MICHIGAN STATE
UNIVERSITY

Project Plan Presentation
Application Lifecycle Framework 2.0

The Capstone Experience

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From Students…
…to Professionals

Project Sponsor Overview

- One of the largest automobile manufacturers

- Plan to be Carbon Neutral by 2040

- Electric and autonomous vehicle development

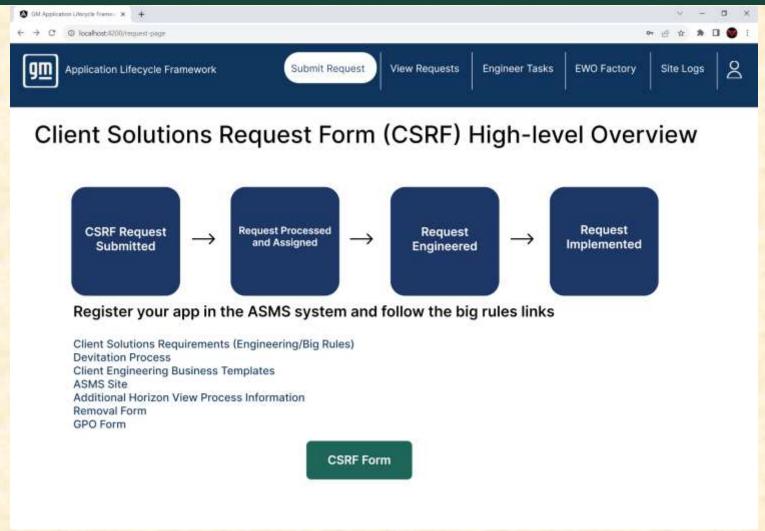- Shift to a more software-focused company

