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ALPS Last Mile Courier System for Medication Delivery – The Chariots

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INTRODUCTION

Since 2018, the project team has collected data, delivery errors and challenges encountered across all PHIs and courier companies to purposefully design a last mile courier system for medication delivery.

Based on the data obtained on an average of 75,000 deliveries per month, the magnitude of the errors were as follows:

- Delivery out of assigned timeslots (2%)
- Wrong addresses provided (2%)
- Wrong deliveries (0.03%)

Through this system, the project team aims to achieve the following.

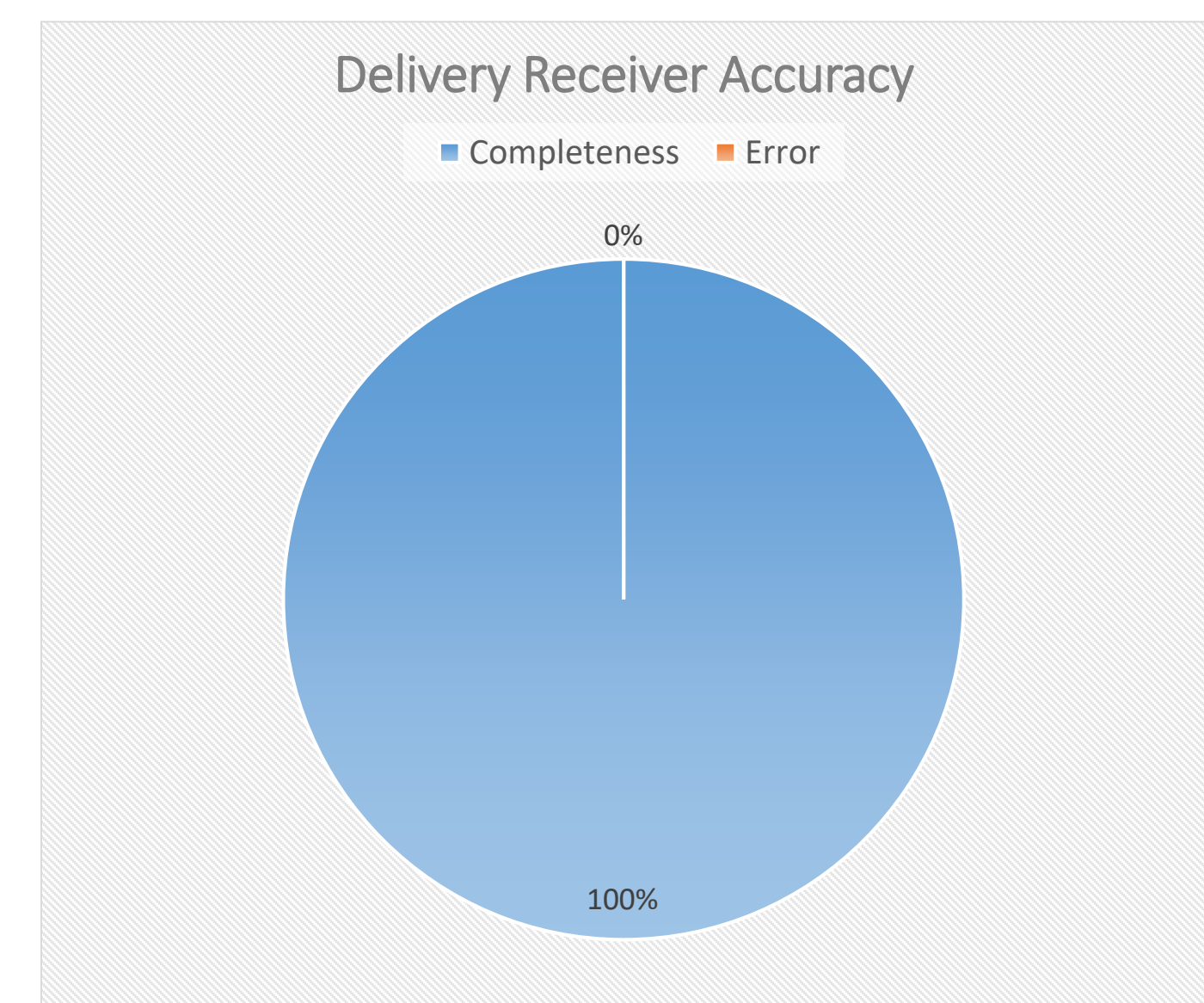
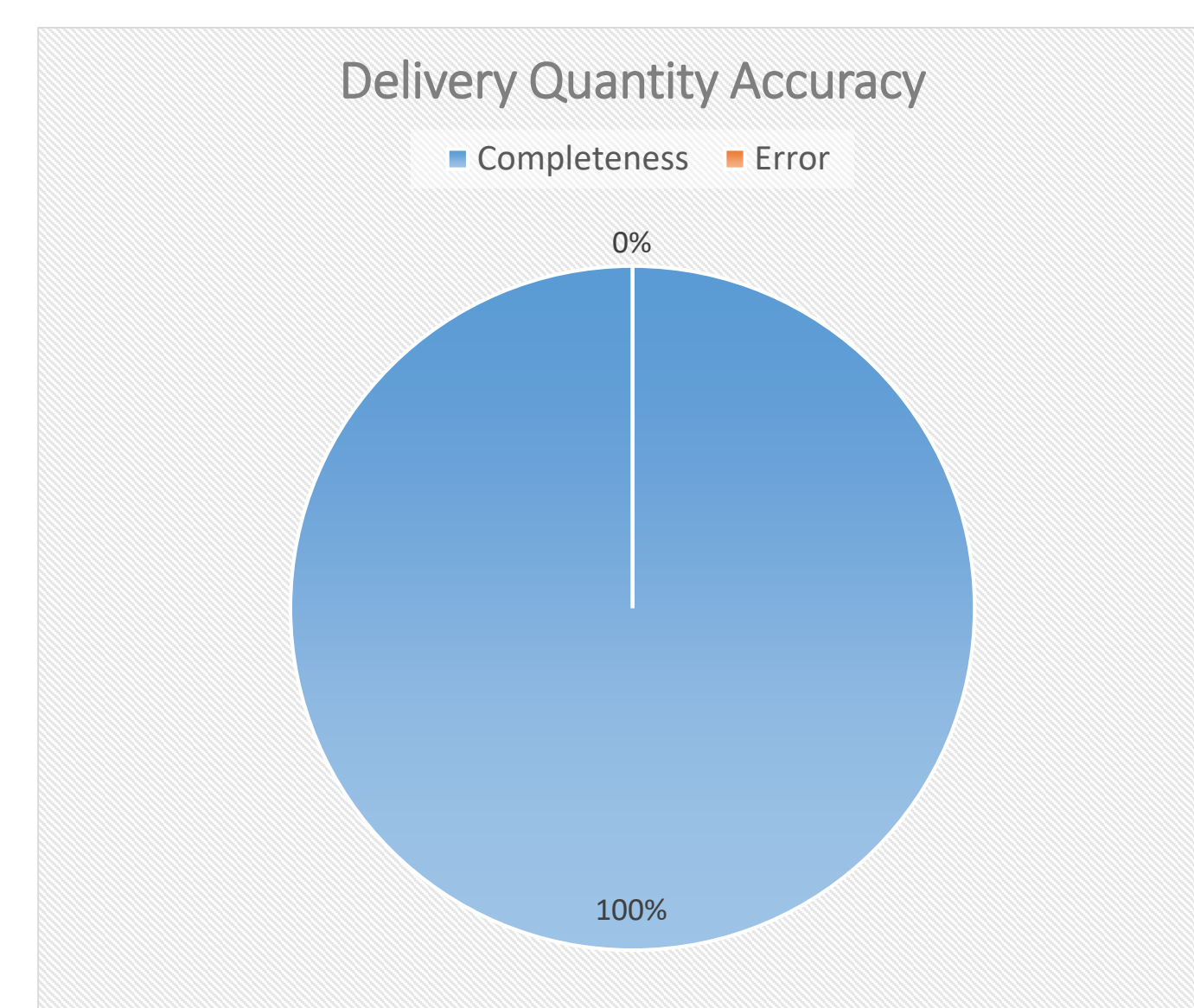
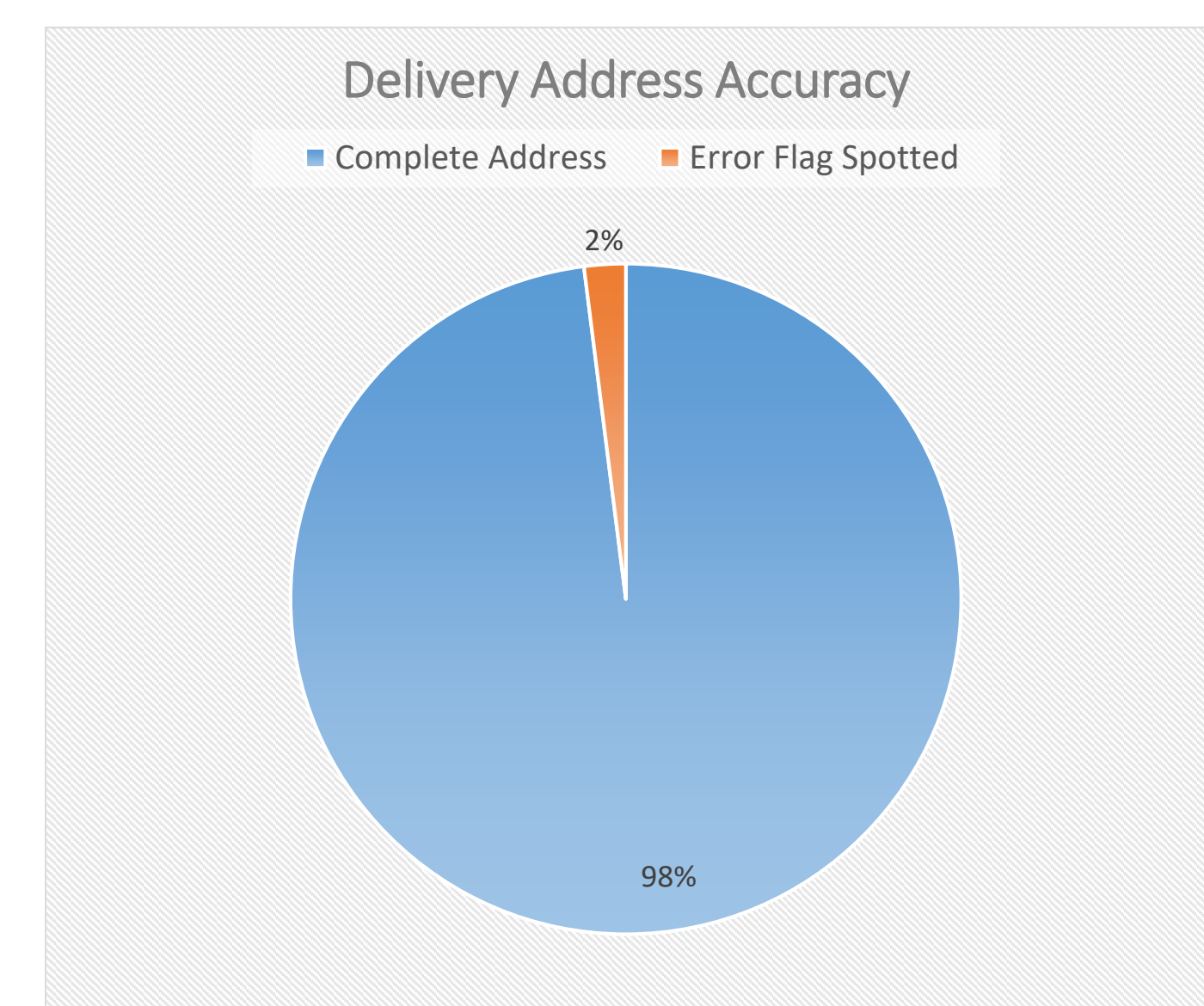
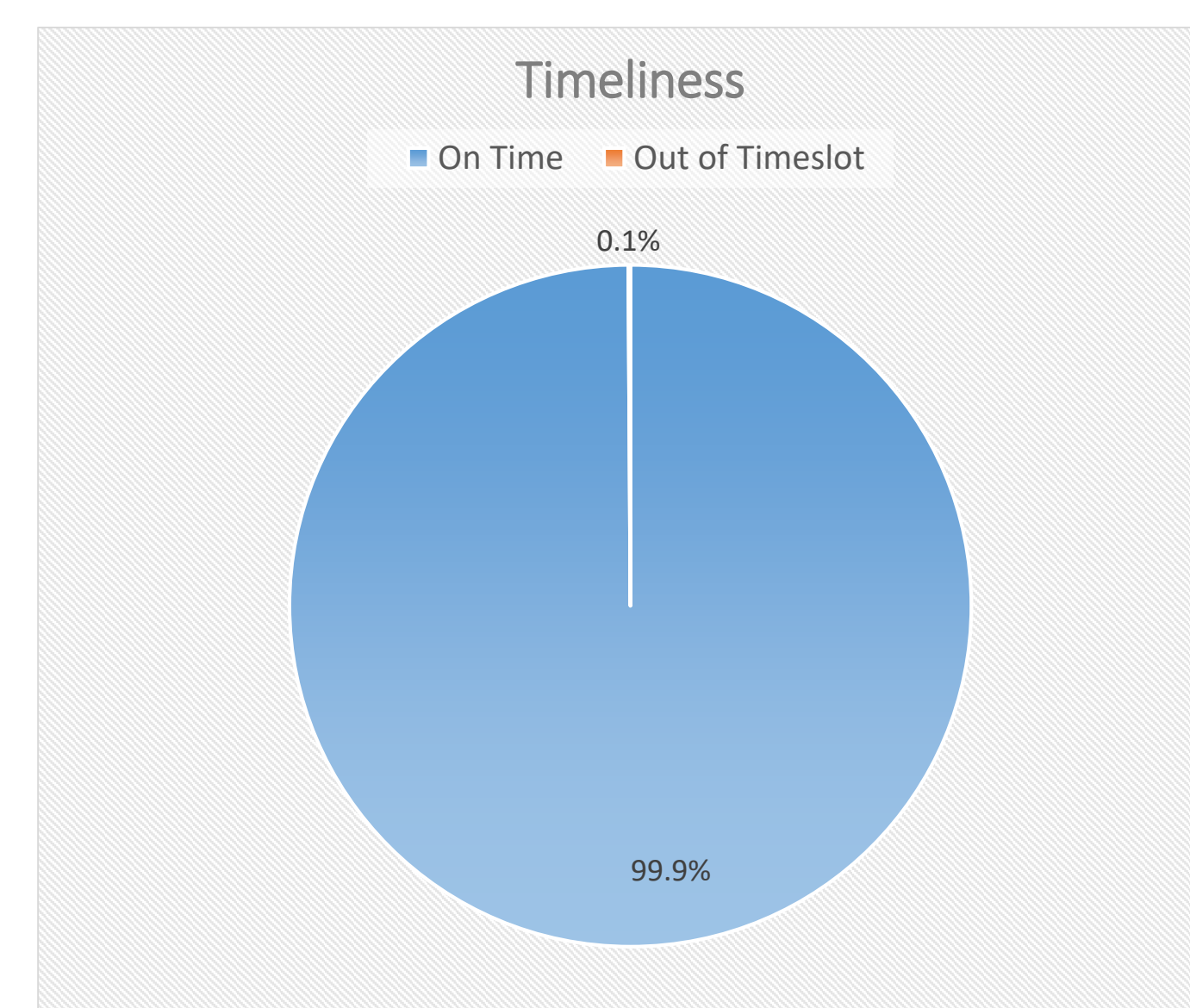
- Visibility of the deliveries instead of using the courier companies' last mile system.
- Reconciliation of orders and generate status reports.
- Using the system to lock the delivery procedures to minimise delivery incidents.
 - Delivery Timeliness
 - Delivery Address Accuracy
 - Delivery Quantity Accuracy
 - Delivery Receiver Accuracy

