

WATERS ANALYTICAL WORKFLOW MANAGER

Analysis Turnaround Times Reduced by 25 Percent

Client: A global pharmaceutical company

BACKGROUND

A global pharmaceutical company develops drugs to treat a variety of disease conditions including cancer, heart disease, and HIV. The company's scientists rely on as many as 30 analytical testing labs that continually analyze thousands of chemical compounds used in or generated by the drug development process.

Structural chemical analysis assists researchers in the discovery of promising new products for medical and industrial applications, while impurity profiling helps assure the quality of its products.

The research analytical laboratories operate as service centers that accept samples for analysis from researchers and quality assurance technicians, routing the samples through tests in one or more labs. The samples are then returned along with the analysis reports to the requesters. This entire analysis process was paper based.

CHALLENGE

A flexible solution was required to minimize the manual paper-based processes between the research chemists and the analytical laboratories. This required eliminating the paper-bound chemical analysis processes at the customer's site and developing an efficient online workflow and system for sharing data.

"We wanted to enable the labs to combine their results into a data warehouse so we could provide value-added research services. And we wanted the researchers to be able to readily benefit from the analysis data that their colleagues had requested, which would lead to greater collaboration and fewer duplicate analyses," said the manager of the nuclear magnetic resonance laboratory.

THE SOLUTION

Waters® Analytical Workflow Manager (AWM) and a site-wide deployment of the InSpector Analytical Data Viewer have been installed to support researchers at the pharmaceutical company's major site. The Analytical Workflow Manager, an analytical laboratory collaborative workflow management system with its integrated InSpector Software, met all of the customers' technical requirements.

AWM was rolled out compliant-ready, helping the client meet the demands of 21 CFR Part 11 and applicable predicate rules where they apply to the documentation of lab workflow and data procedures through valid digital records and signatures.

The initial rollout served three customer labs. The Analytical Workflow Manager is currently used by more than 400 researchers and 40 lab technicians. In this deployment, AWM is scaled to process up to 20,000 analysis orders per year and store 50,000 result sets.



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LAB MANAGER,
GLOBAL PHARMACEUTICAL
COMPANY

As the focal point for all analysis performed within its three participating labs, AWM integrates with several existing systems. To minimize user training and promote user acceptance, an interface was developed between the newly deployed systems and the customer's virtual electronic laboratory notebook workbench software. The interface allows researchers to place orders for analysis and access the results. The AWM receives order requests from the electronic laboratory notebook workbench software system, triggering the delivery of requests to the lab technicians.

Waters also integrated AWM with testing equipment in the labs and with the customer's classical LIMS environment. The LIMS receives notification of incoming orders, tracks the tests performed, and routes information to the customer's SAP system to efficiently generate billing for each order.

AWM can run on a broad range of servers, from a small Intel-based system to clustered Linux, UNIX or mainframe platforms. This scalability and flexibility made the AWM's WebSphere implementation technically and economically efficient; backed by IBM support, it was also a low-risk option. The deployment included IBM Systems with WebSphere Application Server (Advanced Edition), WebSphere Studio Application Developer (formerly IBM VisualAge for Java), and Servers (IBM RS/6000 SP).

While AWM improves day-to-day productivity in the labs, it also builds a database of analysis results, running on an IBM RS/6000 SP server. The database, which the customer estimates is growing by three gigabytes every month, will serve as the basis for collaboration among researchers.

BUSINESS BENEFIT

Turnaround time for analysis orders was reduced by 25 percent in the first year after rollout. The system promotes information sharing and collaboration among researchers across the company. By integrating analysis reporting with workflow and billing processes, Waters Analytical Workflow Manager helps the customer improve laboratory productivity while reducing errors.

"This breakthrough is immense. With the expertise of both IBM and Waters Laboratory Informatics, we have transformed a dead resource into a front-line research and workflow tool, while opening up our analytical lab to the rest of the organization," said the lab manager.

The customer plans to implement AWM in five more analytical labs and extend the system to research and development departments in other organizations within the company. The customer believes that their strong relationship with Waters and the support from IBM are providing strong impetus to proceed.

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March 2008 720001361EN LB-AP

Waters Corporation
34 Maple Street
Milford, MA 01757 U.S.A.
T: 1 508 478 2000
F: 1 508 872 1990
www.waters.com