

Case Study - Overview: Avalon Robotics - Partners

Deployment of LEO: Smart Medical Delivery Robots at Osaka Red Cross Hospital Japan

Hospital Profile:

- 964 beds | 86,000+ m² facility
- 25+ clinical departments
- High-volume, high-acuity referral and teaching hospital



Results (First 60 Days):

- 300+ autonomous delivery runs/day delivery over 10k Med supplies
- Equivalent to 3–4 FTEs in workload reassigned to core direct patient care
- 35% faster lab results
- 90% accuracy in specimen delivery
- 45% more staff time allocated to patient care

Challenges Before Robotics

- 5,500–7,000 manual item deliveries/month
- 50,000–80,000 steps/day per nurse lost to Medical supply tasks
- Workflow bottlenecks in labs, ORs, and Med supply
- Care staff pulled from patient-facing roles for logistics



Strategic Value:

- Enhances care providers retention and satisfaction, meeting Transformation goal
- De-risks human error in transport of sensitive Med supplies
- Scalable to pharmacy, OR, wards, labs, and nutrition services
- Strengthens hospital's public image as modern and innovative

The Solution:

LEO - Medical Delivery Robots

- Covered 10,000 m², across 2 floors
- Automated deliveries of:
 - Blood/specimens
 - Medications
 - Surgical tools
 - Documents and meals
- Integrated with secure access areas
- Lockable compartments, 100kg capacity + data logging



Lessons Learned

- Leadership buy-in is critical
- Workflow remapping improves adoption
- IT and facilities readiness ensures seamless integration
- Staff engagement and training reduce friction and build trust

⚠ DEPLOYMENT RESULTS AND METRICS MAY VARY DEPENDING ON THE TYPE OF ROBOT, DELIVERY DEMAND, HOSPITAL SQUARE FOOTAGE, AND STAFF WILLINGNESS TO ADOPT ROBOTICS INTO DAILY WORKFLOWS.



Avalon Robotics – Proven Experience in Healthcare Robotics

🇨🇦 Canadian Deployments and Engagements

1 - Newfoundland and Labrador Health Services (NLHS)

- Status: AMR Public Tender Winner (2023)
- Scope: Autonomous Delivery Robots and Logistics Automation
- Use Cases:
 - Specimen delivery (lab → ER)
 - Medication and pharmacy runs
 - Surgical instrument transport
 - Meals, linens and document delivery
- Outcome: Avalon selected to modernize logistics and reduce clinical staff burden

2 - Nova Scotia Health Authority (NSHA)

- Status: Bid submitted for 2025 Robot RFP
- Scope: Med Supply Delivery automation
- Use Cases: Medication, specimens delivery, and ward support

- Insight: Reinforces Canadian health authorities shift towards robotics for workforce efficiency and patient safety



3 - NLHS Innovation Summit – 2024 Sponsor

- Showcase: Live demo of KIV the concierge robot
- Roles:
 - Enhanced Hospitality, delivered refreshments, handled schedules
 - Highlighted readiness for hospitals, clinics, and senior care
- Value: Demonstrated how service robots support clinical and hospitality workflows.

International Proof Points

Queen Mary Hospital – Hong Kong

- Deployed: 19 Robots
- Coverage: Multi-floor, multi-department delivery across clinical services
- Impact: Efficient, error-free logistics at scale

Osaka Red Cross Hospital – Japan

- Deployed: 2 LEO Robots
- Metrics (Oct–Dec 2023):
 - 300+ deliveries/day (equivalent to 3–4 FTEs)
 - 35% faster lab results
 - 90% accuracy in specimen delivery
 - 45% more staff time allocated to patient care

Gleneagles Hospital – Malaysia

- Clinical supply chain automation with one robot operating between diagnostic and pharmacy zones

These international deployments validate that Avalon Robotics' technology is proven, safe, and scalable and we are ready to bring this impact home by supporting Canadian health authorities with reliable, autonomous transport of specimens, blood products, and clinical or non-clinical supplies.