Plan Overview

A Data Management Plan created using DMPonline

Title: MSc Thesis: Toward a more inclusive work environment in the construction industry

Creator: Emma Lee

Affiliation: Delft University of Technology

Template: TU Delft Data Management Plan template (2021)

Project abstract:

Like many other business sectors, the construction industry is suffering from a skill shortage. Contrary to the skill shortage, many young woman entrants to the construction industry leave the industry. Previous studies presented the experience of young women in the construction field: lack of respect, sexism, aggressive reaction from counterparts, overt and covert unfair treatment etc. All of these phenomena can be connected to the construction industry's exclusive and masculine organisational culture. The construction industry is characterised by a masculine work environment, which is harsh and physical, and exclusive work culture, and it results in the segregation between young women entrants and skilled construction labour, of which the majority account for males. It drives young women engineers to the corner and eventually leads them to leave the sector. The study aims to investigate the impact of the adoption of digital tools on organisational culture and eventually prevent younger career women from leaving the industry. The focus of the study lies in the Dutch construction industry and the experience of female employees who are in their early careers. The data will be collected from the existing empirical literature and Delphi interview rounds, reaching a consensus from the experts on the presented issue.

ID: 99908

Start date: 19-10-2021

End date: 09-10-2022

Last modified: 20-09-2022

Copyright information:

The above plan creator(s) have agreed that others may use as much of the text of this plan as they would like in their own plans, and customise it as necessary. You do not need to credit the creator(s) as the source of the language used, but using any of the plan's text does not imply that the creator(s) endorse, or have any relationship to, your project or proposal

MSc Thesis: Toward a more inclusive work environment in the construction industry

0. Administrative questions

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

Civil Engineering and Geosciences Data Steward: Lora Amstrong

2. Date of consultation with support staff.

2022-05-25

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
Informed consent	PDF files	email	To record the consent of research participants	Project drive	Researcher and Research Supervisors
Email addresses	.csv file	The informed consent form	The administrative purpose for reaching out and arranging an online meeting, if required	Project drive	Researcher and Research Supervisors
Gender	.csv file	An interview	To understand their perspective and experience based on the gender group	Project drive	Researcher and Research Supervisors
Occupation (Position at work)	.csv file	An interview	To understand their perspective and experience based on their position and occupation.	Project drive	Researcher and Research Supervisors
Answers to the interview questions that contain the personal experience and their opinion	.csv file	An interview	To understand what issues they experienced at work and the effect of digital tools on the work and organisational culture	Project drive	Researcher and Research Supervisors
Job title and work experience	.csv file	An interview	To understand whether their opinion differs depending on the job title and experience	Project drive	Researcher and Research Supervisors

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?

- Methodology of data collection

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

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, ask your Faculty Data Steward for advice. You can also check with the privacy website or contact the privacy team: privacy-tud@tudelft.nl

- Yes

The research involves interviews with various people in the construction industry. The interview aims to understand work experience in the construction industry and its impact on younger women in the industry. Moreover, the impact and role of digital tools on the work culture - whether the digital tools have a positive, neutral, or negative influence on the work/organisational culture will be examined. The interview will ask interviewees to elaborate on their work experience in the industry (education-to-work transition period, early career experience, work practice, including communication and networking, and promotion practices).

8B. Will you work with any 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.

- No, I will not work with any confidential or classified data/code

The research collects data from a series of interviews. The interview will ask the participants to elaborate on their work experience in the construction industry and provide their opinion on implementing digital tools at work and their impact on the organisational culture in which they are involved, based on their experience and expertise. The question may direct the participants to

elaborate on negative personal experiences at work. However, it will not involve sharing confidential or classified 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.

Authorised project supervisors and the research student will use and access the data during the research.

When the research is finalised, the research data will follow and respect TU Delft Research Data Framework Policy and be available in a research data repository according to the FAIR principle. The original transcript of the interviews will not be publicly shared, but some parts of the interview can be part of the thesis result and discussion.

After the interview, the transcript will be sent to the interviewee in order for them to review it. They can request to add or remove some parts within two weeks. No response will be considered as an approval of the contents in the transcript and quotation of it in the thesis. This is explicitly mentioned in the informed consent form and reminded at the end of the interview.

