

User Experience Portfolio

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INTRODUCTION

This user experience (UX) portfolio is written for the course 'User Experience Theory & Practice' as part of the Master of Industrial Design at Eindhoven University of Technology. The portfolio illustrates my understanding of UX before the start of this course, my learning goals and activities throughout this course, and my definition and understanding of UX and UX in previous and future projects.

Personal attitude and point of view

I mainly know User Experience (UX) design combined with User Interface (UI) design since I have worked as a UX/UI designer. The main focus was translating user needs into a specific UI. This shaped my view of UX design in a specific direction: considering user needs and evaluating how they fit best into your product. However, I believe that UX design is more than evaluating needs.

I use a user-centred design process as I think that effective user involvement is essential the quality of designs. I apply this in the context of climate action as I believe that this is crucial to create a planet suitable for human and non-human species. However, the challenge I encounter is that people have different perspectives, emotions, or values. Therefore, I incorporate user input in different stages of my process to create designs with a UX that suits multiple audiences.

Learning goals

Until now, most of my implementation of user experience in my work is based on my intuition but not supplemented with theories or frameworks. Throughout this course, I would like to learn more about different theories to support my process. Therefore, my first goal in this course is to study the provided literature to learn more about empathy and behaviour change in UX design.

My second goal is to understand better how to apply UX design in social design. As I know it, UX design is often focused on interactions with a system, combined with UI design or technology. However, I believe that evaluating and designing for the user experience in social design is extremely important to have the design communicate the intended message and to create the wished outcome.

Lastly, I also want to learn more about how to communicate the designed UX to a client and to be able to communicate the story or ideas behind the UX.

DEFINING UX

Reflecting on my work as UX/UI designer my current definition of UX is focused on usability and user interface design. However, Roto et al. highlights that in UX design usability is an element which contributes to the overall UX and that UX design is more than user interface design [13]. One of the reasons for following this course was to gain a better understanding of what UX design means in social design. Therefore, my definition of UX should be reframed.

Hassenzahl introduces three levels that should be considered in UX design: the Why, How and What [7]. The Why focuses on the needs and emotions experienced by the user during an activity and should set the tone for when designing the entire experience [7]. These three levels are discussed concerning technology-mediated experience design. However, I think this framework is also powerful to use within non-technological experiences or social design interventions. Researching and using the user's psychological needs as a starting point for the experience design allows designers to anticipate during the process already on possible emotional responses to a design or intervention. It should also be considered that the UX is unique per individual, is also shaped by prior experiences, and is related to the context [13].

Combining these definitions of UX, I acknowledge the value of the emotional journey of the user when encountering a system and the impact of the context of the system. Reflecting on how literature defines UX design and my interpretation of how UX design could play a role in social design, the following definition best reflects my definition of UX:

"UX is a consequence of a user's internal state (predispositions, expectations, needs, motivation, mood, etc.), the characteristics of the designed system (e.g. complexity, purpose, usability, functionality, etc.) and the context (or the environment) within which the interaction

occurs (e.g. organisational/social setting, meaningfulness of the activity, voluntariness of use, etc.)" [8].

REFLECTION ON ACTIVITIES

Week 1

The first week discussed the concept of UX. I expected some thing would sound familiar due to my previous experience. However, the literature and the lecture showed that UX design is much more. Roto et al. [13] discussed and defined what UX design could mean much clearer. Especially the timespan of user experience interested me [13]. I am interested in motivating people to change their behaviour which is why the explanation of the episodic and cumulative UX, so the experience after and over time of the interaction, were interesting to me. Hassenzahl showed me the role of psychological needs in UX design [7]. Their discussion on how emotions are complex but are an evaluation of the experience and how pleasure and pain can be used to compare possibilities [7] was an interesting perspective because it showed me how to evaluate the intention of the designed UX. Brand and Rocchi [3] explained the importance of empathy and creating meaning and value in the transformation economy. The lecture introduced the framework of co-emerging futures by Brand [2]. I read the paper related to this framework to see which path of transformation I would want to design for, which is Gaia [2]. Overall, the first week supported my process in exploring what UX can be and helped me to understand what type of UX designer I was in the company I have worked in.

Week 2

I was familiar with the behavioural change models introduced in the second week since I followed the 'Design for Behavioural Change' course. However, seeing that these theories, such as the Self-Determination Theory [6], can also be considered when designing the UX was very useful. As mentioned earlier, psychological needs are essential to consider when designing the UX. However, topics such as motivation should also be considered in this. I think the Attention-Interaction

Continuum [1] was highly focused on product design and had little relation to social design. However, the theory on attention discussed in the paper was new and relevant to me. The paper on Choice Theory [14] made me aware of the influence of decision-making and how this differs per person. This was an eye opener for my personal identity, but also on how choices can influence a user's emotions. Besides the Choice Theory [14], the paper by Erickson and Kellogg informed me about how users are constantly in a sea of social information and how important the presentation of your information is [5]. Besides, the discussion on how people act on social rules made me wonder how social design can question these social rules [5].

Week 3

The third week focused on empathy and perspectives, which was very interesting to me concerning my professional identity and vision. I aim to be an open-minded designer who wants to design for societal challenges and to do this, it is necessary to be able to understand multiple user perspectives and motivations. I was already familiar with the theory on mixed perspectives [16] but always had difficulty applying it. Diving deeper into the mixed perspective theory [16], I better understood the power and influence of integrating mixed perspectives in the design process. The Empathic Handover Approach [15] paper and the workshop taught me practical tools to communicate my findings to a group in future projects. As I want to understand multiple user perspectives, I also decided to read the paper about the framework for empathy in design [9] which provides a four phases process of creating empathy for the user that I can also use in future projects.

Lastly, the paper by Norman and Verganti [11] taught me more about the types of innovation. Before, I was sure radical innovation is the best way to change our current systems and practices to counteract climate change. However, Norman and Verganti also showed me the power of incremental innovation, which might be even better related to my vision as it aims to improve what we

are currently doing rather than creating a new practice [11].

