EXPLORING SHARED UNDERSTANDINGS OF FUTURE AI SYSTEMS THROUGH DESIGN

Appendix
Masters Thesis
Design for Interaction

Delft University of Technology
Faculty of Industrial Design Engineering

August 2023
Shruthi Venkat

Exploring shared understandings of future AI systems through design

Master Thesis
Design for Interaction
Faculty of Industrial Design Engineering
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Shruthi Venkat
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Graduation Committee
Chair
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Faculty of Industrial Design Engineering
Department of Human-Centered Design

Mentor
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Faculty of Industrial Design Engineering
Department of Human-Centered Design

In collaboration with DCODE Network and FreedomLab

Company Mentor
Arief Ernst Hühn
Head of FreedomLab

August 2023

Appendix A. Consent Form

This is a part of the graduation research study titled " Exploring Shared Understandings of AI". This study is conducted by Shruthi Venkat from IDE TU Delft while working with Freedom Lab. The co-creation session will take approximately two hours. The data from the interview will be used to plan the co-creation session later in the project. Your participation in this study is entirely voluntary and you can withdraw at any time.

PLEASE TICK THE APPROPRIATE BOXES	Yes	No
A: GENERAL AGREEMENT – RESEARCH GOALS, PARTICIPANT TASKS, AND VOLUNTARY PARTICIPATION		
1. I have read and understood the study information dated [__/06/2023], or it has been read to me. I have been able to ask questions about the study and my questions have been answered to my satisfaction.	☐	☐
2. I consent voluntarily to be a participant in this study and understand that I can refuse to answer questions and I can withdraw from the study at any time, without having to give a reason.	☐	☐
3. I understand that taking part in the study involves: • *An audio and video recording of the session, the recordings will be deleted once transcribed* • *A survey questionnaire*	☐	☐
5. I understand that the study will end by the end of July 2023		
B: POTENTIAL RISKS OF PARTICIPATING (INCLUDING DATA PROTECTION)		
6. I understand that some of these are considered sensitive data within GDPR legislation	☐	☐
7. I understand that personal information collected about me that can identify me, will not be shared beyond the study team.	☐	☐
8. I understand that the (identifiable) personal data I provide will be destroyed by the end of July 2023	☐	☐
C: RESEARCH PUBLICATION, DISSEMINATION, AND APPLICATION		
9. I understand that after the research study, the de-identified information I provide will be used for • *Graduation report and presentation* • *No recognizable information will be used*	☐	☐
D: (LONGTERM) DATA STORAGE, ACCESS, AND REUSE		

PLEASE TICK THE APPROPRIATE BOXES	Yes	No
10. I give permission for the de-identified qualitative, quantitative, and background information that I provide to be archived in the repository so it can be used for future research and learning.	☐	☐

Signatures

_____ _____ _____

Name of participant Signature Date

I, as a researcher, have accurately read out the information sheet to the potential participant and, to the best of my ability, ensured that the participant understands to what they are freely consenting.

Shruthi Venkat

Researcher name Signature Date

Study contact details for further information: [*Shruthi Venkat, shruthi@freedomlab.com*]

Appendix B. Interview Guide

Goal
“How can we co-create a shared understanding for an upcoming AI system”.

Research questions
- How can we help stakeholders from different backgrounds build a system and understand its implications for different people?

Setup
→ Semi-structured
→ Questions specific to participants based on their background
→ 1 hour long
→ 1 on 1
→ Online or in person
→ Consent will be requested for voice recording
→ The questions are used as as starting point for discussion, based on the responses further discussions will take place

Introduction
→ Introduce myself and the project
→ Given an outline of the shared mobility system case study
→ Consent form
→ Ask participants to introduce themselves, and in relation to the case

Current Understanding of the Context
→ What does shared mobility mean from your perspective?
→ Explain what you’re trying to achieve with this

Participants’ role, concerns
→ What values relating to these systems are important to you in your life? What role do you play in this system? Who else are the actors involved in the system?
→ What are your concerns with it?
→ What are your current expectations of how the system will work? What should it achieve? What challenges do you foresee?

Future possibilities and desires
→ What comes to your mind when you think of the future of shared mobility? Can you imagine what the system would be like?
→ Can you imagine it and envision it happening in the next few years?
→ Technology will play a vital role in enabling this system, do you foresee any challenges on that front?

