

Cross Disciplinary Team Work: Building an e-learning platform for Chainge

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1 Introduction

Climate change is one of the most pressing issues globally, and demands action today. Organisations increasingly focus on sustainable initiatives, which contribute to transforming societies towards sustainability (Bradbury & Clair, 1999).

Chainge is an organisation contributing to this transformation. Chainge was established in 2019 by Paul Blakemore and Torben Damgaard Nielsen who promote sustainable goods transportation. The ambition for Chainge is to reduce the number of diesel vans transporting goods in Copenhagen by offering a sustainable alternative that reduces particle pollution and CO₂ emissions. Chainge does this by utilising electric cargo bikes to deliver packages from Business-to-Business and Business-to-Consumers (“Chainge,” 2021a).

Chainge’s mission aligns with FN’s Sustainability Goals, more specifically number 11 (“Chainge,” 2021b) and number 13. Goal number 11 entails promoting sustainable cities and communities, while goal number 13 entails curbing climate change by reducing greenhouse gas emissions (United Nations, 2021). Sustainability is thus deeply embedded within Chainge’s business model and strategy.

1.1 Case Description

One of the primary concerns of Chainge is to increase their drop-off rate for the new bike drivers. Every minute during delivery has an impact on the profitability of Chainge’s business model and cost for its customers. In this regard, it is vital that new drivers are onboarded as efficiently as possible. The overall goal of this project is therefore to optimise the drop-off rate of deliveries by focusing on optimising the onboarding process.

The scope of the project is to improve the onboarding process for new *Drivers*, as the bike drivers are called. The current onboarding process was presented by the Founder and CEO of the company, Torben, and was described as an unstructured process that could be improved. Nonetheless, the flow of the process and the sequence of actions seemed to be working well. Therefore, our focus is not to redesign the entire process but to explore what and how information should be delivered to the new employees at the beginning of their employment.

Furthermore, we decided on this problem area because we identified an opportunity for combining our competencies to accommodate Chainge’s need for increase the drop-off rate in combination with onboarding new Drivers.

1.2 Research Statement

To focus our research at Chainge, we have formulated two research questions. Research question 1 is problem oriented while research question 2 focuses on possible solutions to problems found in research question 1.

- *Research question 1:* What challenges affect the Drivers in the onboarding process at Chainge?
- *Research question 2:* How might we improve the onboarding process to make it more efficient for the Drivers and Chainge?

2 Methodology

Our process for addressing the research questions was structured using the Double Diamond model, as described by Norman, D (2002, pp. 220–221). In fig. 1 we see which methods were used in a given phase. Broadly, we used observation and interviews for exploring fundamental issues. For converging on the problems experienced we used color coding to see which problems were experienced by study participants. With a focused problem, we explored several ideas in an ideation workshop using brainstorming and sketching. In a group discussion, we converged on an idea for further prototyping that was to be implemented in code. We chose an idea which was 1) grounded in empirical data and 2) realistically could be implemented within project time restrictions. A high fidelity prototype was coded and tested on potential users from ITU. Each method is explained in more depth in the following sections.

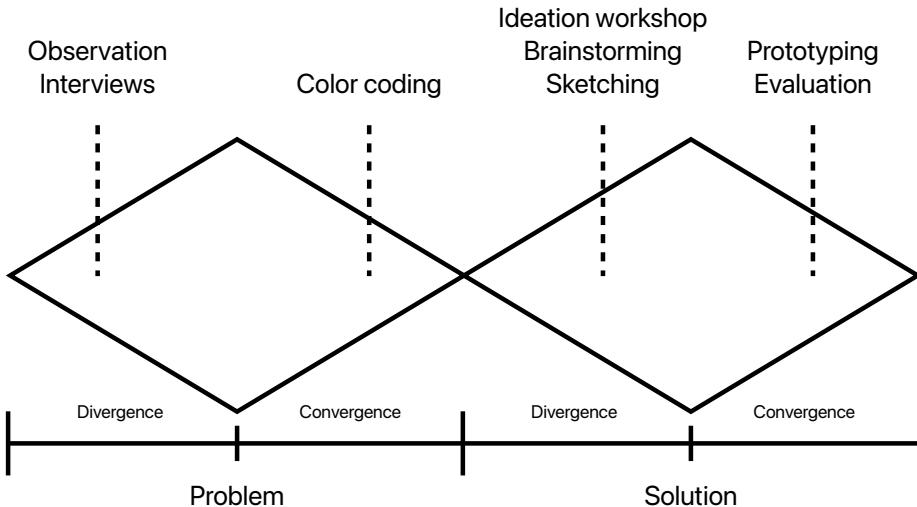


Figure 1: Our instance of the Double Diamond process model.

2.1 Interviews

As part of the empirical gathering, we interviewed Torben, the Founder and CEO of Chainge, to get an understanding of the business in general and the onboarding process. The interview was informal and involved an introduction to the facilities at the headquarters and the electric cargo bikes. To remember the context of the headquarters we took a series of pictures (see fig. 2). Due to the nature of the interview, we had not created an interview guide. The interview was informative and provided a great understanding of the business and strategy. The session with Torben also had a positive impact on our collaboration due to the informal talk in between case related subjects. Nevertheless, the interview supported us in clarifying

and guiding us towards the next step in the process.