UNDERSTANDING UX

User experience

The literature and lectures enabled me to explore the meaning of UX design. As I was already looking for reframing in my perspective on UX design towards the context of social design, Roto et al. highlights that UX relates closely to the perception of the individual, their prior experiences, and the social and cultural context [13]. On top of that, the literature defines UX as related to using a system [13], which I find difficult as my view of a system is often technological instead of non-technological. When I think of the user experience in social design, I do not see technology as always necessary to communicate a message. Therefore, I think UX is about people's emotional experience related to a system (with or without technology). As explained by Hassenzahl, the user's psychological needs should set the tone when designing an experience [7]. To support this, the Why, the What, and the How framework explains how needs and values should be considered when designing the features of a system and how they could be expressed in the aesthetics and functionality of this system [7]. The design of an experience entails focusing on the user, the system, and the context of the system [13].

Besides the user's encounter with the system, other moments can influence the experience [13]. Before encountering the system, the user can have expectations based on other experiences with similar systems influencing, called anticipated UX [13]. Relating this to social design, which often addresses complex societal problems, previous experiences with a topic can influence the interaction with a new system. With my focus on social design and counteracting climate change, I often aim to make people reflect or stimulate them to change their behaviour. So besides looking at the anticipated UX, the episodic UX (after usage) and cumulative UX (over time) can be also interesting to evaluate when creating social designs.

Change is difficult because people are often conservative or struggle with adapting their lifestyles, which I believe is necessary to counteract climate change. Therefore, the transformation economy gives the opportunity for change by the creation of meaning and value for users [3], which is closely related to UX design.

Behaviour

To design the user experience, a designer needs to understand the user and to understand the user, knowledge is needed on human behaviour. Several theories exist on human behaviour, such as the Integrated Behaviour Model which evaluates the attitude, the perceived norm, and the personal agency to see if the intended behaviour will be performed [10]. Besides understanding human behaviour, behavioural theories can also help to change behaviour. The Transtheoretical Model, for example, shows the stages of change, which can be used to evaluate in which state the user should interact with the system to achieve the designer's intention [12]. Another thing to consider is the Choice theory and that I should be careful not to overwhelm the user with too many options as that negatively affects their happiness [14].

When looking at the need for a transformation economy and a shift in people's behaviour to counteract climate change, I believe that using behaviour theories can support this shift. Therefore, I think that a well-designed UX is supported by behaviour change theories and can support the lifestyle change needed to counteract climate change.

Empathy

One of my core values as a designer is to understand the user. Before this course, I mainly did this by listening to the user's stories and opinions through interviews. The four phases to create empathy for the users is a structured framework on creating empathy for the user [9]. I believe this framework enables designers to better understand the user, which is necessary to create a good user experience. A quote that suits this is: "It is one thing to speak of water and another to be wet" [4], illustrating that speaking about

a topic does not give the same experience as experiencing the topic.

A system is often not designed by one individual but by a team. In my previous experience one or two members will interact with the user and transfer their insights. Therefore, it is essential to be able to filter findings and only communicate relevant findings. The Empathic Handover Approach systematically transfers insights from the harvest meeting into the handover session to be used during the ideation [15]. This approach ensures that all team members understand the findings of the harvest meeting and can contribute to creating a relevant user experience. Besides creating an appropriate user experience with the Empathic Handover Approach [15], making use of mixed perspectives can also contribute to creating empathy on multiple layers and create a shift in focus throughout the process [16].

UX IN EARLIER WORK

CO2INS

My FBP aimed to help people imagine a future where they would have to live on a CO2 budget as a household. This project aimed to discover what emotions or needs people would have if a CO2 budget became mandatory. Reflecting on this project with the knowledge I gained throughout this course, I was focused on designing an experience rather than the user experience. The project was a way of communicating a scenario and discovering people's values. It rather functioned as an information harvesting method [15] to design with empathy for households in future societies.

This project challenged social and cultural norms since people had to make decisions and argue with each other about these decisions. Social translucent systems make it easier to participate in discussions, engage in peer pressure, observe others' actions and attune to social conventions [5]. I think the project aimed to facilitate this.

The most significant part of the process was based on 1st and 3rd person perspectives [16]. Especially the creation of the final design, which was a board game, the rules and

discussion prompts, and other elements were mainly based on how I saw that scenario and trends in literature. Reflecting on the project goal, which was to discover the needs and values of households in this scenario, it was appropriate to focus on the 1st and 3rd person perspective [16].

In conclusion, I was focused on creating an experience in this project to gather new insights rather than making a good user experience. I acknowledge that focussing on UX could have been beneficial for gathering insights.

Het Nulpunt

In the first semester of my master, I worked on a project focusing on working and organizing based on trust in the youth care system of the Netherlands. We created a conversation tool that facilitates a new collaboration between parties who aim for radical innovation within youth care. This project was user-centred, as user input was gathered in every stage of the process through multiple methods such as questionnaires, co-creations, interviews and the UEQ. However, looking back on this project and reflecting on the user experience, UX was not our focus which could have improved the project.

Throughout the process, there was often a shift between perspectives [16], mainly between the 2nd and 3rd person perspective. However, they were used as separate moments and not together as a mixed-perspective approach. Also, the 1st person perspective did not play a role in the process. I think this is because we did not realize the 'power' of that perspective and had difficulty trusting our intuition since the topic was unfamiliar. We were sometimes overwhelmed with the scale of the youth care problem and all the information gathered through the 2nd and 3rd person perspective. Therefore, the Empathic Handover Approach [15] could have helped create empathy with the users.

In this project, we were aware of the system's social and cultural context, evaluated the user's psychological needs, and how different stakeholders would interact with the system. Therefore, the context, user and system are

considered and evaluated, which are the factors affecting the user experience [13].

In conclusion, there was a focus on the user experience throughout the project by using multiple perspectives and evaluating the factors affecting the user experience. However, it did not set the project's tone, or we were unaware of how all these elements contributed to the UX and that some activities could be labelled as contributing to the overarching UX.