Conclusions
→ Any questions?
→ Explain the plan for the sessions- group+individual activities, discuss current and future understandings, leave with some future scenario building

Appendix C. Sensitising Document sent before the session

As a part of my graduation project at TU Delft in collaboration with Freedom Lab, I am working towards building a shared understanding of digital/AI systems. The specific case study we are focusing on is a residential shared mobility system in Haarlem. The residential space accommodates about 200 homes. The focus is on smart interventions and shared mobility solutions to promote sustainability. The goal is to reduce residents’ dependence on cars. Shared cars, bikes, and scooters are provided as alternatives for personal vehicles. These initiatives aim to create a more sustainable and efficient transportation system while considering the environment and promoting shared resources.

This project is a collaboration between Dalpha Bright, Louwman Group, and Mobility Invest Group. Through the session, we would like to promote dialogue about what this system can look like, what the possible futures can be, and a lot more. Come prepared to explore,
imagine and innovate.
See you there!

Appendix D. Session Script

Materials-
- Post its
- Pens
- Camera+tripod
- Phone with recorder
- Timekeeping device
- Whiteboard- markers

Script-
1. Introduction
Time- 15 mins

- Introduce masters project- research question
- The specific case study we're looking at today is shared mobility in residential spaces- the project is a collaboration between Dalpha Bright, Louwman Group, and Mobility Invest Group.
- Consent form- a few pictures, voice recording, video
- Introduction around the room
- Recap- the shared mobility case is currently being worked on by the different
stakeholders. So this is a good moment to look at the decisions being made and be critical about it and see what the way ahead can be. This project looks at a particular neighborhood in Haarlem(schalkwijk). One of the possible ideas is to offer a mobility contract as a part of the rental contract.
- Through this session we are looking at this system as a 'socio technical' system, and a intelligent/smart system. An intelligent system because- there will be AI involved in lot of parts in it, defining what modes of transport are available, who's assigned what etc
- And one way to define or break down socio technical systems that FreedomLab uses is the Stack. A lot of you have already worked with or know of the Stack. I have a printout here as well, giving a general breakdown, you can use this as an inspiration to look for ideas when you get stuck any time during the session.
- Now that's out of the way, here's a quick plan for the session and what we're going to do in the next hour and half.

2. Prototype interaction
Time- 45mins(+10 mins buffer)
Talk-
- For the first part of the session, we will interact with some objects. Let me set the scene first- you are in the year 2040. There is a shared mobility system in place. In multiple neighborhoods and residential spaces. There are some objects on the table that are a part of the system. These objects are part of the AI system.
- Through the first activity, you will play the role of a resident or user who's using the system. So you are a user that uses this system as a part of your daily life.
- There are 4 objects placed on the table- will hand out these worksheets- there are two questions for each object. You will interact with each object for about 10 mins, individually, note down your thoughts on the sheet and then switch until all 4 objects are done.
- You can use the Stack to think of ideas if you get stuck as well.
- Questions?

Time- 10 mins
3. Break- During the break, the notes and discussions from the first part will be looked
into to see what directions to take the conversation in and what points to bring up.

4. Discussion
Time- 30 mins
Talk-
- In this part- we discuss the first activity and build upon it. The goal for this part of the session arrive at key questions that will define the system.
- And in this part, we can let go of the user persona and think about it from your specific perspectives.
- How did the interaction with the objects go? What do you think? What layers of the Stack would you place the questions/thoughts on?

Time-10 mins
→ How did you think it went?
→ Do you think you have a different or better understanding of the system?
→ Did you feel like you were co-creating/ working together?

I will send a reflection document once I have analyzed the session.
Thank you

Appendix E. Activity sheets from the session

Object 1: Navi- scape

How would you use it

~~Use the~~ Make a decision on how to travel: shared transport seems to be the fastest way, so I'd wait for the best time to travel (considering shared transport saves money)

What more would you need to know

I would like to know at what time ~~are~~ ~~the~~ traffic conditions are best to travel by own car. Also, I'd like to have the maps integrated into one, so financial and time gains are visible in combination

Object 2: Nexus Key

How would you use it

For shared mobility with neighbors, but also for something like a key to my house if that's possible I'd like to use the data to predict or calculate travel costs & energy optimization

What more would you need to know

~~I'd like~~ what preferences will it know that can improve usability of the car? Who can use the key as well? Where is my data stored? How is the data analyzed? Who is responsible for the vehicles?

