APPENDICES

APPENDIX A: Additional Reserch

Objective Wellbeing
The precise definition of Objective wellbeing and its contributing factors can vary depending on the source, but can be summed up into external and circumstantial factors described briefly (Voukelatou, 2020):

Health
The condition of one's health, which is connected to diet and physical activity but also dependent on genetics, disabilities and illness.
Job Opportunities
Low unemployment rates of the residing country, a healthy working culture and economic opportunity is an important factor also connected to SWB dimensions of realisation of potential and life satisfaction.

Economic situation
The economic situation has a nonlinear correlation to happiness and has its biggest impact in the lower numbers, until a threshold is reached where one can afford to pay all the bills, live at a reasonable living standard and can afford medical emergencies without the fear of not being able to manage unexpected expenses.

Environment
Nature, clean water and fresh air are essential for human's wellbeing. This dimension is under threat by climate change and addressed by the UN environmental sustainability goals (Arora, 2019)

Safety
Safety can with factors like crime rates and potential of suffering from physical or psychological trauma, varying by country.

Stability
Stability in terms of political stability and governmental management of public funds is an essential factor in wellbeing also connected to trust and social cohesion on a local and national level. (Factors like corruption level, Public funds, political structure, Leadership stability)

Factors of objective wellbeing are also intertwined and connected to subjective wellbeing and form the foundation for it. Fulfilment of important factors in objective wellbeing forms a basis for subjective wellbeing which is less dependent but still connected to external and contextual factors like OWB. Due to the nature of this, subjective wellbeing is less tangible and harder to measure by numbers and statistics than objective wellbeing.

Digital Clones

Digital cloning using AI technologies is an emerging field using applications like text-to-speech voice cloners (resemble.ai), image and video cloners (reface.app or DeepFaceLab) to generate hyper-realistic content hardly distinguishable by the human senses. This ofcourse poses a great challenge for legislators to regulate against identity theft, as with minimum means like a handful of photos and spoken phrases, the deep learning algorithms can already produce convincing results (Jia et al., 2018, Thies et al. 2020).

Service providers like Amelia or kora.ai and offer what's called EVAs (Enterprise Virtual Assistants) which are essentially AI employees acting as humans for customer support or scheduling appointments like a secretary. In most cases, these assistants don't embody a whole replication of a human in the digital space as they communicate either via chat without audio or video, or via audio without video (in calls). Perhaps the closest example to real digital clones is a project called NEON presented at CES 2020 by Samsung, which is a range of artificial humans powered by AI, able to learn, converse and sympathise similar to humans. Samsung clames that these artificial Humans can become TV Hosts, spokespeople or fitness instructors of the future. A relevant and successful example of this sort of replacement was Lil Miquela, a popular virtual influencer born in 2016 collaborating with luxury fashion giants like Chanel and Prada, drawing a lot of attention of the public in 2018.

Though anthropomorphised examples draw our attention in the media, and articles about AI depicted as an effort to replicate or replace, even supersede human characteristics and capabilities try to shock us, I think it is more important that AI systems are efficiently targeted and optimised, rather than interacting with the human directly in a way that tries to trick them into being one itself. AI assistants should resolve digital friction quitely, in the right moments and spots, rather than creating it (Zijkstra, 2020).

Apple's Facetime video call software is a good example on how AI adjustments work quietly and subtly in the background. The App transforms the video stream to adjust the line of sight so that the calling partner has the perception of being looked in the eyes (figure below, right), while the camera is capturing the original line of sight at an angle (figure below, left). This is an example of appropriate intervention (minimum means for maximum impact) solely in a detail where it matters without intruding too much (by transforming the whole face for example.)

Figure A-1: Line of Eyesight correction - original (left) vs corrected (right)

General vs. Narrow Artificial Intelligence
The current capabilities of AI and Machine learning is rather narrow and often gets falsely compared and perceived as AGI (Artificial General Intelligence). AGI is defined as an autonomous intelligence, just like human intelligence, whereas ANI (Narrow Artificial Intelligence) has to be pre-programmed with a specific task or set of parameters to optimize, given a set of constraints and a set of training data. State-of-the-Art systems are all considered ANI, needing a precise definition of the framework and solution space, as well as predefined and labelled training data to base interpolations and extrapolations on. Although it is debated how long it will take for AGI to be real, or whether it will happen at all, current ANI systems are not as powerful on their own as they might seem. However, in certain use cases such as facial recognition, behavioural modelling and information distribution, ANI can become a powerful link to enable social injustice, privacy infringement and mass media control with examples like the Cambridge Analytica scandal, Creative Commons images being used as training data for facial recognition systems and mass social surveillance and scoring systems put in place by governmental institutions.

Ethics and Legislation on AI

Currently, AI Technology is used mostly by big technology corporations and governmental bodies as a tool for mass data processing for monetary or power gains (like tailored social feed and advertisement by Google and Facebook and more extremely population surveillance and control by the Chinese Government). Though there have been a lot of open source projects open for anyone to use, AI is still mostly not usable by the general population.

Through the current exposure to the mainstream, more and more conversations are started around ethical use and guidelines concerning Machine learning, putting a user-centred approach to the table. Using the potentials of AI should be to the benefit of society and individuals, thus it should be considered as a tool to benefit people, rather than controlling them and monetizing their data.

The IEEE P70XX Standards are a set of guidelines around the design of AI and autonomous systems ranging from transparency, to algorithmic bias considerations, to ethical considerations in emulated empathy in autonomous systems. Most of these standards are still in the works, however one standard that is available at the current time (since May 2020) is the IEEE 7010-2020 standard (Olszewska, 2020). It is relevant for the topic of this project as it proposes a practice for assessing the long term impact of autonomous and intelligent systems on human wellbeing.

