Diverse Canvas Team Diary

Diary 1 (23 Jan 2024)

Hello! We are ***Diverse Canvas***!

Introductions

- **Phuong Le**: Hey! I'm Phuong, studying the Human-Technology Interaction program at Tampere University and working as a software developer at Wärtsilä. I'm from Vietnam. I moved to Finland in 2017. I did my bachelor's degree in Business Information Technology at Haaga-Helia University of Applied Sciences. I enjoy walking, crafting with paper, and acrylic painting in my free time. These hobbies help me balance the tech world with creative and relaxing activities. I'm always open to new experiences and learning opportunities, in my studies, work, and life. 😊

- **Rachel Kun Wang:** Moi, my name is Kun Wang. I am an international student from China, studying Human-Technology Interaction at Tampere University. This is the first year of my Master's study and I am trying to grasp a summer job opportunity currently. 🙃 I studied Communication in the School of Journalism before so I have some knowledge in digital media, cross cultural communication, etc. I've designed an eco-friendly service using Figma, focusing on helping users save energy and money. I have some foundation in sketching and oil painting, adding a creative touch to my design approach. I like traveling all over the world and exploring new places and activities. I can speak English, Chinese, some Spanish and Japanese, and I am also actively learning Suomi.

- **Melina Aalto-Halme:** Hi, I'm Melina Aalto-Halme, and I come from Tampere. I'm in my first year of master's studies in Human-Technology Interaction at Tampere University. During my bachelor's studies in computing sciences, I focused on front-end development and UX Design. Additionally, I'm interested in usability and accessibility, as reflected in the topic of my bachelor's thesis, which focused on web development and accessibility. I find service robots and the use of artificial intelligence fascinating and would like to learn more about them.

  I have already had quite a long career as a graphic designer specializing in print media. Although I have experienced many great things in my former career, I'm now seeking new

and incredible experiences in the field of work. In the future, I would love to work as a UX designer with coding skills. Alongside my studies, I have worked as a light entrepreneur.

My free time is filled with the horses we've had since my childhood, as my passion spans three generations. Sports, especially running, where ideas pop into my head, are also an important part of my life.

- **Pauliina Harrivaara:** Hallo, I am Pauliina Harrivaara, even though it says Anu on my profile as I am officially Anu Pauliina. I am used to wrong name as all through my highschool when a new course started and the teacher called everyone by name I was sayig ” Täällä, mutta nimi on Pauliina ei Anu” which means Here, but the name is Pauliina not Anu. I did this for 3,5 years for so many courses I always wondered why the teachers after one year continued to use Anu in namecalling because I am sure they remembered That was a funny fact about me :) To balance this out I seem to be terrible at remembering names even though I use special techniques to remember those.
  I Live in Tampere (since June 2021) and I am originally from Pori. I have master degree from Business school (Marketing, economics, business law). I have worked mainly in industrial & tech sector related to infrastructure projects and mainly in global projects and organisations. Also I have done some service design and product development related tasks. At the moment I do my electrical engineering studies in UAS, but have taken maths and other courses here in Tampere uni. I have a background as mentioned in automation and robotics but I have also run for example Maschine Vision related projects for manufacturing companies. I work as Innovation Manager for a German Consulting and Tech company and my main project is related to next generation battery prototype and its industrial use cases.
  In Free time (what is it?) I like to enjoy eating good food (and candy) and go to gym.

- **Sarwer Sakib:** I am Sarwer Sakib originally from Bangladesh, moved to Finland a few years ago and currently residing at Vantaa. I am a Business IT graduate from Haaga-Helia UAS, where I focused on studying digital service design. I am participating in this course as a FItech student.
  I have attended this course following my interest in service designing, user centred development, user experience designing etc. During my bachelor studies I took part in various school projects related to service designing. And my thesis “Concept development of an AR based restaurant menu” which was also related to UCD and UX design.
  I am also an un-enrolled student of Tampere University and planning to resume my studies from next autumn. So, I am also looking to gain valuable insights about the environment of Tampere University.

I am interested in User psychology, User research, UX design, UCD, AR, AI

The topic of the team assignment

- Etteplan “An AI-based design for planning one’s weekly schedule for commuting to work/school, planning for grocery shopping, and scheduling other necessary weekly activities".
- Our kick-off meeting with the client will be on Friday 2nd February 2024.

Team goals

Our team has established several key goals to guide us in our collaborative efforts. These were defined in the first team meeting that occurred on 12th January 2024.

Firstly, fostering collaboration within the team is crucial for effective and efficient work. This involved everyone actively contributing to discussions, sharing ideas, and working together towards common objectives. Secondly, ensuring that each team member completes their assigned tasks well and on time is essential for meeting project deadlines and maintaining a smooth workflow.

Clear communication and openness are important to achieving our goals as they enhance understanding and prevent misunderstanding. We have chosen tools like Telegram for quick updates and Teams for video calls to facilitate seamless communication. Building a supportive team culture is our top priority, where members support and encourage each other. We value open dialogue and aim for an open atmosphere where everyone feels comfortable expressing their opinion freely.

Lastly, our ultimate goal is to deliver a concept that satisfies the customer, requiring us to consistently assess and align our work with their expectations. To evaluate our progress, we will regularly review task completion, communication effectiveness, and the overall team atmosphere, obtaining feedback from both team members and client. These assessments will help us stay on track, adapt as needed, and ensure we are working cohesively towards a successful project outcome.

Teamwork division

a. How did you agree to share responsibilities and roles?

We share the roles according to the scope of the project and customer expectations. The team ensures that important tasks have sufficient resources allocated to them. Initially, roles are assigned based on individual interests, while also considering the necessary skills required to fulfill the tasks. However, there is also a focus on providing opportunities for team members to learn new skills.

b. Who is the project manager and what are her/his tasks?

The project manager is Phuong Le. We have shared the roles evenly, but for example, communication with the customer is mainly done by Phuong to make this convenient for the Etteplan contact person.

c. How are you going to communicate, what tools you will use?

We use Telegram chat for daily discussion. We have Google Drive where we have folders and shared documents where everyone can update information. We make a short memo for team meetings to have things written and also if someone is absent she or he will get the information. When we write an assignment together, we use shared Google Docs and Sheets and each has in some cases a certain color they write, so each one's proposal for text is visible to everyone.

d. How are you going to make team decisions and solve conflicts?

We can discuss and also vote on some occasions. The decision-making style is based on discussion and mutual agreement. In case of conflicts, the team engages in discussions to resolve them, seeking common ground and understanding among team members.

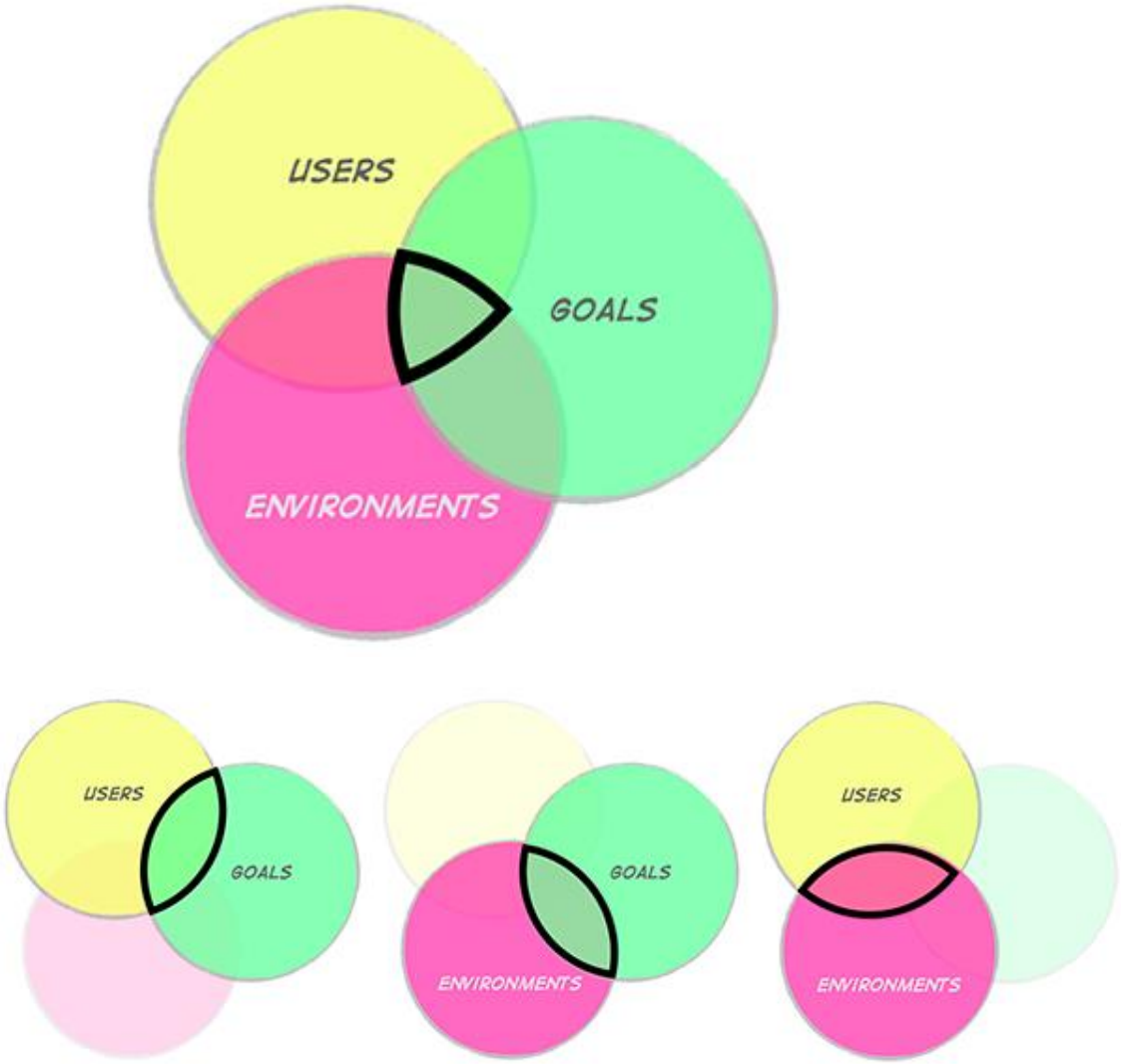
Desk research definition and benefits (for the team)

Desk research definition and its benefits:

Desk research is getting information from something others have already researched and found out. This way you understand the theme broadly. This is useful before you conduct any concrete prototyping or testing by yourself as it is useful to understand similar questions someone else has already tried to solve. (https://www.userfocus.co.uk/articles/desk-research-the-what-why-and-how.html)

Desk research has these benefits: 1) you know when you find something that has not been revealed before. 2) It gives you a broad understanding that supports your communication with users and stakeholders by giving you insights about the subject. 3) It makes the most of your and users' time, as the user does not have to introduce you to the subject during your time together. (https://www.userfocus.co.uk/articles/desk-research-the-what-why-and-how.html)

It might be easy to think your research is unique and thus no desk research is needed. However, this is not true. The 1st picture below shows the place that is an intriguing focus for user research. (https://www.userfocus.co.uk/articles/desk-research-the-what-why-and-how.html)



The 2nd picture shows that these dimension, users, their goals, and environments are likely to be studied before in a context where two dimensions are overlapping. Users and their goals might have been studied earlier for example in the form of surveys, customer interviews, and focus groups. Environments and goals on the other hand might have prior studies to be found. For example, call center or web analytics studies might be researched earlier but without user focus. Prior studies combining the user and environment dimension might exist. In this case, you might be able to field research by teams who are designing a product for the same kinds of users but to meet different needs. (https://www.userfocus.co.uk/articles/desk-research-the-what-why-and-how.html)

Where to find this information? The answer is your organization. Organizations are typically not good at ensuring there is a shared repository of knowledge. This leads to lost time and resources. So talk to product owners, and utilize call center analytics and web analytics. Talk to people who work at the

front line and meet the actual users. (https://www.userfocus.co.uk/articles/desk-research-the-what-why-and-how.html).

Also after these prior steps, find studies that have been done focusing on one dimension. What research exists about your users? And how about studies related to the same goals your system is going to support? And how are the same environments you expect your system to be used in studied before? This means for example HW SW and physical as well as social environment. (https://www.userfocus.co.uk/articles/desk-research-the-what-why-and-how.html)

The quality of your research should be considered. However when talking about human behavior, for example, that tends to change very slowly. In practice, the research results you can find and are otherwise considered trustworthy should be considered useful even though time has passed. (https://www.userfocus.co.uk/articles/desk-research-the-what-why-and-how.html)

Desk research related to our topic

Other relevant concepts, and terms that related to our topic:
An AI-based design for planning one's weekly schedule for commuting to work/school, planning for grocery shopping, and scheduling other necessary weekly activities

There is a study conducted by Wang and Chen (2024) that explores the application of explainable AI (XAI) in job scheduling for manufacturing systems, with a particular focus on the utilization of genetic algorithms (GA). The relevance of the provided information to the topic of "An AI-based design for planning one's weekly schedule for commuting to work/school, planning for grocery shopping, and scheduling other necessary weekly activities" lies in the broader context of AI applications and technologies. While the specific focus of the studies mentioned may not directly address the exact activities mentioned in the topic, they offer valuable insights into the capabilities and potential of AI in optimizing scheduling and decision-making processes, which are pertinent to the overall theme.

According to Wang and Chen (2024), GA applications are the most used in job scheduling.
Job scheduling is often seen as a mathematical programming problem and AI techniques are used to find the optimal solution to the problem. Scheduling results can be analyzed utilizing AI technologies such as a genetic algorithm, artificial neural network (ANN), or other methods to adjust or optimize a dispatching rule. Many current XAI techniques concentrate on recognizing patterns, analyzing defects, estimating outcomes, and making predictions. XAI applications have a greater impact on

human-system interaction in domains like medicine, services, and banking, which requires better interpretation. (Wang & Chen, 2024.)

Wang and Chen (2024) enumerated the data requirements essential for job scheduling. The following categories of data are relevant to our project and warrant careful consideration. For our specific context, we need to adapt the terminology to align with our purposes. Here is an overview of the data:

Collected Data:

- Arrival time (adjusted to our context as “start time”)
- Due date (adjusted to our context as “deadline”)
- Processing time
- Product type (adjusted to our context as “activity type”)

Derived Data:

- Bottleneck
- Hourly capacity of the following machine
- Mean time between failures
- Mean time to repair
- Next bottleneck

Estimated/Forecasted Data:

- Cycle time (by product type)
- Demand

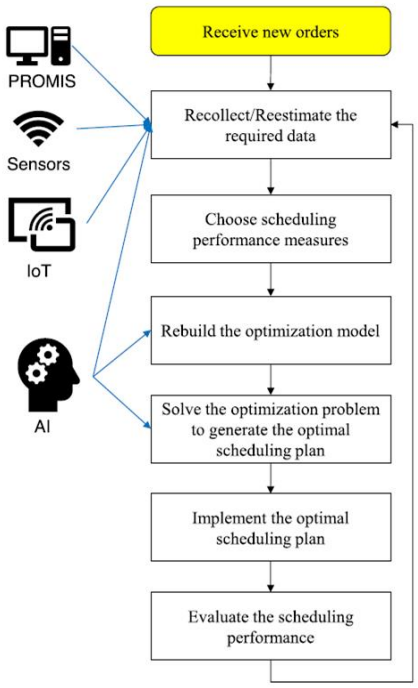


Fig. 1: An illustration depicting AI applications in job scheduling from

Another article by Judy Wajcman provides valuable insights into the cultural and historical context of time management, particularly in the context of AI-driven scheduling tools. Here are some key takeaways from the article and their relevance to the topic of "An AI-based design for planning one’s weekly schedule":
(https://eprints.lse.ac.uk/89406/1/Wajcman_Digital-architecture-of-time-management_Accepted.pdf)

The article discusses how digital calendars are marketed as personalized assistants to help users align their daily rhythms with the ideals of efficient time management. This aligns with the objective of an AI-based scheduling tool, which aims to optimize time allocation for various weekly activities such as commuting, grocery shopping, and other necessary tasks.

Wajcman highlights how individuals are nudged into making the "right" choices about time allocation by algorithms that are perceived as objective and trustworthy. Similarly, an AI-based scheduling tool

could leverage behavioral algorithms to nudge users toward making optimal scheduling decisions based on their preferences and priorities.

The article emphasizes the importance of control over one's time, as a measure of life satisfaction and well-being. In the context of the scheduling tool, it's essential to prioritize user autonomy and allow individuals to have control over their schedules, rather than solely focusing on time optimization.

Wajcman raises concerns about surrendering autonomy as control over private calendars is opened up to employers and colleagues through AI-driven scheduling tools. This highlights the importance of designing the tool with privacy and autonomy in mind, ensuring that users retain control over their schedules while benefiting from AI assistance.

The article challenges the dominant productivity ideals that prioritize time optimization and efficiency above all else. Instead, it advocates for a reevaluation of what individuals want to save time for and how they choose to use their free time. This perspective can inform the design of the scheduling tool to prioritize user well-being and satisfaction over relentless optimization.

Overall, the insights from the article shed light on the cultural, historical, and ethical considerations surrounding the design and implementation of an AI-based scheduling tool for planning weekly activities. By incorporating these insights, the tool can better align with user needs and values, ultimately enhancing the user experience and well-being.

Adding new ways to schedule and plan as well as track and measure ones activities and using one more solution with a mobile device can be related to increased use of mobile devices. This is not just a positive phenomenon and for example increased use of social-media applications for work has downsides. According to Reetta Oksa, especially millennials have tendency to experience “negative psychosocial well-being implications involved physiological symptoms, fears, social pressure, and unclear rules. Higher psychological distress, burnout, and technostress are also found to be linked to increased social media applications work use. This is relevant to our product design as we are developing a solution that can potentially decrease use of different applications for example teams chats, slack etc. Making sure our solution decrease the unwanted time spent on mobile and in some cases even not using the mobile phone at all, we can solve this challenge. (Oksa 2002)

Human maschine interaction and studies by Minja Axelsson

“Humanoid robots have so much potential to help us stay mentally well – I really believe they can improve quality of life," says Gunes, "and they’re so much better than an app. Robots have a physical presence - people tend to find them more engaging, which has more impact on their behaviour.”

"I want to work out how a robot can engage a person in a wellbeing practice such as mindfulness - how to express empathy, provide feedback, and instruct and demonstrate in a personalised way," she says. It's not just a technological challenge: a robotic coach also has to be accepted as a realistic option.

"We found there wasn't any clear preference on what the robot should look like," says Axelsson. "But what was consistent was that they all expect its form to match its function. So, if the robot is going to offer reminders and interact through empathetic gestures, then a dog-like robot could work. But if the robot is going to have conversations and offer advanced interventions like solution-focused coaching, it should be more humanoid."

The group's biggest concern in using a robot wellbeing coach was privacy. "There were also worries about the cost, and ability to operate such a complex technology," says Axelsson. "All these things will be taken into account as the robot is developed." Three human wellbeing coaches were also interviewed separately to get deeper insights and suggestions.
https://www.cam.ac.uk/stories/wellbeing-robot

Aamulehti article 6 February 2024

On February 6, 2024, there was an article in Aamulehti titled 'Cars Can Be Controlled by Voice.' Several car brands have announced their plans to utilize artificial intelligence (AI) in some way. In the article, AI entrepreneur and author Antti Merilehto explains that with generative AI, it is possible to, for example, adjust the car's temperature by stating that it is cold, and the AI will automatically regulate the temperature accordingly. Furthermore, the AI can recognize whether the speech is coming from the driver's or the passenger's seat.

Generative AI, as explained, operates by generating new content based on the input it receives, be it text, images, videos, or musical notes. The condition is that the input must be something the AI can process. However, it's crucial to note that for effective utilization, such AI models need to undergo specific training tailored to their intended purpose or application. (Lawton, 2024.)

Some solutions or concepts are already available for the topic that our team has:

- Reclaim AI (reclaim.ai): an intelligent calendar assistant that works with users' existing calendars (Google Calendar, Outlook, etc) and helps users optimize their schedule for work and life around users preferences and priorities.

- Microsoft Viva Insights uses AI to summarise existing Microsoft 365 data about emails, meetings, calls, and chats and presents this back to the users. It provides personalized insights for building better work and life habits. It previews and adjusts the schedule.
- Apple's Siri allows users to add notes and calendar entries through voice commands, although it doesn't work as expected at least in Finnish.

