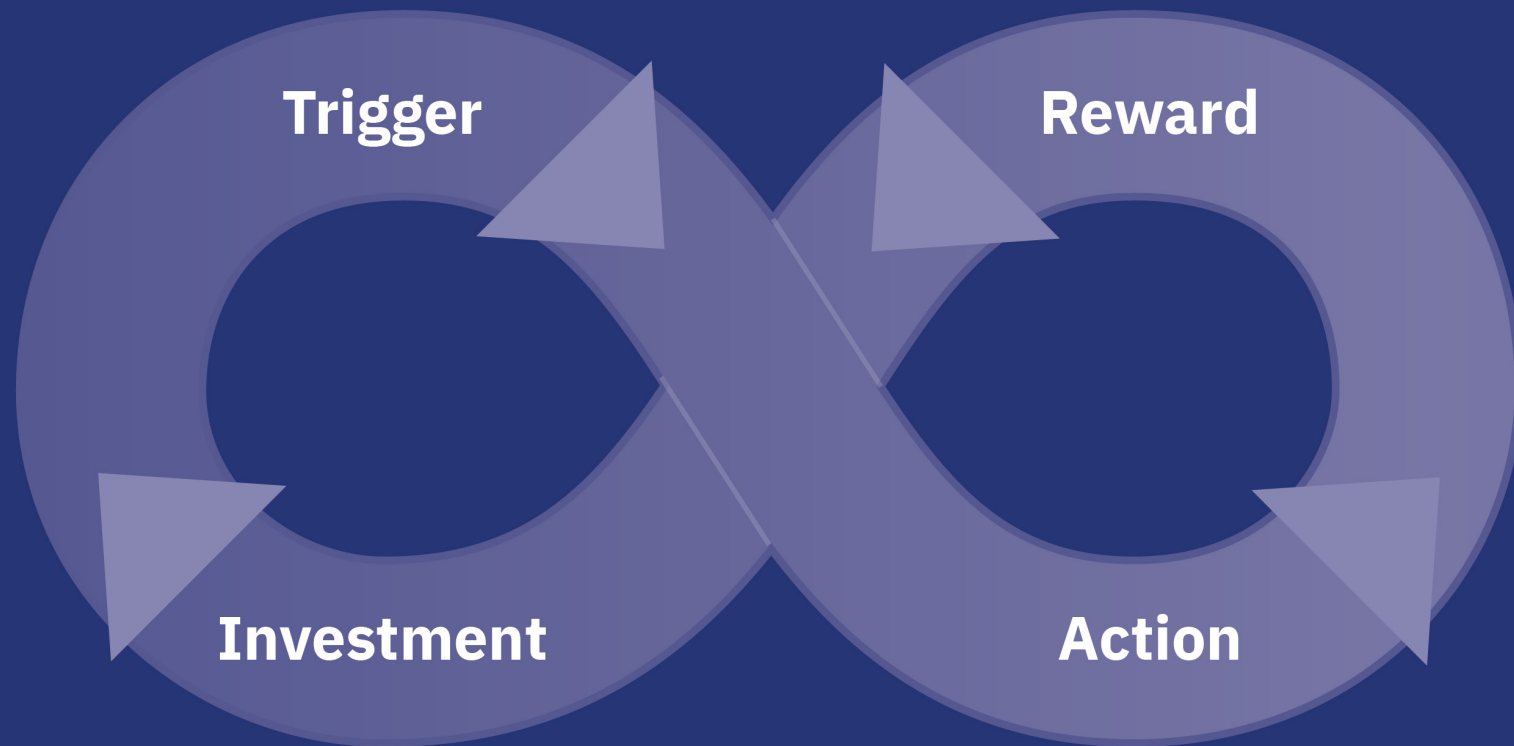
Figure 24. *Simplification of the Hooked model by Nir Eyal* (2014)

External triggers are usually triggers from the environment of the user that include a call to the desired action. This desired action is usually made clear explicitly in order to reduce the thinking that is required of the user. An external trigger can come in different forms including, but not limited to advertising and other marketing efforts, attention in the press or social media, word of mouth referrals and triggers that users opt in for or subscribe to. Eyal also mentions that especially referrals from family and friends are often crucial to the diffusion of a product (Eyal, 2014), confirming the findings in paragraph 4.4 and 5.2.

External triggers are mostly important for the start of new habits as well as to bring users back to start a new loop. As mentioned before, by the time the participant is done working on the checklist for the moment, they can either close the checklist or choose a new time frame to send the list again and work more on it later. The tool asks them whether the checklist can be closed or they can try to plan a new moment for the participant to work on it (see Figure 25 on page 68).

Over time, **the internal triggers that tap into the why of the product are what keeps users hooked.** A product that does not solve the problem well and thus does not have a high degree of perceived utility will not keep users interested (Eyal, 2014).
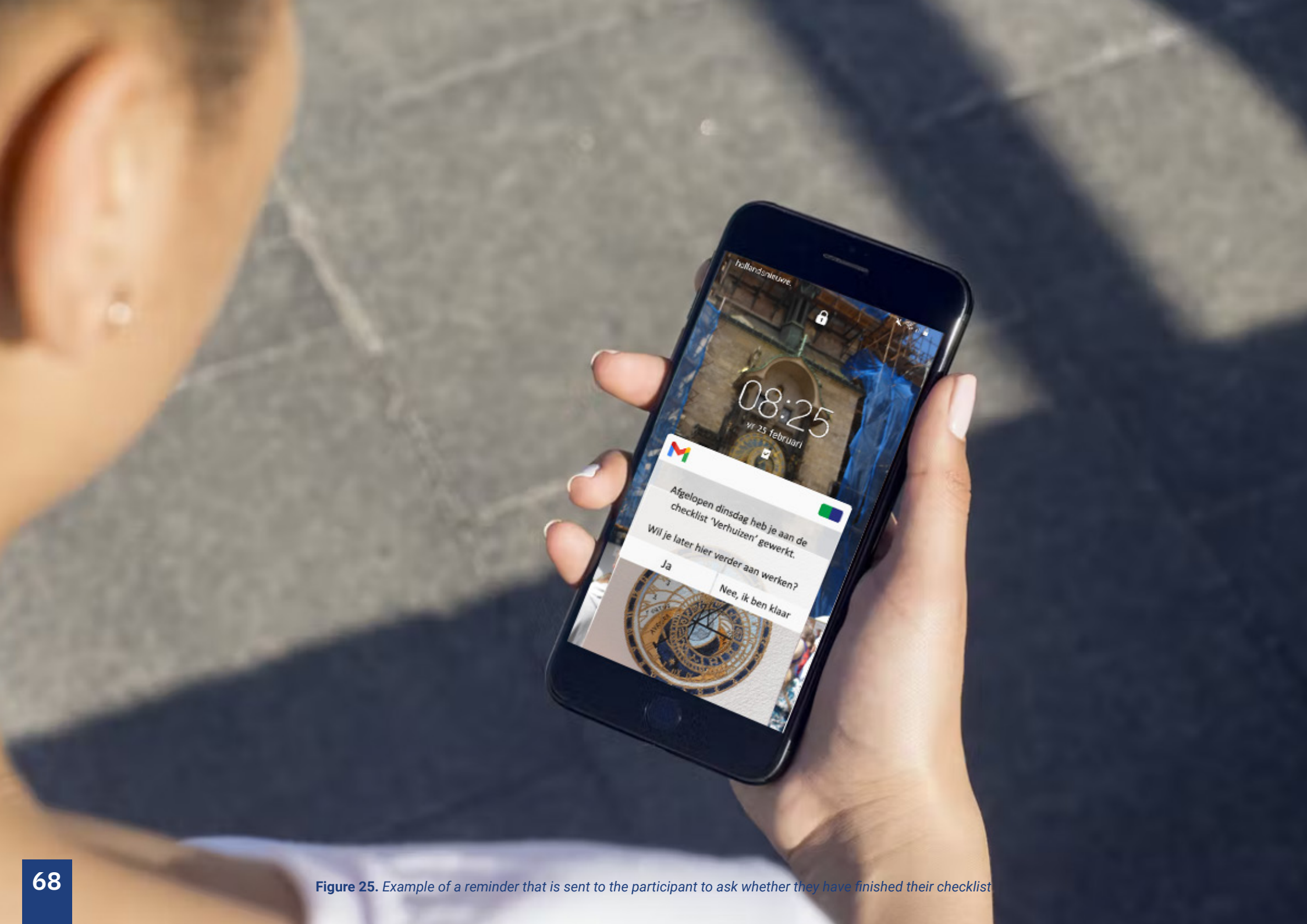
Figure 25. *Example of a reminder that is sent to the participant to ask whether they have finished their checklist*

Application in the concept

The Figure on the next page shows how triggers are used in the Toekomstplanner concept. An **external trigger** is used in the form of an Email that participants get sent when they first join the pension fund PFZW. Email is an accessible platform that participants are familiar with already (meeting criterion 10). The pension fund welcomes the participant to the care and welfare sector and introduces them to the Toekomstplanner. The Email uses terminology like a 'care heart' and the motivation of contributing to other people's lives to apply to the participant's point of view (see paragraph 2.3).

The text of the Email also plays into multiple **internal triggers** that the participants experience according to the interview findings in paragraph 5.2. It mentions 1) the life events they are most concerned about at that stage (career related events and finding a house) as well as 2) their worries about not knowing where to start on serious topics like this and 3) the fear of missing important information.

In addition the sentence at the end "You are free to choose whether you want to make use of this" is added. According to Carpenter (2013) adding some variant of the magic words **"But you are free to accept or refuse"** is an effective way to increase the likelihood of people agreeing, since it reaffirms people's freedom to choose. This effect was not only observed during real life interactions, but also over Email.

The **transition to the next action step** is made relatively simple by the added buttons at the end of the Email. It is made clear what options for the next action are. By clicking on the button on the left, participants are sent to a webpage on PFZW's website where they can find more detailed information about the Toekomstplanner. By clicking on the button on the right they can add the tool to their own Email and start to use it.
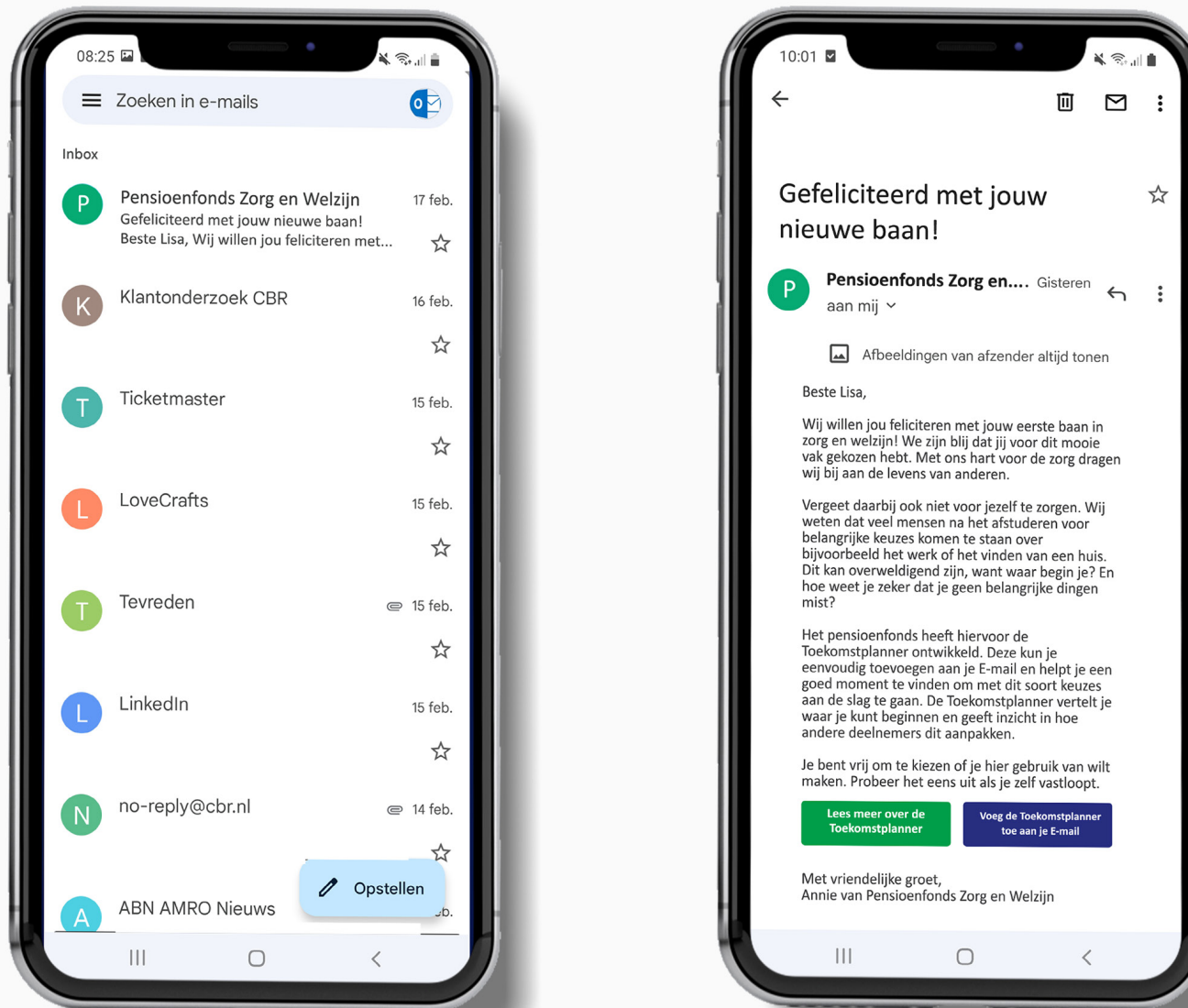
Figure 26. *When PFZW learns about you as a new participant, they send you an Email to congratulate you with your new job and introduce you to the Toekomstplanner.*

Action

After the trigger that starts it all, the next step is the action. This is where the **ability** part of Fogg's model is relevant. Habits are behaviours that should not require a lot of conscious thought. Therefore the desired action should be made easy to do for the participant (Fogg, 2009). The clue here is to reduce the steps that participants would have to take to find out what they should do (Hauptly, 2007). According to Hauptly, a product that does this is usually adopted by many users that feel the need the product intends to solve. This is where modern technology, like predictive knowledge, can be applied to take out these steps (Williams, n.d., as cited in Eyal, 2014, p.70).