Figure 2: The Head Quarters of Chainge

We wanted to interview Drivers working at Chainge to learn more about their work tasks and the onboarding process. Torben from Chainge assisted in arranging interviews with newly hired Drivers a week later. We wanted to interview Drivers that had recently experienced the onboarding process or were in the middle of the onboarding. We conducted three interviews with new Drivers that had worked at Chainge for less than four weeks. The three Drivers had worked at Chainge for one week, two weeks and three weeks respectively.

The interviews were conducted at Chainge's headquarters to make it convenient for the

interviewees. Prior to the interviews, we created an interview guide to structure and facilitate the interviews. This guide was semi-structured, which is more flexible for structured interviews but not as loosely structured as unstructured interviews (Bryman, 2016). The interview guide provided flexibility for questions that suddenly arose but at the same time managed the interview in a way so we did not deviate from the planned questions.

2.2 Colour coding of data

Numerous frameworks and tools exist for grouping interview data in categories. We chose an accessible and visual methodological approach of highlighting words and sentences with colors, each color corresponding to a category in our coding format table *tbl. 1*. It illustrates the colours and the corresponding definitions.

Table 1: Colour Coding Table

Colour	Definition
Green	Positive aspects of the Drivers' job
Yellow	General knowledge about work practices
Red	Challenges/insecurities experienced by Drivers

The three color codings were chosen, as we would be able to clearly highly positive aspects of the onboarding process that should not change (green code), information that might be needed in the corresponding solution (yellow code) and challenges and/or insecurities that need to be addressed in the onboarding process (red code).

2.3 Participant observation

As part of our empirical gathering, we have conducted participant observation. Spradley has categorised different degrees of participant observation. We utilised the type of participation classified as passive participation. ~~Spradley applies the insider/outsider perspective to explain the degree of participation~~ (Tannenbaum & Spradley, 1980).

The person being observed was one of the interview respondents that was also a newly hired Driver. This observation was arranged during our interview with the Driver. The Driver agreed to being observed while driving a delivery route for Chainge. The Driver was followed on bike by two of the students from the group and was observed while performing his work tasks. ~~The students did not seek to maintain a balance between an insider/outsider perspective as they merely behaved as outsiders to observe from the outside.~~ The students drove after the Driver so they were present at the scene but they did not participate in

performing the work tasks. We decided to pursue participant observation with the aim of exploring tacit knowledge about the work tasks that was not vocalised during the interview.

Additionally, we wanted to take pictures and videos as they could be useful later on and as a point of reference for the remaining students that did not participate.



Figure 3: Pictures showing the trailer and checklist used by Drivers.

2.4 Ideation Workshop

Grounded in the themes identified through our category-coded interview data, we conducted an internal ideation workshop with brainstorming as the main focus, wherein we explored the design openings and potential solutions. Our approach was to ignore the technological possibilities *in situ*, as well as any constraints, leveraging a user-centric approach instead. In this process we emphasised the benefits a solution would have on Chainge employees, based on the problems they vocalised in our interviews. .

Kolko describes how brainstorming emerged as a playful and creative way of problem solving. Four principles are relevant in a brainstorming session: to avoid criticisms, encourage crazy

ideas, produce a variety of ideas and utilise the ideas from the team members to build upon to extend ideas (Kolko, 2018). According to Kolko, empathy is the foundation of participatory design practice.

We brainstormed themes on a whiteboard to figure out what should characterise the solution. Afterwards, we individually marked three words each that we found the most important. It became evident through this process that the central theme of our solution should be the existence and contextual accessibility of structured, standardised information on work practices and responsibilities for Change drivers. We have strived to be empathetic in the brainstorming within the group to be open-minded and explorative when being presented to ideas.

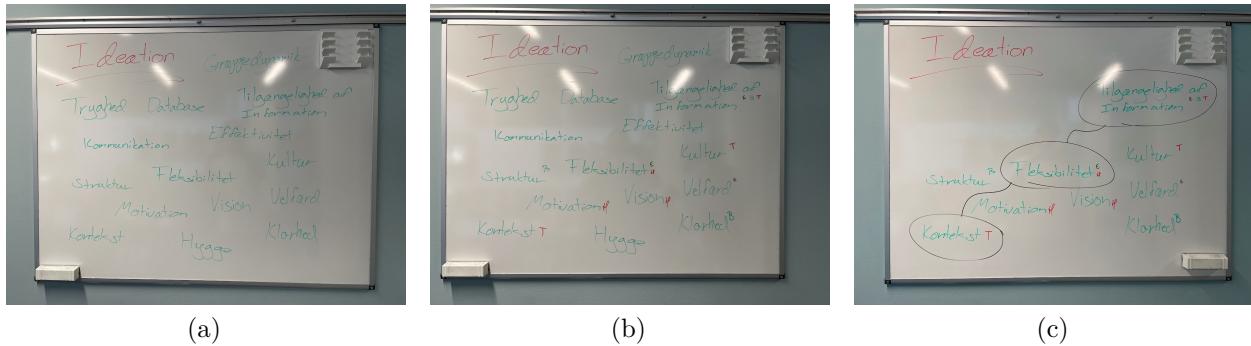


Figure 4: Subfigures caption

Reflecting on our sketching process led to us discussing potential sources of inspiration. One of our sketches illustrated an e-learning platform, and it reminded us of Apple's Developer application fig. 6, which consists of a list of links leading to pages containing a video, description and resources with references. We sampled this for the development of our prototype, as it shares our design goals.