Overall, while the specific contexts of the studies may differ from the topic at hand, the underlying principles and advancements in AI technology explored in these studies contribute to the broader understanding of AI-based solutions for optimizing weekly schedules and activities. They offer insights into the potential capabilities, challenges, and considerations relevant to the development of AI-based scheduling tools for various purposes, including commuting, grocery shopping, and other necessary weekly activities.

Contribution/tasks and working hours

https://docs.google.com/spreadsheets/d/119zthq-fS14004pVJjDqBFoEqpx5L1NB6pCtMlI9l6Q/edit#gid=64979970

Team member	Summary	Working hours	Cumulative hours
Phuong Le	Organizing team's calls (1st and 2nd), collecting available time slots from members for the next following 2 weeks to identify some suitable time slots for the kick-off meeting with client. Afterward, I created and sent an email to the client proposing those time slots. Additionally, I created the diary file and worked on the first team diary task. Join the team meetings (1st and 2nd)	12	12
Pauliina Harrivaara	Creating shared folder and documents to Google Drive. Writing 1st assignment. Gathering background info about the customer and adding this info to group. Joining team meetings (2)	10	10

Melina Aalto-Halme	I worked on the first week's diary tasks, such as writing my introduction text and starting desk research. I prepared questions for the kick-off meeting and participated in two team meetings.	7	7
Kun Wang	Wrote personal introduction in the team dairy, prepared 5 questions for the kick-off meeting with client, and attended 4 group meetings	9	9
Sakib Sarwer	Attended zoom meetings and regular telegram communications, Diary tasks, project related activities	8	8

Diary 2 (31st Jan 2024)

9241-210:2019 Ergonomics of human-system interaction

Using a human-centred approach to design and development has substantial economic and social benefits for users, employers and suppliers. Highly usable systems and products tend to be more successful both technically and commercially. The document 9241-210:2019 Ergonomics of human-system interaction provides valuable information and standards which helps the stakeholders understand, analyze and prioritize different activities and principles. The human-centred approach can lead to increased human-centred quality (usability, accessibility, user experience, avoidance of harm from use).

Examples of outputs from human-centred design activities are illustrated in Table 1.

Table 1 — Examples of outputs from human-centred design activities

Activities	Outputs from human-centred design	Examples of information contained in outputs
Understand and specify the context of use	Context of use description	— User group profiles — As-is scenarios — Personas
Specify the user requirements	User needs description User requirements specification	— Identified user needs — Derived user requirements — Required design guidance
Produce design solutions to meet these requirements	User-system interaction specification User interface specification Implemented user interface	— Scenarios of use — Low-fidelity prototypes — High-fidelity prototypes
Evaluate the designs against requirements	Evaluation results Conformance test results Long-term monitoring results	— Usability-test report — Field report — User survey report
NOTE More detailed information on each output can be found in ISO/IEC TR 25060.		

In 9241-210:2019 describes what are the principles which should be considered while doing human-centered design. Then it outlines how to plan different phases of the design project and the activities which lead to a successful human-centered design. And finally the sustainability of HCD.

For our project, we can have a reference to the principles of a design which will allow us to reduce the mistakes in design principles. Using the phases, we can focus on each phase separately and the iterative process will help the efficiency of the project. Planning will be easier and we will be aware

of the activities that are needed to be executed during the project. Overall, it will be a reference document for us to follow while doing a design.

ISO standards

One very important standardisation on process is standardisation group working on AI (AI Act). As standardisation goes hand in hand with legislation, this process is not yet finished. Also Digital product passport standardidation is ongoing in EU, but not yet finished (reference https://sfs.fi/standardit-kiinni-ajassa/)

Another important standard already published is ISO/IEC 27001 which was reviewed and new version published in 2002. This new version is ISO/IEC 27001:2022 and it focuses on how organisations can identify, recognise as well as manage risks in information security management system. (Antila 2023, TAMK : ISO/IEC 27001:2022-standardin tuomat muutokset organisaatiossa). Thus this standard and its content is worth to assess with care and has links to our prototype / concept design process. In the core of the standard is PDCA process model. This means Plan, Do, Check, Act and this continuous development is a prerequisite for all the actions. (Antila 2023, TAMK : ISO/IEC 27001:2022-standardin tuomat muutokset organisaatiossa).

ISO/IEC 27001 is focusing on information security management system. ISO/IEC 27002 includes information security, cybersecurity and information security and management of information system. ISO/IEC 27005 includes advice for control of information security risks. (Antila 2023, TAMK : ISO/IEC 27001:2022-standardin tuomat muutokset organisaatiossa).

ISO/IEC 27001 includes requirements, which are mandatory. Control parts on the other hand are not mandatory, but an organisation has to define what they are in its Statement of Applicbility (SoA). In 2022 new controls were introduced such as A.8.10 Deleting the Information (information regarding customers, employees etc. must be deleted when they are no longer needed). Also A8.10. Information Covering is new and means that for example personal user information must be covered. (Antila 2023, TAMK : ISO/IEC 27001:2022-standardin tuomat muutokset organisaatiossa).

Discussion: as ICT is crucial part of every industry and field in our society and personal lifes and technology develops fast finding new ways to collect data and combine different data sources, standards and regulations as well change fast. EU wants to be the leader in ethical use of AI and fresh AI Act is one example of this. The regulations inside Europe seem to change and we can expect this region interests global players who are willing to act according to European regulation and standards. On the other hand EU is not the no 1 in new technology development. Tesla, BYD, Samsung, Apple,

WeChat, TikTok.. Who and where is made the decision what kind of intelligent systems are used globally and is it even possible to have separate rules for AI in 2035 without causing hindrance to European Tech and other Industries companies?

Trend map

Sources:

10 of the Best AI Planner & Calendar Assistants in 2024 https://clickup.com/blog/ai-calendars/

The 7 best AI scheduling assistants https://zapier.com/blog/best-ai-scheduling/

Our trend map

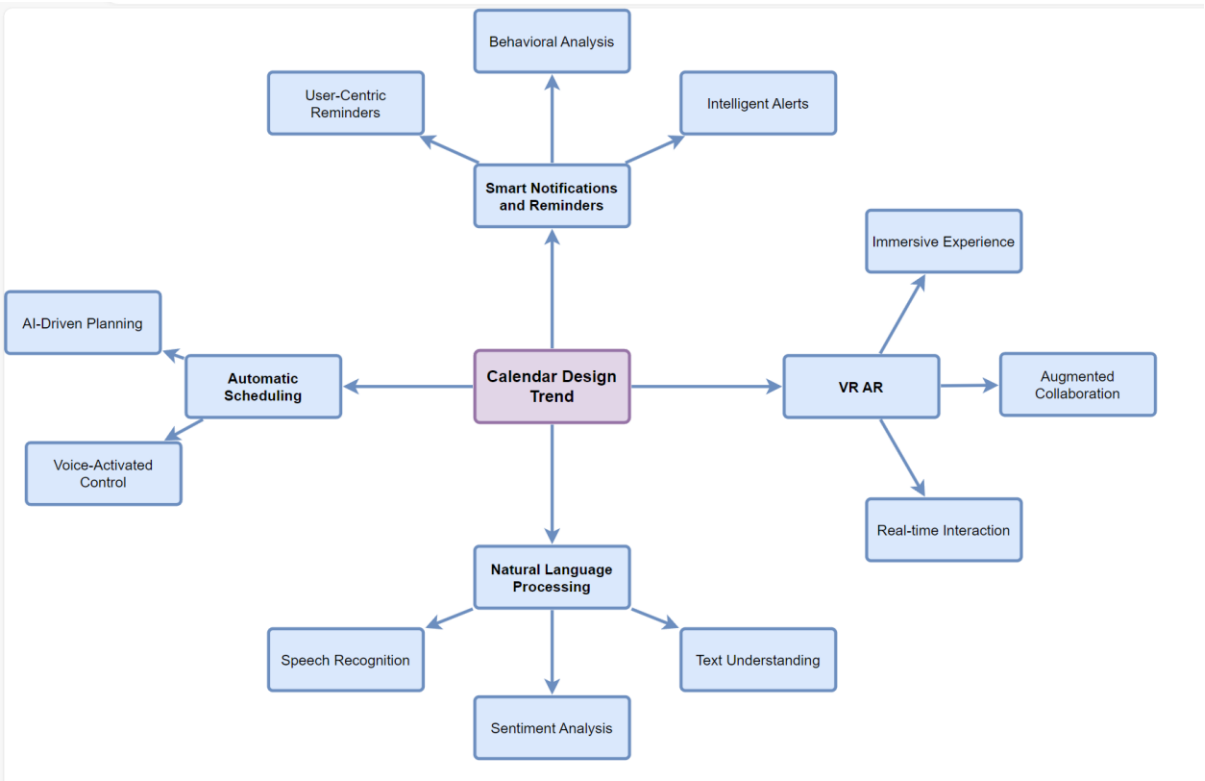
- Automatic Scheduling: AI-driven tools automate appointment booking and rescheduling.
- Voice-Activated Control: Natural language commands simplify calendar interactions.
- AI-Driven Planning: Algorithms optimize schedules, considering deadlines and collaboration.
- NLP (Natural Language Processing): Calendars understand human language.
- Sentiment Analysis: Detecting urgency or stress levels in messages.
- Speech Recognition: Dictating events using voice.
- Smart Notifications and Reminders: Personalized alerts.
- Intelligent Alerts: Proactive suggestions.
- Behavioral Analysis: Learning from user behavior.
- User-Centric Reminders: Tailored to individual preferences.
- VR/AR (Virtual Reality/Augmented Reality): Immersive experiences.
- Real-time Interaction: Collaborating simultaneously.
- Immersive Experience: Redefining time management.

The most potential trends for our work

- NLP and Text Understanding: Efficiently input tasks and events.
- User-Centric Reminders: Tailor reminders to habits.
- VR/AR (Immersive Experience): Explore innovative ways to visualise schedules.
- Real-time Interaction and Augmented Collaboration: Enhance projects and sessions.

Why these four trends the most potential trends for our topic (Added after receiving feedback from teacher):

- **NLP and Text Understanding** trend enables our solution to understand natural language command and text inputs, making it easier for users to interact with the assistant. By having advanced NLP algorithms, the assistant can accurately parse and interpret user requests extracting relevant information such as event details, dates, location and so on. This capability streamlines the process of inputting tasks and events, reducing the cognitive load on users and enhancing overall usability.
- **User-Centric Reminders**: Personalized reminders tailored to individual habits and preferences ensure that users receive timely and relevant notifications. By analysing user behavior and historical data, the solution can anticipate user's needs and deliver reminders that align with their daily routines and preferences. For example, if a user tend to schedule meetings in the morning, the assistant can prioritize sending reminders for morning appointments.
- **VR/AR (Immersive Experience)**: Having VR/AR technology into our calendar assistant introduces a new dimension of interactivitity and engagement. By visualizing schedule and events in immersive virtual environments, users can gain a deeper understanding of their schedule and make more informed decisions. For instance, users can explore their calendar while having coffee in the kitchen in the morning where events are represented as interactive objects, allowing them to interact with and rearrange events with natural gestures. This experience not only enhances comprehension but also makes scheduling more enjoyable and intuitive.
- **Real-time Interaction and Augmented Collaboration**: Real-time Interaction and Augmented Collaboration functionalities play a crucial role not only in professional settings but also in various aspects of users' personal lives. Beyond enhancing productivity and collaboration in work-related tasks, these features offer significant benefits across different aspects of daily life, including hobbies, routines, travel, social engagements, and appointments. In everyday scenarios, such functionalities enable users to seamlessly coordinate with friends and family, whether it's planning outings, organizing gatherings, or scheduling leisure activities. Furthermore, in organizing social engagements and appointments, real-time interaction features ensure efficient coordination and communication. Users can easily schedule and confirm appointments, coordinate meeting times with friends or colleagues, and share calendar availability to avoid scheduling conflicts. This streamlined approach to scheduling and coordination enhances users' ability to manage their social and professional commitments effectively.



Contribution/tasks and working hours

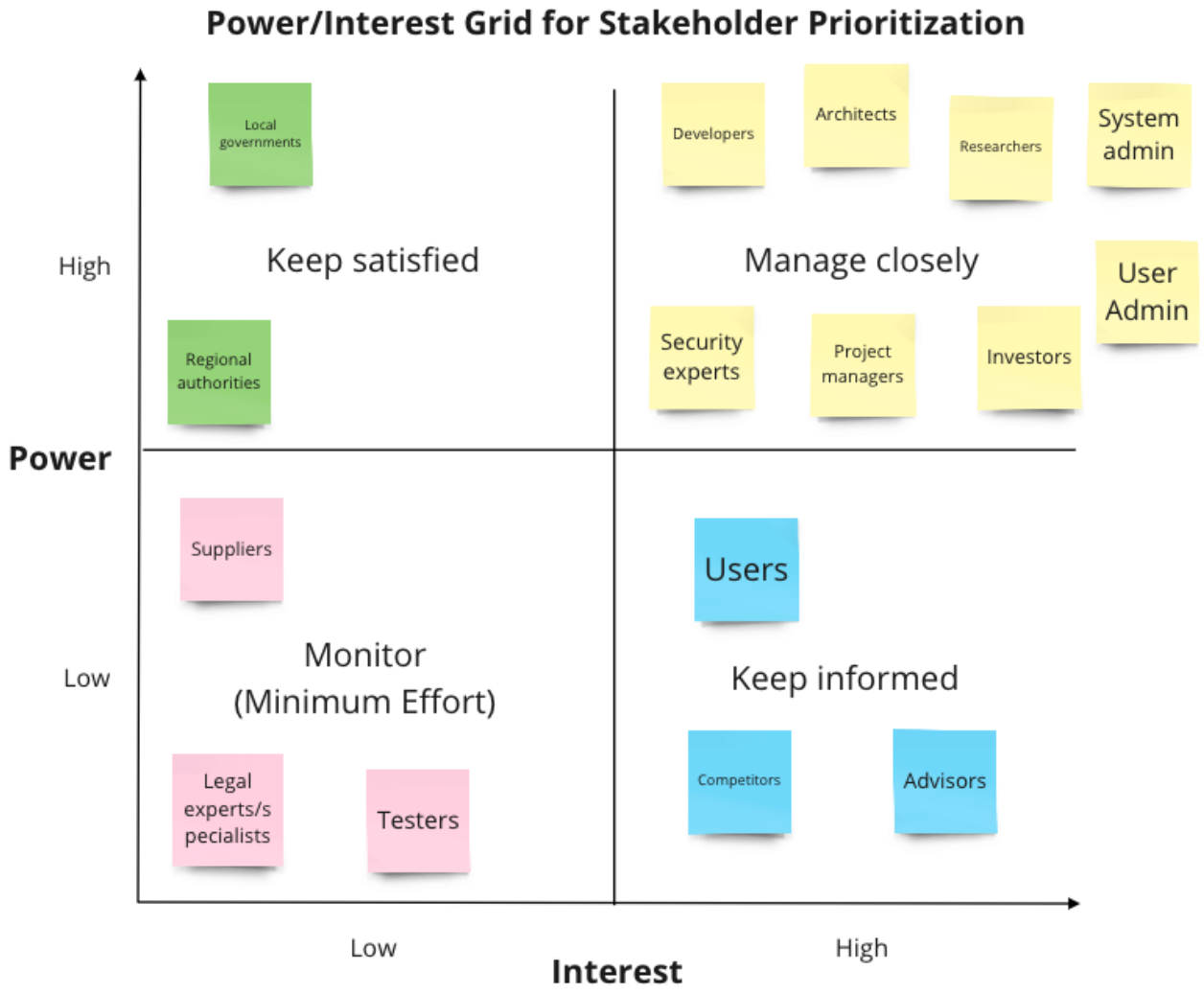
https://docs.google.com/spreadsheets/d/119zthq-fS14004pVJjDqBFoEqpx5L1NB6pCtMlI9l6Q/edit#gid=64979970

Team member	Short summary	Working hours	Cumulative hours
Phuong Le	Diary structure, prepare materials for the kick-off meeting with client, schedule calls , kick off meeting with client, desk research	6	18
Pauliina Harrivaara	Desk research, the kick-off meeting with the client, diary work	5	15

Melina Aalto-Halme	Desk research, the kick-off meeting with the client	7	14
Kun Wang	Trend map, the kick-off meeting with the client	6	14
Sakib Sarwer	Diary work, Meetings, Communications	6	14

Project Diary 3

Power/Interest Grid for Stakeholders



Segmentation / Customer Grouping canvas

Customer grouping

Common issues: time, a lot of activities in their life, too much information in different places, smart gadgets

Customer group 1: Students

			- Main group?
image	Studying in different educational institutions	Different courses tight schedule part time job remote meetings groceries laundries	Yes

Customer group 2: IT Professionals

			- Main group?
image	Experts (Consultants, Lawyers, Engineers, IT (interest/department) teachers))	Limited time. Parallel activities, Parallel projects Too much information Family / Hobbies	Yes

Customer group 3: non-IT professionals

			- Main group?
image	Doctors, teachers, lawyers, football players, etc.	Limited time. Parallel activities Parallel projects Too much information Family / Hobbies	No

Customer group 4: AI enthusiasts

			- Main group?
image	Women in AI community, Data Sciences community, AI entrepreneurs	lack of AI solutions and applications	NO

The main target group, IT-professionals, was selected based on several factors:

- IT-professionals are more likely to appreciate and utilizing advanced features of the AI-powered calendar assistant, such as integration with technology tools and platforms commonly used in IT environments.

- This group often has demanding schedules and complex task management requirements, making them top candidates for a calendar assistant that can handle very complex scheduling tasks efficiently.
- IT-professionals are generally more tech-savy and open to adopting new technologies, making them more receptive to embracing innovative solutions like and AI-powered calendar assistant.
- The IT industry is expansive and continuously growing, providing a large pool of potential users for the AI-powered calendar assistant.

However, while IT Professionals may be the main target group, other customer segments like Students, Non-IT Professionals, and AI Enthusiasts shouldn't be overlooked:

- Students: They have busy schedules balancing classes, extracurricular activities, and social commitments. An AI-powered calendar assistant could help them manage their time effectively and improve academic performance.

- Non-IT Professionals: Although not the main target group, Non-IT Professionals also have demanding schedules and can benefit from the productivity features offered by the calendar assistant.

- AI Enthusiasts: This group may have a keen interest in exploring cutting-edge AI technologies and could serve as early adopters or advocates for the product, contributing to its initial success and market penetration.

While IT Professionals may represent the primary focus due to their specific needs and potential for adoption, the other customer segments should not be ignored, as they can still provide valuable market opportunities and contribute to the overall success and growth of the product.

Background user research

We used a semi-structured interview as a research method. Before the interview, the participants were sent a participant code and a confirmation form, which stated the date, time, duration and location of the interview, as well as links to the consent form and the background information survey. The participant was asked to fill out a consent form and a background information form before the start of the interview. The participants were asked to provide the following background information:

1. Participant code (provided by the test organizers)
2. Your age group
    - under 25
    - 25-65
    - over 65
3. Gender
    - Woman

- Man
- Non-binary
- I prefer not to say

4. What is your education level?
    - Basic Education
    - Secondary Education
    - Bachelor's Degree
    - Master's Degree
    - Licentiate or Doctoral Degree
5. What is your current occupation?

Before the start of the interview, participants were informed about the purpose of the interview, the estimated duration of the interview, how the data will be processed, who will have access to it and when the material will be destroyed. The interview consisted of 14 questions, as outlined below:

1. Do you utilize any scheduling applications or similar calendars or other ways to assist with your time planning?

   IF YES

2. What challenges do you currently face with the scheduling?
3. What is the **biggest challenge** you face with the scheduling?
4. What are your goals regarding scheduling?
5. What features or functions do you consider most important in scheduling?
6. How often are you using scheduling applications, calendars, or other methods to plan and track your time and activities?
7. If there were no restrictions, what problems would you expect the new scheduling application or tool would solve?
8. What features would be included or improved?
9. How comfortable are you with the idea of using AI to assist with planning your activities?
10. Why yes? Why no?
11. What features or functionalities do you think would be helpful in an AI-based solution for planning weekly schedule?
12. In what ways would you prefer to interact with scheduling applications whether verbally (e.g., voice commands), in writing (e.g., text input), or haptically (e.g., touch, gestures)?
13. Are there any ideas you would like to share with us?
14. How can we improve the interview questions?