Application in the concept

Since the Toekomstplanner is an addition to your Email, it does not require a lot of effort to add it and start using it, compared to for example downloading a new app.
Next, one of the main changes compared to a previous iteration of the tool is the way users make their checklist. In the previous iteration users would start their checklist and the pension fund would add to it in a new Email. When you do not know a lot about a topic yet, it can be quite difficult to imagine the steps you would have to take. This was also mentioned during the interactive workshops (see paragraph 6.3). In this new version this step is taken out to **reduce mental effort and feelings of uncertainty.** The Toekomstplanner recognises the life decision you want to look into and provides you with the option to add a standard checklist of tasks and things to consider, as well as the option to add tips that other participants have added to their checklists (see Figure 28 on page 73).

In order to do this, the Toekomstplanner uses various technologies. It uses predictive knowledge and collaborative filtering to provide you with **personally relevant options** to add to your list (read more about this in paragraph 7.4.2). The Toekomstplanner compares your draft checklist to checklists that similar participants have made. Eyal (2014) also mentions how recommendations by people one feels close to are usually highly effective, similar to the finding in paragraph 3.3 that recommendations by like-minded people carry ten times more weight for the average user or consumer, compared to recommendations by salespeople (Mackenzie, Meyer & Noble, 2013). In addition, by making the experience more personal and accurate every time the participant uses the tool, it reinforces the participant's connection with the Toekomstplanner (Eyal, 2014).
Research should still be done on **what kind of participant information should be compared here** to make the recommendations most effective. Examples could be how many people they live with, age and salary scale (all information that a pension fund has already). Using participant information is a sensitive matter; you can read more about this in paragraph 7.4.2. when discussing the privacy concern.

As mentioned before in the last iteration of the Toekomstplanner, **predictive knowledge** is used to help participants with the difficulty that is the **timing**. How do you know when in the future you will have time and motivation to work on your checklist? The Toekomstplanner lets you pick a larger time frame. Throughout this time frame it shows you popups with suggested moments. It uses its predictive qualities to suggest moments based on for example the weather forecast, the time of year, user trends and your past behaviour when using the Toekomstplanner (see Figure 30 on page 75).
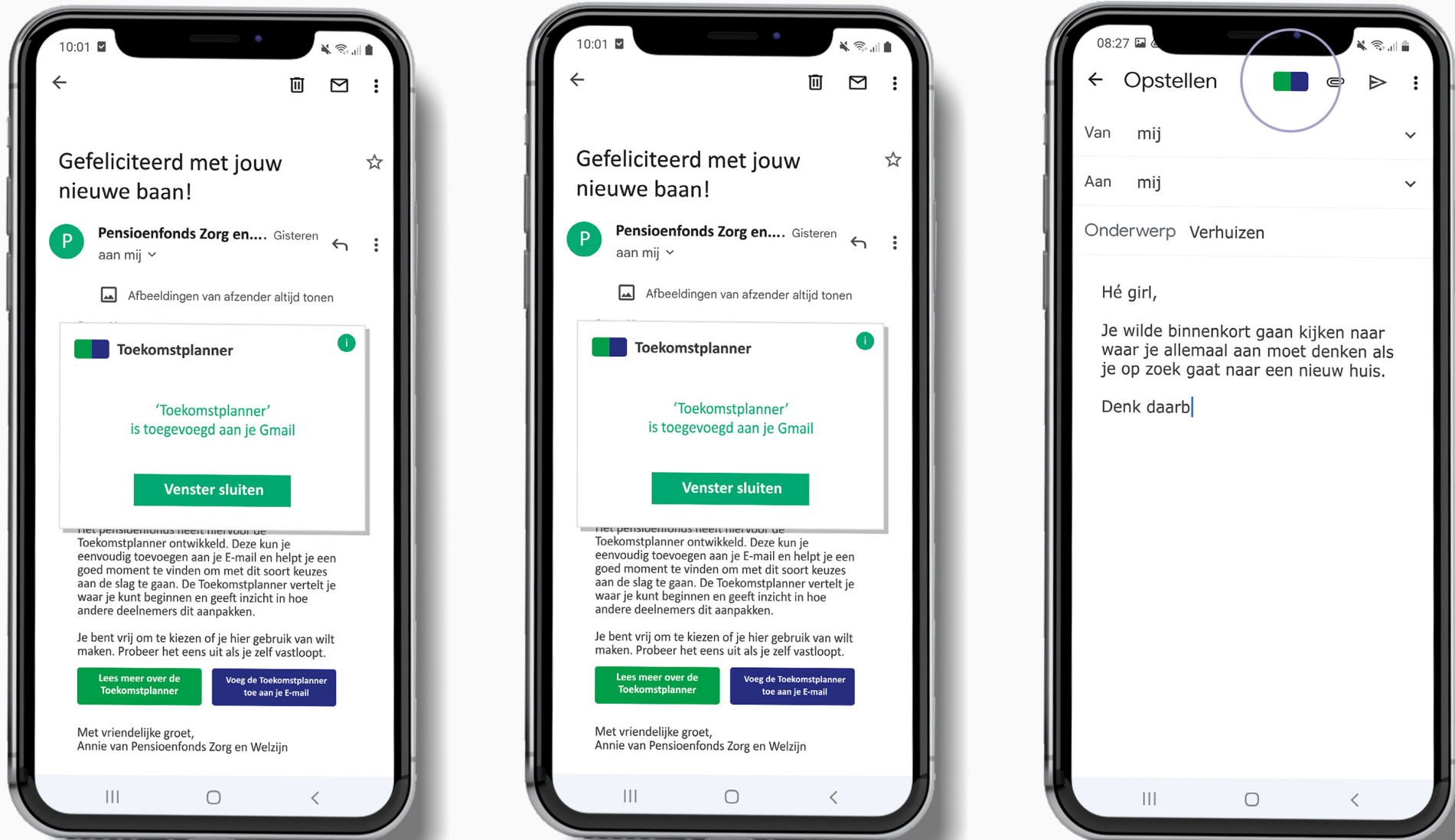
Figure 27. *When you have added the Toekomstplanner to your Email, you can start on your first Email to your future self. Clicking on the Toekomstplanner icon will activate the tool.*
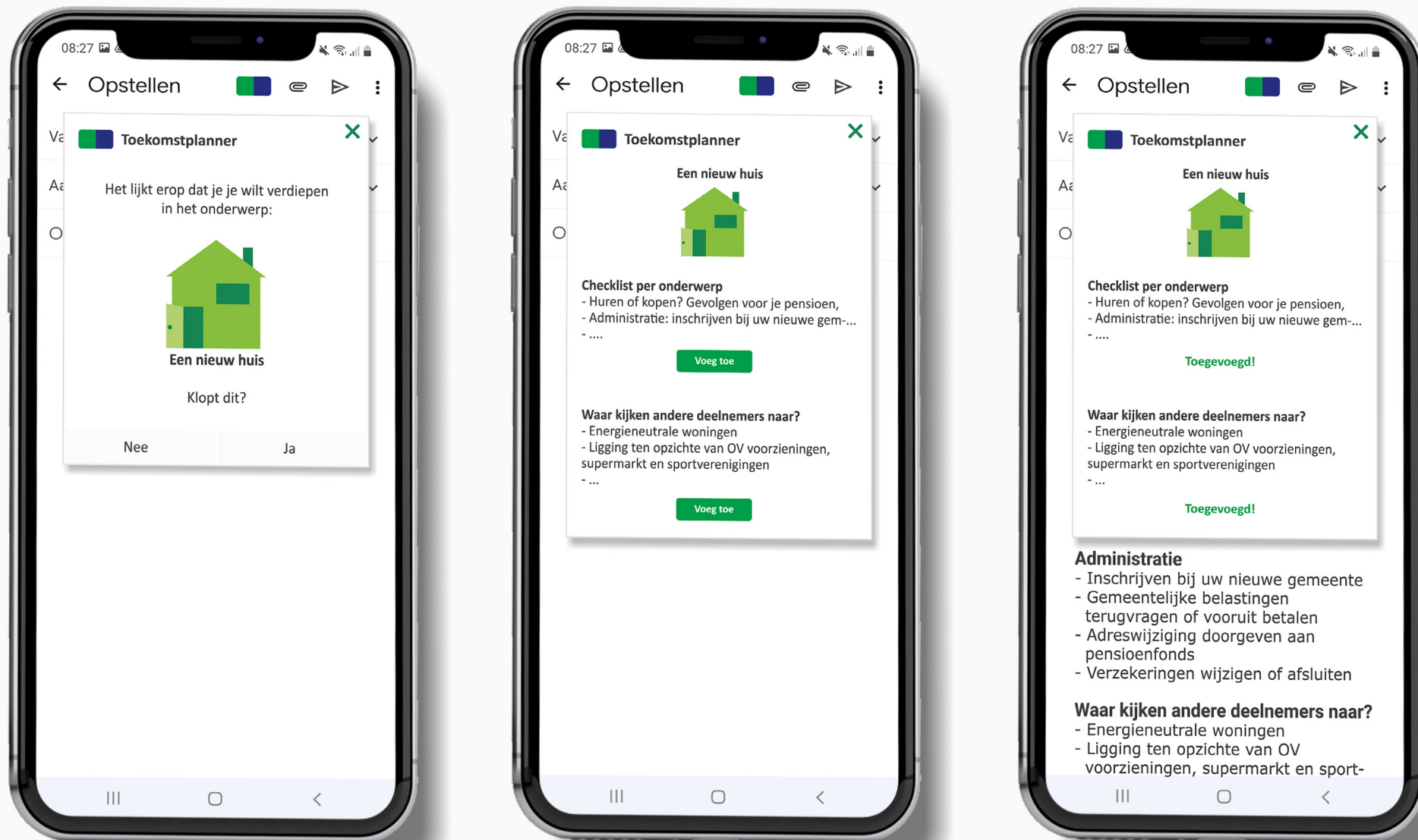
Figure 28. *The Toekomstplanner recognises the life event you want to look into and provides you with the option to add a checklist that you can use as a starting point. You can add tips from others as well as your own suggestions.*
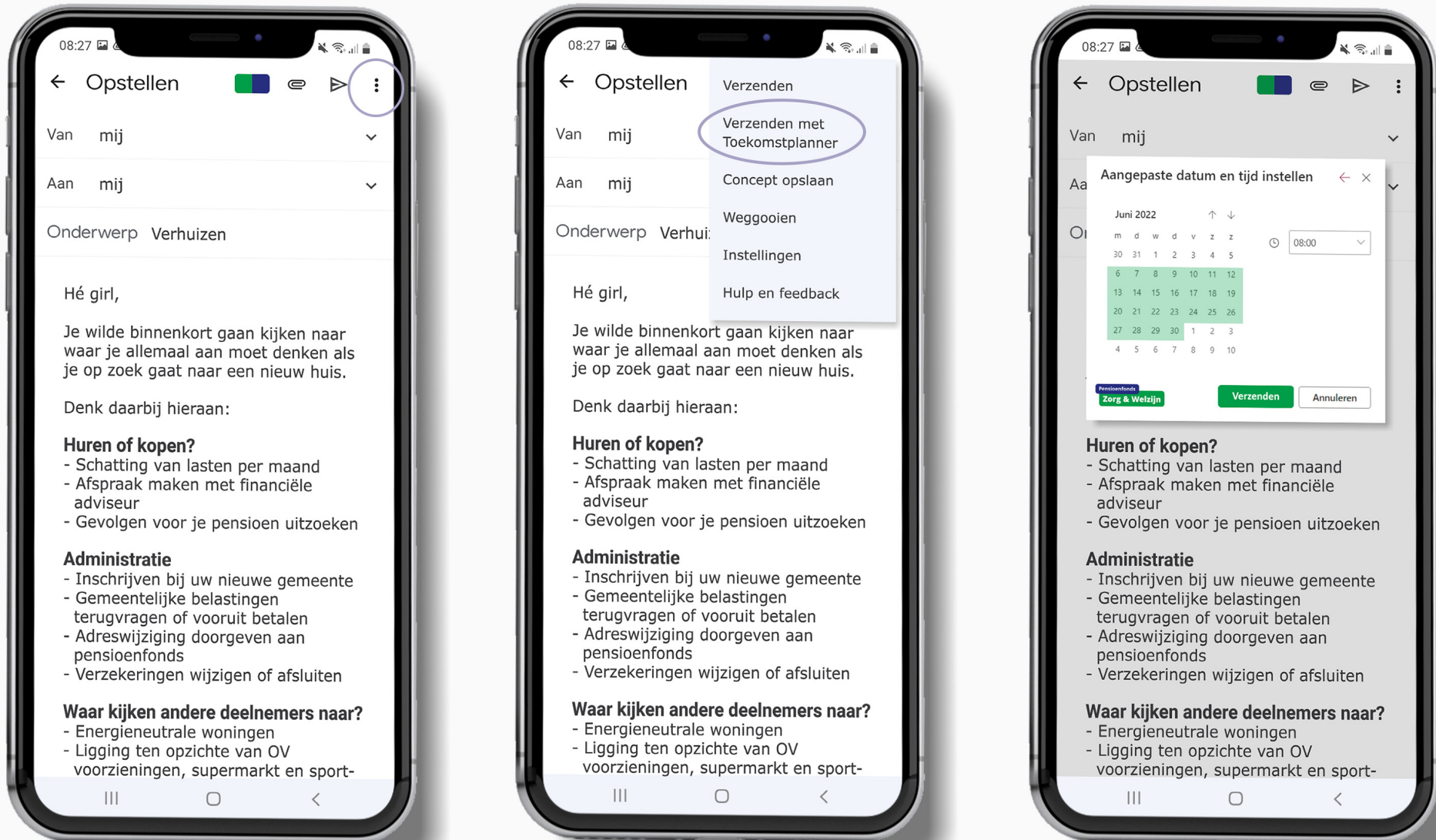
Figure 29. *When you have finished the checklist you can use the three dots in the top right corner and plan for when to send it to yourself. You do not have to pick a specific date, but can indicate a wider time frame.*
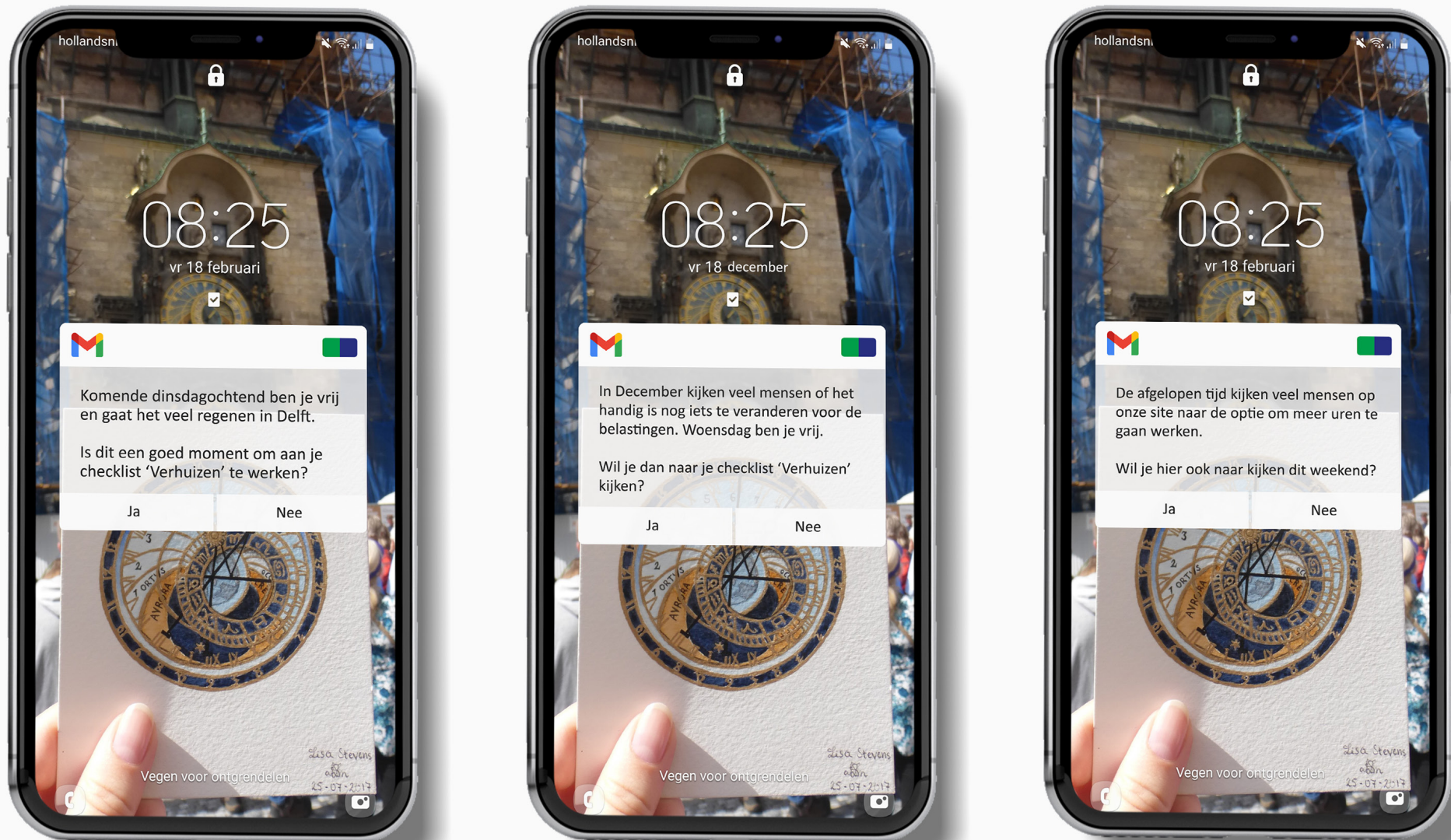
Figure 30. *The Toekomstplanner helps you find a suitable time to work on your checklist. It uses predictive knowledge to suggest potential relevant moments within your chosen time frame and asks you to accept or reject them.*

