



Pratt & Whitney

Supplementing SAP solutions with content management for increased efficiency enterprise-wide

Benefits

- Ability for manufacturing to act more quickly and proactively with respect to quality issues
- Faster compliance with government regulations
- Significantly faster response time to plant maintenance issues and emergencies
- Increased information-sharing between functional areas

Business overview

Pratt & Whitney, a division of United Technologies Corporation (NYSE: UTX), is a leader in the design, manufacture, and support of engines for commercial, military, and general aviation aircraft, space propulsion systems, and power systems. Today, Pratt & Whitney engines power more than half of the world's commercial fleet. Every few seconds—more than 20,000 times a day—a Pratt & Whitney-powered airliner takes flight somewhere in the world.

Challenges

Today's competitive aviation industry demands far more than power from an aircraft engine. It demands thrust at the lowest possible cost and the highest level of reliability. A pioneer in aerospace technology since 1925, Pratt & Whitney turned to technology to help improve manufacturing processes to meet these industry challenges.

ERP alone is not enough

Several years ago, Pratt & Whitney decided to standardize on SAP® R/3® for enterprise resource planning (ERP). Today approximately 10,000 Pratt & Whitney employees and contractors use SAP solutions for finance, quality management, plant maintenance, materials management, controlling, program management, logistics, accounting, and sales and distribution transactions. Other SAP solutions are still being rolled out.

“The SAP solution replaced a number of disparate legacy systems and provided a common ground to pull a lot of business functions together,” said Merri Fox, a document and data management specialist at Pratt & Whitney. However, manual processes remained for managing large volumes of unstructured content (information such as digital photos, scanned images, and CAD drawings, not easily managed by any ERP system). In addition, difficulty finding critical information quickly hampered efficiency in numerous ways.

Business profile

Pratt & Whitney

Industry

Aerospace, Manufacturing

Geographies

Headquarters in East Hartford, Connecticut, with manufacturing operations in five U.S. locations and Singapore, Norway, and Canada

Business focus

Enterprise document management

EMC products

EMC Documentum platform, EMC Documentum Content Services for SAP

Deployment summary

Documentum content management platform integrated with SAP in multiple functional areas across five U.S. manufacturing sites, with additional functional areas and sites to be implemented in the future

Partners

SAP, CSC Solutions

Quality information difficult to access

Supporting documents for quality notifications, one form of unstructured content, require fast access. If one of Pratt & Whitney's several hundred quality inspectors received a shipment of parts and rejected half of them, a number of people within the manufacturing organization would need to know about it as soon as possible. A line manager on the production floor might need to reschedule an assembly line.

With SAP materials management software, the manager would see that there was a quality problem related to the parts. But to understand the nature of the problem and have all the information necessary to make good decisions, the manager would need to communicate with the proper person in the quality organization via phone, e-mail, fax, or some combination of these—which might incur unnecessary delays. Having immediate access to digital photos, vendor communications, and test data electronically would speed the process and enable the manager to respond much more quickly.

Paper-based processes hindering fast compliance

To meet government regulations and industry requirements, Pratt & Whitney relied on paper-based processes that were increasingly hindering the company's ability to demonstrate compliance.

For example, every time a change is made to a project, no matter how small, the company must create a new work release authorization (WRA), a critical business document authorizing work to be done on a particular project and indicating who to charge for the work. Because both the Federal Aviation Administration (FAA) and Pratt & Whitney customers can perform an audit at any time—for instance, to verify charges or ensure that work was done—almost everyone on the plant floor needs to have a current WRA to perform work.

It is not unusual for the company to generate hundreds of WRAs in a single month. Generating and distributing WRAs had been a paper-based, manual process requiring supervisors to print out and manually distribute each new version. With SAP project management functionality, new WRAs could be created automatically. But while SAP functionality helps expedite the creation of WRAs, it's not a complete solution; locating and viewing previous WRAs to provide to auditors still required a slow process of digging through file cabinets.

A similar situation existed in the Customer-Owned Property group. Pratt & Whitney has over a thousand pieces of equipment on its production floor that are owned by customers, such as calibration testing equipment owned by the United States Air Force. Government regulations require that every time a piece of customer-owned equipment is moved, even if only 10 feet, a requisition document must be generated. The SAP solution replaced the paper-based process for generating these documents; however, finding and retrieving previous requisition documents, related correspondence, and other related information was still a labor-intensive, often time-consuming process.