APPENDIX B: Cycle 0 – Interviewing Home Office Workers

Sensitizing Sheet Employees

INTERVIEW PREPARATION

Jim Unterweger
TUDelft 2020

First of all thank you for participating!
In preparation to the interview that we are about to have, I would like you to start thinking and reflecting on the topic in order to be sensitized at the moment of the interview. This step serves the purpose of exploring and investigating the context and the target group (you), so don't feel obliged to be overly positive or negative, ideally you give me your unfiltered objective perspective.

Home Office
The context I am investigating is the Home Office. As the recent coronavirus pandemic required many of us to work from home, our living space became merged with our working environment. This sudden switch might have brought some ups and downs with it, especially in the way we work and communicate with team members or supervisors. In case you were already partly or fully working in a Home Office environment, think about how this process happened before - and after the pandemic hit. Also try to think of connections outside of the given context, maybe transitioning into it you can find some more distant correlations like having more time for your pets, or getting less social interactions etc.
For the preparation, I would like you to primarily focus on reflection of past experiences and the status quo, in the interview itself we will discuss them and then move on to a projection into the future.

1 Environment

In case the Home Office situation was new to you since the Lockdown hit, think back on how it happened and how you found yourself coping with the new situation(s).

Did your company or manager support you and give you instructions?
Did they adjust workload to facilitate the transition?
Did you change your living arrangement at home?
How did your timeschedule and social schedule change?

Give some thoughts also on some further reaching implications that might seem only distantly connected (if at all).
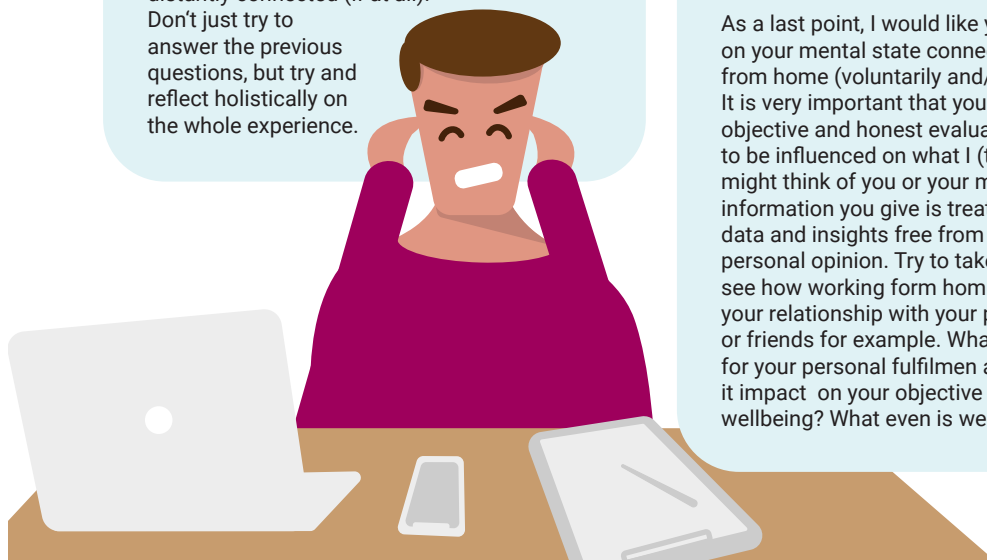Don't just try to answer the previous questions, but try and reflect holistically on the whole experience.

2 Communication

One of the most important aspects when working from home is communication. How did this aspect change for you in relation to updating your supervisor, coordinating with team members or even just the casual small talk you used to have at the coffee machine? Did you change or adapt new tools or habits in order to facilitate? How do you feel about digital communication in general, benefits and shortcomings that come with it?

3 Mental State

As a last point, I would like you to reflect on your mental state connected to working from home (voluntarily and/or involuntarily). It is very important that you try and give an objective and honest evaluation and not try to be influenced on what I (the interviewer) might think of you or your mental state. All information you give is treated as objective data and insights free from any judgment or personal opinion. Try to take a step back and see how working form home has impacted your relationship with your parther, family or friends for example. What does it mean for your personal fulfilmen and how does it impact on your objective and subjective wellbeing? What even is wellbeing to you?

INTERVIEW PREPARATION

Jim Unterweger
TUDelft 2020

First of all thank you for participating!
In preparation to the interview that we are about to have, I would like you to start thinking and reflecting on the topic in order to be sensitized at the moment of the interview. This step serves the purpose of exploring and investigating the context and the target group (you), so don't feel obliged to be overly positive or negative, ideally you give me your unfiltered objective perspective.

Home Office
The context I am investigating is the Home Office. As the recent coronavirus pandemic required many of us to work from home, our living space became merged with our working environment. This sudden switch might have brought some ups and downs with it, especially in the way we work and communicate with team members or supervisors. In case you were already partly or fully working in a Home Office environment, think about how this process happened before - and after the pandemic hit. Also try to think of connections outside of the given context, maybe transitioning into it you can find some more distant correlations like having more time for your pets, or getting less social interactions etc.
For the preparation, I would like you to primarily focus on reflection of past experiences and the status quo, in the interview itself we will discuss them and then move on to a projection into the future.

1 Environment

In case the Home Office situation was new to you since the Lockdown hit, think back on how it happened and how you found yourself coping with the new situation(s).

Did you take actions to facilitate a smoother transition or adaption for yourselfg and your team/employees?
Was it necessary to make adjustments to the workload and mandatory working hours and schedules?
Was there an impact on team cohesion or company spirit?
Did you change your arrangement at home?
How did your timeschedule and social schedule change?

