

## **Project Title**

Digital Transformation of Asset Management and Clients' Transportation

## **Project Lead and Members**

Project lead: Ignatius Ong

Project members: Fiona Chua, Henry Lim and Terry Tan

## **Organisation(s) Involved**

St Luke's ElderCare Ltd

## **Healthcare Family Group(s) Involved in this Project**

Allied Health, Nursing

## **Applicable Specialty or Discipline**

Respiratory Therapy

## **Project Period**

Start date: not indicated

Completed date: not indicated

## **Aims**

See poster appended/below.

## **Background**

- Asset maintenance involves daily manual reporting of defects and cyclical planning using Excel sheets; this involves extensive manhours for tracking and updating.
- Reporting of vehicle defects was not structured and occasionally mis-communicated, resulting in vehicle breakdowns and delays in transport services.
- Client transport arrangement involved daily planning using Excel sheets and Google mapping to plan routes.

- Vehicle actual loads and clients on-board vehicles were not visible to the operations teams unless communicated by the transport captains. This was not a safe practice as it took the transport captain's focus off the road.
- The process of using Excel sheets and Google mapping to plan deployment and schedules involved a significant degree of coordination and notifications, which involved extensive manhours.
- Both the asset and client transport management processes were not viable given the increasing vehicle fleet of 40 vehicles and a client base of 1500 and growing.

## **Methods**

See poster appended/ below

## **Results**

See poster appended/ below

## **Conclusion**

See poster appended/ below

## **Project Category**

Technology

Digital Health, Data Management, Data Platform, Mobile Health, Digital App

Care & Process Redesign

Environmental Sustainability, CO2 Waste

## **Keywords**

Client transport arrangement, Digital transformation, Computerised Asset Maintenance System, Fuel consumption, CO2 derivation, Mobile App

**Name and Email of Project Contact Person(s)**

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## Background

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- Vehicle actual loads and clients on-board vehicles were not visible to the operations teams unless communicated by the transport captains. This was not a safe practice as it took the transport captain's focus off the road.
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- Both the asset and client transport management processes were not viable given the increasing vehicle fleet of 40 vehicles and a client base of 1500 and growing.

## Solution

- Digital transformation to create a seamless and single platform for managing St Luke's ElderCare's (SLEC) assets and clients' transportation needs.
- CAMS or Computerised Asset Maintenance System. It is a seamless and simplified reporting process for all transport captains to report vehicle defects that are immediately captured in the system and routed to vendors for follow-up actions without delays or downtime.
- The system records all defects, fuel consumption and costs of the assets in the system for detailed study to reduce costs and improve reliability and service performance on the road.
- TMS or Transport Management System. It plans transport scheduling and deployment of vehicles, optimises routes, captures the vehicles' geo location and sends alert notifications to next-of-kin and SLEC teams when clients are on board or alights from vehicles. The system improves efficiency and gives visibility.
- With CAMS and TMS on the same platform, it is a holistic transport management system, and it positions SLEC well for ESG consideration for CO2 derivation.

## Results

### Pre-CAMS implementation

Assets-related maintenance activities : 224 manhours

### Post CAMS implementation

Asset maintenance activities :92 manhours.

Reduction of manhour / month : 132

Manhours saved allow executives to focus on resource planning.