Consent to participate in AI Scheduling User Insights Study and permission to record it

We invite you to take part in the AI Scheduling User Insight Study, a component of our project for the Human-Centered Product Development course at Tampere University. This project focuses on the creation of an AI-assisted scheduling application and tool for Etteplan. Your participation in this interview will provide valuable insights into user expectations and needs, helping us in developing[1] a more user-friendly and practical tool.

Our project with Etteplan is centred around understanding how individuals approach various activities, including commuting to work or school, planning grocery shopping, and scheduling other weekly tasks. Your insight will be essential in shaping our understanding and contributing to the development of an AI-assisted design for these purposes.

The interview is expected to last approximately 30 minutes, with a maximum duration of 40 minutes. The session will be recorded. All personally identifiable data will be securely stored and will be destroyed by 31 May 2024 at the latest, after the completion of the course. Your data will be treated with confidentiality and will only be utilised for the purposes of this course. The results will be reported anonymously, and your identity will remain confidential. You have the right to stop the interview at any time without the need for explanation.

If you have any questions or concerns, please feel free to ask. We are here to ensure that you feel comfortable and informed throughout the process.

By participating in this study, you are contributing significantly to the development of AI-assisted scheduling tools. Your time and insights are greatly appreciated.

Thank you for your participation.

1. **I give my permission to record**
    - audio (my voice and potential sounds in the background)
    - video (my face and background)

2. **I have read and understood the information given above. I have received sufficient information about the study and I had opportunity to ask questions.**

I understand that personal data is collected during the study, and I have understood how the data is being collected and stored. I give my permission to collect personal data.

I understand that participating in this study is voluntary. I have the right, at any time during the study, to cancel my participation in the study. I do not need to give any reasons for cancelling my participation. Cancelling my participation will not result in any negative consequences for me

To consent to the above terms, please enter your name (first name and surname)

- Participant's first name and surname

3. **Date (d.M.yyyy)**

User recruitment process

How did we find the participants:

Phuong: The participant and I met at the Women in Tech and Women in AI events.

Melina: I sent a message to two study groups I belong to and got two participants

Pauliina: I found a potential participant from work related networks

Sakib: I met the participants at the Bangladeshi community in Finland.

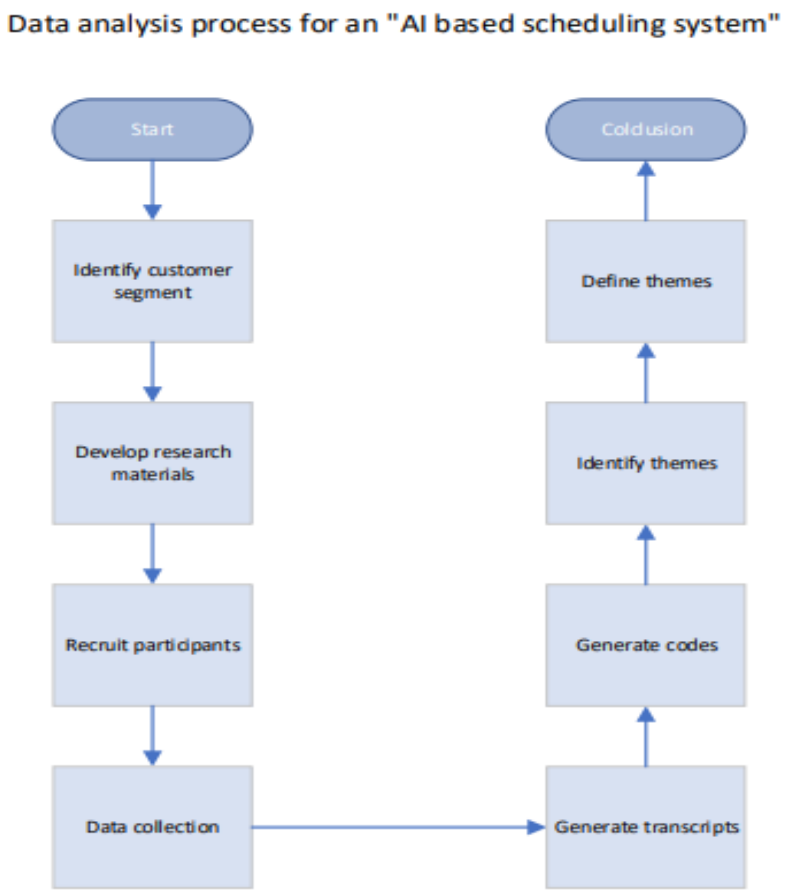
Rachel: I asked my friend, who is in the same program with me, if she is available and she said yes.

Background information from the participants

	Participant 1	Participant 2	Participant 3	Participant 4	Participant 5	Participant 6
Age group	25-65	25-65	25-65	25-65	25-65	25-65
Gender	Woman	Woman	Woman	Man	Man	Woman
Education level	Bachelor's Degree	Master's degree	Master's degree	Master's degree	Master's degree	Master's degree
Occupation	Student	Student	Software Developer	Software Developer	IT Professional	(IT) Project Manager

Data analysis process

For our project “An AI-based design for planning one’s weekly schedule for commuting to work/school, planning for grocery shopping, and scheduling other necessary weekly activities” we did thematic analysis of the qualitative interviews that we conducted. The process is described below:



- **Identifying customer segment:** We mapped power-interest grid to find out relevant stakeholders then we went to find out different customer segments with defining problem and description in order to find out the main group to conduct the interviews.
- **Developing research materials:** After finding the customer segments we went on to formulate and choose interview questions and generated interview scripts for semi-structured interviews. We also designed a consent form for the participants regarding the data handling process.
- **Recruiting the participants:** We then went on to recruit the participants for the interviews. Each member decided to find 2 participants for the interview.

- **Collecting the data:** Semi-structured interviews were conducted to collect data. The interviews were done both physically and remotely. The interviews were recorded with permission from the participants.
- **Generating transcripts:** We then generated transcripts from the recordings. Some of the transcripts were generated using an auto-transcription tool, while others were done manually by reviewing the recordings.
- **Generating codes:** The transcripts were then analysed and all the relevant topics, themes and patterns were highlighted. Deductive analysis methods were used to generate codes as the scheduling is a common tool and its terminologies are also known.
- **Identifying themes:** From the codes we generated task matrix & Point-of-view(POV) analysis to identify themes that are most relevant for the research.
- **Defining themes:** Finally we use brainstorming and affinity wall in order to define the themes and select the ones which will be used to identify rich and useful insights about people's experiences, behaviours, and nuanced opinions.

Interview notes and transcripts

Link to interview notes and transcripts folder here.

Results

This task matrix will list different values, needs, expectations of our users. We will list down all the findings from the interview here and mark which participants have similar needs. For example, participant 1 & 3 wishes to have voice command but participant 2 doesn't. Then we mark in the row for Voice command that the participant has the need. All of us will fill this table finding user needs from the interview transcript. If we come up with a new item then we create a new row for that. Otherwise for common needs we just mark 'x' for that participant. This will eventually provide us with the most desired one's from all participants and allow us to have a better ideation.

Tasks	P1	P2	P3	P4	P5	P6
Values personal assistance than just calendar	x	x	x		x	x
Desires a balance between visual and voice interaction for enhanced accessibility and convenience			x			x
Expects a comprehensive scheduling solution that integrates health status updates		x	x			
Expects a comprehensive scheduling solution that offers proactive suggestions for	x	x	x	x	x	x

time management.						
Emphasizes the importance of the human aspect in maintaining control over decisions and preferences.			x			x
Considers integrating transportation-related information into scheduling solutions to streamline access to commute details.			x			
Wishes for an automatic update instead of having to do the additions, updates and deletions manually	x	x				x
Have difficulties in time management because underestimates the needed time for certain tasks and also schedule to many tasks in a day	x					x
Wants to use voice command	x	x	x		x	x
Would like to have an option to communicate in her/his native language	x					
Hopes AI help schedule tasks by prioritizing based on urgency and deadlines of the tasks and do the recommendation for a day schedule	x	x	x	x	x	x
Wants to move tasks to another time by dragging and dropping and using voice commands	x					
The biggest problem is too many different platforms that are not integrated together and information is everywhere across different scheduling apps	x		x	x	x	x
Wants to receive notifications about changes in the schedule	x		x			
Status sharing option (Busy, available etc)				x	x	x
Schedule sharing option with different access levels				x	x	x
Getting clear notifications with insights about valuable information				x	x	x
Understand user behaviour based on past activities and provide task suggestions				x		x
Information are structured and visualised in					x	x

a manner that allows easy and comprehensive understanding of an event						
Possibility of saving schedules (Weekly, Monthly) in pdf for easy review					x	
User intuitive notification to keep users ready for events. For example: Sharing a picture/text to relax before a meeting.					x	

Based on the user research findings from the interviews with six participants, several key insights emerged regarding our concept design and the needs, values, challenges, and expectations of our target users:

- Participants expressed a preference for a **personal assistant that goes beyond basic calendar functions**, indicating a need for comprehensive scheduling solutions that offer proactive suggestions and integrate various aspects of daily life.
- Users desire **a balance between visual and voice interaction** for enhanced accessibility and convenience. This highlights the importance of providing multiple interaction modalities to cater to diverse user preferences and accessibility needs.
- Users emphasized **the importance of maintaining control over decisions and preferences**, suggesting a preference for AI-powered assistance that respects user autonomy and provides personalized recommendations without imposing rigid constraints.
- **Integration of transportation-related information** into scheduling solutions was highlighted as a valuable feature to streamline access to commute details and enhance overall convenience.
- Users expressed a desire for **automatic updates and proactive task prioritization based on urgency and deadlines**. This indicates a need for intelligent scheduling algorithms that optimize time management and minimize manual effort.
- Several participants reported difficulties in time management, such as underestimating the time needed for tasks and scheduling too many tasks in a day. Addressing these challenges requires features that help users effectively **allocate time and prioritize tasks**.
- Many participants cited the challenge of managing information across **multiple platforms** and expressed a need for **integration of scheduling apps** to avoid fragmentation and enhance efficiency.

- **Clear notifications** with insights about valuable information, user behaviour analysis for personalized task suggestions, and intuitive notification features to keep users prepared for events were identified as essential requirements for an effective scheduling solution.
- Users expressed a need for **flexible schedule sharing options with different access levels**, as well as structured visualization of event details for easy comprehension and review.
- Participants indicated a desire for the ability to **save schedules in different formats** (e.g., PDF) for easy review and archival purposes, highlighting the importance of data portability and accessibility.

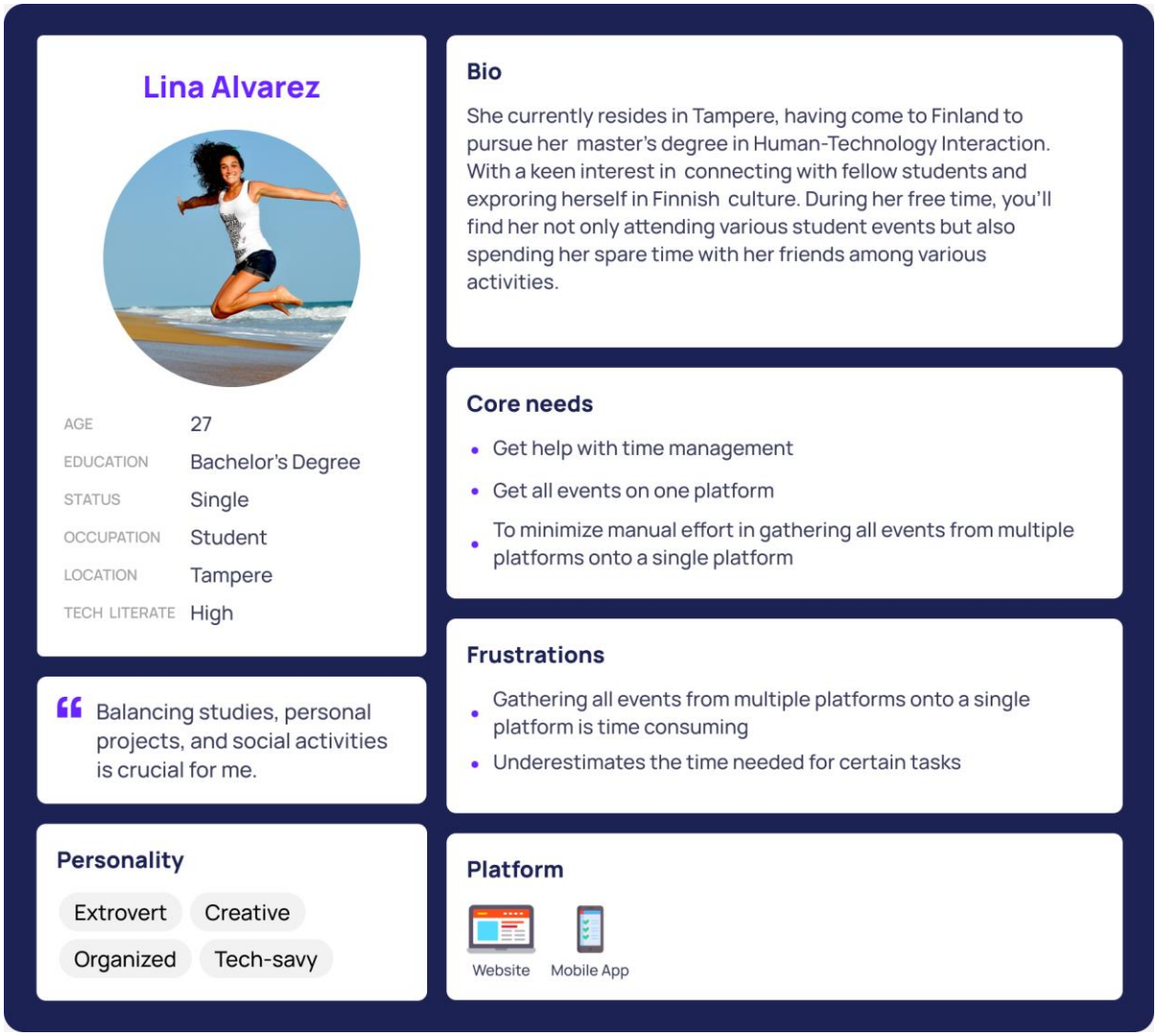
Contributions/tasks and working hours

Team member	Short summary	Working hours	Cumulative hours
Phuong Le	Diary 3 structure, participant summary structure, working on interview questions, creating interview script and confirmation email template, sharing the script consent form and background questionnaire with the team, joining the team meeting, arranging the interview with the participant, writing meeting notes and transcript ready for analyzing task, working on the desk research and check more info related to our team topic, organizing team meetings, planning agenda for team meetings	13	31
Pauliina Harrivaara	Interview questions drafting, watching a meeting I could not attend, finalised the inquiry document	6	21
Melina Aalto-Halme	Drafting interview questions, I investigated the current status of the project as I couldn't attend the previous meeting, drafted the consent form, attended to the team meeting, created a consent form and background	9	23

	information form using Microsoft Forms, added the consent form to our diary, arranging interviews (times, forms to participants etc.)		
Kun Wang	Meetings, Diary tasks, interview questions, communications	10	24
Sakib Sarwer	Meetings, Diary tasks, interview questions, communications	12	26

Project Diary 4

Personas



Marcus Hofmann

AGE	36
EDUCATION	Masters degree, Information Systems
STATUS	Married, children (4&6y)
OCCUPATION	Head of Department
LOCATION	Tampere
TECH LITERATE	High

> I want to achieve my goals everywhere in life.
>
> I like to measure my actions and see progress.
>
> However health and relaxation as well as enjoying time with family and friends has growing importance for me

Personality

Goal oriented · Organized · Tech-savy · Science-based Decision maker

Bio

Experienced IT professional with busy life. He has to meet expectations at work& home. He want´s to achieve his goals at his almost competitive sports, football.

Marcus likes his work and is satisfied with his life. He suffers from stress from time to time and faces expectations from family. Different schedules and finding work-family-life balance is something he wants to achieve.

Even though heis tech savvy he does not like overload of mobile use & notifications.

As logic-rational persona, he enjoyes measuring and following science-based data & achievements for work, free time, family and sports as well as comparing these numbers with co-workers and football team members.

Core needs

Manage different appointments and changes in them in one platform.

Share certain information with family, certain information with football team and certain information with work related networks.

Follow up time spent and achievements at work and at sports (maybe with familyrelated appontments as well)

Frustrations

Lots of things to do and remember. Information scattered in different applications

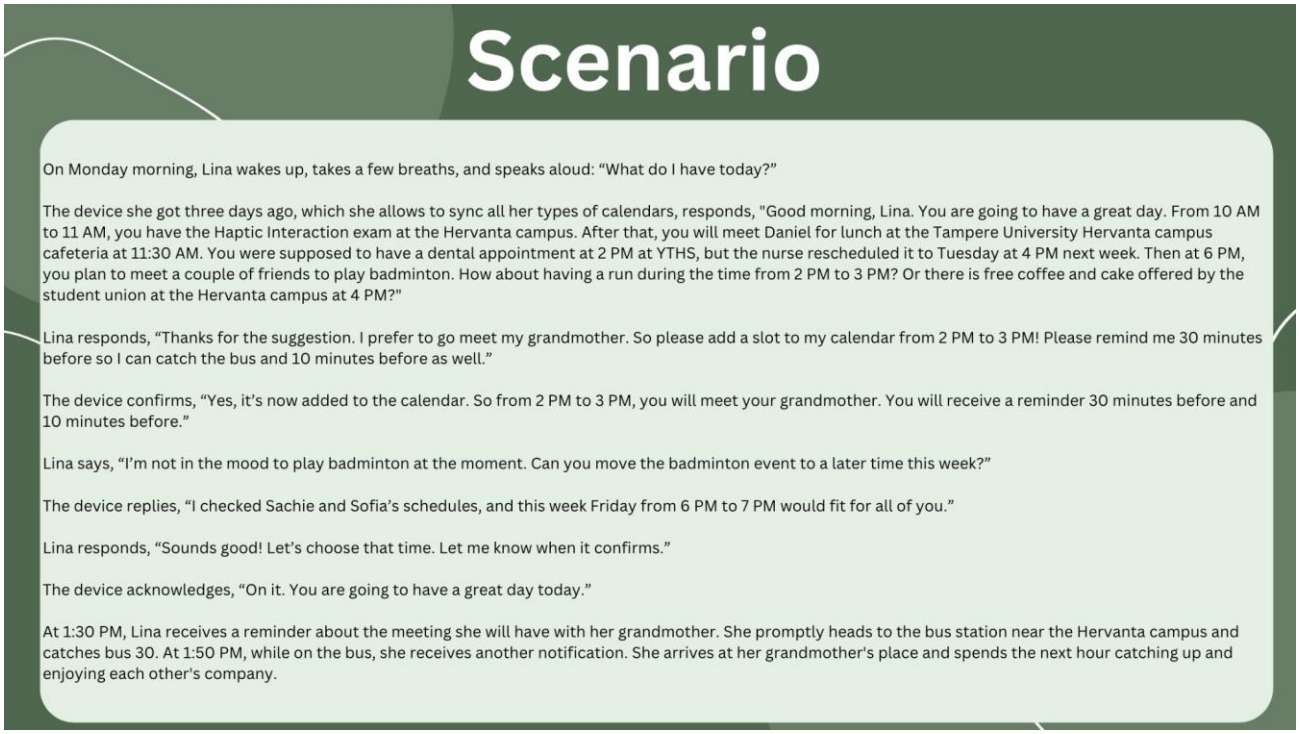
Feelings of not doing and achieving enough at work, family and sports.

Suffers from stress time to time
Coordinating responsibilities with family, sports, at work related appointments which are important customer meetings requiring preparation.AND who picks up the kids from daycare etc.)

Platform

Website · Mobile App

Scenario



On Monday morning, Lina wakes up, takes a few breaths, and speaks aloud: “What do I have today?”

The device she got three days ago, which she allows to sync all her types of calendars, responds, "Good morning, Lina. You are going to have a great day. From 10 AM to 11 AM, you have the Haptic Interaction exam at the Hervanta campus. After that, you will meet Daniel for lunch at the Tampere University Hervanta campus cafeteria at 11:30 AM. You were supposed to have a dental appointment at 2 PM at YTHS, but the nurse rescheduled it to Tuesday at 4 PM next week. Then at 6 PM, you plan to meet a couple of friends to play badminton. How about having a run during the time from 2 PM to 3 PM? Or there is free coffee and cake offered by the student union at the Hervanta campus at 4 PM?"

