Project Plan
Live Platform Real-Time Occupancy Status

The Capstone Experience

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From Students…
    …to Professionals

Functional Specifications

- Simplify the process of searching for available desks

- Display available workspaces through an interactive Live-Platform dashboard

- Based on a user's seating preferences

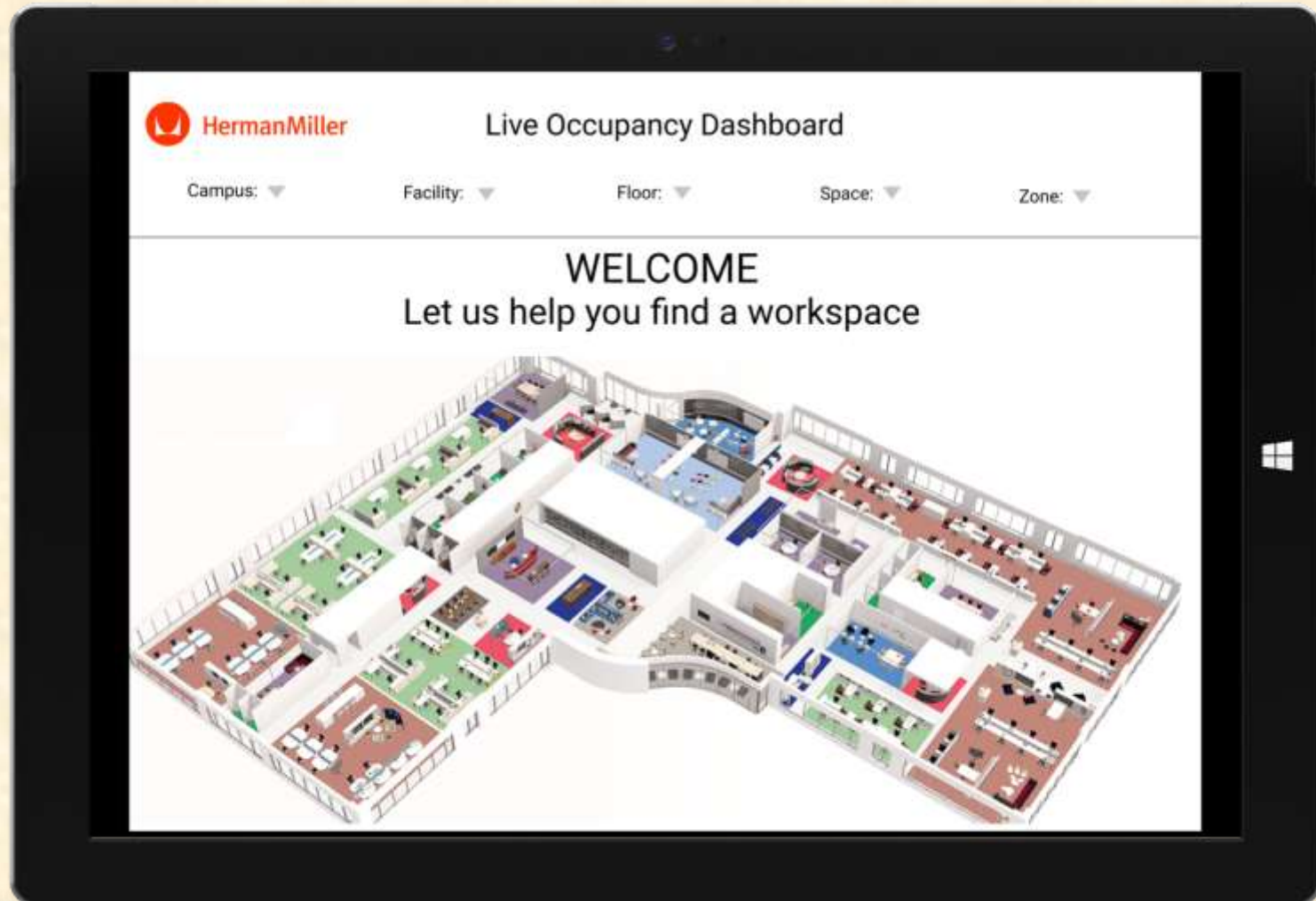- Updates workspace availability in real-time
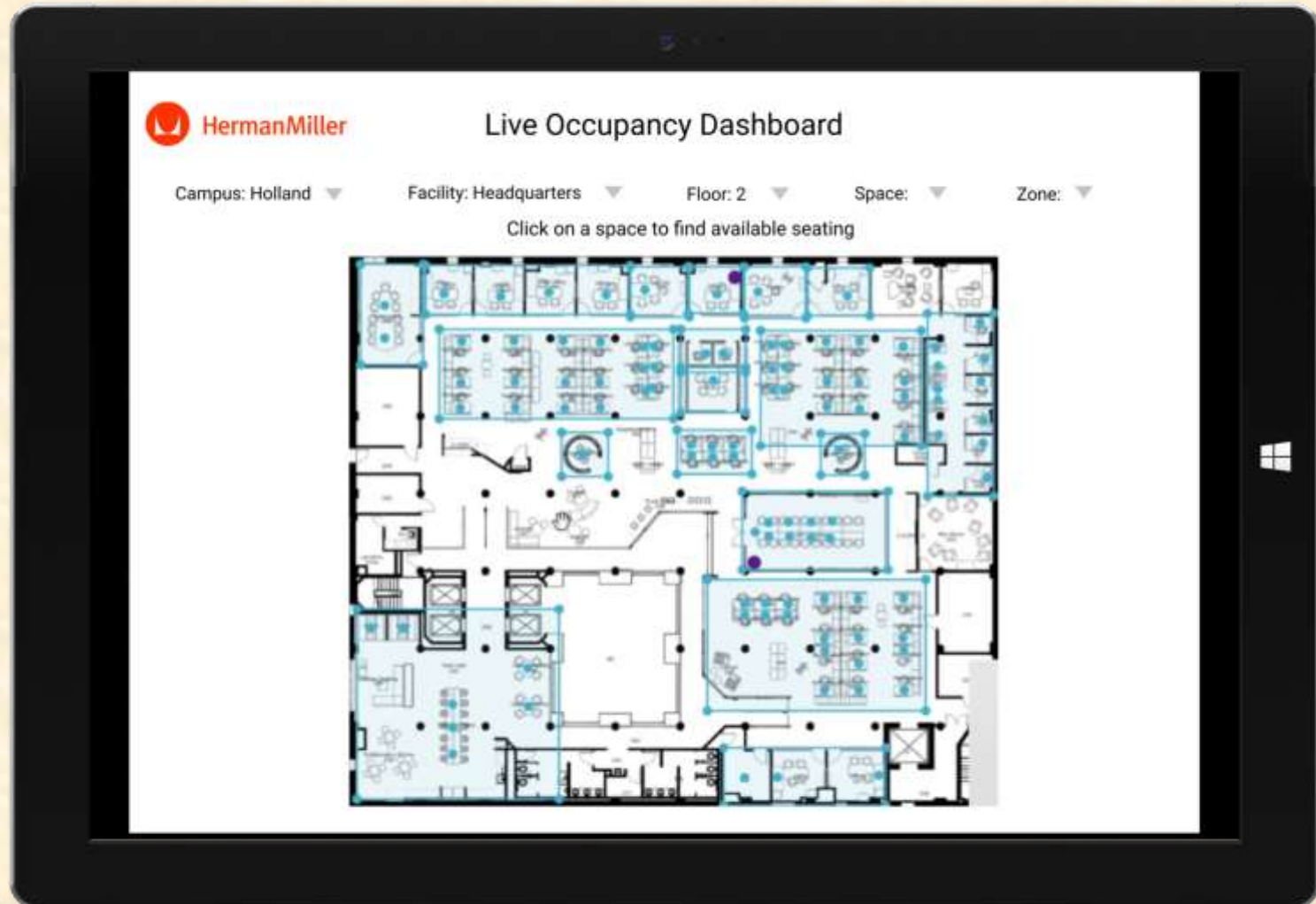
Design Specifications