Object 3: Move Card

How would you use it

I would use the heli to go on short trips :-). Plus, take it everywhere so I can go anywhere. Decide which movement method gives me a higher level

What more would you need to know

Whether it adjusts to my travel style. What the map of options looks like (linked to navi-scape?) Is this also visible online? Is there a weight to ~~which~~ movement method to improve the level?

Object 4: Urban Signs

How would you use it

To know what transport is available, and ~~where~~ what Rules of ownership and shared vehicles are. To know where and when I can park my private car.

What more would you need to know

~~Other~~ location of shared vehicles, garage for personal vehicles, how the 'no'-signs are monitored, what is allowed instead of what's not allowed

Object 1: NAVi- Scape

How would you use it

- DECIDE WHAT MEANS TO USE
- GET INSIGHTS OVER TIME WHAT IS "TOTAL" MOBILITY SOLUTION GIVEN PARTICULAR SITUATION, LIKE BUSINESS OR EMERGENCY

What more would you need to know

- FOCUS ON TRAVEL TIME, WHAT ABOUT DEPARTURE AND ARRIVAL TIMES?
- SWITCHING TIMES BETWEEN MEANS
- HOW ACCURATE IS IT?

Object 2: URBAN SIGNS

How would you use it

- SPECIFICALLY IN NEW/ UNKNOWN AREAS
- FIND OUT WHAT POPULAR PLACES ARE INFLUENCING TIME OF DEPARTURE
- COMMUNITY FEELING

What more would you need to know

- ARE THEY VISIBLE ENOUGH
- REAL TIME INFO, PREDICTING SITUATION WHEN ~~BEING~~ ARRIVING THERE

Object 3: MOVE CARD

How would you use it

- TO INCREASE LEVEL OF CONFIDENCE IN SHARED MOBILITY
- TO INCREASE NUMBER OF TRANSPORTATION MEANS

What more would you need to know

- MEANING OF GIVEN POINTS AND LEVELS
- HOW TO ORGANIZE PRIORITY BOARDING / WILL IT HELP, FROM TIMING AND SATISFACTION PERSPECTIVES
- VALID TIME IS DIFFERENT, WHY?

Object 4: NEXUS KEY

How would you use it

- TO GET EASY ACCESS TO SHARED MOBILITY
- FIND OUT NEW WAYS OF BETTER MOBILITY OPTIONS/CAR
- OVER TIME, ALSO USE IT FOR OTHER MEANS

What more would you need to know

- THEFT PREVENTION
- WHAT IS AI COMPONENT IN THIS / WITH WHOM ARE PREFERENCES SHARED?

Object 1: Move card

How would you use it

- I would use it to access the shared mobility service (based on subscription plan)
- board an vehicles
- know my subscription plan

→ what does the 6t/4t mean? more or exactly

What more would you need to know

- what does the access point exactly mean
- same for movement level
- is it unlimited usage?
- what is the price differnce btw silver & gold?
- can I set preferences in silver &?
- what does easy booking bio, mean?

Object 2: Nexus Key

How would you use it

Black: get info on range, open vehicle

Blue: find vehicle, start and stop the trip (with autodrive?)

autodrive?

What more would you need to know

- what is auto, connect
- ~~why do~~ the start & stop is for route preference?
- connect to residents/vehicles/ range pop?
- how is it securely mine? (finger, code?)
- why is it 2 keys? → not 1

→ how is it checked that I can't transfer it to someone?

Object 3: Navi-Scape

How would you use it

Navigate to my destination
Locate available transport
See many options

→ does the algorithm have a bias towards sustainable options

What more would you need to know

- can the sharing finding be shared w residents?
- what is the next trip based on (manual prog. set or frequency analysis)
- can preferences be set or adjusted manually (I always use the bike but I wanna use more scooters)

Object 4: URBAN SIGNS

How would you use it

- get info on shared vs private vehicle zones
- get info on shared vehicle availability
- get info on pick-up point location and privacy zones

What more would you need to know

- are there designated spots for private vehicles
- does the availability spot show distinction btw membership types
- why is the shared transport availability sign needed if I can see it in the app?

Object 1: Resident Move Card

How would you use it

I would lose it
~~Stolen~~ → helicopter?! for fun

To use mobility in places public transport doesn't get to

Early booking → I don't want to book but I do want reliability.

What more would you need to know

What is stored on the card?