Figure 31. *When you have selected 'yes' on one of the pop-ups, you get your Email with the checklist sent back to you at the agreed upon moment. Some time later the Toekomstplanner asks you whether you are finished with the checklist or want to work on it some more.*

Variable reward

In the next step users need to be rewarded for the action they took in the phase before this one. People generally lose interest if the reward is the exact same every time. A variable reward makes people pay attention and brings more excitement, making it a powerful incentive to repeat a behaviour (Ferster & Skinner, 1957). But only if the user still feels a sense of autonomy. It is not necessarily only about the reward itself, but more so about the anticipation (Eyal, 2014). Eyal proposes a distinction of three types of variable rewards: rewards of the hunt, the tribe and the self.

- **Hunt:** in short, rewards of the hunt play into people's need to acquire resources that aid their survival. These are not only material objects, but can also be things like money and information in all forms including text and images (Eyal, 2014).

- **Tribe:** these rewards are about our relations to other people and feeling accepted and included. This type of reward is what social media are built around. According to Bandura's "social learning theory" (1986) people are more likely to adjust their behaviour when they see people similar to them or people they look up to being rewarded for a certain behaviour.

- **Self:** rewards of the self play into people's intrinsic motivation to grow or become more competent, or to complete something. This is based on Deci and Ryan's self-determination theory (2008). Adding an unknown or mysterious element to the goal makes it even more exciting for users. This reward is especially used a lot in video games where users are rewarded for completing tasks or mastering skills (Eyal, 2014).

Application in the concept

A lot of products that are intended for forming habits use multiple variable rewards. An example that uses all three types is **Email**. Along with the fact that Email is very accessible for most people, they generally already use it often as well partly due to these types of rewards. It is already a part of people's daily lives, which makes the threshold relatively low to use an additional tool that can be used within the environment of their Email.

Moreover, the most prominent reward is the fact that the Toekomstplanner provides participants with the knowledge on where to start with a big life decision. This is a **reward of the hunt**. It reduces the effort required to find out where to begin and helps the participant find a moment that suits them. This information that the participant is provided with does not only vary per life event, but also based on the information it has about the participant, their previous actions, what other participants do and the Toekomstplanner's predictions. This makes the outcome unique every time and the experience more exciting.

The Toekomstplanner also aims to make people feel like they are back in control and that they are capable enough to take on a big life decision like moving to a new house or switching jobs. This **reward of the self** plays into the participant's intrinsic motivation to become more competent (Eyal, 2014).

Investment
The fourth step of the Hooked model is the investment phase. Eyal explains the relevance of this phase clearly in his book as follows:

"The more users invest time and effort into a product or service, the more they value it."
(Eyal, 2014, p. 136)

Generally people perceive things they have created or worked on themselves to be more valuable. They do not only appreciate it more emotionally, but also attribute a greater monetary value to it compared to similar alternatives they have not invested time or effort in. This is also what the IKEA concept of people assembling their own furniture is based on for example (Norton, Mochon & Ariely, 2011).

The effort and time people invest in a product increases the chance that they will use the same product in the future when looking to solve a similar problem. This stored value can then be used to make the product even better and more fitting for the individual user. This can lead to the product becoming the top-of-mind solution when a similar problem arises again (Eyal, 2014).

Both the investments people make and new external triggers have the function to **retain users** and motivate them to start a new Hooked cycle, and thus **use the product again**. As mentioned before, the more people use a product, the less they rely on external triggers to come back to the product and the more it becomes an automatic response to use the product whenever the user experiences the internal trigger.

Application in the concept
With the Toekomstplanner participants initially invest some of their **time and effort** by creating a checklist for a life event and agreeing or disagreeing with the suggested moments in the popups. After they get the rewards of information on where to start and a level of competency as mentioned before, they get to work by actually taking a good look at their checklist and working through the tasks.

Moreover, the Toekomstplanner uses **predictive knowledge** to learn from each user experience and make it more personal and relevant the next time. These personal investments, as well as the fact that they now know exactly how the Toekomstplanner works and how it can help them, increase the chance that they will use this tool again.

External triggers in the form of new Emails or popups can be used to alert the participants of checklists they have not finished yet or potential new life events to look into. These triggers function as cues to start new hooks and use the Toekomstplanner again for the new event. Using all the data that the pension fund has, it can use **modern technology like predictive knowledge** again to try to find patterns as to when certain events generally become relevant for participants.

7.4. The technology behind the concept

7.4.1. An add-on in the participant's Email environment

The Toekomstplanner is a tool that can be added to the participant's Email platform. Current Email platforms already have the function to send Emails at a chosen point in the future which is needed for this concept. In addition, there already is a tool called **Boomerang** that also enables users to send Emails to a later date, amongst other functionalities. As of now it is mainly an extension that you can add to your web browser. Currently it works for the web browsers Google Chrome, Firefox, Opera, Edge and Safari (Boomerang n.d.). There is also a Boomerang app that you can download both for Android and iOS.

The idea for the **Toekomstplanner** is now that PFZW sends an invitation Email to the participant when they start their first job in the care and welfare sector, as explained in paragraph 7.3.2. This Email includes an introduction about the Toekomstplanner and a button to add the Toekomstplanner to the participant's Email (see Figure 32). For a **first version** this button could redirect the participant to the Chrome web store so they can add the tool to their Email platform. This way it is already possible today to use the Toekomstplanner on a laptop or computer, similar to how Boomerang works now.

Ideally the participant would just add the tool on their phone to use it there without exiting the Email app as now demonstrated in the example mockup of the Toekomstplanner (see Figure 32). Downloading a separate app to be able to use the Toekomstplanner is too much of a hassle. This costs the participant more time and effort, which decreases the ability factor as in Fogg's model (paragraph 7.3.1) and makes it less likely that people will use the Toekomstplanner.

Gmail add-ons

As of 2017 it is possible to add **add-ons to Gmail** that can improve your Email experience. These add-ons do not only work in web browsers, but also on Gmail's mobile applications operating on Android or iOS (Schoon, 2017). The idea is that you only have to install them once and will be able to use the add-on on all your devices afterwards. You can find the add-ons in the G Suite Marketplace (Sahney, 2017). Sahney, who is a product manager at Gmail, also mentions that it should not be too hard to develop an add-on for an organisation. He refers to a web page (Chun, 2017) where it is explained how you can write an add-on code. According to him, if you do this your add-on should work automatically in Gmail, both in a web browser as well as the mobile application.