UX PROPOSITION

My view of UX design has changed from usability and interface design towards user-centred design. To create a proper UX, the user, system, and context should be considered, as well as the time span of the interaction [13]. Researching the psychological needs, creating empathy for the user and implementing behavioural models into a system can elevate the quality of the UX design resulting in better matching the designers' intentions.

In the future, I want to work on how we can change behaviour that can counteract climate change while still maintaining a comfortable lifestyle. In addition, I want to do this with a positive experience, which is why I want to consider the UX's timespan in future projects to see what the experience is over time and if people are, for example, stimulated to change their behaviour.

The behaviour change methods will be considered in my future projects when I aim to create systems that support people in changing behaviour. Besides these methods, I also value the user experience evaluation, which I used to do qualitatively but now can do quantitative with the UEQ.

I want to continue with value and meaning creation in the transformation economy with a specific focus on the transformation path of Gaia [2]. I see myself working as an empathic and social designer in a company addressing lifestyle solutions for climate change which helps me to scope the companies I want to work for or even start according to the DLE learning goals.

To conclude, the course supported my reframing of UX design, provided me with new methods and frameworks for UX design, taught me the importance of value and meaning creation and helped me to see how UX design is relevant concerning the DLE track.

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A woman is not a version of a man

In the ideal world, UX is inclusive for everyone.
One group that is now excluded is a large part of the population: women.

Women are not a niche in the globe's population

The industrial economy has modernized societies and increased the standards of living [2]. This modernization focused on accelerating innovation to improve the quality of life. However, women were not part of creating these innovations which led to a male-dominated society [9]. For example, 40% of the NASA crew is female, but they do not have any space suits for women. The current suits are based on men, which leads to discomfort for women. Only in 2022 they started working on a specific suit [6]. To change society and improve women's quality of life, we believe the focus should not be on technology-driven innovation but rather on giving new meaning to what there already is. Meaning-driven innovation aims to make a change in sociocultural structures [8], allowing to build upon all the innovation and reframe it to create an inclusive society. Don't you think that women are equal to men in this society?

Women are also the human default

Men are often seen as the human default [9], so designing for an unspecified target group or everyone often means designing for men. For instance, the language of emojis. Every platform has the same word for an emoji but a different interpretation/visualization. When the emoji 'runner' was created, all platforms created a running man [9]. However, it was never specified that the runner was a man. Do you think all these platforms consciously chose a man for the emoji? Therefore, we believe designers should be aware of the men-as-default bias. Unlearning these biases make UX more ethical and reliable. This can be done by creating empathy for stakeholders through, e.g. a mixed perspectives approach or, as mentioned previously, with the empathic handover [13, 12]. After understanding stakeholders better, it becomes easier to specify target groups and thus design inclusively. Are you ready to unlearn biases about women?

Women should be represented in the economy

The knowledge economy aims to enable people to represent their unique selves on, e.g. social media platforms [8]. Same as men, women are part of the user group of these platforms. However, women are not included in the process of creating these platforms causing their needs to be underrepresented [11]. This is also seen in other experiences, for example, a group of men assumed women needed help when disposing of tampons. They designed a glove to throw away sanitary products. This did not work as women already knew how to manage periods [14]. How could this have been prevented? We believe it is necessary to aim for the transformation economy, which focuses on the transformation of the mindset to demand accountability from stakeholders and development in participation [8]. To create this shift, a systematic approach and new methods are needed to acknowledge and work with more than one gender to

Women should not suffer because of designers' mistakes

User-centred design is not a set of defined methods but rather a philosophy which assumes that innovation starts by studying the user and activities [8]. However, the world we currently live in is designed around men, where women are seen as a version of men [9]. An example to illustrate this is the case where more policewomen die because their armour is not suited for their bodies [9]. People call it "just a mistake". However, more female deaths should not be seen as a mistake, but the design team should be held accountable. Therefore, we conclude that the user is studied improperly, which negatively impacts human lives. To create a good UX, differences between gender should be acknowledged and considered when designing new products or services. The Empathic Handover method shows that relating to experiences from user insights enables a first-person perspective and helps to develop sensitivity for the target group [12]. Wouldn't you want women to

Women's lives should not be negatively impacted by cumulative UX

Designers learn to measure and evaluate anticipated, momentary and episodic UX [10]. However, there is little focus on the user experience over time and how much influence it can have. The designed UX can even contribute to bigger societal issues, such as violence against women [7]. Studies showed that it might be possible that people playing sex-typed video game characters (such as in Grand Theft Auto) became more tolerant of real-life sexism and harassment [4, 1]. Even though it has not been completely proven, it is assumed that the initial designers did not evaluate the long-term consequences of the video game. But is it possible to design with a long-term positive influence? A video game that did consider the cumulative UX is The Sims. This game shows that the world is a collection of all types of cultures and values rather than one way of living a life [5]. The Sims can create acceptance of others that can influence their real-world experience [3]. The cumulative UX can positively as well as negatively impact women's life. Therefore designers need to evaluate which design decisions impact the cumulative UX. You would not want to design

something that negatively impacts women over time, right? **We hope this manifesto provided insight into the importance of considering women in the design process. A woman is not a version of a man; a woman deserves equity. The next step is to design inclusive and accessible user experiences considering the needs of all the people in our society.**

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A manifesto by Vere Vreeswijk & Alicia Poels

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INTRODUCTION

How do we motivate TU/e students to reflect on their career goals? This question, coined by Bureau Moeilijke Dingen (BMD), a design company in Eindhoven, has been a topic of discussion for a while now. Why are students unmotivated to deliberately reflect on their career path when it can benefit them if they do? Solving such psychological conundrums is difficult, especially when applying traditional design methodology. Instead, we should focus on designing for the user experience, using theories from the social sciences to substantiate design decisions. Or to frame it in more popular terms: we should design for the “UX”.