The documentation (thesis) will not share any personally identifiable information or personally identifiable research data. In other words, when the part of the interview is cited in the thesis, it will not identify any identifiable information of the participants. Moreover, the consent form informs the participants that the de-identified data will be used to document the thesis.

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

- Special categories of personal data (specify which): race, ethnicity, criminal offence data, political beliefs, union membership, religion, sex life, health data, biometric or genetic data
- Signed consent forms
- Data collected in Informed Consent form (names and email addresses)
- Other types of personal data - please explain below
- Gender, date of birth and/or age

The research involves data collection of participants' names, email addresses (for administrative purposes), gender, and personal data, for instance, occupation (position at work and work experience years in construction). Besides, to get the agreement from the participants to proceed with interviews, the participants will be asked to sign the informed consent form, which includes the purpose, the process of the research, how the data will be used and processed, then their name and email address will be collected again for an administrative purpose. The collected data and informed consent form will be stored in the TU Project Drive and strictly used for administrative purposes.

Email addresses are collected to contact to schedule the interview. When the interview is arranged online, the email addresses will be used for the online meeting.

Gender and working experience years in construction are collected to compare the answers to the interview to understand how their opinions differ. The age of the research participants will not be asked.

Job titles and years of experience will be asked to understand how their opinion differs depending on the job titles and the years of experience.

Special categories of personal data may be collected from the interview, as they can be partially

relevant to the interview questions. For instance, the interviewer can ask if they perceive the construction industry as being harsh on women and ask about their experience as an early career woman in the industry. But the interview question will not explicitly ask about their gender, ethnicity, sexual orientation, etc. But there is a possibility that the interviewees may reveal sensitive types of personal data while answering the interview questions.

The informed consent form and interview transcript will be stored in the project drive but separately; therefore, it cannot identify the participants by comparing the answers and personal details collected from the informed consent form. The transcript will be stored anonymously; for example, the file name will be transcript participant X and will not be linked with the informed consent form. Therefore, it is not possible to identify participants from the project drive.

11. Please list the categories of data subjects

- Early career professionals in the construction industry or recent graduates of higher education in design, engineering, and management;
- Members of a related activist group; and
- professionals in managerial, supervisory and executive roles in the construction industry.

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

- No

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

- Informed consent

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

1. The informed consent form will be created following the TU Delft Informed Consent Form guidelines.
2. When the potential participants are sorted, they will be contacted asking whether they would like to participate in the research (The potential participants will be informed of the followings:
    - Purpose of the research
    - Summary of the research
    - The procedure of the research
    - What kinds of data will be collected and processed by the researcher
3. The informed consent form will be distributed if the participants want to engage in the research. The informed consent form will be a written file. The distribution will be conducted online base (through email)

17. Where will you store the signed consent forms?

- Same storage solutions as explained in question 6

It will be stored separately with recordings and transcripts of interviews

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.

- None of the above applies
- Sensitive personal data

Sensitive personal data will not be explicitly asked during the interview session; however, there is a chance that the participants will reveal some of their personal data when answering interview questions.
Moreover, after consultation with the TU Delft Privacy Team, the team concluded that there is no vulnerable subjects involved in the research. (see the comment on the following question (19).

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

- Personal research data will be destroyed after the end of the research project

The personal data will be only used for administrative and research purposes and this data will be destroyed after 1 month of grading.

V. Data sharing and long-term preservation

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

- I do not work with any data other than personal data

My research contains

- personal data (gender, position at work and working experience years);
- Personal contact information, such as emails, for an administrative purposes; and
- Their career experiences and opinions

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

- No data can be publicly shared - please explain below

Original research data will not be publicly shared.

VI. Data management responsibilities and resources

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

- Yes, the only institution involved

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

My thesis committee: Paul Chan (P.W.C.Chan@tudelft.nl), John Heintz (J.L.Heintz@tudelft.nl) and Marian G.C. Bosch-Rekveld (m.g.c.bosch-rekveldt@tudelft.nl)
I will make sure to inform my supervisors of the responsibility.

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)?

4TU.ResearchData is able to archive 1TB of data per researcher per year free of charge for all TU Delft researchers. We do not expect to exceed this and therefore there are no additional costs of long term preservation.