Inception Phase Status Assessment

1. Assessment against Objectives of the Inception Phase

1.1 Do we know what we are trying to achieve?

The aim of the project is to create an app that streamlines any kind of inspection process, from form creation and formatting to filling out the form during an inspection and finally sending completed forms to clients. This is embodied in the completed Vision Document.

We understand the main functional requirements of the project which are:

- Create Form Templates
- Modify Form Templates
- Loading and Saving Form Templates
- User fill forms (during inspection)
- Saving User Form
- Export to pdf
- Distribute via email

We understand the main Non-Functional requirements of the project which are:

USABILITY Apply good interactive design practices and concepts such as affordances and familiarity to ensure optimal usability. It is important that the system is easy to use. As such the application should be designed in a way that it is easy to use without the need for tutorials or help.
RELIABILITY The system will be designed to work offline as potentially some inspection sites may not have service. Share features of the app will require an internet connection. The system also needs to be stable reliable to prevent loss of work.
PERFORMANCE The system needs to respond promptly to input by the user. If system is busy loading screens and other prompts will be used to convey status to users.
SECURITY The application will not store user data, require logins, or transmit data. Any data transfers will be handled by third parties. Any passwords will be handled by third party services (email client for example).
AUDIT Interactions, errors, and statuses are logged. Not user filled data. This log is held locally. Bug reports will be transmitted via google play store services.
CAPACITY Only one device is required to use the system. While the application itself will have a small installation size, the devices free space will determine how many templates and pdfs can be stored locally.
COMPATIBILITY As the target hardware is android mobile phones, the devices do need to have touch input and rear facing camera. To minimize compatibility issues with outputs, PDF has been chosen as this format is able to be read by default by many systems.
MAINTAINABILITY The system will conform to a modular architecture this will be achieved by breaking features down into components that are cohesive and loosely coupled with each other. This approach will make source code easier to read, understand, and debug while also decreasing effort required to update individual components.

1.2 Do we know how we are going to achieve it?

We have a good idea of how we are going to achieve our aims. We are going to use Android Studios UI tools and xml fragments to allow users to construct their custom forms. Android keyboard input will be used for user filled data, and androids print adapter will be used to convert xml into pdf.

We have a good understanding of the project specific risks facing our project and how we are going to deal with them. The risks are:

- Export to PDF
- Manipulating xml for template modifying

Our evolving understanding of risks is shown in the ongoing risk list and discussed further below in Section 4.

We have a good understanding of how we are going to check that our application delivers the intended functionality and system properties. Our key areas of concern and the test strategies we will use to address these concerns are as follows:

- Export to PDF.
    - Attempt built in Android print functionality and if unsuccessful fallback on external libraries.
- Manipulating xml for template modifying.
    - Research time will be assigned to mitigate issue.

This is shown in the completed Master Test Plan

We have a good understanding of the dependencies and likely completion times for different parts of the project. Target completion dates for key aspects of the project are as follows:

- E1 28/04
    - Implement Log Manager
    - Implement Conversion Manager
    - Implement Template
    - Implement Template Editor
- E2 12/05
    - Implement File Manager
    - Implement File Share Manager
- E3 26/05
    - Implement Inspector
    - Implement Photo Manager
- E4
    - Contingency
    - Revise Architecture and Design Documentation
    - Revise Project Plan
    - Deliver Life Cycle Architecture Milestone (LCAM)

This is shown in the Initial Project Plan.

1.3 Skills required

Our project requires skills using the following key tools and technologies:

- Java
- Android Studio
- xml

We have demonstrated that we have the skills to use these technologies through the implementation of a technology competency demonstrator.

2. Deliverables

2.1 Architectural Notebook.

No issues

2.2 Domain Model.

No issues

2.3 Risk List.

No issues

2.4 Master Test Plan.

No issues

2.5 Non Functional Requirements.

No issues

2.6 Project Plan.

No issues

2.7 Style Guide.

No issues

2.8 Use Case Model.

No issues

2.9 Vision Document.

No issues

3. General Issues.

3.1 Lack of Skill and Knowledge

Research and development is assigned time for tasks of reasonable complexity.

During Inception Phases tutorials are assigned as work items.

On going.

3.2 Productivity Issues -balancing external and internal pressures

While these are inevitable, good communication, coordination, and flexibility of all team members will be used to mitigate the issue..

4. Risks

4.1 Export to PDF

If unable to do with built in android functionality an external library will be utilized.

At worst case html will be used.

4.2 Template Editor

While manipulating xml programatically is not unheard of, our template editor is an extreme and possibly fringe use case of the functionality which will require some out of the box thinking.

5 Summary – Overall Project Progress

It is our belief that for inception we have met all our aims.