METHOD

Built on blockchain principles, the last mile system will create a token at each stage of the collection and delivery process when the delivery order was created. With this token, the last mile system will create a step-by-step delivery and verification process for the driver to follow through which will aid the courier company in reducing the long training period required to qualify the drivers. Notwithstanding the system will flag out all wrong addresses to notify the end users for verification to reduce the need of reworks at the pharmacies and courier companies.

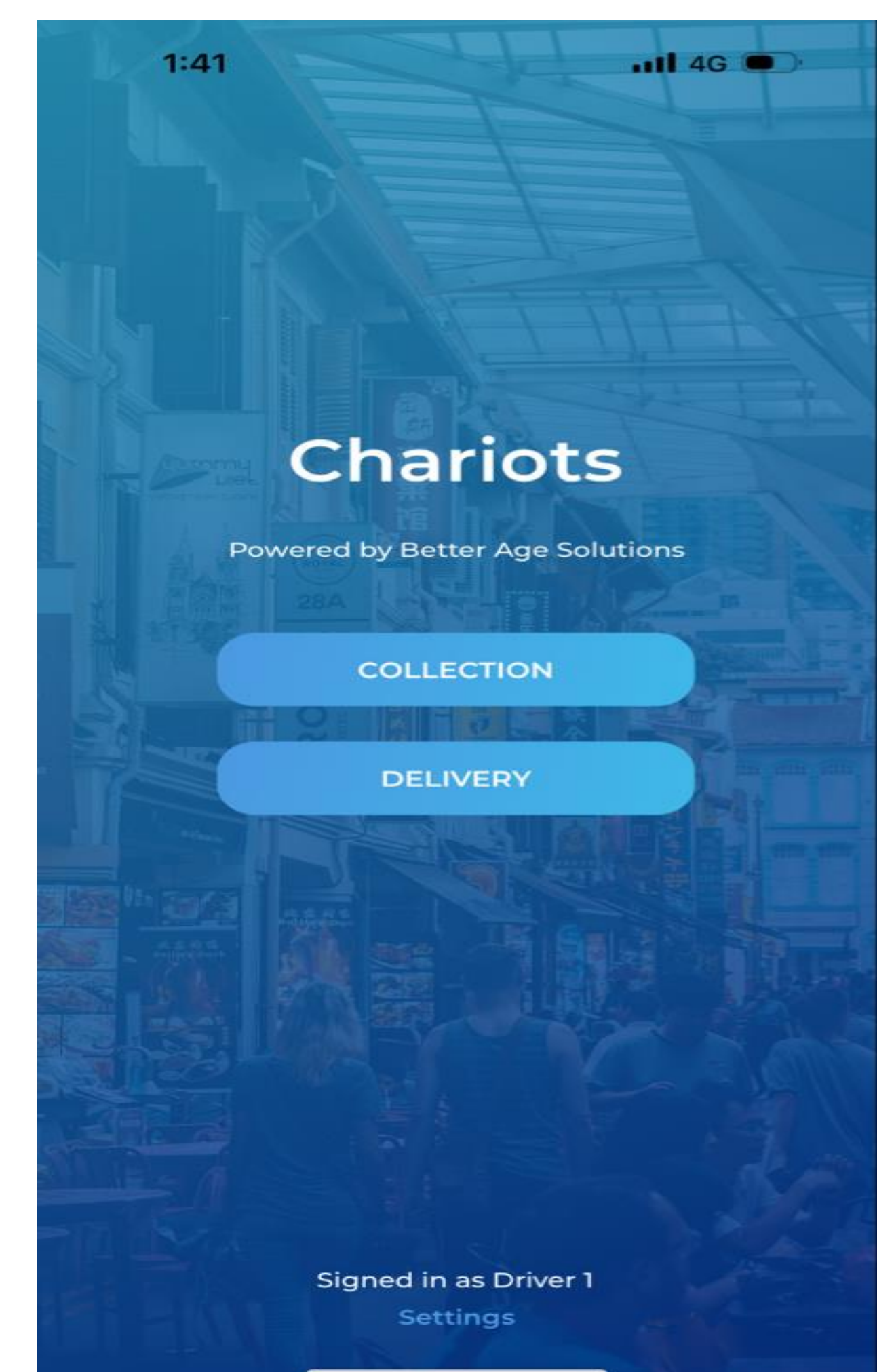
RESULT

The system was put on trial with one of the courier vendors from 3 May 2023 to 30 June 2023, the new last mile delivery system has achieved 100% accuracy for quantity released and patient verification for 32,184 deliveries. Further, the fulfilment rate of deliveries achieved 99.9% within timeslot and have flagged out 2% of the address errors for intervention. ALPS will continue to monitor the system and obtain the data for assessment.



CONCLUSION

The new ALPS Last Mile Courier System for Medication Delivery – The Chariots will enhance the delivery experience by the patients while ensuring that the courier vendors will adhere to the delivery procedures thus eliminating any PR issues and additional administrative actions.



Key feature 1: When details are uploaded, system will check for address and contact details validity.

Key feature 2: Generate shipping labels with unique QR for individual parcels under same orders

Key feature 3: Create "token" for individual orders with step by step guide for drivers to follow.

Key feature 4: Token will "generate" a step by step guide for driver to complete.

4a: Scan parcels to open order. Eliminate missed out parcels.

4b: System generate OTP and send to receiver's mobile number as per record. Eliminate wrong delivery.

Key Feature Before Delivery: Orders before the start time will not be available for driver to attempt the delivery.