Project Plan Presentation
Organization Efficiencies Utilizing Wifi Locationing
The Capstone Experience

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Project Sponsor Overview

• Regional Retailer
• Founded in 1934 in Greenville, MI
• Over 265 stores in 6 Midwest states
Project Functional Specifications

• Improve the Customer Experience

• By Adding Smartphone Payment and

• Redirecting Resources to Busy Areas

• Using Real Time Store Traffic Data
Project Design Specifications

- Enhanced Shop & Scan Functionality by paying directly from phone

- Validation of Customers Credibility

- Showcase of Customer Shopping/Payment metrics
Screen Mockup: Home Screen
Screen Mockup: Item Screen
Screen Mockup: Cart Screen
Screen Mockup: Checkout Notification Screen

Would you like to complete your shopping trip and pay now?

Yes
No

An attendant will assist you shortly to complete a service check.
Screen Mockup: Dashboard Screen #1
Screen Mockup: Dashboard Screen #2
Project Technical Specifications

- Use react-native to build the basic structure of the app. Target customers by uploading data from Mist-access-point to Mist-cloud.

- Through the data stored in Microsoft-SQL, users can directly use the app to scan and record the price of the product without queuing up to re-scan.

- Through the positioning of Mist-access-point, customers can directly use the app to pay bills in designated areas without queuing for payment.

- Administrators can monitor the region through dashboards generated by Power-BI and ReactJS.
Project System Architecture

- Mobile App
  - Mist SDK
  - React Native
  - BLE Beacons
  - Authentication, Location Data, Inventory Data

- Web App
  - Power BI
  - React JS
  - Users Location Data
  - Authentication

- Microsoft SQL Database
- Mist Access Points
- Mist cloud
- Phone data converted to location data
- Customer
- Store Manager
Project System Components

• Hardware Platforms
  ▪ Mist Junifer Access Points

• Software Platforms / Technologies
  ▪ Web Application
    o React JS
    o React Router
    o Microsoft SQL Server
    o Microsoft Power BI
  ▪ Phone Application
    o React Native
    o React Navigation
    o Mist Wi-Fi
    o Microsoft SQL Server
Project Risks

• Risk 1
  ▪ Integrating Mist-SDK into React Native App
  ▪ Utilizing Android and iOS documentation, consulting with Juniper-Mist staff

• Risk 2
  ▪ Obtaining, using and updating real-time data on PowerBI dashboard
  ▪ Continue PowerBI research, streamline dataset using Azure Stream

• Risk 3
  ▪ Translating Customer data from the mobile app to the web app
  ▪ Plan: mobile app -> Azure SQL -> PowerBI -> web app

• Risk 4
  ▪ Utilizing customer credibility data in an efficient and user-friendly way
  ▪ Maximize positive customer experience for customer retention while minimizing theft, using customer data and collective experiences
Questions?