Give some thoughts also on some further reaching implications that might seem only distantly connected (if at all). Don't just try to answer the previous questions, but try and reflect holistically on the whole experience.

2 Communication

One of the most important aspects when working from home is communication. How did this aspect change for you in relation to updates, coordination or even small talk you used to have at the coffee machine? Did you change or adapt new tools or habits in order to facilitate and enable this new working mode? How do you feel about digital communication in general, benefits and shortcomings that come with it? Also give some thoughts around the impact on company culture and team spirit, as well as personal ambitions and desires of employees.

3 Mental State

As a last point, I would like you to reflect on your mental state connected to working from home (voluntarily and/or involuntarily). It is very important that you try and give an objective and honest evaluation and not try to be influenced on what I (the interviewer) might think of you or your mental state. All information you give is treated as objective data and insights free from any judgment or personal opinion.

Do you perceive a difference in responsibility coming from yourself or being expecetd from you? How does the mental load change from managing people gathered in a physical space vs. remote?
Try also to take a step back and see how working form home has impacted your relationship with your parther, family or friends for example. What does it mean for your own personal fulfilment and how does it impact on your objective and subjective wellbeing? What even is wellbeing to you?

Additional Insight Clusters

In The Limelight
In company structures with a culture of distinct hierarchical separation and little personal connection between workers, there seems to be an issue around webcam usage in online meetings. Participants have stated that it would help the communication immensely if everyone could see other people's faces and reactions. This was especially the case on the manager side: Lukas for example steers a conversation according to real time input of his conversation partners and finds it very hard to communicate with people that have their webcam switched off (negative experience). One of his concerns was also that people don't listen and continue working during conversations. This was confirmed by Hannes, who often works on other things during calls and quickly leaves the screen to grab a coffee (positive experience). Due to lack of personal connection among workers and strict hierarchical separation, it appears to be some sort of "taboo topic" to point out or insist on switching on cameras, as it is seen as an intrusion of other people's personal space.

Participant: Lukas, Hannes
"I caught myself working on other things (in a call), but I find that very rude actually."

Participant: Lukas, Hannes, Simon
"I hate it when people don't switch on their webcam but I feel I cannot do anything about it."

Exaggeration
This Cluster suggests a heightened sensitivity towards (small) technical issues and problems that inhibit the home office workflow like lagging internet connection and software incompatibilities. Reason for that might be an increased sense of responsibility in a solitary environment and heightened dependency of digital tools to enable home office workflows.

Participant:Lukas
„Small things that don't work become disproportionately frustrating at the moment."

Real Contact
This category can be mainly attributed to the ongoing global pandemic which causes a lack of (professional and private) social contact and real face-to-face communication. Participants have stated that any real contact is better than nothing, and that initiatives to maintain casual contact and interactions through online communication have been attempted to maintain social contact.
This however turns out to often die out over time, as "forced" initiatives feel unnatural. Bianca for example has implemented online challenges and virtual coffee rooms for their employees and sounded positive about it. Giacomo (who works with her) instead, painted a different picture about the initiative and revealed that people are not as enthusiastic about them as the HR department.

Participant: Florian, Lukas, Giacomo
„Forced socializing initiatives die out quickly because they feel unnatural and like a waste of time."

Participant: Florian
„Taking small breaks with roommates is of great value, specifically for sharing good and bad experiences as they happen. However, they often don't know what I'm talking about so sharing them with co-workers in the office was more effective."

Vision in Product Design cycle

Step 1: Deconstructing the Product

As a first step, current products that are used in the home office context and came up during the interviews were analysed and deconstructed considering their superficial properties. The products included: Laptop, Phone, Office chair, Headset, Software (in general), Monitor, Home Trainer and Home Office Room.

Laptop

flat	light	metal	bright	secure	clicking
hefty	portable	square	portable	enabling	powerful
edgy	multyfunctional	expensive	Warm	buzzing	reliable
productive	lasts multiple years				

Phone

multifunctional	scrolling	light	close	reduced	attatched to human	Black
ergonomic	enabling	buzzing	lighting up	connected	metal	glass
fragile	expensive	small	new	lasts 1-2 years	cracked screen	

Office chair (at home)

cheap	rotating	rolling	plastic, cloth	uncomfortable
black	cushion has gotten flat	harder to roll	ergonomic	covered
rocking	static position	hard		

Headset

black	cheap	close	plastic, cloth	flexible	vulnerable
flimsy	isolating	connecting	attatched detatched	inbetween	adjustable
soft	pressure	persobal	big	short lived	uncomfortable

Monitor

square	peripheral	multiple	customizable	comfortable	edgy
monumental	quiet	big	flat	bright	cold
heavy	static	fragile	hard	constant	anonymous

Home Trainer

not approachable	moist	"dumb"	low tech	heavy	static
metal	rubber	demanding	resistance	tireless	mocking
challenging	reliable	sweaty	expensive	ergonomic	long lasting

Home Office Room

minimal	small	static	Chaotic	familiar
nostalgic	cold	motivating	separated	lean
functional	bubble	isolated	calling	quiet

Software

problematic	utilitarian	intangible	premade	problem solving	connected	slow	action	enabling	unpersonal
protected	secure	distant	intelligent	vulnerable	cold	cold	artificial	unnerving	demanding

Figure B-1: Deconstructing the product

Step 2: Deconstructing the Interactions

As a second step, the general relationship between the objects and their user were decoded in order to reveal attributes about the interactions between them. This can already yield some interesting aspects in the existing relationships and intended use cases and open up questions about opportunities for design.