Lina responds, “Thanks for the suggestion. I prefer to go meet my grandmother. So please add a slot to my calendar from 2 PM to 3 PM! Please remind me 30 minutes before so I can catch the bus and 10 minutes before as well.”

The device confirms, “Yes, it’s now added to the calendar. So from 2 PM to 3 PM, you will meet your grandmother. You will receive a reminder 30 minutes before and 10 minutes before.”

Lina says, “I’m not in the mood to play badminton at the moment. Can you move the badminton event to a later time this week?”

The device replies, “I checked Sachie and Sofia’s schedules, and this week Friday from 6 PM to 7 PM would fit for all of you.”

Lina responds, “Sounds good! Let’s choose that time. Let me know when it confirms.”

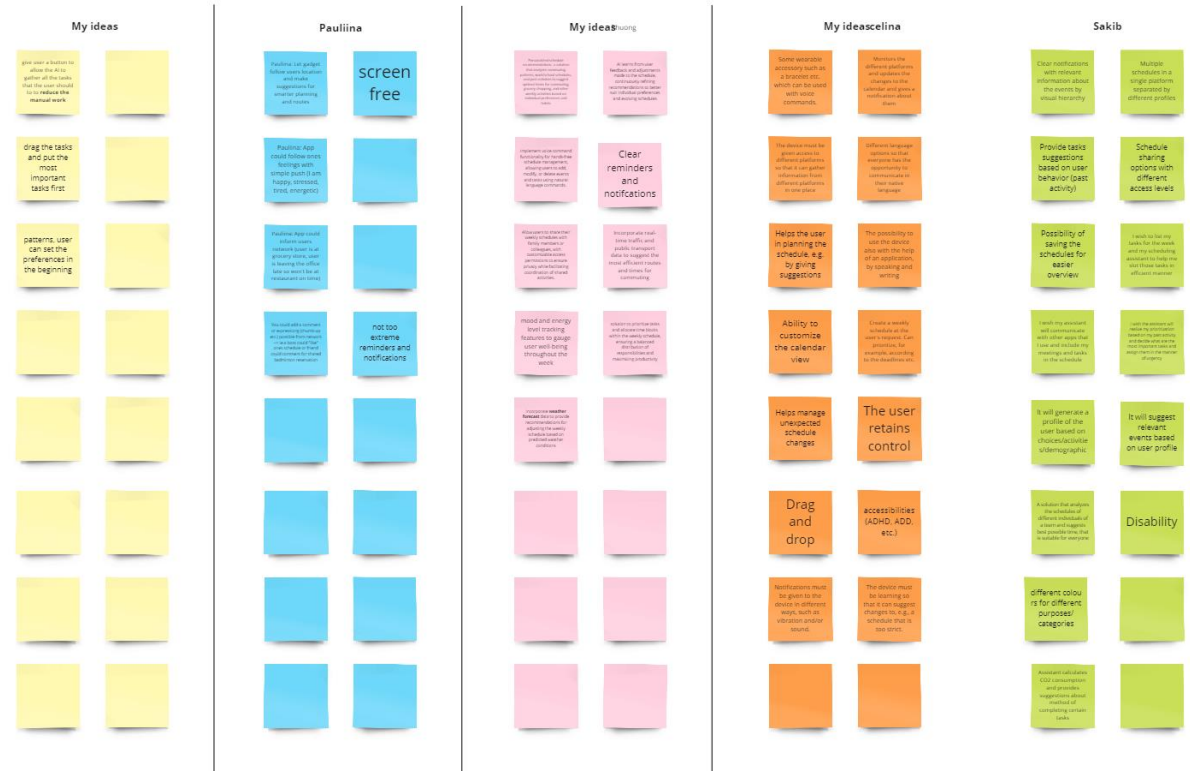
The device acknowledges, “On it. You are going to have a great day today.”

At 1:30 PM, Lina receives a reminder about the meeting she will have with her grandmother. She promptly heads to the bus station near the Hervanta campus and catches bus 30. At 1:50 PM, while on the bus, she receives another notification. She arrives at her grandmother's place and spends the next hour catching up and enjoying each other’s company.

Point of View (POV)

For the POV exercise each of us tried to come up with a problem statement by following the instructions provided in the Miro board. After generating the problem statement we tried to come up with solution statements for each of those problems which were written in the same column as the problem statement. The results from the POV exercise are shared below:

Results and experiences from ideation sessions



The picture of our ideas.

The most effective ideation method for our group was the task matrix, as employed in Diary 3. Additionally, the exercises from Workshop 4 proved highly beneficial, encompassing various stages such as useful points of view, solo brainstorming, group brainstorming, and more. We found these exercises to be particularly helpful in gaining different perspectives. Apart from these, we also explored other ideation methods like mind mapping using tools such as Coggle.

The most challenging aspect of the ideation process was the selection and elimination of ideas. Initially, team members held diverse perspectives, creating a difficulty in aligning our visions. However, as we cultivated a shared mindset, we could collaboratively generate common concepts and solutions that incorporated both our shared experiences and individual differences. We continually questioned the innovativeness of our ideas, aiming to ensure they were daring and unconventional enough. ;)

As we assess various ideas, our favored concepts include an AI-driven personnel assistance solution for effective task scheduling and prioritization. The notion of personalized schedule recommendations, which evaluates commuting patterns, work/school schedules, and past activities, captures our interest by suggesting optimal times for activities based on individual preferences and habits. Additionally, the idea of analyzing the schedules of different team members to identify a

mutually suitable time is appealing, promoting collaborative efficiency. We are particularly drawn to the inclusive solution that considers individual challenges like ADHD, ADD, and overworking, with a dedicated focus on accessibility and well-being. Lastly, the incorporation of voice command functionality stands out as a convenient and hands-free feature, enriching our overall user experience.

Contributions/tasks and working hours

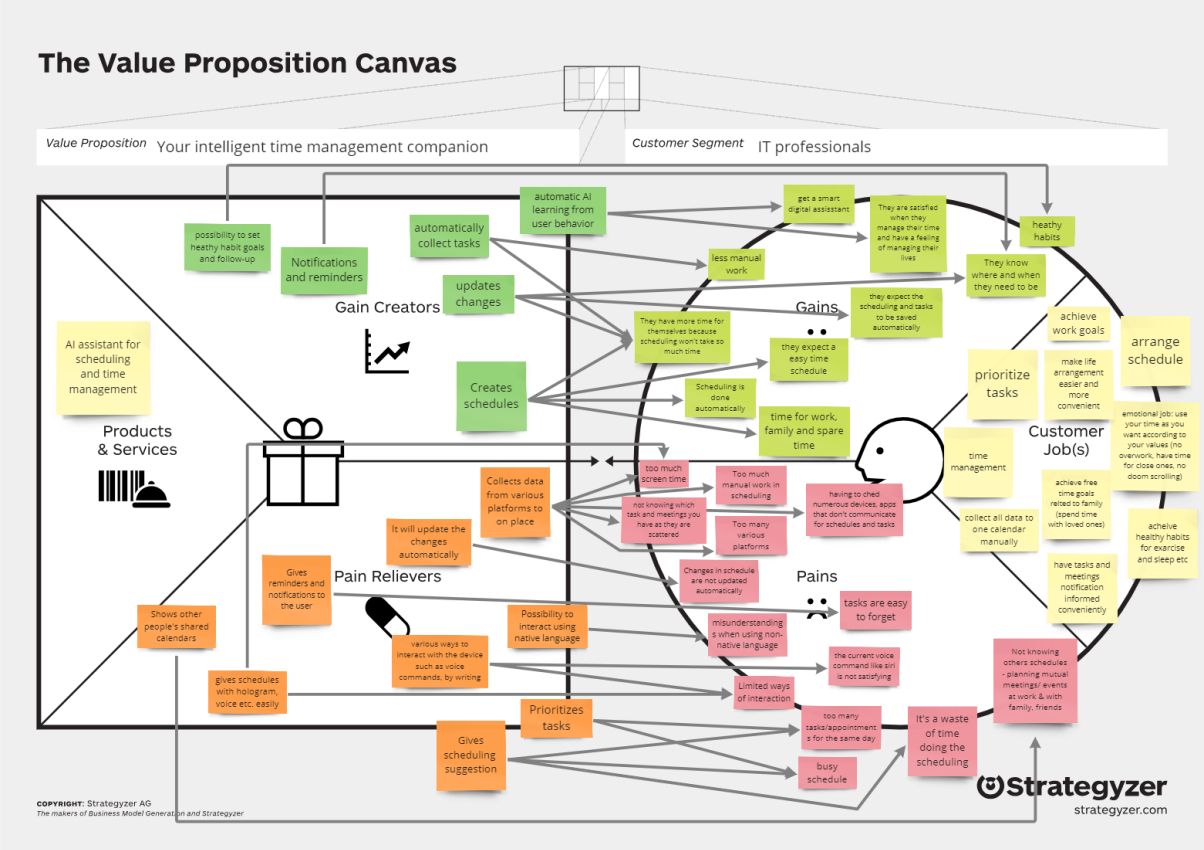
Team member	Short summary	Working hours	Cumulative hours
Phuong Le	Diary 4 structure, and planning agenda for team meeting, attend team meeting, create meeting notes, delegate tasks with clear instructions, create presentation to present to client, solo brainstorming, prepare agenda for the team meeting (21 feb)	13	44
Pauliina Harrivaara	Witing to miro the personas, and their needs and solutions to based on persona, conducting interview and writing transcripts	11	32
Melina Aalto-Halme	I conducted the pilot interview and another interview, and wrote the transcripts, attended to the team meeting, analyzed the results and participated in a meeting with the client	12	35
Kun Wang	I conducted the user interview, and wrote the transcripts, attended to the team meeting, analyzed the results and gave the presentation on workshop and marked the interview analysis on this document. I also rephrased the "Report your results and experiences from ideation sessions" part based on the discussion of our team.	12	36
Sakib Sarwer	Team meet, Diary tasks, Miro-board	12	38

	tasks, Interviews, communication, reviews		

Project Diary 5

Concept description

Our AI-powered calendar and task assistant idea offers seamless schedule management by synchronizing with various calendars, such as personal, work, and school calendars. This provides users with a unified platform to access their entire schedule effortlessly. Moreover, the solution provides personalized scheduling assistance and proactive suggestions to enhance productivity, health, and happiness.



MVP description

Our product is an innovative wearable device designed to enhance productivity, organization, and convenience through seamless integration, task prioritization, reminders, and transport options. It seamlessly integrates with a companion mobile application, allowing users to customize settings, manage their schedules, and stay informed.

The device collects information from various platforms, such as calendars, emails, and social media. It aggregates data relevant to the user's daily life, ensuring a holistic view of their commitments.

Users can interact with the device in multiple ways. They can use voice commands to speak directly to the device to set reminders, check appointments, or dictate notes. Additionally, writing and text input are available options, allowing users to utilize the touchscreen on the device or a paired smartphone for entering text-based instructions.

The device provides various methods for presenting and accessing schedules. It includes voice output functionality, verbally announcing upcoming appointments and reminders. For a quick overview, users can also check concise schedule details directly on the wristband screen using the text display feature. This approach ensures user privacy.

When conflicts arise or new events are added, the device proactively suggests changes by rescheduling overlapping appointments, alerting the user to potential clashes, and offering alternative time slots.

The device stores essential appointment information, including start and end times, venue details, estimated duration, and a brief agenda summary for each event.

Users have the flexibility to customize their notification preferences on the device. Options include choosing from various tones, receiving discreet reminders through vibration, utilizing visual indicators like LED lights or icons on the wristband, and selecting a preferred voice (male or female) for announcements. Additionally, the device MVP includes features such as the "Do Not Disturb" option and the ability to set designated sleep times, such as 22:00 to 07:00, during which notifications are disabled.

The device MVP aims to streamline daily life by intelligently managing schedules, adapting to user needs, and providing timely reminders. As development progresses, additional features and refinements can be incorporated based on user feedback and market demand.

How does TimeWise differ from the products of today?

While some calendar applications allow users to sync multiple calendars, they require manual setup for each calendar. Unlike existing products, our solution prioritizes essential features such as seamless integration, task prioritization, reminders, and transport options. Its various ways of user input, encompassing voice commands, text input via touchscreen or a paired smartphone sets it apart from existing wearables. Our solution proactive schedule management, rescheduling conflicts, alerting users to potential clashes, and offering alternative time slots, represents a significant departure from traditional devices that typically lack such adaptive features.

The customer segments for our product/service

Our solution targets a diverse range of customer segments, each benefiting from its features such as students, IT Professionals, non-IT Professionals and AI Enthusiasts. Our solution's versatility makes it suitable for individuals across various industries and lifestyles, providing a tailored and intelligent solution to meet the diverse needs of its customer segments.

MVP hypothesis statement

1. **We believe that implementing seamless integration with multiple calendars, including personal, work, and school calendars, will streamline the scheduling process for users and improve overall user satisfaction.**
   We will know this is true when we observe the following feedback:
   Qualitative Feedback: Users express satisfaction with the convenience and ease of having all their calendars consolidated into one platform. They appreciate the ability to view and manage their personal, work, and school schedules in a single interface, reducing the need to switch between multiple apps or platforms.
   Quantitative Feedback: Participants may provide numerical ratings or rankings based on their understanding of the concept's potential impact on scheduling efficiency and user satisfaction.
   Market-Based Key Performance Indicators: Participants may indicate their likelihood of using such a solution if it were available, providing valuable information on potential market demand.

2. **We believe that implementing an AI-powered assistant that users can interact with using voice commands will enhance user engagement and satisfaction by providing a hands-free and intuitive way to manage schedules and receive personalized recommendations.**

We will know we are right when we see the following feedback from users:
Qualitative Feedback: Users appreciate the hands-free nature of the interface and find it intuitive and user-friendly. Users' opinions on the accuracy and relevance of personalized recommendations provided by the voice assistant will be collected, focusing on their understanding of preferences and needs.
Quantitative Feedback: Metrics such as number of users prefer using voice commands for scheduling tasks.

3. **We believe that implementing personalized schedule management, tailored to the user's specific preferences, habits, and priorities, will lead to improved user satisfaction and productivity.**
   We will know we are right when we see the following feedback from users:
   Qualitative Feedback: During user testing sessions, users express satisfaction with the personalized scheduling system, noting that it accurately reflects their school/work-related activities and preferences.
   Quantitative Feedback: Based on surveys conducted with participants, there is a noticeable increase in the number of users who find the personalized scheduling system helpful and easy to use compared to traditional paper planners or generic digital calendars.

MVP description

TimeWise Bracelet is an innovative wearable device equipped with hologram and voice command functionalities, designed to enhance time management and productivity for users on the go. The MVP focuses on delivering essential features that leverage the unique capabilities of the bracelet while providing a seamless user experience.

Key Features:

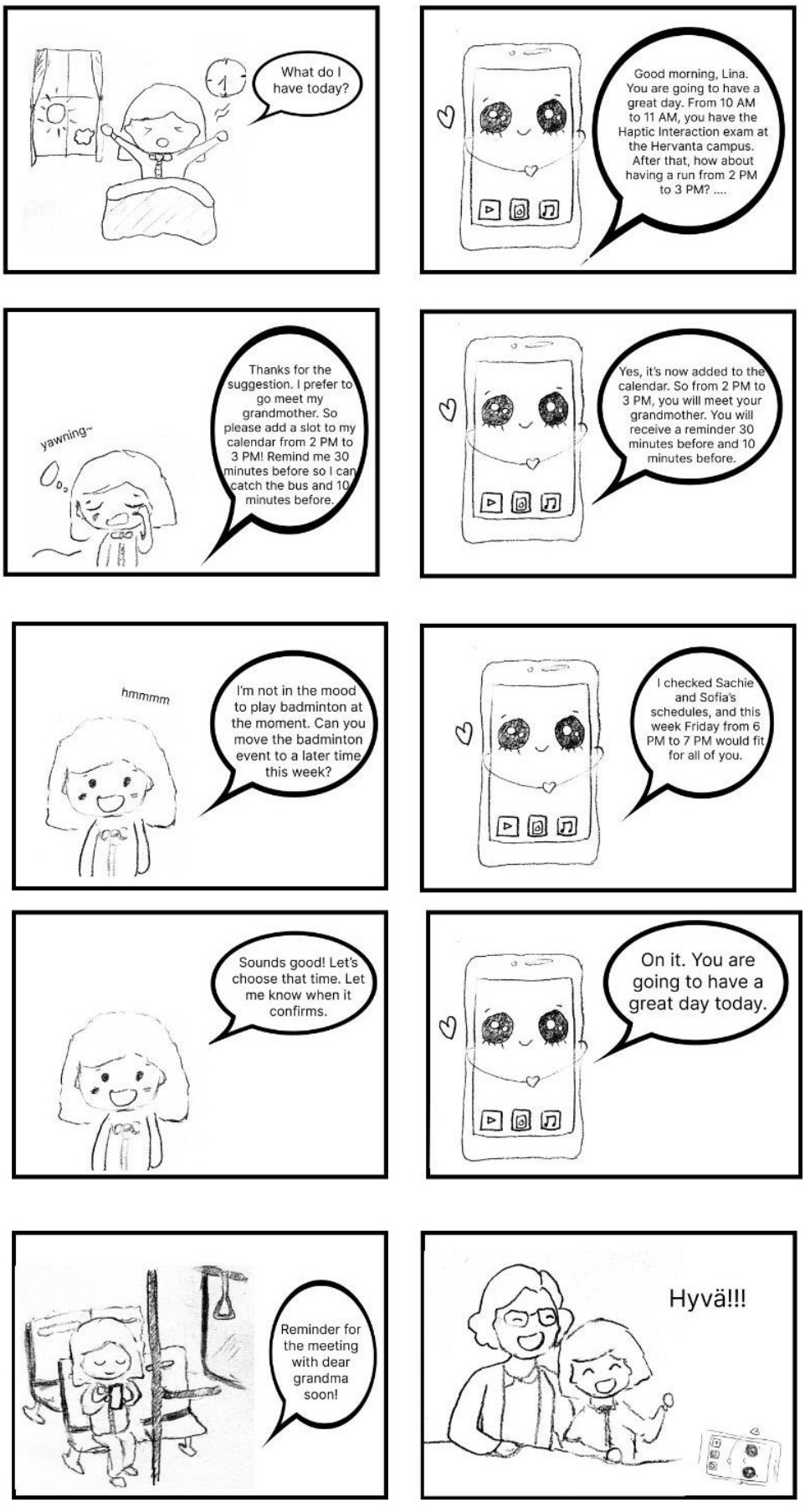
- Hologram Display: The bracelet features a built-in holographic display that projects a visual representation of the user's schedule and tasks, providing an immersive and interactive experience.
- Voice Command Integration: Users can interact with the bracelet using natural language voice commands to add, edit, and manage events, tasks, and reminders, enabling hands-free operation and convenience.
- Real-time Notifications: TimeWise Bracelet delivers real-time notifications and alerts about upcoming events, schedule changes, and important reminders, keeping users informed and on track throughout the day.

- Personalized Assistance: The MVP includes basic AI functionality to provide personalized scheduling recommendations and proactive suggestions based on user preferences and behavior patterns.

Scope:

The MVP will focus on developing the core functionalities of the TimeWise Bracelet, including hologram display, voice command integration, display route map and weather. The bracelet will be compatible with a companion mobile app for initial setup and configuration.

Storyboard


What do I have today?
Good morning, Lina. You are going to have a great day. From 10 AM to 11 AM, you have the Haptic Interaction exam at the Hervanta campus. After that, how about having a run from 2 PM to 3 PM? ....
yawning~
Thanks for the suggestion. I prefer to go meet my grandmother. So please add a slot to my calendar from 2 PM to 3 PM! Remind me 30 minutes before so I can catch the bus and 10 minutes before.
Yes, it's now added to the calendar. So from 2 PM to 3 PM, you will meet your grandmother. You will receive a reminder 30 minutes before and 10 minutes before.
hmmmm
I'm not in the mood to play badminton at the moment. Can you move the badminton event to a later time this week?
I checked Sachie and Sofia's schedules, and this week Friday from 6 PM to 7 PM would fit for all of you.
Sounds good! Let's choose that time. Let me know when it confirms.
On it. You are going to have a great day today.
Reminder for the meeting with dear grandma soon!
Hyvä!!!