2.5 Prototyping

Our prototyping process began with a discussion of which elements of the design should be emphasized or de-emphasized. Because our prototype was a small component in the larger context of a platform, the operational medium had to be perceivable as one component of many collective components.

Buchenau and Suri raise the notion that a prototype is any medium produced to communicate or explore ideas (Buchenau & Suri, 2000). Our goal was to not only communicate amongst ourselves a representation of our collective ideas, but to also communicate to and explore it with potential end-users.

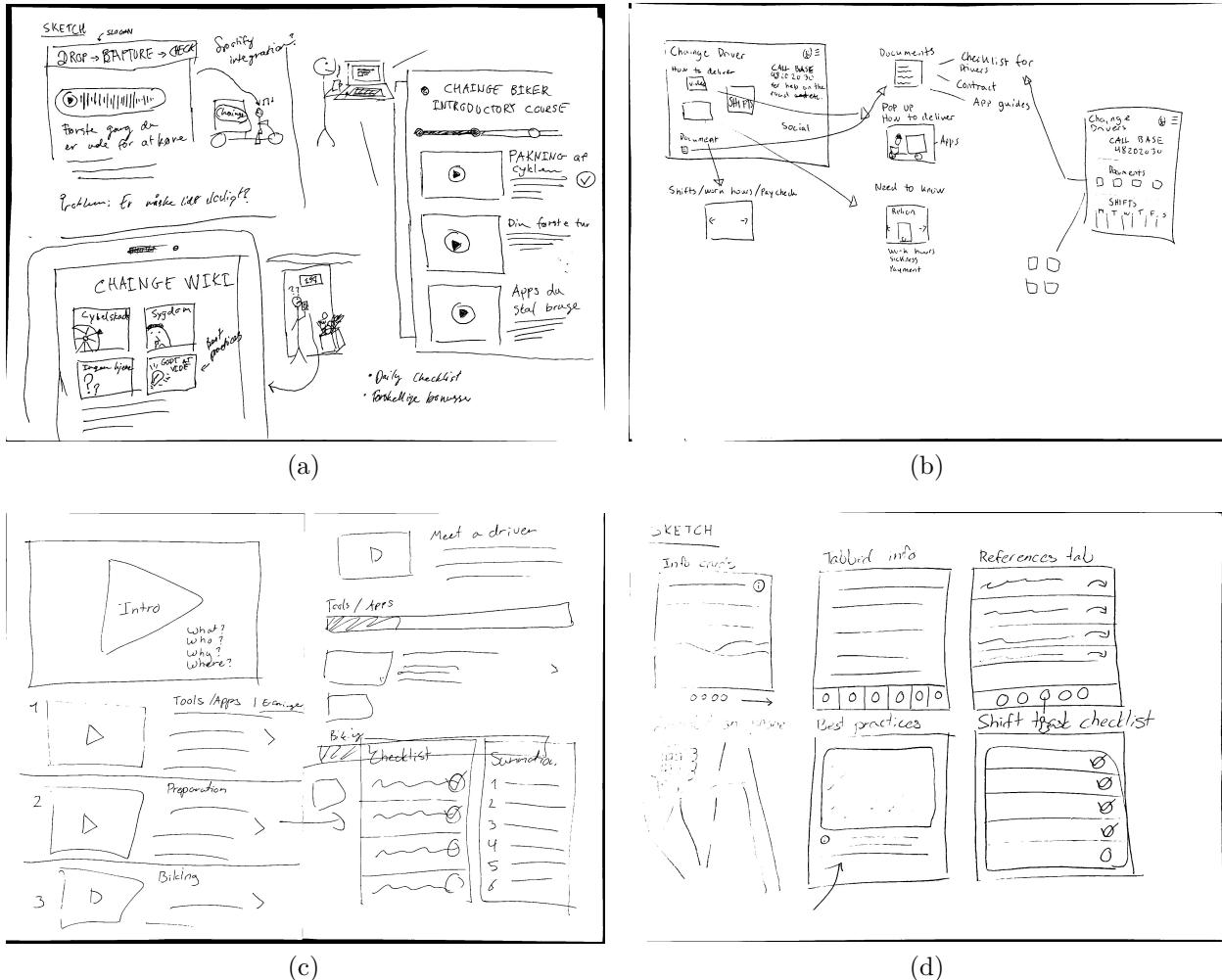


Figure 5: Subfigures caption

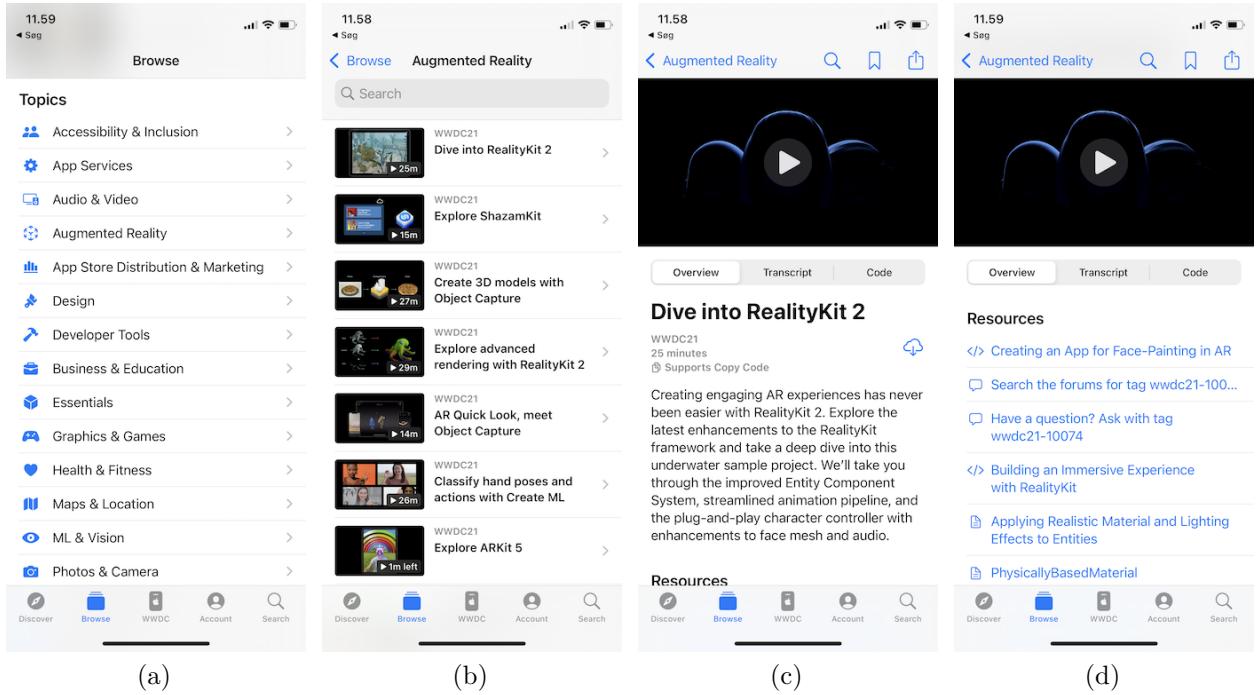


Figure 6: Subfigures caption

Stotlerman et al. argue that prototypes manifest in three dimensions: medium, resolution, and scope. Our prototype reflects these dimensions by being consciously shaped as a digital platform, with a high degree of fidelity, and a scope fixed to the learning component. We chose to build a high-fidelity prototype based on our low-fidelity sketches, because we were less interested in co-designing with users, and more interested in presenting a highly-structured and accessible platform (Lim, Stotlerman, & Tenenberg, 2008).

2.6 Evaluation

