



Digitalisation of Competency Management



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Introduction

Management of Clinical Staff's competencies and training records used to be a highly labor intensive process. It involves tracking and maintaining records for both existing staff and new hires. Records were kept as paper copies stored in physical cupboards, and reminders for reassessments are done manually. An accurate, real-time oversight of competency and training records is required to prevent Nurses missing out on necessary training, allow for effective identification and deployment of trained staff when needed, and enable efficiency in collating competency records for reporting and audit purposes.

This project aims to provide an end-to-end digitalization of competency management for Clinical Staff.

Aims



Enhancing Nursing Efficiency:

Streamline processes through technology, saving hours of nursing time per week by eliminating manual tasks.

Ensuring Competency Levels:

Prevent training lapses and ensuring all nurses, including new hires and transfers, are adequately trained.

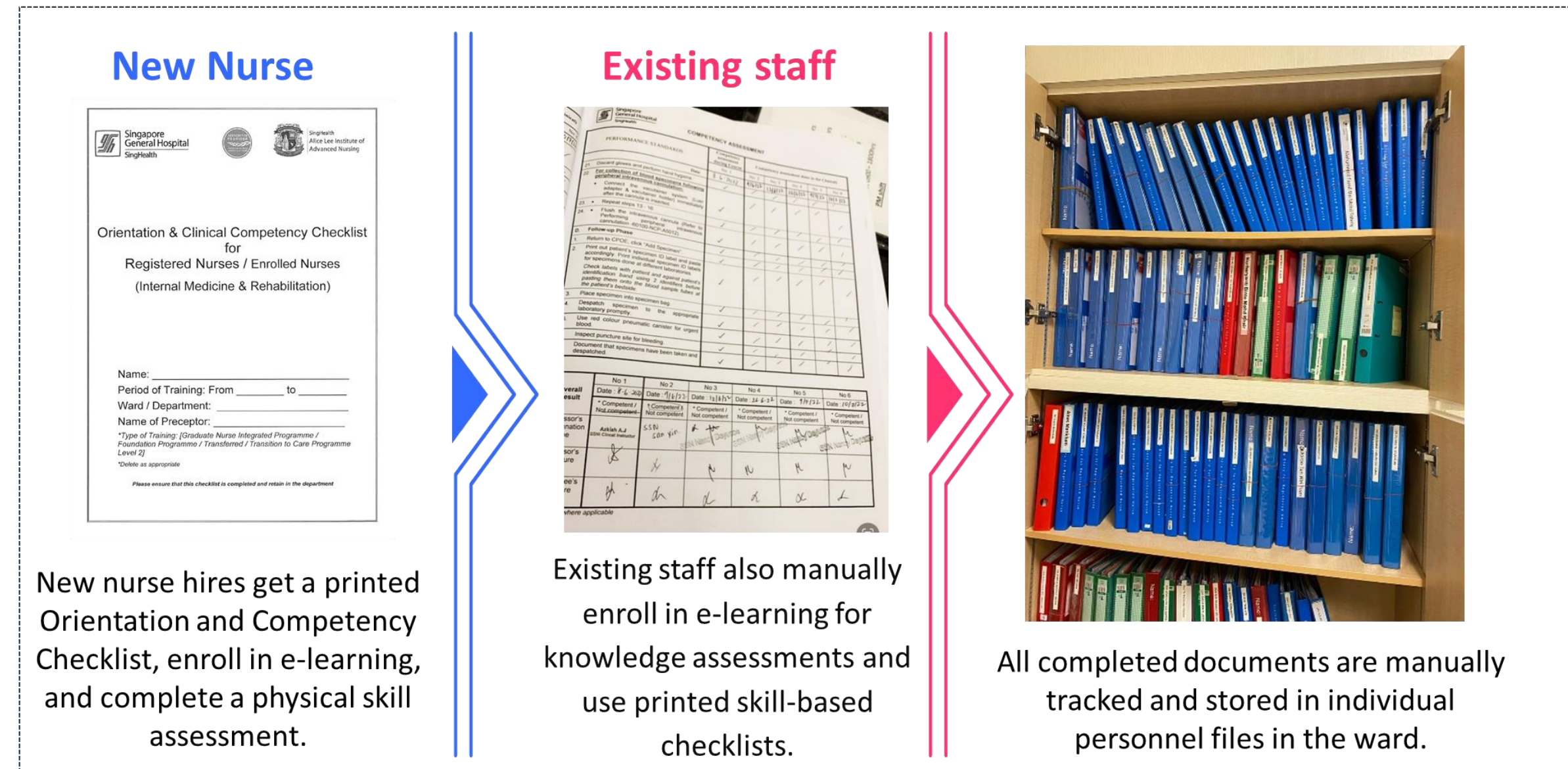
Promoting Sustainability:

