

The role of modern MRO in performance excellence at China Airlines



With a proven implementation plan and the support of a committed vendor in IFS along with an internal team of champions, China Airlines is achieving and exceeding its business performance objectives, helping it remain agile and top of mind in today's highly competitive aviation market.

Safety first—always

For China Airlines, the promise of safety is the fundamental factor in delivering the best possible customer service. As Taiwan's largest air carrier operating in the highly dynamic and competitive Asia Pacific market, strengthening China Airlines' reputation as an industry leader in this area is a business imperative. Mr. Sun Jia-Min, Senior Vice President, Engineering & Maintenance Organization, China Airlines, says, "We have integrated safety awareness into our operations, system, design, and organization to ensure that all our employees are committed to it. We continuously evaluate and monitor the training and certification of our maintenance personnel to ensure ongoing compliance with regulations."

One single solution – the value of integrated maintenance software

The airline had a network of legacy mainframe systems that often failed to deliver the critical data insights required to evolve the business and introduce new efficiencies. The systems were mostly siloed from one another and operated with various sets of processes. China Airlines had difficulties accessing and sharing timely maintenance information across the organization. "In our highly competitive marketplace, we knew that success would hinge solely on factors that could be controlled - for example, driving greater operational efficiencies," says Mr. Sun, adding that aggressive growth plans and an expanding fleet meant that retaining the status quo was no longer viable. The company integrated the entire Engineering & Maintenance Organization (EMO), strengthened

About China Airlines

Founded in 1959, China Airlines is the largest airline in Taiwan and a SkyTeam airline alliance member since September 2011. As of 2023 the airline operates a fleet of 91 aircraft with an average age of 9.9 years, including A350-900, A330-300, A321NEO, 777-300ER, 777F, 737-800, 747-400, 747-400F (cargo), 787-900 (delivered by 2025). With its hub in Taipei, it serves 151 destinations in 29 countries. China Airlines has 10,815 employees worldwide. Subsidiaries include Mandarin Airlines and Tigerair Taiwan. Revenue in 2022 amounted to TWD 151 billion.

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configuration control and record-keeping, while minimizing in-house customizations. “In addition to generating substantial cost savings, we wanted to drive stronger visibility into our operations, both ‘day of’ and historical. This would not only simplify compliance with regulatory standards but would also help us better understand why things happen and how we could best minimize the risk of it happening again in the future through preventive maintenance.”

A decade of collaboration

China Airlines engaged in a thorough market search to assess the solutions on offer, eventually opting for IFS. Mr. Sun says, “We chose IFS as our system of record for maintaining and engineering our fleet of Boeing and Airbus airplanes, as well as aircraft from our growing third-party maintenance services.” IFS offers a full end-to-end suite, including functionality for maintenance program management; configuration management; engineering; planning; materials management; and line, heavy, and shop maintenance. “After a decade of using IFS, our objectives for this system are being met. IFS has allowed us to improve business efficiency in multiple areas. Engineering provides the core of our compliance efforts, ensuring that planning, execution, and materials are always working within the regulatory objectives while minimizing cost and effort”. Using IFS, China Airlines has been able to provide immediate traceability for tasks, tools and parts, automatic scheduling of tasks, clear and comprehensive planning, and scope and execution support throughout the maintenance cycle.

The value of an integrated, aviation-centric solution is evident throughout the business. “The integration between materials and maintenance has allowed China Airlines to have a real-time understanding of the part demands. Shortages can be identified immediately and rectified with minimal impact to maintenance and operations,” says Mr. Sun.

Moment of Service™

“Expanding third-party MRO services for global customers like United Airlines, FedEx, Korean Air and Japan Airlines is of significant benefit to the growth areas of our business,” says Mr. Sun. IFS also extends into such specialty areas as materials management. For instance, China Airlines currently uses a warehousing system called ASAR, or Automatic Storage Automatic Retrieval. ASAR is quite robust, capable of retrieving information on more than 120,000 parts and materials within just 50 seconds of inquiry. “To capitalize on this power, we integrated the system with IFS,” Mr. Sun explains. “This enables a completely seamless ‘Just in Time’ supply model, helping us cost-effectively execute timely parts requests and fulfillment in line with increasingly competitive serviceability targets.

Benefits

- 65 percent reduction of multi crew job card waiting time in heavy maintenance
- 10 percent increase in line management process efficiencies
- 10 percent increase in heavy maintenance manpower efficiencies
- 3 percent increase in A Checks delivery efficiencies
- Average addition of 30 revenue days per year through a reduction in scheduled aircraft maintenance
- Average addition of 25 revenue days per year through a reduction in unscheduled aircraft maintenance
- Average addition of 14 revenue days per year through a reduction in heavy maintenance without an increase in labour costs

“IFS has allowed us to improve business efficiency while exceeding safety and reliability standards. China Airlines values their partnership with IFS and looks forward to another decade of a productive relationship.”

Mr. Shih Ching-Kai, Assistant Vice President, Maintenance Division, China Airlines

Optimization and efficiency key gains

Optimizing the way line and A checks are performed, coupled with the significant reduction in layover times, mean that aircraft are spending more time in revenue-generation mode, and less time in the hangar. “Collectively, the positive results we have experienced to date cannot be undersold,” says Mr. Sun, “Factoring in the cost reductions achieved to date, we are positioning ourselves for stronger financial performance.” Within two years of site activation, China Airlines saw its EMO operating costs go down by U.S. \$3.5 million—a significant achievement considering how the market’s increasingly competitive nature is forcing operators to deliver greater services with fewer resources. Moving forward, the real-time logistical support and complete cost analysis afforded by IFS will help China Airlines to further increase its maintenance cost control and drive continuing improvements in repair quality and efficiency. The airline firmly believes that optimizing its EMO will go a long way to maintaining a positive customer experience and driving greater brand loyalty. Most importantly, according to Mr. Sun, “It supports our unending commitment to delivering the safest and most reliable passenger and cargo service in the industry.”

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Mr. Sun Jia-Min, Senior Vice President,
Engineering & Maintenance
Organization, China Airlines

Find out more

Further information, e-mail info@ifs.com, contact your local IFS office or visit our web site, ifs.com

