
Plan Overview

A Data Management Plan created using DMPonline

Title: Balancing Operational Efficiency and Guest Experience in Queues at the Efteling

Creator: Carmen Hoekstra

Principal Investigator: Carmen Hoekstra

Affiliation: Delft University of Technology

Template: TU Delft Data Management Plan template (2025)

ID: 201347

Start date: 18-03-2026

End date: 10-08-2026

Last modified: 03-04-2026

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

Balancing Operational Efficiency and Guest Experience in Queues at the Efteling

0. Administrative questions

1. Provide the name of the data management support staff consulted during the preparation of this plan and the date of consultation. Please also mention if you consulted any other support staff.

N.A.

2. 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

TU Delft is the lead institution for this Master's graduation research project. The research is conducted by a TU Delft student within the Faculty of Industrial Design Engineering and supervised by TU Delft academic staff. The project is carried out in collaboration with the Efteling. This partner institution provides earlier obtained insights and access to the context.

I. Data/code description and collection or re-use

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

Type of data/code	File format(s)	How will data/code be collected/generated? <i>For re-used data/code: what are the sources and terms of use?</i>	Purpose of processing	Storage location	Who will have access to the data/code?
-------------------	----------------	--	-----------------------	------------------	--

Recordings of interviews	.mp3	Semi-structured interviews conducted with context professionals and/or participants involved in the research. Recordings will be made with the informed consent of the participants. If they happen in person, they will be made using the student's password protected phone. If they are done remotely via call, they will be made using an audio recorder application or microsoft teams recording.	To capture participants' perspectives on the queue experience and design interventions.	Temporarily stored on the recording device and transferred as soon as possible to TU Delft OneDrive for secure storage. Files will be deleted from the device after successful transfer.	Student and supervisory team
Interview transcripts	.txt / .docx	Audio recordings will be transcribed using transcription software such as Turboscribe, and then anonymised.	Qualitative analysis and use of anonymised quotes in the Master's thesis and related research outputs.	TU Delft One Drive	Student and supervisory team
Observational notes	.docx	Field notes taken by the student during site visits, observations, or intervention sessions	To document contextual observations, visitor interactions, and reflections relevant to the research.	TU Delft One Drive	Student
Informed Consent forms	.pdf/paper	Participants will provide informed consent before participating in the study. Consent may be collected through paper forms signed in person. Paper consent forms will be scanned and stored digitally.	To document participants' consent for participation and data processing.	TU Delft OneDrive (stored in a secure folder separate from research data). Physical forms will be stored temporarily in a secure location until digitised and then securely destroyed.	Student

Photographs	.jpg / .png	Photos taken with student's password protected phone during testing sessions. Images will avoid identifiable faces unless explicit consent is obtained.	To document interactions in context, and interactions with prototypes.	Temporarily stored on the recording device and transferred as soon as possible to TU Delft OneDrive for secure storage. Files will be deleted from the device after successful transfer.	Student and supervisory team
Video recordings	.mp4	Video recordings captured using a password-protected phone during testing activities. Recordings will focus on prototypes, spatial interactions, and employee interactions, and will avoid capturing identifiable faces where possible.	To document interactions in context, and interactions with prototypes.	Temporarily stored on the recording device and transferred as soon as possible to TU Delft OneDrive for secure storage. Files will be deleted from the device after successful transfer.	Student and supervisory team
Age range and nationality of visitor participants	.docx	Personal data documented during interviews or testing	To specify the applicability of outcomes of testing the intervention	TU Delft One Drive	Student and supervisory team
Name, email adress and job title from employee participants	.txt	Contact information for taking part in interviews. Retrieved from internal catalogue	For administrative purposes, communicating with participant	TU Delft Office account inbox	Student
Survey data	.pdf/.pptx	Data obtained through surveys, source from Efteling Onderzoeksbibliotheek. Only accessible with an employee account after signing contract and NDA.	To ground the research with existing insights	TU Delft One Drive	Student

II. Storage and backup during the research process

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

- < 250 GB

5. Where will the data/code be stored and backed-up during the project lifetime? (Select all that apply.)

- Another storage system – please explain below, including provided security measures
- TU Delft OneDrive

Research data will primarily be stored on TU Delft OneDrive, which provides secure institutional cloud storage and automatic backup. Photographs, videos and voice recordings are taken during research activities, for example to document interviews and prototype interactions, they will initially be stored temporarily on the student's password-protected device (phone or laptop). These files will be transferred to the secure TU Delft OneDrive storage as soon as possible after collection. After successful transfer and verification, the files will be deleted from the local device to minimise the risk of unauthorised access.

III. Data/code documentation

6. What documentation will accompany data/code? (Select all that apply.)

- Data – Codebook describing the contents, structure, layout, and variable definitions of the data
- Data – Methodology of data collection

IV. Legal and ethical requirements, code of conducts

7. Does your research involve human subjects or third-party datasets collected from human participants?

If you are working with a human subject(s), you will need to obtain the HREC approval for your research project.

- Yes – please provide details in the additional information box below

Yes. This research involves human participants, including ride employees and visitors who voluntarily and anonymously participate in interviews related to the research. Ethical approval will be requested from the TU Delft Human Research Ethics Committee (HREC) before data collection begins.

8. Will you work with personal data? (This is information about an identified or identifiable natural person, either for research or project administration purposes.)