Create a paperless environment by saving thousands of sheets of paper annually and digitizing training records for better portability and staff transfers.

Methodology

Identify Needs

Workflow Challenges



	Training Cycle	Est Total # of Pax	Avg Competency per pax	Total competencies completed a year
New Hires	4 batches over 3 months each	200	30	6,000
Current Hires	Ad-hoc through the FY	3800	13	49,400

Table 1: SGH Nursing Training Volume

Four Essential Needs :

- Automation:** Transition to automated notification, enrolment, and tracking systems to reduce manual inputs and errors.
- Integration:** Implement integrated digital platforms for real-time competency tracking and verification.
- Centralized Data Management:** Develop a centralized system for real-time oversight and reporting across all service areas to enhance operational efficiency and accuracy in competency management.
- Accessibility and Security:** Ensure secure, real-time access to training records and competency status for all authorized personnel to improve responsiveness and patient safety.

MUST HAVES versus Good to Haves

MUST HAVES	GOOD TO HAVES
Ability to have curated views for learners, trainers and leaders	Forms to be accessible via mobile app
Send email prompts to learners and administrators when actions are due. This would include actions like completion of competency, verification of competency and missing of competency deadlines.	Send notification reminders to learners and administrators when actions are due via mobile app
The interface should be intuitive and easy to use	Self register competency module
Reports that can be curated based on needs	Auto generation of reports

Economic Analysis

5 years Costs:
Project Implementation
Subscription Fees



5 years Savings
Manpower
Consumables
Storage Space

Savings/Costs= 36%.