Over the past quartile, we have been exactly doing so: addressing the challenge provided by BMD using a UX-approach. Our main goal was to learn how to translate UX-theories into a concrete design. The challenge itself revolved around revising the MyFuture platform, which is a platform that TU/e students are required to use to develop skills that are useful for their professional careers. Our goal was to enable students to set goals and stimulate reflection related to those goals. We used various UX-theories to substantiate the design decisions made and subsequently translated them into user interface (UI) elements. This report describes the design process and the decisions made, followed by a self-evaluation and comparison of how the other teams approached the UX challenges.

UX CHALLENGE

Approach

A thorough analysis of the client's challenge was conducted to decide what element(s) of the MyFuture platform would be our main focus for revision. Out of this analysis, one clear primary requirement was deduced. According to the client's challenge, the main task was to stimulate students' motivation to reflect on their career goals. We reasoned that this means that the platform needs to contain an element that the students can use to properly set up goals to begin with. Adjacent to this component, the system should contain an element that stimulates reflection linked to the user's goals. After defining these requirements, we decided to focus on revising the progress page because it was most suited for such elements.

After defining the focus of the design challenge, three user experience (UX) theories were chosen to serve as our fundament during the design process. Goal setting theory (GST) was chosen because it describes the connection between task performance and conscious performance goals and provides guidelines on how to set goals in general [10]. The other UX theories were further defined using the students' insights, which showed a clear pattern of a lack of motivation in the students. To address this, the self-determination-theory (SDT) was chosen as the second UX-theory to increase motivation [5]. The elaboration likelihood model (ELM) was used to persuade the students via the central route by providing

personally relevant information to increase engagement with the platform [12]. Furthermore, the theory of five planes of UX design by Jesse J. Garrett [6] was chosen to inform decision-making regarding UI-elements. This theory provides a structural approach that starts from the underlying strategy of the platform up to a concrete outcome (the surface). Additional research on the target group and their web behavior was also conducted, which led us to include the paper by Baird and Fisher, who state that neo-millennials, our target group, now make use of the internet to learn in a supportive social learning environment guided by supporting tools [1].

The challenge mentioned that the resources provided by the university regarding the future career are often fragmented, making it hard for students to navigate. Therefore, some benchmarking of other universities was done to see what the other platforms of the TU/e offered and if comparable platforms already exist outside of the TU/e. Out of this benchmark, it was concluded that there is much support in activities for students to develop skills, but there needs to be a place for reflection or to have an overview of the progress.

Besides all preliminary research, a general decision was made regarding the platform's layout. It was decided to keep the style of the newly designed elements in the same style as the rest of the page to keep the platform in one cohesive style. This decision was made because the client's challenge revolved around improving the current

MyFuture platform, and it was not about turning it into a new website.

Concept

This chapter will explain the four phases of the user journey. The complete overview of all the pages of the concept is in Appendix A.

Phase 1 – onboarding

In the first phase (Appendix B), the student enters the platform and starts by selecting a skill and creating a goal. To address the primary requirement of providing the opportunity to set up goals, we decided to give students the opportunity to formulate a personal goal related to each skill. We wanted to stimulate students to formulate a specific goal because specific goals are more effective than generic ones, according to GST [10]. However, we wanted to avoid forcing the student into specific goal formulation. Instead, instructive text was provided to the student to consider specifying the goal, but the option to formulate a less specific goal was kept open (figure 1#). Next to setting the goal, related upcoming activities are also shown as part of this onboarding flow. These decisions were based on the self-determination theory, specifically the autonomy and competence dimension [5]. By allowing the student to set up any goal, autonomy is maintained, and by accompanying the goal setting with instructive text, the formulation of a goal becomes more accessible to a wider range of competencies. Both factors stimulate motivation, according to SDT [5].

Innovation is the multi-stage process whereby organizations transform ideas into new or improved products, service or processes, aiming to advance, compete and differentiate themselves successfully in their marketplace [1].

Why are you interested in innovation?

Reflect on what element of innovation sparks your interest and where this interest originates from

What would you like to learn in the field of innovation?

Think about your desired development in the field of innovation

Formulate a specific learning goal related to your interest in innovation

Learning goals are generally best captured within one sentence. It is advised to keep the goals specific, feasible, and measurable.

Figure 1: Part of the goal set-up page. The guiding text supports the goal set-up.

To reduce cognitive load, the skills are shown in a carousel instead of spreading them out along the whole page. After the student has chosen skills and personalized them, the skill canvas now only shows relevant information to students. The timeline shows the student's upcoming events, and the skill canvas shows the progression related to each skill (Appendix C). This provides the student with some general feedback which serves as a moderator for goal achievement, according to GST [10]. By creating this personalized overview, we aim to show only personally relevant items related to the user. In doing so, central route processing is stimulated, according to the ELM [12]. Also, the layout was designed to be very easy to scan through because that is how neo-millennials read pages, according to Baird [1]. This would make students more cognizant of their personal goals and progress, and we hypothesized that this could help them during the reflection stage.

Phase 2 – reflecting

In the second phase (Appendix C), the student enters the platform after attending an activity.

To support and motivate reflection, students are asked to write a reflection on the activity they have attended. This is prompted by actively asking for this reflection instead of showing the next activity (Figure 2). The aim was to provide autonomy when creating this reflection, combined with guiding the reflection. This guidance was

aimed to compensate for varying levels of competencies, stimulating motivation according to the SDT [5]. This was done by prompting the student with open-ended questions and instructive text. Besides the reflection related to an activity, the student can also write a reflection whenever they want. This reflection has a similar structure as the reflection related to the activity but has other open-ended questions.

INNOVATION

WHY?
I mainly have a theoretical background in innovation and would like to see how innovation works in the field.

LEARNING GOAL
I want to meet at least 3 alumni working on energy innovation.

ACTIVITIES
[Icons]

REFLECTIONS
[Icons]

REFLECTION

LET'S REFLECT ON THE ACTIVITY YOU RECENTLY ATTENDED

ADD REFLECTION

Figure 2: Prompt to ask the student for a reflection after attending an activity

Phase 3 – Extending or offboarding

In the third phase (Appendix D), the student enters the platform, and all planned activities and reflections have been written.

