Improving invoices generation and verification process for efficient payment

KK Women's and Children's Hospital
SingHealth

Nurmastura Banu
Ricky Chan Yeng Lea
Joanne Lee Kah Hui
KK Women's and Children's Hospital

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INTRODUCTION

Department of Document Management Services (DDMS) in KKH is responsible for the provision of medical records for appointments, admissions, researches, reviews and audits. The department is also involved in facilitating medical report requests, reconciling patient medical records through patient bio-data merging and diagnosis coding. Due to the increasing number of medical records created over the years, DDMS is also working with Recall Total Information Management Pte Ltd to provide medical records storage and retrieval services since 2012.

BACKGROUND

Throughout the years, outsourcing grew to be an integral function in DDMS. With the rapidity of outsourcing, it has led to an increasing number of medical records stored offsite and also resulted in heightened retrieval frequency. This poses several issues such as:

- Longer turnaround time in generation of invoices
- Delayed verification due to inability to match inventory
- Late payment to vendor

OBJECTIVE

The objective of this project hence aims to allow efficient and prompt payment to vendor.

METHODOLOGY

Fault Tree Analysis were conducted to **identify the causes** which eventually led to late payment to the vendor. Figure A illustrates that both KKH and vendor contributed to the inefficient payment process.

From the vendor's end, they encountered **difficulties in generating the invoices timely** on a monthly basis as they were **unable to collate the various retrieval services** KKH had utilized due to the huge amount of retrieval transactions for numerous purposes such as appointments and admissions.