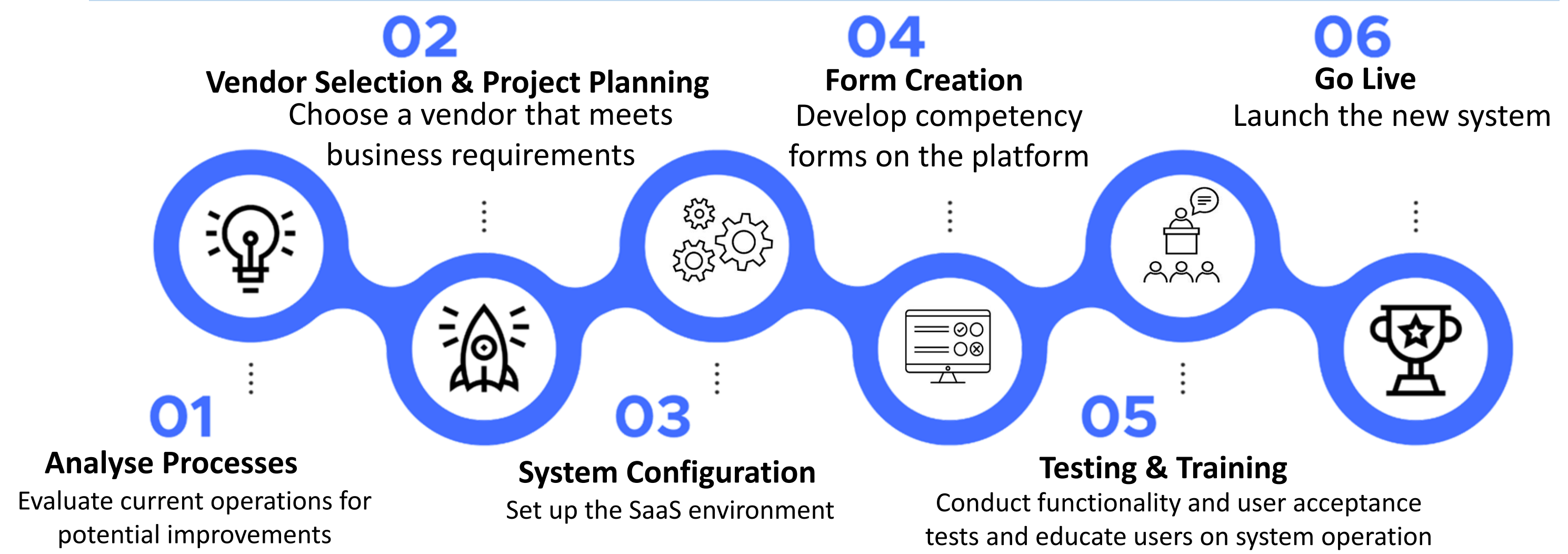
With the implementation of the E-competency system, we anticipate savings of up to \$830k in 5 years.

SaaS versus COTS

Open RFPs were conducted to identify the right solution partner from the market. Given benefits of a SaaS product versus starting from scratch with a COTS solution, a SaaS vendor that could demonstrate fulfillment of our needs was selected by the evaluation panel.

Criteria	SaaS (Software as a Service)	COTS (Commercial Off-The-Shelf)
Deployment	Quick and requires no hardware; managed by the provider.	Time-consuming and may require hardware installation and configuration.
Maintenance	Handled by the provider; automatic updates.	Managed by the customer and Synapse ; updates must be manually installed.
Customization	Limited; designed to meet general needs with configurable options.	Highly customizable to meet specific needs; can be modified extensively.
Scalability	Easily scalable with the provider managing additional resources.	May require additional licenses and hardware, less flexible.
Cost	Lower upfront costs; typically based on a subscription model (per user/feature).	Higher initial costs due to licensing, installation, and potential hardware needs.
Use Case	Ideal for businesses seeking quick deployment, minimal maintenance, and lower upfront investments.	Suitable for organizations needing deep customization and full control over software.