When the student has finished their planned activities and corresponding reflections, they are asked to extend or finish their goal (Figure 3). This feedback shows their progress which increases the goal effectiveness, according to GST [10]. Students can extend their goal by planning new activities. If a student decides to finish the goal, they are asked to write a final reflection (Figure 4). This final reflection allows the student to reflect if they have accomplished their initial goal. Because according to GST, finishing goals increases the student's total satisfaction [10].

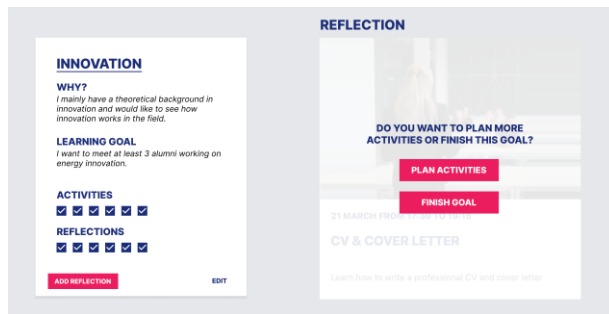


Figure 3: Prompt to ask the student to extend or finish their goal

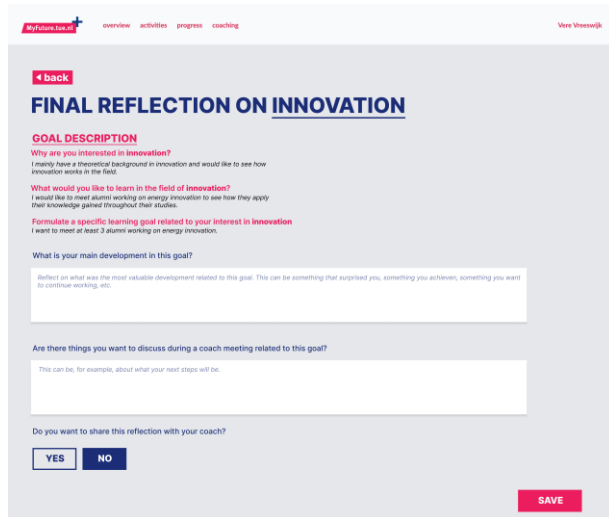


Figure 4: The final reflection page

Phase 4 – Archiving

In the last phase (Appendix E), which appears when the student has finished goals previously, the student's accomplished skill(s) has now moved to the bottom section of the page.

The skill is not shown in the active skill canvas anymore. Instead, it is shown below the carousel with skills, where a new section is added showing previously worked on skills (Figure 5). Seeing what has already been developed could also support the students' total satisfaction and motivate them to continue with their development,

according to GST [10]. Here, a short overview is given of how many activities and reflections are completed related to this skill and the opportunity to view the progress. If the student wants to view the progress, they are redirected to a new page which shows an overview of all attended activities and the reflections.



Figure 5: New section added to the bottom of the page that gives an overview of what has been worked on

Qualities

The design decisions aimed at increasing the user flow, allowing for a more engaging experience that would aid in motivating students to reflect. We aspired to stimulate autonomy by keeping goal and reflection open and non-obligatory questions supported by instructive text, enabling students to gain varying competencies to formulate goals in their fashion. These decisions were based on the SDT [5]. We also tried to increase personal relevance by personalizing the canvas, with the goal of stimulating central route processing, based on the ELM [12], serving as a base for reflection. We also clearly linked the activities and skills, which we subsequently visualized in a timeline. We tidied up the skills into a carousel, moving the less personally relevant elements to the periphery. We provided the student with an archiving page, allowing the student to look back on earlier finished work. Ultimately, the design decision was made to stick with the visual identity of the original platform, which was to our client's satisfaction.

Limitations

One limitation is the conscious decision not to incorporate elements of the relatedness domain, as described in SDT [5]. This domain contains elements like the opportunity to engage with coaches or tools to interact with other students. We decided to leave this part out due to feasibility, as we prioritized the primary requirement.

However, it is an essential element to add to increase the coach's role and the student's overall motivation. In addition, the design decisions were to increase the user flow and the motivation to reflect, yet our client mentioned that it is unclear whether students will be more motivated in this way. It is an indirect way of stimulating motivation, and a more direct way might be preferred considering some students might not be motivated in general.

During the process, we also found that some elements of theories conflicted. For instance, the GST emphasizes the importance of formulating specific goals [10]. However, if the student is prompted to formulate a specific goal, then that would impact the student's autonomy, and it would require a specific competence, which could decrease motivation [5]. Ultimately, we valued the SDT elements over GST [10] elements because the former contains elements of our basic psychological needs, which we deemed more important [10, 5].

Comparison

There were a couple of similar and differing elements from the other teams regarding the approach to the challenge. Team B had many overlaps with our approach. They deduced the challenge into a similar primary requirement of creating the opportunity for goal setting combined with reflection optionality, ultimately revising the UI whilst maintaining the same aesthetics. However, they did use different information to inform their design decisions regarding the reflective element. The team used more specific qualitative insights from research articles instead of using more general theories such as SDT [5]. This can be a valuable approach because it can make the argumentation for design decisions more specific. However, it comes as a risk of bias since these specific insights might not be generalizable to the TU/e students. Team A conducted a more practical approach, incorporating elements such as the value proposition [7] and the why-what-how model [2]. Doing so allowed them to stick closely to the challenge while delivering a

profound prototype. This contrasts with our approach, which was a lot more theoretical. It would have made our process more efficient if we used more of those practical tools, as they serve as an accessible means to generate a design. Ultimately, we believe that a balance between theories and practical tools seems to be the most versatile approach when addressing these challenges. Lastly, the results of Team D were still abstract, but the main concept had much potential to increase the student's motivation. By adding a buddy system, this team decided to focus on the relatedness domain that we excluded from our approach. This social element is probably a stronger motivator than our focus on increasing the user flow. By keeping the concept abstract, team D was able to present a more holistic overview of the new platform, allowing them to focus on elements beyond merely the primary requirement that we decided to focus on. This approach is riskier because it is less specified, and it can be overwhelming for the client. Nevertheless, it can be a solid approach to present a valuable element that goes beyond the primary requirement, which could induce excitement in the client.

