Functional Specification

Standard Work Instruction App

B/E Aerospace require a replacment application for creating standard work instructions on mobile devices. Previously the iOS application "Inflowchart" was used to create the documents. The generated files in .pdf .inflowchart and .pages format are uploaded to a WebDAV server which has a WI App search web application running on top. This enables the users with permmisions to search the repository with limited functionality.

Due to the discontinuation of Inflowchart and its lack of support in recent iOS vesions, a new cross platform, mobile ready application is required.

Acronyms

- SWI = Standard Work Instruction

Technology

Server

- **Hosting**
  - Windows Server 2008 R2
  - IIS 7
- **Database**
  - SQL Server 2008 R2
- **Web Data Service**
  - ASP.Net Web Api 2
  - REST compliant

Client (Web App)

- Angular 2 for application framework

- Bootstrap 3 for styling

- Browser Compatibility

  - Internet Explorer 11
  - Google Chrome
  - iOS Safari

Application Security

The application would have the following roles:

- **Basic User**
  - Can read public SWIs and SWIs in their own company
- **Author**
  - Can create SWIs in their own company
- **Approver**
  - Can approve SWIs in their own company
- **Manager**
  - Can manage users permissions within their company
  - Can make SWIs in their own company public to all B/E

Screens

Login

Login using B/E Aerospace Active Directory. We should not have to maintain seperate authentication details in this application. However we may need to store user profile data regarding permissions and defaults.

Dashboard (Home Page)

The dashboard will act as the application home page and provide top level access to the menus and user specific information. The dashboard will be built up from "modules" which can show summary or basic detail information.

- **My Recently Created SWIs**
  - Show the last 5 SWIs created by the logged in user
- **My Approval Queue (Approvers Only)**
  - Show the SWIs which are waiting for the logged in users approval
- **My Work In Progress (Authors Only)**
  - Show the WIP / draft documents which have been started but not published by the logged in user.
- **My Recently Trashed SWIs (Authors Only)**
  - Show the last 5 SWIs trashed by the logged in user

Search

This screen would be the primary screen for searching all SWIs in the system. You will only find the SWIs for which you have the permissions (see Application Security section).

The following fields can be searched. The search screen criteria would build cumulatively.

- Document Title (Text)
- Company (Drop down list based on permissions)
- Author (Text - possible lookup)
- Tags (Text)
- Document Category (Drop down list)
- Keyword (Text)
  - This would be based on the text inside all of the stages and would have to be a full wildcard.
- Created On (Date Range)

- Last Modified On (Date Range)

Search results would be displayed in a grid with basic metadata including, Document Title, SWI#, Author, Last Modified By and Created On. Also there would be a button to open the SWI edit screen and SWI viewer.

Create / Edit SWI

This screen is used soley for the creation and modification of the SWIs. It is not intended as the display view. This structure means that we can have more control over the display of the SWIs and also simplify the data entry and validation.

The SWI document is broken into the following sections:

- **Header**
  - Document Title
  - Author
  - Revision
  - Expert
  - Approver
  - Company
  - Private/Public Flag
  - Created On
  - Modified On
- **Health & Safety**
  - List of health and safety icons associated with the process
- **Tooling**
  - List of tooling panels containing an image, tooling number, caption text.
- **Stages**
  - List of process stages.
  - Option of different layouts. e.g. (Large image & caption), (Small image & caption & care point), (Text only)
  - Dynamic layout, where stages take up the available space on the users device

SWI Viewer

This screen would be used for read only viewing of the SWI. Because the 'SWI Viewer' screen is seperate to the create and edit screens, we are able to customise the design for an enhanced user expereince. In previous versions of the application, the goal was to produce a PDF document. With the new app, we can focus on paperless documentation with an interactive viewing experience.

- **Possible Features**
  - Step by step scrolling
  - Dynamic flow layout
  - Image zoom
  - Production time notes
  - Error reporting
  - Usage tracking