Ethics Document

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Abstract: For this phase of the project, we conducted a series of informal customer feedback interviews, in which participants were invited, and with their permission, allowed us to record improvements that might need to be made to our implementation. This document concatenates the general outline of the informal interview, along with a summary of all the participants feedback put together, to provide concise definition of improvements that need to be made, as well as providing an additional layer of anonymity to the participants. Underlined is the main topic and motif of each question, highlighting what we want to get out of the user feedback.

Informal Interview Questionnaire

1 | General Functional Design

Prompt 1	What were your <u>initial impressions of the application</u>, i.e. the dashboard along with the other pages of the application, and <u>how intuitive</u> and <u>responsive</u> did you find it?
Response	Candidates responded that the application seemed almost technical in how basic the designed looked, and that, whilst believing that the tool's design may be satisfactory for scientific applications and users, the design was not appropriate for the wider use case for the general public as the design is in no way appealing, inspiring or immediately intuitive to use. Despite this, they found that the implementation was responsive and that the information they were looking for was available.

2 | Application Navigation

Prompt 2	Did you find the <u>navigation system</u> straightforward, descriptive and accommodating?
Response	Majority of participants recognised the "tab" system currently used by the navigation system from other interfaces, and found it arcane, albeit intuitive to use. Unfortunately, not as many users as one might expect noticed the description pop-up when hovering over the card tab, with most user's only using the tab title to deduce what was in the section. Most users agreed that the "cards" system that was finally intended would be a more suitable design decision, as users would have to wait for information, or know any convention to retrieve information from the application.

3 | Methods of Data Visualisation

Prompt 3	How effective would you describe the demonstrated methods of <u>data visualisation</u>, i.e. traffic colouring of compliance, graphing data
Response	Participants found the traffic colouring scheme immediately recognisable and agreed that it was a good way of representing UK/EU compliance, and whilst the CSV nature of the data dashboard was daunting, and clearly not optimised for data handling, the search function provided basic functionality, allowing for users to query specified pollutants and general locations for water pollution.

4 | Usability and Compatibility

Prompt 4	Did you encounter any <u>usability issues</u> when using the application, such as colour contrast, <u>language incompatibility</u>, or perhaps any <u>interface difficulties</u> such as using keyboard only or a screen reader?
Response	Participants have met a few issues, such as difficulty distinguishing between the red and amber compliance indicators because of weak colour contrast and difficulties with language compatibility since the language selection didn't clearly display all the options. Some of the users complained that they had trouble focusing on clickable components due to keyboard navigation problems and mentioned about the insufficient of app's screen reader. Furthermore, the data tables were overpowering in the absence of more structured layouts or sections that could be folded up, and the map component lacked user-friendly zoom settings. These evaluations highlight areas where the user interface's clarity, accessible, navigation need to be improved.

5 | Overall Experience & Suggestions

Prompt 5	How <u>satisfied</u> were you with using the application, and if so what, and are there any <u>improvements</u> that you would suggest to anything, such as a particular page that you found difficult or confusing to use?
Response	In general, participants were satisfied with the application, particularly regarding the compliance indicators and data visualisations. However, several users found that dashboard navigation to be difficult when navigating between pages. Users also recommended breaking up the data tables into tabs or sections that could be folded up to make them easier to read and less cluttered. The user experience and navigation would both be improved by these changes.

Conclusion

Whilst the initial implementation was overall successful in the sense that it provided some basic functionality, there remains still some outlying problems regarding the design and usability, and whilst more data visualisations are wanting, feedback on them cannot be conducted as they haven't been completed. The main takeaways from the informal interviews are:

- Design improvements should be made to make the application more accessible to general public
- The navigation should consider and implement the "card" navigation system
- More methods of data visualisation should be developed, reviewing the amber system for colour blindness
- Basic accessibility functionality needs to be evaluated further
- Further debugging and testing of features should be carried out