The next steps

Our final concept is based on earlier user-test insights and assumptions but still needs to be validated. Therefore, the concepts should be tested with students from different backgrounds. User testing can also uncover new insights that support further development. The reflection element should be verified to discuss if the designed solution supports this in the intended way.

Secondly, integration and connection with coaching should be developed. Currently, students can share their reflections with the coach as an option. However, it still needs to be determined what the coach receives exactly. Also, the coaching is now structured as an expert guiding the student. However, a study on the learning curve of neomillennials discusses that a social learning environment can increase skill development in contrast to learning alone [1]. Therefore, additional user research is necessary if students need this social learning

community, for example, by seeing the development or reflections from peers or friends.

Lastly, the platform now supports and guides students to regularly reflect on their development, but needs additional support on how to motivate them to act for their development. One way of implementing this is to add more cues to the website and use the peripheral route to direct people to the progress page [12]. Another option is to reflect on the layout of the website. A study shows that the preferred ratio between text and images differs per age group [1]. Therefore, the website content can be evaluated to see what draws attention and what does not.

REVIEW

Challenge 2 - Philips Group E

Priority partner is a tangible display that shows the patient's priority level. This makes patients aware of which corresponding zone in the emergency department (ED) they should move to.

The concept is connected to the theory of social translucence, which includes visibility, awareness and accountability [3]. A good consideration is that it covers many users' demands by relieving stress and allowing for less alertness. The need for attention is shifted to the tangible device instead of the auditory space, and patients can walk around freely through the ED. The team considers what happens to the patient's device if they are moved back to the priority level but did not anticipate this.

Group F

Three concepts were proposed: a wheel, blobs on the wall, and an overview map. The concepts focus on empathizing with doctors and patients. This team formulated design requirements using empathy and social translucence theory [9, 3]. However, by creating three concepts, the experience was not completely thought through, and the broader implications of their design were questionable. For instance, they could have made a better

distinction between social transparency and social translucence [3].

Group G

Aria is an application with a digital nurse who can explain emergencies and answer non-medical questions. The concept considers the constraints of the situatedness of the patient well, and a mixed perspective method was used to create the final concept [15].

This concept facilitates inclusion for people unable to use the app by adding a large screen to the waiting room. Apologizing for extensive waiting times provokes an opposing effect on the patients in the context of the challenge.

Group H

The concept contains a web application that can inform patients about the process, their relative positions in the waiting line frequently asked questions, and the expected waiting time. The concept combines diverse theories, value-sensitive design [4], social translucence [3], empathy [9] and mixed perspectives [15].

This design manages the expectations of the patients well, giving insights into the process and explaining why the patient must wait is a welcoming addition. However, putting more weight on how the patient's empathy is addressed in the design could have made the concept more valuable.

Challenge 3 – Essense - PostNL

Group I

CoSend is a service that allows people to anonymously send a gift to others without revealing their own identity when retaining the address. In doing so, the ordering experience is improved. The team used a service blueprint and a value proposition canvas [7]. They created personas based on the first and third perspectives from the mixed perspectives theory [15]. The concept provides certainty to both the sender and receiver whilst maintaining the receiver's privacy. The team could improve the concept by defining what happens when the receiving party does

not respond to the address request or does not want (to stay home for) the gift.

Group J

The concept is a resizable box for packaging that should allow for a more pleasant experience for the parcel deliverer and receiver.

The deliverer can store more boxes in his van due to the smaller sizes of the boxes. Delivering, returning, or handling a smaller package is easier. The deliverer has higher motivation due to a higher salary since a deliverer gets paid per delivery. The concept brings a meaningful change for all stakeholders. The team could have elaborated further on the motivational part of the deliverer. Nevertheless, it is clear how the value framework is translated into the design [7].

Group K

The concept is a service design in which package receivers can indicate their preferred location to pick up their package. The team focused on increasing empathy for both deliverers and package receivers by improving their information exchange and communication [9, 14].

Receivers select where and when a pick-up van waits on the delivery route for them with their package. The added flexibility of the system to choose another pick-up point on the route for the receiver is user-friendly and provides them with more freedom. The efficiency of the deliverer increases as well. The possibility of the receiving party experiencing extra stress due to the moving pick-up point should be researched. The deliverer can also feel less safe with the designed system because his location is exposed.

Group L

The concept is a revised BudBee-box system with slight improvements, especially for disabled people.

An inclusive design is created, targeted at wheelchair users to allow for proper system usage. Empathy amongst stakeholders is increased to create a community [14]. How this system could be used with all the different packaging delivery companies should be researched. It is doubtful if delivery employees and webshops find it desirable that returns are made less obstructive, because

it expands the workload for parcel companies. The concept was created by the four types of pleasure from Jordan [8], and the basic human needs, with a focus on esteem, from Maslow [11].

GENERAL REFLECTION

Overall, the three challenges have distinctive focuses towards target user and outcome but share similar methods and theories for user experience practice.

Differences between challenges

BMD

Compared to the other two challenges, the challenge from BMD mainly focuses on UI-design. Building on the platform already developed, BMD has a clear user group consisting of students from Eindhoven University of Technology and offers distinct user insights. The challenge provided is targeted and narrow in its scope. Regarding the theoretical framework, the challenge encompasses behavioral change theory, value-related theories, or UI-theories. In contrast to the other two challenges, product usage is concentrated on a more personal level, meaning that the user will primarily use the site individually.

Philips

Of the three challenges, Philips presents a challenge that includes a lot of interpersonal interactions in a situated context. All teams, therefore, decided to opt for the social translucence theory [3] and tried to ascribe as much attention as possible to every stakeholder. In other words, Philips' challenge revolved around co-experience [13], and, therefore, approaches the situation from a different perspective. The client provided a general challenge without explicit constraints, which gave the teams an open-ended design space. The outcomes were, therefore, diverse, as the design was not restricted to a digital platform.

