Project Plan Presentation
Application Lifecycle Framework 2.0

The Capstone Experience

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Project Sponsor Overview

• One of the largest automobile manufacturers
• Plan to be Carbon Neutral by 2040
• Electric and autonomous vehicle development
• Shift to a more software-focused company
• Based in Detroit, Michigan
Project Functional Specifications

- Increases and improves functionality of existing workflow management system
- Improves system to handle more scenarios for application installations from request to production
- Adds forms for additional requests and scenarios
- Improves email notification of affiliated teams
- Forms will respond and change based on user inputs
- Overall user experience improvements
Project Design Specifications

• Add links and section to toolbar to provide users a clean and efficient experience
• Admin can review a request and assign it to multiple EWTs using collapsible fields
• Provide user direct link and form to streamline software removal process
• Provide user direct link and form to submit Policies which will be implemented by Security team
Screen Mockup: Submit Request Page

Client Solutions Request Form (CSRF) High-level Overview

1. CSRF Request Submitted
2. Request Processed and Assigned
3. Request Engineered
4. Request Implemented

Register your app in the ASMS system and follow the big rules links:

- Client Solutions Requirements (Engineering/Big Rules)
- Deviation Process
- Client Engineering Business Templates
- ASMS Site
- Additional Horizon View Process Information
- Removal Form
- GPO Form

CSRF Form
Screen Mockup: Removal Form Fields
Screen Mockup: GPO Form Fields
Screen Mockup: Distribution Mechanism SCCM Fields
Screen Mockup: Distribution Mechanism InTune Fields
Screen Mockup: Site Logs

Log ID | User             | Action                                                                 | Time   | Date       | Log File Link  
-------|------------------|------------------------------------------------------------------------|--------|------------|----------------|
11587  | Bukharin, Nikolai| Email successfully sent to requester ID 479156                         | 14:08  | 3/15/1938  | log11587.json  
11586  | Rykov, Alexei    | Request successfully submitted: CSRF 106434                            | 08:15  | 3/15/1938  | log11586.json  
11585  | Rykov, Alexei    | Cross Testing complete: QA email sent                                 | 08:12  | 3/15/1938  | log11585.json  
11584  | Kirov, Sergei    | EWO CE23001 created: CE SCCM team email sent                           | 22:36  | 3/14/1938  | log11584.json  
11583  | Kamenev, Lev     | Approved CSRF 512863: email sent to engineer 117                      | 16:01  | 3/14/1938  | log11583.json  
11582  | Yezhov, Nikolai  | UAT/IAT complete: email sent to certification engineer                | 10:40  | 3/13/1938  | log11582.json  

Project Technical Specifications

• Backend will be a Java Spring Boot application running on an Apache Tomcat Server, within an Ubuntu distribution
• Frontend will be built upon an existing AngularJS application
• MariaDB instance is going to store client solution forms, employee information, and engineering work tasks
• SMTP Server will be used to send emails for notifying employees of process progression
Project System Architecture

- **Ubuntu Server**
  - Apache Tomcat Server
  - Java Spring Boot

- **Front end**
  - AngularJS

- **Back end**
  - Google SMTP Email Server

- **Database**
  - MariaDB

- **User**
  - Browser
Project System Components

• Hardware Platforms
  ▪ Rack Server in Lab

• Software Platforms / Technologies
  ▪ Spring Boot
  ▪ Angular JS
  ▪ Maria DB
  ▪ Google SMTP server
  ▪ Ubuntu
Project Risks

• Database relationship
  ▪ Description - Modifying database relationships to allow multiple engineering work tasks per request
  ▪ Mitigation - Evaluate different schema diagrams to identify the most suitable approach

• JQuery Compatibility
  ▪ Description - Incorporating provided JQuery Scripts into AngularJS
  ▪ Mitigation - Verify compatibility, isolate JQuery functions, follow AngularJS best practices, and conduct rigorous testing

• Database Synchronization
  ▪ Description - Challenges of database synchronization a multi-user environment
  ▪ Mitigation - Ensure a persistent data migration by assessing data for inconsistencies, persistent endpoints calls, creating backups, and making necessary schema adjustments

• Scalability
  ▪ Description - Scalability challenges with handling high request and task volumes
  ▪ Mitigation – Test our application with large volumes of data as well as investigating methods for handling large datasets

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Questions?