This already comes closer to the **intended ease of use** for the Toekomstplanner. In addition, it seems that it would not be too hard for PGGM to write a code for a Toekomstplanner Gmail add-on. However, this way the tool's accessibility on a mobile phone is limited to participants who are also Gmail users. Gmail is a popular Email provider, so a Gmail add-on is a good place to start. The **challenge** is to look into ways to also add the Toekomstplanner to other Email providers in order to reach all of PFZW's participants.
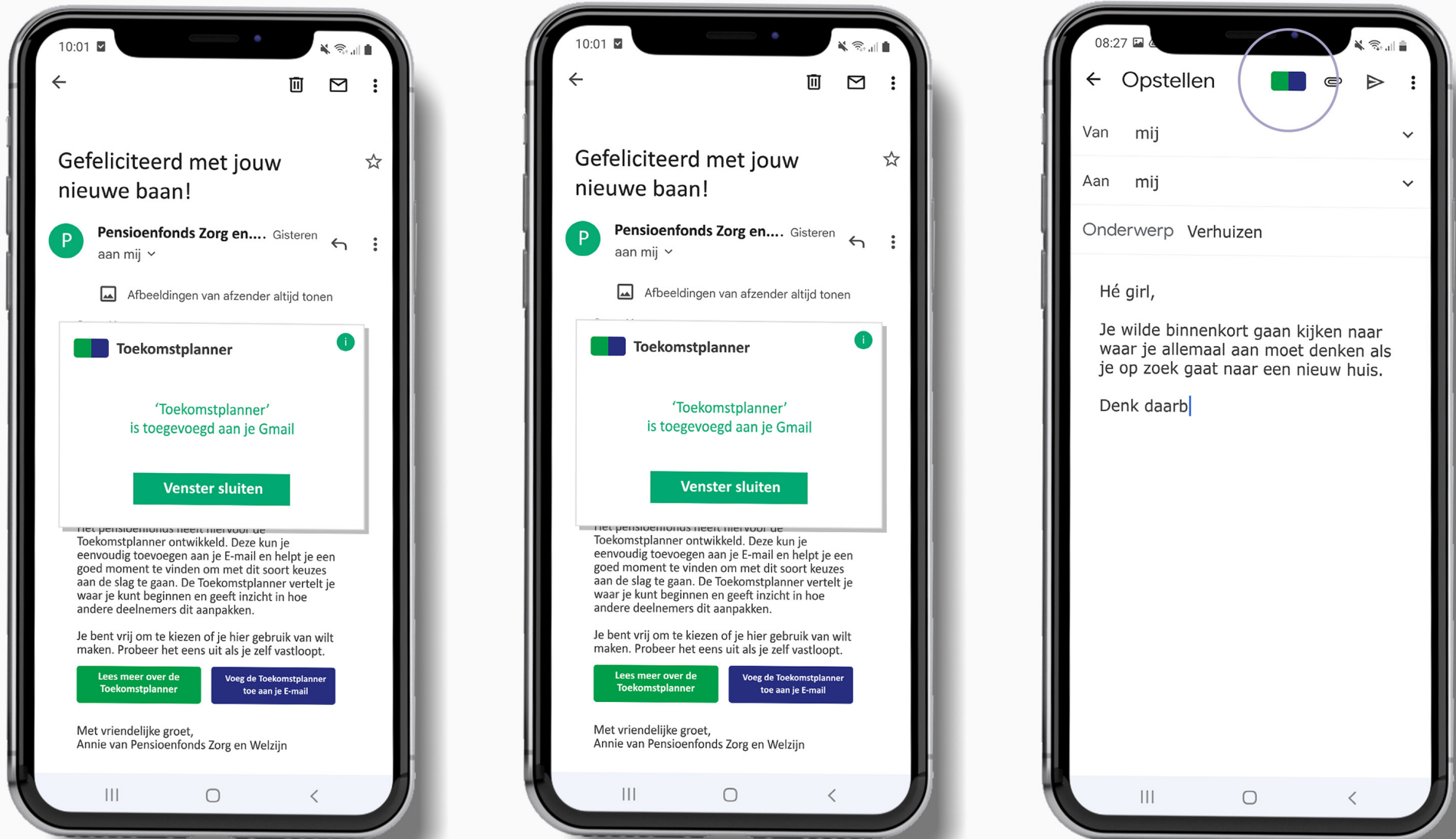
Figure 32 (same visual as Figure 27)**.** *When you have added the Toekomstplanner to your Email, you can start on your first Email to your future self. Clicking on the Toekomstplanner icon will activate the tool.*

7.4.2. Predictive knowledge

The Toekomstplanner makes use of predictive knowledge in multiple ways to make the experience **more personal and fitting** for the user. As explained in paragraph 4.1, predictive knowledge is a technology that can be added to smart objects in a way that it collects data from the user as well as the network it is connected to, makes predictions based on this information and acts proactively (Smit, 2020). The object, or Toekomstplanner in this case, is likely to know more about future developments than the user does. **This way it can help the user make more well-informed decisions.**

Invitation Email

The predictions already start with the invitation **Email** that the pension fund sends a new participant. Based on the information the pension fund has of the participant, as well as information of similar users of the Toekomstplanner and changes in the context, the tool makes predictions of the life events that are likely to interest the new participant. Tailoring the Email this way, it aims to play into one or more potential internal triggers (as explained in paragraph 7.3.2), motivating the participant to add the Toekomstplanner to their Email.

Figure 33. *Mockup representation of the Email invitation by PFZW*
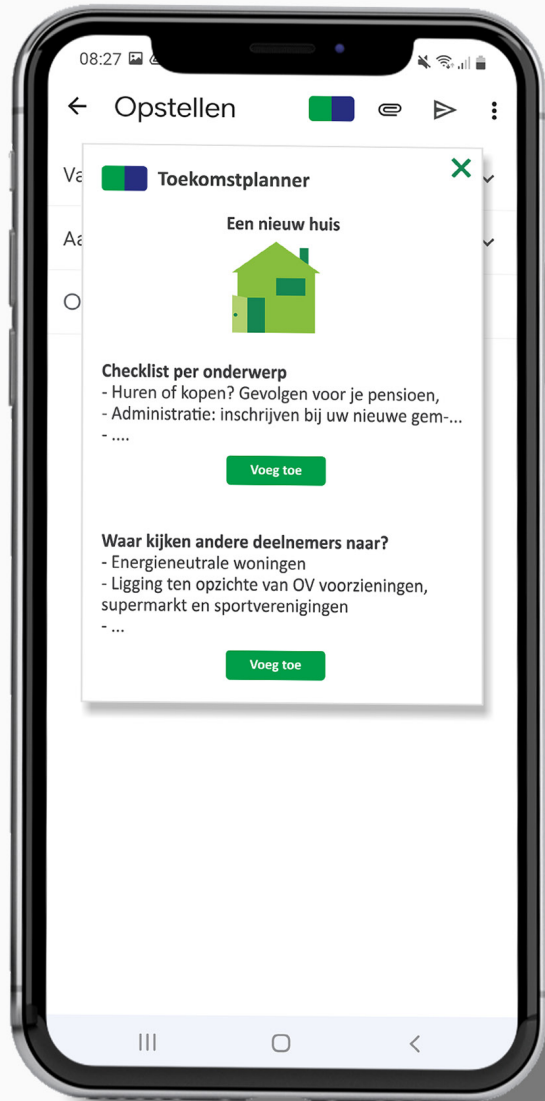
Figure 34. *Mockup representation of a checklist for the life event of moving to a new house*

Creation of the checklist

In addition, predictive knowledge plays a big part in the creation of the checklist that the Toekomstplanner prepares for a participant. Based on the life event the participant describes in the subject line and/or the Email text the tool recognises what it should show a checklist for when the tool is activated (see Figure X).

The tool uses multiple sources of information to make a checklist that is both complete and personal:

• stored knowledge: information from knowledgeable organisations like PFZW on what tasks an individual generally goes through when making a decision regarding the specific life event;

• user profile data: information that the pension fund has from a participant like their age, marital status, address, job function, salary etc.

• using patterns: information that the Toekomstplanner has gathered from the new user's interaction with the tool;

• contextual data: information that the Toekomstplanner has gathered about the checklists and decisions that like-minded participants have made.

Based on all this the Toekomstplanner makes a list that aims to fit both the current and future personal situation of the participant. The tool explicitly shows what tasks or recommendations originate from other participants. This distinction does not only make the workings of the tool a bit more transparent. But it also makes sure that the Toekomstplanner meets criterion four:

4. The future self tool should include recommendations from like-minded people.

It was confirmed in the literature research, user interviews and analysis of existing offerings that participants prefer to know what like-minded people have done or would do in their situation. They find it important to take this into consideration when making important decisions.

Timing
One of the most important concerns during the interactive workshops regarding the idea for the Email tool was the timing. The Email platform was considered as a very accessible platform for everyone to use. But participants mentioned that they would find it difficult to imagine when in the future it would be relevant for them and fit their schedule to take time to look into a life event decision. They also mentioned that **the wrong timing could be detrimental**, because they would just ignore the Email then.

This is where **predictive knowledge** comes in to help. Because the Toekomstplanner is an add-on to the participant's Email platform, it can also access their calendar. The idea for now is that the participant indicates a wider time frame of multiple weeks or months. Then based on the participant's calendar, their previous experiences with the Toekomstplanner, what other participants do and factors from the context, the tool looks for suitable moments.
So for example, the Toekomstplanner could choose a free Tuesday afternoon when it is expected to rain a lot, since it is likely that the participant will stay in then. Or maybe it could choose a moment in the beginning of December since the life event decision is likely to have consequences for their insurance in the next year or for the taxes over the previous year (see Figure 36 and 37 on the next page).

The best suitable moments are planned conditionally, in the sense that if one of these moments has been accepted, the others ones are cancelled.
Over time the Toekomstplanner sends the participant these suggested moments in the form of pop-ups. The participant can then choose to either accept or reject the suggested moment.
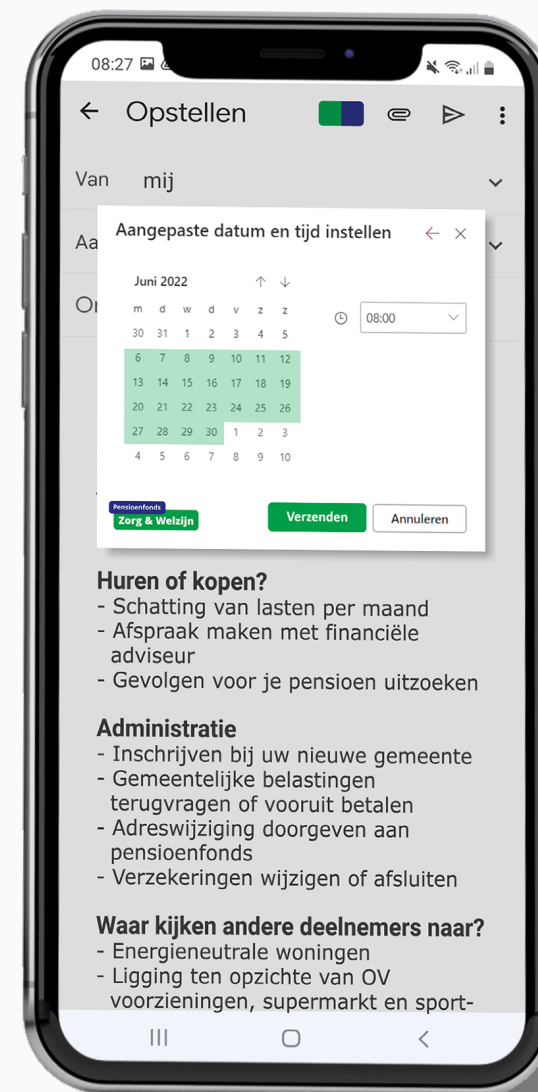
Figure 35. *Mockup representation of choosing a time frame for when to work on the checklist*

