Plan Overview

A Data Management Plan created using DMPonline

Title: The development of Circular Building Hubs

Creator: Quinten Isselman

Principal Investigator: Ir. (Mart) van Uden PhD

Data Manager: Quinten Isselmn, Ir. (Mart) van Uden PhD

Project Administrator: Quinten Isselmn

Contributor: Dr.ir. J.N. (Jaco) Quist

Affiliation: Delft University of Technology

Template: TU Delft Data Management Plan template (2021)

Project abstract:

The thesis investigates what is needed to make circular building hubs, a relatively new concept in the construction sector, work; What do the hubs need to achieve a better supply of secondary building materials? Social practice theory is used to map practices in and around these hubs; with a focuses on the operational supply processes. This theory is used to help to gain multiple deeper understandings and the various factors that influence the practices involved.

Multiple participants (10-20) will be questioned about their practices involving the supply processes via semi-structured interviews. These participants will be search for online and recruited via snowballing within the sector and networks of these hubs. They are expected to answer 10 to 20 questions regarding their work and all the factors such as tools and competences (e.g. knowledge) behind their practices. The interviews will be held both online and in real life, preferably at the hubs, so that observations of their practices will help gain a deeper understanding of their answers.

After the interviews, preferably many connected to 3 or 4 circular building hubs, 2 hubs will be chosen (and asked if it is possible) to conduct observations. The observations will be held at the hubs to observe the practices within operational supply processes.

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The development of Circular Building Hubs

0. Administrative questions

1. Name of data management support staff consulted during the preparation of this plan.

My faculty data steward, Janine Strandberg, has reviewed this DMP on 1/6/2023.

2. Date of consultation with support staff.

I. Data description and collection or re-use of existing data

3. Provide a general description of the type of data you will be working with, including any re-used data:

Type of data	File format(s)	How will data be collected (for re-used data: source and terms of use)?	Purpose of processing	Storage location	Who will have access to the data
Audio recordings from semi-structured interviews (face-to-face meetings).	MP3	In person interviews recorded with mobile phone recording app.	To pseudonymize and transcribe interviews and analyze the data gathered during the interviews. This data is needed to understand the practices involved with the supply processes of CBHs. Hence: to answer the research questions of my research.	Temporary storage on personal mobile phone which is locked with a biometric fingerprint only accessible for the executing researcher (Quinten Isselman, student at Technische Universiteit Delft (TUD) en Wageningen University & Research (WUR) from which it will asap be transferred to the TU Delft Project Storage	This data is only accessible to the executing researcher (Quinten Isselman, student at Technische Universiteit Delft (TUD) en Wageningen University & Research (WUR), the responsible researcher (M.F.M. (Mart) van Uden) (TUD). , the second supervisor (Dr.ir. J.N. (Jaco) Quist) (TUD), and the research team 'TranCiBo' from the TUD (The TranCiBo team consists of 8 persons).
Audio recordings of interviews held online	MP3	Online interviews recorded with laptop online meeting app (e.g. Microsoft Teams).	To pseudonymize and transcribe interviews and analyze the data gathered during the interviews. This data is needed to understand the practices involved with the supply processes of CBHs. Hence: to answer the research questions of my research.	Temporary storage on personal Wageningen OneDrive account only accessible for the executing researcher (Quinten Isselman, student at Technische Universiteit Delft (TUD) en Wageningen University & Research (WUR) from which it will asap be transferred to the TU Delft Project Storage	This data is only accessible to the executing researcher (Quinten Isselman, student at Technische Universiteit Delft (TUD) en Wageningen University & Research (WUR), the responsible researcher (M.F.M. (Mart) van Uden) (TUD). , the second supervisor (Dr.ir. J.N. (Jaco) Quist) (TUD), and the research team 'TranCiBo' from the TUD (The TranCiBo team consists of 8 persons).

