**Ethical Design Report**



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# **Process**

In week 5, we followed a workshop by Gertjan about ethical design. In this workshop we were asked a few questions about the case of a smart toilet in the domain of ethical design. We had to think about requirements, potential uses, potential risks etc. while keeping general norms and values in mind.

After this case we were prompted to try and think of the aspects of ethical design that could come into play in our group project. It was recommended to use the TICT tool provided by Fontys or to use one of the other sources mentioned in the Canvas course.

Directly after the workshop we decided to do a TICT Quick Scan with the whole group, however we did not feel like this brought us many new insights, besides the occasional privacy and data sharing issue. After all, for every category of the TICT methodology, there was only one question. The output of our Quick Scan can be found in our Google Drive.

Because we did not get a lot of input from the quick scan, a part of our group went on to fill in the TICT full scan before starting to write this report. Because of the extensiveness (5-6 questions for every category) of the full scan this one did give us some new ideas, even some for existing functional requirements. We also had to come up with some non-functional ethical requirements and therefore we examined our own and each others’ answers and picked out the sentences which we could turn into requirements. The requirements we found can be read on the next page. The full scan can be found in the Drive in the same folder as the quick scan.

Link to TICT Full Scan:

<https://drive.google.com/file/d/1tRFc77nnkiWOGZsAeMKUruzPfCXqPFQh/view?usp=sharing>

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# **Ethical non-functional requirements**

| **#** | **Requirement name** | **Description** | **Possible solution** |
| --- | --- | --- | --- |
| 1 | Privacy - personal data | The application requires a login from the user. This way, we save personal data, for instance, name or address. | We can configure Auth0 to encrypt, store and decrypt the personal data. |
| 2 | Privacy/ Security - energy usage/ yield | The application saves the energy usage and yield of users to support the AI. This data could be sensitive because it could be used by bad actors. | Because we make use of Auth0 to save personal data, the ID is encrypted. The data about the energy usage and yield is linked to an ID. So when a bad actor hacks the energy usage/ yield database, the data would be incomplete and useless because it is not connected to a user, only to an userID. |
| 3 | Reliability - AI predictions | We want the AI predictions to be as accurate as possible, because we do not want the users to experience negative effects of foul predictions | We should train our AI thoroughly, but also present disclaimers to the user that the AI is not a wonder machine. |