



Healthcare 🎇 Abacus GT Pte Ltd

Project title:

Innovative Robotic solutions to improve Patients' care and productivity Author Name: Ivan, Hazel and Daryl

1.Background



a) Moving patients at KTPH in a safe and comfortable manner from ward to any clinical units required at least 2 staff. On top of that maneuvering heavy

patient bed (unladen at 190kg) around corners and carpet are big challenge. In yr2012, KPTH started evaluating Abacus motorized solution.



b) As order for tests and investigation of sample flooded the central receiving station at Medical Laboratory, hence, it could be labourious to deliver quickly to different stations for investigation and collect report to the ward for timing patient treatment. In year 2012, KPTH chose an autonomous solution using Abacus "Amabelle robotic transporter".

3.Benefit/ Achievement

a)One Man Operation for patient Bed:

- 50% productivity improvement.
 - Enhance Patient comfort during transportation through innovative design using advance suspension system
 - Safety design with intuitive response control.
 - Movement of patient bed can be done by porter, nurse can focus on patient care.
 - Extend the working life of older worker (porter).

b)Unmanned Laboratory specimen robotic transporter :

- i. Quick dispatch and pickup of patient's test reports
 - ii. Lab technologists can focus more core
 - activities

iii. Improve technicians overall productivity.



2. Execution Strategy – Abacus Robotic Solutions for bed maneuverability and laboratory specimen transportation (Amabelle Robotic transporter). Can we make better robotic solutions and improve productivity? Planning & Implementation with KTPH relevant departments. Are we doing the Logic Model (LM) right work?

Design Theory of Change (TOC) Evaluation Are we achieving superior results?

4.Conclusion

a) One-man operation using Abacus bed robotic system With Immediate result as : •Reduce overall demand for porters and increase

- productivity.
- •Extend our older porter work life.
- •Improve Quality Of Service for nurses and porters.
- •High ROI and low initial investment.





i. Enable on-time reporting of test sample that

- led to timely treatment.
- ii. Improve Lab. Technologist productivity. iii. High ROI.

•Others robotic solutions with approved Rapid prototype Grant or Special funding.



Autonomous Food cart for food delivery in the ward.