Laptop

intensively	spontaneous	unlimited	varied	mobile
flexible	deep	fast	fused	ingrown
quick	demanding	impatient	frustrating	intensive
sceptic				

Phone

fused	quick	consuming	attention grabbing	addicted
holistic	subconscious (mental connection and expectation)	deep	for granted	careless
ingrown	high frequency	short period	trusted	fixated
loving	dependent	dependent	symbolic accessory	lingeringness

Office chair (at home)

ignored (item with little added value)	accepting (once bought it gets used and not easily replaced)	static (rarely changes location)	"abused" as in standing on it or putting clothes on it
blaming (cause for backpain)	disposable (not an item of particular value)	indifferent (could sit anywhere)	playful (spinning around on it)

Headset

indifferent	detatched	adjusting
intuitive	autonomous	

Monitor

smooth	enhanced	enriched
dedicated	friendly	loving
thankful	considerate	accomodating
respectful		

Home Trainer

hesitant	aggressive	intense
combattive	careless	occasional

Home Office Room

trusted	distant	grateful
integral	respected	

Software

demanding	hostile	indifferent
accusational	blaming	glorified
disrespectful	impatient	glorified

Figure B-1: Deconstructing the Interactions

Step 3: Deconstructing the Context

As a last step of the Deconstruction phase, the context within which the products were designed, was imagined and reverse engineered. This section serves the purpose of getting into the mind of the original creator of these objects, including his values and intentions for the given (old) context. In this way, differences to the current context can be identified in order to find potential opportunities to change product attributes to fit a new use case.

LAPTOP
Productivity, mobility, flexibility, need for agile working environment. minimize footprint, maximize usability and portability. Be suited for as many people as possible.
The pace of the world is becoming faster, demands for human performance increases and the need for computers to be an ever accompanying tool that lets us use technology without barriers. Accessibility. People's needs and binding to product

PHONE
Extension of the laptop, have less barriers even and higher performance for even more connectivity. enable more and more tasks in more situations, be a status symbol. bind the user and transform technology into a body part. enable users to do more and make them crave more. extend to more and more use cases and incorporate as many functions as possible, in order to increase device usage and dependency as well as swallowing or profiting from other industries.

OFFICE CHAIR (Home)
Enabling a sedentary work life. Home Office Chairs are often bought with occasional use in mind, so they might not be suited for extensive long term use. At home they serve multiple purposes such as putting worn clothes on top, using it to reach high spots or having an extra chair for visitors. At the time of designing office chairs for the home, there have probably been many decisions that cut cost (materials, ergonomics) and increase convenience (assembly, transport) as office chairs for the home are often bought on a budget.

HOME TRAINER
Created for people who might want to have a gym room at home and/or are obsessed with fitness and want to train with bad weather. Main focus is to achieve health benefits and be used as much as possible. The construction was made very sturdy due to the physical stress during usage, that is why those devices usually last a long time also for security reasons. At the time of the design it was probably made for urban living arrangements (saving space) Looking at people's physical needs for replicating some exercise artificially.

HEADSET
Context: gaming, music consumption or phonecalls (I doubt people have bought products made for videocalls.) Intention to either have a high quality and good output/input or be super portable (in-ears or airpods). some recently already for intention of working and concentration (noise cancelling) but not mainly.

MONITOR
Originally a necessity in order to work with a computer, then became an extension for laptops and multiple monitors for enhanced comfort and productivity. Now very often made modularly and even curved in order to pose maximum support and lower frustration with computer. Intention to display virtuality as close to reality as possible (resolution, color), even exceeding reality (retina reception capability).

SOFTWARE
Designed with usability in mind, sometimes in connection within an ecosystem and with needs of not only the end users but also administration and IT/Corporate. Especially professional software is designed to fit as many people as possible and build upon past versions and compatibility in order to maintain b2b.
switch to „newer" more agile software: more user centered, main focus usability and being a tool to use with being intuitive and posing low barriers for the end user.

HOME OFFICE ROOM
Created in most cases for an undefined application, taking usage as office space as one of many applications. Customisation left completely to the user in most cases to transform according to his needs. Only the basics are incorporated (things the user cannot do) like electricity, heating, floor etc. The designer in this case is the user himself who wants to divide personal and professional space, often using what is available to make it work and build up space gradually.

Step 4: Designing the Context

The second half of the ViP process serves the purpose of categorizing new in-sights about the context to be designed for and constructing a domain and interaction vision for designing.
Starting out by forming a Domain description, the design phase is kicked off by loosely defining the design direction, Therefore, the Domain description at this stage should not limit the realm of exploration too much, but rather act as a rough direction, into which more specific context factors can be attributed to.
In this case the domain description was focussed on the Home office worker: "A product that benefits the subjective wellbeing of people working at home." With the addition of the future scenario in which working from home is a predomi-nant model of working, but factors like the complete lockdown caused by the pandemic (coffee shops closed, imposed curfews, etc.) are not considered as the norm.
Drawing insights gained from the initial research and Interviews, these Context factors are listed as a foundation to describe the context to be designed for.

1. People find it harder to disconnect from work in breaks and at the end of the day when they work from home.
[S] psych.