Figure 36. *Mockup representation of the rainy day popup*
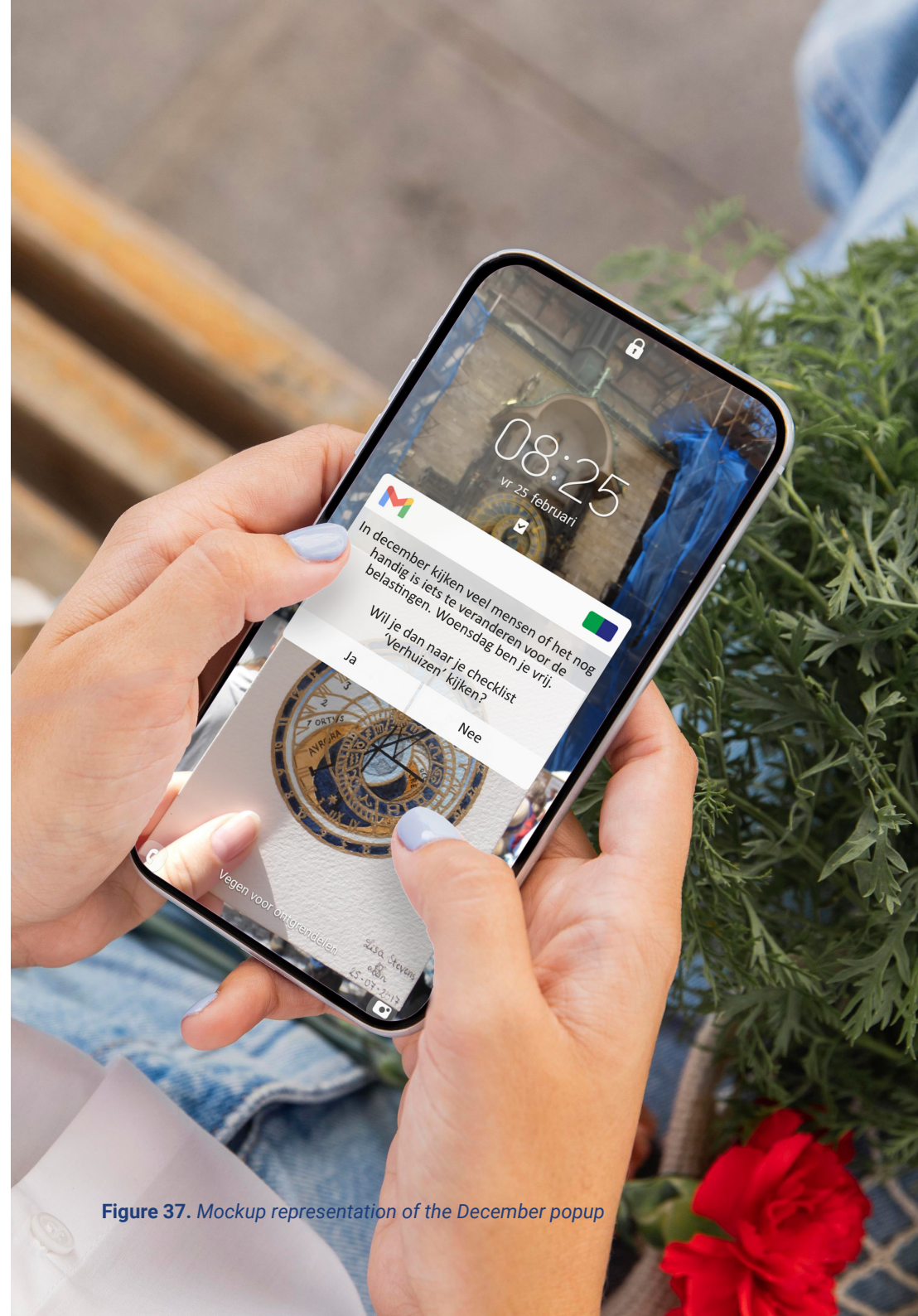
Figure 37. *Mockup representation of the December popup*

Privacy

The Toekomstplanner uses quite some participant information to make effective predictions in order to make the tool more personal to the user. In addition, using the participant's Email platform means that the Toekomstplanner has access to the participant's Emails and calendar. When writing it down like this, that sounds quite invasive. The question is to what extent participants would be happy to share this with the tool to be able to enjoy the Toekomstplanner's benefits. Figure 38 shows an overview of the information and access Boomerang already asks from the user.

It is important that the processing of personal data happens **in accordance with the applicable laws and regulations**. For example, the participant has to explicitly give their permission for the way the tool can use their personal data. There is a fine line here between what is deemed appropriate and convenient, and what information is too personal to share with a tool like the Toekomstplanner. This is definitely a design problem that is an **interesting starting point for further research and development.**

During the interactive workshops privacy concerns were only mentioned in one of the three groups when talking about the idea behind the Toekomstplanner. **For most participants it was not a top of mind concern.** In addition, most participants mentioned that they would perceive an online tool to be trustworthy if they believed the source of the tool is. A pension fund was considered a trustworthy source when it comes to information about life events and pension. In addition, websites like Google and social media have so much information about their users, and the majority of people uses it anyway and they do not make a big deal out of the privacy concern. It would be interesting to tap into the privacy topic with users in a concept test if the tool were to be developed further. So far, based on the participants I have spoken to, this target group does not seem to pay it any mind.

On the other hand, **privacy is an important concern for PFZW and PGGM.** Since PFZW is a pension fund and they have so much personal data including about people's finances, it is important for them to keep this information safe and prevent frauds. Mishaps or carelessness could damage PFZW's image greatly. So even though the participant may not care that much, until it goes wrong, it is important to guard the participants' privacy as much as possible when further developing the Toekomstplanner.
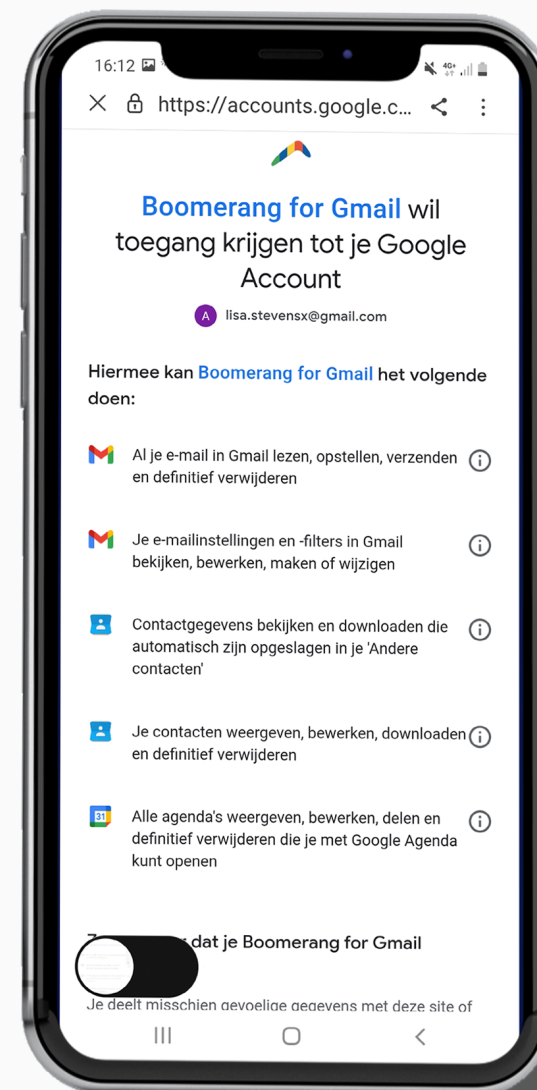
Figure 38. *An overview of the access and information Boomerang asks from the user in order to use the tool (Boomerang, n.d.)*

8. Conclusion

The **goal** of this project was to make younger people [21-35 years] in the care and welfare sector **feel more in control** of their own pension by making them aware of the impact that they can have on it themselves. The idea was to develop a concept of a 'future self' tool for this that uses predictive knowledge.

It becomes even more important for young participants to engage with their pension in the future. Factors like the new pension system, increasing inflation (CBS, 2022) and the fact that people who have just started their career still have decennia to accrue their pension make it interesting for them to look into their pension (see paragraph 3.3). Should they feel like they will not have enough by the time they retire, they still have plenty of time to do something about this.

In the beginning of the project I assumed that I would develop a future self tool that informs these people about their pension in some way that would interest them. And this is still the case, but the focus is not on pension information alone anymore. Read on to understand why.

People are just not that interested in their pension, no matter their age. This became clear after the literature research and interviews with both older and younger PFZW participants. For all of them, pension still feels too far away. They call it a "ver-van-je-bed" show and mention phrases like "wie dan leeft, wie dan zorgt" (En: who lives by then, cares then). The participants do not look into their pension. Most of them do save money for the future, but mostly in the form of a safety net in case they need it for unforeseen events or they focus on paying off their mortgage.

Especially **younger people have a hard time imagining their future self and making decisions for the future** (Löckenhoff O'Donoghue, & Dunning, 2011). This is why the Toekomstplanner uses a different angle and focuses on the **life events** that this group is interested in already. Decisions around events like moving to a new home and finding the perfect job are things that the target group already thinks about according to the user interviews. These decisions also have an impact on a person's future, including their pension. A process of literature research, user interviews, design iterations, interactive workshops with participants and feedback sessions with my coaches as well as innovation managers at PGGM has led to a concept future self tool called the Toekomstplanner.

The **Toekomstplanner** is an add-on to a participant's Email platform. Participants can use the tool to create a checklist for a life event they plan to look into. The Toekomstplanner uses predictive knowledge to help the participant make a checklist for this life event that fits their current and future personal situation well. Next the Toekomstplanner again uses predictive knowledge to help the participant find a suitable moment to sit down and work on the checklist.

This way the concept does not bombard the participant with a load of pension information that they are not interested in anyway. Rather, it helps them feel more in control of a life event decision and helps them understand the consequences of their decision for both the near and far future. Pension tasks related to the life event are included in the checklist to **introduce the participant to their pension in a more low key way.**

As you can see, **predictive knowledge** indeed plays a big role in making the participant's experience with the Toekomstplanner personal and to help with the planning, since timing is crucial with this tool according to the participants in the interactive workshops.

Moreover, if you want to motivate participants to engage with their pension and future in general more, it is important that the interaction with the tool is not a one time thing, but rather something that **participants come back to time and time again**. The Hooked model by Nir Eyal (2014) was applied to the Toekomstplanner with the intention to turn it into a habit-forming tool.

Helping people feel more in control of their life events and pension adds to the **customer satisfaction**, which is important in itself, but could also function as a strategic asset for PFZW should the need arise in the future.

The Toekomstplanner is a concept intended for PGGM and PFZW to explore further. The discussion on the next page describes aspects that would benefit from more research, thought or evaluation with the target group.

Figure 39. *Mockup representation of a woman using the Toekomstplanner*

9. Discussion

The Toekomstplanner is a tool that motivates PFZW's younger participants to engage with their future in general and pension more. The last version in this report meets most of the eleven criteria well. However, there are still some aspects to look into before the tool can be realised and start to impact the lives of PFZW's participants in a positive way.

Evaluation of the Toekomstplanner based on the criteria
The Toekomstplanner motivates participants to look into their pension by relating it to **life events** that they are already interested in (criterion 5). This way it helps them work on goals that contribute to them getting closer to **the ideal version of themselves** that they have in mind (criterion 1, as explained in paragraph 3.6). According to Boyatzis & Akrivou (2006) this is the most important driver for people to change their behaviour. In addition the Toekomstplanner breaks down life events and pension into relevant concrete tasks, decreasing the complexity of the task. This is one of the factors that increase people's motivation to look into their pension that Buijsman had found in her thesis for Netspar (2016). When further developing the Toekomstplanner you could try to incorporate more of the factors that should help motivate people to look into their pension (see paragraph 3.6). An example of a factor left unused now is for example the influence that parents have on their children's financial behaviour (Trzcinska & Goszczynska, 2015).

In addition the Toekomstplanner breaks big life events down into concrete tasks, including pension related tasks specific to the life event of interest. This way it helps participants feel **more in control** again (criterion 2). As explained in paragraph 7.4, the tool uses **predictive knowledge (**criterion 3) in multiple ways to help make the experience **more personal** and effective for the participant (criterion 8). The participants in the interviews and workshops indicated that they generally prefer to make decisions by themselves, but do value being provided with a **starting point** when it comes to more complex topics like pension (criterion 9). This is why the function of predictive knowledge in the tool is more like a facilitator or helping hand rather than that it actively makes decisions for the participants (criterion 3).

Moreover, the Toekomstplanner explicitly communicates which tasks in the checklist originate from w**hat other like-minded people do a**nd look into (criterion 4). From the literature research, user interviews and analysis of existing offerings it became clear that participants really value learning about the experiences of people they can relate to.
The pension fund PFZW is now the source behind the Toekomstplanner. In the interactive workshops the pension fund was considered a k**nowledgeable and trustworthy source f**or a tool like this (criterion 6).

Criterion 7 states that the tool should make it clear to participants **what impact they can have on their pension themselves.** As of now the Toekomstplanner includes pension related tasks in the checklists for a chosen life event, when this task is relevant to the event. It states what aspects of pension the participant can look into. However, it does not explicitly mention the impact of different decisions regarding the life event. This is something to **look into for further development.** As of now the participant can take the suggested task and look for information on it themselves. Maybe the tool could decrease the participant's mental effort here (ability in Fogg's model, paragraph 7.3.1) by redirecting the participant to a credible source for example

Next, the tool was designed as an add-on for the participant's own Email platform with the intention to make it **easily accessible t**o many participants (criterion 10). On the other hand, as of now the concept uses quite a lot of text in both the invitation Email and the Toekomstplanner itself. From the interactive workshops I learned that participants have different preferences for digesting information; some prefer to read, others to watch videos and some prefer a boring lay-out while others enjoy a more playful one. The look and feel of the tool is not something I focused on specifically during the execution of this project. There is definitely room for improvement here too to appeal to all young participants.