Essense

Unlike the other two challenges, the teams designing for Essense suggested different directions for the solution to courier services. The definition of user groups is relatively broad, and the teams specialized in different directions for the design. In addition, the commercial

dimension characterizes this theme, with designers seeking to create economic benefits whilst increasing the user experience. This presents different considerations, as they need to balance design objectives with commercial interests. Similar to Philips, this challenge is also open to physical and digital solutions, and multiple users will interact simultaneously. However, Essense's focus towards social translucence [3] is less than Philips'.

Connection between theory and industry

Out of the three challenges, there is a clear distinction between how the different companies (and their corresponding teams) addressed their challenge. The most notable difference is the overarching framework that the companies choose for their challenge. The difference in frameworks can be explained by the difference in situatedness of each case. In a social context with various interpersonal interactions, opting for a framework incorporating social translucence theory [3] sounds logical. When designing for individualized UI-elements, picking motivational or specific UI-theories seems more reasonable.

However, some theories were observed across all challenges. For instance, value-sensitive design [4] was a common theory used to map out and consider the different values of relevant stakeholders. The same can be said about empathy-related theory or the mixed perspectives methodology [15], which was also re-occurring across the UX-cases. Out of this, we concluded that the UX-theory applicability is a continuum, with on one extreme the holistic theories, like value sensitive design [4] and empathy, and on the other end the more case-specific UX-theories, such as the goal setting theory [10] that we used in our challenge.

From a business perspective, holistic theories are most valuable to use because the generated knowledge and expertise during a challenge can also be applied in other projects. This contrasts with specific UX theories, which are less applicable to other projects. However, the latter theories can be beneficial to motivate or refine concrete

design decisions. In contrast, holistic theories tend to be more abstract and potentially biased due to differences in interpretation, thus resulting in a more debatable rationale for design decisions.

View on UX after challenges

Coming into this challenge, we wanted to create a thorough understanding of how to incorporate and translate UX-theories into a concrete design. The three companies provided the teams with different challenges, requiring different theories and approaches. Each group had their unique way of addressing the challenge at hand, resulting in a diverse range of outputs, which made us realize that there is no clear road towards valid UX-design. This makes sense because designing for a subjective phenomenon like experience is difficult to ground in objective terms.

When translating UX theories into design, we believe that the overall story must make sense. This starts by clearly dissecting the proposed challenge into concrete requirements, followed by an appropriate selection of theories. As mentioned in the previous chapter, these UX-theories range from holistic to case-specific theories, each containing benefits and drawbacks. The theories can then be used to further define the approach or tools most suited for addressing the challenge.

The diverse range of outputs emphasizes the need for thorough validation of concepts because the variety in interpretations of theories can lead to biased concepts. This was outside of the scope of this elective, but it is an essential part when designing for UX. Due to time constraints, we also had to limit our design proposal to a specific element or an "episodic" part of the experience [13]. This comes with the risk of tunnel vision because the designed part might not fit in the bigger picture. In an ideal scenario, a more holistic approach should be conducted which addresses the cumulative experience, making sure the entirety of the narrative makes sense before deciding to make anything concrete.

WEEKLY LOGBOOK

Week 2

After the challenge introduction, its details and our approach for this challenge were explored. The five planes of UX design method [6] was used as an approach for this challenge.

The first plane, strategy, aims to understand the innovation [6]. We approached this by researching theories that could support this challenge and performed a benchmark on what is provided within the TU/e and on similar platforms outside the TU/e. Based on these insights, everyone individually created low-fi prototypes.

Week 3

All the relevant research was discussed, and we created a list with theoretically grounded key insights that could form a solid base for the challenge. With this, we moved from the strategy to the scope plane, which looks at the required functionality and features [6]. We discussed the lo-fi prototypes and used brainwriting to generate ideas.

Secondly, we ideated what type of UI elements or UX-flow could be fitting. This started the next plane, structure, which aims to understand the user journey [6]. We iterated on how the UI and UX could look with paper elements (Figure 6).



Figure 6: Paper elements used to iterate the UI and UX.

Week 4

The skeleton and surface planes were addressed simultaneously, aiming to make the actual UI of the platform, [6] which we decided to make in Figma. We considered how the UI provides the desired UX and iterated on that.

Week 5

The design was finalized, and the presentation was prepared.

Week 6 – 9

The presentation was held in week seven, and the feedback was evaluated. Reporting was started and finished in week nine.

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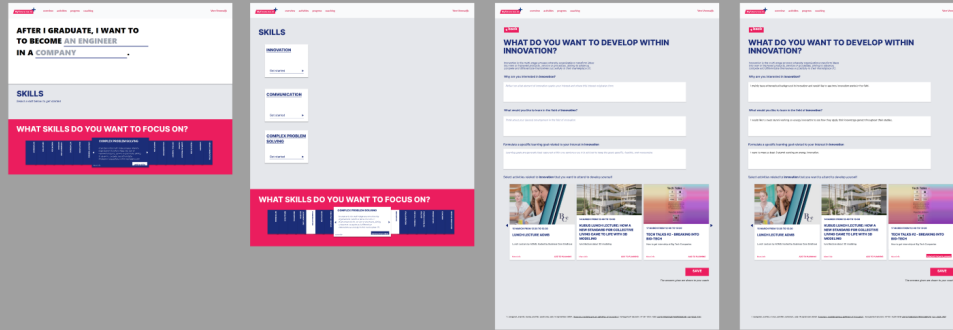
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APPENDICES