2. A healthy work-life balance is gaining in value for workers in exchange for lower salaries.
[T] psych. econ.

3. Working from home enables a deeper flow state while working on tasks, increasing productivity.
[S] psych.

4. In the future, more and more companies will adapt a hybrid work scheme (home and in office).
[T] econ.

5. Machine learning will greatly contribute in the "humanization" of digital products.
[D] dev.

6. Body language is an important part in communication.
[P] evol.

7. Work related notifications on the phone are perceived as demand for action, inducing anxiety.
[P] psych.

8. Giving people responsibility and trust makes them grow faster and be more invested in the company.
[D] socio.

9. Soacial contact has to come naturally, it cannot be forced.
[D] socio.

10. Having different calls one right after the other is exhausting (inertia of context switching).
[S] psych.

11. Companies' recruitment pool will be larger if home office becomes more adapted.
[T] demog.

12. Having a videocall from home is a delicate act for some people. There is a "cultural norm" around it.
[D] cult.

13. Small teams and flat hierarchies perform better when working remotely.
[P] socio.

14. People have the desire to share good and bad experiences as they happen, even if they are small.
[P] socio.

15. American Work culture is more off-balance than european with less longevity on an individual level
[D] cult.

16. Physical rituals like closing the computer or exiting the room facilitate a cut between working - and private time but cannot achieve the same result as a spacial change.
[P] psych.

17. Young professionals might see a carreer disatvantage because of missing out on networking.
[D] demog. socio.

18. The Home office experience might vary drastically depending on your living arrangement and circumstance.
[S] econ. socio.

19. Young professionals are more likely to take advantage of working from home, maybe because they don't have kids yet.
[S] biolog.

20. Small practical and technical issues are perceived more negative and stressful in a home office setting.
[D] dev.

Figure B-3: Context Factors

Domain Description:
"A product that benefits the subjective wellbeing of people working at home."

(Focussing on the individual Home Office Worker)

14

The context factors defined in the previous step are now categorized and clustered according to fields and types. In figure B-3 you can find fields and types at the end of context factor which are then summarized in figure B-4. This grouping of context factors should support finding connections and combinations of different factors and guide the development of the next step which is extracting interaction qualities. In this step, the focus is narrowed and certain categories and context factors are prioritized - such as sociological, psychological and technological - while others are used to limit the context frame - focus on European culture (cultural), younger professionals (demographic)- keeping in mind the project goal.

TYPES →

FIELDS	Developments	Trends	States	Principles
Cultural	2	/	/	/
Psychological	1	1	3	2
Demographic	1	1	/	/
Sociological	3	/	1	2
Economic	/	2	1	/
Biological	/	/	1	/
Evolutionary	/	/	/	1
Technological	1	/	/	/

Figure B-4: Categorizing context factors

Step 5: Designing Interactions

This step of forming a more concrete design goal and interaction vision(s) from interaction qualities is the last step before ideation. The formation of the design goal and interaction vision is the culmination of all the previous steps taken in the ViP process. The goal is to formulate a design goal and interaction qualities that support it, then going back and forth between interaction qualities and design goal, refining them step by step, until solid and clear statements have been established.
Since this is the first ideation cycle and the topic is very open and will be explored through design, this part is not definitive and will be refined and further elaborated at a later stage with concrete ideas and concepts. The Design goal and Interaction Vision at this stage is not definitively set in stone and will be revisited and refined in the next step during ideation.

Design Goal:
I want people to take meaningful and effective breaks throughout the day and actively support them in detaching from work.

Interaction Vision:
Interacting with my concept should feel engaging, supportive and relieving. Like getting supported by an always available sports coach, which helps keeping spirits up and work/life balanced.

APPENDIX C: Cycle 1 - Improving subjective well-being in the home office

Work Zone Insights

- Being outside the zone feels safe and feels good in the morning, knowing you are in the safe zone

- The act of easily entering and exiting the space doesn't feel inhibiting.

- The visual presence of the space is an important reminder about the separation

- The space makes participants reflect on working schedule, habits and certain moments where they catch themselves unnecessarily worrying, refreshing or answering

- In some situations, there is the need to do work activities outside of the work zones (circumstantial)

- Different types of work may require different needs: lightweight task preferably in the living room together with family

- The virtual and temporal aspects (software and working time) are potential components related to the space

- Perception of productivity varies and sometimes participants are tired from working while feeling like not having accomplished anything.

- Susanna has the notifications always off anyway and periodically checks them (Fitz, 2019) while Livia gets more anxious without the notifications because of fear of missing out on things.

- Livia feels more comfortable in receiving notifications and actively ignoring them por postponing an answer, rather than not getting notifications.

- Having the tape makes it easy of stepping out and thus taking a small break because of the low barrier.

- The experiment was relatively easy to do for participants, and they enjoyed participating

- A system like this being introduced by someone externally (like a boss or management) gives participants a sense of justification and validates them for not being available or active when outside of the zone.

- A spacial limitation works better than a temporal work frame for Susanna.

Mailbox Insights

- Voice messages are "awkward" to record, except for situations like on the car or when walking/running, then it is very convenient

- Hearing the voice of a colleague triggers a good feeling and makes the message feel closer and more personal and euphoric compared to text and emojis

- People want to give value to others if they deem it valuable for them (podcast)

- There is a need for a more casual communication channel within a team, where "being professional" is not a rule (like slack) in order to communicate about things that might be related to work, but don't fit an email or slack channel

- Sharing of knowledge and interesting videos and podcasts is something to bond over, using it as a topic for conversation.

- Gifs are often used to express a reaction in a humorous way

- A shared topic within casual and humorous conversation lowers the barrier to join in

- As a new guy I found it hard to post something, being insecure about how it will be perceived, this was not the case with Lukas and Florian.