Implementation

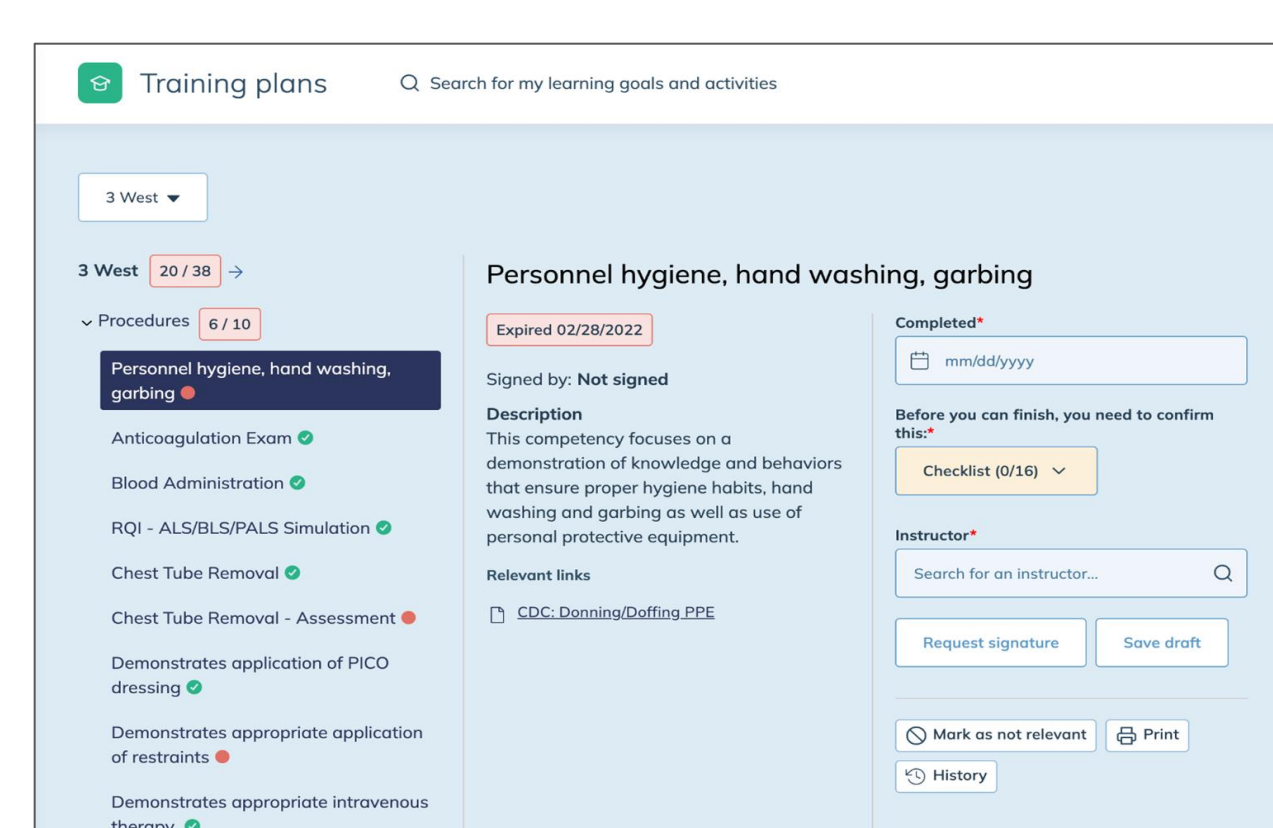