- Is it like a "private" OV-card?
  - → can it be linked?
  - (as it also accesses stairs)

Gold/Silver indicates hierarchy, but why not differentiate on other variables?

Object 2: Urban Signs

How would you use it

"curated" pick-up point: between carpooling and hitchhiking

"carpool lane" on the buslane?

"no ownership zone": no private parking? ~~stay~~ when parking for it, you have to make your car available for that hour.

What more would you need to know

Why from 7PM to 6AM?

I don't think they promote safety and efficiency, but they defend public space

what to do with the matrix info? and why update only every 15 min

→ where to go when 0 is there a choice?

Object 3: Navi-scape

How would you use it

To see how many km I cycled and drove, for fun.

How much I spent on mobility

To find the quickest route, when I need it (so not necessarily beforehand)

What more would you need to know

How many users do you need for this to be relevant?

Which data do you take?
→ about places or about people.

Object 4:

To locally safe your data? And share it with others.

How would you use it

I like the idea of digitally (de-)connecting a car to a key or multiple cars.. and that it's still a key.

Can it make visible to your neighbours that you share a car?

What more would you need to know

How will it help to find a car?

What is the advantage of a key? (over an app)

Object 1: Nexuskey

How would you use it

Have it in my pocket or bag all the time, feels like it's private access to something. Exclusive access, so when I don't need it I would hang it in a box for someone else to use it or get

What more would you need to know

- what will happen if I press any button → what would be the reaction to the action.
- How many are around?
- What has the fysical object to add to a digital experience or cloud.?
- What happens ? with my data.

Object 2: Navi-scape

How would you use it

I talk to my device (phone/watch/car), telling it what I'd like to do. It talks back to ask questions about my preferences for the trip. It projects the route in front of my feet, bike or other vehicle

What more would you need to know

- Is it brand mutual? Or am I forced into options based on marketing? How objective is the system?
- Is government involved? Now could info up to date? Can it help prevent traffic jams and other inconveniences? → that would increase my enthusiasm.

Object 3: Urban Signs

How would you use it

I would stick to the rules and make sure the goverment / manucipality writes fines if others don't. It looks like we agreed on something as a collective, I would trust that.

What more would you need to know

- Are people actually going to be fined if they don't stick to it?
- How big is the area where they apply?
- Are people being rewarded or experience extra benefits who stick to it?

Object 4: Move Card

How would you use it

Everytime I'm going somewhere I show this card, which gives me access to extra services. I would feel special and valued by the local government. The more I use it the more benefits I get

What more would you need to know

- Do you pay more for a gold card? What decides which benefit level you get?
- How would tourists or visitors feel when they see that residents have benefits over them?

Object 1: URBANSIGNS

How would you use it

Would
- only expect these signs for public shared mobility
- Residential mobility is ~~garanteed mobility~~

What more would you need to know

- what is a personal vehicle? owned or shared?
- pick up point for people or shared mobility?
- priority lane for ridehailing?
- what if cars & bikes are ~~0~~ ?
- No ownership of keys?

Object 2: Navi-Scape

NO car! + Electric bike

How would you use it

- compare shared vehicle with (personal) car
- Bike is more ~~co~~ cost efficient

What more would you need to know

- ~~what is shared~~
- how come it's a shared car more efficient than a personal car? (owned car)

Object 3: Nexuskey

How would you use it

Like the idea (its your smartphone/watch) why a key, but it feels like full available
(only need the blue key)

What more would you need to know

I need an interface for feedback, status, timeframe etc.
- what = auto in this context.

