

CASE STUDY:

Deployment of Autonomous Mobile Robots (AMR) to Build Own Lease (BOL)/Non-BOL NHs

by St. Andrew's Nursing Home (Queenstown)



Aim:

- The processes of meals and laundry delivery, which were time-consuming and labour-intensive for care staff, were identified as potential areas for improvement through automation. By automating these processes, the reduced time and physical labour required to complete the tasks will allow care staff to have more time and focus on residents' care

What was done:

- Efforts were made to reduce the turnaround time for each process before the implementation of AMR e.g., discussions were held with the relevant vendor and department to improve on tasks that are physically demanding.
- Staff were also cross-trained so that such tasks could be rotated.

(Note: Laundry staff are internal staff, kitchen staff for meal delivery are outsourced.)

The challenges for each task were analysed by:

- Verifying existing practices on the ground
- Determining the deliveries made throughout the day and identifying critical times when the deliveries needed to happen, such as meal times
- Identifying existing delivery paths for such activities
- Understanding the optimum turnaround time required to improve productivity with efforts taken through scheduling and optimising labour

Outcomes:

- Staff can now spend more time on care-related tasks, rather than on tasks which are time-consuming and can be automated
- A safer working environment for staff, with less exposure to heavy load-bearing duties
- Minimising human cross-interaction (especially during times of disease outbreak)

Projected outcomes of AMR implementation:

- AMR can free up 192 man minutes per day by automating meal deliveries of lunch and dinner
- AMR can free up 176 man minutes per day by automating laundry delivery



Staff transporting food using heavy trolley



Staff transferring clean linen to laundry for distribution



AMR to lift and transport trolley containing meals, laundry or consumables

“It is important to optimise processes — if not, manpower savings may not be realised. Before implementing AMR, we needed to reduce or eliminate the challenges faced by our staff for each task, then we could streamline the entire work process in tandem with the usage of AMR.”

**Mr. Derrick Ng, Operations Manager,
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