When the invoice has been generated and billed to KKH, DDMS then were confronted with issues in reconciling the medical records storage inventory as there were **differences in the vendor's and KKH inventory extraction process**, given that we were utilizing two different systems. DDMS also **did not have a proper application tool to process huge volume of data easily** which led to longer turnaround time for invoice verification.
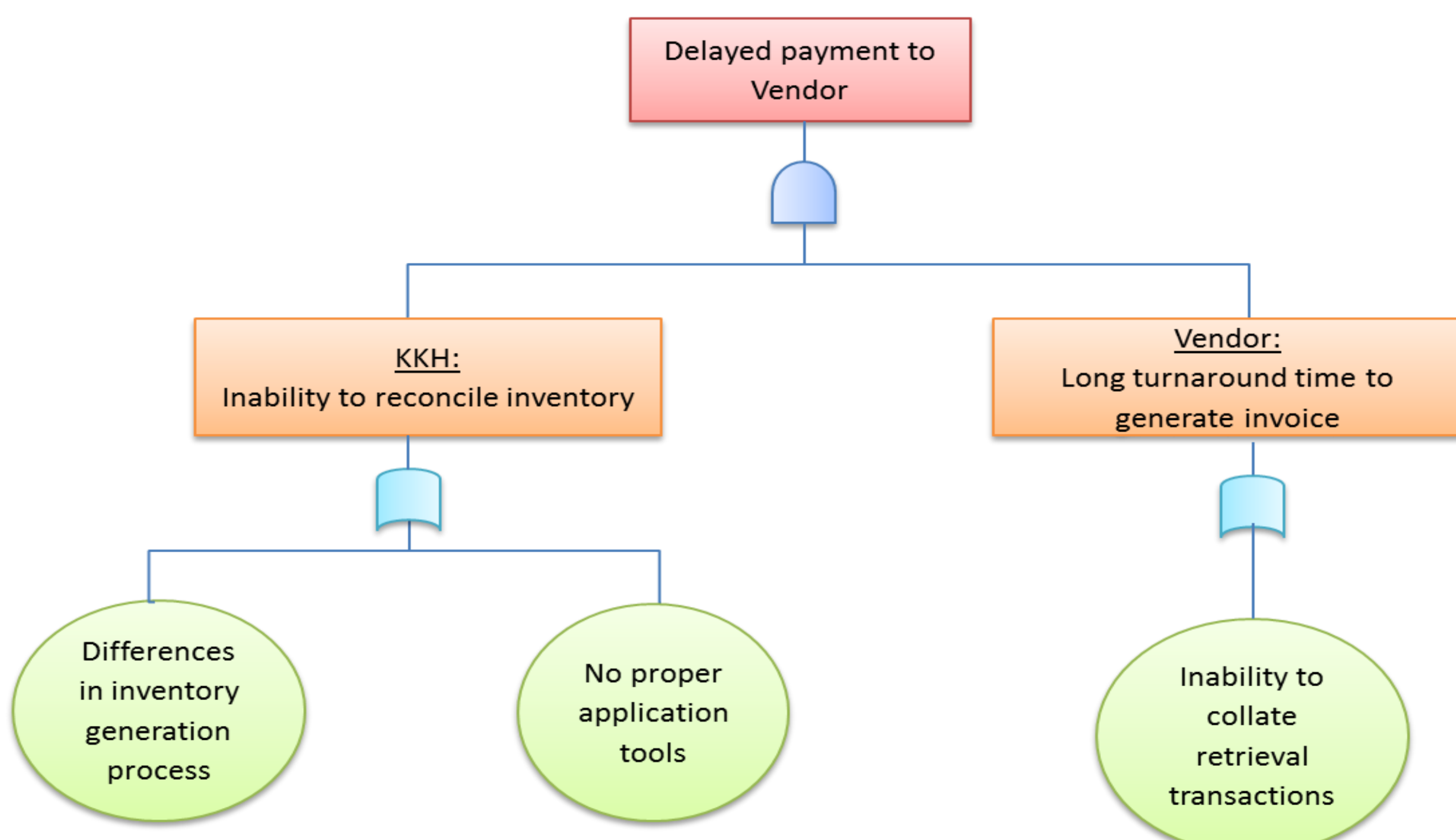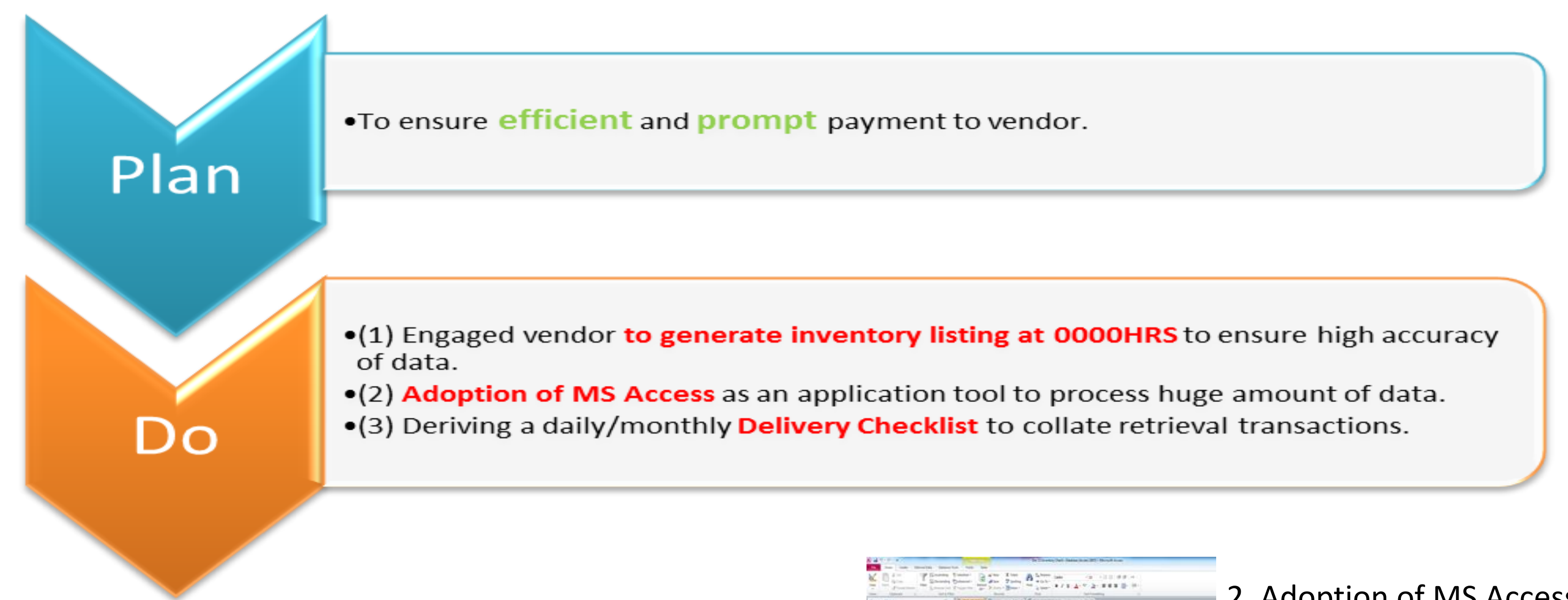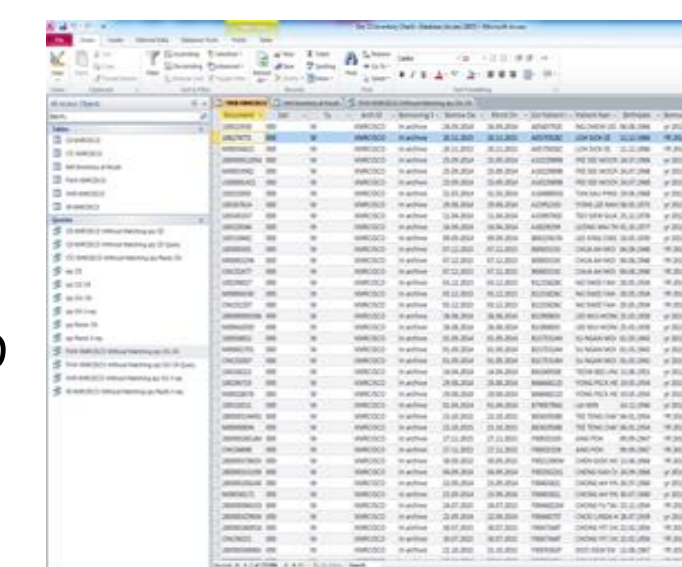