User stories

As a student at Tampere University, I need an assistant to help me with time management because I often struggle to prioritize tasks and meet deadlines

As a student with multiple responsibilities, I need a tool that consolidates data from various platforms into one calendar to reduce manual work

As an international student in Finland, I want the scheduling application/tool to be available on my native language to avoid misunderstandings and improve usability

As a busy student with multiple responsibilities, I need a scheduling tool or application with voice recognition for effective and smooth communication

As a student who tends to underestimate the time required for certain tasks, I need a tool that prioritizes tasks and tracks the time needed for each task to avoid overloading my schedule

As a student facing time management challenges, I need a scheduling application or device that learns from my activities and provides personalized scheduling recommendations to prevent stress caused by an overwhelming number of tasks

As a busy professional, I need to be able to quickly add to my schedule via voice commands, as this allows me to maintain continuity of work even when my hands are occupied.

As a parent, I want to be able to view my entire family's schedule with simple voice commands so that I can better manage time and activities among family members and ensure smooth family functioning.

As a student, I need an AI calendar that understands complex voice commands so that I can easily reschedule my academic and social activities as my schedule changes frequently.

As a traveller, I need to be able to easily add and adjust my travel itinerary via voice commands as this allows me to quickly adapt to itinerary changes while on the move and improve travel efficiency.

As a freelancer, I need an AI calendar that can provide smart suggestions for schedules via voice interaction, as this can help me optimise my work and break times and increase my productivity.

As a teacher, I want quick access to my lesson and meeting schedules via voice commands, as this can help me better prepare my teaching and meeting content and ensure quality teaching.

As head of Department, I want to stay up-to-date what are important appointments at work and prioritise my working and schedule.

As busy professional I want to control my stress and thus have time for hobbies and exercise.

As busy professional with family and small children, I have to schedule picking kids from day care, spending time with them and remembering when I have to leave work early etc.

As professional with family I have several scheduling and to do-apps for work, day care, childrens hobbies, own hobbies and combining these to one application makes my life simple.

As busy professional with travel, I have sometimes changes (plane/train late) that I would like to be automatically communicated to spouse or foorball club memebers (plane late, I can't pick up kids OR I am late from football practise)

As a busy professional, I need to be able to quickly add to my schedule via voice commands, as this allows me to maintain continuity of work even when my hands are occupied.

As a parent, I want to be able to view my entire family's schedule with simple voice commands so that I can better manage time and activities among family members and ensure smooth family functioning.

As a student, I need an AI calendar that understands complex voice commands so that I can easily reschedule my academic and social activities as my schedule changes frequently.

As a freelancer, I need an AI calendar that can provide smart suggestions for schedules via voice interaction, as this can help me optimise my work and break times and increase my productivity.

As a teacher, I want quick access to my lesson and meeting schedules via voice commands, as this can help me better prepare my teaching and meeting content and ensure quality teaching.

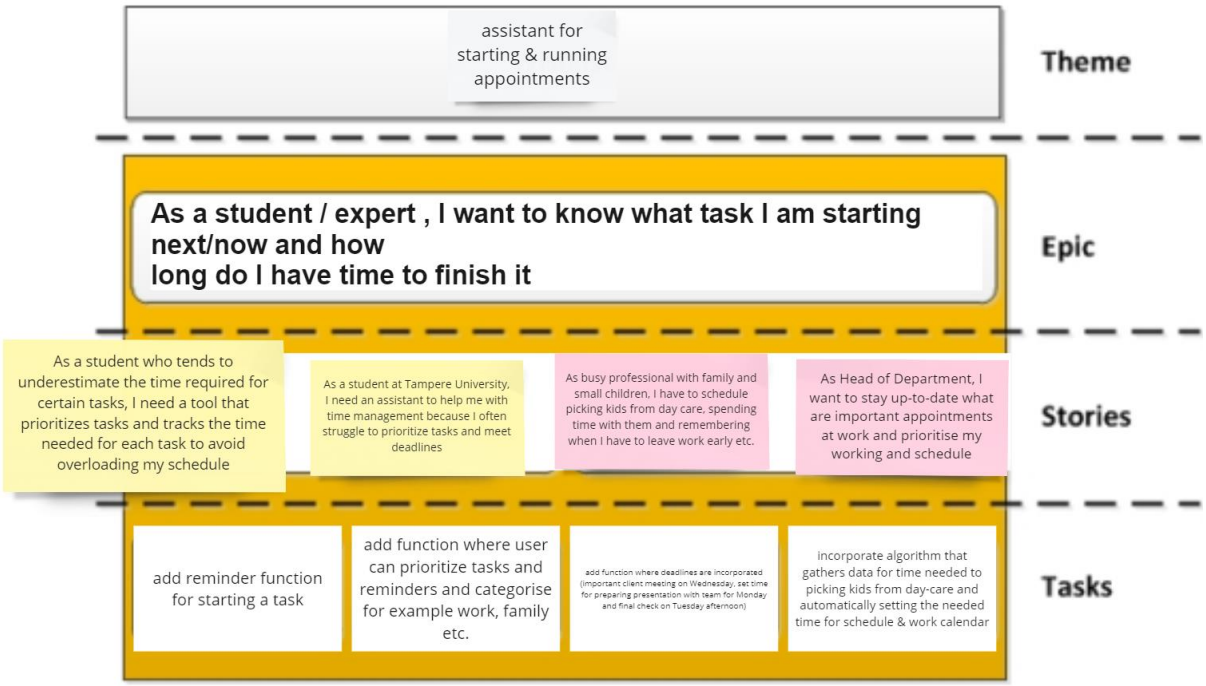
Theme: Voice Command Integration				
Epic: As a user, I want the scheduling application to support voice commands for adding, editing, and managing events and tasks hands-free.				
Story 1: As a busy professional, I need to add to my schedule via voice commands for seamless scheduling, even	Story 2: As a parent, I want to view my family's schedule using voice commands to	Story 3: As a freelancer, I need smart suggestions for schedules via voice interaction to optimize my work and break	As a student, I need an AI calendar that understands complex voice commands for easy rescheduling	As a busy student with multiple responsibilities, I need a scheduling tool with voice recognition for effective

when my hands are occupied.	efficiently manage family activities.	times	of academic and social activities.	communication.

Theme: Personalized Assistance		
Epic: As a user, I want the application to provide personalized scheduling recommendations based on my preferences and habits to optimize my time management.		
Story 1: As a student facing time management challenges, I need a scheduling application that learns from my activities and provides personalized recommendations.	Story 2: As a freelancer, I need an AI calendar that can provide smart suggestions for schedules to optimize work and break times.	Story 3: As a teacher, I want quick access to my schedules via voice commands to enhance teaching preparation and meeting readiness.

Theme: Family and Work Integration		
Epic: As a user, I want the scheduling application to integrate family and work schedules into one unified calendar view for better coordination and time management.		
Story 1: As a parent with multiple responsibilities, I need a tool that consolidates family and work schedules for better time management.	Story 2: As a busy professional with family and small children, I require scheduling integration to balance work and family commitments.	Story 3: As a busy professional with travel commitments, I need automatic notifications for schedule changes to manage my time efficiently.

Theme: Multilingual Support
Epic: As a user, I want the scheduling assistant to support multiple languages to enhance accessibility and usability.
Story 1: As an international student, I want the scheduling application to be available in my native language for improved usability and understanding.



Contribution/tasks and working hours

Team member	Short summary	Working hours	Cumulative hours
Phuong Le	Project diary 5 structure added to Docs (0,5) Scheduled the team call and communicated with stakeholder (0,5) attended team call (2,5 hours) Reviewed the diary file and prepared for upcoming team exercise (1,5) Organize tasks and check the course materials (1) MVP hypothesis statement (1,5) Team meeting Monday (3,5) - work on the survey Team meeting Tuesday (1,5) - review the survey with the team, send the survey to	15,5	59,5

	participants Meeting with client (1)		
Pauliina Harrivaara	This weeks tasks included :User stories, epics, themes writing , team meeting and content for team meeting and participation.	20	52
Melina Aalto-Halme	I read through the diary, did the diary tasks such as writing and brainstorming, attended to the team meeting. Student persona, weekly 5 tasks, the team meeting on Wednesday 6.3. Value proposition canvas (corrections), MVP description, the team meeting on Tuesday 12.3., the team meeting on Thursday 14.3., a meeting with the client 15.3. I attended the team presentation and acted as an opponent to another group.	26	61
Kun Wang	Visualise the user story and final format the slides and give the presentation, and attended group meetings, regular telegram communications	16	52
Sakib Sarwer	Diary review, Diary tasks, Team meetings, communications, ideation	7	45

Project diary / blog post 6 MVP idea verification

MVP idea verification methods

The Microsoft Forms anonymous survey was sent to the same participants whom we interviewed in the earlier phase of the project. Additionally, we recruited some other participants from our personal networks and received 10 responses altogether.

The focus group of the survey were students and IT professionals. The purpose of the survey was product idea verification and receiving valuable insights into user preferences and needs to help us develop a more user-friendly and practical tool.

We sent out a Microsoft Forms survey for MVP idea verification to those who agreed. The survey consisted of two parts. The first part included a description of the MVP and a consent form for participation in the verification process. The second part contained essential background questions and inquiries related to MVP idea verification.

Background information from the participants

	Participant 1	Participant 2	Participant 3	Participant 4	Participant 5
Age group	25-65	25-65	25-65	25-65	25-65
Gender	Woman	Woman	Woman	Man	Woman
Education level	Master's Degree	Bachelor's degree	Master's degree	Master's degree	Bachelor's degree
Occupation	Student	Student	Software Developer	Transformation Manager	Specialist

	Participant 6	Participant 7	Participant 8	Participant 9	Participant 10
Age group	under 25	25-65	25-65	25-65	25-65

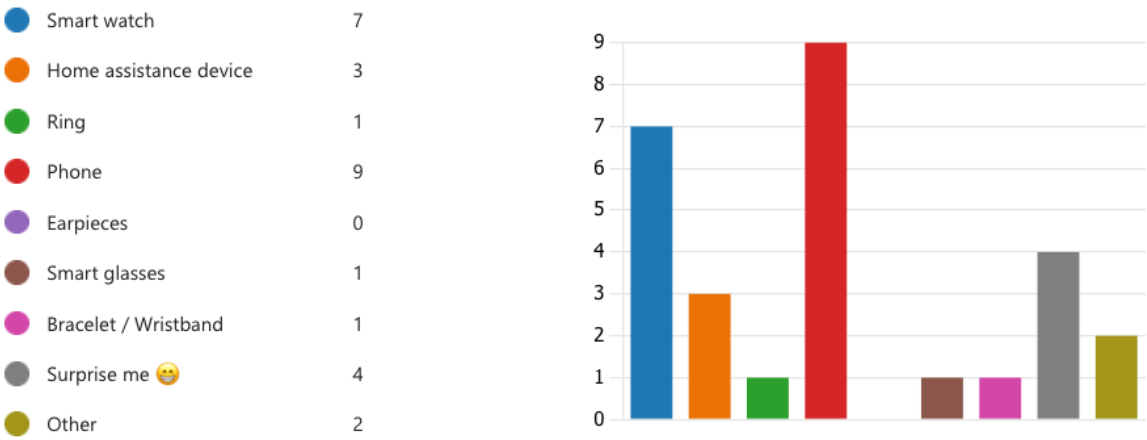
Gender	Woman	Man	Man	Man	Woman
Education level	Master's Degree	Bachelor’s degree	Bachelor’s degree	Master’s degree	Bachelor’s degree
Occupation	Student	Software Developer	Urban Planner	Unemployment	Student

MVP idea verification results

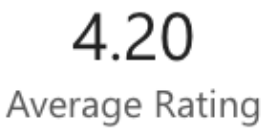
On scale from 1 - 5, how experienced are you in using information technology and technical devices? (1 presents the least experience and 5 presents the most experience)

What kind of device(s) do you prefer as AI-powered calendar and task assistant?

More Details



On a scale from 1 - 5, how interested would you be in using the AI-powered calendar and task assistant that allows you to manage your schedule?



Please rank the following features based on their value to you, with the top ones being the most valuable and the bottom ones being the least valuable (You can drag and drop the options in the right order)

Are there other features or functions you would want the AI-powered calendar and tasks assistant to assist you with?

- "I would like an option where I could **customize the voice narrator** for this software, such as give it a name or change its voice."
- "I'd like to have the **option to switch on "no disturb mode"**
- "I'd also like a countdown timer or alarm clock for sauna time"
- "important events could be organised into certain colours"
- "it can play motivating music from Spotify or YouTube"
- "Provide reminder of the fixtures for my favorite sports team."
- "kind of like "what objectives have you reached today" thing"

Which method of interacting with the AI-powered calendar and task assistant would you prefer? (you can choose as many as you want)

Would you substitute your current traditional manual calendar and planning tools/applications with our hand-free AI-powered solution, if it were available to you?

Please explain the reasons related to your previous answer (Question number 12)

Very likely:

"many of the calendars I use are a bit outdated. While most of them work as intended, there are some features that I feel are missing that could help me in my day-to-day life."

"my calendar looks so cluttered because of how the events are presented"

"I don't want to use multiple tools/services for planning"

"I have been looking for and want to use this solution if it were available but of course it's understandable that there are so many regulations, rules how the data used and transferred in different organizations at the current time."

"Convenient and easy to track"

Somewhat likely:

"I've chosen somewhat likely as it depends on whether I'm willing to buy the device that the hand-free AI solution is attached."

"I am open to new technology."

"The decision will be made based on the performance of the AI Calendar."

Summary

When analysis the results, we have to take into consideration that participants answer based on their current knowledge and available options. That is why it is understandable that traditional devices such as mobile phones and smart watches are preferedred for AI -powered scheduling. On the other hand ”surprise me” was something that was rated as third popular device and thus, we can anticipate there is interest and potential for new radical solutions in our focus group. Also wearable or easily carried options seem to be appreciated by participants.

There were several appreciated features by the participants. Seamless integration is something users value the most. Task prioritization and timing are also almost equally important. Interesting is that voice commands that are not common today also got high scores so they seem to interest and offer something valuable for participants.

Customization and personalization were highlighted by many participants. The voice or narrator of the solution was appreciated and so was ”hands free” feature. Similarly need for ”dont disturb” was seen as important. Also majority of the participants were willing to substitute their current scheduling options with AI-powered one, if it were available.

Based on these finding, we see potential for our AI-powered solution. We are confident to develop further a solution that is more disrupting than incremental innovation and at the same a solution that would offer an integrated solution, hands free option and voice command option and then test user experience of this built prototype.

Product description

The TimeWise is an innovative wearable device designed to enhance productivity, organization, and convenience. It seamlessly integrates with a companion mobile application, allowing users to customize settings, manage their schedules, and stay informed.
The TimeWise collects information from various platforms, such as calendars, emails, and social media. It collects data relevant to the user’s daily life, ensuring a holistic view of their commitments.

Users can interact with the TimeWise in multiple ways in their preferred language. They can use voice commands to speak directly to the wristband to set reminders, check appointments, or dictate notes. Additionally, writing and text input are available options, allowing users to utilize the touchscreen on the device or a paired smartphone for entering text-based instructions.

To present and access schedules, the TimeWise offers various methods. Users can utilize the holographic display feature, which projects interactive holograms onto the back of the hand, forearm, or into the air. The hologram view has a slightly darker shade with a subtle opacity, maintaining visibility while blending smoothly with the background. Additionally, the wristband offers voice output functionality, verbally announcing upcoming appointments and reminders. For a quick overview, users can also check summarised schedule details directly on the wristband touchscreen

using the text display feature. This approach ensures user privacy by providing options to view the calendar on the wristband screen, as a hologram on the back of the hand or forearm.

The TimeWise learns from the user's behavior and preferences over time. It analyzes past interactions, schedule adjustments, and user feedback and refines its suggestions for better, more accurate schedule management.

When conflicts arise or new events are added, the TimeWise proactively suggests changes by rescheduling overlapping appointments, alerting the user to potential clashes, and offering alternative time slots.

The TimeWise stores essential appointment information, including start and end times, event details, estimated duration, and a brief agenda summary for each event.
Users have the flexibility to customize their notification preferences on the TimeWise. Options include choosing from various tones, receiving discreet reminders through vibration, utilizing visual indicators like LED lights or icons on the wristband, and selecting a preferred voice (male or female) for announcements. Additionally, the TimeWise includes features such as the "Do Not Disturb" option and the ability to set designated sleep times, such as 22:00 to 07:00, during which notifications are disabled.

The TimeWise device can be easily attached to various wristbands, providing users with flexibility in how they wear it. Initially, two wristbands are available, and users can switch between them as needed. Additionally, because the device is detachable from the wristband, it allows users to set it on a table and see the hologram view in the air or on a table surface. This feature enhances accessibility by eliminating the need for users to keep their hand in a certain position, which may be challenging for many individuals.

The TimeWise aims to streamline daily life by intelligently managing schedules, adapting to user needs, and providing timely reminders. As development progresses, additional features and refinements can be incorporated based on user feedback and market demand.

Here are the pictures of the wristbands we made in FabLab:

How TimeWise differ from the products of today?

Unlike existing products, the TimeWise incorporates a holographic display that can project interactive holograms onto the back of the hand, the forearm or in the air, ensuring a personalized interaction. Its various ways of user input, encompassing voice commands, text input via touchscreen or a paired smartphone, and advanced AI-driven learning capabilities, sets it apart from existing wearables. The TimeWise's proactive schedule management, rescheduling conflicts, alerting users to potential clashes, and offering alternative time slots, represents a significant departure from traditional devices that typically lack such adaptive features.

The customer segments of the TimeWise

The TimeWise targets a diverse range of customer segments, each benefiting from its features such as students, IT Professionals, non-IT Professionals and AI Enthusiasts. The TimeWise's versatility makes it suitable for individuals across various industries and lifestyles, providing a tailored and intelligent solution to meet the diverse needs of its customer segments. As TimeWise is a holistic solution supporting healthy work-life balance, optimising ones tasks and time ensuring the most important task are done and user has enough focus time, it also offers benefit to employers. They are a customer segment as TimeWise protects the key personnel from burn out and keeps them happy, healthy and efficient as well. Thus companies can offer the TimeWise to their employees and gain both positive employee reputation and measurable results with well-being at work and more efficient personnel.

Contribution/tasks and working hours

Short summary of each team member's contribution/tasks and working hours for the team assignment (last week + total).

Team member	Short summary	Working hours	Cumulative hours
Phuong Le	Project diary 6 template added to the team diary, review team members' available time slots to schedule the next team call. (1) Attended to team call (1,5) and review the diary (1) Attended to team call Monday (2) and work on the prototype (0.5)	6	65
Pauliina Harrivaara	Contributing to Product Description. Looking for background studies related to techno stress, wellbeing at work and screen free options benefits. Attended team meeting. FabLab 3D print related planning and work	5	57
Melina Aalto-Halme	I updated the MVP description and product description, I attended the team meeting on Tuesday 19.3., I went through the entire diary, removed all the instructions, and edited the desk research section. Additionally, I restructured and added headings throughout the diary to enhance clarity and ensure that the text is comprehensible without the need for instructions.	5,5	66,5
Kun Wang	Attending team meeting. Worked with MVP and prototype. Added diary content .	9	61

Sakib Sarwer			45

Improvements based on the teacher's feedback

Diary Post 2

Discussion why are four selected trends the most potential ones for our topic.
The discussion was added here.

Diary Post 3

1. ***In customer grouping, discuss why the group is or is not main target group.***

The discussion was added here.

2. **In the user research section, discuss and highlight what are the most relevant and interesting findings considering our concept design and what did we learn from our target users' values, needs, challenges, or expectations**

The discussion was added here.

Diary Post 5

1. ***In user stories, sort the stories to themes and epics.***

The discussion was added here.

2. ***Teacher's feedback: "For me it seems that you have forgotten to write the MVP description. You have the topic "MVP description" under the canvas, but it feels like you are still describing the whole concept, even answering questions about differences to existing products and customer segmentation after that. So, you should include MVP description. This can be for example the MVP story map done in workshop"***

New version of MVP description can be seen here.

Project Diary /blog post 7

Proposals for name of device

TimeBuddy Holo

HoloTime Pal

TimeWise Buddy

HoloChrono Friend

TimeCraft Companion

HoloTempo Buddy

TimeViz Pal

HoloTime Buddy

TimeBuddy Companion

HoloTime Mate

Selecting the Perfect Name: Why TimeWise Stands Out

Choosing the right name for our innovative solution was a important decision, as it needed to reflect the essence of our product while resonating with our target audience. After careful consideration and deliberation, our team decided **TimeWise** as the ideal name for our device. Below, we outline the reasons behind our choice and why we believe TimeWise encapsulates the essence of our solution.