### Pre-TMS implementation

Transport related planning activities : 740 manhours across 24 centres

### Projected Post-TMS implementation

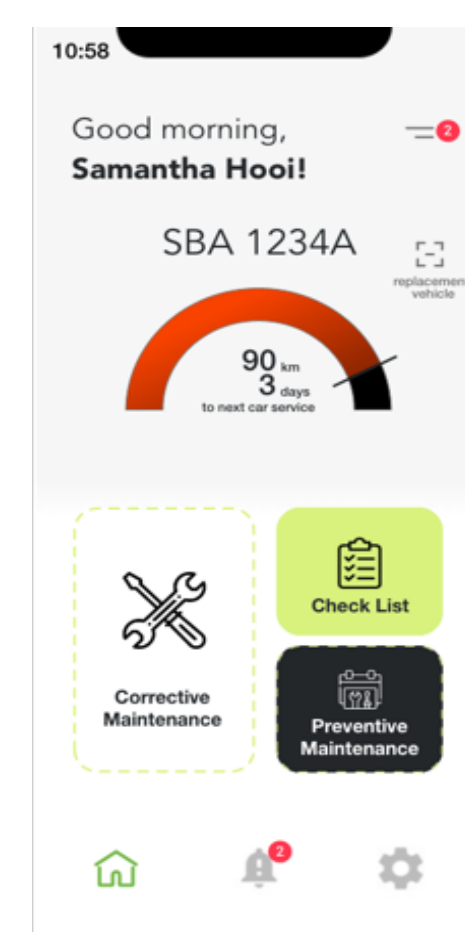
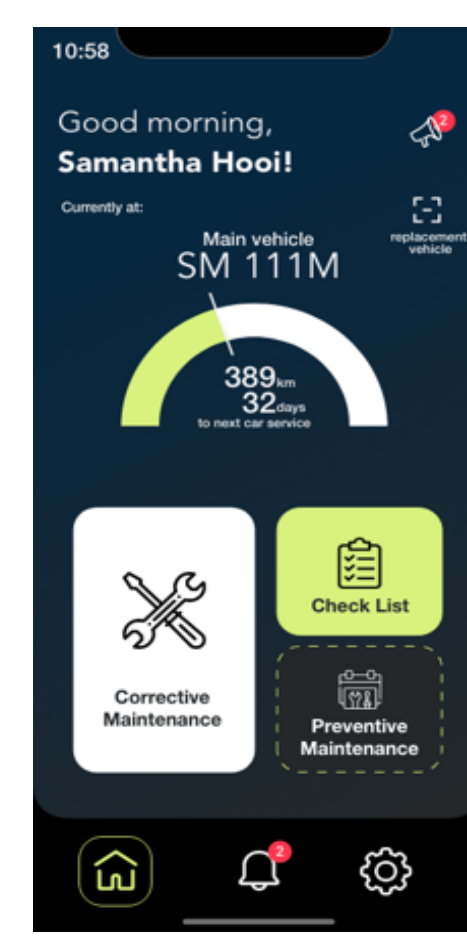
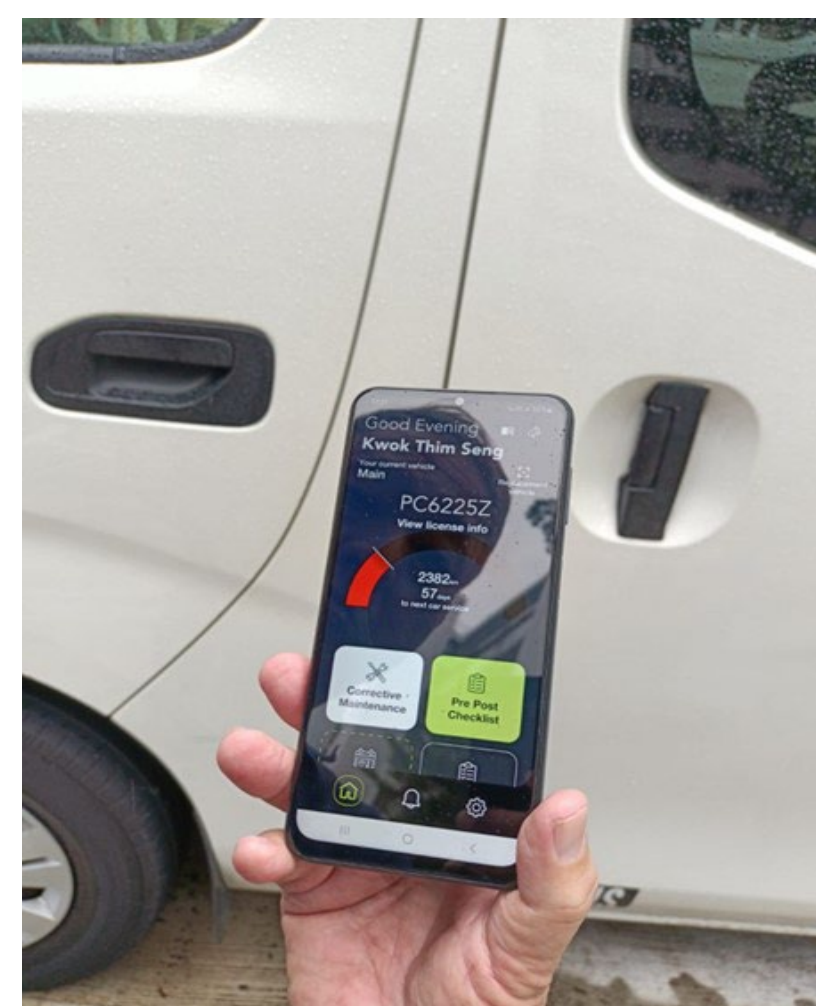
Transport related planning activities : 240 manhours (managed by transport office)

Reduction of manhour / month : 500

Manhours saved allow care staff to increase care engagement time with elders by 30.83 hours per month / centre

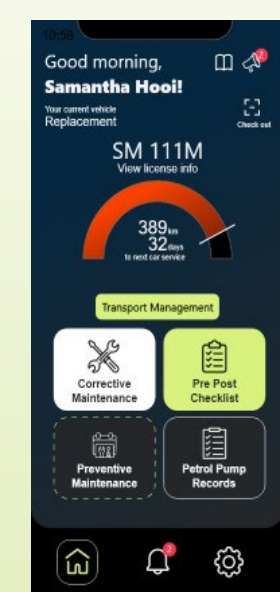
## System Seamless Mobile Applications (CAMS & TMS)