Finally, for the concept to be more **ingrained in people's daily lives** I have applied the **Hooked model** by Nir Eyal (2014) to it. However, as Eyal also states himself, creating a habit-forming tool is an iterative process. It would definitely be wise to evaluate the Toekomstplanner with participants in user interaction tests and iterate based on that.

Next to the criteria formed during the project, there are some other aspects that need more exploration before the Toekomstplanner is ready to be used.

Not only for the young participants
As mentioned in the conclusion (and explained in paragraph 5.3), the **older participants I interviewed are not interested in looking into their pension either. T**he assumption that people closer to their retirement in age would be more interested in their pension does not seem to hold. Therefore they might benefit from a tool like the Toekomstplanner too. One would have to evaluate whether the criteria of this project which are based on the needs of the 21-35 year old participants still hold for older participants and whether there are criteria specific to older participants that are missing now.

Privacy
As mentioned in paragraph 7.4.2, the Toekomstplanner uses quite a bit of personal information about the participant as well as requires access to the participant's Email and calendar. Even though this is rather invasive, **privacy was not a top of mind concern for most participants** in the interactive workshops. **For PFZW and PGGM though, privacy is a huge concern** as a social organisation. It is therefore crucial to make sure that the participant's information is guarded and kept safe when developing the Toekomstplanner into a version that is ready for implementation.
In addition to privacy, **appropriateness** is a common concern when it comes to AI technologies like predictive knowledge. This is one of the main focus points in the notion of co-performance (Kuijer & Giaccardi, 2018). Humans are usually tasked with the judgement of whether a certain behaviour is deemed appropriate. In a tool like the Toekomstplanner the technology can learn what is and is not appropriate over time from the interaction with the users. At the start of the implementation this can lead to some mishaps, but as the tool matures these will occur less often to not at all.

Not only for Gmail
So far we know it is possible to develop a Toekomstplanner add-on for Gmail to use the Toekomstplanner on a phone or to make an extension that can be used on a laptop or computer in multiple browsers. The question is now how to **translate the tool to other Email platforms** in order to enable all PFZW participants to use it on their phone.

Representativeness
During this project I used **qualitative research methods** like user interviews and interactive workshops to find out the needs of the participants and evaluate different ideas for solutions. For this I talked with thirteen people maximum per round of interviews and had workshops with two to four participants per session. Generally ten to fifteen interviews should reveal approximately 80% of the target group's needs (Van Boeijen, Daalhuizen & Zijlstra, 2020).
When selecting these participants I tried my best to select a heterogeneous group with people of different ages, ethnicities, jobs within the care and welfare sector and a representative gender division. Especially the selection for the interviews with the target group came close to a decent representation of PFZW's young participants, save for the age (this was skewed towards the younger end of the spectrum).
I have learned a lot from these qualitative research methods for this project, but twelve or thirteen people maximum can never represent 1.320.800 active participants (PFZW, 2020). This adds another reason why it is wise to keep evaluating further iterations with the target group, or to follow up with quantitative research in order to validate the findings from this project.

How do people get to know the Toekomstplanner?
In the concept the idea is that people get a welcome Email from PFZW when they have become a participant. According to research among 1000 Dutch employed individuals (Aon, 2020) most people prefer to be contacted about their pension via a digital platform, Email or a letter. As of now I do not have a clear idea how many people read an Email from their pension fund. And in turn, how likely are they to add the Toekomstplanner to their Email platform? This is something that could also be asked or tested in more user tests.
It was mentioned during the user interviews and interactive workshops that **people look for sources that are both knowledgeable and preferably familiar to them** when it comes to big life decisions. However, there were only a few people during these interviews and workshops that were able to tell me what their pension fund was from the top of their mind. So in order for the tool to reach the target group it is also important to **investigate ways to inform the target group of the existence of the Toekomstplanner**, or at least the existence of PFZW so they will recognise this as the source. Participants can not benefit from the Toekomstplanner if they do not even know it exists. PGGM has a marketing department that has more experience when it comes to approaching participants in an effective way.

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A. Demographics interviewees aged 45+ years old

Overview of the age of the twelve interviewees

Number of interviewees
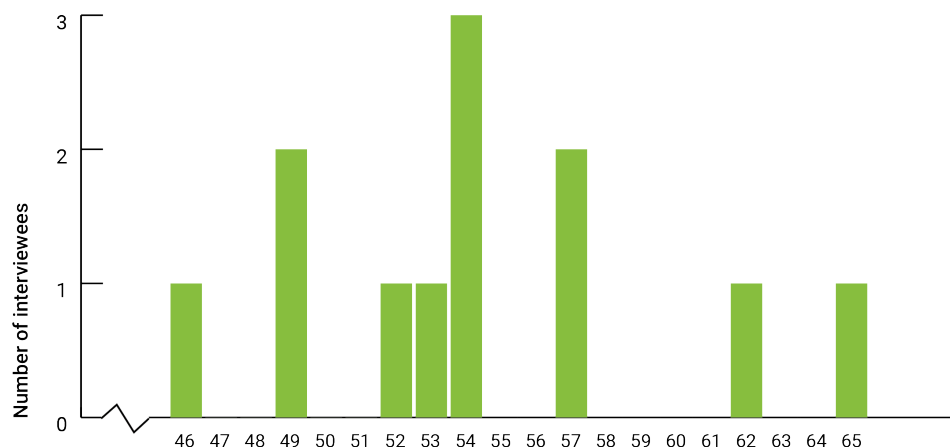
Age of interviewees in years
Mean = 54.3 years

Overview of the workload of the twelve interviewees according to their contract

Number of interviewees
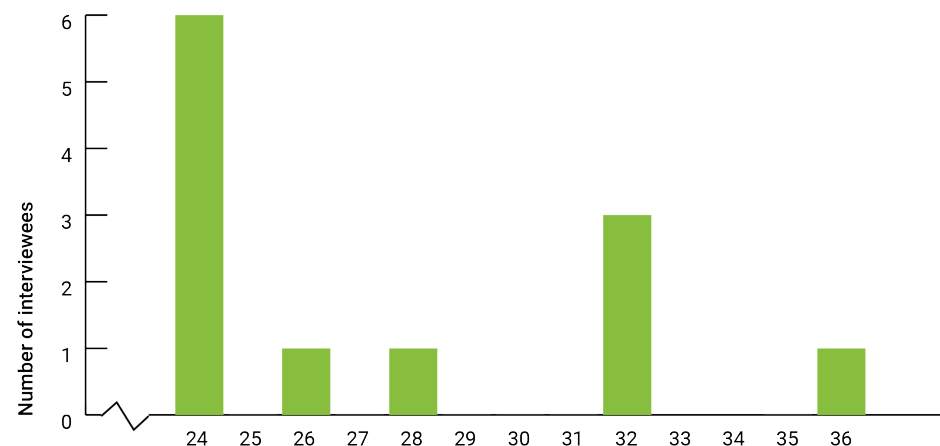
Workload of the interviewees in hours per week according to their contract
Mean = 27.5 hours

Gender

- Female (100%)
- Male (0%)
- Other (0%)
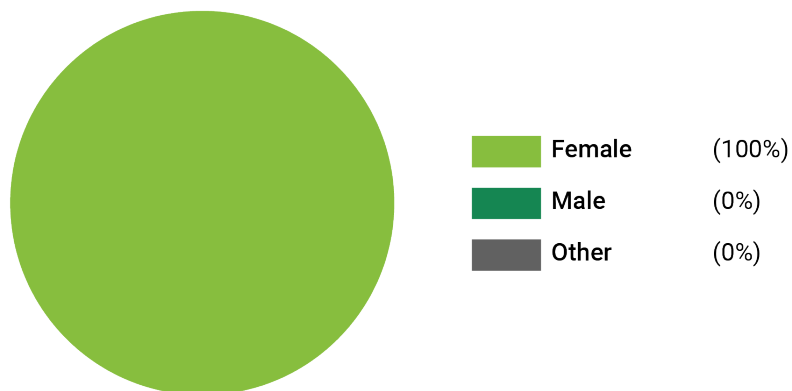
Occupation
- community nurse (1)
- nurse at pre-operative screening (1)
- receptionist at registration desk of hospital (1)
- home care nurse for personal care (1)
- personal healthcare assistant at nursing home (1)
- living room assistant at nursing home (1)
- team leader care and welfare at nursing home (1)
- logistic planner at department of radiotherapy (1)
- nurse at assisted living facility for the mentally handicapped (2)
- nurse personal care at assisted living facility for the mentally handicapped (1)
- nurse at assisted living facility for the mentally handicapped (1)
- teacher at nursing school (1)

B. Demographics interviewees aged 21-35 years old

Overview of the age of the thirteen interviewees

Number of interviewees

Age of interviewees in years
Mean = 25.2 years

Gender

- Female (84,6%)
- Male (15,4%)
- Other (0%)
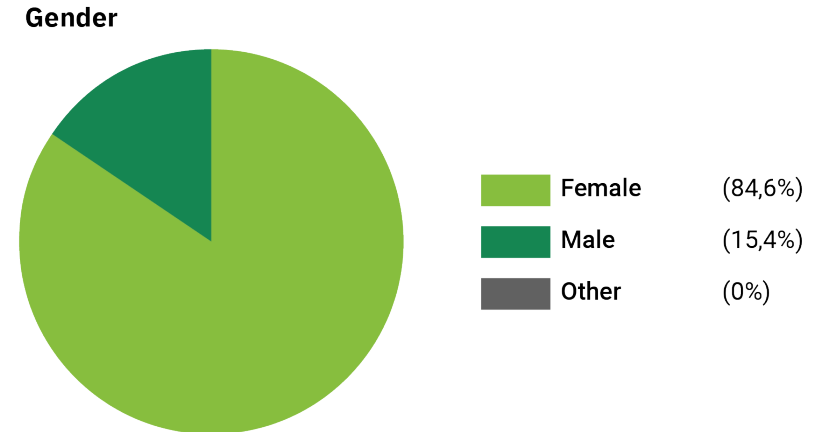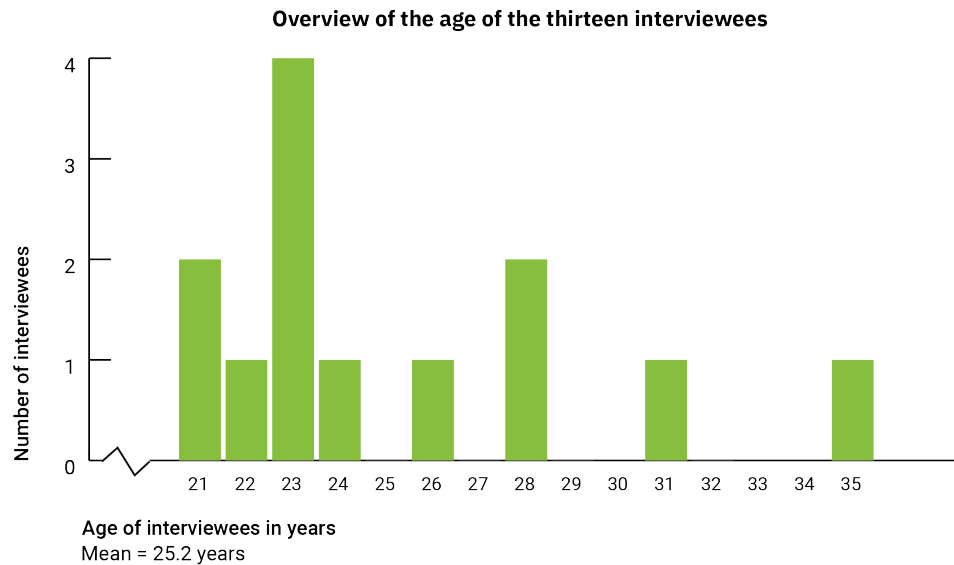
Occupation
- nursing student (dual degree)   (1)
- nurse at oncology department   (1)
- nurse covid testing at hospital   (1)
- childcare worker   (1)
- youth counsellor for mental healthcare   (1)
- youth care worker   (1)
- nurse at assisted living facility for the mentally handicapped   (2)
- nurse in nursing home   (1)
- social worker   (1)
- assistant manager at children's daycare   (1)
- personal healthcare assistant   (1)
- home care nurse   (1)

C. Sensitising boards for the online interviews

Deel 1

Even voorstellen
Met deze vragen kan ik alvast een beetje een idee kan krijgen van wie jij bent en wat voor werk je doet.

Dubbelklik op een Post-It om hier je antwoord in te typen.