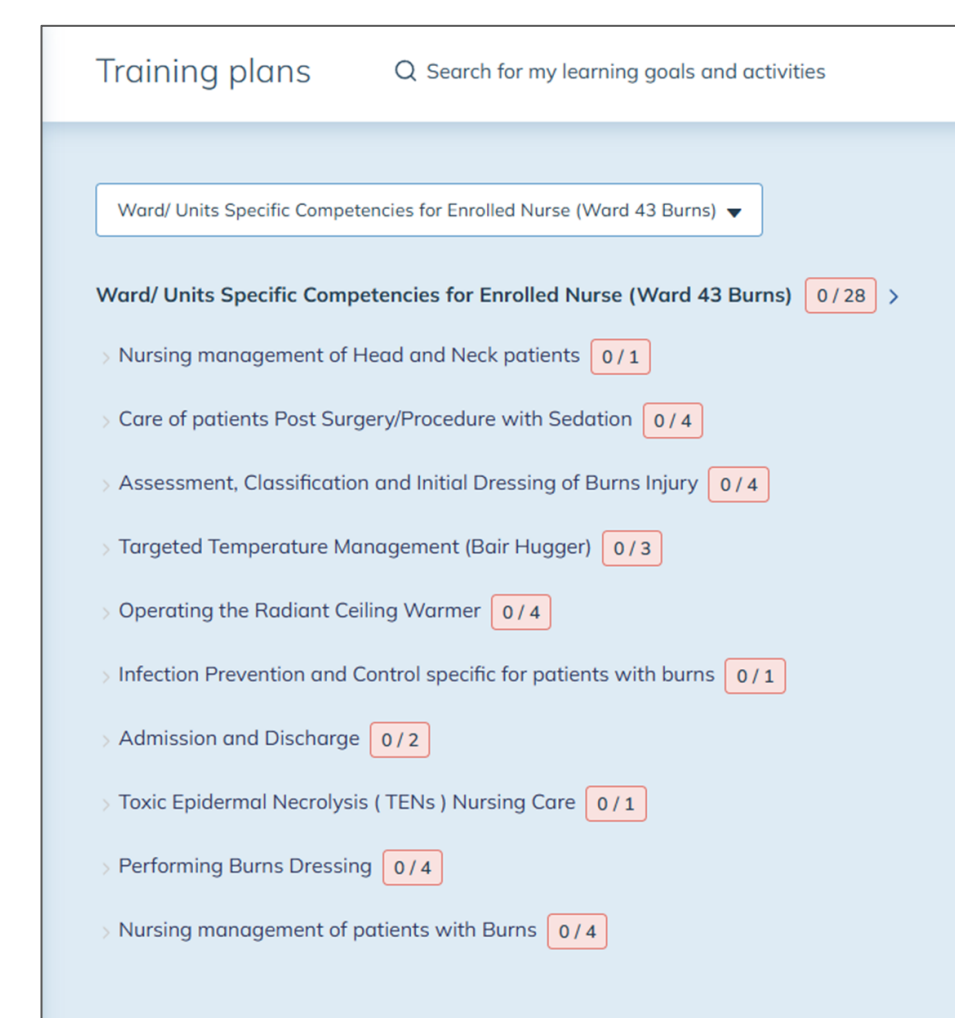
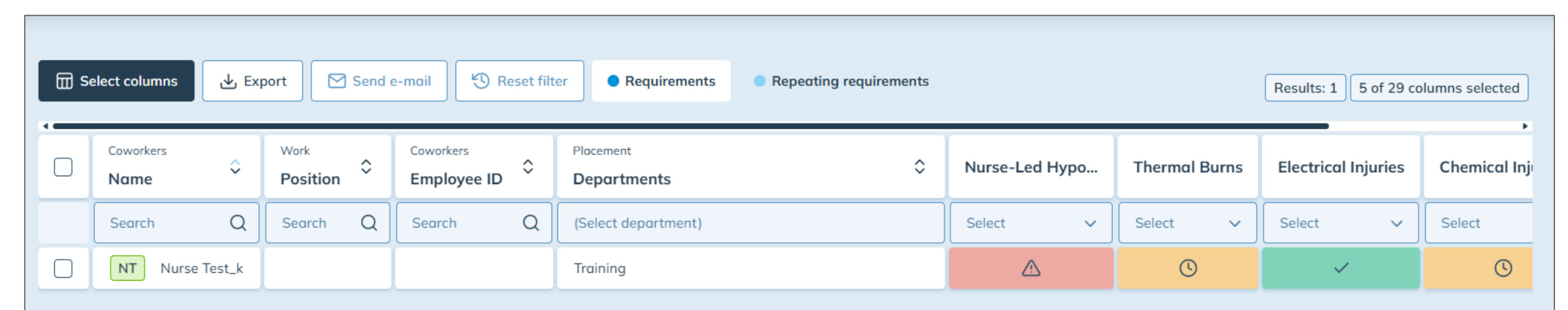
