Project Plan
Product Development Portfolio and Planning
The Capstone Experience
Team DRIVEN-4
Dan Tinsman
Kyle Forbes
Athena Zhang
Kevin Kye
Hassan Tarar
Department of Computer Science and Engineering
Michigan State University
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Functional Specifications

• Developing an environment to create product plans and roadmaps that the Original Equipment Manufacturers need to be a successful business in their industry by maximizing the use of available resources.

• **Portfolio Planning**: Show the most efficient 1, 3, 5 year plan to best allocate time/resources.

• **Portfolio Execution**: Keep track of the current status of the portfolio and compare it to the forecast.

• **Product Planning**: Develop capabilities that allow Product Managers to define and baseline an interactive 10-year product plan.
Design Specifications

• Portfolio Planning
  ○ Module will display resources, scenario, and forecast which will show employee hours, project capacity, expense budget, ability to remove/add projects, and accessibility to reports from resources displayed in graphs.

• Portfolio Execution
  ○ View updates of forecasts/projects, access to employee timesheets (table), and track execution of previously forecasted portfolios.
  ○ Mobile app will have a dashboard of reports (visuals of web app), updates, and employee timesheets.

• Product Planning
  ○ 10-year Gantt chart: assigning/tracking action items, Program/Project building block definition, storage of artifacts: documents/images etc.
Screen Mockup: Home Dashboard
Screen Mockup: Portfolio Planning

Portfolio Planning Module

- Resources
- Scenario
- Forecast

Powered by DRIVEN-4
Screen Mockup: Forecast
Screen Mockup: Home Dashboard
Screen Mockup: Portfolio Execution Module
Screen Mockup: Forecast vs. Actual
Screen Mockup: Mobile Interface
Technical Specifications

• Backend Service
  - ThingWorx Platform
  - PostgreSQL
  - Amazon Elastic Cloud Compute

• Mobile Application (iOS + Android)
  - Xamarin
  - ThingWorx REST API

• Web Application
  - Angular
  - ThingWorx REST API
System Architecture

- Xamarin
- Angular
- ThingWorx
- PostgresSQL
- REST API
- AWS
System Components

• Software Platforms / Technologies
  ▪ ThingWorx REST API
  ▪ Angular
  ▪ Xamarin
  ▪ Amazon Web Services
  ▪ Apache Tomcat
  ▪ ThingWorx Platform
  ▪ PostgreSQL
Risks

• **ThingWorx Platform as an Application Backend**
  ▪ No team member has worked with this platform.
  ▪ Our client has provided us with a library of enterprise-level training for all the features of the ThingWorx Platform.

• **AWS Integration**
  ▪ Description: Our team has little knowledge of AWS.
  ▪ We will try to continuously integrate pieces of our application into the AWS environment.

• **Role-based Authentication and Access to Modules**
  ▪ Our application relies on different users having different levels of access to the core features. We are not familiar with this implementation.
  ▪ Dan and Hassan have found an Angular tutorial online that uses role-based authentication. They will learn from this while implementing.

• **Project Scope Creep**
  ▪ The initial project proposal has a lot of features to be implemented.
  ▪ We will continually work with our client to identify main features.
Questions?