Need to respond quickly to plant maintenance issues

Pratt & Whitney has very large manufacturing facilities in five U.S. locations, as well as Singapore, Norway, and Canada. SAP plant maintenance software alone would enable the company to monitor, schedule, and control physical plant functions; however, supporting documents, such as CAD drawings and diagrams, would require logging onto a different system or maintaining physical copies.

According to Fox, “If an electrician needed a schematic of one section of one building—to fix some wiring, for example—he would either have to e-mail the facilities organization and wait for them to print and send him the drawing via interoffice mail, or he might have to walk or drive to the facilities building (over a mile away at certain plants), and hope that someone was there to print out the schematic on a plotter.” In an emergency, such as a flood or fire, the time spent tracking down facilities staff who could print out the necessary drawings could mean the difference between minor damage and a catastrophe.

Spare parts customers desire detailed information upfront

Pratt & Whitney sells a significant number of spare parts to customers and third-party vendors. To complete the sale, each part must be accompanied by a legal document, its Air Worthiness Tag, which documents previous usage and expected remaining life of the part. Pratt & Whitney had created a legacy system that enabled customers to go to a Web site and view a list of types of equipment available for sale. However, they could not see the equipment’s Air Worthiness Tag. To find out more about a part, a customer had to call or send an e-mail to someone in the sales organization who would then have to track down a copy of the Air Worthiness Tag, copy it, fax it, and re-file the original. Pratt & Whitney desired a way to allow buyers to view Air Worthiness Tags on their own, thereby aiding them in their purchase decision-making and reducing the time a Pratt & Whitney employee needed to spend helping them.

“Pratt & Whitney has integrated SAP and Documentum solutions in multiple areas of the company and, in each case, reaped significant benefits—including faster decision-making and compliance, increased efficiency, and time and cost savings. At Pratt & Whitney, SAP and Documentum solutions work hand in hand.”

Merri Fox, Document and Data Management Specialist, Pratt & Whitney

EMC Documentum solution

To increase efficiency and facilitate finding critical information quickly in these and other areas, Pratt & Whitney realized that it needed to complement its SAP solution with critical content management capabilities. After evaluating several leading content management solutions, Pratt & Whitney chose the EMC® Documentum® content management platform as its content management foundation to enhance SAP applications throughout its global enterprise. Working with CSC Solutions, Pratt & Whitney implemented the Documentum system with EMC Documentum Content Services for SAP in a number of functional areas.

Content Services for SAP provides two-way integration between the Documentum repository and SAP applications, empowering SAP users to collect, securely store, find, link, and easily retrieve Documentum content. Using Content Services for SAP, Pratt & Whitney automated the linking of standard SAP transactions, as well as customized transactions, to objects in Documentum for dynamic information exchange between the two systems. With just a few clicks, a Pratt & Whitney SAP user can now view relevant documents stored within the Documentum repository without ever having to leave his desk.

Facilitating fast decision-making

Among the first areas to reap the benefits of the SAP-Documentum integration were the quality and manufacturing organizations, thanks to an improved quality notifications process. Now when one of Pratt & Whitney's more than 700 quality inspectors or engineers inspects a nonconforming part, he or she stores in the Documentum system any supporting content to substantiate the nature of the problem (digital photos, e-mail messages to the vendor, copies of a report), and creates a quality notification in the SAP quality management module. The data contained in the notification is automatically posted in other SAP solutions. Upon seeing a quality notification icon next to an SAP transaction within their SAP materials management software, manufacturing personnel will then click on the notification, which prompts them to log on to the Documentum system where they can immediately see all the supporting quality documentation. Today, over 1,500 Pratt & Whitney employees and contractors view quality notifications details via SAP applications.

"Before the SAP-Documentum integration, the documents supporting quality notification just weren't accessible on the production floor," explained Fox. "Now anyone with access to SAP solutions can see clearly what's wrong—whether it's an incoming or outgoing part, or our own product—and quickly determine the implications and proper response. Being able to inform everyone who needs to know at the same time and being able to act more quickly and proactively are enormous benefits."

Increasing efficiency through easier access to information

Easier access to information has also increased efficiency with respect to work release authorizations and requisition documents for the Customer-Owned Property group. Today 1,200 Pratt & Whitney employees and contractors use the Documentum system to store and access current WRAs and to quickly and easily display previous WRAs for customers and federal auditors. In the Customer-Owned Property group, all versions of each requisition document, as well as supporting content, such as contracts and correspondence, are easily accessed from either SAP applications or the Documentum system. In addition to increasing efficiency, easy access makes compliance with government and customer audits much easier and faster.

