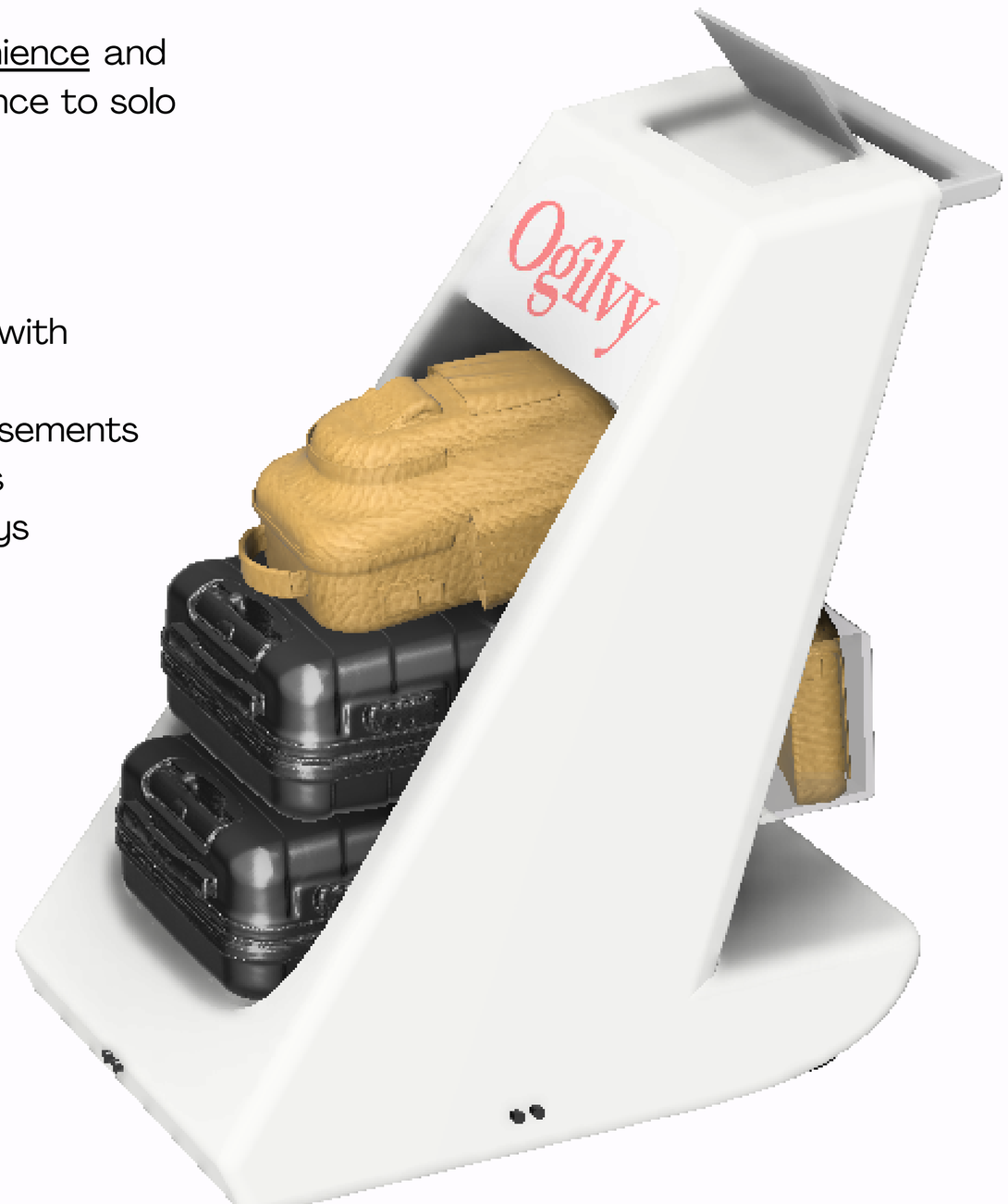
GUID-E

INTELLIGENT TROLLEY

PROBLEM STATEMENT

How might we redesign conventional trolley to enhance user convenience and operational efficiency by facilitating seamless navigation and assistance to solo and group travelers in Singapore?