- Participants felt that they should not post too much, because they don't want others having to read through 30 messages at the end of the day when opening a channel. (not so well suited for conversations)

APPENDIX D: Cycle 2 - The role of AI and SWB within my project

Acting out Digital Assistants for Exploring Trust

Trust in AI is a big topic related to this project, as it has AI and interaction with AI at its core. This year's Mozilla Festival organised a digital workshop with Iohanna Nicenboim from TU Delft as one of the organizers. The workshop consisted in an introduction to the topic of Trust in AI, emphasizing on the urgency and relevancy of the field given the rapid developments and high impact of AI systems.
In groups of 3, we acted out conversations with an AI where one person played the conversational Agent (CA) and the other person could ask questions to it. The goal was to enter into a conversation with the CA and to see how trustworthy the CA's answers and behaviour was perceived.

Some interesting insights gained from acting out this scenario was that the AI is initially perceived as an autonomous entity with independent agency. By probing further on this point, the CA could change this perception by explaining its origin and creator in a realistic way (made by humans from a corporation). By explaining the CA's motives as motives by its creators, a familiar association in the user is triggered and thus makes the CA's behaviour and goals more tangible and comprehensible. By referring to specific regulations (like GDPR) under which the CA and the company operates and obeys by, trust can be strengthened, but a certain level of insecurity still remains. This might be because the user tried to probe for a specific motivation for the company to interact with the user. This was suspected to be harvesting data and monetizing by selling the data and products of interest. The user still remained somewhat sceptical even when the CA explicitly explained that it is there to serve the human and not only to bring financial gain to its creator company. By exposing the "guts" of the CA and letting the user look behind the curtain, issues surrounding trust shifted from having the AI at the centre, to having the humans that created it at the centre.

Takeaway:

It is important that the AI is transparent about the mechanisms at play, what how and why data is processed.
The system should not pretend to be something it is not by tricking the user into trusting it more. This is where the question arises whether the concept should be anthropomorphised or not. Going forward, I think the concept should not take a human appearance or attributes in functions where it is not necessary. In conveying information via language, I think it makes sense to anthropomorphise and think about humanizing the system.

APPENDIX E: Cycle 3 - Co-Creation Session

Additional Outcome:
After reviewing all generated ideas during the session, some participants had similar concepts and overlapping ideas. After summing up and combining relevant parts, 19 general concepts came out of the purge (figure below), and 16 distinct ideas came out of the main session.
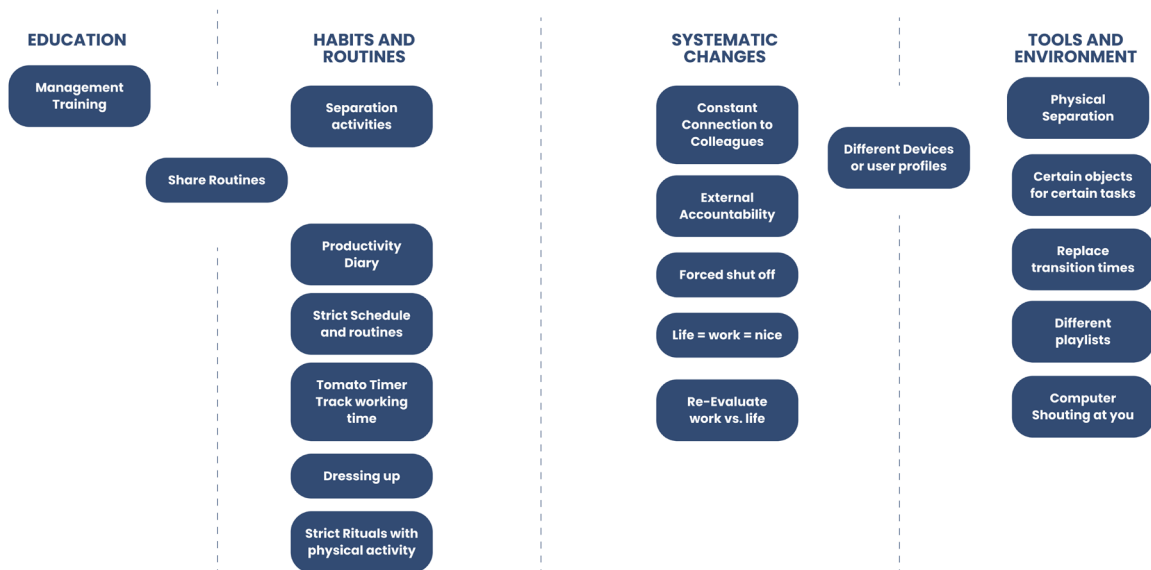

Figure E-1: Ideas generated from the Purge

The purge showed some parallels with previous ideas I had like the sharing of routines and what helps other people (INTERVENTIONS), physical separation (WORK ZONE) .
Some go in line with insights of the interaction tests carried out like External accountability

Main Session Ideas

One Day Off
Abandon all routines and schedules one day a week. Plan in a day for spontaneity.

Reminder To Go Out
Have something outside your house that starts beeping before and after work hours so that you have to go out

Digital Psychologist
The devices around you register your action and then ask how you feel. with learning algorithms going, it understands when you are ok or not, and can give you the right suggestions

Wellbeing tracker
App that tracks your work routine and crosses it with your vital signs -> Have Ai tracking your data (very ethically) and provide supervisors or peers with some sort of emotional meter. Suggesting if someone needs a break or an incentive; Have AI give workers a clear summary of their work routine, when they are most productive and when they feel more energy.

Posture Recognition
Laptop camera uses pose recognition to recognize your posture and so what correlates this with what activity you should be working on : result is reward or pressure to stick to schedule.
Work at different heights throughout the day: start standing, go to sitting on chair, go to sitting on floor - the to lying on foor: that's when the work day is over!

Physical To Do List
Object recongintion e.g. via a headset with integrated lenses tells you what your next task is by identifying object in circle or scattered around the house with an activity. Give specific objects an annotation as the day progresses. A physical clock, schedule and reminder of tasks to do moving from task to task. Place items in a circle and work round the circle as the day progresses. A physical clock, schedule and reminder of tasks to do.