Appendix A: Full overview of concept

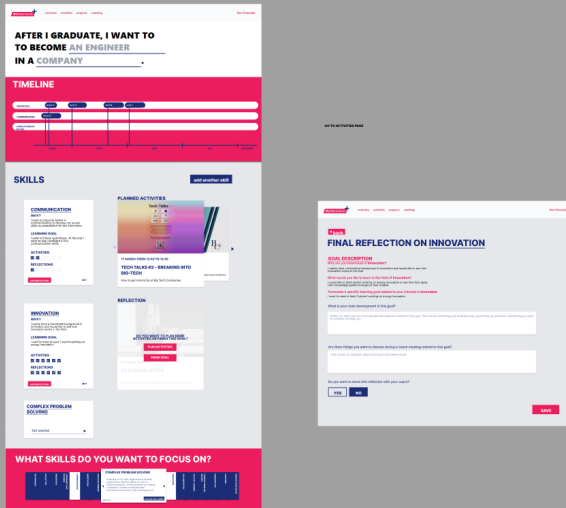
PHASE 1: ONBOARDING - SETTING UP GOALS



PHASE 2: REFLECTING



PHASE 3: EXTENDING OR OFFBOARDING



PHASE 4: ARCHIVING



PHASE 2: REFLECTING

AFTER I GRADUATE, I WANT TO TO BECOME AN ENGINEER IN A COMPANY

TIMELINE

SKILLS

COMMUNICATION

INNOVATION

COMPLEX PROBLEM SOLVING

WHAT SKILLS DO YOU WANT TO FOCUS ON?

This screenshot shows the initial goal setting interface. It features a header with navigation links (Home, Activities, Progress, Learning) and a main heading: "AFTER I GRADUATE, I WANT TO TO BECOME AN ENGINEER IN A COMPANY". Below this is a "TIMELINE" section with a horizontal bar and vertical markers for 2022, 2023, 2024, 2025, and 2026. The "SKILLS" section displays three skill cards: "COMMUNICATION", "INNOVATION", and "COMPLEX PROBLEM SOLVING". Each card includes a "WHY" statement, a "LEARNING GOAL", "ACTIVITIES", and "REFLECTIONS" (represented by progress indicators). At the bottom, there is a section titled "WHAT SKILLS DO YOU WANT TO FOCUS ON?" with a grid of skill categories.

LET'S REFLECT ON YOUR PROGRESS

GOAL DESCRIPTION

Do you feel like you are making progress in innovation? And why?

How can you reflect on your learning goal. This can, for example, write about what you have learned, what your struggles are, what you still need to do to achieve your goal.

Are there things you want to discuss during a coach-meeting related to this goal?

Do you want to share this reflection with your coach?

YES NO SAVE

This screenshot shows the first reflection page. It has a header with navigation links and a main heading: "LET'S REFLECT ON YOUR PROGRESS". Underneath is a "GOAL DESCRIPTION" section with three bullet points. The main body contains three text input fields for reflection, each with a vertical cursor. At the bottom, there are two buttons labeled "YES" and "NO", and a red "SAVE" button.

LET'S REFLECT ON THE ACTIVITY

What did you learn in doing the activity?

Do you feel like you are making progress in this activity? Why?

Are there things you want to discuss during a coach-meeting related to this goal?

Do you want to share this reflection with your coach?

YES NO SAVE

This screenshot shows the second reflection page. It has a header with navigation links and a main heading: "LET'S REFLECT ON THE ACTIVITY". Below the heading is a small diagram showing a cycle of activities. The main body contains three text input fields for reflection, each with a vertical cursor. At the bottom, there are two buttons labeled "YES" and "NO", and a red "SAVE" button.

PHASE 3: EXTENDING OR OFFBOARDING

AFTER I GRADUATE, I WANT TO BECOME AN ENGINEER IN A COMPANY

TIMELINE

Timeline showing progress from September to June. Milestones include: COMMUNICATION, INNOVATION, COMPLEX PROBLEM SOLVING, and a final goal: BECOME AN ENGINEER IN A COMPANY.

SKILLS

add another skill

COMMUNICATION

WHY?
I want to become an engineer in a company and I need to be able to communicate my ideas and my progress to my team.

LEARNING GOAL
I want to be able to communicate my ideas and my progress to my team.

ACTIVITIES
[Progress indicators]

REFLECTIONS
[Progress indicators]

INNOVATION

WHY?
I want to be an engineer in a company and I need to be able to think creatively and solve problems.

LEARNING GOAL
I want to be able to think creatively and solve problems.

ACTIVITIES
[Progress indicators]

REFLECTIONS
[Progress indicators]

COMPLEX PROBLEM SOLVING

Get started

WHAT SKILLS DO YOU WANT TO FOCUS ON?

Complex Problem Solving

Communication

Innovation

Technical Skills

Leadership

Teamwork

Problem Solving

Decision Making

Time Management

Organization

Interpersonal Skills

Self-Motivation

Resilience

Adaptability

Flexibility

Open-mindedness

Empathy

Active Listening

Conflict Resolution

Collaboration

Networking

Public Speaking

Writing

Reading

Research

Analysis

Synthesis

Evaluation

Creation

Application

Integration

Reflection

Self-Assessment

Goal Setting

Time Management

Organization

Interpersonal Skills

Self-Motivation

Resilience

Adaptability

Flexibility

Open-mindedness

Empathy

Active Listening

Conflict Resolution

Collaboration

Networking

Public Speaking

Writing

Reading

Research

Analysis

Synthesis

Evaluation

Creation

Application

Integration

Reflection

Self-Assessment

Goal Setting

GO TO ACTIVITIES PAGE

FINAL REFLECTION ON INNOVATION

GOAL DESCRIPTION

Why are you interested in innovation?
I really love an intellectual development in innovation and want to be an engineer in a company.

What would you like to learn in the field of innovation?
I would like to learn about applying my knowledge in a way that they apply their knowledge gained throughout their studies.

Formulate a specific learning goal related to your interest in innovation.
I want to be able to solve a complex problem.

What is your main development in this goal?

Reflect on what was the most valuable development related to this goal. This can be something that surprised you, something you achieved, something you want to continue working on.

Are there things you want to discuss during a coach meeting related to this goal?

This can be, for example, about what your next steps will be.

Do you want to share this reflection with your coach?

YES NO

SAVE

PHASE 4: ARCHIVING