Hoe oud ben je?

Wat voor werk doe je /
heb je gedaan?

Met wie woon je thuis?

Ik

Waarom heb je voor dit werk gekozen?
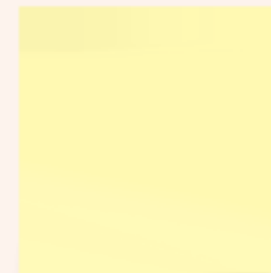
Deel 2

Nadenken over de toekomst

Waar denk je het eerste aan als je het woord 'toekomst' hoort?

Kies rechts zoveel beelden als je wilt uit om deze vraag te beantwoorden. Sleep deze naar dit vak. (Mis je een beeld? Zoek het op op internet en plak het hier.)

Hoe zijn deze beelden van toepassing op jouw toekomst? Leg kort uit waarom op de Post-Its.

Wat zijn je dromen of plannen voor de toekomst?
Deze kunnen zowel over je privéleven als over je werk gaan, of allebei. Dubbelklik op de Post-Its en omschrijf ze in een paar kernwoorden.

Over 1 jaar
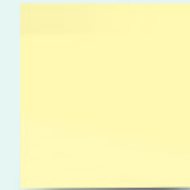
Over 5 jaar
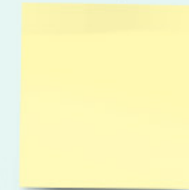
Over 10 jaar
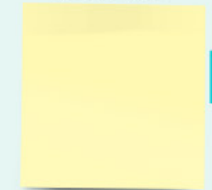
Deel 3

Over 20 jaar

Nog later

Welke van de volgende beslissingen heb jij al eens gemaakt?
Sleep het plaatje van de beslissing(en) naar dit vak.

Een huis huren / kopen

Een eigen auto kopen

Een grote vakantie plannen

Trouwen

Een studie kiezen

Samen wonen

Kind(eren)

Eerste baan in vakgebied

Switchen van baan

Of vul zelf in:

Kies de beslissing waar je het meest mee bezig ben geweest.
Dubbelklik op de Post-It om te typen:

Gekozen beslissing:
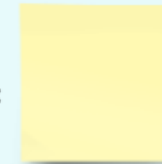
Dubbelklik op de Post-Its hieronder en licht toe hoe je deze beslissing hebt aangepakt:

Hoe heb je informatie verzameld?

Hoe voelde je je erbij?

Heb je iemand om hulp gevraagd? Wie?

Waarom heb je uiteindelijk deze beslissing gemaakt?

D. Visual representations of idea 1, 2 and 3

Idea 1 part 1
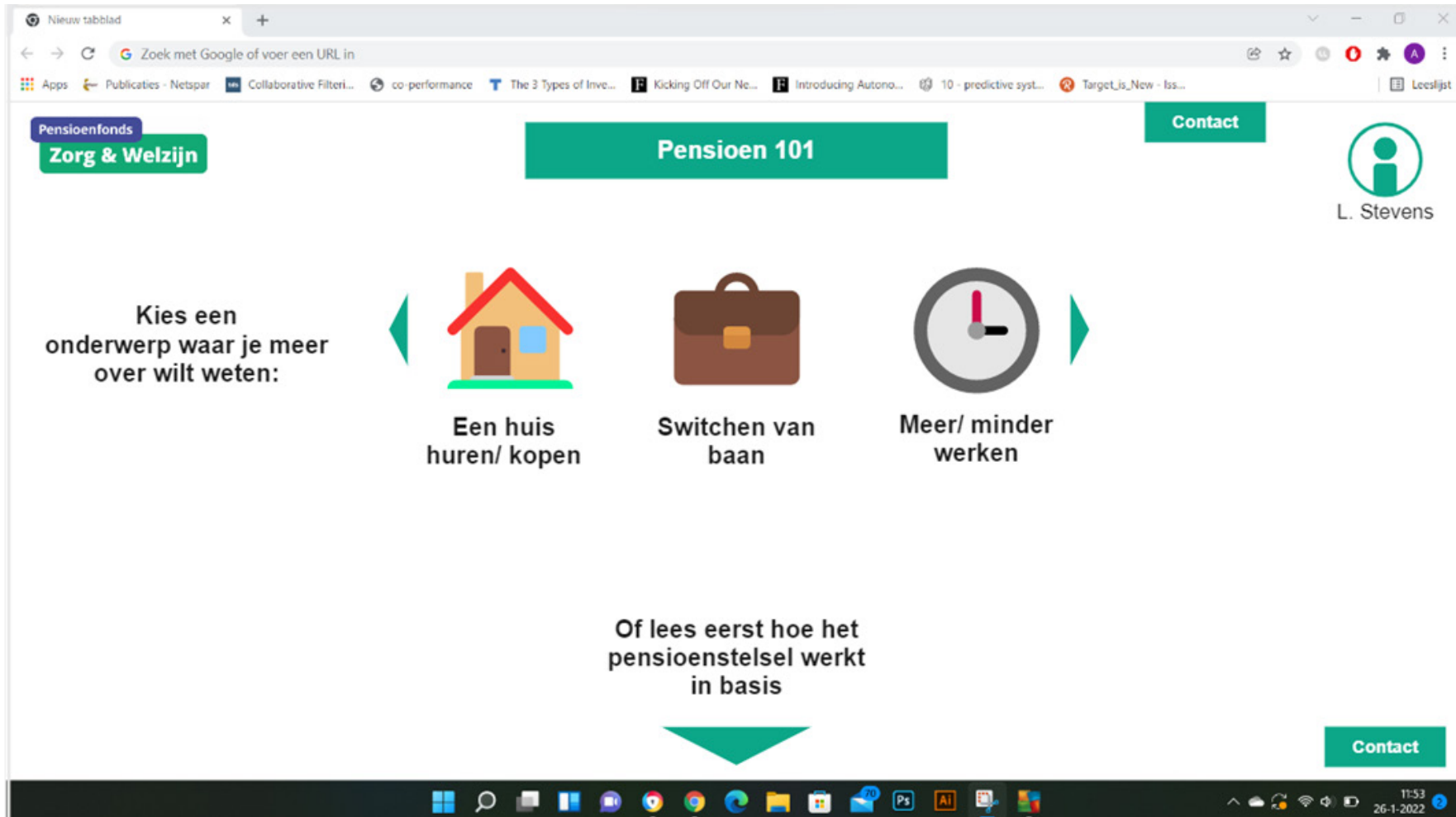
This page shows the PFZW website when you are logged in with your account as 21-35 year old. The first page gives you the option to easily navigate to life events that are generally most relevant for this target group. If you want some general information about pension you can click on the arrow at the bottom.

Idea 1 part 2

When clicking on a life event you get a brief overview of the consequences of the life event for your pension and the most important things to consider when making the decision. Next, you can click on the button for advice or for a checklist of things to do.

Idea 1 part 3

If you click on the advice button, you are navigated to this page. The pension fund advises you what the best decision would be based on the information that the pension fund already has of you as a participant. You can feed the tool with more information if you want to make the advice even more specific and personal.

Idea 1 part 4

If you click on the tab 'Experiences of others' the tool does not only use your information to formulate an advice, but also the information it has of similar participants of the pension fund. Collaborative filtering is used to compare your situation to other people's situations and learn what decisions they have made. Based on other people's experiences you can make better informed decisions now.

Idea 2 part 1
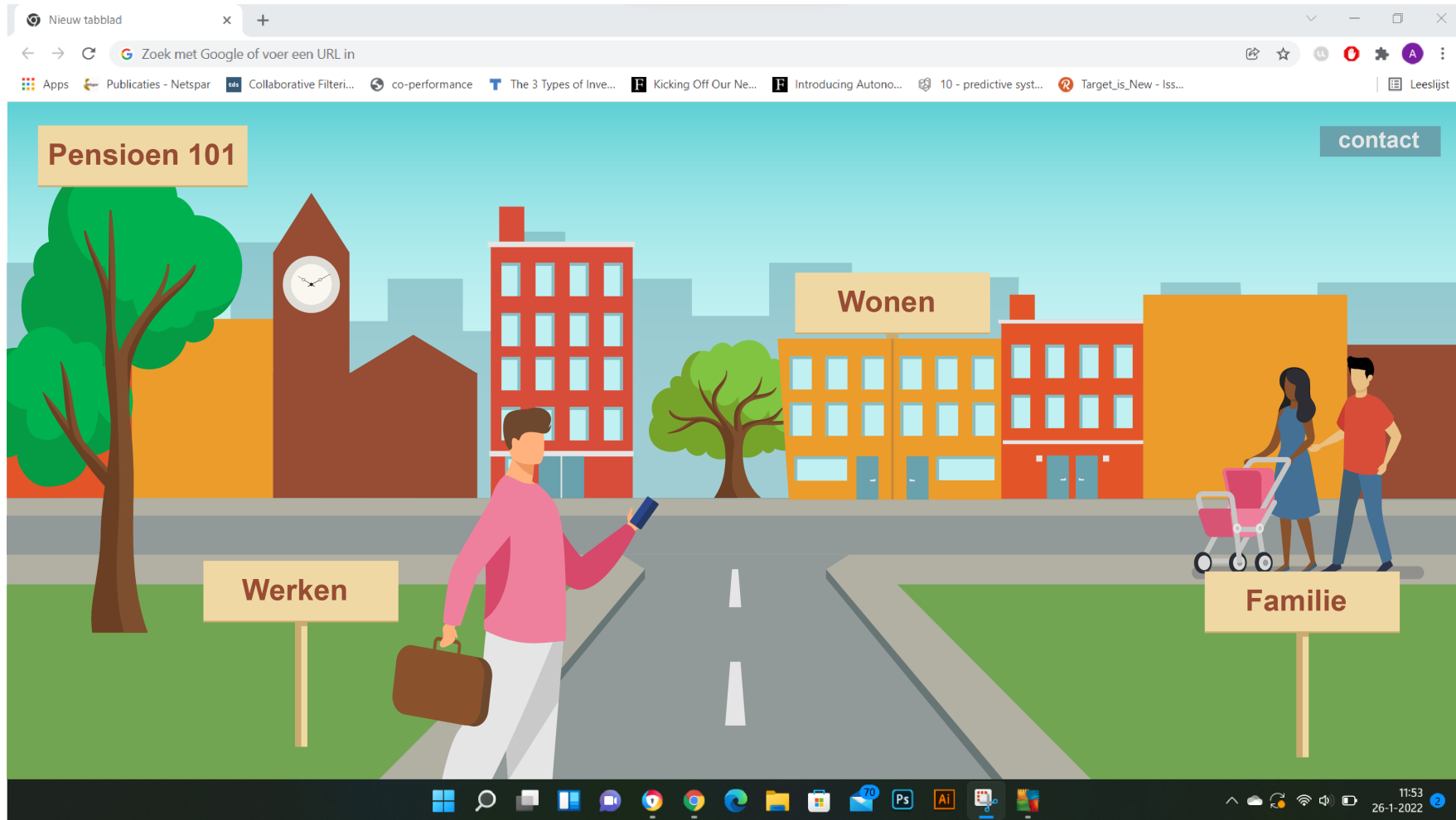
This page shows the first page of a more interactive website. It shows buttons for three main topics to navigate to more specific information throughout the composition and a button for a basic explanation of how pension works in the top left corner.

If you click on the topic 'work' you get to a selection menu with sub topics to learn more about. With the button in the bottom right corner you can go back to the home page. With the button in the top right corner you can navigate to a contact page.

Idea 2 part 3

If you picked an option from the previous selection menu, you are shown an introduction video on the chosen topic and its implications for your pension. If you click on 'What do others do?' in the bottom right corner, you are navigated to the next page.

Idea 2 part 4

contact

Eerste baan

Wat doen anderen?
Wij hebben jouw situatie vergeleken met die van andere PFZW deelnemers. Er zijn 12.336 deelnemers bij PFZW die 21-35 jaar oud zijn, een partner hebben en werken als verpleegkundige in een ziekenhuis. Net als jij dus!

Van hen zijn 870 ook afgelopen jaar aan hun eerste baan begonnen. **34%** heeft aangegeven gestart te zijn met het sparen van extra geld naast het werkgeverspensioen. Gewoon om zeker te weten dat ze straks meer dan genoeg hebben om de pensioendromen uit te laten komen.

Werken

Rekenhulp

Terug naar video

Terug naar overzicht

On this page you are provided with an advice, similar to idea 1. Based on the information of you and other participants the tool advises you what decision would be most beneficial for you. There is also a button for a calculator tool that helps you calculate the impact on your pension of the decision.

Idea 3 part 1

This idea is different from idea 1 and 2. Instead of being an informative website the tool is integrated in your own Email platform in this case.
You send a reminder to your future self regarding a specific life event that you plan to work on. In a checklist you sum up a number of things to keep in mind.

Idea 3 part 2

You use the planner tool already available in your email to pick a date and time when you want to receive the Email.