USER-SPECIFIC PROBLEM

Solo

- Overwhelming signs
- Losing track of time
- Last calls cause delays

Family

- Children playing with trolley
- Untimely advertisements
- Losing directions
- Scattered trolleys

VALUE PROPOSITION

- User Convenience and Safety
- Operation Efficiency
- Support Retail Branding

FEATURES

User Convenience and Safety

- Autonomous Navigation - Guid-E will autonomously lead users to any defined areas. Users will follow behind, guided by Guid-E to their choice of destination.
- User Detection - Guid-E will cease movement once user is detected too far away
- Child Presence Detection - Guid-E will suspend movement if a child is detected on it
- Obstacle Detection

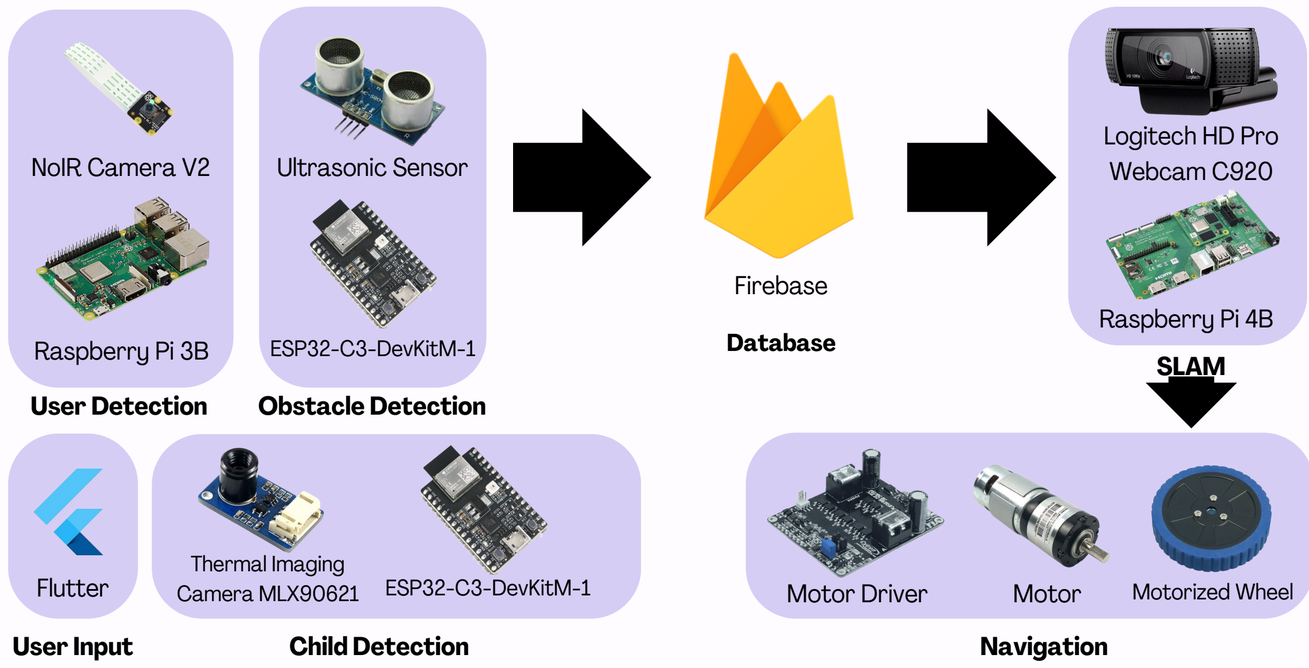
Operation Efficiency

- Self returning - upon end of user journey, Guid-E will return to its charging points
- Self balancing - an even distribution of Guid-E will be maintained at distribution/charging points
- Trackable with pre defined boundaries