Object 4: Move Card

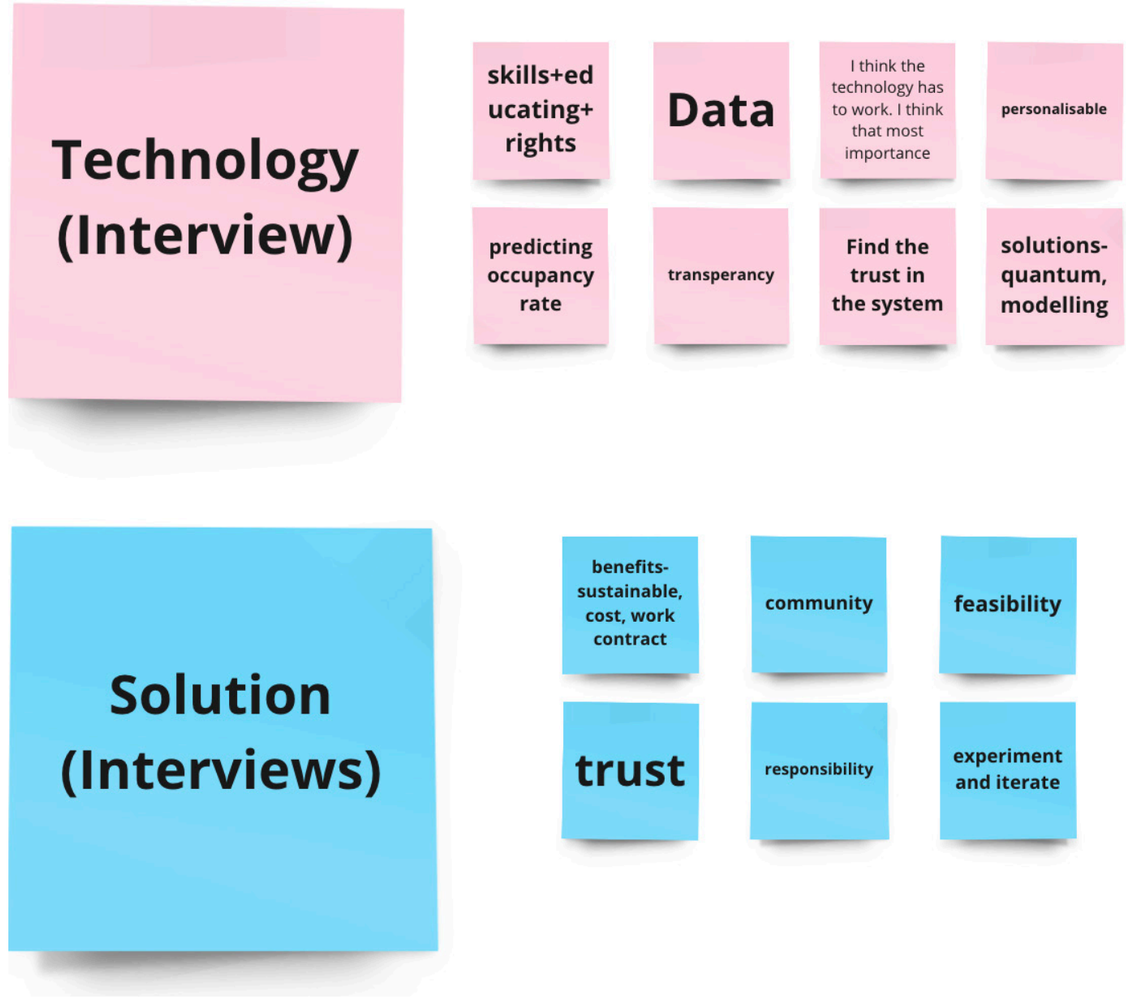
How would you use it

- I wouldn't feels like a step back

What more would you need to know

- why not flexible usage?
- ~~Plan~~ Define resident? building, neighborhood, city?
- would a resident have discount over visitors?

Appendix F. Screenshots from Miro Board



Appendix G. Approved Project Brief

DESIGN FOR our future

TU Delft

IDE Master Graduation

Project team, Procedural checks and personal Project brief

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

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

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

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

family name	Venkat	6320	
initials		given name	Shruthi
student number	5234492		
street & no.			
zipcode & city			
country			
phone			
email			

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

IDE master(s): IPD | Dfl | SPD

2nd non-IDE master:

individual programme: - - (give date of approval)

honours programme: Honours Programme Master

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

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

** chair	Roy Bendor	dept. / section:	HCD-DCC
** mentor	Iohanna Nicenboim	dept. / section:	HCD-HICD
2nd mentor	Arief Hühn		
organisation:	Freedom Lab		
city:	Amsterdam	country:	Netherlands

comments (optional)

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

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

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

Procedural Checks - IDE Master Graduation

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

chair Roy Bendor date 07 - 03 - 2023 signature Roy Bendor - IO Digitaal signeo Roy B IO Date: 2023.(16:59 +01'0

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

Master electives no. of EC accumulated in total: 27 EC
Of which, taking the conditional requirements into account, can be part of the exam programme 27 EC
List of electives obtained before the third semester without approval of the BoE

