



Transformation of Information Technology (IT) Approval Process to Enhance Efficiency

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Shereen Yeo, Group Purchasing Office
Ang Dun Qi, Finance Shared Service
National Healthcare Group

AIM

The National Healthcare Group (NHG) Group Purchasing Office jointly with Finance Shared Service had successfully transformed the manual approval process into a paperless electronic workflow for Information Technology (IT) purchases across Institutions under NHG.

Under the previous manual process, the Integrated Health Information System (IHIS) Project Managers managing NHG IT projects would have to physically bring the hardcopy set of **Approval Paper (AP)** and **Purchase Requisition (PR)** to various Institutions to obtain signatures sequentially from the Users and Management.

As healthcare faces rapid changes and growing demands, we require a more efficient and effective way to approve IT purchases.

By transforming and streamlining the current approval process through the development of an in-house electronic portal, SKELTA IT system, our aims are to achieve the following:

- ✓ Significantly reduce **approval cycle time**
- ✓ Increase **efficiency**
- ✓ Boost **productivity**
- ✓ Improve **visibility** for document tracking and management report
- ✓ **Environmental sustainability** by going paperless

METHODOLOGY

Before embarking on the project, the team considered the needs of key stakeholders from a 3-dimensions perspective:

Needs of Key Stakeholders (3-Dimensions)

Users' needs

- Highly value PR traceability
- Reduce paperwork and cut down travelling time between Institutions

Managements' needs

- Greater ability to approve PR faster
- Minimize hardcopy paper build-up

Suppliers' needs

- Receive Purchase Order quickly

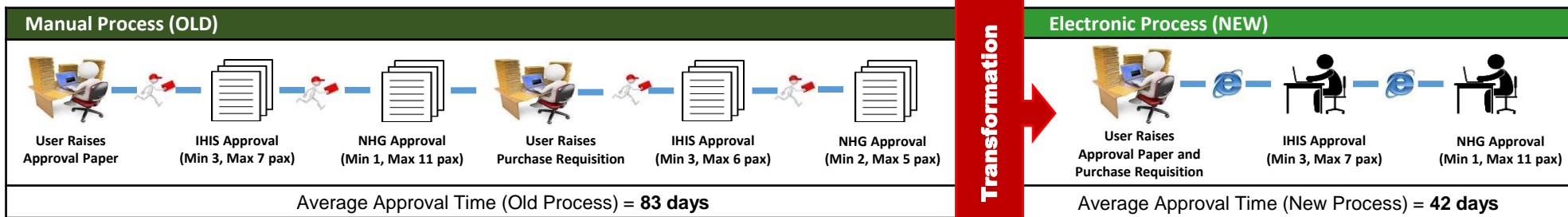
After understanding the stakeholder's needs, we applied two important methodologies during the implementation stage:

Value Stream Mapping: The team re-evaluated the PR approval workflow at each step from the beginning until the end stage to apply the lean management method of studying the current workflow state and break paradigm to design a more effective future state.

User Acceptance Test (UAT): Stakeholders and Institutions' representatives were invited to test and provide valuable feedback on the system through two rounds of UAT. It was conducted to ascertain the system reliability and user-friendliness before the actual roll-out.

RESULTS

The SKELTA IT system was introduced in mid-2014 and the key results accomplished as shown below:



Note: Maximum number of Approvers is based on number of Institutions involved (more Institutions = more Approvers).



1. Reduce Approval Cycle Time - Streamline to Single Workflow

Applying Value Stream Mapping, the team aimed to eliminate repetitive steps along the workflow to significantly reduce the long approval lead time.

The following outcomes are achieved:

- 1) Users can now conveniently raise one online request form to get both their AP and PR approved
- 2) IHIS and NHG Approvers will only have to approve the same request once
- 3) Suppliers will be able to receive their Purchase Order faster than before

As a result, the **total approval time taken was reduced by half, from 83 days to 42 days!**

Approval time
reduced by
50%



2. Increase Efficiency - Concurrent Approval

In the old workflow, Approvers must approve the AP and PR sequentially (one Approver must approve before the PR goes on to the next). In the new electronic process, Approvers will be able to receive the online request form at the same time, thereby allowing **multiple parties approval on the same day!**

Manual Process (Old)	5 NHG Institutions involved, minimum 5 days needed for approval
Electronic Process (New)	5 NHG Institutions involved, minimum 1 day needed for approval



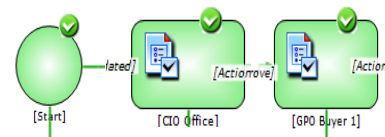
3. Boost Productivity - Time Saving

There is a growth in productivity as Users no longer have to manually print out the AP and PR, physically deliver them to multiple Institutions and obtain the signatures from Approvers. This has helped save time and effectively resulted in zero incidents of loss documents.



4. Improve Visibility - Document Tracking and Management Report

The new electronic system allows Users to retrieve their documents when needed and **conveniently track the location of their request form anytime**. SKELTA IT system is also equipped with a **reporting function** that allows Management to make use of the information captured in system to generate useful reports eg. approval turnaround time at each stage, yearly IT spend report, etc.



Request form tracked at all times



5. Environmental Sustainability - Going Paperless

The transformation from being paper reliant to going paperless means that in most cases, hardcopies of AP and PR documents are no longer required. This has significantly reduced paper printing wastage and **contributed to conserving our environment**.

CONCLUSION

A year from implementation, SKELTA IT system has supported a total of **238** requests! Apart from the significant results outlined above, this transformation has helped NHG strengthen our partnership and workflow integration between our key stakeholders. Today, Users and Management from both NHG and IHIS can better optimise their time and resource allocation to be channelled into more substantive and value-added activities. Overall, this project has transformed and improved the productivity and efficiency of healthcare!