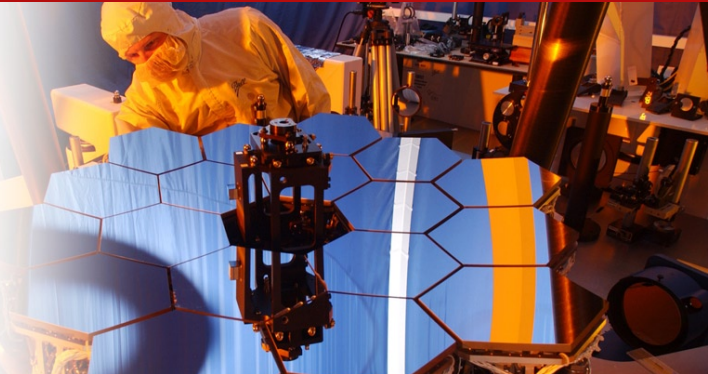




With virtually no second chances to make corrections, **Ball Aerospace & Technologies Corp.** made the right choice in selecting **Intercim** to help transform its nonconformance process.



The Challenge

- Reduce and eliminate inefficiencies of paper-based nonconformance management system
- Rapid and accurate response to customer inquiries
- Managing more than 50,000 emergent events per year
- Communicating nonconformance data to all programs

The Solution

- Pertinence Suite powered by Velocity® Emergent Process Management (EPM) module.

The Benefits

- Dramatically reduced close out cycle times
- Decreased task-time and increased accuracy by eliminating the redundancies of paper-based management system
- Can quickly provide accurate information to customer inquiries
- Complete as-built and as-tested record integrated with execution system



Ball Aerospace & Technologies Corp. develops and manufactures spacecraft, advanced instrument sensors, components and data exploitation systems for strategic, tactical and scientific applications. Its customers include the Department of Defense, NASA, NOAA and other U.S. government and commercial entities. As a technology innovator for the aerospace market, Ball is the industry leader in antenna and microwave technologies, laser communications and space-based imagery devices. Ball has never had an on-orbit failure that did not accomplish the mission data goals.

In 2005, Ball launched the Anomaly and Corrective action Tracking System (ACTS) initiative to transform the company's nonconformance process. According to Project Manager Brian Bate, the goal is to develop a streamlined and consistent process for managing anomalies. "We needed visibility of the nonconformance data to provide status and identify systemic trends. We also required the ability to easily package nonconformance data for a specific program to provide to customers when the program is completed," he said.

"Because producing one-of-a-kind, space-borne systems is inherently anomaly-prone, non-conformance management is critical," said Bate. "Once a system is launched into orbit, we don't get a second chance to make corrections."

Ball required a system that tightly coupled nonconformance management with manufacturing execution: a system equipped with data sharing and interactive controls between electronic shop orders and nonconformances. During the selection process, Intercim process architects met with ACTS team members to perform gap analyses. "Intercim personnel had great nonconformance experience with notable expertise in the aerospace industry. The solution was highly configurable, which met another requirement," he said. "We wanted a system we could configure to meet today's and tomorrow's nonconformance needs. Emergent Process Management (EPM) solution was the best choice."

A cross-functional team of Ball engineers from Quality, Material & Process, Integration Test & Manufacturing in the Detector Technology Center validated the configuration during a three-month Live pilot that started Q4, 2006.



Ball Aerospace & Technologies

- Founded in 1956 as subsidiary of Ball Corporation, 2007 Sales - \$787.8M, 3,000 employees
- Mission areas include Intelligence, Surveillance & Reconnaissance, Space Science & Exploration (Hubble, HiRISE) and Weather & Environment

About Intercim

Intercim is a global leader in Manufacturing Operations Management (MOM) solutions for the aerospace & defense, automotive, pharmaceutical and semiconductor industries. Our flagship product, the Pertinence Suite powered by Velocity, is a truly innovative software solution that bridges the gap between product design and supply chain. Our unique technology empowers distributed teams to collaborate on process planning, execution and quality to reduce manufacturing costs, time to market and cycle time. With 25 years experience Intercim operates from offices throughout the US and in Europe. Its customers include industry leaders like Airbus, Ball Aerospace, BMW, Boeing, Honeywell, Intel, Sanofi Pasteur. Partnerships with Dassault Systèmes, SAP and Microsoft support the company in its mission to provide operational excellence for all.

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The solution allowed Ball to create right-sized, data-driven workflows while allowing a level of flexibility to meet specific program needs. The system ensures complete traceability and supports real-time visibility for rapid investigation and status. Electronic approvals and documentation have replaced paper.

The Velocity Core is the central repository of progressively archived data. Nonconformance data associated with as-built and as-tested data is accessible in real-time via the Internet. Information extracted from this database can report trends and other analyses to help decision makers at all levels.

Success

According to Bate, the tool is exceeding expectations. Ball is gaining efficiencies and is increasingly able to make better and faster decisions. "EPM has allowed us to dramatically streamline our nonconformance process," Bate exclaimed. "We've taken a 32 step process and condensed it to four stages. Quality Engineers that once spent eight to 10 hours each week generating customer reports can now push a button and get that data. Redundant tasks and the inefficiencies of a paper-based process are virtually eliminated."

Bate opines that since go-live, cycle time for resolving hardware-related nonconformances have been reduced 2-3 times. "The Detector Technology Center is realizing exceptional results. Product close out cycle time has gone from one to five days to literally hours," he said.

The ability to quickly provide accurate information to customers is also recognized as an ACTS success. "Our customers have a better view of Ball and their own programs," asserted Bate. "They see our efficiencies and appreciate the improved response time and accuracy. We're also recording more data than we did on paper."

The transition from paper to electronic quality management enjoyed an estimated 95% user acceptability. "Users aren't the only ones excited by the technology," said Bate. "I get 1-2 phone calls every week from all parts of the organization asking 'when are you going to come and implement this system on my program?'" While EPM is being fully deployed, Ball and Intercim are planning the 2009 implementation of the Pertinence Suite Process Execution module.

Bate and his colleagues have demonstrated Intercim's EPM solution to customers, governmental agencies and other aerospace organizations. "We never enjoyed customers coming to audit our nonconformance system; now we look forward to it! They're very impressed with how mature the system is – saying we have the right level of functionality and complexity in the system," he said. "One has even termed ours as the new benchmark in nonconformance management for aerospace. It's like we've come from worst to first! The fact that everyone sees the benefits and users really like the functionality makes all the work we put into developing it worthwhile. What we've accomplished is very impressive."