Facilitating sharing of information between different functions

Storing related information in a central repository also facilitates knowledge sharing among different departments and functions within Pratt & Whitney. For instance, the Customer-Owned Property group generates documents in SAP and stores them in Documentum. They can view their documents from the SAP transaction to display contracts associated with those documents. The Customer-Owned Property group also receives contracts with frequent updates from the legal department and can store them in Documentum along with their own documents. From the SAP display of the contract transaction, authorized users of the Customer-Owned Property group, the legal department, or other organizations can view all the documents associated with that contract.

"Because Documentum enables setting different security levels of authorization for different documents, we can also limit accessibility where needed," added Fox. "In SAP solutions, employees and contractors can see a list of all the documents associated with a transaction but can only read the ones they are authorized to access, and only certain people can modify a given document." For instance, most sales professionals can see a contract transaction and a customer statement associated with that contract but not the Customer-Owned Property documents associated with the contract.

Speeding plant maintenance response time

With the SAP-Documentum integration, authorized users can access all the documents associated with a specific building or location. In the SAP solution, the user specifies the location and then clicks to view documents stored in the Documentum repository in folders such as Electrical, Plumbing, Air, and so on. Users can quickly and easily pull up the required drawings, drill down to the sections they need, and print just those sections on a local printer.

“Being able to access this information without having to go to another building across campus and track down someone who can find and print a drawing on a plotter has literally shaved days off the time needed to respond to plant maintenance issues,” said Fox. “And if the issue impacts production, a quick response can make a difference for the company’s bottom line.”

Streamlining spare parts purchasing process for customers

Thanks to the Documentum content management platform, potential buyers of Pratt & Whitney’s spare parts have also saved time, as have the employees who help them. Pratt & Whitney now manages its Air Worthiness Tags in the Documentum repository, which in turn feeds the spare parts Web site. Now customers can view and print out watermarked PDF copies of Air Worthiness Tags directly from a Web site to determine for themselves whether to continue in the purchase process. No longer do they have to wait for a Pratt & Whitney employee to copy and fax these documents.

Pratt & Whitney employees also save time, now that they have direct access to spare parts documents from within SAP solutions. They no longer have to spend time tracking down, copying, and faxing the Air Worthiness Tags to customers.

Reaping the benefits of content management in other areas

The Documentum content management platform has also enabled Pratt & Whitney to streamline its proposal development process, making it easier for suppliers and partners to collaborate with internal staff in the content creation process. The company desired a way to more effectively control versioning of proposal content and to provide audit trails that document the entire proposal development process. A portal-based, Documentum-Plumtree Web content management solution shaved 50 percent off proposal cycle time and significantly cut printing and mailing expenses.

Summary

The SAP solution is the main working tool for many Pratt & Whitney employees and contractors. However, without quick and easy access to relevant business documents, productivity and efficiency gains were limited. By integrating the Documentum content management platform with its SAP application, Pratt & Whitney gave SAP users easy access to relevant documents and streamlined multiple processes in multiple functional areas enterprise-wide. According to Fox, “The integration of Documentum and SAP solutions has resulted in numerous benefits, including faster decision-making and compliance, increased efficiency, and significant time and cost savings. At Pratt & Whitney, SAP and Documentum solutions work hand in hand.”

About EMC software products and solutions

With more than \$3 billion in software sales and 5,000 employees dedicated solely to software development, sales, and service, EMC is the sixth largest software company in the world. EMC's open software products enable organizations of all sizes to more efficiently and cost-effectively store, manage, protect, and share their information—from creation through archiving and final disposal. EMC software products meet today's requirements for information lifecycle management (ILM), a strategy that recognizes the changing value of information over time. For more information, visit <http://software.emc.com> or call **800.607.9546** (outside the U.S.: +1.925.600.5802).

About EMC

EMC Corporation (NYSE:EMC) is the world leader in products, services, and solutions for information storage and management. Through information lifecycle management (ILM) strategies, we help enterprises of all sizes manage their growing volumes of information—from creation to disposal—according to its changing value to the business. EMC information infrastructure solutions are at the heart of this mission, helping organizations manage, use, protect, and share their information assets more efficiently and cost-effectively. Our world-class solutions integrate networked storage technologies, storage systems, software, and services.

We're creating the ultimate information lifecycle management company—to help our customers manage and use more information, more easily and effectively. The result? Information with greater business value and at lower management cost.



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Customer Profile
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