Reasons for Choosing TimeWise:

- Reflects Efficiency: The name TimeWise conveys the idea of being efficient and making the most of one's time. Our solution is designed to help users manage their schedules and time more effectively, making TimeWise a fitting and descriptive choice.
- Indicates Intelligence: The term "Wise" implies wisdom and intelligence, suggesting that our device is smart and capable of making informed decisions to assist users in their daily tasks and scheduling.
- Appeals to Target Audience: We aimed to select a name that would resonate with our target audience of busy professionals, students, and individuals seeking better time management solutions. TimeWise communicates the value proposition of our device clearly and effectively to this audience.
- Memorable and Catchy: TimeWise is easy to remember and has a catchy ring to it, making it stand out in the minds of consumers. A memorable name is essential for building brand recognition and attracting potential users.

Modality

TimeWise supports a variety of modalities to enhance the user experience by making interactions more intuitive and accessible. The system is designed as a multimodal platform, integrating several modalities:

- Visual Modality: TimeWise utilises advanced hologram technology to display schedules and reminders in a three-dimensional space. The user can visually examine

this view and with hologram technology the size of the view can be enlarged based on available space. This allows users to interact with their calendars, viewing detailed representations of their daily, weekly, or monthly schedules. The visual interface is also accessible through more traditional digital displays such as smartphone screens and computer monitors.

- Auditory Modality: The system features voice control capabilities, permitting users to engage with TimeWise using spoken commands. This is especially useful for hands-free operation and accessibility. The system provides audio feedback and reminders, which can be essential for users who are visually impaired or when they are engaged in activities that preclude visual interaction.
- Tactile Modality: TimeWise can be used as an interactive holographic interface. Users can swipe, tap, and pinch the view to navigate through the holographic interface, adjust settings, and enter information manually if desired.
- Speech Recognition Modality: As part of the voice command functionality, TimeWise uses natural language processing to understand and execute user commands. This allows users to interact with the system in a conversational manner, making the technology more accessible and user-friendly.

Detailed description of complete user task

Use Case: Adding and Rescheduling an Appointment

Here is a step-by-step breakdown of how a user, such as Lina, might use TimeWise to add and then reschedule an appointment:

Initiating Interaction:
Lina activates TimeWise using a voice command, "Open TimeWise," spoken to her smartwatch while she is preparing breakfast.

Adding an Appointment:
Lina says, "Add new appointment."
TimeWise responds, "What is the appointment?"
Lina specifies, "Team meeting on Thursday at 2 PM."
TimeWise asks for confirmation, "Add 'Team meeting' on Thursday at 2 PM to your calendar?"
Lina confirms, "Yes."
TimeWise confirms the addition, "Team meeting added to your calendar on Thursday at 2 PM."

Receiving a Conflict Notification:
Later, TimeWise notifies Lina via a gentle audio cue and a holographic pop-up, "You have a scheduling conflict: dentist appointment at 2:30 PM on Thursday."

Rescheduling the Appointment:
Lina commands, "Reschedule team meeting to 1 PM."
TimeWise checks for availability and responds, "1 PM is free. Reschedule here?"
Lina confirms, "Yes, reschedule it."
TimeWise completes the rescheduling and confirms, "Team meeting rescheduled to Thursday at 1 PM."

Visual Confirmation:
Lina views the updated schedule on her smartwatch's holographic display, seeing the team meeting now set at 1 PM, providing clear visual confirmation.

Technology used and sustainable design

a) The technologies used are for example AI, hologram technology and location tracking, and voice commands (continues).

As hologram technology is relatively new, evaluation of the interaction and related user experience and usability does not yet have an extensive amount of academic research to refer to. There is however some studies that focus on users interacting with virtual objects in real environments. (De campos, Damasceno, Costa Valentim 2023, IHC 23). On the other hand, applications such as post-it notes, manuals and navigation technology are studied to have high acceptance rate from users (Rauschnabel 2021). Rauschnabel (2021) also states that similarly as in 2011 there was a statement in Wall Street Journal saying "software is eating the world" , could now another technology as well be stated to have major role: Augmented Reality. This argument is supported by the name of the respective article " "Augmented reality is eating the world - the substitution of physical products by holograms. ". The reason for ARs recent success, is based on solving prior challenges it had: slow internet connection, needed mobile computing power and inadequate sensors. Thus as a result Rauschnabel citates that " **screens in consumers' pockets will be replaced by AR interfaces that people put on — and keep on—without a second thought** - - "

Our TimeWise uses hologram technology and specifically it has benefits on users own home by showing a big screen view to users kitschen. This makes it possible to have for example your breakfast, check your schedule and still be present at the breakfast table. If one would do this with personal mobile phone, it might take all the focus of the user. When watching the wall, the user is able to notice others in the same space and they can even check the content together (is so preferedded). The user experience of the main user and also others in the space, is different. This is noticed also in the academia. Rauschnabel (2021) demonstrates that **AR users are not isolated from the real world**; they still see their physical environment, but the technology enhances it with virtual information.

But is is not only the being present in real world that has benefits when talking about AR or specifically holograms. TimeWise offers "hands-free" functions for voice commands but also gives freedom by offering a larger screen you can observe while ,lets say, you make your morning coffee. Of course mobile devices and their content can be observed, but not as conveniently as hologram big screen view TimeWise can. This "hands-free feature is rised by academic research similarly. Rauschnabel (2021) continues by highlighting that leading companies expect that AR will experience a breakthrough and **be popular at the market when it is integrated into wearable devices that users can operate "hands free".** Also it is stated in the same article that AR is associated with improved/facilitated decision making, purchase intentions and positive experiences. Our TimeWise product user evaluation test with physical 3D printed hologram had similar findings.

b) Sustainable design. How is sustainability related to your concept? How it could be considered in further design?

Sustainable design

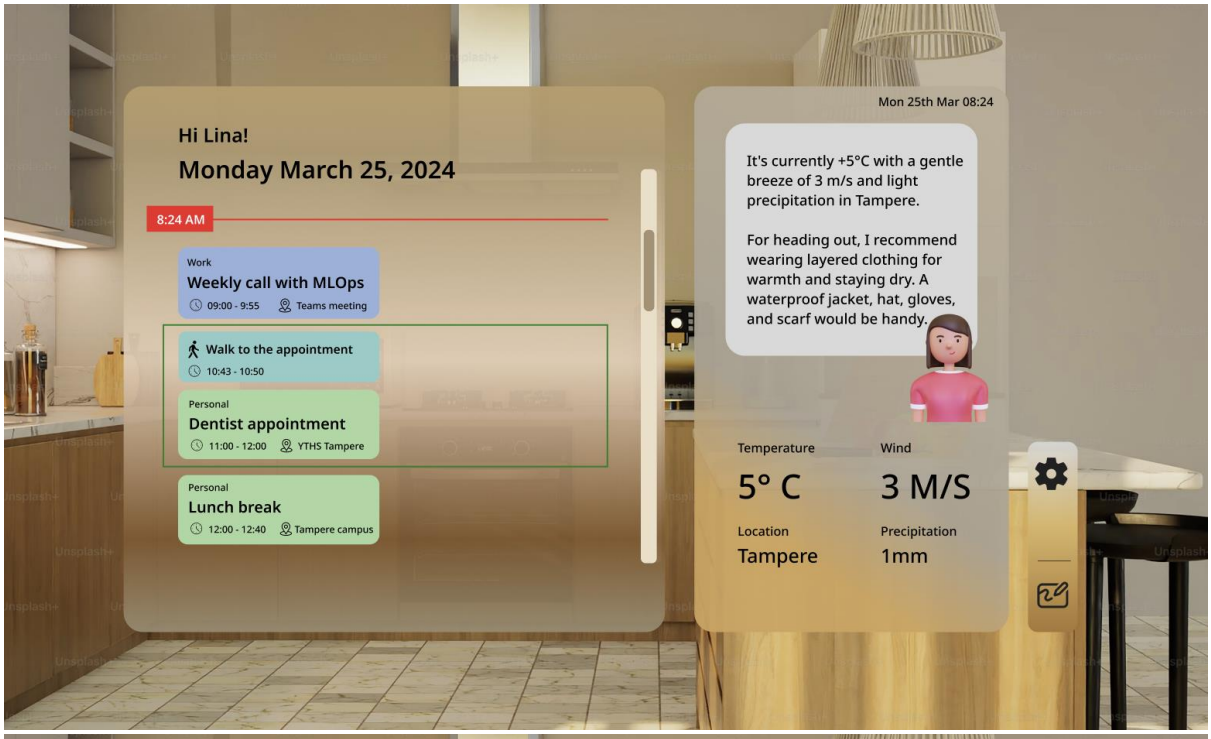
TimeWise is circular designed. Both the electronic parts and different bracelet materials are designed to be recycled easily. Especially critical raw materials needed for electric devices are currently often hard or even impossible to reuse or recycle in a way that materials can be used. With TimeWise this is taken into consideration. Also TimeWise uses recycled materials when ever possible and the materials used are also chosen carefully.

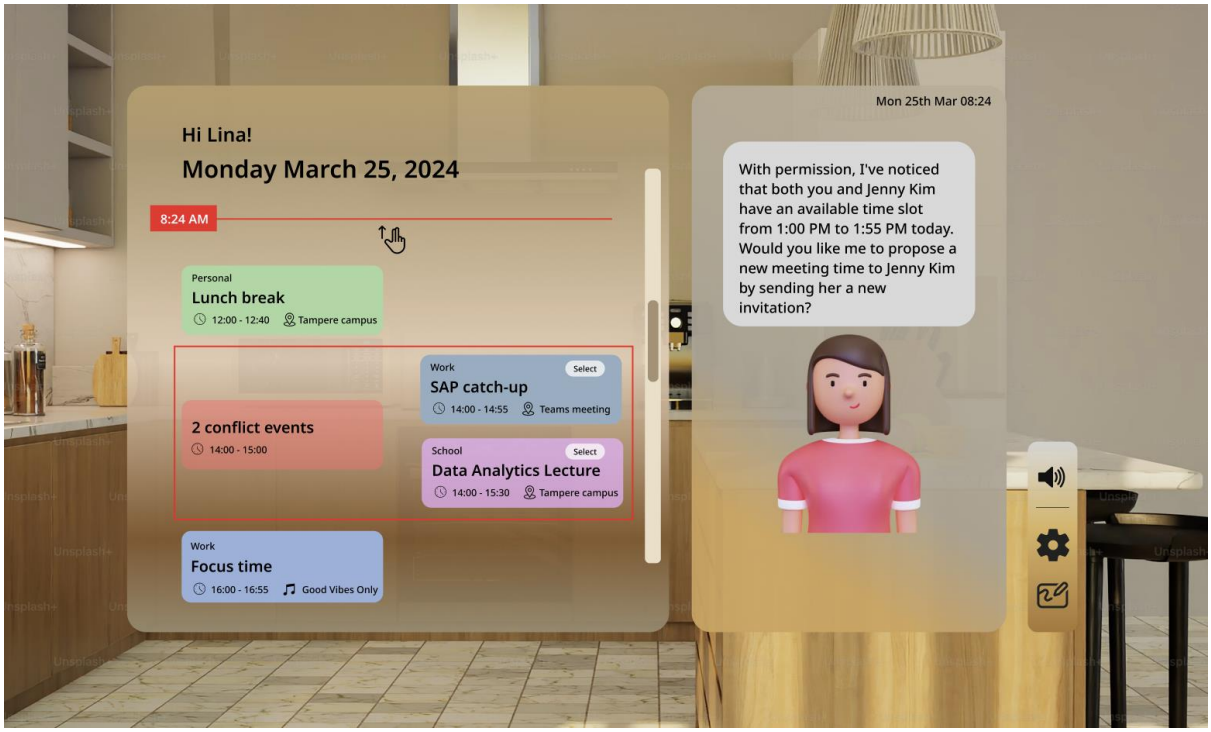
As current wireless technology requires lower amounts of energy, the energy consumption of the device and needed software is low for a wearable device. As TimeWise substitutes use of laptops and mobile devices with big screens and lots or hardware it decreases the energy consumption of the user. Hologram technology requires of course energy, but it is potentially lower than in laptops for example. It is estimated that holograms have the potential to save energy compared to traditional screens in certain applications. One reason is that holographic displays can produce images that appear three-dimensional without the need for backlighting, which is commonly used in traditional screens. Backlighting consumes a significant amount of energy. Similarly compare to mobile phones there can be estimated to be similar energy savings when compared to a smaller hologram picture with mobile phone screen.

EU is implementing currently the first Digital Product Passport(DPP) for batteries, but has recently made decision to have this digital product passport implemented to other sectors as well. This DPP requires that the supply chain, production and product life cycle is tracked and assessed with precision. The carbon footprint and social aspects related to for example mining of materials as well as logistics and recyclability and reuse of the product has to be thus tracked, assessed and reported with accuracy. TimeWise is implementing these procedures already and is incorporating these practices in advance. This DPP information is provided to consumers and other stakeholders with the DPP QR code.

Figma prototype for the evaluation

The prototype developed using Figma represents a comprehensive visualization of our TimeWise solution. Link to the Figma prototype here. This version was used for the MVP prototype evaluation.





MVP concept / prototype version evaluation plan, evaluation process and results

a) **The research methods** utilized here is a combination of observational studies and semi-structured interviews.

b) Consent form:

Consent to participate in AI Scheduling Tool prototype evaluation and permission to record it

We invite you to participate in the AI Scheduling Tool prototype evaluation, a component of our project for the Human-Centered Product Development course at Tampere University. This project focuses on creating an AI-assisted scheduling application and tool. Your participation in this prototype evaluation will provide valuable insights into the usability, functionality and user-friendliness, helping us develop a more useful and practical tool.

The evaluation session is expected to last approximately an hour. The session will be recorded. All personally identifiable data will be securely stored and destroyed by 10 May 2024 at the latest, after the completion of the course. Your data will be treated with confidentiality and is utilised only for this course's purposes. Access to the data will be restricted to team members and the teacher of this course only. The results will be reported anonymously, and your identity will remain confidential. You have the right to stop the evaluation session at any time without an explanation.

If you have any questions or concerns, please feel free to ask. We are here to ensure you feel comfortable and informed throughout the process.

By participating in this prototype evaluation, you are contributing significantly to the development of AI-assisted scheduling tools. Your time and insights are greatly appreciated.

Thank you for your participation.

* Required

1. I give my permission to record: *

- [ ] Audio (my voice and background sounds)
- [ ] Video (me and surroundings)

2. I have read and understood the information given above. I have received sufficient information about the prototype evaluation and had the opportunity to ask questions.

   I understand that personal data is collected during the prototype evaluation, and I have understood how the data is being collected and stored. I give my permission to collect personal data.

   I understand that participating in this prototype evaluation is voluntary. I have the right to cancel my participation at any time during the prototype evaluation without explanation. Cancelling my participation will not result in any negative consequences for me.

   To consent to the above terms, please enter your name (first name and surname). *

   Enter your answer

3. Date (d.M.yyyy) *

   Please input date (dd/MM/yyyy)

Submit

After sharing the purpose of the MVP prototype evaluation session and explaining what would be included, we provided the participants with a consent form link. They were asked to review and agree to the terms outlined in the consent form before continuing with the session. This ensured that participants were fully informed about the evaluation process and gave their consent willingly.

c) User recruitment process

- Participant 1:

The participant was chosen based on her being potential customer segment (professional and student with IT experience). As 1st event was organised onsite the person had to be available to join Hervanta campus and reserve the needed time for the session. We found the participant through our networks relatively easily and having the chance to test this prototype raised interest in the participant.

- Participant 2:

The participant was chosen as he is representing the potential customer segment, professional IT expert. This session was organised online and was focusing more in detail on the service and not to current bracelet version or hologram use in close to real environment.We found the participant with the help of our networks easily.

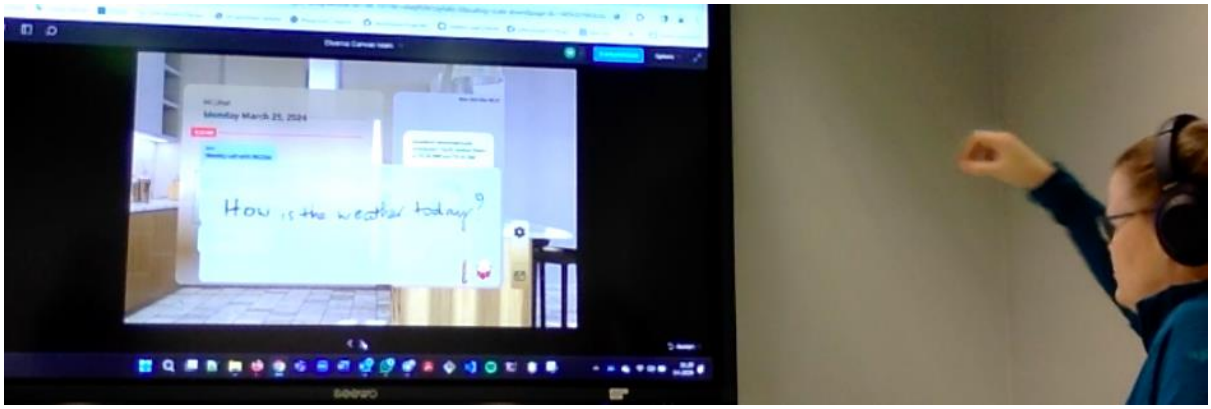
d) Participant summary

	Participant 1	Participant 2
Age group	25-65	25-65
Gender	Woman	Man
Education level	Master's Degree	Bachelor's Degree
Current occuppation	IT Project Manager	Software Developer

e) MVP prototype evaluation process

We created Moderator's script. Link to the moderator's script can be found here Moderator's script - TimeWise.
Besides, we also prepared a comprehensive plan outlining the process for conducting the MVP prototype evaluation process, Plan for prototype validation - a plan for conducting a user study of a prototype utilising Figma Ai-powered schedule solution . Furthermore, we created Checklist Checklist for evaluation and backlog to ensure consistency alignment across the team during the evaluation and backlog management.

The 1st test was conducted in Tampere University Hervanta Campus Library room on Monday 9th of April. The test included 3D printed bracelet (2 models grey and turquoise). The hologram technology was visualised with big screen as if the hologram would have been shown to users breakfast table. The 1st session was moderated by Pauliina and Melina, who provided an introduction to the purpose of the test and explained the procedure to the participants.



The 2nd test was done online with Figma prototype material on 15th of April. Thus as the physical environment and bracelet were not included evaluation of bracelet and hologram was not as precise as the service itself. The 2nd session was moderated by Rachel, who provided an introduction to the purpose of the test and explained the procedure to the participants.

Both sessions, we obtained consent from the participants to record the session for educational purposes and collected background information through questionnaires. Participants were instructed to think aloud as they interacted with the prototype, allowing us to understand their decision-making process and any challenges they encountered. The session consisted of several tasks related to using the TimeWise product, such as asking about today's schedule, interacting with the TimeWise solution, and checking the weather and so on.

After completing the tasks, participants were invited to participate in a brief interview to further discuss their experiences and provide feedback. The interview covered topics such as first impressions, the integration of hologram and voice command functionalities, scheduling functionality, personalization and customization options, and willingness to use the TimeWise product in the future.

Overall, the session aimed to gather feedback on the user experience of the TimeWise prototype and identify areas for improvement to refine the product for better usability and user satisfaction.

f) Data analysis process

For the data analysis process, we utilized content analysis. This method involved systematically examining and interpreting the qualitative data obtained from the evaluation sessions.

In conduct content analysis, we first transcribed and organized the qualitative data gathered from the evaluation sessions. This included user’s comments, feedback, and observations during their interactions with the MVP prototype. We then systematically analysed this data to identify recurring themes, patterns and insights. Throughout the analysis process, we maintained consistency by involving all team members in reviewing and validating the data and results.

g) Reports and analysis of MVP prototype evaluation

Link to the report and analysis document can be found here.
Report and analysis of prototype user evaluation

h) Results summary

1st test user considered the scheduling function and calendarising **very important for her 1st test user.** The test user considered following functions useful and meaningful:

- scheduling and other functions from holistic user centric point of view
- integrating different data sources, automatically runs scheduling and communication tasks with users contacts in personal and work/study life
- combining visual view utilising hologram, voice commands and audio and providing hands free functions
- helping the user find optimal routes and ways to move there and supporting wellbeing
- and offering wide options for customisation according to personal preferences and different life styles as well as wide selection of product design from feminine jewelry to wearable skin like options with attached devices and personalised icons.

