

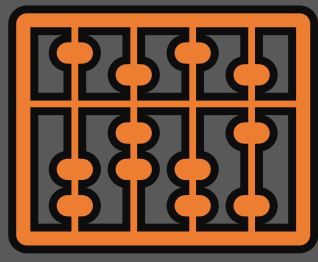


Singapore Healthcare Management 2024

Optimizing Patient Medical Records Digitisation Processes for Improved Turnaround Time

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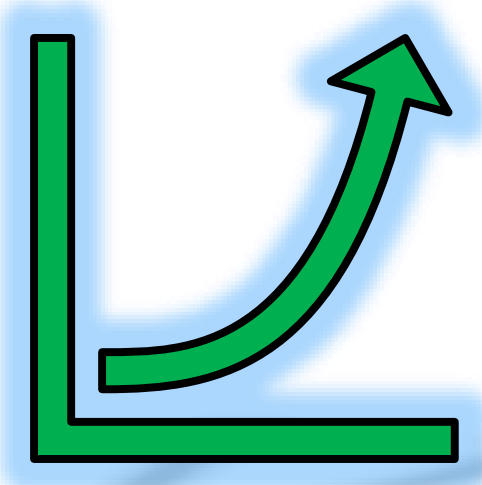
Introduction

Integrating AI into document digitization processes leverages the technology's strengths in automation, accuracy, and data processing. This integration will lead to more efficient workflows, cost savings, improved quality control, and better data management, ultimately enhancing the overall operational effectiveness of an organization. In the context of hospitals, this aligns with the vision of delivering quality healthcare through the intelligent use of health informatics, combining people, technology, and data to improve safe patient care and quality. A cornerstone of this digitalization strategy is the active pursuit of advancements in machine learning to enhance scanning processes, enable autonomous learning, and automate tasks with minimal human intervention.



