Project Plan
VW Car-Net Demo App

The Capstone Experience

Team Volkswagen

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Functional Specifications

- Inform dealers and potential buyers about the value of Car-Net
  - Tutorial app mimics the Car-Net UI
  - Allow user to learn about & experience Car-Net features
  - Instruction via brief overviews or longer walkthroughs

- Engage customers with the Volkswagen brand
  - Allow option for the user to create a VW ID
  - User receives VW sticker pack for completing all the material
Design Specifications

• App is broken into 3 categories (5 modules total)
  ▪ Learn about/create Volkswagen ID
    o Benefits of a Volkswagen ID; user can then choose to create one
    o Prepares for future access to Car-Net features
  ▪ Swipe Through (quick overview)
    o Remote services
    o Vehicle health report
    o Maps – navigation, parking, points of interest
  ▪ Interactive (hands on, in depth)
    o Guardian services (boundary alerts only)
• User unlocks sticker pack upon tutorial completion
Screen Mockup: Home Screen (Modules Incomplete)
Screen Mockup:
Home Screen (Modules Complete)
Screen Mockup: Swipe Through

Unlock your car

By clicking this button, you are able to unlock your car.

Honk your car by the click of this button.

done
Screen Mockup: Walkthrough

- Click to create a boundary alert
- Click and type in a location
- Click to set the location
Technical Specifications

• Front End Mobile Application
  ▪ iOS, Android
  ▪ Primarily a self-contained application
  ▪ User/Shared Preferences (iOS/Android) store user progress

• VW Registration Server
  ▪ Interfaces with app to allow user to create Volkswagen ID
  ▪ OAuth will be used for server/app interaction

• Firebase Analytics
  ▪ Captures application usage statistics, e.g., how many users have completed all tutorial modules
System Architecture

- Firebase Analytics
- OAuth
- Registration Server
- Swift
- Kotlin
System Components

• Hardware Platforms
  ▪ None

• Software Platforms / Technologies
  ▪ Android/Kotlin → OKHttp, Retrofit, EventBus
  ▪ iOS/Swift → URLSession, Codable, NSNotificationCenter, SnapKit
  ▪ Firebase Analytics (user statistics)
  ▪ OAuth (user registration)
Risks

• OAuth
  ▪ Need to authorize app to communicate with registration server
  ▪ Need to determine how VW implements OAuth into their existing apps; working with VW to gain access to test server

• EventBus/NSNotification
  ▪ Publish-subscribe patterns are integral to modern mobile application development
  ▪ Developed prototype to outline app architecture

• Firebase Analytics
  ▪ Firebase Analytics will be used to gather app statistics
  ▪ Set up test applications to interact with Firebase Analytics
Questions?