Idea 3 part 3

You receive your own Email on the planned moment with your checklist.

Idea 3 part 4
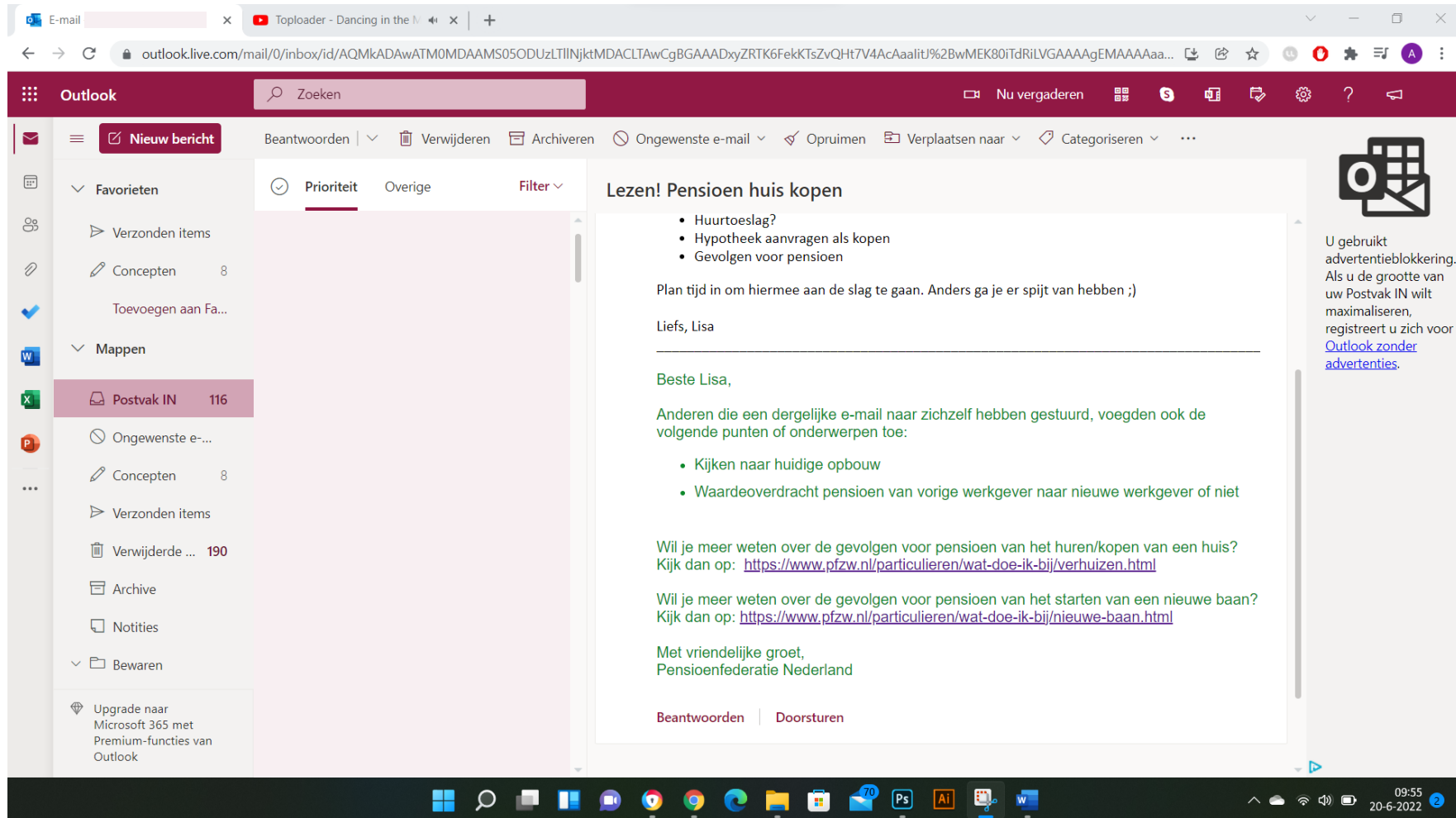
You do not only get your own Email back, but it is extended with suggestions of things that other participants also plan to look into regarding the same life event. This way you can add to your checklist. In addition links to the relevant pages on the pension fund's website are mentioned as well.

E. Findings of the interactive workshops per idea

Feedback on idea 1

The most appealing factor of idea 1 is the **simplicity** according to most participants. It comes across as **clear and organised** and the variation in text and visuals makes it pleasant to look at. A couple of participants mentioned specifically that they thought getting some kind of advice that is based on their personal information was very valuable.

The participants also appreciate the opportunity to get to know what decision **other people** have made regarding a specific topic, so they can consider this when making the decision themselves. Some participants appreciated being provided with a percentage, others would rather (also) be able to read more about others' experiences and to what extent they were happy with their decision.

The **simplistic style** used in the representation of the idea evoked different reactions. Some thought this style made it look **reliable**, others thought it **diminishes the professionalism** of the look. Most participants did think the tool looked reliable. This is also due to the **logo of the pension fund** used on every page. When asked about this all participants in the workshops thought their pension fund would be a reliable source for this information since they are supposed to be most knowledgeable on the topic of pension. The participants also have not had any negative encounters with their pension fund yet, so for now they do trust it to be able to help them.

The main question that was raised with this idea is **how they would find it**. For a decision regarding their career it sounds logical to the participants that they might look into their pension then. But for decisions that feel a bit less directly related, like buying or renting a house, they would not think to look into their pension.

"I wrote down that I think it looks organised [Dutch: overzichtelijk]. It is clear where you can click and what kind of information you will get then. And I think it is nice that the information is focused on you, that you can get advice for your own situation."

- Participant aged 21-35 years old

"When buying a house, I do not know whether I would go to a pension website. I would sooner contact a realtor or mortgage broker. On the other hand, when switching jobs or deciding to work less, I might go to a pension website sooner."

- Participant aged 21-35 years old
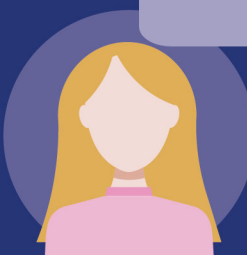
Feedback on idea 2

The **lay-out** of idea 2 was a topic of discussion. Some loved it and thought it made looking into pension more **attractive and fun**. For others the colourful background was a bit too **crowded and overwhelming**.

There are two elements in this idea that almost everyone mentioned as really useful. One of them is the more **interactive navigation** including the idea of a **video** to replace more general texts. A new way of getting information adds to the variety which the participants mentioned would help keep their attention. Most participants thought especially the addition of a video would make the tool very inclusive. Some really liked getting information that way themselves. Others thought it would be valuable for others, but preferred to read themselves.

The next popular element is the idea of including a **calculator tool**. During the discussion of idea 1 it was already a suggestion to include, so seeing a button for it in idea 2 made some participants very happy. They thought it would be valuable to be able to see the direct result of a decision on their pension in numbers. Most participants agreed.

One concern was whether older people would find it too **childish or simple**. Another concern was whether participants would be provided with information on alternatives when the expectation of the value of their pension in the calculator tool seems to be lower than expected and/ or wanted.

"I think the lay-out is really great, it makes me all enthusiastic. The pictures and all the interactive elements."

- Participant aged 21-35 years old

"But for me personally, after a day of work when I am already a bit overwhelmed, it is like bam with all those colours in your face."

- Participant aged 21-35 years old

"I really like that this idea is very active, that there is more interaction because you are making choices. It was already partly included in the first idea, but now there is a video and then text afterwards. This breaks the fact that you would have to read all the time otherwise."

- Participant aged 21-35 years old

Feedback on idea 3

The third idea was the most controversial among the three. On one hand participants were **impressed** and thought it was rather innovative. On the other hand it mostly raised **practical concerns**.

Participants liked the fact that the **threshold for it was rather low,** since they could use the tool in their email provider that they are familiar with already. This also adds to the ease of use. In addition, the fact that your own checklist would be added to with suggestions of others could be very valuable according to some. The suggested links to informational websites in the email also make an easy and low effort way to access the information an individual could be interested in.

The main practical concern was the **timing** in this case. This is crucial. It can be quite difficult to plan ahead for important decisions. And when a reminder like this arrives at the wrong time, participants indicated that they would be likely to just ignore it.

It might also **not be the best source for extensive information**, since it relies on the information you have already and works from there. Participants are wary that they might miss information, even with the added suggestions, since they hardly know anything about the topic yet. It was mentioned that this idea could be a nice addition to a tool like idea 1 or 2, but that it would not fulfil the information need on its own.

In the first two workshops there were not many concerns regarding the trustworthiness. During the third workshop we did have a discussion about the **privacy** of it all. Because an email platform is prone to hackers according to these participants, this is not the most trustworthy platform; especially when personal information is mentioned in the email.

"I thought it was a really original idea, I liked that. I think it would be a good addition that those extra topics can be sent with your email.

- Participant aged 21-35 years old

"I wonder if people are really going to use it. Often you do not know a precise date and there is a good chance that the reminder is not in time because you have decided to move or switch jobs sooner... There is also a good chance that you think I won't read that email now since it is not relevant now, I'll read it later. And then you won't do it anymore."

- Participant aged 21-35 years old
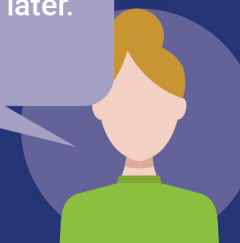
"I think it is useful to send something to your future self as a reminder. But not as a source of information, because I think it is important you already have more information first."

- Participant aged 21-35 years old

DESIGN FOR our future

IDE Master Graduation
Project team, Procedural checks and personal Project brief

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

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

⚠ USE ADOBE ACROBAT READER TO OPEN, EDIT AND SAVE THIS DOCUMENT
Download again and reopen in case you tried other software, such as Preview (Mac) or a webbrowser.

STUDENT DATA & MASTER PROGRAMME
Save this form according the format "IDE Master Graduation Project Brief_familyname_firstname_studentnumber_dd-mm-yyyy".
Complete all blue parts of the form and include the approved Project Brief in your Graduation Report as Appendix 1 ! ⚠

family name	Stevens
initials	A.H.M. given name Lisa
student number	4591763
street & no.	
zipcode & city	
country	
phone	
email	

Your master programme (only select the options that apply to you):

IDE master(s): ( ) IPD   ( ) Dfl   (★) SPD

2ⁿᵈ non-IDE master: _____

individual programme: _____ - ____ (give date of approval)

honours programme: (Honours Programme Master)

specialisation / annotation: (Medisign)
(Tech. in Sustainable Design)
(Entrepeneurship)

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

** chair	Ellis van den Hende	dept. / section:	DOS
** mentor	Iskander Smit	dept. / section:	HCD
2ⁿᵈ mentor	Anneloes Brand		
	organisation: PGGM		
	city: Zeist	country:	The Netherlands

comments (optional)

⚠ Chair should request the IDE Board of Examiners for approval of a non-IDE mentor, including a motivation letter and c.v..

⚠ Second mentor only applies in case the assignment is hosted by an external organisation.

⚠ Ensure a heterogeneous team. In case you wish to include two team members from the same section, please explain why.

Procedural Checks - IDE Master Graduation

*TU*Delft

APPROVAL PROJECT BRIEF
To be filled in by the chair of the supervisory team.

chair _____ date ___-___-_____ signature _____

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

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

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

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

(YES) all 1st year master courses passed

(NO) missing 1st year master courses are:

name _____ date ___-___-_____ signature _____

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

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

Content: (APPROVED) (NOT APPROVED)

Procedure: (APPROVED) (NOT APPROVED)

comments

name _____ date ___-___-_____ signature _____

Initials & Name _____ Student number _____

Title of Project _____

Personal Project Brief - IDE Master Graduation

_____ project title

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

start date _____ - _____ _____   _____ - _____ _____ end date

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

space available for images / figures on next page

Initials & Name _____   Student number _____

Title of Project _____

introduction (continued): space for images

image / figure 1: _____

image / figure 2: _____

Initials & Name _____   Student number _____

Title of Project _____

Personal Project Brief - IDE Master Graduation

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

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

Initials & Name _____   Student number _____

Title of Project _____

PLANNING AND APPROACH **

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

start date _____ - _____ _____   _____ - _____ _____ end date

Initials & Name _____   Student number _____

Title of Project _____

MOTIVATION AND PERSONAL AMBITIONS

Explain why you set up this project, what competences you want to prove and learn. For example: acquired competences from your MSc programme, the elective semester, extra-curricular activities (etc.) and point out the competences you have yet developed. Optionally, describe which personal learning ambitions you explicitly want to address in this project, on top of the learning objectives of the Graduation Project, such as: in depth knowledge a on specific subject, broadening your competences or experimenting with a specific tool and/or methodology, ... Stick to no more than five ambitions.

FINAL COMMENTS

In case your project brief needs final comments, please add any information you think is relevant.

Initials & Name _____   Student number _____

Title of Project _____