- Real-time visualization of workspace's open seating

- Users select their seating preferences (facility, floor, zone, etc.) in a dropdown menu

- A floor map will display available workspaces in green and unavailable spaces will be shown in red
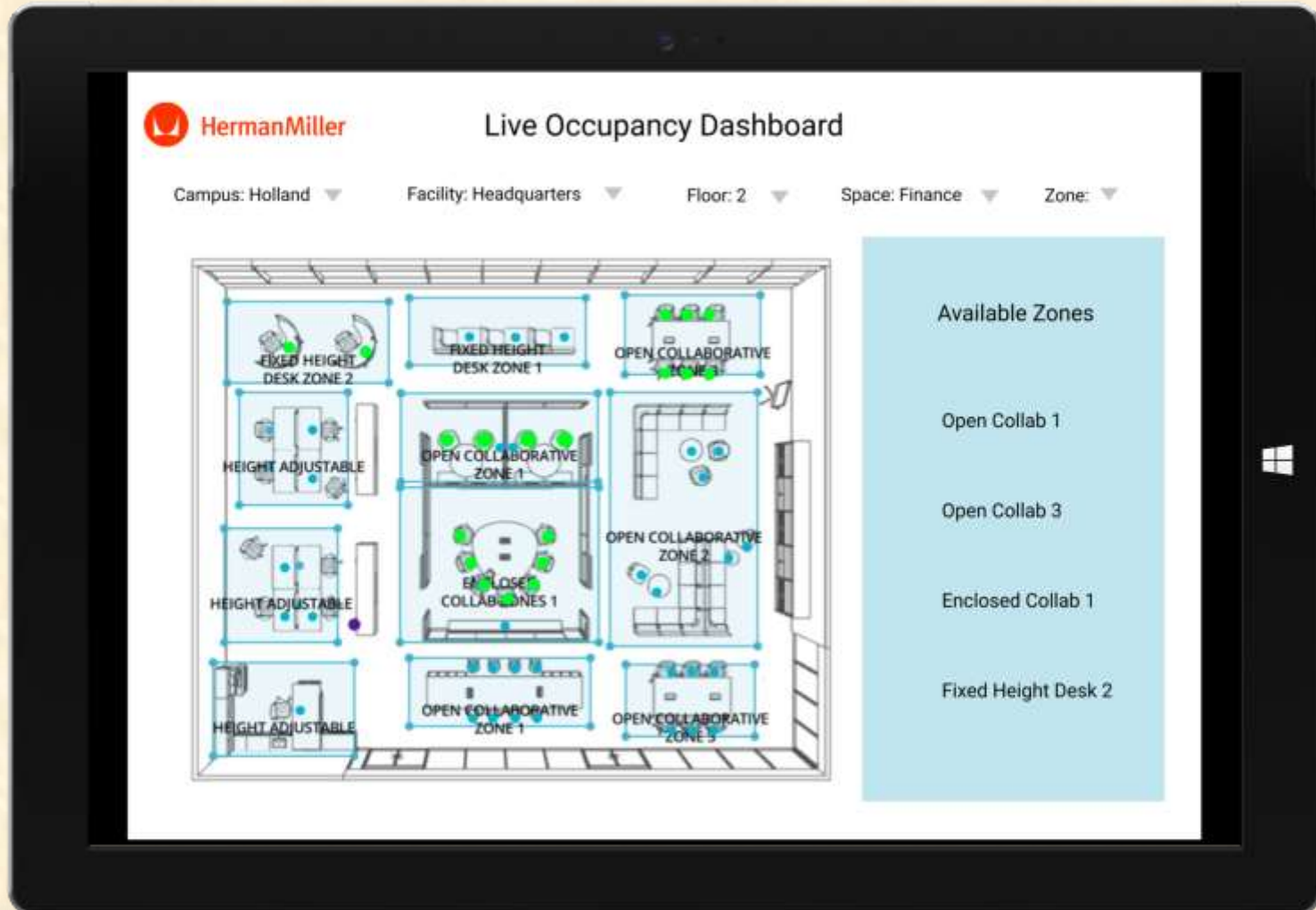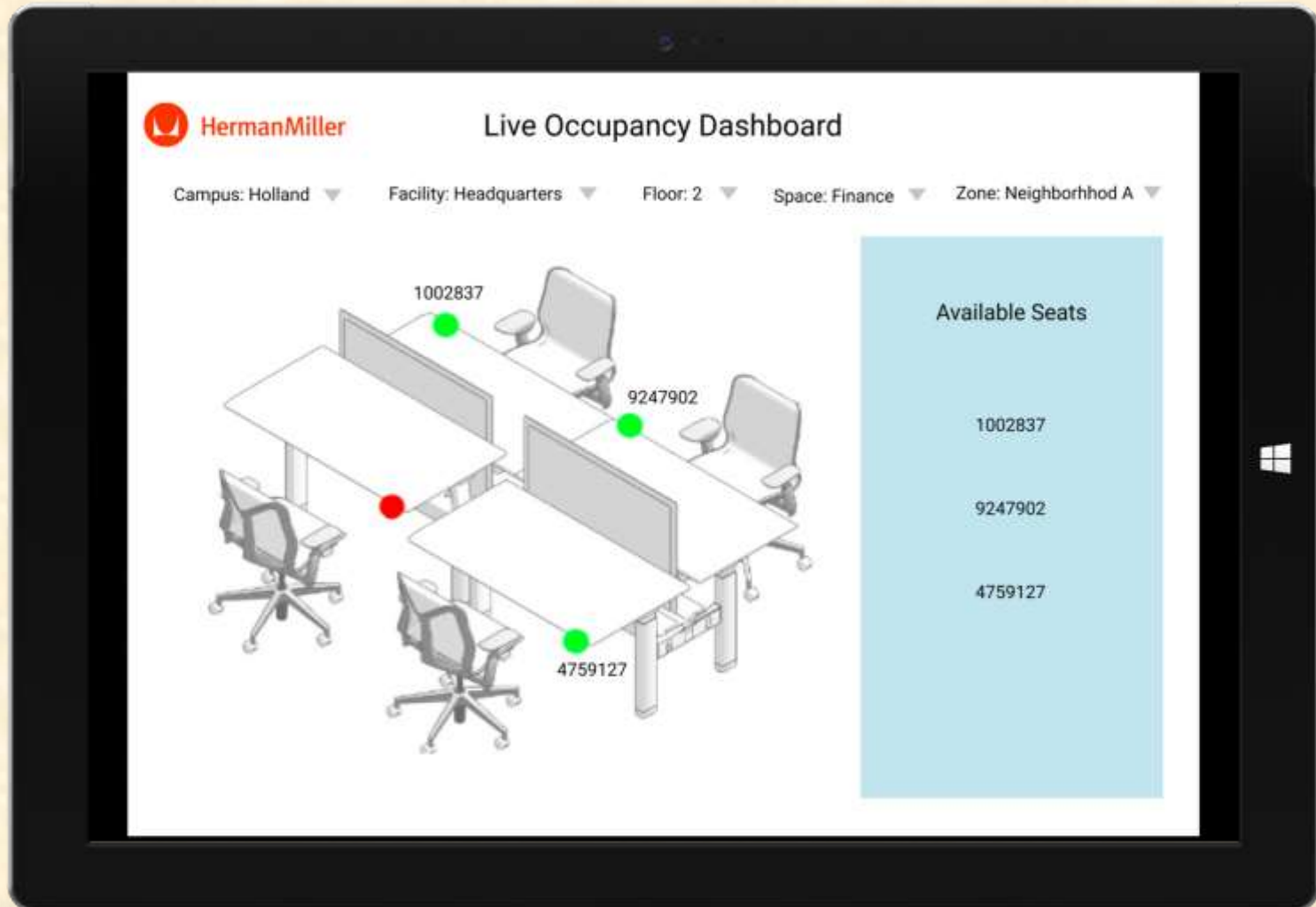
Screen Mockup: Home Screen

