

SMART Inventory Management Solution (S.I.M.S)

Transforming Singapore's Healthcare Supply Chain

After analyzing current issues like: manual stock taking process, loss of time due to searching for products and the long waiting time for product replenishments, a new approach to the inventory management services was envisioned, leveraging on technology to improve accuracy in stock-taking and forecasting.

NUH, Medtronic Singapore and ST Healthcare (STHC) worked together to develop this innovative solution, leveraging on technology and data analytics to improve processes, reduce waste and increase productivity of staff.

Key Challenges

Inventory Management

Stock-taking is conducted regularly and manually counted, a process that is both laborious and prone to error.



Handling

Missing or misplaced items due to improper handling translates into write off costs, in addition to increased manual processing.



Storage

No proper segregation of products, resulting in lack of visibility and additional time wasted to locate a product for use.



Solution

An end-to-end inventory management solution was implemented, deploying a SMART cabinet with RFID readers in the OT to provide real-time inventory visibility and activity tracking. Products to be used are scanned out and replenishment requests are automatically triggered. Usage patterns are captured and used to inform par levels and anticipatory replenishments.

A data driven solution enabling a more proactive approach to ensuring the Right product, at the Right place and at the Right time.

End-to-end Inventory Management

- Centralized Storage
- RFID tagging of products
- Interactive user interface
- Real-time inventory analytics
- Automated top-up triggers
- Predictive usage patterns
- Anticipatory replenishment
- Systematic reconciliation



Benefits



Real-time inventory count and activity reporting



Enhanced patient safety with automated product expiry tracking



Reduced human intervention, increasing productivity



Just-In-Time replenishment process to minimize waste and redundancy



Robust 'track and trace' audit trails to promote user accountability