Figure A: Fault Tree Analysis

Upon identification of the problems, DDMS then adopted *Deming's Cycle of Plan, Do, Check, Act (PDCA)* to develop and implement solutions, monitor the performance and continuously improve the process.
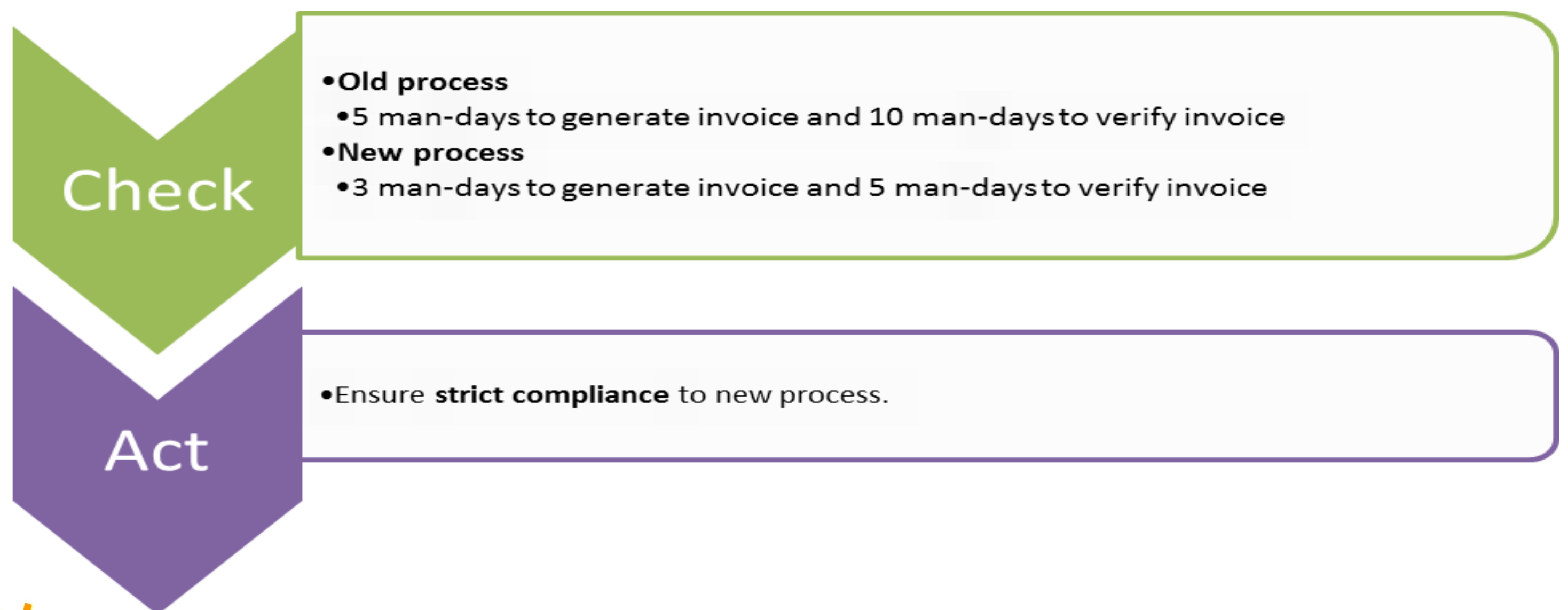
Plan
- To ensure efficient and prompt payment to vendor.

Do
- (1) Engaged vendor **to generate inventory listing at 0000HRS** to ensure high accuracy of data.
- (2) **Adoption of MS Access** as an application tool to process huge amount of data.
- (3) Deriving a daily/monthly **Delivery Checklist** to collate retrieval transactions.

1. Using SAP transaction code of ND18 to generate the inventory @ 0000HRS

2. Adoption of MS Access to match medical records inventory at KKH and offsite easily. Allow fast identification of mismatch records for verification.

3. Delivery checklist created by vendor to assist them in collating services utilized by KKH to allow prompt billing.

Check
- **Old process**
  - 5 man-days to generate invoice and 10 man-days to verify invoice
- **New process**
  - 3 man-days to generate invoice and 5 man-days to verify invoice

Act
- Ensure **strict compliance** to new process.