We decided to test the prototype with a individual that do not work at Chainge. A technical description of the prototype is outlined in sec. 3.2.3. The target group of the prototype is new Drivers, therefore we did not find it relevant to test it on existing employees as they are potentially biased from their experience working at Chainge. We tested the platform on a individual studying at ITU. The test was mostly concerned with a proof of concept and to identify potential pain points. We wanted to explore if the prototype was easy to navigate. Additionally, we wanted to show the video on the platform to get information regarding if it showcases the different work tasks that a Driver can be presented with.

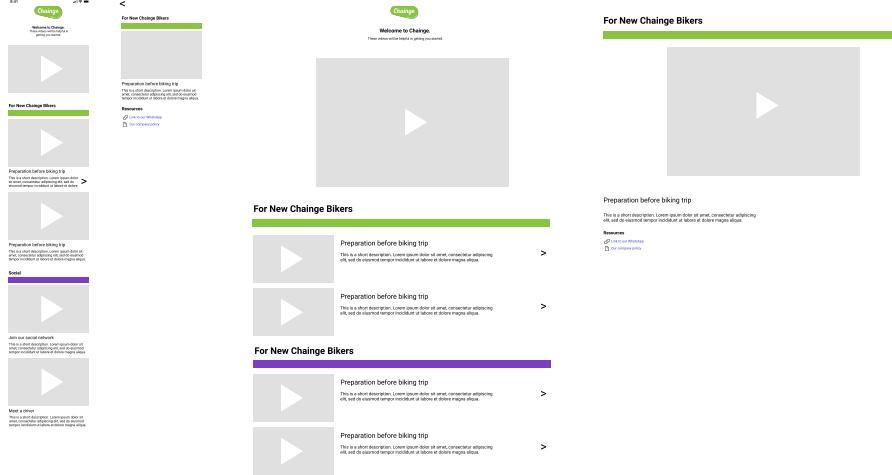


Figure 7: Mockup of solution

3 Findings

The following sections will answer our research questions. Sec. 3.1 will answer our first research question “*What challenges affect the Drivers in the onboarding process at Chainge?*”, while sec. 3.2 will answer the second research question “*How might we improve the onboarding process to make it more efficient for the Drivers and Chainge?*”

3.1 Challenges in Onboarding Process

Through our interviews, observations and following analysis of data, we found several challenges that affect Drivers in the onboardring process (see tbl. 2).