The 1st user also stated she would like to have solution and would be wiling to pay for it.

The 2nd test user found:

- Overlapping events highlighting **beneficial,** suggesting that the user appreciates features that help manage scheduling conflicts effectively
- The interface user-friendly.
- Automatic rescheduling, rebooking, and suggestion features particularly **appreciated,** enhancing the user's efficiency in managing their calendar.

Both evaluation tests rose also some points that were taken into consideration when developing the final prototype. These were for example:

- A desire for more customization options, such as integrating maps with timing for better logistical planning.
- Need for privacy with hologram and audio interaction
- Need to communicate with one's native language

The evaluation test results were analysed and the findings were incorporated to final prototype version. These findings were also reported to client company in a meeting and our proposals were accepted.

3D Printed Hologram Bracelet

As part of the concept, we had innovated based on the users need a new way to utilise smart assistant services. As mobile devices lack certain functionalities and on the other hand, as overuse of mobile devices is a risk for wellbeing, we came up with a new wearable device. This hologram bracelet can be easily carried with the user. It provides possibility to have a big screen view for users home wall for example as well as a smaller view for privacy in ones forearm. The bracelet can be customised according to users personal needs and personal style.

As the course provided an option to use the Fab Lab and its materials, we wanted also to experiment with this technology. We got instruction from Fab Lab specialists who gave instructions on how to

find the model, how to choose the right material and also how to use the devices. As a result we ended up printing 2 prototypes after some trial and error.

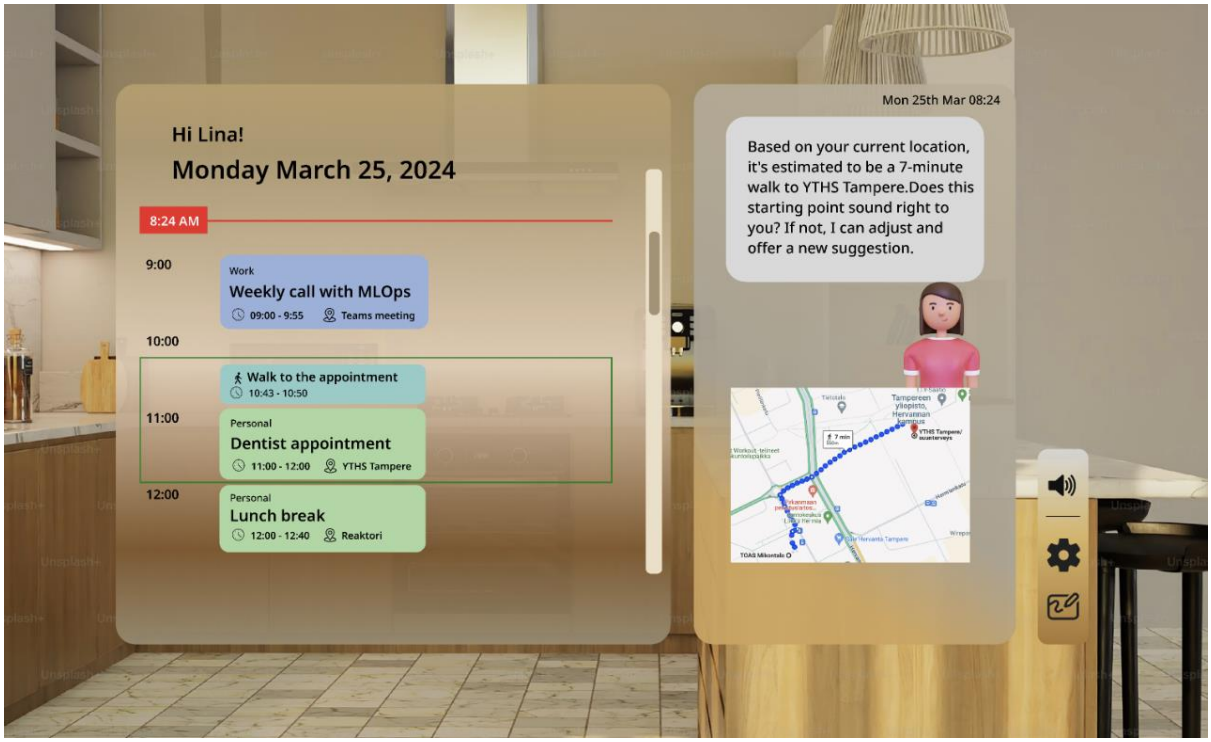
The 3D printed bracelets were tested at user evaluation test and showed to company client as well.

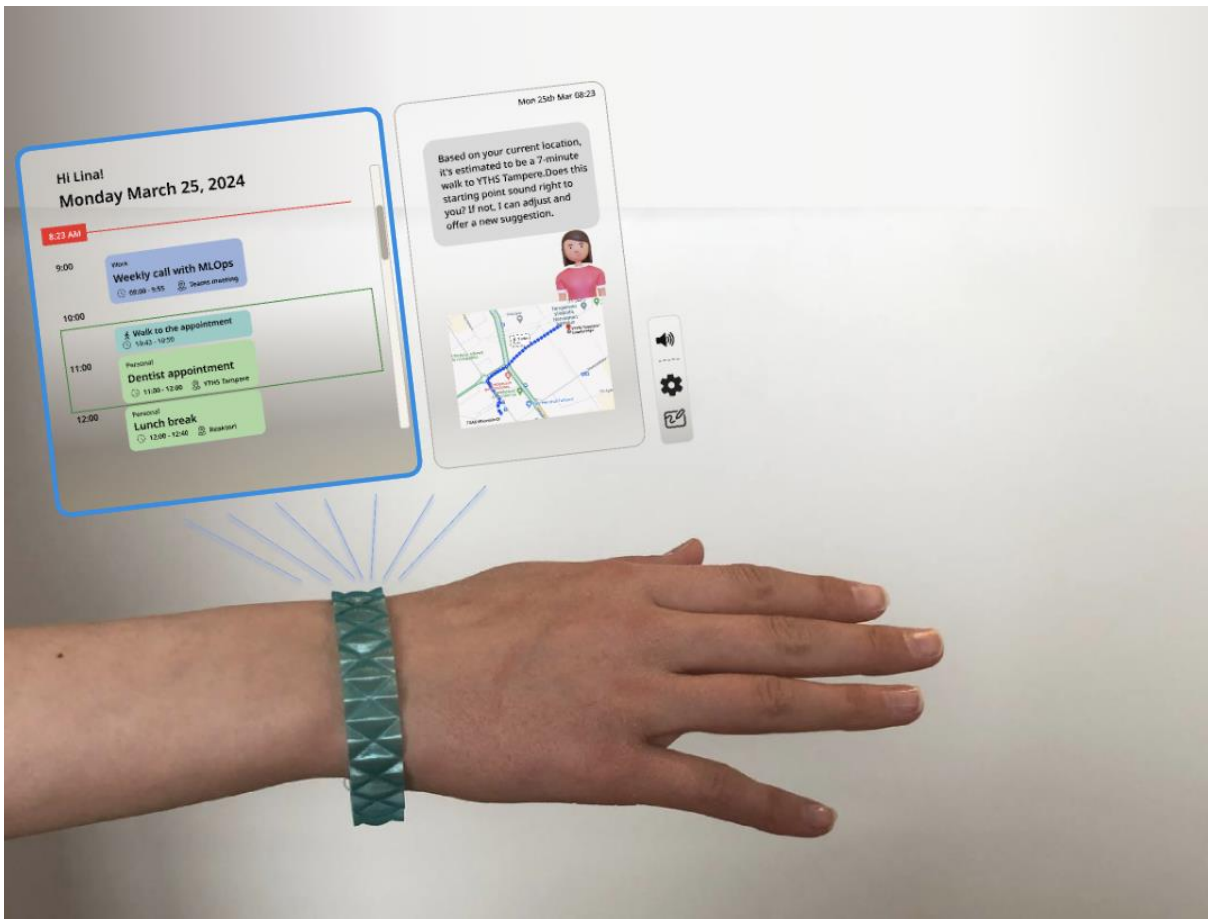
See pictures of these below.

Final prototype version

After conducting thorough MVP prototype evaluations, we have refined and enhanced our TimeWise solution to better meet the needs and expectations of our users and clients. The feedback gathered from participants and clients has been invaluable in guiding our improvements and optimizations.

Link to the final prototype solution can be found here.


Hi Lina!
Monday March 25, 2024
8:24 AM
9:00
Work
Weekly call with MLOps
09:00 - 9:55
Teams meeting
10:00
Walk to the appointment
10:43 - 10:50
11:00
Personal
Dentist appointment
11:00 - 12:00
YTHS Tampere
12:00
Personal
Lunch break
12:00 - 12:40
Reaktori
Mon 25th Mar 08:24
Based on your current location, it's estimated to be a 7-minute walk to YTHS Tampere.Does this starting point sound right to you? If not, I can adjust and offer a new suggestion.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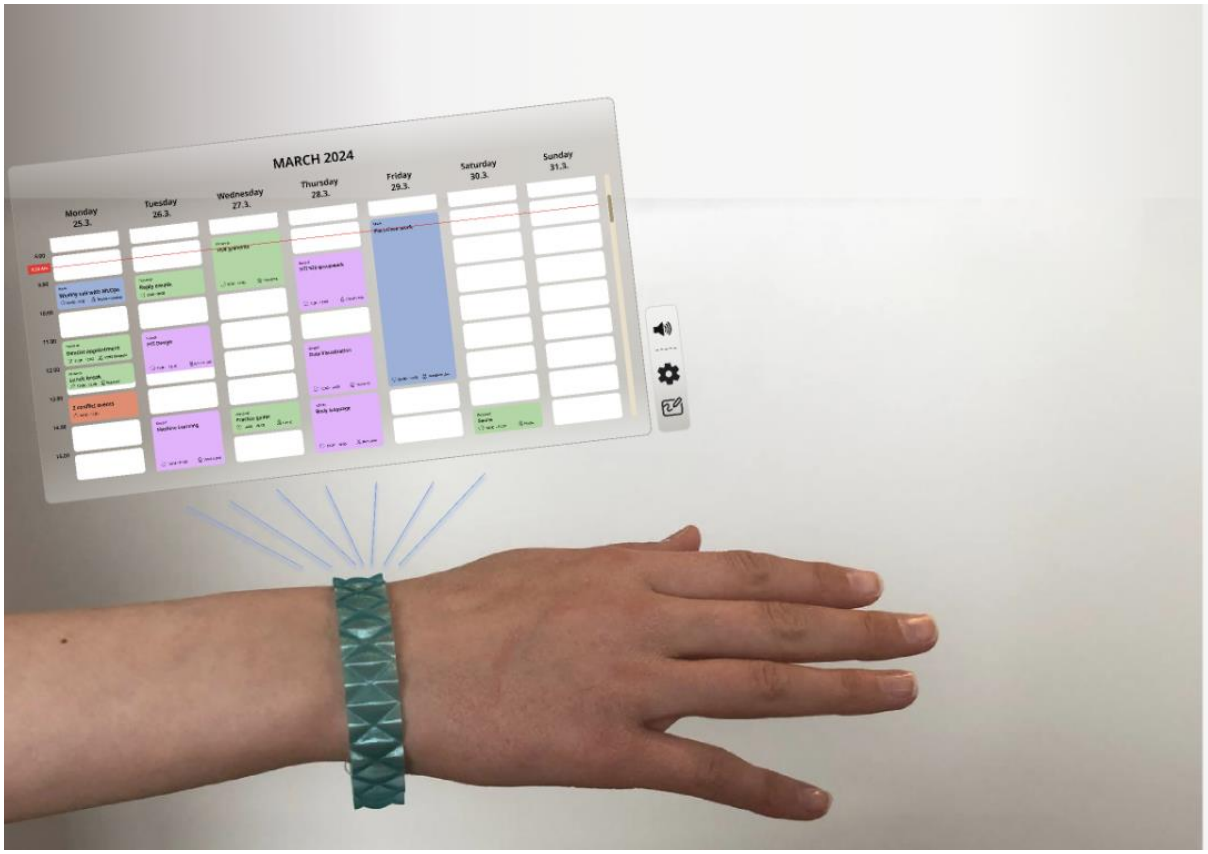

Further product development plan

TimeWise product changes radically the way people schedule their time, make appointments with colleagues at work, friends and family and at ones studies. It is made from user perspective and the solutions is designed to serve the user instead and his/hers unique needs. The solution is futuristic and integrating systems and data from applications such as microsoft outlook, google calendar and services, different study related application requires further development. Once these main functions are working TimeWise is able to fully serve the needs of the user. Currently the application has many functions to support everyday life such as map and route assistance, automatic messages to friends, family and colleagues to re-schedule and schedule mutual appointments and tracking user for to provide smart recommendations based on gathered data. The next development phases can be related to adding functions that are valuable to focus group (IT professionals and students) or developing TimeWise for new user groups with dedicated functionalities. For example elderly people and in general the aging population create new needs for easy communication that don´t require technical skills. Creating TimeWise solution further also for elderly people to support for example eating routines and checking medicine dosages as well as offering an easy way to communicate regardless of disabilities according to ones needs, could bring added value to elderly people and their close ones.

Reflection of the whole team assignment and division of team work points

a) What were the most challenging parts in the whole assignment?
Melina: In my opinion, there were any really difficult parts because our teamwork worked well and efficiently. We didn't face any situations when none of us would have known what or how to do.

Phuong: For me, the most challenging parts were managing time effectively and maintain clear communication as it requires constant effort and attention. However, I'm working with really professional team. Their dedication and commitment made overcoming these challenges much more manageable.

Pauliina: I enjoyed the course work a lot. Having talented team around you made this really enjoyable experience. If I would have to think of something, I would say that when you are around very talented and hard working team that all require a lot from themselves, everyone seems to be working even harder. As everyone has busy schedule, this might have the risk to run people to do too much and neglect free time -especially since this has been so fun at the same time.

Kun Wang: The most challenging thing is time arrangement, because I need to spend much time on this project. Like on team meetings, we spend 3-4 hours for each meeting or even more every time . It is a huge challenge for me because sometimes my patience is challenged, and I had a lot of courses this semester so I was very busy.

b) What did you enjoy the most?
Phuong: What I enjoyed the most was the opportunity to work collaboratively with my team members toward a shared goal. Every members are highly motivated, professional, dedicated to meeting deadlines. The ease of communication and transparency within the team fosters a collaborative environment where ideas flow freely, and everyone's input is valued <3. What truly brings happiness it witnessing each team member's expertise shine through in their respective areas of passion and interest. In such an environment, challenges become opportunities for learning and innovation, the journey towards achieving our goal becomes incredibly fulfilling. Moreover, I particularly enjoyed the user interaction aspect of this project, where we had an opportunity to engage with users and gather valueable insights.

Melina: I enjoyed our team. It was fantastic. Everyone's opinion was listened to, and the project was done together, not alone, towards the same goal. Also, it was fun to make the wristbands in FabLab. I will definitely go there again.

Pauliina: I enjoyed working with as said- very talented team and learning from them a lot. I also loved the possibility to innovate new solutions and actually creating a real product (prototype). Learning Figma and 3D printing was amazing. And seeing all the visuals created by the team was truly an experience. Especially since I appreciate beauty and the skill to create just the right atmospheres that serve the purpose. This brought our idea live (kind of like Walt Disney experience) and as i don´t have it for myself I appreciate it even more.

Kun Wang: I enjoyed working with encouraging teammates. I love getting positive and constructive feedback from them. I remember after I created the storyboard and video, which are visual products, I got very positive praises from my teammates. This made me feel my time and effort are worthy.

c) What was the most useful thing you learned?
Melina: Not so much any single piece of information, but rather the overall experience of the entire project and how it shifted my mindset when it comes to developing future products. Additionally, I learned how to create a Value Proposition Canvas, which I have found to be useful.

Phuong: The most valuable thing I learnt was how to effectively manage a project. I learnt the importance of clear communication and regular updates to keep all the team members aligned and informed. Throughout the course, I gained practical experience in organizing tasks, setting timelines, and allocate resources to ensure the project success.

Pauliina: I learned Figma as i have not used it earlier although I used very little. We learned how to 3D print, how to find the model, how it can be altered, what material to choose etc. This has been the most useful skill i have acquired during last 3 years (in studies or at work). Also concretely doing the Business Model canvas, Value Proposition Canvas, Power Grids etc. where very useful. I used them at work also right away and got good feedback.

Kun Wang: The most valuable thing I learned is to work as a team. My teammates are more experienced in work and life than me. I can learn from them and grow faster. Also, my teammates are nice people with nice personalities and good work morals. I was immersed in this working environment and learned from it. Also, for knowledge ,I got more experience in the whole process of developing a HCD product, including storyboard, videos, and so on.

d) Feedback: How could this course be improved?
Melina: I don't have any improvement ideas.

Phuong: Nothing to add.

Pauliina :The course was excellent. Nothing to add. Melina's note: I agree.

Kun Wang: It's generally very good. Although I like to go offline, it will be good if we can join workshops online as well so our whole group can attend somehow.

e) Division of your teamwork points
We decided to go for a equal division of points to each team member. Phuong has taken charge of the total project management and client relations, demonstrating a strong work ethic and dedication through extensive efforts.

Contribution/tasks and working hours week 7

Short summary of each team member's contribution/tasks and working hours for the team assignment (last week + total).

Team member	Short summary	Working hours	Cumulative hours
Phuong Le	Meeting with team members at Tampere campus where we discussed about the idea, created initial wireframe and low fidelity prototype (5) Working on Figma, creating high-fidelity prototype (5) Added Project Diary 7 template to diary and modified the text (0.5) Enhance the high-fidelity prototype (2) Prepared the presentation for the meeting with client (0.5) Meeting with client (1) Prepared gantt chart and listed all the tasks and deadlines and share with the team 31/3 (1.5) Worked on the prototype 31/03 (1.5) Meeting with the team 4/4 (1) Write meeting notes and prepare the moderator script for the evaluation (1,5) Team meeting Friday 5/4 (2) Enhance prototype, prepare for MVP prototype evaluation (enhanced moderator script, scenarios and tasks, explanation, etc..) (3.5) Team meeting Monday 8/4 (2) Team meeting Monday 15/4 (1) Enhance the diary based on teacher's feedback (3.5) Prepare presentation for the meeting with client (3) Meeting with client 19/04 (1) Wrote meeting notes for the meeting on 19/04 (0.5) Adding to diary all Diverse Canvas meeting notes (3) Team meeting 21/4 (5)	57	120.5

	Improved prototype based on participants and client's feedback (2) Create/edit/photoshop hologram photos (adding prototype to photos) (1) Adding prototype links and write paragraph in the diary (1) Adding to the diary the explanation why we choose TimeWise as the name (0.5) Team meeting 23.04 + meeting notes (3.5) Working on Diary 7 MVP concept prototype evaluation (1.5) Work on the diary review all the part and write reflection of the team assignment (2) Team meeting 24/4 (1,5)		
Pauliina Harrivaara	Prototyping meet with the team. Working in Figma for Low/High -fidelity wireframes, prototype evaluation test plan, running and analysis, Fab Lab work, meeting with client, looking backup information and prior research on holograms, and other subjects, writing the client meeting slides, taking pictured of the product	43	100
Melina Aalto-Halme	Brainstorming and prototyping with the team, the team meeting, prototyping in FabLab, meeting with the client 28.3., the team meeting 4.4., consent form, the team meeting 5.4. and and modified the whole week wiev of the prorotype, the team meeting 8.4., the prototype evaluation 9.4., the transcript of the first evaluation session, the team meeting 15.4., writing the diary 6, a meeting with the client 19.4., We worked on the video together with the team 21.4., the team meeting 23.4.	44	111,5
Kun Wang	Brainstorming with the team, writing the initial script for the video, collected the background music, running the prototype evaluation test, analysing results, creating visuals for the project	54	115

	preparing for client meet, writing parts of the report, making the slides for the product, making 3 versions of the product video in total, finalising diary, attending the last team meeting		
Sakib Sarwer	No hours for Sakib for this week		45

Meeting with Client- Etteplan

02.02.2024 Kick-off meeting

Time: 2.2.2024 11:00-12:00

Topic:

During our kick-off meeting with the client, our team came prepared with a comprehensive list of questions designed to gather essential information about the project. We made sure to cover topics such as the client's expectations, desired outcomes, preferred communication tools, and project timeline. By planning ahead and organizing our questions in advance, we were able to ensure that the meeting was productive and that we obtained all the necessary details to move forward with the project effectively. Our proactive approach demonstrated our commitment to understanding the client's needs and delivering a solution that aligns with their vision.