Email addresses, phone numbers,full name of participants, company name and function of the person in question.	.csv files	Online desktop research (e.g. googling companies and employees) and asking participants who were found online and have been spoken to (phone, in-person or via internet) to provide contact persons of other people they think are important. (snowballing)	To communicate with potential participants, schedule meetings and interview times and get informed consent before the semi-structured interviews or observations	Temporary storage on personal Wageningen OneDrive account only accessible for the executing researcher (Quinten Isselman, student at Technische Universiteit Delft (TUD) en Wageningen University & Research (WUR) from which it will asap be transferred to the TU Delft Project Storage (encrypted and *separate* from any other participant data used for analysis)	This data is only accessible to the executing researcher (Quinten Isselman, student at Technische Universiteit Delft (TUD) en Wageningen University & Research (WUR), the responsible researcher (M.F.M. (Mart) van Uden) (TUD). , the second supervisor (Dr.ir. J.N. (Jaco) Quist) (TUD), and the research team 'TranCiBo' from the TUD (The TranCiBo team consists of 8 persons).
Notes from the observations	hand writing on paper	In person observations at circular building hubs locations, written in notes.	To recall important moments that took place during the observations and to make it afterwards more easily and keep track of the practices performed by the people involved. This data is needed to understand the practices involved with the supply processes of CBHs. Hence: to answer the research questions of my research.	Temporary In-person (room in a house with a door that can be locked in Utrecht) only accessible for the executing researcher (Quinten Isselman, student at Technische Universiteit Delft (TUD) en Wageningen University & Research (WUR) from which it will asap be destroyed.	This data is only accessible to the executing researcher (Quinten Isselman, student at Technische Universiteit Delft (TUD) en Wageningen University & Research (WUR).
Photo's taken during the observations	.jpeg files	In person observations at circular building hubs locations, written in notes.	To recall important moments that took place during the observations and to make it afterwards more easily and keep track of the practices performed by the people involved. This data is needed to understand the practices involved with the supply processes of CBHs. Hence: to answer the research questions of my research.	Temporary storage on personal mobile phone which is locked with a biometric fingerprint only accessible for the executing researcher (Quinten Isselman, student at Technische Universiteit Delft (TUD) en Wageningen University & Research (WUR) from which it will asap be transferred to the TU Delft Project Storage	This data is only accessible to the executing researcher (Quinten Isselman, student at Technische Universiteit Delft (TUD) en Wageningen University & Research (WUR), the responsible researcher (M.F.M. (Mart) van Uden) (TUD). , the second supervisor (Dr.ir. J.N. (Jaco) Quist) (TUD), and the research team 'TranCiBo' from the TUD (The TranCiBo team consists of 8 persons).
Pseudonymized transcripts of all recorded interviews	.docx files	Downloading transcripts from Microsoft Teams and using online transcirpt tools for the MP3 audio files from face-to-face recordings. Analysing and describing using Microsoft Word.	This data is needed to understand the practices involved with the supply processes of CBHs. Hence: to answer the research questions of my research.	TU Delft Project Storage	This data is only accessible to the executing researcher (Quinten Isselman, student at Technische Universiteit Delft (TUD) en Wageningen University & Research (WUR), the responsible researcher (M.F.M. (Mart) van Uden) (TUD). , the second supervisor (Dr.ir. J.N. (Jaco) Quist) (TUD), and the research team 'TranCiBo' from the TUD (The TranCiBo team consists of 8 persons).

Pseudonymized transcripts of the notes from the observations	.docx files	Analysing and make more detailed texts from the notes during the observations, using Microsoft Word.	This data is needed to understand the practices involved with the supply processes of CBHs. Hence: to answer the research questions of my research.	TU Delft Project Storage	This data is only accessible to the executing researcher (Quinten Isselman, student at Technische Universiteit Delft (TUD) en Wageningen University & Research (WUR), the responsible researcher (M.F.M. (Mart) van Uden) (TUD). , the second supervisor (Dr.ir. J.N. (Jaco) Quist) (TUD), and the research team 'TranCiBo' from the TUD (The TranCiBo team consists of 8 persons).
Names + Signatures	Hand writen on paper	Informed consent forms	This data is needed to receive legal consent to conduct the interviews (both online and face-to-face) and observations.	Temporary In-person (room in a house with a door that can be locked in Utrecht) only accessible for the executing researcher (Quinten Isselman, student at Technische Universiteit Delft (TUD) en Wageningen University & Research (WUR) from which it will asap be transferred to the TU Delft Project Storage	This data is only accessible to the executing researcher (Quinten Isselman, student at Technische Universiteit Delft (TUD) en Wageningen University & Research (WUR).
Names + Signatures	.docx files	Informed consent forms	This data is needed to receive legal consent to conduct the interviews (both online and face-to-face) and observations.	Temporary storage on personal email from the Wageningen university mail service only accessible for the executing researcher (Quinten Isselman, student at Technische Universiteit Delft (TUD) en Wageningen University & Research (WUR) from which it will asap be transferred to the TU Delft Project Storage	This data is only accessible to the executing researcher (Quinten Isselman, student at Technische Universiteit Delft (TUD) en Wageningen University & Research (WUR), the responsible researcher (M.F.M. (Mart) van Uden) (TUD). , the second supervisor (Dr.ir. J.N. (Jaco) Quist) (TUD), and the research team 'TranCiBo' from the TUD (The TranCiBo team consists of 8 persons).
Content of emails (possibly with names, and other PII or PIRD information)	.msg (Outlook)	Emailing with my participants	Reading through the emails to understand what information they provide. This data might be needed to answer the research questions of my research.	Temporary storage on personal email from the Wageningen university mail service only accessible for the executing researcher (Quinten Isselman, student at Technische Universiteit Delft (TUD) en Wageningen University & Research (WUR) from which it will asap be deleted.	This data is only accessible to the executing researcher (Quinten Isselman, student at Technische Universiteit Delft (TUD) en Wageningen University & Research (WUR), the responsible researcher (M.F.M. (Mart) van Uden) (TUD).