Table 2: Challenges experienced by Drivers

ID	Challenge
1	Drivers receive large amounts of information in an unstructured manner
2	Procedures or practices not learnt before first ride

1: Drivers receive large amounts of information in an unstructured manner

One of the more important observations we made occurred just before a planned observation session with one of the newly hired drivers as mentioned in sec. 2.3. This observation suggests that the current onboarding process does not give new Drivers structured information concerning their job. Furthermore, the amount of information given before their first drive was significant with many details to remember. For example, the manager explained how certain product items on a product list are prepended with characters that have special importance to the delivery. This is further supported by our interview data (see appendix 2.1). One interviewee mentioned how he somewhat got the information he needed to do the job properly, however, this information needed structure and could be better formalised (see appendix 7.1.1). So while employees at Chainge use valuable time to share information concerning Driver's job, the information is challenging for Drivers to consume because there are large amounts of it just before their first drive, and it is presented to them in an unstructured manner. This valuable time by Chainge could be more productively used elsewhere in the company for other tasks. A consequence of the challenge could potentially result in more errors when delivering products which can affect the drop-off rate. In this regard, one interviewee mentioned that while the job is not difficult it still needs to be done systematically to circumvent negative consequences (see appendix 7.1.1).

2: Procedures or practices not learnt before first ride

One incident during one of the interviews was particularly interesting. When the interviewee was asked about challenges related to job tasks, she referred to a situation where the recipient was not home to receive the package. Instead of bringing the package to the headquarters, she went back later on her delivery route to try and deliver the package again (see appendix 7.1.3). The interviewer that conducted the interview would probably not have paid special interest in the statement if Torben had not explained the standard procedure some days in advance. The standard way of working is to only try to deliver the packages once and if nobody is at the designated location, then the package is to be brought to the headquarter, as too much time is otherwise spent on delivering a package which hurts the drop-off rate. Another similar example was experienced by another interviewee. He explained that he had trouble locking his bike so he had make a call to headquarters to learn how to do the procedure of locking the bike (see appendix 7.1.2). These examples show how drivers have not learnt certain procedures and practices before their first ride, even if the procedure might be important for Chainge's profit (first example) or is relatively simple to do (second example).

3.2 Solution

Due to the scope of the project, the proposed solution is designed for internal use only as the users are employed at Chainge. The users of the solution are primarily the new Drivers but also the existing Drivers and the management of Chainge. The solution was developed by following the approach described in sec. 2.4. It based on the previously described challenges in sec. 3.1 to accommodate Chainge's needs.

We have named the solution *Trainge* (Train + Chainge) and in a final form it would consist of multiple larger components. Due to course time restrictions, our prototype only illustrates one of these components within the Trainge platform. This component is an realisation of an e-learning platform that contains videos and other resources that can educate new drivers. It can be viewed by clicking this link (or enter this url into your browser: <https://emilbartholdy.github.io/Trainge/>).

Welcome to the Chainge Knowledgebase

Watch these videos to help you get started.



Tools

Introduction to Relion app: Shift planning

You will use the app called Relion for scheduling shifts and plan your work days. You need to register your work hours in the app after each shift. If you are planning on going on vacation then you need to contact your supervisor to get it approved and mark it in the app.

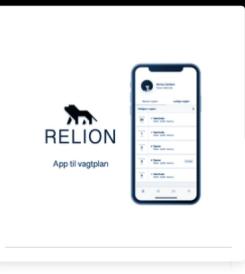
 RELION
App til vagtplan

Chainge
A bike movement

Introduction to Relion app: Shift planning

You will use the app called Relion for scheduling shifts and plan your work days. You need to register your work hours in the app after each shift. If you are planning on going on vacation then you need to contact your supervisor to get it approved and mark it in the app.

 Back



Operire auxiliaria

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Figure 8: Right: Home page of the e-learning part of *Trainge*. Different videos present themselves and are tagged so that Drivers can see the overall theme of the video. In this example the uppermost video is about tools they use as Drivers. Left: The content of a video page. It shows the video itself, along with explanatory text and other resources, if needed.

The solution solves both challenges

As stated, the proposed e-learning section is part of a platform that is accessed with login credentials to personalise the content and to ensure data security. The idea behind this platform is to create a space for each individual Driver to obtain and store knowledge relevant to their job. The proposed solution is designed to assist the Drivers whenever they need support. For instance, the platform could be useful to utilise when in doubt of which app to use when delivering packages for a specific client or how to use internal apps. In this case, the Driver could watch a video describing in detail what action is needed. One of the interviewees described that he did not receive an introduction to how to use one of the apps so he needed to figure it out by himself (Interview 1). It could be an ideal use case for utilising the proposed solution to watch a video about the app.

The videos are intended to be informative and accessible ad hoc. We imagine that the videos are especially valuable in the beginning of employment, when there is a lot of new information to process and memorize. The e-learning section addresses the challenge concerning lack of knowledge of Chainge's procedures and practices.

3.2.1 User Testing

We evaluated and tested the prototype with a respondent. We wanted to test if the respondent understood the Driver's potential work tasks by viewing the video that we have created. The tester confirmed that the high fidelity prototype was easy to use and understand. The tester suggested new features that could be added to the platform. We have not implemented the suggestions due to the scope of the course.

3.2.2 Organizational Context

The proposed solution is valuable for the management of Chainge. The platform is digitising and standardising work routines, consequentially optimising the use of resources spent on onboarding new drivers. During participatory observation at the headquarters, we observed a manager at Chainge explaining to three new Drivers how to pack a cargo bike for a certain client fig. 3 . The manager was also responsible for picking up the phone if the Drivers were out delivering packages and needed assistance with situations related to delivering. The manager's phone rang while he explained the process to the new Drivers. The resources could be spent differently and the walk-through could be replaced by a video outlining the process.

