Iberia Maintenance

Leading Spanish airline is a pioneer in using electronic work cards built using Adobe® LiveCycle® Enterprise Suite software to track work done during aircraft maintenance

Iberia Maintenance
www.iberiamaintenance.com

In partnership with
Atos Origin
www.es.atosorigin.com/es-es

Industry
Aeronautics

Challenges
• Replacing existing paper-based work cards with electronic cards featuring digital signatures
• Improving flexibility and efficiency of inspections to save time and money
• Enhancing the visibility of maintenance tasks and improving document tracking

Solution
• Digital signatures
• Engineering collaboration
Iberia Maintenance is using Adobe LiveCycle Enterprise Suite software with legacy data management systems to streamline aircraft inspections and documentation processes to reduce costs, accelerate inspection times, and enhance services to its customers.

Results
• Accelerated inspection times, improved quality, and increased productivity of mechanical staff
• Enabled immediate and consistent information sharing and project status reporting to clients
• Reduced printing by as much as 2.5 tons of paper annually and saved thousands of man-hours with automated electronic systems

Ninth largest global maintenance and engineering company

Iberia Maintenance is one of three lines of business that, along with passenger transportation and airport assistance, constitute Iberia, the premier air transportation group in Spain and fourth largest in Europe. The division is responsible for performing inspections and maintenance on the airline's aircraft as well as for 100 clients. Iberia Maintenance is one of the largest operations in the sector worldwide, with approximately 200,000 square meters of MRO (Maintenance, Repair, and Overhaul) facilities and closed 2009 with €321.5 million in billing to third-party customers.

Certified by national and international agencies like Spanish Civil Aviation, the European Aviation Safety Agency, and the United States Federal Aviation Administration (FAA), Iberia's business is based on quality and competitiveness. Two years ago the company decided to look into replacing the paper work cards used in aircraft inspections with electronic work cards, equipped with digital signatures, that are accessible on tablet PCs for both greater flexibility and work efficiency.

To achieve this, it was necessary to change the existing process for creating and completing work cards. Iberia handles technical documentation from manufacturers in SGML or XML format. The information is loaded into a Documentum XML document manager, and task planning is done in SAP ERP. The application prints orders and then generates specific work cards by compiling information from different manuals.

For each of the orders, a document manager created a PDF file that was printed and used for workers to manually track the tasks they performed. Once completed and signed, the paper work cards were scanned to create another PDF file for each request stored in Documentum.
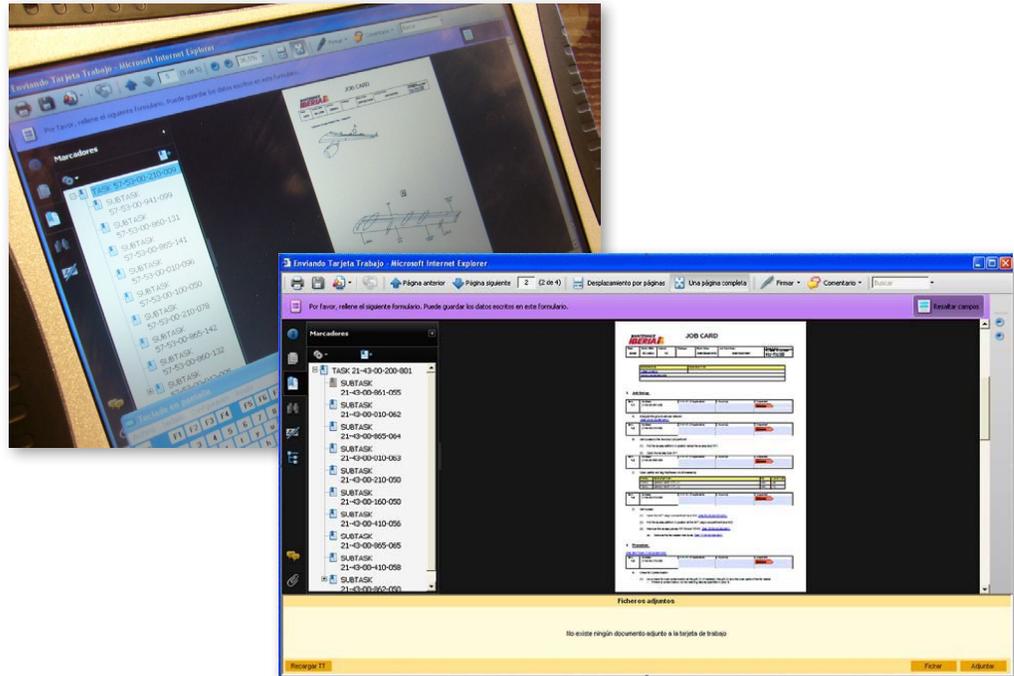
Seamless transition from paper to digital

"With the old system, we were essentially blocked," says Carlos Expósito, head of Iberia's systems unit of the maintenance and engineering systems division. "We wanted to improve cycle time, revision control, and document tracking. The challenge was to find a solution that would allow users to see information on the screen just as they would when using paper. The project was put out for bid to international consultancies and we chose Atos Origin, in collaboration with Adobe, which proposed a model based on Adobe LiveCycle Enterprise Suite software."