☐ YES all 1st year master courses passed
☐ NO missing 1st year master courses are:

name Robin den Braber date 13 - 03 - 2023 signature Robin den Braber Digitaal ondertekend door Robin den Braber Datum: 2023.03.13 10:02:13 +01'00'

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

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

Content: ☐ APPROVED ☐ NOT APPROVED
Procedure: ☐ APPROVED ☐ NOT APPROVED

comments

name Monique von Morgen date 21 - 03 - 2023 signature

Personal Project Brief - IDE Master Graduation

Exploring shared understandings of AI — project title

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

start date 20 - 02 - 2023 24 - 07 - 2023 end date

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

Artificial intelligence is a big part of our everyday life. AI is used in decision-making processes both in everyday scenarios as well as in crucial domains. For example, AI-assisted decision-making has been considered to be better than human decision-making due to fewer biases and improved efficiency in dealing with large amounts of data (Kerr et al., 2020). At the same time, other studies have shown that AI can have harmful consequences such as perpetuating or even amplifying existing human biases (Aizenberg & Van Den Hoven, 2020). Furthermore, in most cases, there are many parties (or stakeholders) involved and affected by these AI-driven systems. For example, AI-assisted policymaking involves policymakers, citizens, and regulatory bodies (Dignum,2020). Importantly, stakeholders have varying levels of autonomy in relation to AI. Even though they may not fully comprehend how it operates or what implications it has. In other words, there's not one single explanation for AI that works for everyone. The decision-making of a machine learning model is often referred to as a 'black box' because of how hard it is to know what's going on in the system.

Explainable AI (XAI) has been an attempt to enable human users to understand, manage and therefore trust AI decisions (Turek, 2020). From a policy standpoint, the 'Right to Explanation' has been added to the GDPR in an attempt to improve clarity and inclusiveness. However, having this right is just the first step in making this technology legible to the variety of people affected by it. As one of the approaches for my project, I am looking at shared understandings which suggests a more situated and relational approach (Nicenboim, 2022). I believe that this approach is especially relevant because it goes beyond explaining what AI does and doesn't but the effects of the system on daily life. It is important to consider the multi-stakeholders and their varied entanglements with the AI systems. The goal would be to design for the possibility of multiple understandings based on the user's background, technical knowledge, and expertise.

As a part of the graduation project, I will be collaborating with Freedom Lab, which is a think tank that helps public and private companies navigate future scenarios through transdisciplinary research and speculative methods. Freedom Lab is currently using a model based on Bratton's notion of "the Stack" (The Stack, 2022) as a tool to understand the anatomy of interrelated components of complex digital systems. The tool was developed by the client and has been used in sessions with Dutch Ministries and other such organizations to explain digitization in general. As a part of my assignment, I will assess the potential of using this tool for explainable AI.

space available for images / figures on next page

introduction (continued): space for images

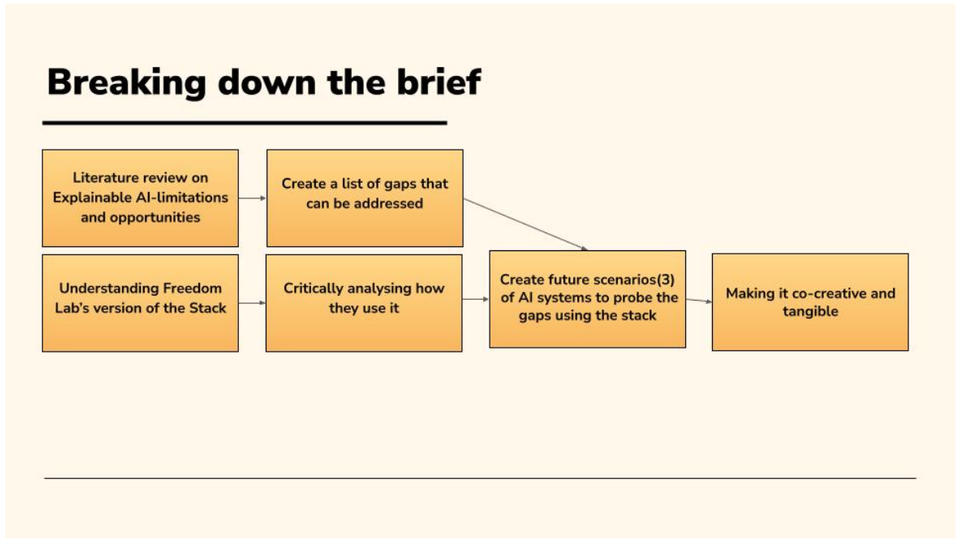


image / figure 1: The three stages of the project

image / figure 2:

