Efficiency Through Technology & Innovation

'Freeing Up Effort In Logistics Works, Reinvesting Into Patient Care'

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ALPS
Synergies in Healthcare Supply Chain

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Introduction

End-to-end work efficiency for Nursing and Logistics Staff, through '*Technology Solution'* and 'Supply Chain Reengineering'

Effectively,

Nurse:

- ***No need to count stock! -*** At a glance, knows when to request for replenishment of items
- ***No need to fill-in forms!*** - At a press of a 'button', orders the required quantity

Logistics Staff:

- ***No manual forms! -*** Order(s) is sent thru integrated systems (SAP/WMS) and items are packed according to ward requirements ('Kit-to-Ward')

Results

✓ ***Plug and Play***
- set-up is simple and light (No infra-works required, only need power points for router and wireless connection via cloud)

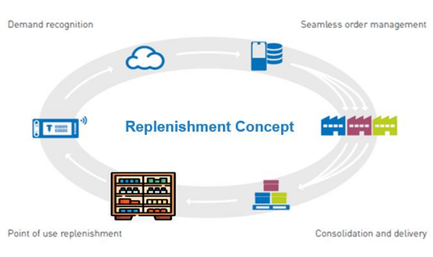
✓ ***Short Order Lead Time (80% Time Reduction)***
- Averaging about 2 minutes per item request (from 'button' pressed to 'order' received in warehouse) from 11 minutes per item request today, validated thru time motion study

✓ ***Time Savings***
- Estimated time savings of 258 hours annually for National Cancer Centre Singapore

✓ ***100% ordering accuracy (SKU and quantity)***

✓ ***Urgent order lines reduced by 66%***

✓ ***Positive Survey Results***:
- *Ease of use*: 4.3 out of 5 (some commented on small font-size)
- *Prefer Smart Tag*: 4.2 out of 5 (some rather not be involved in reordering)

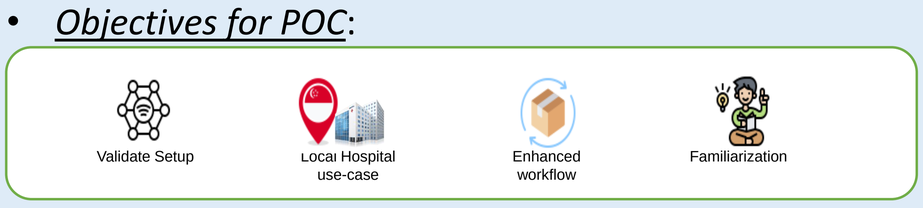


Methodology –
Technology solution and Supply reengineering

- ***Visual cues for reordering***
  Items in the Nurse Station are organised according to the 'Kanban-arrangement'

- ***'Smart-Tag' solution, to ease ordering***
  A small physical 'Digital Tag' used for each shelf (similar to those used in most supermarket).
  This tag:
  - displays information of the items (***no need to print and label***)
  - digitally connects to single source that allows one-time effort to change display information (***no need to reprint***)
  - has a 'Button' to trigger replenishment order and the quantity to order can be pre-set, as required (***no need to fill in form***)
  - has visual tell-back when order is sent (***no worry of misplacement of order-forms/RFID tags***)
  - Order is digitally sent to Central Warehouse for replenishment (***no manual/human in the loop processing, avoidance of errors***)

- ***Validation thru Proof of Concept (POC), tested using real data and applications***
  - *Site selection criteria*:
    - Coverage - clinical areas with different operational models
    - Digital Connectivity - site in different geographically areas
  - *Clinical areas selected*: Oncology Pharmacy & Morning Glory ATU Suite (NCCS building) and NCCS Satellite Clinic at SengKang General Hospital.
  - *Objectives for POC*:



Conclusion

- ***Feasible and Effective***
  - Results from POC showed that:
    - ✓ Users (Nurses) welcome the change and appreciate the significant ease and reduction in logistics works, and
    - ✓ (b) find the solution easy and straight forward.

- ***Quick and Simple Implementation***
  - The Smart-Tag used for the POC is one of several commercially ready solutions that could provide a quick 'Turn-key' solution.

  - Comments and lessons learnt from the POC can be overcome via technical adjustments and/or physical arrangement.

- ***Complements Central Service provisions by ALPS (Planning, Purchasing, Warehousing and Distribution)***
  - Replenishment orders via the Smart-Tag (or other IT solution) can be easily interfaced with IT-systems deployed for the provision of Central Services (e.g. Order Management System, Transport Management Systems, ePOD).

  - Collectively, these offer a Digitalised End-to-End Supply Process, which affords ***Processing ACE²*** (Accuracy, Analytics, Consistency, Compliance, Efficiency and Effectiveness).