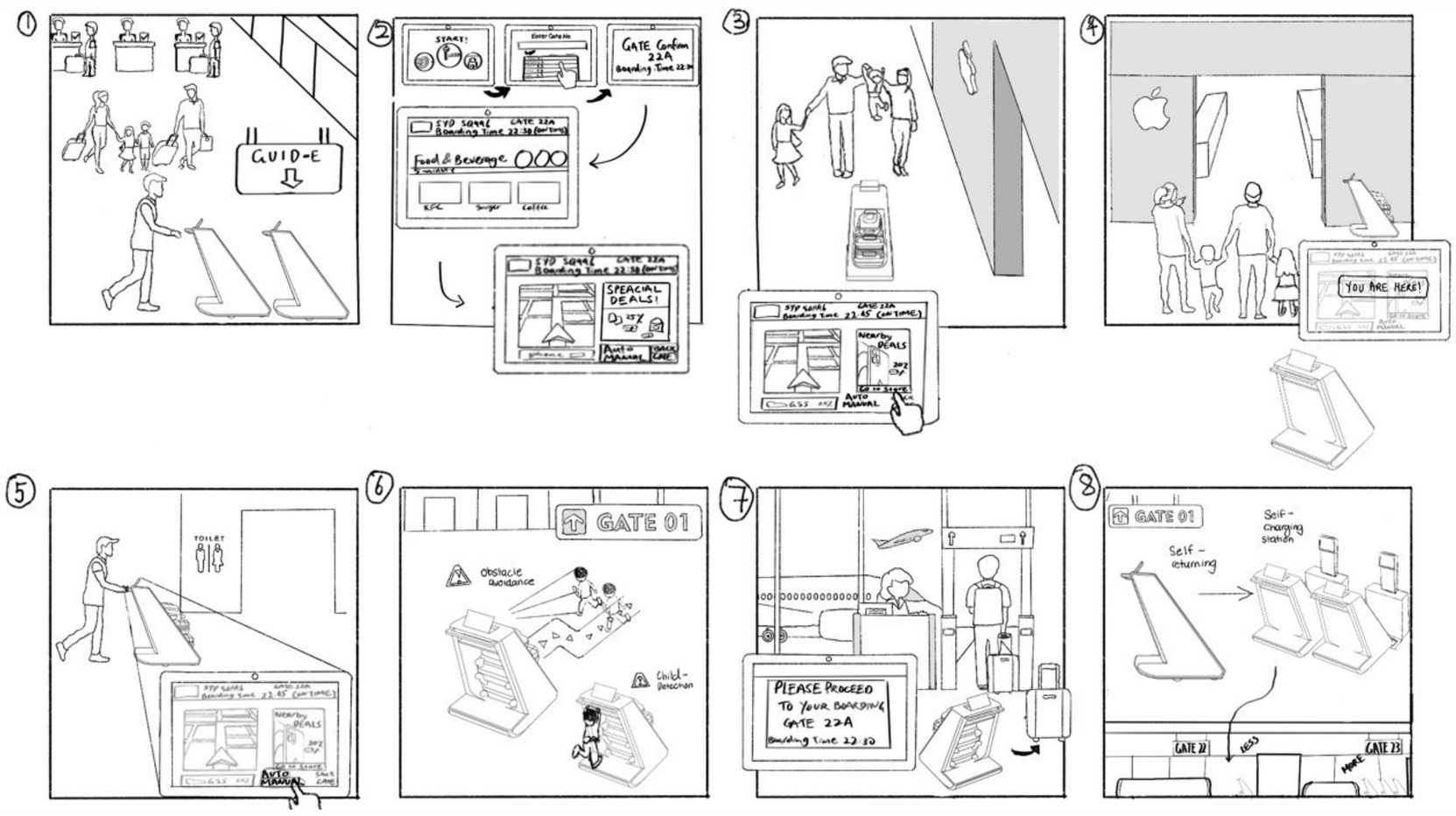
Support Retail Branding

- Real-time promotions - real-time advertisements will pop up, as user passes by specific shops
- Advertisement space

ARCHITECTURE



PROPOSED USER JOURNEY



SCAN QR CODE FOR USER INTERFACE

Amos Tan Pei Wei
Andrew Yu Ming Xin
Charmaine Hong Min Xuan
Fawziyah Binte Rosli
Michelle Halim
Mohamed Ammar Bin Mohamed Yusri

Product Design Studio (Spring 2024)
BSc in Design and Artificial Intelligence