4. How much data storage will you require during the project lifetime?

- < 250 GB

II. Documentation and data quality

5. What documentation will accompany data?

- Data will be deposited in a data repository at the end of the project (see section V) and data discoverability and re-usability will be ensured by adhering to the repository's metadata standards
- Methodology of data collection
- README file or other documentation explaining how data is organised

III. Storage and backup during research process

6. Where will the data (and code, if applicable) be stored and backed-up during the project lifetime?

- Project Storage at TU Delft
- Another storage system - please explain below, including provided security measures

The TUD Project Storage is the primary storage location. However, since I use multiple digitale and paperback technologies to collect the data, and these technologies work not directly from the TUD Project Storage, there are few other temporary locations where data is stored before it is transferred to the TUD Project Storage. It should be noted that these temporary storages are only used for the time that is absolutly necacarry for a certain time before it can be transfferd. These temporary storage locations are:
1) Observation notes stored In-person in a bag to carry them to the home (bag will be keeped in close proximey at all times) of the executing researcher (Quinten Isselman). Than they are stored in a room in a house (Utrecht) with a door that can be locked.
2) Storage on personal mobile phone which is locked with a biometric fingerprint only accessible for the executing researcher (Quinten Isselman).
3) Storage on personal email from the Wageningen university mail service only accessible (by password) for the executing researcher (Quinten Isselman).
4) Storage on personal Wageningen OneDrive account only accessible (by password) for the executing researcher (Quinten Isselman).

IV. Legal and ethical requirements, codes of conduct

7. Does your research involve human subjects or 3rd party datasets collected from human participants?

- Yes

8A. Will you work with personal data? (information about an identified or identifiable natural person)

If you are not sure which option to select, first ask your Faculty Data Steward for advice. You can also check with the privacy website . If you would like to contact the privacy team: privacy-tud@tudelft.nl, please bring your DMP.

- Yes

8B. Will you work with any other types of confidential or classified data or code as listed below? (tick all that apply)

If you are not sure which option to select, ask your Faculty Data Steward for advice.

- Yes, data which could lead to reputation/brand damage (e.g. animal research, climate change, personal data)

9. How will ownership of the data and intellectual property rights to the data be managed?

For projects involving commercially-sensitive research or research involving third parties, seek advice of your Faculty Contract Manager when answering this question. If this is not the case, you can use the example below.

The datasets underlying the published master thesis, and possible papers from the responsible researcher (M.F.M. (Mart) van Uden), will be publicly released following the TU Delft Research Data Framework Policy.
During the active phase of research, the executing researcher (Quinten Isselman), the responsible researcher (M.F.M. (Mart) van Uden), and the second supervisor (Dr.ir. J.N. (Jaco) Quist) will oversee the access rights to data (and other outputs), as well as any requests for access from external parties. They will be released publicly no later than at the time of publication of the corresponding master thesis. During this time, the source data is only accessible to the executing researcher, the responsible researcher (M.F.M. (Mart) van Uden), the second supervisor (Dr.ir. J.N. (Jaco) Quist), and the research team 'TranCiBo' (The TranCiBo team consists of 8 persons).

