Project Plan Presentation
Airline Passenger and Baggage Application

The Capstone Experience
Team United Airlines Airport Operations

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Project Sponsor Overview

• United Airlines
• Chicago, Illinois (ORD)
• Fortune 500 Company
Project Functional Specifications

• Train United Airlines personnel on the passenger and baggage boarding process
• Test users’ attentiveness with bags/passengers intended for different terminals
• Administrative access available for viewing metrics of all users
Project Design Specifications

- Accessible on primarily Web, IOS, and Android platforms
- Interactive training experience for customer and ramp services employees
- Administrative control allows for the creation and selection of training data for event usage
- Similar UI interface for both admin and non-admin users
Screen Mockup: Portal Selection
Screen Mockup: User Profiles
Screen Mockup: Event Itinerary and Passenger Details
Project Technical Specifications

• View performance metrics across multiple devices
• Statically store passengers and pseudo-randomly generate new passengers
• Generate scannable QR codes for passenger baggage and flight info
• Scan tickets with webcam or hardware camera on mobile devices
Project System Architecture

- **Flutter**: Client Application (iOS, Android, Web)
- **Docker Container**
  - **Node.js**: Node environment
    - Express.js: Express server
    - Mongoose: API and Middleware
  - **mongoDB**: Database
Project System Components

- Hardware Platforms
  - iOS Phones
  - Android Phones
  - Web

- Software Platforms / Technologies
  - Node.js backend with library support
  - Flutter/Dart frontend with library support
  - MongoDB as our database via Mongoose
  - Awaiting confirmation on desired app host platform
Project Risks

• Risk 1
  ▪ Use of a varied tech stack with multiple development kits/libraries creating complexity
  ▪ Extensive testing to ensure intended functionalities
  ▪ Risk 2
  ▪ Synchronization of data and experience between clients on multiple platforms
  ▪ Utilization of proper backend tools to ensure synchronized experience
• Risk 3
  ▪ Consistency of language and flow between application views
  ▪ Keep familiar application flow and consult with client to ensure proper implementation of client vision
• Risk 4
  ▪ Maintaining design simplicity and ease of use
  ▪ Thorough documentation and well-informed design choices
Questions?