RESULTS

Significant improvements were derived from the new process. They are:-

- Eliminated audit risks as there is high level of data accuracy.
- Time-saving due to elimination of manual verification process i.e. *40% and 50% improvement in invoice generation and verification process respectively.*
- Improved relationship and reputation through efficient payment and timely subvention claim.
- Cost savings of **$1,050** per day *(see Figure B).*

Figure B: Manpower Cost Saving	
Medical Records Supervisor	$150/day
Old process	$2,250
15days X $150/day	
New process	$1,200
8days X $150/day	
$ savings in manpower costs per day	$1,050
% in Manpower savings	**47%**
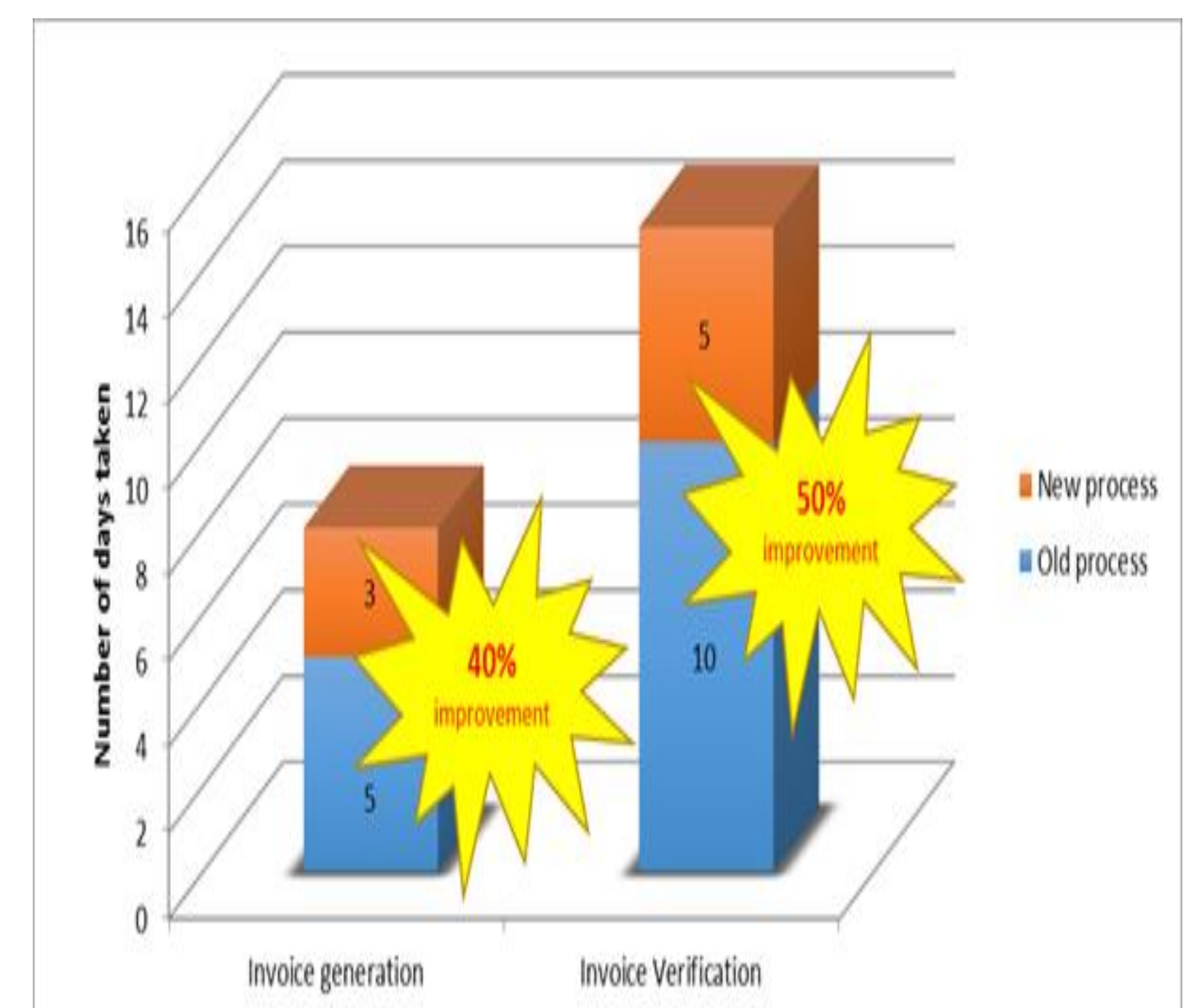
CONCLUSION

By working closely with our outsource partner and through appropriate utilization of IT application tools available, we managed to resolve issues directly impacting payment efficiency. With the revamped process, we are able to generate and verify invoices within a **shorter turnaround time** and most importantly, reduce costs by **47%.**