

Optimizing repair processes and asset management for Embraer



Client profile

Embraer (Empresa Brasileira de Aeronáutica) is a multinational company founded in 1969, operating in the aerospace sector. Headquartered in São José dos Campos (SP), the company is a global leader in manufacturing aircraft with up to 130 seats. In addition to commercial aircraft, Embraer produces executive, military, and agricultural planes. Embraer serves over 800 clients in Brazil, the United States, Europe, Singapore, and China by leveraging innovative design, advanced engineering, and cutting-edge technology.

Why NTT DATA

- Low-code and no-code technologies
- Proven success in digital transformation initiatives
- Extensive experience in digital customer engagement

“

This partnership plays a crucial role in fostering innovation and improving operational efficiency in repair processes and asset management.”

Erick Souza, Customer Support Manager, Embraer

Business need

- Enhance operational efficiency
- Optimize inventory management
- Minimize manual interactions with suppliers for repair and asset management

Solution

- Integration of Salesforce Service Cloud and Salesforce Manufacturing Cloud
- Implementation of Google Cloud Hubs, including Cloud Pub/Sub, Cloud Dataflow and Apigee API gateway
- Deployment of Electronic Data Interchange
- Adoption of generative AI within teams

Outcomes

- Seamless integration across all business units
- Automation and acceleration of internal processes
- Improved team efficiency through system centralization

Business need

Streamlined processes with advanced technology

At Embraer, post-sale repair management is critical to ensuring that parts remain available for hundreds of customers. However, the lack of centralized management and fragmented processes led to significant operational inefficiencies in the Repair & Asset Management department. These issues were further exacerbated by increasing order volumes and an increasing competitive market.

Embraer identified these inefficiencies and looked to replace their redundant and complex legacy systems with a unified, global and standardized solution for its three business segments: Commercial, Executive and Defense. This transformation strategy focused on providing real-time data integration with legacy systems and external solutions, alongside implementing a microservices architecture to enable independent, easily testable and maintainable APIs.

Efficient knowledge management was another critical factor. By centralizing processes within structured, accessible and well-documented systems, Embraer aimed to enhance consistency, reliability and operational effectiveness.

Managing all business units in a single platform

Embraer recognized that achieving sustainable growth and operational excellence required a more efficient repair management system. Therefore, the strategic integration of digital transformation initiatives has yielded improvements in quality, enhanced its ability to meet customer needs and streamlined operational processes.

As a result, key challenges were identified and addressed, including:

- Centralizing information and request management
- Reducing total turnaround time
- Increasing parts availability

Embraer leveraged generative AI to drive efficiency and implemented advanced technologies to develop an effective solution that meets the evolving needs of the Repair & Asset Management teams.

“Using Salesforce Service Cloud and Salesforce Manufacturing Cloud, the new solution integrates all business units and sites, automates processes with EDI and reduces Total Addressable Time,” explains Ricardo Neves, CEO of NTT DATA Brazil.

Solution

Transforming internal processes

Together with Salesforce and Aeroxchange, NTT DATA developed an adaptable product ecosystem that aligned with Embraer’s corporate objectives, supports new programs and processes and provides scalable solutions tailored to Embraer’s diverse customer base.

Embraer initiated the project with a comprehensive design phase to address the specific needs of various departments and ensure a successful implementation.

Business and IT teams collaborated closely to develop a unified digital platform capable of replacing outdated legacy systems and meeting the company’s operational demands.

With key challenges identified and analyzed by NTT DATA, Embraer launched the Repair Digital project — a customized, optimized system for inventory management that reduced process complexity, eliminated redundancies and minimized manual interactions. This resulted in improved synergy and enhanced customer support.



This project was a transformative milestone for Embraer, setting the stage for a new era of innovation and operational efficiency. Initially, adopting this culture of change was challenging, but it has now become an integral part of our department’s approach.”

Erick Souza, Customer Support Manager, Embraer

Repair Digital integrates processes inside and beyond the company through an advanced ecosystem, allowing Embraer to maintain a continuous internal workflow, facilitate efficient communication across departments and consolidate critical data into a single data lake.

The solution also guarantees compliance with contractual terms for special programs, provides intelligence-driven insights to improve partner and customer satisfaction and enables the automated recording of dates, events and service progress. Comprehensive KPI tracking and performance measurement ensured precise internal data measurement ensured compliance with defense and security regulations while supporting Embraer's global expansion.

Enhancing the user experience for employees

Employee experience played a crucial role in the development process of the new solution. Many users initially hesitated to change their work routines due to their familiarity with the company's legacy systems.

NTT DATA coordinated collaborative efforts between business and IT teams to address this challenge. These efforts mapped all employee concerns and established a stable, streamlined workflow.

Competitive advantage and adaptability

The digital solution is designed to be scalable and secure while maintaining the flexibility required to adapt to organizational changes, new programs and evolving market demands.

This strategy ensures that Embraer maintains industry leadership and also moves ahead of competitors through technological innovation and operational excellence.

Outcomes

Efficiency drives results

NTT DATA's solution enabled Embraer to overcome the challenges of the development and implementation phases, leading to a 30% reduction in its repair cycle time. Additionally, the consequent reduction in total turnaround time, along with improved inventory management, increased parts availability and eliminated the need for extra investments, resulting in a 15% increase in order fulfillment rates.

With the implementation of Repair Digital, Embraer successfully transitioned over a hundred users from outdated legacy systems to the new platform.

"This project was a transformative milestone for Embraer, setting the stage for a new era of innovation and operational efficiency. Initially, adopting this culture of change was challenging, but it has now become an integral part of our department's approach. As we move forward, we are eager to explore the latest advancements in artificial intelligence, automation, machine learning, and other emerging technologies," says Erick Souza, Customer Support Manager at Embraer.

Visit nttdata.com to learn more.

NTT DATA is a trusted global innovator of business and technology services, helping clients innovate, optimize and transform for success. As a Global Top Employer, we have experts in more than 50 countries and a robust partner ecosystem. NTT DATA is part of the NTT Group.