- 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

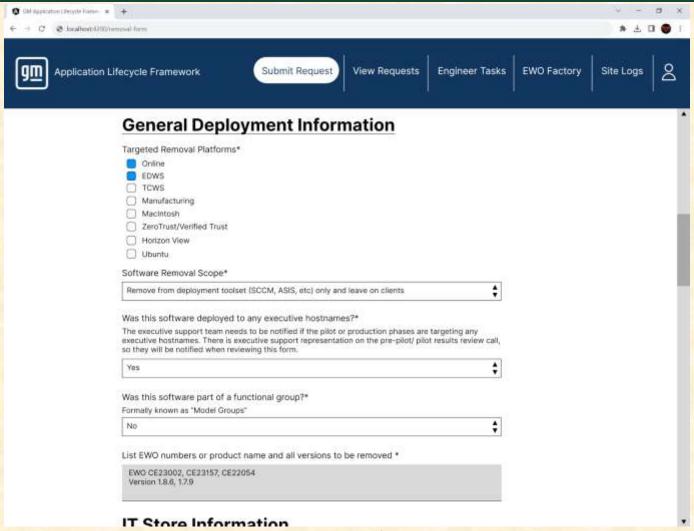# Project Design Specifications

- 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

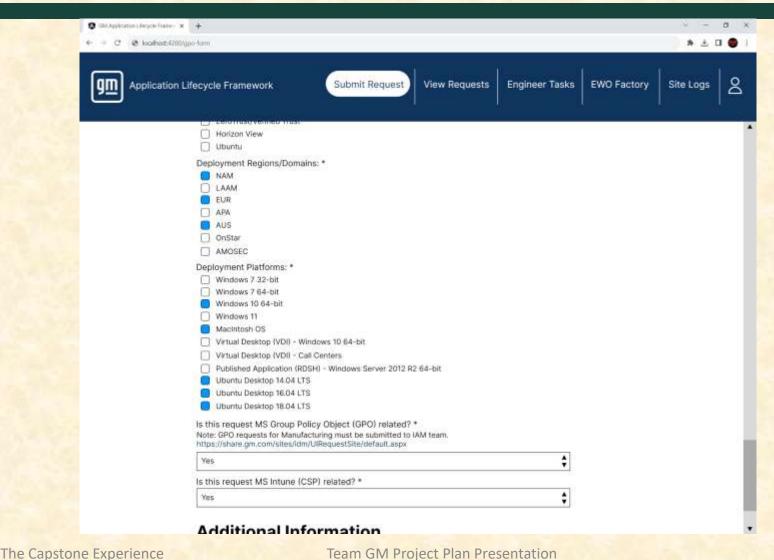# Screen Mockup: Submit Request Page
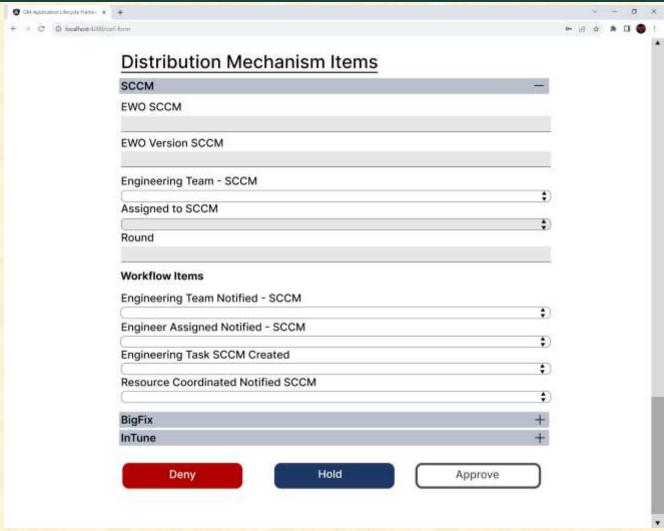
Screen Mockup: Removal Form Fields
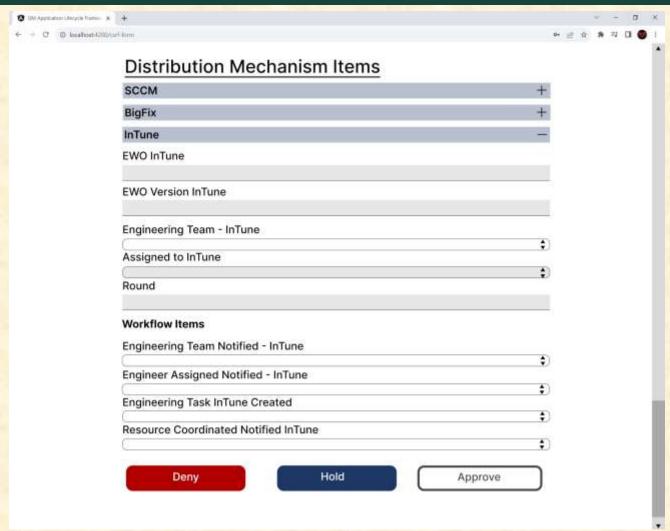
Screen Mockup: GPO Form Fields

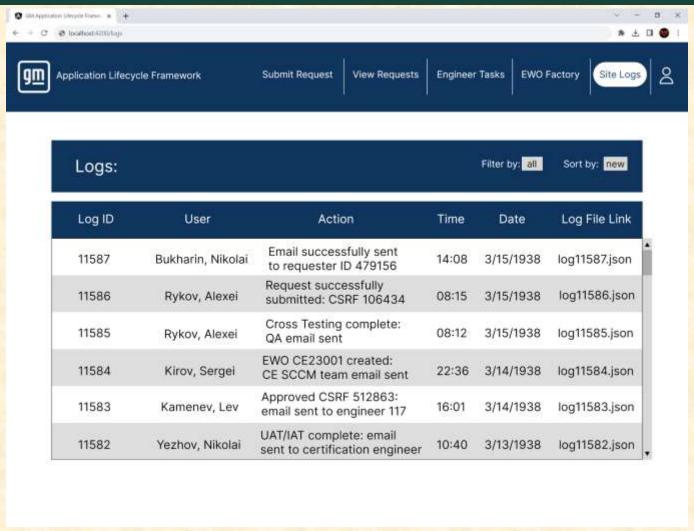# Screen Mockup: Distribution Mechanism SCCM Fields

Screen Mockup: Distribution Mechanism InTune Fields
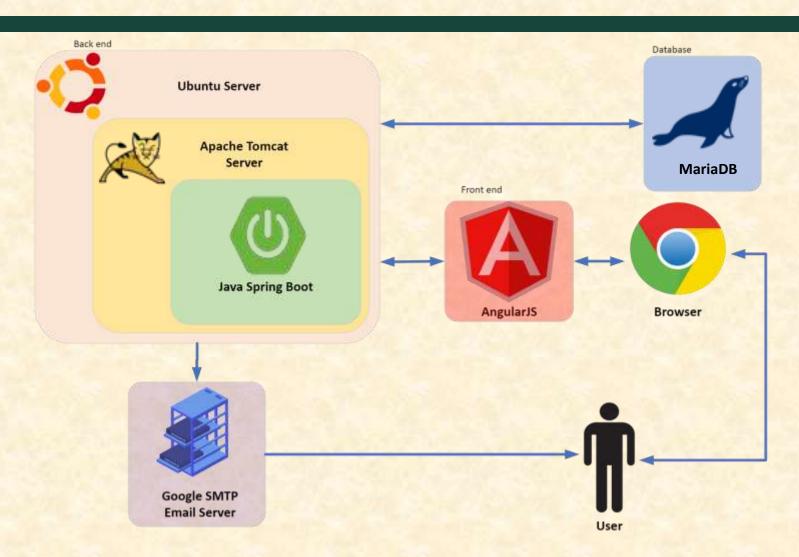
Screen Mockup: Site Logs

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

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

Questions?

Team GM Project Plan Presentation