PROBLEM DEFINITION **

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

The explainability of AI depends on situated factors, so my goal is to create a process through which shared meanings of AI can emerge among different stakeholders. I will take Freedom lab's current version of the stack as my starting point, and find ways to adapt it to explore some of the gaps in Explainable AI. Because some of the consequences of AI involve a high degree of uncertainty and take place in the future, I will make use of design fictions and speculations to engage with stakeholders to develop shared understandings of the AI system.

My ultimate goal is to use artifacts to connect stakeholders with the technology and build narratives relating to what stakeholders already know. This can help speculate and reflect on possible opportunities for the field of XAI in the future.

ASSIGNMENT **

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

The goal is to design for the possibility of multiple understandings of artificial intelligence based on the user's background, technical knowledge, and expertise. The project will explore this through speculative scenario building and participatory approaches.

My project will take place in three stages . First, I will review the existing literature on explainable AI, its limitations, and opportunities. I will also analyze and critically look at Freedom Lab's version of the stack from a design perspective. Second, I will use the stack as a starting point to build a tool to express some of the chosen gaps and limitations in XAI. The goal will be to create future scenarios and rethink how the stack can be used as a participatory tool to explain certain AI systems. During the third stage, I will evaluate the future scenarios with stakeholders in context.

The project will help various stakeholders understand their relation to public AI systems through Research through design(RtD) methods. For example, one such method I plan to use is the Open prototyping approach which has a framework to imagine, navigate, and shape collaborative research and co-creation projects (Hemment et al, 2020). I believe using speculative methods within an RtD process is an appropriate approach to this challenge because it will open up the context of the future through prototypes and other such artifacts. It gives me the freedom to experiment and find interactive ways to explain complex systems. The current version of the Stack used by Freedom Lab is a tool to help clients break down complex digital systems. Through this project, I will find ways to adapt this tool into a participatory session that can be used with AI-based systems as well. It will help Freedom Lab's attempt to make the Stack workshops more interactive and hands-on.

PLANNING AND APPROACH **

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

start date 20 - 2 - 2023 24 - 7 - 2023 end date

Month	February		March				April				May					June				July				
Calendar Week	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	20/02	27/02	06/03	13/03	20/03	27/03	03/04	10/04	17/04	24/04	01/05	08/05	15/05	22/05	29/05	05/06	12/06	19/06	26/06	03/07	10/07	17/07	24/07	31/07
Project Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Phase 1	Kickoff																							
Phase 2									Mid Term															
Phase 3															Break									
Phase 4																			Green Light			Hand in Report	Presentation	

Phase 1
- Literature study of what explainability of AI means, the different approaches to it, values relating to explainability of AI
- Create a list of gaps that can be addressed through design within XAI.
- Understanding Freedom lab's version of the Stack
- Conducting sessions with colleagues at Freedom Lab to gain insights into the tool and how it is used.

Phases 2 & 3
In this phase, I will follow an iterative design and testing process with two moments to evaluate the process and outcomes.
- Define 3-4 future scenarios with AI systems and stakeholders
- Creating tangible artifacts for the scenarios based on Phase 1's insights.
- Prototyping to arrive at designs

Phase 4
- Testing in participatory sessions with stakeholders
- Evaluating concepts and sessions
- Looking into further steps ahead
- Project compilation

MOTIVATION AND PERSONAL AMBITIONS

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

The influence of AI and technology in our daily lives is growing. I believe it is still a good time to question how this is going to impact us and what people that aren't designers, researchers, or developers can do about it. During my MSc, I have been focusing on interaction with technology in current and future scenarios. I have explored this from a variety of perspectives, including advanced machine learning, researching more than human conversation starters, and working at Next Nature. With this project, I will be able to apply the skills I have learned through all these experiences, but in a new context.

With this project-
- I want to explore this new space of public interaction with AI
- I want to experiment with speculation and research through design, specifically in a participatory/co-creative setting.
- I want to define an inclusive approach to understanding the everyday usage of AI
- I would like to use tangibility and experience to understand complex concepts.

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FINAL COMMENTS

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