



## CASE STUDY

**Automating a key audit process  
at an integrated health system  
ignites digital efficiency**

# Mission



Working together  
to create a  
**healthier world,**  
one life at a time

## Action from Insight

At **Quest Diagnostics®** we work every day to transform knowledge into insights to empower you with the information you need to make your decisions count. Because when it comes to health, our actions have tremendous impact. We believe in the value of foresight, the power of prediction, and above all, the **impact of information**. Because knowledge in the right hands creates **powerful actions and better outcomes**.



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# Background

At the center of a large health system is a suite of technologies working together as a centralized information system for patient data, shared clinical standards, and best healthcare practices. Many technology solutions play a role in this model, including an electronic health record (EHR) seamlessly integrated with **Quantum®**

## **Enterprise Content**

### **Solutions** (ECS) by **Quest**

**Diagnostics®**. Quantum ECS is a data platform that empowers healthcare organizations to capture, manage, and deliver critical clinical and business content to the right systems, users, and workflows.



**Quantum Enterprise Content Solutions** seamlessly integrates with EHR and ERP systems to deliver secure access to the right information, at the right time



# Challenge



The health system captures patient data via several different methods, one of which is document scanning with Quantum ECS. Over 20,000 batches of documents are scanned each day. To ensure images are captured and indexed properly, the health system employs an audit and remediation process to review a determined percentage of the images. Auditing and remediation are the practice of reviewing scanned or imported documents within the electronic patient health record via random daily selection to ensure completeness and legibility. If errors are found within the audited document, targeted communication and instructions are provided to the scan operator to assist them with remediation. A living list is utilized to guide this process in the centralized information system. Each morning a report is generated of the previous day's scanned images. The report is then exported to a spreadsheet where formulas are applied to randomize images, and a percentage of the images are identified for auditing.

The auditing team is comprised of health information management professionals who perform multiple tasks along with the audit function. Each auditor was given their own spreadsheet that had the information for the randomized images listed and ready for review. As the auditor retrieved, reviewed, and confirmed the validity of the documents, notes were made on the spreadsheet and any necessary escalations sent via email. Another team member then consolidated the individual files back into the master spreadsheet. For any identified errors, the documents were flagged for review and correction.

This process was tedious, manual, and time consuming. The enterprise leadership team knew there was an opportunity for improvement.



# Solution

The enterprise leaders and Quest team meet regularly, including in on-site observations, to stay connected and collaborate on opportunities. During one such meetup, the leadership team shared the existing process for audit and remediation to see if there was a way to improve the process with Quantum ECS. Upon discovery of the steps to generate separate spreadsheets, audit team members working in silos, and email as an escalation tool, the Quantum ECS team knew that a tailored process automation would elevate efficiency.



The Quest team built a workflow automation to mimic the concept of the living list in the centralized information system. With the new workflow, all audit team members utilize a live worklist that is created for specific Document Types within Quantum ECS. The workflow pulls a configurable percentage of scans based on Document Type onto 14 different worklists, which both randomizes the scanned images and meets the required percentage that needs to be audited. Auditors launch the image to be reviewed right from the worklist in Quantum ECS. After reviewing, the auditor makes updates on the respective worklist—a drop-down menu of options is available to send the task associated with the image to the next appropriate state, whether this be a completed or follow-up required status. For the images marked for follow-up, the task is routed to a supervisor worklist to be corrected.