Substitute Yourself
Have AI do the job, you only train and supervise it

Simulate Commute
VR headset to pretend you are on your way to work

Physical On/Off
using an on off button like a switch.
Using a physical element, with a light, that gives you the exact perception that you are working, and then visualize in a way like what you are missing, or why you are doing so if it cost you your health

Problem Compensation
Technology problems e.g. bad wifi result in an output which brings you ‚happier place' - favorite scent

Sensory Change
The conditions in your WFH office (e.g lighting, temperature) change in response to your heart rate. Low lighting for instance signals more relaxed mode, bright bulb suggests pressure and focus mode.

Public Value = Employee Wellbeing
The whole company worth in the stock exchange is managed by an articificial intellgence that base the value on the employee oveerall balance between life and work (accenture will fail in a minute)

Wellbeing Tamagotchi
The Computer have a life - is called Wokky - It born when you join the company, and daily, your care for your own balance maks him health/unhealty, this at the end of every month gives you a bonus or a malus on your salary!
Obviously this entity is connected with a device, wearable, that communicates and register your status, also giving you suggestion on how to improve your life

AI Trainer
Training people to manage their schedule

VR Office
Use VR sets when „at work"and see your collegues around your house

Shocker
A wearable which learns your daily routines and starts to shock you to mix it up and stay creative

APPENDIX F: everydAI - The Final Concept

Raw Results and Quotes

Participant 1:
Introduction
Tool simple but a bit overwhelming, very balance, same amount of attentiion
balanced equally liked
curious, lets see what happens
no idea, no clear vision of recommendations
distinguishing through stud, no moment of doubt

Suggestions from everydAI

distinction between tips and suggestions not super clear
too long to read, some more structure and visual content
both add value
lofi playlist was relevant, unsuspected, good surprise. Skate one too intimate, the other ones not
lofi at 2am pushed at 2 am actually would be too much.
skate interest is understandable, but its different if

Fundamental needs classifier and Tracker
Labels not seen before, only in the "Your needs "
Needs come from AI, wonders what would happen with more complicated
Thinks that AI reads and detecs
He would like to see all of them to know what he is missing on his own.

Trust in everydAI
He didn't mind.
With the skate one he would become sceptic and think about it
if it happens multipl etimes, go to disable it

GENERAL QUESTIONS

What would you change in your routine?
changing habits very hard. Go for a run would not be able to.
running not because a lot of effort, he knows he should do, not consistent.
Small tips would appreciate it, big things ignore like change complete diet

How would you expect a DA to help you in balancing work/life?
Your needs tracker, reminder more on calendar and stuff he already uses. Small things that help and are not very intrusive.

Did the concept make you think about work/life balance and your personal needs as a human to flourish?
Needs tracker yesHe doesn't think about the WHY behind actions like walking and groceries, makes him reflect

24

Participant 2:

Introduction
comfortable in the beginning, trello was familiar.
normally only work, lightness in putting personal tasks
distinction sometimes not so clea, her hobby coincides with work. sometimes not super clear.
in smart working even more blurred line. some personal things are kind of work.
she uses note usually, trello is more relieving. Notes not shared in telephone.

Fundamental needs classifier and Tracker
LEFT: I feel understood wit hthe labelling and I feel guided with the selection of needs to fulfil.
trusts the system, no concern for data infringement
Needs tracker i like because it gives me tangibility of how I perform. Information only for self pleasure
I would like to know a time element in these, I do notice when I need some sort of fitness, but I would like to know from when on I didn't work out or called my mom or was at the hair dresser's. or nails or something.
This temporal element would give me some sort of wake up call.

Trust in everydAI
Absolutely no secrets. . We kind of grew up like this.
I think we are in a post privacy age.
if my information would be shared to other people I know, that would be a line where i would draw the line.
if this woudl end up in the handds of my colleagues and boss then its too much.

GENERAL QUESTIONS
What would you change in your routine?
I would like to limit work time. I would like to create time divisions which are striict. I cant do it because there is too much surprise stuff that comes in unexpectedly and hass to be done immediately. I liked the work zone.

How would you expect a DA to help you in balancing work/life?
It would have to implode the whole system. something that comes from my boss something that would shut off everything after a certain time.

This is too weak of an interaction to help me I liked the zone, because it was strict and had a "massive" impact, but it was controllable by me by going in and out.

Extending Ideas for everydAI

everydAI for Teams

To facilitate Team cohesion within working groups, everydAI could connect to other team members to find common interests to suggest for group activities with overlapping interest areas (figure 6-X). This is an alternative opportunity to connect more meaningfully than company-imposed group activities which are seen more as an obligation rather than being enjoyed (insight from interviews).