10. Which personal data will you process? Tick all that apply

- Names and addresses
- Telephone numbers
- Email addresses and/or other addresses for digital communication
- Photographs, video materials, performance appraisals or student results
- Signed consent forms
- Data collected in Informed Consent form (names and email addresses)
- Other types of personal data - please explain below

Other types of personal data: Company of employment and position inside the company, Audio recordings (MP3).

11. Please list the categories of data subjects

Circular Building Hub providers or employees working in a Circular Building Hub (all in the Netherlands).
Experts on the concept of Circular Building Hubs: Academia, governmental employees, consultants at private firms.

12. Will you be sharing personal data with individuals/organisations outside of the EEA (European Economic Area)?

- No

13. To which countries will you be transferring personal data:

14. Please contact the privacy team (privacy-tud@tudelft.nl) for advice on data transfer. Please also bring your draft DMP when contacting the privacy team.

Please record below their advice, the data transfer mechanism used and agreed security measures:

15. What is the legal ground for personal data processing?

- Informed consent

16. Please describe the informed consent procedure you will follow:

All study participants will be asked for their written consent for taking part in the study and for data processing before the start of the interview and observations.

17. Where will you store the signed consent forms?

- Same storage solutions as explained in question 6

TU Delft Project Storage (encrypted and separate from any other participant data used for analysis)

18. Does the processing of the personal data result in a high risk to the data subjects?

If the processing of the personal data results in a high risk to the data subjects, it is required to perform a Data Protection Impact Assessment (DPIA). In order to determine if there is a high risk for the data subjects, please check if any of the options below that are applicable to the processing of the personal data during your research (check all that apply).
If two or more of the options listed below apply, you will have to complete the DPIA. Please get in touch with the privacy team: privacy-tud@tudelft.nl to receive support with DPIA.
If only one of the options listed below applies, your project might need a DPIA. Please get in touch with the privacy team: privacy-tud@tudelft.nl to get advice as to whether DPIA is necessary.
If you have any additional comments, please add them in the box below.

- Data concerning vulnerable data subjects

Although the research and data-gathering via the interviews and observation is not targeting specifically vulnerable individuals who might not be able to understand the informed consent form, and preferably these individuals are being avoided, there might be a small possibility that such individuals are being encountered during the search for participants. These individuals might be working at one of the hubs within the operational supply processes. As such, they might be interesting to conduct an interview or observation with.
Such individuals are most likely employees that are working under the supervision of one or more individuals that do not fall within this category. Therefore the following measures are taken prior to even asking such individuals for participating:

- Their direct or indirect supervisor will be asked if it is possible that his or her staff involving the operational supply processes will be interviewed and or observed.
- It will be explained to the supervisor(s) that risks involving questions for personal data or opinions that can lead to any of the indicated risks will be minimized to the best knowledge of the corresponding researcher and with the described measures on data protection and storage.

The following measures are taken before the interviews with such vulnerable individuals:

- A separate informed consent form (V2), the questions and the purpose of the interview and or observation, and all of the indicated risks will, together with their direct or indirect supervisor, be openly and very clearly discussed.
- This special V2 form version is extra detailed and with more easily explainable text covering the most critical aspects. As such it would be more understandable to this group of individuals (in line with Article 7 (2) and Article 12 (1) GDPR).
- If the individual is not comfortable with any of the topics within the interview, these will not be discussed during the interview.
- It will be made very clear that the individuals do not have to conduct an interview or participate in the observations. Moreover, they can withdraw from the interview or observations at any time and are not obliged to answer any of the questions.

19. Did the privacy team advise you to perform a DPIA?

- No

Arvin Khozooei
Privacy Officer
TUDelft | Directie ICT
Security, Privacy & Architectuur
''My conclusion based on the delivered documentation and information you've provided to the Privacy team is that it is not necessary to perform a DPIA, because the processing of personal data in your project is not likely to creat a high risk to the rights and freedoms of the participants. I therefore took into consideration that there no sensitive or special categories of personal data will be collected. Furthermore, you've mentioned that the data sought for in the interviews with your data subjects doesn't relate to special/sensitive personal data as described in the DPIA Checklist (attached to this mail). Even though you might encounter data subjects who could be considered as vulnerable, this fact alone doesn't lead to the conclusion that a DPIA is necessary;''
Mail: Monday 22-5-2023 16:37