Objective

INCREASE

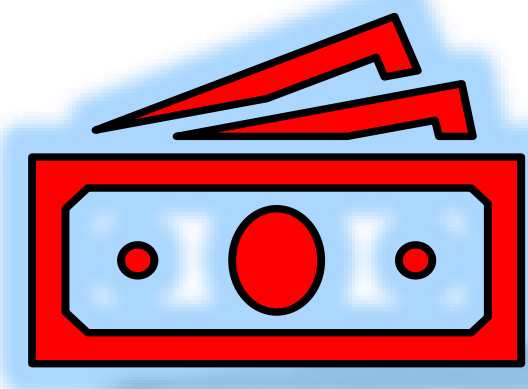


Overall efficiency and productivity of scanning processes

REDUCE



Turnaround time to access medical records

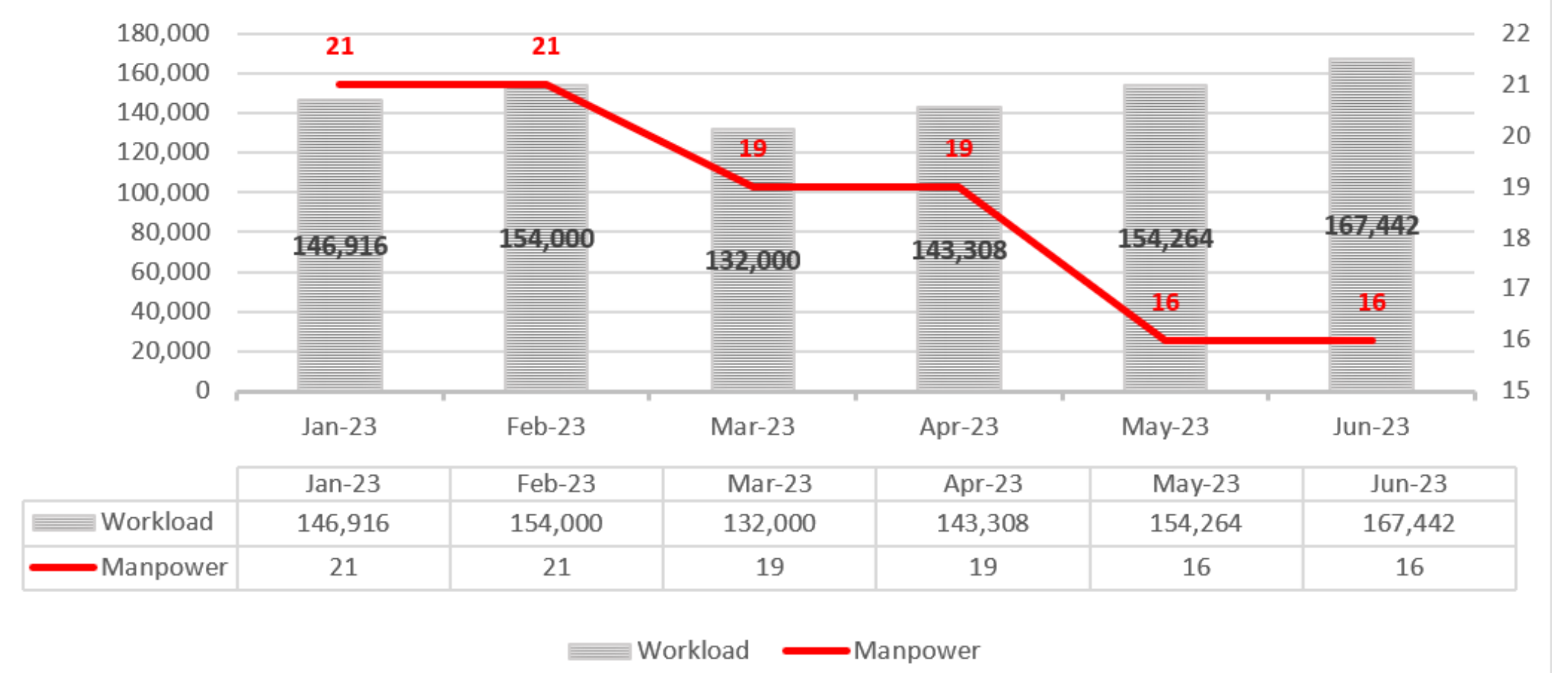


Cost incurred for manpower and materials



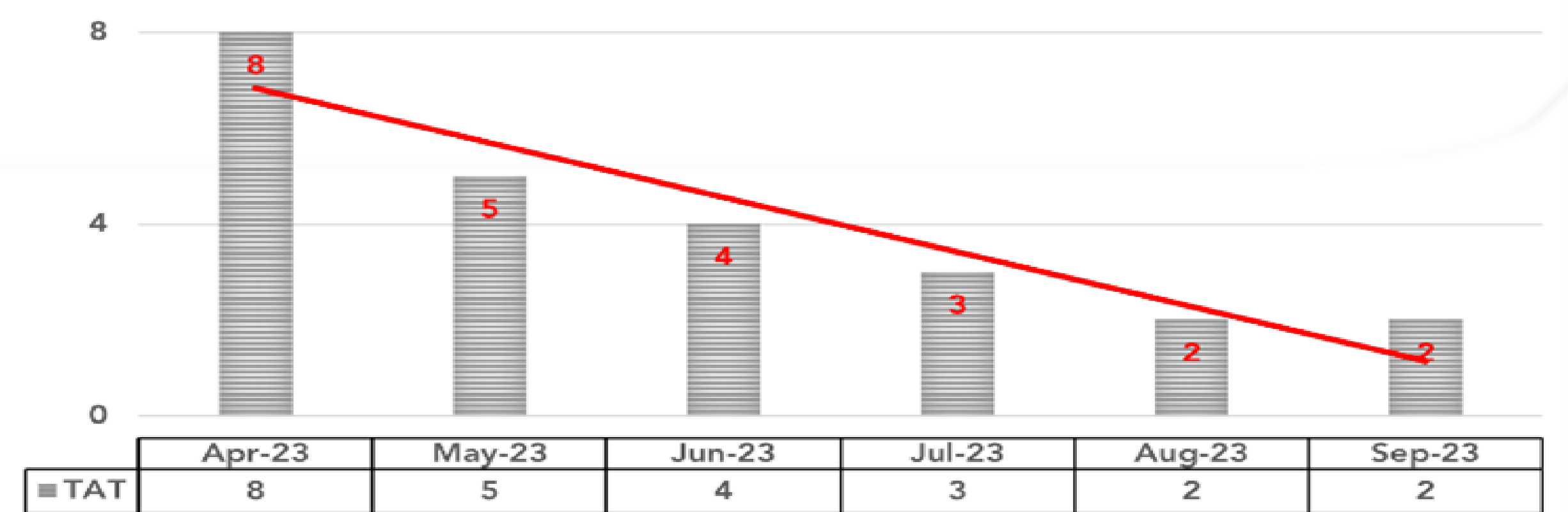
Results

WORKLOAD VS MANPOWER



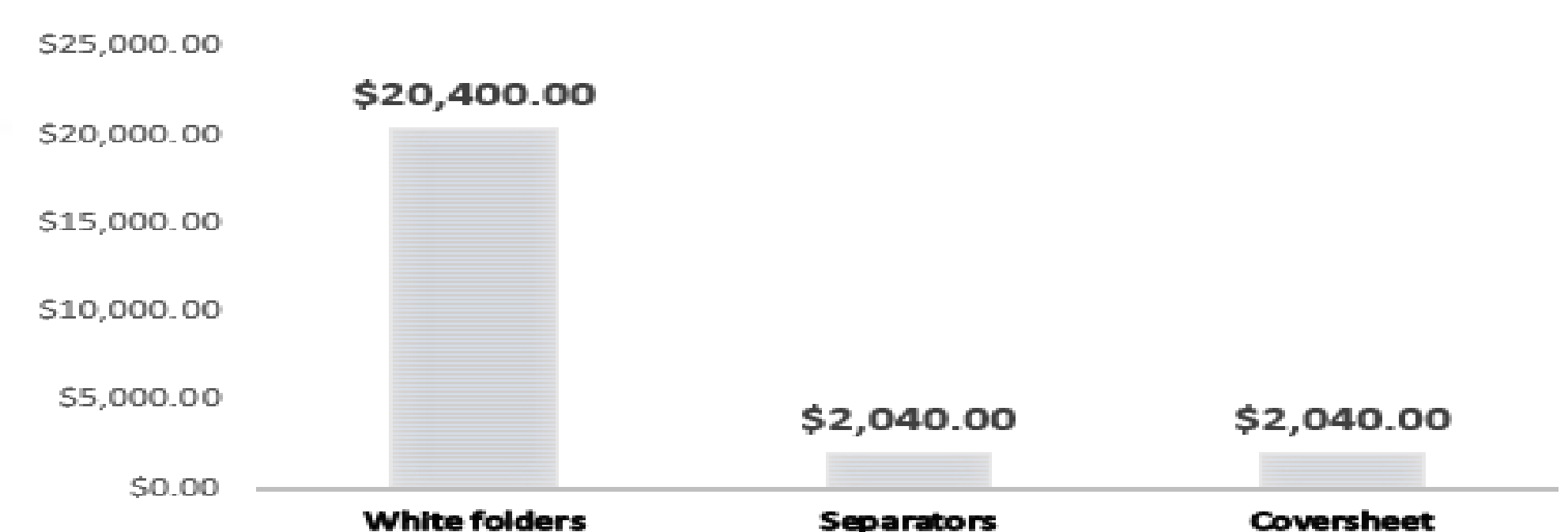
Achieving annual manpower cost saving of \$303,000

TURNAROUND TIME

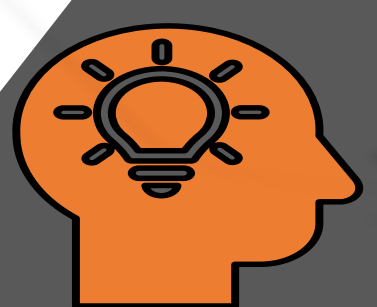


Reduction of average turnaround time for medical record scanning by 400% from 8 to 2 working days

MATERIALS COST PER ANNUAL

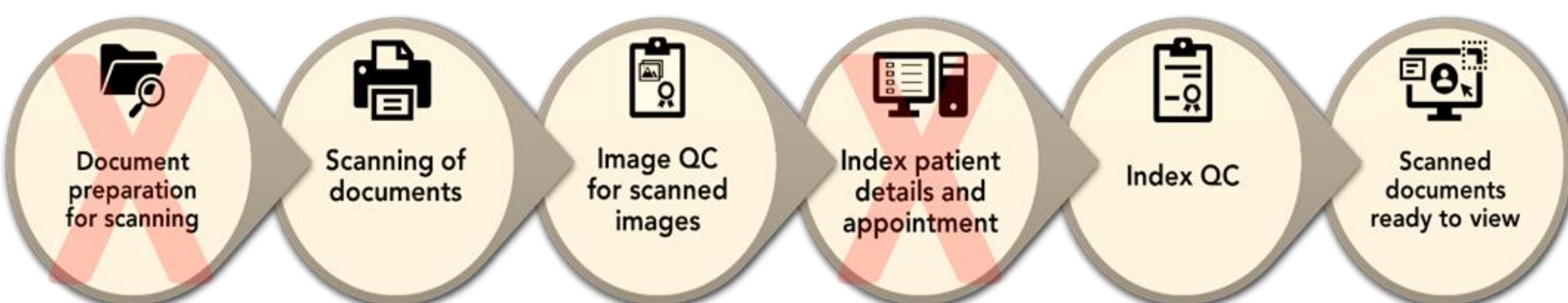


Projected \$24,000 annual materials cost savings with the elimination of manual document preparation and scanning



Methodology

1. Use AI optical character recognition to identify form structures and auto sort the forms into the correct document types to eliminate manual document prep.
2. Embed QR code on documents to enable auto indexing of patient details and appointment to eliminate manual Indexing.



Reduced to 1 Checker step for Quality Control (QC) of Image and Index



Conclusion

The integration of AI machine learning into TTSH's digitization process has significantly reduced turnaround times from 8 to 2 working days, providing clinicians with quicker access to vital medical information. This advancement streamlines operations, enhances team members' AI skills, and fosters growth. We are now exploring the feasibility of extending our scanning approach to point-of-care settings, aiming to reduce processing times to real-time.