- Yes

I will ask for the participant's age group and nationality for research purposes. I will not ask or note down names. Participants will only be identifiable on photos and videos when they have indicated this in their informed consent form.

9. Will you work with any other types of confidential or classified data or code as listed below? (Select all that apply and provide additional details below.)

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

- Yes, confidential data received from commercial, or other external partners

Data sources from the Efteling Onderzoeksbibliotheek are confidential. I will only use limited findings out of these sources to give a generalised argumentation for my thesis' problem statement.

10. 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.

The intellectual property rights are framed by a graduation agreement between Delft University of Technology, Efteling and myself.

11. Which personal data or data from human participants do you work with? (Select all that apply.)

- Telephone number, email addresses and/or other addresses as contact details for administrative purposes
- Job title and/or employer
- Names as contact details for administrative purposes
- Names and/or geolocation information as part of research data
- Proof of consent (such as signed consent materials which contain name and signature)
- Audio recordings
- Video materials

- Photographs
- Date of birth and/or age

12. Please list the categories of data subjects and their geographical location.

Personal data will only be asked when participating in interviews. Both employee and visitor participants are located in the European Union, mainly NL and BE.

13. Will you be receiving personal data from or transferring personal data to third parties (groups of individuals or organisations)?

- No

16. What are the legal grounds for personal data processing?

- Informed consent

17. Please describe the informed consent procedure you will follow below.

The researcher will inform the potential participants about the goals and procedures of the research project. The researcher will also inform them about the personal data that are being processed and for what purpose. This information will be provided to the potential participants as follows: The participant will be given time and peace to read the paper form and ask questions, before signing it and participating in the interview. All participants will be asked for their consent for taking part in the study and for data processing by signing a physical informed consent form before the start of the interview/experiment.

18. Where will you store the physical/digital signed consent forms or other types of proof of consent (such as recording of verbal consent)?

The paper forms will be digitized and then stored securely on the TU Delft OneDrive. The consent forms will be stored in a separate, access-restricted folder from the research data to prevent re-identification of participants. The physical versions will be stored in a private secure location until they can be safely destroyed.

19. Does the processing of the personal data result in a high risk to the data subjects? (Select all that apply.)

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 in your research project.

If any category applies, please provide additional information in the box below. Likewise, if you collect other type of potentially sensitive data, or if you have any additional comments, include these in the box below.

If one or more options listed below apply, 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.

- Sensitive personal data

Photos and videos of participants will be taken during testing sessions of the prototype. These sessions will take place in a public area with no vulnerable groups. Only after participants have signed the physical consent form, the session can start. The informed consent form will include giving permission for being unanonymously photo- and videographed during the session with the researcher's phone. The form will also ask for permission to place this imagery of them anonymously in the to be published master's thesis. The original photos and videos will be taken on a pass-word secured phone and transferred to TU Delft OneDrive as soon as possible. The materials will be deleted from the phone after successful transfer.

20. Did the Privacy Team advise you to perform a DPIA?

Please elaborate on the advice the Privacy Team gave.

- Privacy Team has not yet been contacted / Privacy Team has been contacted, awaiting response

23. What will happen with the personal data used in the research after the end of the research project?

- Anonymised or aggregated data will be shared with others

24. For how long will personal research data (including pseudonymised data) be stored?

- Other – please state the duration and explain the rationale below

Anonymised research data will be stored for up to 10 years in accordance with the TU Delft Research Data Framework Policy to allow verification of the research results. Identifiable personal data will be deleted after the completion of the research project. Audio recordings will be deleted after transcription and verification. Signed informed consent forms will be stored securely for validation purposes in accordance with TU Delft research ethics requirements.

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

- Other – please explain below (see guidance for additional options)

Participants will be informed about how their data will be used through the informed consent form. The consent form explains that identifiable personal data will not be shared with third parties and that research findings will only be reported in anonymised or aggregated form. Participants will also be informed that anonymised excerpts from interviews (such as quotes) may be used in the published Master's thesis. Participants will provide their consent for participation and data processing by signing the informed consent form before the start of the research activity.

V. Data sharing and long term preservation

27. Apart from personal data mentioned in question 23, will any other data be publicly shared?

Please provide a list of data/code you are going to share under 'Additional Information'.

- All other non-personal data/code produced in the project

Non-personal research materials may be publicly shared as part of the Master's thesis submitted to the TU Delft education repository. These may include descriptions of the research methodology, aggregated findings, design concepts, and other non-identifiable research outputs produced during the project. Personal data and raw research materials that could lead to the identification of participants (such as interview recordings, identifiable transcripts, or consent forms) will not be publicly shared in order to protect participants' privacy and confidentiality.

29. How will you share research data/code, including those mentioned in question 23?

Select all that apply and provide additional details below.

- I am a Bachelor's/Master's student at TU Delft and I will share the data/code in the body and/or appendices of my thesis/report in the TU Delft Repository

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

- < 100 GB

31. When will the data/code be shared?

- At the end of the research project

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

- Other – please explain below

Copyrighted thesis

VI. Data management responsibilities and resources

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

My supervisor Laurens Kolks, Assistant Professor, Department of Human-Centered Design, with email adress L.A.G.Kolks@tudelft.nl

34. 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)?

The thesis will be published on the TU Delft repository. I will handle all data management on my own using resources provided by the university.

35. Which faculty do you belong to?

- Faculty of Industrial Design Engineering (IDE)