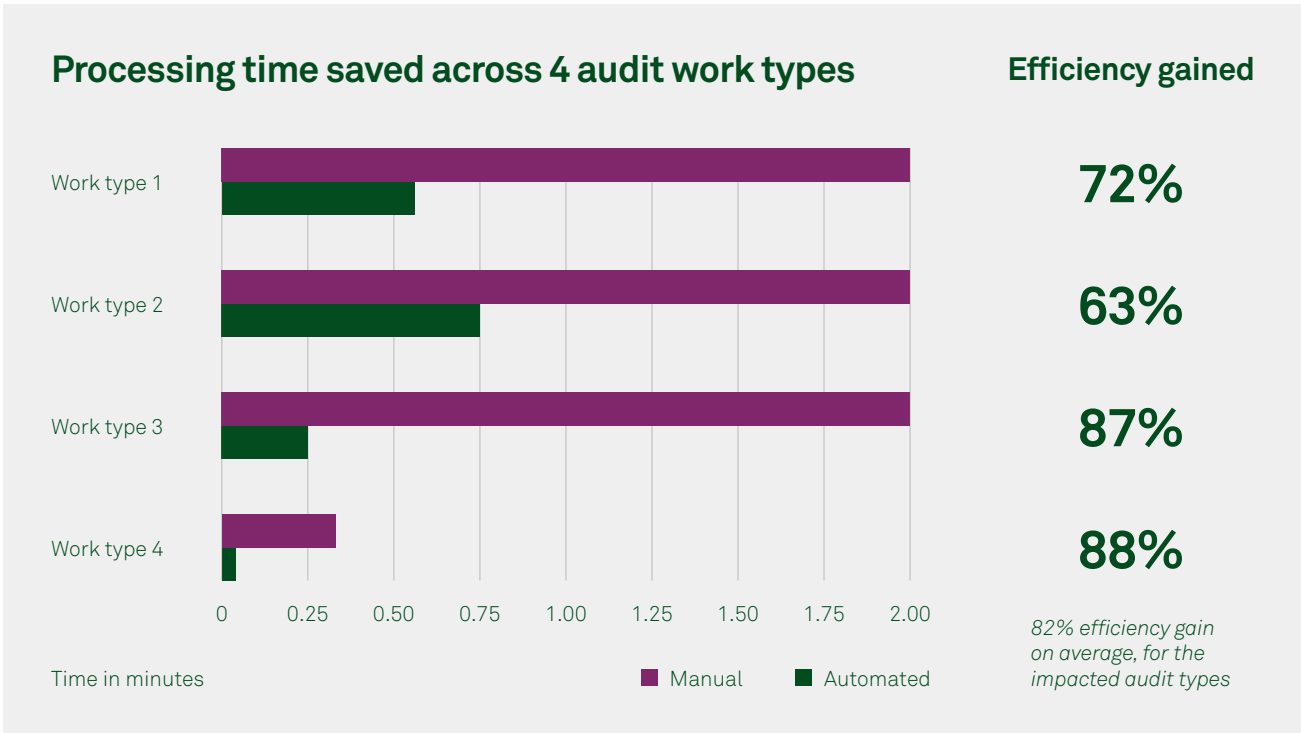
# Results

The new automated workflow in Quantum ECS is a straightforward and clean process. The new live worklists in Quantum ECS that replaced the living Excel lists are automatically updated with the arrival of new scans that are randomized and ready to go. This has eliminated the need for the end process of creating a list in Excel, adding formulae for randomization, separating into 30+ working spreadsheets, and consolidating post-audit back into the master list. The elimination of this

administrative work has saved the audit team 60 minutes each day, totaling 5 hours each work week that are now reallocated to other important workstreams.



The enterprise quantified a drastic reduction in processing time across the 4 audit work types. The overall average results represent a whopping 82% efficiency gain, which is a time savings of 5.2 full-time employees or 10,519 work hours over the fiscal year. The health information manager shared, “The time savings from automating our audit and remediation process is incredible. We now have a seamless and efficient process that allows us to be more productive and accurate.”



# Results



Audit team members are thrilled with the new process automation tool. The review of images is much more streamlined and easier to complete, as all steps are right within Quantum ECS. The time savings with the new process allow team members to focus on a detailed review of audited images along with a more in-depth analysis of identified errors. The errors identified are used as education for the scanning team members to help with proper indexing and to highlight the importance of image legibility. Benefits like these are likely to yield reduced user burnout and the ability to continue to improve productivity. The team looks forward to increasing the daily audit workload as well as evaluating the opportunity to reallocate the number of resources dedicated to the audit and remediation process.

The enterprise teams worked seamlessly with the Quest team to implement this valuable process automation. Upon reviewing the new workflow, the enterprise leadership team identified the need for additional specialized lists so the auditors can quickly and easily route a task to another list if key data points are missing or if something falls outside of daily workstream types. The Quest team quickly created these new lists along with tailored filters for easy review. In addition to these specialized lists, the team will collaborate on additional reports needed for performance tracking. Reports are generated to track progress and productivity, which are needed insights for the management team. “Monitoring team and individual progress is crucial to the effectiveness of our audit process. We have seen great improvements in our process efficiency and are thrilled to leave the manual processes behind us. We look forward to the continued improvements,” commented the health information manager.



# Conclusion



“We have seen great improvements in our process efficiency and are thrilled to leave the manual processes behind us. We look forward to the continued improvements.”

– health information manager

The leadership team looks forward to uncovering more opportunities for **digital transformation**

The automation of key steps for audit and remediation have paved the way for new ideas. The leadership team looks forward to identifying other opportunities for process automation and collaborating with the Quantum ECS team.



**Quest Diagnostics** is the world's leading provider of **diagnostic information services**. Derived from the world's largest database of clinical lab results, our diagnostic insights reveal new avenues to **identify and treat disease, inspire healthy behaviors, and improve healthcare management**. Quest offers a suite of **technology solutions** with the **Quantum** brand. For more than 30 years, **Quantum Enterprise Content Solutions** has helped healthcare organizations improve enterprise document management and imaging strategies with award-winning solutions that **define, streamline, and automate workflows**.

**Quantum ECS** is an **enterprise content management system** designed to help hospitals, health systems, and large ambulatory groups **drive operational efficiency**. A patented, supervised machine learning capability automates the capture process and transforms structured and unstructured data into searchable and shareable content. **Seamlessly integrate EHR and ERP** systems to quickly access the data and workflows your healthcare organization needs to **empower processes, people, and patients**.

**Contact us** to learn how Quantum ECS can manage your data to your exact requirements.





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lives  
touched  
every day

Our **healthcare expertise**,  
robust **technology solutions**,  
and **customer-centric culture**  
**propel your organization to**  
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**healthcare innovators of tomorrow.**





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