Tessa
- 🏠 Home decor
- 🌹 Romance
- 🎨 **Digital Art**

Mike
- 🚗 EVs
- 🎨 **Digital Art**
- 🎸 Guitar playing

Tom
- 🪑 Furniture
- 🪴 Gardening
- 🎨 **Digital Art**

💡**Tip!** Sared suggestion **Mike** **Tom**

In 2 weeks, the Triennale Museum is hosting an interactive digital Art exhibition with works from Jan Bernstein and Jamie Zigelbaum! 🎟️**Tickets**

Figure 6-17: everydAI for Teams

Routine Recovery

Over longer periods of time, habits and routines seem to fade away and people need to be reminded on the benefits and positive experience connected to them, in case they are not replaced with a new routine which fulfils equivalent needs. EverydAI could remind people of positive emotions and experiences to evoke rediscovery of past passions.
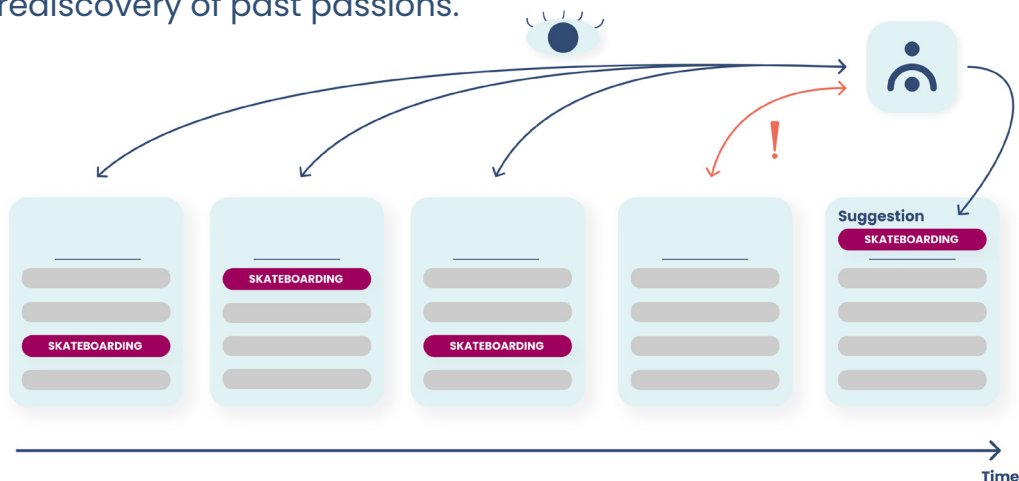
Suggestion
SKATEBOARDING
SKATEBOARDING
SKATEBOARDING
SKATEBOARDING
SKATEBOARDING

Time

Figure 6-17: everydAI for Teams

Time planning

Assigning time for certain activities which are bound to a specific time or timeframe (e.g. beginning and duration of a course) could help users maintain a clearer mind. Therefore, connecting everydAI with a calendar or scheduling function could be a valuable extension. Calendar systems are already widely used

In a Dialog with everydAI

To strengthen judgemenst of everydAI and better understand the user, the system could offer a dialog with the user via a conversational interface for example. By creating a feedback loop assessing how suggestions land with users and how they feel by doing certain activities, their needs and interest profiles could be complemented with additional data and the system gets to know the user even better. A feedback loop on how helpful or impactful tips and suggestions are to the user, could either be implemented with a simple rating system or with a more qualitative input via spoken conversation.

"Did you enjoy the yoga session yesterday? Tell me how it was! "

everydAI

"Yes, it was great! I was really relaxed for once and could shut off completely during the session. I also met some really nice girls there. I think I'll go again the day after tomorrow!"

Tessa
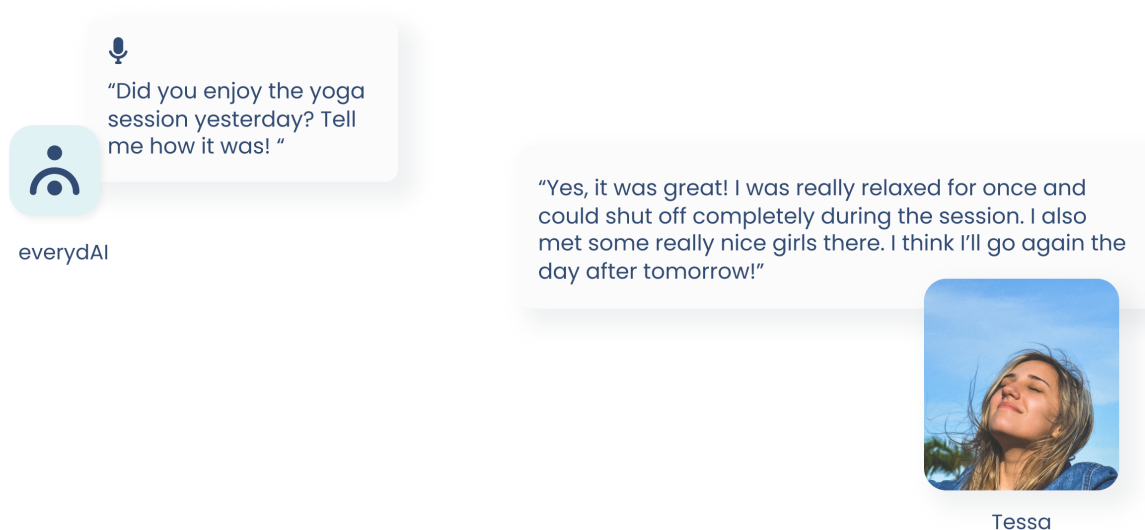
Figure 6-18: In conversation with everydAI for better judgements

Personal Project Brief - IDE Master Graduation

_____ project title

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

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

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

space available for images / figures on next page

Initials & Name _____   Student number _____

Title of Project _____

introduction (continued): space for images

image / figure 1: _____

image / figure 2: _____

Initials & Name _____   Student number _____

Title of Project _____

Personal Project Brief - IDE Master Graduation

PROBLEM DEFINITION **

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

ASSIGNMENT **

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

Initials & Name _____   Student number _____

Title of Project _____

PLANNING AND APPROACH **

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

start date _____ - _____ _____ - _____ end date

Initials & Name _____ Student number _____

Title of Project _____

MOTIVATION AND PERSONAL AMBITIONS

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

FINAL COMMENTS

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

Initials & Name _____   Student number _____

Title of Project _____