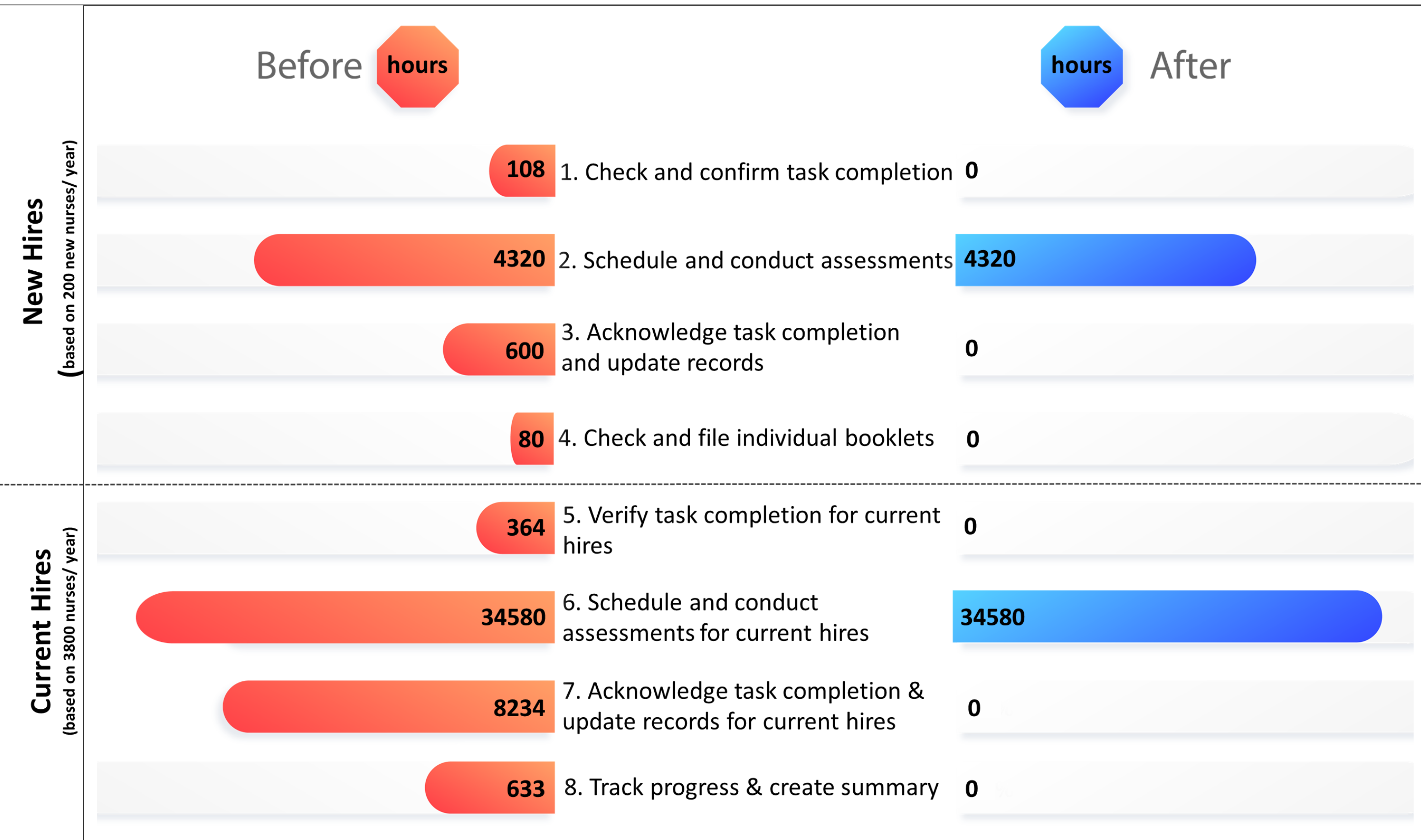


