Your project proposal

1. Please select the modules that your project proposal relates to (select all that apply):

**TM352 – Web, mobile and cloud technologies**

**TM354 – Software engineering**

1. Proposed Project Title (Draft):

**Developing a Mobile Application to Digitise Routine Maintenance Inspections in a Packaging Factory**

1. Describe your project in brief:

At this early stage of your project, try to answer one or two sentences for each of the questions below.  If your project idea is quite developed, you are welcome to share further details.  
  
Consider in your description:

What is the problem that needs to be solved?

Why is it considered a problem?

What will the benefit(s) of solving this problem be?

**Answer:**

**What is the problem that needs to be solved or understood?**

Right now, my team of maintenance engineers completes routine maintenance check forms on paper. This process is inefficient because it means carrying around multiple forms along with tools. Storing, retrieving, and managing these forms is also time-consuming and not environmentally friendly.

I want to develop a bespoke mobile app that allows engineers to complete these checks digitally on the team’s tablets. This will reduce paper usage, improve efficiency, and make data instantly accessible from any site once connected to the server.

**Why is it considered a problem?**

Paper slows us down: I’ve seen firsthand how engineers waste time filling out, carrying, and sorting through paperwork.

* Forms get lost or damaged: If a form gets misplaced, it’s difficult to track maintenance history.
* Limited access to data: Right now, forms are stored physically, meaning they’re not available instantly when needed.
* Environmental impact: Reducing paper usage by at least 30% would contribute to the company’s sustainability goals.
* Difficult to analyse data: Since everything is on paper, it’s hard to track trends, audit records, or generate reports efficiently.

**What will be the benefits of solving it?**

* **Increased efficiency:** My team will only need a tablet instead of stacks of paper.
* **Faster data entry & retrieval:** Engineers will be able to complete and access forms instantly.
* **More secure and accurate records:** Digital storage reduces the risk of data loss or human error.
* Remote access to forms: Once connected to the SQL database, completed forms will be accessible from any site.
* **Better reporting & compliance:** Managers will be able to track maintenance history, ensure compliance, and generate reports effortlessly.
* **Supports sustainability:** Using less paper means my team is actively reducing waste and promoting an eco-friendly approach.

1. Does your project involve, or have any effect on human subjects?

If you plan to use interviews, surveys or questionnaires to gather requirements or carry out any evaluation or testing then you must select ‘Yes’

**Yes**

1. If you are able, please give further details of your reasoning for involving human subjects.

**I need to conduct some meetings and interviews to find the best possible solution for both the parties’ manager and maintenance engineers. This may require some meetings, even if online video meetings or phone calls, to confirm the outcome before moving to the next phase of the project.**

1. Are all participants able to give their informed consent? (e.g. signed declaration)

**Yes**

1. Is the study likely to involve vulnerable people? (e.g. children, disabled people)

**No**

1. Will any subjects be observed covertly?

**No**

1. For participants involved longer than an hour at any time, has due regard been made to their health, safety and well-being in a suitable plan and discussed with the participants in advance?

**Yes**

1. Will the subjects be asked about sensitive topics? e.g. money, appearance, relationships, hygiene, politics, religion, protected characteristics, alcohol and drug use, etc.

**No**

1. Does your proposed research involve any action on, or action that might affect any animals and/or plants?

**No**

1. Does your research involve the collection of data and information?

Data is raw facts, while information is data that has been processed to add meaning and context.

**Yes**

1. Please share how you plan to store and manage this data/information?

See 'Data Management Plans | Library Research Support' for more information - <https://www5.open.ac.uk/library-research-support/research-data-management/data-management-plans> (Max word count - 500 words)

**The data collected will be some of the historically completed facility and machine routine check forms. They will be stored in a physical space in my desk draw and used for designing entity relationships database. Any company specific data like names, places, locations etc will not be revealed and for testing purposes more generic locations and random person initials will be used instead of the real data. Also, whenever there is a mention of a specific person or persons, only their role will be given to protect personal data.**

1. Could the storage, computations, or data analysis, whether through AI or standard coding, potentially harm individuals or organisations through data breaches, misuse, or unintended computational outcomes?

**No**

1. For AI projects, is it possible that either the outcomes, or the analysis, will have any impact on human decision making?

**Not applicable**