



All the Right Moves

How Enterprise Imaging's rules-based workflow organizes, sorts, prioritizes and drives tasks and data, for an agile, productive department.

Interview

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Radiologists today are required to do more tasks simultaneously overall, while finding ways to prioritize their high-value responsibilities. Reading, feedback, correction, quality check, signoff, ... all while dealing with the regular interruptions that occur throughout the working day.



Agfa HealthCare's Enterprise Imaging software's rules-based workflow enables the department to flexibly organize activities and determine priorities, while the radiologist can focus on high-value services and patient care quality. On the one hand, this creates a more productive workflow for the radiology department, and on the other it provides security that no task is lost or delayed.



The rules-based workflow engine has been a key platform design feature of Agfa HealthCare's Enterprise Imaging solution from the start. Unlike other image management solutions, rules-based workflow is 'native' in Enterprise Imaging, which means no other workflow 'orchestrator' or application is needed.

A 'push' to efficiency: From order review to reading and follow-up

When an order for an imaging exam is created, there are plenty of questions that arise and decisions that must be taken to determine the tasks to be completed:

- Does the order need to be reviewed? For example, if a patient has orders for two overlapping exams, can they be combined into a single exam?
- Should an acquisition task be initiated?
- How should the patient be prepared for the exam?
- Which radiologist, from which subspecialty, will do the reading and reporting?
- What follow-up is needed?
- Outside of regular hours (e.g., nights or weekends), who will handle acquisition and reading in an emergency situation?

Enterprise Imaging's rules-based engine initiates the workflow: automatically driving each step and distribute tasks to the users, depending on the parameters that have been set for every situation the department has defined.

1 Rules-based workflow engine

Information, tasks and events flow smoothly, automatically and quickly to the right person. Rather than taking the time to search and prioritize tasks, staff can get to work, with all the information they need automatically provided to them.

2 Radiographer and radiologist communicating for care

If the radiologist isn't satisfied with the image quality for a certain study, a new image can be immediately ordered, using the retake workflow. The workflow engine adds the retake task to the radiographer's worklist. When the image has been acquired, the radiologist is notified automatically that the image is available, and can finalize the report.



5 From peer review to peer learning

We continue to extend our Enterprise Imaging solution to meet evolving needs. For example, it now comprises a comprehensive peer learning workflow, embedded into the radiologists' routine workflow.

This offers much more than peer review tools. Radiologists can ask for second opinions or discuss diverging views on a case, increasing diagnostic confidence. They can also easily create a case out of an interesting study, anonymize it if needed, and share it with their colleagues. As radiologists share their medical knowledge and best practices, they develop a positive mindset that is open to learning and improvement.

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3 Studies do not get lost, even after interruptions

Interruptions are common during the radiologist's working day. With the interruption workflow, the radiologist can leave off a task, then clearly see what tasks are still open afterwards. The task can be taken up where it was left off.

4 Augmented intelligence, for more speed, diagnostic confidence, and care quality

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6 Remote reading and reporting: same experience as in the hospital

With the remote reading workflow, the radiologist has the same working experience remotely, without latency and bandwidth issues. The rules-based Enterprise Imaging workflow pushes tasks and images to the radiologist's fully featured remote diagnostic desktop. Critical tasks are highlighted and prioritized. In very urgent situations, such as stroke reads, the radiologist can read the images and provide a preliminary response almost immediately, then complete the report later.

7 Balanced workloads

Enterprise Imaging provides full transparency on how much work each person still has to complete, making it easy to balance workloads. If necessary, tasks are quickly assigned to someone with a lighter workload to make sure nothing is missed or unduly delayed, and that staff doesn't get overloaded.

8 Smooth organization of multidisciplinary conferences

With the increasing importance of cross-specialty collaboration, the radiologist has a more central role to play, and this can be clearly seen in multidisciplinary conferences. Let's take the case of a patient who was treated for cancer a year ago. Now the patient comes in for a checkup, and the radiologist is reviewing the patient's images. The radiologist wants to discuss the patient's evolution with the tumor board. So he saves some images or snapshots, adds measurements and links them to the next conference. During the conference, the radiologist can share these prepared images, and discuss them with the colleagues – onsite and remotely. Afterwards, there is a record of which patients were discussed and who participated in the conference, for full traceability.



The Agfa HealthCare XERO Universal Viewer also enables the radiologist to remotely access the list of studies awaiting review, as well as images, even from a mobile device, for “anywhere, anytime” viewing.



10 Meeting quality control and certification requirements

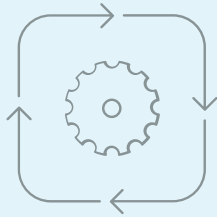
Enterprise Imaging Business Intelligence tools support the department's goals to easily and automatically create and provide accreditation documentation, for example, reports for all peer-reviewed studies based on various criteria. This helps the radiology department to meet its accreditation and certification requirements, and assists the hospital to achieve a high quality ranking.

9 Dedicated academic workflows: shared reading and learning

Academic reading workflows, supported by easy-to-use collaboration, chat and sharing functions, keep residents and attending physicians connected, in real-time and visually. New studies are first driven to the resident for reading and reporting, then to an attending physician for review. The attending physician can finalize and approve the report, and provide feedback to the resident.

The peer learning workflow can also be configured to support the more complex learning process in university/teaching environments, allowing trainees and residents to receive the support and follow-up they need as they evolve from junior to senior radiologist.

Building workflow around processes and needs



To provide the flexibility that medical environments need, Agfa HealthCare's rules-based workflow engine can be parameterized to match the hospital's or department's vision. It uses the following components:

Tasks

The workflow engine uses a set of predefined tasks or activities, for example, Acquisition - Reading - Review - Retake - Correction - Sign-off - Discussion, etc. These tasks can be used to flexibly organize the workflows.

Task assignment

Rules make sure the right care professional gets the right task.

Workflow rules

Determine in which circumstances a person needs to execute a task, do a retake, for example.

Escalation rules

Set priorities, and help avoid bottlenecks.



The rules-based workflow engine also drives data flows:

- Where is the data being stored, in which storage tiers, etc.,
- What are the triggers (e.g. inbound HL7 ORM message, inbound DICOM image, etc.) to prefetch and retrieve studies, or to route them to other systems.

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Orchestrating your workflow: step by step

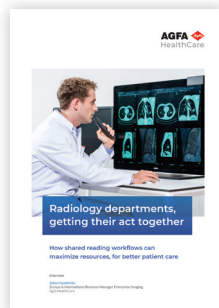
Enterprise Imaging includes a large set of 'standard' workflows. Many radiology departments start with these pre-defined workflows when Enterprise Imaging is first implemented. While gaining insight in the functionality of the platform, users develop more concrete ideas on how the workflow can be improved to match their department's specific processes. In parallel, we work with the customer to analyze their needs. Together we can then adapt the 'default' workflows in an effective way and make them match the radiology department's processes.

Contact your Agfa HealthCare representative for more info

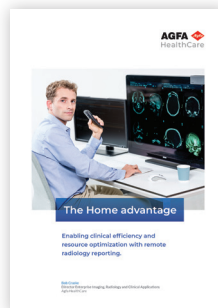
More Expert-interviews



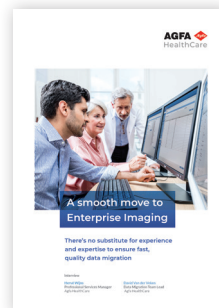
Peer Learning



Shared Reading Workflows



Home Reporting



Data Migration



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