

Organised By



Asset Tracking System (ATS)



for Simulation Equipment and Laboratory Specimens

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Introduction

SingHealth Duke-NUS Institute of Medical Simulation (SIMS) is an accredited medical simulation center that provide a full spectrum of medical simulation skills training and certification.

To conduct these programmes, simulation equipment and laboratory specimens are used extensively. Staff has to spend a considerable amount of time and effort to prepare and setup.

These laborious tasks are not circumvent with the onus process of manual tracking and documentation for the tracking of availability, updating and utilization of these via paper and spreadsheets to support workshops.

To improve this manual process, the team seek to leverage on technology to implement an asset management (cluster-ready) system for SIMS:

To plan, track and manage these equipment and specimens from inception to disposal to support workshops.

AIMS

To harness technology to share and trace equipment and specimen via a unified system

Through this centralized approach, work processes can be automated so as to increase accountability, accuracy and traceability of assets

To increase overall productivity, staff job satisfaction and morale

Description

To achieve above operations excellence, SIMS embarked on a journey of business transformation to leverage on mature technology innovations. Below are 2 major selection criterias as:

1) **Detection medium and tags.** Radio Frequency (RF) technology was selected as the detection rate is swift with a wide selection of tags to choose from.



2) **Customize asset management system.** This software needs to unify and harmonize the followings:

- 2.1) Ready-to-interface to RF scanners in intranet environment
- 2.2) Is cluster-wide ready and staff can access via Active Directory

Discussion

With the implementation of this system, staff is able to plan ahead; this increases productivity, accuracy and asset utilization. Overall business workflows are improved and staff is happier.

Then	Now
• Relied on manual planning	• Planning are done via e-requests in the system
• Time consuming to find specimens in the freezer	• With RFID, able to detect specimens promptly
• Equipment assignment for workshops are tedious	• Equipment assignment is swift
• After workshop, equipment are return via manual recording	• With a click of the check-in list, missing items are easily highlighted
• Stocktaking are manual and time-consuming	• Stocktaking rate is reduced by 50%



Forward

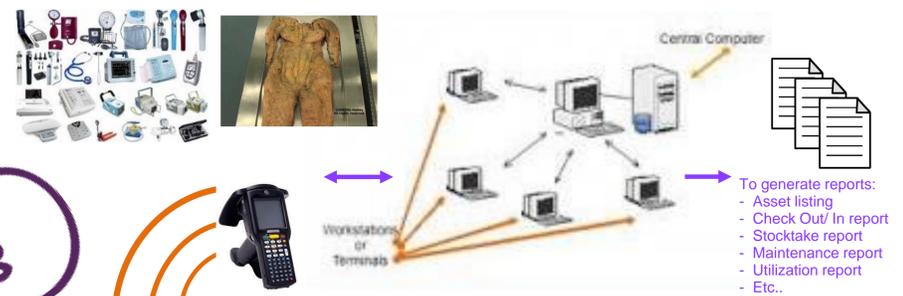
Going forward with the maturity of the RF technology, striving towards process harmonization and solution consolidation can be further achieved.

Through this digital transformation and continuous improvement, SIMS have achieved a truly technology-enabled system to better provide clinical-based simulation workshops for healthcare professionals.



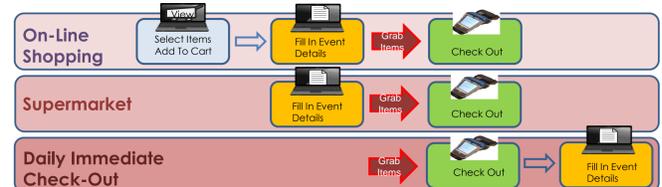
Men at work More steadfast planning and in control

Innovation

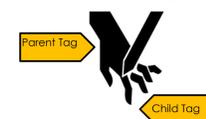


- To generate reports:
- Asset listing
 - Check Out/ In report
 - Stocktake report
 - Maintenance report
 - Utilization report
 - Etc..

- 2.3) Departments can create own groups to manage their users, equipment and specimens
- 2.4) Uploading of equipment into designated groups
 - 2.4.1) Equipment can be categorize into 3 sub-levels
 - 2.4.2) Options to assign each equipment to only own group usage or open up to others for loan
- 2.5) To incorporate 3 mode of requests to check out the equipment



- 2.6) Specimens must be able to tag as a whole individually and upon further dissection, able to link back to the original



- 2.6.1) To achieve via parent-child relationship tagging

- 2.7) To build in Stock-take, Maintenance and Consumables modules

Above considerations lead to a fully customized asset management system that met the operational needs of SIMS and her associated users. Four major results achieved are:

- A secure and paperless system ready to use anytime



- Cost savings of up to **\$\$50,000** per institution roll-out as this system is cluster-ready (Total: 12 Institutions)
- **30%** reduction in man-hours for pre-and post-workshops setup
- Equipment can be shared via e-loan to achieve significant manhours and cost-savings – Shared economy