The proposed solution could be a valuable asset for Chainge in allocating responsibilities more efficiently which could have great impact on the business.

The proposed solution does also entail an element for storage of documents. The documents should be relevant for the individual employee, for instance, a work contract and paychecks.

The Driver that we interviewed did not have any knowledge regarding where they could find their paycheck and one of the interviewees had not received a contract yet (Interview 1, Interview 2, Interview 3). The described storage element could be the primary location to place such documents which would ideally create alignment and eliminate confusion.

3.2.3 Technical Implementation of the Prototype

The Trainge prototype is built as a web application written in a functional style using F#, as F# offers many language features that prevent program errors compared to other languages such as Javascript or Typescript. Using the Fable F# to Javascript compiler, the prototype is then able to be run as a web application in the browser. The F# code robustness is transitively applied to the resulting compiled Javascript when using Fable.

Several large frameworks are used to realise the prototype, mainly the React and Bulma frameworks which are used to define the structure, look and reactivity of the prototype. Reactivity is important, as it allows the UI to become driven by data instead of imperatively/manually updating relevant UI components when the underlying data changes. This is automatically afforded to us using React. As React is not a native framework to the F# language, an auxiliary library called Feliz is used to interface between F# and the Javascript-based React framework.

The code is structured using the Elm Architecture (TEA). TEA is a way to split an application into smaller applications or components that are easily composed together without introducing unnecessary coupling between said components. Essentially, it is a way to control *spaghetti code* and make sure that error inducing changes in one part of the prototype does affect another part of the prototype. This is strictly not necessary for a small prototype as Trainge, but hugely useful in the case Chainge needs to scale up the prototype to a fully fledged application.

4 Discussion

we initially modelled our phases of inquiry and development onto the Double Diamond. Using the Double Diamond as a guiding reference throughout our process. As our approach was neither agile nor iterative, the final documented process ended up fitting well onto the Double Diamond model, as we diverged into the problem area, converged on a specific problem, diverged into the solutions, and converged on developing a prototype, fig. 1.

5 Reflection

- Not an iterative approach because the solution is not tested on users/non-users (Emma)
- Used double diamond model as 1) we needed to create prototype and 2) we needed a common language to understand where we were in the process and where we were headed.
- Why did we do what we do

Jacobs and Frickel (2009) have reviewed various studies of interdisciplinarity, and . . . little diffusion of ideas across disciplinary boundaries. These studies advocate for interdisciplinarity to operate under the assumption that disciplines are disconnected from each other and inhibit innovation (Jacobs & Frickel, 2009). In contrast, Jacobs and Frickel (2009) argue that different disciplines inform each other when collaborating and should therefore be viewed as networks.

Interdisciplinary teamwork forces us to reflect on things we take for granted within our own field of study. In relation, Bechky (2003) state that “knowledge is constructed within a particular social context” (Bechky, 2003, p. 313). In the project. Our own situated knowledge brought into this project from our various disciplines gave rise to misunderstandings. The discussions in our team were therefore characterized by different disciplines trying to explain their understanding of the problem or context. Through these talks where key differences in our disciplinary context were highlighted, we built a shared understanding of the case (Bechky, 2003, p. 324).

- **Shared vocabulary:** we needed to agree on the meaning of terms. I.e *implementation* meant something different to all of us.
- **Knowledge:** we shared our theory, but only that which we could back up with sources.
- **Process:** more ethnographic than Computer Science. more technical than Business or Design. different tools and experience with tools.

When visualizing our knowledgebases as T-shaped, we see this course as strengthening the general knowledge of each other’s disciplines and thus aid in preparing us for future interdisciplinary collaborations.

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7 Appendices

7.1 Appendix A: Interviews

7.1.1 Interview 1 - Chainge Drivers - Klaus

Duration: ~20-30 minutes

Introduction

We are four students from ITU. We are collaborating with Chainge to enable higher urban sustainability. One way we're attempting to do that is helping the new drivers have a better experience of the onboarding process to help Chainge grow.

Question	Answer
What is your name?	Klaus
How old are you?	29
How long have you worked at Chainge?	Startede i går. Var til samtale i sidste uge.
Why did you choose to apply for this job?	Fleksibilitet, kan selv vælge vagter. Penge. Fik interesse i Chainge fordi de afspejler hans værdier, f.eks. at få dieselbiler ud af byen. Der var fokus på den "tredobbelte bundlinje", aka økonomi, miljø, socialt.
How/where did you find the job?	Facebook feed
How do you approximate your job responsibilities?	Ansvarlig overfor Chainge, fordi de er ansvarlige overfor deres partnere. Hvis han ikke gør arbejdet ordentligt, så ser Chainge dårlige ud overfor deres partnere, som betaler. Ansvarlig overfor kunderne som leveres til. Ansvarlig for ikke at fucke op. Kører som et dumt svin; vælter på cyklen, kører folk ned, taber varer. Hvis han ikke havde pakket cyklen ordentligt, ville han ikke have det rigtige med ud på en kørsel.
How would a fuck up look?	Han blev overrasket over at cyklerne skal pakkes, han havde hørt at de var pakket i forvejen. Der har ikke været nogen som hjælper ham under hans første kørsel. Han har skulle sætte sig ind i deres app.

