# Introduction

Team Pharmacon has discovered a need for an application that aids hospital pharmacist in the tracking of medicinal errors and wastage. Currently, errors that occur in the dispensing of medicines, including directions, dosage/strength, form (e.g. intravenous vs per oral), batch number, expiry date, medication (i.e. wrong medication), wrong patient, wrong quantity, etc., are recorded on pieces of paper to be entered into a spreadsheet at a later time. This is a time consuming and cumbersome exercise that can lead to errors being lost or forgotten.

The proposed application will be called Pharmacy Error Tracker (P.E.T.). The error tracking will be done with a web interface that is designed to be used across any platform. P.E.T will be a user-friendly application that will enable the direct entry of errors as they happen, negating the current process of creating a written record. It will assist pharmacists to track errors made during daily tasks, helping them track down deficiencies in instructions, routines and training. The application will also assist pharmacists share, report, search, filter, and email reports and alerts to internal contacts.

# 2. Positioning

## 2.1 Problem Statement

|  |  |
| --- | --- |
| The problem of | Not reliably tracking errors easily |
| affects | All hospital pharmacists |
| the impact of which is | Errors not being logged correctly or at all |
| a successful solution would be | A system that would allow hospital pharmacists to easily and quickly log and track errors |

## 2.2 Product Position Statement

|  |  |
| --- | --- |
| For | Hospital pharmacists |
| Who | Need to track errors made in medicinal deliveries |
| The “Pharmacy Error Tracker” | Is a single page web application |
| That | Provides an easy and efficient method for entering data |
| Unlike | Spreadsheets which are slow and limited to one computer |
| Our product | Can be accessed via Android tablets and web interfaces removing the limiting factor of one computer and is extremely quick compared to filling out spreadsheets. |

# Stakeholder Descriptions

### Stakeholder Summary

| **Name** | **Description** | **Responsibilities** |
| --- | --- | --- |
| Hospital Pharmacist | Control drugs and medicines in hospital. Main user of the system | * Responsible for distribution of drugs and medicines throughout the hospital * Responsible for tracking any errors made in drug distribution |
| Data Reviewer | The person who looks at the results of the data gathered about errors | Responsible for gathering information about errors gathered by the system. |
| Team Pharmacon | The project developers | * Responsible for developing the project * Responsible for communicating with client |
| Rory | Hospital Pharmacist aiding in the design of Pharmacy Error Tracker | * Responsible for informing development team about how hospital pharmacists operate * Responsible for giving feedback to team on the system that is being designed |
| Hospital I.T. Department | Department in charge of nearly every computer and network connected device in the hospital | * Responsible for making sure the designed system is compatible with the hardware they have |

## 3.2 User Environment­

In the current environment every pharmacist is responsible for tracking errors they make. They are required to go to a specific computer that has a spreadsheet on it and enter the data in that spreadsheet. If the computer is in use, then they must wait until it is free. Once they get on the computer they must open-up the file, scroll to the end and then finally add the error. While this is simple, having to complete this task, sometimes many times in one day makes a simple routine tedious. “Pharmacy Error Tracker” will combat these issues by firstly allowing errors to be entered across many machines. Next, “Pharmacy Error Tracker” will make it extremely simple and streamlined to enter errors. By providing an interface that requires minimum interactions to complete, pharmacist will no longer find error entering tedious.

“Pharmacy Error Tracker” will be able to provide data visualization so the pharmacist can easily see what causes errors. These visualisations will be generated by Metabase using up-to-date data, and can be viewed and exported from the Metabase dashboard. The user can generate additional visualisations for the dashboard. These visualizations may be needed in reports. To facilitate this, users will be able to export any visualization to an image file that they can then import into a presentation or report.

# Product Overview

## 4.1 Needs and Features

|  |  |  |  |
| --- | --- | --- | --- |
| **Need** | **Priority** | **Features** | **Planned Release** |
| Ability to track errors | High | A streamlined flow that will allow adding and storing of errors. | Beta |
| Ability to amend incorrectly entered errors | Low | An option for a user to edit the most recently submitted error. | V1.0 |
| Ability to view errors in a spreadsheet program | Medium | An option to export all data to a spreadsheet filetype. | V1.0 |
| Manage who receives reports about the data | Medium | An ability to Create, Update and Delete users from the mailing list | V1.0 |
| Ability to visualize data about errors in order to formulate conclusions | High | An entire page dedicated to viewing the data in a variety of visualizations | Beta |
| The Error Entry form to be customisable | High | Ability to edit the Error Entry form by an authorised user to customise the form to better fit the user’s needs, by hiding fields that the user does not need data from and managing selectable options for certain fields. | V1.0 |

# Other Product Requirements

|  |  |  |
| --- | --- | --- |
| **Requirement** | **Priority** | **Planned Release** |
| Online manual | High | V1.0 |
| 99% Uptime | High | V1.0 |
| Auditability | Medium | V1.0 |
| Usable within certain time frames for different levels of experienced operators | High | All |
| Recoverable | High | V1.0 |
| Fast Response Times | High | V1.0 |
| Compatible with modern web browsers | High | All |
| Maintainable | High | All |
| Client computer, tablet or mobile device with access to internet | High | All |

# 6. Changelog

## V2 – 26/05/2018

Section 3

- Added details on how the vision will have Metabase will be used to generate visualisations in the user environment.

Section 4.1

- Error Entry Form Customisation – feature section was updated to reflect the reduction in scope.

- “Editing Errors” aspect was separated from “Ability to track errors”, as they are separate (though linked) features. Editing Errors was given a lower priority and a later planned release.

- Features being released in the Executable Architecture had this noted in the Planned Release column, which was simplified to “Beta”.

Minor grammar and formatting fixes:

- Header updated to be consistent in naming and formatting with other documents. Date updated.

- Minor spelling and grammar fixes in Section 1.

## V1 – 24/03/2018

Original version