## **Revision**

| **Version** | **Primary Author(s)** | **Description of Version** | **Date Completed** |
| --- | --- | --- | --- |
| 1.0 | Chang Hoe Hin  Yee Si Shun | Explain what and how Vision will be | 19/4/2025 |
| 1.1 | Goh Chun Yong | Define project goals. | 24/4/2025 |
| 1.2 | TEE KAH LE | Define project scopes. | 27/4/2025 |

## Vision

**Requirement for the whole system**

| **What?** | **How?** |
| --- | --- |
| The System needs to provide accessible route planning across campus | * The user can select the starting point and desire location. * The navigation system should show multiple available routes from start location to end location. * Some route being shown should automatically avoid unwanted events (elevator breakdown and construction) and default one is the fastest without events consideration. |

**System Architecture**

| **What?** | **How?** |
| --- | --- |
| The System needs to integrate with the university's facilities management database and events calendar | * Universities that want to use the system need to link their events calendar and build a map model database. |

**Requirements for the components**

| **What?** | **How?** |
| --- | --- |
| Users can contribute accessibility information about campus. | * Users can select the location on map model to mention the type of event that will be marked as potential event. * The navigation system provides different interfaces for the university’s administrator to validate and double confirm the information sent by users or update themselves manually. |

**Design model of the components**

| **What?** | **How?** |
| --- | --- |
| The System shall provide multiple interfaces for users to choose | * Normal routes and wheelchair-accessible maps can be chosen by users. * User’s account can be use differ between basic users and administrator person for different interfaces. |

**Implementations of the components**

| **What?** | **How?** |
| --- | --- |
| The System shall present event information on campus navigation | * Events calendar and database being link from university will import the information to show details on the specific location. |

## **Scope**

| Accessibility | We will implement a design approach that prioritizes ease of navigation for users with mobility challenges, ensuring that all individuals can use the system. Users will be able to plan their movements to avoid stairs, elevators and ramps, which will enable easier navigation throughout the campus. |
| --- | --- |
| Real Time Updates | The platform will merge with University facilities management databases in order to provide construction, elevator downtime, and other disruptions in real time. This will allow users to quickly devise the best routes across campus to avoid inaccessible areas. |
| Event Integration | The system will fetch data from the university’s events calendar to incorporate modifications to pathways and access routes for various events. Users will be notified of other routed or added accessibility accommodations. |
| Personalized User Experience | Users will have defined mobility constituents under which they shall customize their own profiles. The platform will provide the most appropriate and accessible routes based on these preset preferences. |
| Interactive Mapping | A computer based instructional system will be developed to enable users to look for buildings, view accessible entrances, and see the recommended routes, as well as predetermined ones, on an interactive campus map. |
| Feedback and Reporting System | Users will have the option of reporting accessibility issues with the platform itself so that the facilities team can take action and make improvements more rapidly and efficiently. |
| Administrative Tools | The platform will have a backend dashboard for administrators where they will be able to view user activity, view reported problems, and assess how effective the navigation system is working. |

## Goals

1. **Enhance Campus Accessibility**
   * Ensure all users, including those with disabilities, have equal access to navigate the campus efficiently and safely.
2. **Improve Real-Time Decision Making**
   * Enable users to make informed navigation choices based on live updates about accessibility-affecting changes.
3. **Dynamic Route Adjustments**
   * Recalculate paths based on obstacles (construction, outages).
4. **Real-Time Data Integration:**
   * Sync with facilities and event systems for up-to-date routing.
5. **Facilitate User Engagement and Feedback**
   * Provide options for users to report accessibility issues or suggest improvements, supporting continuous system enhancement.