Question	Answer
How's the app usage going?	Det gik okay. Den virkede ikke optimeret til deres form for leverance. Den virker som en tredjeparts app, som er udarbejdet til frugt.dk. App'en virker påbudet frem for lavet til formålet.
What information do you bring with you on a ride?	Addresserne, som bliver til ruteplan / Google Maps GPS. Vareliste, hvad skal afleveres. Vogn. Noter med specifikke instrukser til de forskellige stede, som ikke er lige så godt udfyldt ifht. kundens forventninger. Instruktionerne stemmer ikke overens med hvad kunderne siger de ville have foretrukket. Han ved ikke om det er kunden der har udfyldt det forkert.
Where and how do you register your work hours?	Ikke endnu. Har hørt at der er en app, men ved ikke hvilken.
Where and how do you receive your pay check?	Har ikke fået kontrakt endnu. Forventer en bank konto overførsel. Har hørt at arbejdsperioder er 21. til 20. i måneden.
What happens if you are sick or unable to work?	Forventer ikke at blive betalt sygedage, og at han bare bliver hjemme når han er syg.
How and to who do you report it?	Ved ikke om der er en officiel måde at gøre det på, men han ville skrive/ringe til Poul. [Nævner ikke om tidsfrister osv. f.eks. før et bestemt tidspunkt på dagen]
What are the perks of working for Chainge? (fridge with drinks for drivers)	Sodvand. Kan leje en cykelvogn for 50 kr. hvilket er godt til at flytte ting.
Do you feel confident in knowing your job responsibilities and tasks?	Ja, følte sig lidt skrøbelig første dag, men her dagen efter føler han de første fuck ups er kørt igennem.

Question	Answer
What could those fuck ups be?	Han skulle have taget billeder efter aflevering, og hvor de er blevet afleveret. Det var han ved at glemme ofte. GPS kan fucke. Kan fucke lidt op i pakningen, så han kunne ikke få alt det med han måske burde. Han skimmede hurtigt listen over hvad skulle med. Det kan blive forvirrende. Det er ikke super kompleks, men det skal gøre systematisk for at undgå negative konsekvenser.
Are there other fuck ups?	Var ved at glemme et stop på ruten. Kom til at krydse det forkerte af. Vil gerne gøre det hurtigt, men godt og grundigt især første gang. Der er et høj detaljegrad krav, og det er let at lave fejl.
Do you know what an onboarding process is? (we describe the onboarding process as the very first contact with Chainge to you as an experienced driver at Chainge.)	Ja
Describe the onboarding process for Chainge.	Jeg fandt et opslag, skrev en kort mail til dem med sit CV, Torben ringede samme dag og sagde hans profil var interessant og de aftalte en dag hurtigt. Han kom ind og snakkede med Poul om cyklen, og med Torben om mulighederne i virksomheden. Snakkede om sygedage, app til planlægning af vagter, og kort intro til hvordan det fungerer. Konstant asterisk om at Chaigne er et startup, og at det derfor kan være kaotisk/i ændring.
How was the first day?	Lærte at pakke vognen, at der var racks som optimerede pakningen osv. Blev påmindet om at være søde overfor kunderne. Det er lidt ad hoc, learning by doing.

Question	Answer
How did the onboarding process feel to you?	Jeg synes at jeg nogenlunde fik det af vide jeg skulle bruge. Tænkte med det samme at der manglede nogle informationer og noget struktur, samt at der var nogle best-practices som skulle nedskrives, især ifht. pakningen. Der er 2 hold til pakningen, og det kunne være fedt med noget formalisering af deres samarbejde.
What was things you like about the process?	Synes ikke jobbet er komplet, og er derfor glad for at onboarding processen ikke føles som 2 ugers lektier.
What do you not like about the process?	Glæder sig til at se vagt booking app'en, om der f.eks. er kamp om vagterne. Glæder sig til at se om der er en WhatsApp gruppe.
Was there anything you missed? Information, tools, guidance?	At onboarding var mere struktureret, så det ikke tog så meget tid for Poul, fordi Poul har travlt.
How familiar were you with traffic rules before starting? Were you taught any rules after starting?	Har kørekort, så han har personligt styr på trafikreglerne, men har ikke info fra Chainge. Blev spurgt af Chainge om han havde kørekort. Fik at vide han skulle række helt ud med armen når han skal signalere på cyklen.
What challenges did you have? How did you solve those challenges?	Vognen er større end man tror
Would you recommend the job to a friend?	Ja, ud fra arbejdsmiljøet
If you should quit your job, what would be the reason?	Når måske sit limit hvis vejret er for lort

7.1.2 Interview 2 - Chainge Drivers - Asger

Duration: ~20-30 minutes

Introduction

We are four students from ITU. We are collaborating with Chainge to enable higher urban sustainability. One way we're attempting to do that is helping the new drivers have a better

experience of the onboarding process to help Chainge grow.

Question	Answer
What is your name?	Asger
How old are you?	24
How long have you worked at Chainge?	Two weeks - six weeks
Why did you choose to apply for this job?	X
How/where did you find the job?	X

Work tasks

How long is a typical work day? (hours)

- 3-5 hours

Describe a typical work day...

What are your responsibilities during a shift?

- Check in - check out
- Check the bike after shift
- App - Relion (type in work hours, shifts)
- App - Rutific

What tools do you bring with you on a ride?