The questions can be seen here.Etteplan - initial meeting

Additionally, we agreed to **establish bi-weekly calls** with the client to maintain regular communication and provide project updates. These calls will serve as opportunities to discuss any emerging issues, address concerns, and ensure that the project is progressing according to the client's expectations

Meeting notes: 1st meet etteplan.docx

16.02.2024 Bi-weekly call

Time: 16.02.2024 11:00-12:00

Topic:

During our first bi-weekly call with the client, we presented the milestones and deliverables achieved thus far in the project. These included conducting background user interviews and extensive desk research related to the project topic.

The presentation can be check here. Project status update - 16th Feb

15.03.2024 Bi-weekly call

Time: 15.03.2024 11:00-12:00

Meeting notes:

Memo 2024 0315 / Etteplan & DV

Eira Erola, Phuong Le, Melina Aalto-Halme

Concept idea presentation

Etteplan: you have taken a lot into account. Also data protection even though you dont have to focus on this too much

Key features:
-voice commands this is important
-Transportation function - this was discussed also earlier
-Support mental health and wellbeing
-giving regular positive vibes

Etteplan: good points. Nice to hear you have been able to validate for example transportation. Good job.

Scenario:
Etteplan: sounds good.

Survey Questions:
No questions. I believe you have done good .

Main findings:
Device - discussion
Etteplan: it is not surprise that people choose phone and smart watch as they are used to. Also they think they need phone for being buss tickets, banking etc. They keep using that and it means they maybe are not designers focusing on future. Designing new things you get this answer. This is typical. Still as this many choose also surprise me and others it means there is interest.

What features &functions:
Etteplan: focus on first ones as least and decide what other you want there included.
Discussed: voice commends should be also personalized (women /men etc. -research) and they are important function
Must do: add the no disturb mode

Discussion about segmentation and to whom this device is designed for. DV explained that our segmentation has been based on 2 main groups: IT professionals and IT students. They have background information and probably interest to be the early adopter of this new AI solution and related features (whether it is using phone, smart watch, gadget and something else). IT professionals

have already sufficient income and value-providing solution has business potential. Also IT students have interest and are the future professionals. As well companies can buy the new solution and gadgets to their employees, which is a benefit for the business model.

Etteplan: you have really thought about the segmentations and business potential. If the solutin and new gadgets require investment and the segmentation has to be suitable. This strategy sounds good and you have really thought about this.
Hands-free has interest: Happy this was expectatio of others as well.
The way to go should be to have the mobile app as the basis. You can extend this to gadgets if you want. This should maybe a monthly extra subscription with extra fee.
(Eira checks public refence details for the task)

28th March at same time next meeting

19.04.2024 Bi-weekly call

Time: 19.04.2024 11:00-12:00
We presented our product description, MVP description, prototype, and evaluation results. We received valuable feedback from Eira, which included several suggestions:
- Incorporate localization options (platform available in English or other native languages) into our product description.
- Consider removing the "write in the air" functionality from our prototype and will need to conduct further research on this feature (like how to make users feel natural when writing on the air, any available technologies, research etc…)if we plan to implement this later :).
- Add empty schedule slots in all schedule views in the prototype.
- Address privacy concerns by:
    - Mentioning in the MVP and product descriptions the importance of using the product in private surroundings, especially if the user has the speaker on and a large hologram display.
    - Clearly defining the future scenarios (30+ years later) for which this solution is intended.
- Prioritizing accessibility, particularly in terms of contrast and the use of icons.
- We've agreed to have a wrap-up meeting with Eira on Friday, May 10th, from 11:00 to 12:00.

10.05.2024 Closing meeting with Client

Diverse Canvas Meeting Notes (group work meeting and meeting with client)

	Dates	Meeting titles	Meeting notes
1	12.01.2024	Diverse Canvas first meeting	Know more about each other, share your expectations, define the team goals, and discuss the topics.
2	23.1.2024	Team catch-up call	Meeting note (23 Jan 2024) - Confirm the meeting with the client on 2nd Feb Friday from 10-11:00 -> Phuong will send the confirmation email - Pauliina will submit the diary link to Moodle and work on the Etteplan background research - Next team meeting: 25th January Thursday 19-20:00 -> Phuong will schedule the call - Work to be done before Thursday 19-20 - Write your introduction in the diary - Read question 6 in the diary and answer the question and we will discuss it in the meeting on Thursday (it's totally fine if you don't manage to read the article :))) - Everyone think 5 questions what to ask in the kick-off meeting and we will discuss and put those on the agenda for the Etteplan meeting
3	25.01.2024	Diverse Canvas-Diary task and prepare agenda for the kickoff meeting	Meeting notes (25th Jan 2024) - Diary 1 (we will review question 5 and 6 after the kick-off meeting) - Roles in kick-off meeting: Phuong leads the discussion, Sakib and Melina support in asking questions, following-up questions. Pauliina and Rachel take meeting notes. - Todo: Let's find available time slot that fits for all of us (ideally 30mins -1hour). We can reserve this time slot every week and can be used for our team meeting. If no agreed meeting, we can use this time slot to do the course assignment or coffee break time ☕. We can use Doodle to find the time slot 🙌
4	2.2.2024	Kick-off meeting with Etteplan	Etteplan - initial meeting
5	3.2.2024	Diverse Canvas team meeting	Meeting notes (03 Feb 2024): - Send an email to Eira, confirming the meeting time Friday 11-12 bi-weekly (Phuong) - Everyone shares opinions about the first meeting with the client (positive, good atmosphere, supportive client, good memo) - Diary 1 & 2 (deadline: 9/2): ○ Diary 1: Review the diary 1: Phuong ○ Diary 2: § Ergonomics of human-system interaction: Sakib § ISO standards: Pauliina (others can add here if you find other relevant standards for our project)

			§ Trendmap: Rachel - Diary 3: ○ We did Power/Interest Grid for stakeholders and customer grouping canvas § Link: https://miro.com/app/board/uXjVN0rTNsc=/ § Melina, feel free to add more items to Miro board if you have some ideas, or you can also share them in the chat ○ Background user research § Target group: AI enthusiastic § We agreed to do the structured interview (20-40 mins) § We will have our next meeting on Tuesday (6/2) from 16:00-17:00 to work on the interview script § Before the meeting, everyone will think about what questions you want to ask, or what information you want to get. You can add the interview questions here Interview script draft (with questions from team members) § During the Tuesday meeting, we will discuss the interview questions, prepare the interview script, and consent form, and send email (including all the interview materials) to Eira for feedback and also ask her if there is anyone in Etteplan we can interview with. - Also, Pauliina made a really nice spreadsheet where we can all add the hours that you use for this project. You can check the file here: Follow up of team work
6	7.2.2024	Diverse Canvas team meeting- group work	MEETING NOTES (7th Feb 2024) - Desk research in diary 1 -> all will review and do a little research on if any concepts, solutions that are relevant to our team topic. Please check the desk research question in diary 1. We will spend 15 mins in the next meeting and discuss about this. - Diary 2 (Ergonomics of human-system interaction, iso standards, trend map) -> deadline on Fri 9/2 - Customer grouping: We changed to IT professional (broader group compared to AI enthusiast -> possibility to get more insights) @rachelwangkun how do you think? 😊 - For the background user interview: ○ Can you Sarwer and @rachelwangkun review all the links below, especially the interview script, ideally by the end of this week? ○ Interview instruction: Interview instruction ○ Interview confirmation email (once you get the participant, send this confirmation email including the consent form and background questionnaires link. The links will be added later): Interview confirmation email ○ Interview script finalised (we will use this one in the interview) @PauliinaHarrivaara will reformat this and add some additional text: Interview script ○ Interview script draft (where we all added the questions initially): Interview script draft (with questions from team members)

			○ Consent form: https://docs.google.com/document/d/1vxGqglKLmTQGJhxMCF5hUQ5rURAFXIHS/edit ○ Consent form and background questionnaires will be added to Microsoft Forms. The links will be added to the interview confirmation email. I will share the form template and @melina_aalto will create the Microsoft Forms. - Pilot background interview: ○ @melina_aalto can conduct the pilot interview where we can validate if the interview script is ok. We (other team members) can join as observers. Melina will inform the interview time. - Next meeting: ○ Would Monday (19:00-2000) good time slot for the our team meeting? We can all review the interview script before the pilot interview (if the pilot interview will be conducted next week) ○ Or Wednesday (16:00-17:00) - Diary 3: ○ all will add to the user recruitment process part that how did you find the participants?
7	14.2.2024	Diverse Canvas group work	Meeting notes 14th Feb We worked on - team's presentation where we shared any findings we noticed in the interview - "Point of view + How might we" exercise - Went through the diary file and divided some tasks there - Tasks we defined today and the responsible person were added to this file (check the yellow tasks). Please check the file as I found it was pretty tricky to describe the tasks in Telegram 😅 List of tasks and to dos for group + meetings - Session with Jari where we can ask, discuss any uncertainties and questions. He's available Tuesday and Wednesday 10-12. - remember to add your time slots to the time spreadsheet so I can book the next possible call for our team. We will then focus on the ideation and creating personas.
8	16.2.2024	Bi-weekly meeting with Etteplan	Presentation: Project status update - 16th Feb
	21.2.2024	Diverse Canvas group work	Meeting notes 21st Feb - we worked as a team on brainstorming and ideation - Tasks: + Create Persona: @melina_aalto @PauliinaHarrivaara + Summerize POV task: Sarwer + write results and experiences from the ideation session:

			@rachelwangkun + cancel next call with Eira -> inform Eira: Phuong - I added tasks also to the spreadsheet - let's agree on the next team call after workshop 5 session on Friday. - next week (week 9) is the winter holiday so we agree to not have meeting ❄
	6.3.2024	Diverse Canvas group work	Notes Wednesday 6th March - We reviewed the diary 4 (including persona, PoV) ○ Results and experiences from ideation sessions: @rachelwangkun , do you have time to look at this one? Or do you need any help ? :) Diverse Canvas Diary ○ Contribution and tasks working hours: @PauliinaHarrivaara could look at the instruction from the teacher - Project diary 5: ○ MVP description: @melina_aalto and Sarwer ○ MVP hypothesis statement: Phuong ○ Storyboard: @rachelwangkun ○ User stories: As a [USER GROUP/PERSONA] I want/need/… [FEATURE/FUNCTIONALITY] because/to [REASON] : Everyone please add your user stories. We will need around 10-15 user stories for our project ○ We will sort them as themes and epics in the next meeting Can you add your schedule to this spreadsheet so I can book the next call for us Time - Schedule - please check the teamwork exercise https://moodle.tuni.fi/pluginfile.php/4054086/mod_resource/content/1/Workshop%206%20pretask%20assignment.pdf We will need to conduct MVP idea verification and prepare the presentation for the workshop 6
	12.3.2024	Diverse Canvas group work	- went through the verification form
	14.3.2024	Diverse Canvas group work	Meeting notes 14 Mar: We went through the results of the survey We prepared presentation for tmr workshop and for the meeting with Eira - Study method: @PauliinaHarrivaara - Concept, scenario and key features: Phuong - Main findings: I added the quotes that @melina_aalto sent in the chat to the presentation - Format and finalize the presentation: @rachelwangkun - When you have time, can you review the presentation and add your thoughts to slide 18 Sarwer - Link to the presentation: Presentation - Workshop 6

	15.3.2024	Bi-weekly meeting with Etteplan	Topic: - MVP and should we focus on futuristic or realistic - Linkedin- can we add this to our portfolio? - Any other questions?
	19.3.2024	Diverse Canvas group work	Meeting notes 19 Mar 2024 - we went through some parts of the diary from diary 1 to 5 - We agree to submit diary phase 1 (from 1 to 5) in the evening today so everyone please review it when you have time @melina_aalto @PauliinaHarrivaara Sarwer @rachelwangkun - Seems that there is no submission box for this diary, I assume that we already submitted the diary link to the teacher in the beginning of the course. But tmr morning, I can send the email to the teacher and confirm that we are ready with the diary phase 1 - Next steps in this project: We will focus on the low-fidelity prototype, high fidelity prototype, prepare for the final video, and of course continue writing the diary. What we proposed today: We can meet at Tampere city center campus on Friday to work on the ideation and create low fidelity prototype. We can have lunch at the campus at around 11 together, and work on the task until e.g. 4pm. Sarwer Would this work for you? We will also create a Teams call if you can join online.
	22.3.2024	Diverse Canvas Meeting at Tampere Campus	Hi everyone, Finally getting around to summing up our chat from last Friday 😄: Pauliina, Melina, and I brainstormed ways to bring some futuristic ideas into our project, as we thought this was an important factor that could affect our grade and of course the solution should make the client happy. We focused on holograms and wearable devices, like wristbands/bracelets, and we're thinking of checking out the fablab in Tampere. We sketched out a basic version of today's schedule on the whiteboard, trying to figure out the best layout. You can see the photo that Melina sent earlier. We discussed some interesting topics: - Making sure our design works for everyone. - Melina mentioned some research about Sophia the robot, and how people react. I forgot the term so can you @melina_aalto share it here? - Ergonomics when users use our solution (posture, etc..) Rachel joined our discussion, and we started setting up our team's Figma space, and we made a start on initial wireframes. Next steps: If Sarwer needs any more info, just send a message here or Pauliina

			said she could have a call with you and go through the concept ○ Low-fidelity wireframe and high-fidelity prototype § Today's schedule view - Phuong § Wholeweek schedule view - Rachel § Setting view or Me view - Paulina § Welcome view -no one has taken this yet. ○ We agree with Pauliina and Rachel that the first version prototypes will somewhat ready by tmr Sunday midnight so everyone can review and give comments on them next week. We planned to have a call on Monday 25th Mar from 16:00-17:00 to review the prototype. Does this time work? @melina_aalto @PauliinaHarrivaara Sarwer @rachelwangkun . Please also add your schedule to the spreadsheet for the upcoming 2 weeks. ○ Prepare for the MVP idea verification/user testing § Pauliina will take the lead here and define what tasks/materials are needed § Phuong can provide some old templates for user testing, or if someone has it, can you share it with the team? § Recruit users- maybe about 3-4 persons ○ Diary blog post 6-7 § We haven't discussed or divided the tasks related to this yet, but please check the course materials. We can discuss this in the next meeting. Let me know if you've got any questions. @PauliinaHarrivaara @melina_aalto @rachelwangkun anything that you want to add 😊 Figma link: https://www.figma.com/team_invite/redeem/r0z0ToFTCSsyUdUm4zWLpk I made some modifications in Figma and added some sections there - Inspiration section - I added there some pictures that could support us in the design thinking. Feel free to add more pictures there - Colour palette, font family and icon section - Low-fidelity wireframe section - High-fidelity wireframe section I added today's schedule view prototype to Figma, feel free to already add comments there. I will still modify it tmr 😊
	25.3.2024	Diverse Canvas group work	
	4.4.2024	Diverse Canvas group work	Meeting Summary (Thursday, April 4th): - Continuing work on refining and improving the prototype. - @PauliinaHarrivaara will coordinate planning for the MVP prototype evaluation. - Phuong will review the script template from the other course. - @melina_aalto will modify the consent form for the MVP prototype evaluation.

			- We planned to have a meeting tomorrow from 1:00 PM to 2:00 PM to discuss the MVP prototype evaluation process, script preparation, and test case creation. @rachelwangkun, does this time work for you? - Evaluations are expected to be conducted between the end of this week and the end of next week, either at the campus or another suitable location (we can decide in the meeting tomorrow). Let's aim to have 2-3 participants. @rachelwangkun, can you support @PauliinaHarrivaara in the MVP prototype testing? We can discuss more tomorrow. - For video ideation and creation (first version), we plan to meet at the campus on Tuesday, April 16th. We haven't decided on the time yet, but if that date works for you, @rachelwangkun? - Meeting with Eira next week: We might still be in the testing phase and might not have anything concrete to share with her yet. We could postpone the meeting to 1 week later.
	5.4.2024	Diverse Canvas group work	Meeting Summary (April 5th): - We discussed the moderator script, covering it up to the test cases. - Six test cases and scenarios were made. - Melina can work on wireframing the entire week view. - Phuong will refine the prototype for the today view. - Pauliina will assess the interview questions and arrange a meeting room for the prototype evaluation. We plan to have the initial evaluation this Sunday. - Rachel will review both the moderator script and interview questions. - Rachel can brainstorm ideas for the video, including following teacher instructions, selecting background music, and preparing a video script if possible. We plan to address this task after the MVP prototype evaluation.
	15.4.2024	Diverse Canvas group work	Meeting notes (15th April 2024): - 1st evaluation session review - free time slots in Day view - adding language options in setting - bracelet -> customisation / add- on - 2nd evaluation session @rachelwangkun plans to conduct today - insights from the evaluation sessions -> We agreed to have it ready by this Wednesday (17th April) evening. - Prepare the material for the meeting with Eira. The meeting will be this Friday 19th April. Link to the PowerPoint file: Meeting with Etteplan - Friday 19th April - Diary 1-5 adding improvements based on teacher's feedback
	19.4.2024	Bi-weekly with Etteplan	Presentation: Meeting with Etteplan - Friday 19th April Hello all, in our bi-weekly meeting with Eira from Etteplan today (Fri 19th April), we presented our product description, MVP description, prototype, and evaluation results. We received valuable

			feedback from Eira, which included several suggestions: - Incorporate localization options (platform available in English or other native languages) into our product description. - Consider removing the "write in the air" functionality from our prototype and will need to conduct further research on this feature (like how to make users feel natural when writing on the air, any available technologies, research etc…)if we plan to implement this later :). - Add empty schedule slots in all schedule views in the prototype. - Address privacy concerns by: - Mentioning in the MVP and product descriptions the importance of using the product in private surroundings, especially if the user has the speaker on and a large hologram display. - Clearly defining the future scenarios (30+ years later) for which this solution is intended. - Prioritizing accessibility, particularly in terms of contrast and the use of icons. - We've agreed to have a wrap-up meeting with Eira on Friday, May 10th, from 11:00 to 12:00.
	21.4.2024	Diverse Canvas video, diary tasks	Agenda Items: Privacy and Accessibility: Discussed the importance of privacy control for users and ensuring accessibility features are incorporated into the solution. Agreed to update the product description and MVP description to include privacy concerns. **Action Items:** Melina to update the product description and MVP description to address privacy concerns. Phuong to update the prototype, focusing on the day and week view. Pauliina to take photos/videos of the bracelet from different angles and edit them. Pauliina to work on Diary 6 analysis summary. Rachel to work on Diary 7 Modality and report the evaluation results. Pauliina to add the bracelets' 3D photos to the diary and document the process of making the bracelet. Phuong to create sections in the diary and link the Figma prototype. Phuong to add a section explaining why we chose the name "TimeWise" to the diary. Phuong to link the Figma prototype to the diary. Other Tasks: Pauliina to complete the "It's all about me" script by Sunday, April 21st. Rachel to create an initial version of the video by Tuesday, April 23rd, and add voice using murf.ai. Phuong to review the diary before April 24th and share the notes with Eira via email. Action items can be found here: Time - Schedule
	23.4.2024	Diverse Canvas group work	Meeting notes Tuesday 23/04

		Video review and diary tasks	For the final video, - There are some small enhancements needed that we noticed: ○ 0:58-1:06 : we can also add this slide to this timeframe HTI230Slides-edit2304.pptx ○ For the feature highlight slide, can you change the order of "Hologram and Voice command" and "Customization and preferences" same as this slide HTI230Slides-edit2304.pptx . I also updated the order of the text in the script ○ 3:02-3:07 The Value slide, we can have this a bit longer for example 10-13s (having a break or smooth transition to the next slide would be good) ○ From 3:12 where the Figma prototype was displayed, we edited the script a bit here a script for the video.docx (check the green marker). Can you update the video based on the script? ○ Before the last slide (the ending slide), we can have a small break (3s) ○ And then the last slide (the black one), we could replace with this one where we present our team HTI230Slides-edit2304.pptx . @rachelwangkun you can add your photo, edit the position name (the one that you prefer), and LinkedIn QR code. ○ @rachelwangkun Is it possible to have this video version ready for review by 7 pm tmr? It would be so great!! 💔 just share here if you need support or if something is unclear. - Diary tasks 6 and 7 and prototype @melina_aalto and @PauliinaHarrivaara , we agree already on the tasks that need to be done (I don't list them here). Let's have it all ready latest tmr at 7 pm.

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