22. What will happen with personal research data after the end of the research project?

- Personal data will be shared with others - please explain which personal data will be shared, with whom, how and whether you have specified this in the informed consent form
- Anonymised or aggregated data will be shared with others

After the end of the research, personal data including the source data such as photo's and audio recordings are stored for the long term in a secure private storage location (TU Delft Project Storage) of the TUD that is managed by the responsible researcher (M.F.M. (Mart) van Uden). This source data is only accessible to the responsible researcher (M.F.M. (Mart) van Uden), and the research team 'TranCiBo' (The TranCiBo team consists of 8 persons).
The filled-out consent forms are stored for the long term in a secure private storage location of the TUD (TU Delft Project Storage) that is managed by the responsible researcher (M.F.M. (Mart) van Uden).

All of this is explained in the Consent from.

23. How long will (pseudonymised) personal data be stored for?

- 10 years or more, in accordance with the TU Delft Research Data Framework Policy

24. What is the purpose of sharing personal data?

- For research purposes, which are in-line with the original research purpose for which data have been collected

25. Will your study participants be asked for their consent for data sharing?

- Yes, in consent form - please explain below what you will do with data from participants who did not consent to data sharing

If the participant does not consent after he or she signed the informed consent form and the interview or observations are conducted, to the use of data, audio recordings, the interview transcripts as well as the notes from the observations, will not be stored in the TU Delft Project Storage, and information gathered during the interview or observations will not be used.
In case the participant does not consent to share specific data, a meeting between the researcher and the participant will be organized in order to specify which data can or cannot be shared. This will result in an agreement signed by both the researcher and participant, which lists all data that can or cannot be shared.
In case the participant does not consent before the interview or observations, no data is collected.

V. Data sharing and long-term preservation

26. What data will be publicly shared?

See question 27

27. Apart from personal data mentioned in question 22, will any other data be publicly shared?

- All other non-personal data (and code) produced in the project

28. How will you share your research data (and code)?

See question 29

29. How will you share research data (and code), including the one mentioned in question 22?

- All anonymised or aggregated data, and/or all other non-personal data will be uploaded to 4TU.ResearchData with public access
- My data will be shared in a different way - please explain below
- I will upload the data to another data repository (please provide details below)

All pseudonymised data will be uploaded to TU Delft Project Storage. This data is only accessible to the executing researcher (Quinten Isselman, student at Technische Universiteit Delft (TUD) en Wageningen University & Research (WUR), the responsible researcher (M.F.M. (Mart) van Uden) (TUD), the second supervisor (Dr.ir. J.N. (Jaco) Quist) (TUD), and the research team 'TranCiBo' from the TUD (The TranCiBo team consists of 8 persons).

30. How much of your data will be shared in a research data repository?

- < 100 GB

31. When will the data (or code) be shared?

- As soon as corresponding results (papers, theses, reports) are published

32. Under what licence will be the data/code released?

- CC BY

VI. Data management responsibilities and resources

33. Is TU Delft the lead institution for this project?

- Yes, leading the collaboration - please provide details of the type of collaboration and the involved parties below

Since my education and master's is a Joint degree, the other institution is Wageningen University and Research. However, no one from the Wageningen university is required to acces the data during the research process.

34. If you leave TU Delft (or are unavailable), who is going to be responsible for the data resulting from this project?

Thesis supervisor: M.F.M. (Mart) van Uden (M.F.M.VanUden@tudelft.nl)

35. What resources (for example financial and time) will be dedicated to data management and ensuring that data will be FAIR (Findable, Accessible, Interoperable, Re-usable)?

Data management will be done by the corresponding researcher (Quinten Isselman) and later, when the corresponding researcher graduates from TU Delft / Wageningen University, the responsible researcher M.F.M. (Mart) van Uden from the TranCiBo reserach team will take over the data management.
The TranCiBo research project is still in operation until September 2024, after which the data will be transferred and managed by Prof.dr.ir. J.W.F (Hans) Wamelink (TUD) on a secure storage service of the TUD.
4TU.ResearchData is able to archive 1TB of data per researcher per year free of charge for all TU Delft researchers. I do not expect to exceed this and therefore there are no additional costs of long-term preservation.