

# Automating Medical Imaging Study Ingestion Saves Time and Reduces Costs

## A Global Initiative to Standardize Image Sharing Workflow

Ingestion and distribution of medical imaging studies are common clinical workflows at most healthcare provider organizations. They are, however, becoming increasingly complex, as healthcare organizations consolidate, partner and diversify over wider geographic areas, and utilize increasingly disparate clinical information systems. One organization that is benefitting from an automated solution to managing their complex workflow processes on a global scale is Zimmer Biomet. They are a manufacturer of orthopedic joint reconstruction and fixation products that relies upon cross sectional imaging studies to drive their custom manufacturing and surgical guide development processes. Candidates for an implant are scanned according to predefined imaging protocols and their imaging studies are sent to Zimmer Biomet to guide the manufacturing process. More than 3,500 imaging providers, from 35 countries, send over 2,500 imaging studies per month for these purposes.



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Historically, this study ingestion process was managed by a handful of online and manual processes that require customers to manually initiate, upload or transmit studies, including sending via email or on CD or DVD. Overall, the process typically

took a significant amount of time per case, reducing technologist productivity, distracting them from their patient responsibilities, and creating opportunities for patient identification errors to find their way into the system. Additionally, maintaining the security, connectivity and reliability of the multiple image ingestion methods requires time and effort of local and central IT staff.

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*Bryan Morrison, Ph.D.  
Senior Imaging Engineer  
Zimmer Biomet*

These requirements are costly for Zimmer Biomet and the individual healthcare organizations that provide the imaging studies. As the number of these providers grew into the thousands, the need became acute for an automated, standardized, reliable, secure and robust method for managing this study ingestion workflow.

To address these needs, the Compass™ Image Ingestion and Routing Solution from Laurel Bridge Software, is being installed across their customer base to replace their legacy, manual study ingestion processes. To date, Compass has been implemented

at more than 500 of the approximately 3,500 medical imaging providers worldwide that provide imaging services to Zimmer Biomet clients. The goal is to implement the Compass solution at all new and existing sites. At the imaging facility, Compass automatically ingests the relevant imaging studies directly from the modality or the PACS, and then automatically encrypts and sends the images directly to Zimmer Biomet headquarters. There, another Compass receives and stores the imaging studies on the Zimmer Biomet Vendor Neutral Archive (VNA) while managing internal imaging study movement, as required.

“Zimmer Biomet has reduced implementation, IT support and clinical operations costs, by automating their image ingestion and distribution processes with Compass”, reports Bryan Morrison, Ph.D., Senior Imaging Engineer at Zimmer Biomet. He also indicates that implementation times have been reduced compared to the previous web-portal methods. “Unless mandated by the imaging provider, a virtual private network (VPN) connection is no longer required to maintain security at each implementation. This significantly reduces the complexity of a deployment and enables us to rollout a new connection in typically less than hour.” Bryan also points out, “Compass ensures that sensitive patient information is protected.” Lower IT support costs enable imaging providers to focus on delivering a high quality clinical service for their patients and their physician community. Cost savings are amplified by the reliability and throughput of Compass, making it practical for centralized deployments at larger healthcare organizations and Integrated Delivery Networks (IDN’s).

The new automated process that Compass has enabled also streamlines workflow for the radiologic technologists that perform these orthopedic surgical cases, by eliminating their need to manage a manual study ingestion workflow process that often included burning studies to CD prior to upload to Zimmer Biomet. Technologists have reported saving approximately 15 minutes per imaging study, enabling greater focus on addressing patient care needs and maintaining department productivity. Radiology administrators are also better able to maximize modality utilization as these orthopedic surgical imaging exams no longer require extra time in the schedule. Compass operates on computers with user interfaces in multiple languages in 35 countries across four continents. Bryan reminds us, “Early on in our Compass deployment effort, it became clear that the benefits our customers and our company were realizing was significant and multi-dimensional, in part because medical imaging workflow touches many different people and processes. Everyone benefits from the fact that the Laurel Bridge Software solution works so efficiently!”

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