Atos Origin proposed a system called Alexandria that allows Iberia to keep its server infrastructure, database, ERP, and existing document management systems the same while only replacing its previous application with the more efficient Adobe LiveCycle ES software to issue work cards electronically. The system creates printable PDF files that include digital signatures. Once a card is completed, the new system stores it in the repository as unalterable code, which can be printed on demand.

The web-based application requires only an Internet browser and the free Adobe Reader® for user access. Using Adobe LiveCycle ES, the software solution leverages the Forms module to support the capture and movement of data into form templates, the Output module for printing cards, and the Reader Extensions module to enable files to be viewed by authorized personnel using only Adobe Reader software. An additional IT investment has been focused on installing Wi-Fi in the hangars and the purchase of mobile devices— such as rugged Panasonic laptops—to view and complete the online forms anywhere, and access assets at all times online and offline.

Adobe LiveCycle ES modules enable mechanics and technical staff to easily access all work orders instantly on tablet PCs. With Adobe software, staff can review and approve work orders and notes with digital signatures for more efficient workflow and superior accuracy.

Training technicians in just two hours

Developing the solution took place at the Atos Origin Software Factory in Valladolid, Spain, featuring a team of 15 people led by Ezra Martin Sanchez, several consultants, and an Iberia subject matter expert. The software is now in use in Iberia's largest maintenance hangar in Madrid, where teams can work on up to five planes simultaneously. The products will be deployed in the new Barcelona facility as well.

Carlos Expósito stresses that working with Adobe software and technologies has enabled more rapid and consistent user training, which is important as the number of users will grow from around 200 currently to 1,500—eventually reaching 5,000. "As it will be similar to the work cards we previously used, the training time has been drastically reduced to two hours for a mechanic and four hours for a manager," he says. "Now we can offer refresher courses right at the foot of the plane, as required."

Avoiding occupational risks and competing globally

Carlos Expósito is aware of the advantages of this industry-first MRO solution. "We control the inspections in real time, eliminating the continuous visual reviews of documentation and avoiding oversights in required signatures," he says. "In addition, technicians will save trips back and forth to PCs for instructions or manuals because the cards include links to information in PDF files. The signatures required at the beginning and end of a task are done automatically in the form, so technicians don't have to physically clock their work. With this we can avoid occupational hazards, since mechanics move around on catwalks, scaffolding, and storage spaces that can be dangerous."

Carlos Expósito also notes that the savings in time are significant. Iberia saves 4,320 hours per year in planning in-hangar inspections and 800 hours annually by minimizing the need to consult paper-based manuals through workspace preparation. In addition, electronic signatures help the company save 9,900 hours a year and 3,800 hours in recalled or reworked inspections.

With these improvements, the company is poised to finish the year with the ability to conduct additional, more comprehensive inspections, which can take up to two weeks and require 60 or more people. There are also savings in paper and printing costs, promoting a more sustainable business model. The company estimates that this solution will reduce printing as much as 2.5 tons of paper a year and use only about 100 toners a year; this is on top of the reduction in man-hours required for paper-based processing. For example, in the scanning process alone, Iberia estimates that each year it will save as much as 500 working days among the team, 500,000 pages in Kofax licenses and scanner maintenance, and 600 hours in document packaging and shipping processes.

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Carlos Expósito
Head of systems unit, maintenance
and engineering systems division,
Iberia Maintenance

Systems at a glance
- Adobe LiveCycle Enterprise Suite. Modules include:
  Adobe LiveCycle Forms ES
  Adobe LiveCycle Output ES
  Adobe LiveCycle Reader Extensions ES

"The message we're sending is that we're innovative, we're improving our processes, we are more competitive, and we're shortening our inspection times," says Carlos Expósito. "We're not just providing documentation related to an inspection on a CD, but instead we can use SAP to report our progress to customers directly. It's the only way to compete in a global market and reduce labor costs. In terms of certain types of inspections we want to be the benchmark for Europe."

For more information
www.adobe.com/products/livecycle