**PATHFINDERS**

**Requirement Document**

**Project: KR STEEL OPTICAL SCANNER**

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**Introduction To The Project**

Hello,

We are Pathfinders, and our team has been assigned with the project to develop a prototype of an optical scanner for KR Steel.

The reason we have been tasked with this project is because currently when the steel beams are galvanised off-site, the galvanisation process can cause the etchings on the steel beams to become worn out or damaged, this makes it difficult for the engineers on-site to identify the steel beams and locate where they are going to be placed.

The idea of an optical scanner was though of to counteract this problem of the engineers having to manually look closer at the etchings and correctly identify them, this process was very inefficient and often unreliable.

The new optical scanner will be utilised in order to make the process of identifying steel beams on-site more reliable, accurate and efficient.

**Functional And Non-Functional Requirements**

**Non-Functional Requirements -**

Must Have

* The system must be accurate and reliable in identifying and processing information.
* The system must process a scan and determine a beam’s destination within a short time frame to ensure efficiency.
* The system must be designed with simplicity and be easy to use to ensure that older employees will still be able to effectively use the system.
* The system must be designed in compliance with the principles of ISO 9241 to ensure the page to be accessible and usable for the intended users.

Should Have

* The system should be efficient and require little manual work from the user

Could Have

**Functional Requirements -**

Must Have

* The system must accurately identify the correct destination for the steel beam to go to.
* The system must match the scanned code with an internal database to retrieve detailed information on the steel beam and its information
* The system must use an optical scanner.
* The system must be capable of accurately scanning and capturing any remains of a code on a steel beam, even if the code is partially worn out or damaged
* The system must accurately Identify the specific steel beam shown for correct use for engineers.

Should Have

* The system should make employees to log in to access information

Could Have

* The software could include progress tracking features to allow the monitorisation of work speed and other performance metrics and be able to be shared to upper management.
* The software could be implemented within existing mobile devices (such as iPads) used on-site already to reduce the need for additional hardware.
* The optical scanner could be mounted on the crane, allowing for hands-free scanning and reducing manual handling.
* LESP (~200 Words)

Legal, ethical, social and professional issues of project

* Conclusion and Future Work

Appendix A - Meeting Minutes

Meeting 1: Meeting with Ellen Delph 1st October 2024

Minutes: 30 minutes

Attendees: Ellen Delph, Owen Stevenson, Caelan Wilson, Fraser Barron, Tyllar Barrett, Caius Omary

Appendix B – Ethics Form

ethics form

Appendix C – DPIA Form

-DPIA Form