- Rain coat, phone and headphones (for Google Maps)

What information do you bring with you on a ride?

- Nothing
- Check in - check out
- Check the bike after shift
- App - Relion (type in work hours, shifts)
- App - Rutific

Registration

Where and how do you register your work hours?

- Relion app

Where and how do you receive your pay check?

- Don't know

What happens if you are sick or unable to work?

How and to who do you report it?

- Don't know
- Ask on what's app

Do you find a replacement driver for your shift?

- Ask on what's app

What are the perks of working for Chainge? (fridge with drinks for drivers)

- Free fruit, soda and beer

Onboarding process

Do you feel confident in knowing your job responsibilities and tasks?

- Yes
- Always one ready on the phone to help

Do you know what an onboarding process is? (we describe the onboarding process as the very first contact with Chainge to you as an experienced driver at Chainge.)

- Getting to know the job tasks and responsibilities

Describe the onboarding process at Chainge.

- Met the partners and was introduced to the bike. He tried the bike for 10 minutes. He was not told about working extra and pack the bikes with boxes.
- He had a test run a few days after where he delivered 10 packages (2 hours duration).

How did the onboarding process feel to you?

What was things you like about the process?

- It was easy

What do you not like about the process?

- Nothing

Was there anything you missed? Information, tools, guidance?

- Not that he can think of

What tools, information etc did you receive concerning driving in Chainge (e.g. handbook, apps)?

- App - Relion (admin app)
- Phone numbers that had to be typed in to his contact list on his phone

How familiar were you with traffic rules before starting? Were you taught any rules after starting?

- Very familiar as he is used to bike in the city.
- Chainge taught him to use his arms to indicate turns and to exaggerate it a bit because of the big storage box.

Describe your first drive you took on your own.

What challenges did you have? How did you solve those challenges?

- Could not lock the lock on the bike the first time so he called the office to get help. They said it was a standard lock which made him feel a bit dumb and then he continued with his work tasks.

Job satisfaction

If you should recommend the job to a friend, what would you mention?

- There is a lot of running up and down stairs which is hard
- Must enjoy biking
- Should not get stressed when biking as some drive slow and others fast.

What do you enjoy about your job?

- The flexibility - able to take new shift or change shifts if needed

If you should quit your job, what would be the reason?

- Moving to a new city which he is
- Seasonal changes - would prefer to drive during spring and summer

7.1.3 Interview 3 - Chainge Drivers - Johanne

Duration: ~20-30 minutes

Introduction

We are four students from ITU. We are collaborating with Chainge to enable higher urban sustainability. One way we're attempting to do that is helping the new drivers have a better experience of the onboarding process to help Chainge grow.

Question	Answer
What is your name?	Johanne
How old are you?	21
How long have you worked at Chainge?	30 august
Why did you choose to apply for this job?	Recommended from a friend

The flexibility Non-human contact | | How/where did you find the job? | Applied on the website No possibility for uploaded a CV or motivational letter |

Work tasks

How long is a typical work day? (hours)

- Shift from 15-18 but Johanne is not done until 20
- Don't know when things are supposed to be delivered

Describe a typical work day...

What are your responsibilities during a shift?

Only the bike - no packing

Know the route and deliver the packages to the right people

What tools do you bring with you on a ride?

- The app with the route

What information do you bring with you on a ride?

- Safety first

Challenges

- If the people are not home - tried once to go back on own initiative but it took a long time

Registration

Where and how do you register your work hours?

- App Relion - able to

Where and how do you receive your pay check?

- Don't know but think it comes on eBooks

What happens if you are sick or unable to work?

- Can swift shifts in Relion
- Uses what's app to talk about shifts if there is a shift to take

How and to who do you report it?

- Don't know but thinks she is suppose to call in the morning
- Don't know if there is a timeframe

Do you find a replacement driver for your shift?

- It depends - if early then Paul sorts it

What are the perks of working for Chainge? (fridge with drinks for drivers)

- Lunch breaks together with co-workers on Sundays because they all work more than six hours and therefore are eligible for a lunch break

Onboarding process

Do you feel confident in knowing your job responsibilities and tasks?

- Yes because they are good to answer questions in base/office

Do you know what an onboarding process is? (we describe the onboarding process as the very first contact with Chainge to you as an experienced driver at Chainge.)

Describe the onboarding process for Chainge.

- Applied on the site → interview on premise + tried the bike with and without battery
→ test run a few days later with a small delivery

How did the onboarding process feel to you?

What was things you like about the process?

- Safety first
- No pressure to rush on the bike

What do you not like about the process?

- Nothing

Was there anything you missed? Information, tools, guidance?

- Would like to see the pay-check and "hovedkort"

What tools, information etc did you receive concerning driving in Chainge (e.g. handbook, apps)?

- Received an email with information about the bike and rules

How familiar were you with traffic rules before starting? Were you taught any rules after starting?

Describe your first drive you took on your own.

- A bit shy in the beginning

What challenges did you have? How did you solve those challenges?

Job satisfaction

Would you recommend the job to a friend?

- Yes because of the flexibility
- Bad payment
- Good leadership and healthy work environment

What do you enjoy about your job?

- Flexibility
- Enjoys the ride

If you should quit your job, what would be the reason?

- Bad payment
- No competition

7.2 Appendix B: User Testing