Screen Mockup: Floor View

Screen Mockup: Space View with Status

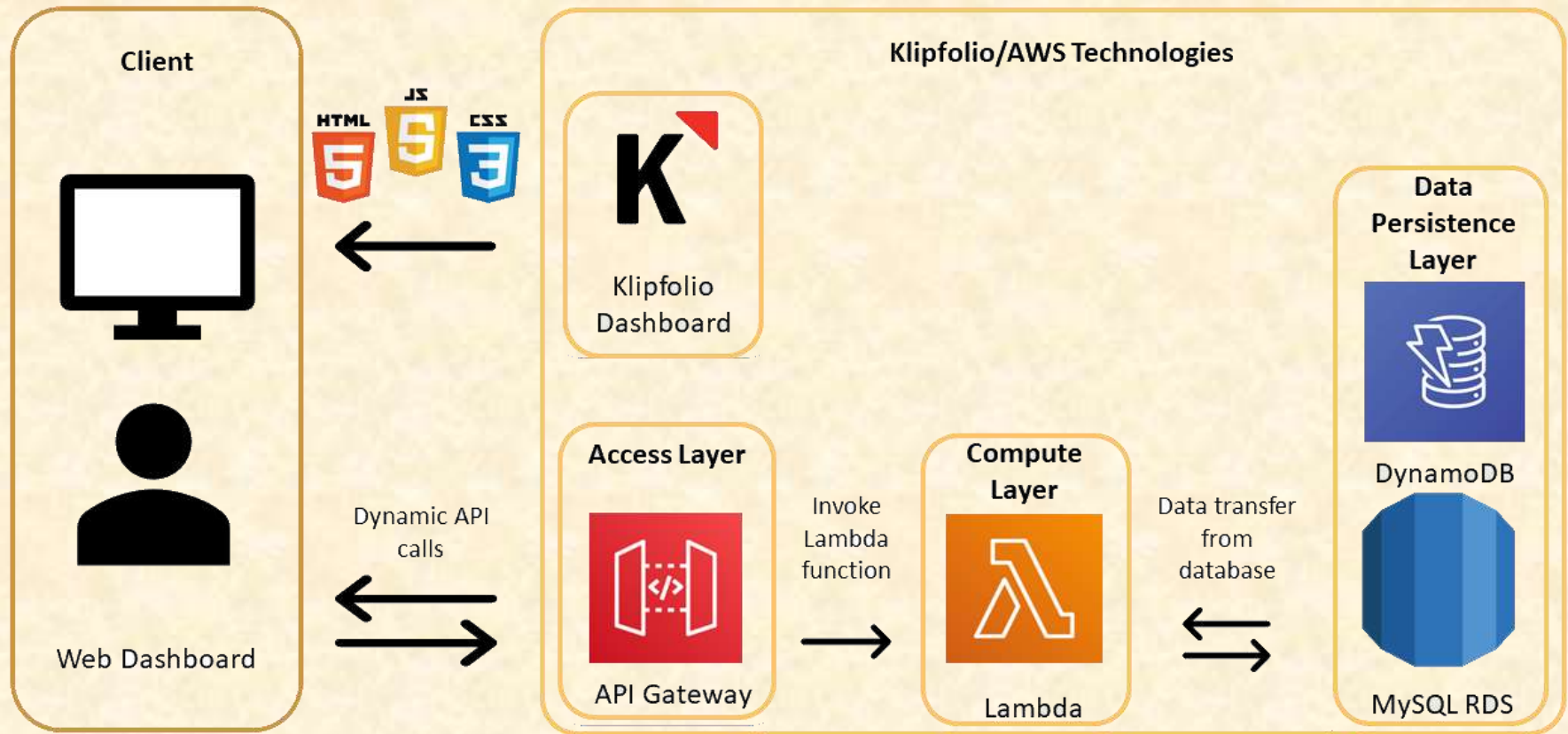# Screen Mockup: Zone View with Status

Technical Specifications

- Dashboard built and hosted on Klipfolio

- The dashboard invokes Lambda functions through an API call

- Lambda functions will query DynamoDB and MySQL RDS

- A stream will be enabled on the DynamoDB table to update in real-time

System Architecture

System Components

- Software Platforms / Technologies
  - AWS Lambda with Node.js
  - AWS API Gateway
  - AWS DyanamoDB
  - Klipfolio
  - MySQL RDS
  - MapBox GL JS
  - HTML / CSS / JS

Risks

- **Lack of Access to Hardware**
  - Description: Without access to a desk and sensor set up, it will be difficult to ensure that the displayed status on the dashboard is correct (i.e. An unoccupied desk being incorrectly displayed as "occupied")
  - Mitigation: Conduct virtual tests to ensure that the correct status is given
- **The Data is in Different Platforms in DEV/UAT Environments**
  - Description: Data is stored across multiple databases increasing the risk of displaying incorrect occupancy results
  - Mitigation: Work closely with clients to ensure the correct tables and relations are used. Test query results to ensure correct data is displayed in the result
- **Desks Could be Assigned or Unassigned**
  - Description: Whether a desk is assigned is not clear in filtered results
  - Mitigation: Filter results further to remove assigned seats from available spaces and display the workstation as unavailable on Klipfolio dashboard

Questions?