Results

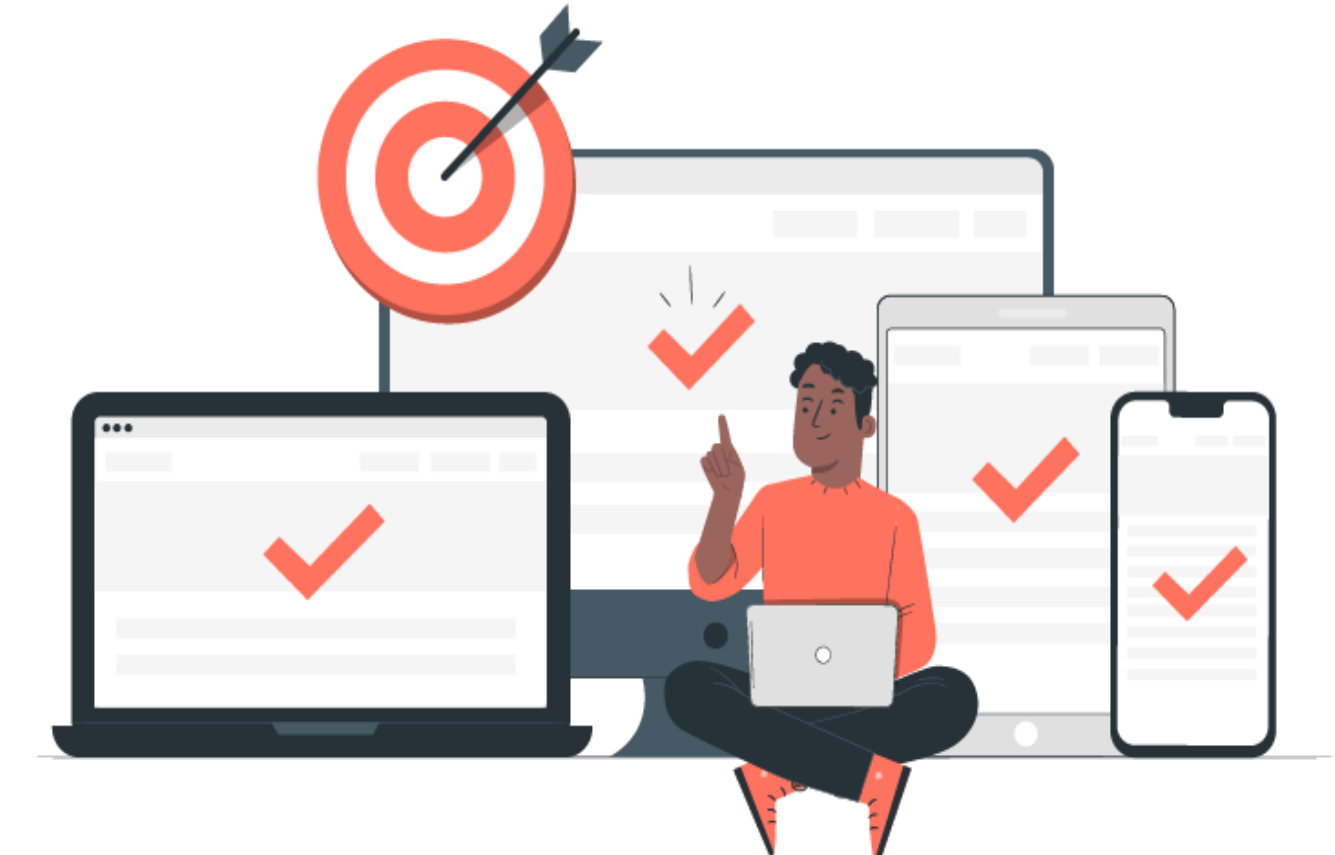
We successfully implemented a cloud-based digital competency Solution and are now able to:

- Eliminate the cumbersome process of paperwork management and system navigation, which currently leads to substantial documentation and consumes valuable space.
- With a single click, immediately assign or update skill sets, communicate new goals and issue reminder alerts to the right staff.
- The transformation also allows us to future proof the management and deployment of our clinical workforce during mass casualties or pandemic as we now have real time visibility of every clinician's capability and training records.

To illustrate, below is a comparison of the nursing manhours saved per annum in the hospital when we adopted the new solution:



Conclusion



The transformation involves digitalisation of the entire process of managing clinical competency. The team achieve this through a digital platform that facilitates real-time tracking, timely re-assessments, and training oversight prevention. It also streamlines staff allocation and accelerates reporting during deployment.