## CHALLENGE

- Multiple hardware vendors, multiple tag types with multiple systems.
- Unable to find assets and supplies in the production process.
- Limited visibility across the enterprise.

## APPROACH

- Develop an enterprise solution to transform near real-time data into actionable information for Boeing factories.
- Build an enterprise class middleware solution connecting all different tag types into one user interface.
- Create mapping capabilities to provide universal enterprise-wide visibility.
- Integrate Passive RFID, Wi-Fi, GPS enabled Wi-Fi and Ultraband Active RFID tags into a single system.

## RESULTS

- Tapestry completed the project on-time and on-budget.
- The solution has been rolled out and fully operational at over 50 sites.
- Tracking 2 billion tag reads per week.
- Projected savings of over $100 million annually.
- Complete visibility of the manufacturing process regardless of tag types and hardware.

# The Boeing Company

## Sensor Tracking Software Improves Production Processes, Saving Millions

Tapestry Solutions worked with Boeing, the world's largest aerospace company, to build a solution to increase visibility across the company, with a focus on the manufacturing and assembly process.

Tapestry's experience with sensor tracking and logistics software played a key role in Boeing's decision to move forward with a solution to fit the needs of their large defense and commercial manufacturing operations.

Tapestry set out to build an automated information management system to provide a single solution with near real-time data into Boeing's factories.

The solution, called the Automated Identification Technology - Information Management System (AIT-IMS), would deliver standardization and automation across the entire enterprise.

Tapestry worked collectively with Boeing Commercial Airplanes, Defense, Space & Security, Manufacturing and Quality Systems, Research and Technology and Information Technology to review use cases and define functional requirements and features to support these cases. After the requirements were validated, a phased approach was established with a budget, scope and schedule. Tapestry provided transparency throughout the process from testing to bug fixes, schedule and implementation production, creating a strong relationship with the Boeing team.

Tapestry broke down the development of AIT-IMS into multiple phases that would bring the product to full operational capability while providing incremental benefits along the way.

The approach took into account the operational needs and implementation timelines for a variety of technology insertions across the company. Tapestry aligned the requirements into discrete block builds to support the operational priorities of Boeing, while maintaining flexibility to accommodate process, priority and technology adjustments.

Tapestry has performed to budget and has provided 100% on schedule deliveries. The solution has rolled out to over fifty sites across Boeing, touching thousands of users daily. Along with the improved data, Boeing has reduced the amount of resource hours throughout
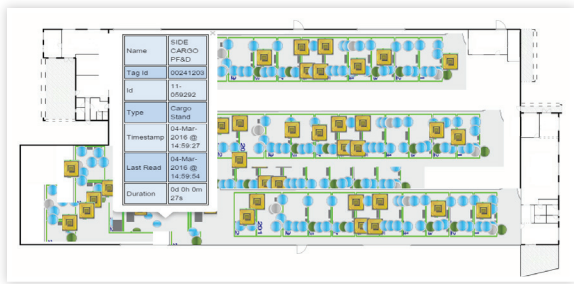
INTEGRATE, AUTOMATE AND ACCELERATE

NEAR REAL-TIME DATA FOR COMPLICATED SUPPLY CHAINS,

INCREASE OPERATIONAL EFFICIENCIES IN MANUFACTURING PROCESSES

## Projected savings over $100 million annually.

the production process and has estimated a savings potential over 100 million dollars annually. The solution gives Boeing the ability to have an enterprise-wide, consolidated map-centric view of data regarding assembly schedules, quality and parts, location of assets, and temperature regulation.

AIT-IMS enabled Boeing to become hardware agnostic without having to worry about multiple systems with data in different places. One of the major benefits is that legacy investments into sensing hardware is leveraged and integrated to extend its value and ROI of the infrastructure components over its full lifecycle.

Boeing is also recognizing enhanced situational awareness and actionable decision support capabilities that drive efficiencies through triggers, events and actions which enhance and smooth production and overall accountability during the manufacturing and assembly process.

This is achieved by bringing together captured data from a variety of tag types, including passive RFID, Wi-Fi, GPS-enabled Wi-Fi and Ultra Wideband Active RFID, into one system.

With Tapestry and Boeing working together to develop the initial requirements for the solution, Tapestry was able to quickly design, develop and implement a long lasting solution that has yielded long-term operational efficiencies for Boeing.

Based on the success and savings realized by AIT-IMS, Tapestry has launched its commercial Enterprise Sensor Integration (ESI) solution.

ENTERPRISE VISUALIZATION OF ASSETS AND WORK FLOW ACROSS THE MANUFACTURING AND ASSEMBLY PROCESS.

## ABOUT OUR CUSTOM SOFTWARE

We provide mission-critical software and services for global defense, government and commercial industries. Our key solution areas include Mission Planning, Training & Simulation; Maintenance Repair & Overhaul; Enterprise Asset Management; and Logistics Operations including Deployment & Distribution, Logistics Command & Control, and Logistics Modeling & Simulation.

## ABOUT OUR COMPANY

Headquartered in San Diego, Calif., Tapestry Solutions has approximately 850 employees and a presence in more than 50 locations around the world. A wholly-owned, independent subsidiary of The Boeing Company, Tapestry provides premier Comemercial Off-the-Shelf (COTS) and custom software products and service to customers worldwide.

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