## Computerized Asset Management System (CAMS)

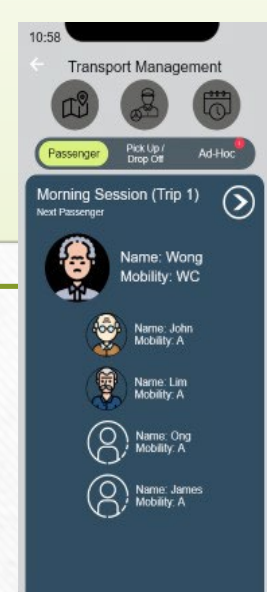


### CAMS Transport Management System (For Transport Captain)

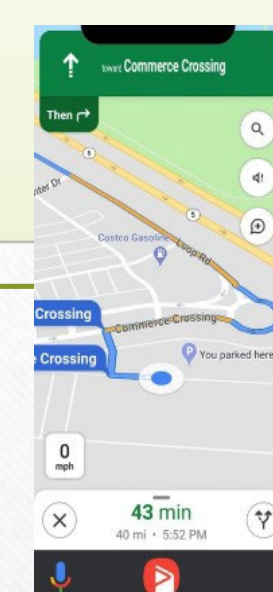
#### Daycare Morning / Rehab (Go)



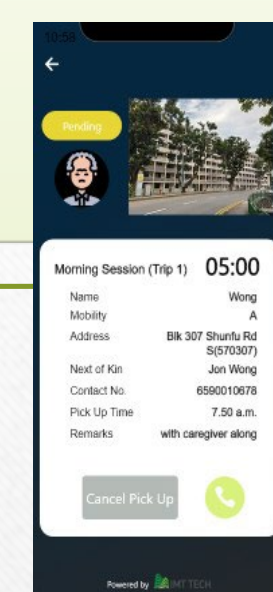
- Homepage of CAMS Mobile App
- Click "Transport Management" button in middle



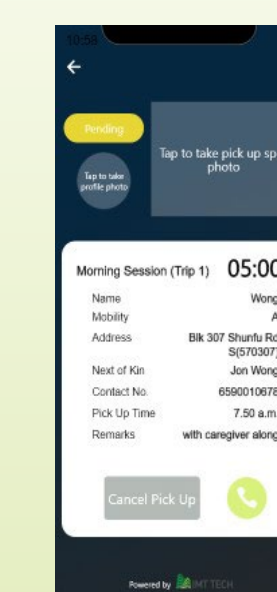
- Homepage of TMS
- List of passenger by trip and session
- Click the passenger's name to see his/her ticket



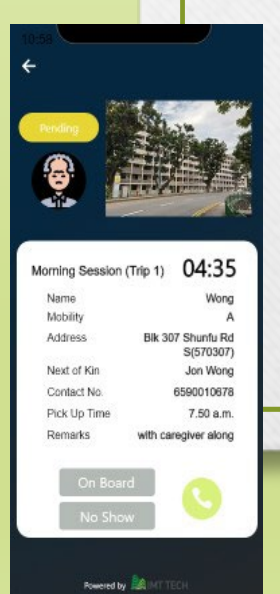
- Click ">" icon in previous page to open navigation tool to the pick-up location of next passenger



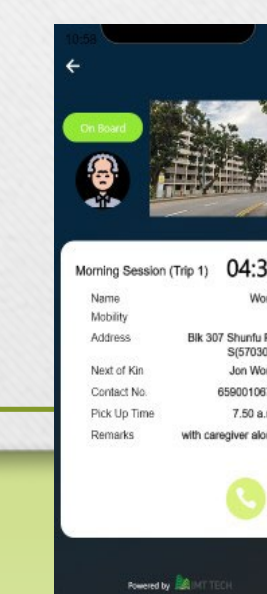
- Each ticket should come with a default profile photo and pick-up spot
- A phone icon is available for TC to press and launch another app to call the passenger/NOK



- If not, TC needs to help to capture the photos and upload via this app



- Once TC arrives the pick-up spot, a push notification will be prompted to Passenger/NOK
- Countdown timer starts
- Click "On Board" after passenger is seated in vehicle



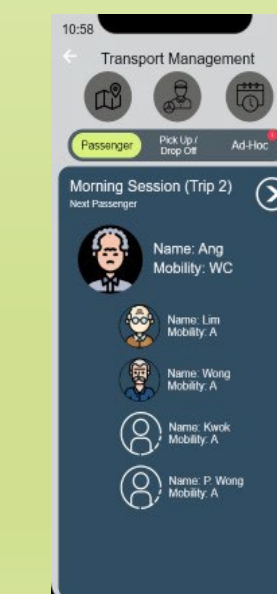
- Status will be updated to "On Board" and TC can proceed to pick the next passenger



- Once a passenger is being picked up, the name will be moved from "Passenger" tab to "Pick Up / Drop Off" tab
- Click "Drop Off All" after drop the passengers to center



- Status will be updated to "Dropped Off"



- TC can proceed to pick next passenger of next trip