



# Smart Technical Operations

Transforming Aviation MRO Operations with Predictive Intelligence



Aircraft downtime and inefficiencies in spare parts management cost the aviation industry billions annually. Managing the unpredictable demand for over thousands of critical components—across regions and with varying usage patterns—requires a transformative approach.

Innova’s **Smart Technical Operations** leverages **IoT, AI, and blockchain** to redefine MRO supply chain efficiency, enabling predictive maintenance and precise demand forecasting. Built on AWS’s scalable infrastructure, this solution is designed to minimize downtime, optimize costs, and enhance operational excellence.

## Why This Matters



### Unplanned Downtime Costs

Every minute of aircraft downtime impacts the bottom line.



### Inventory Challenges

Balancing excess inventory and stockouts has been an industry pain point for decades.



### Legacy Systems

Manual processes and fragmented tools struggle to handle the scale and complexity of modern aviation operations.

## The Solution at a Glance

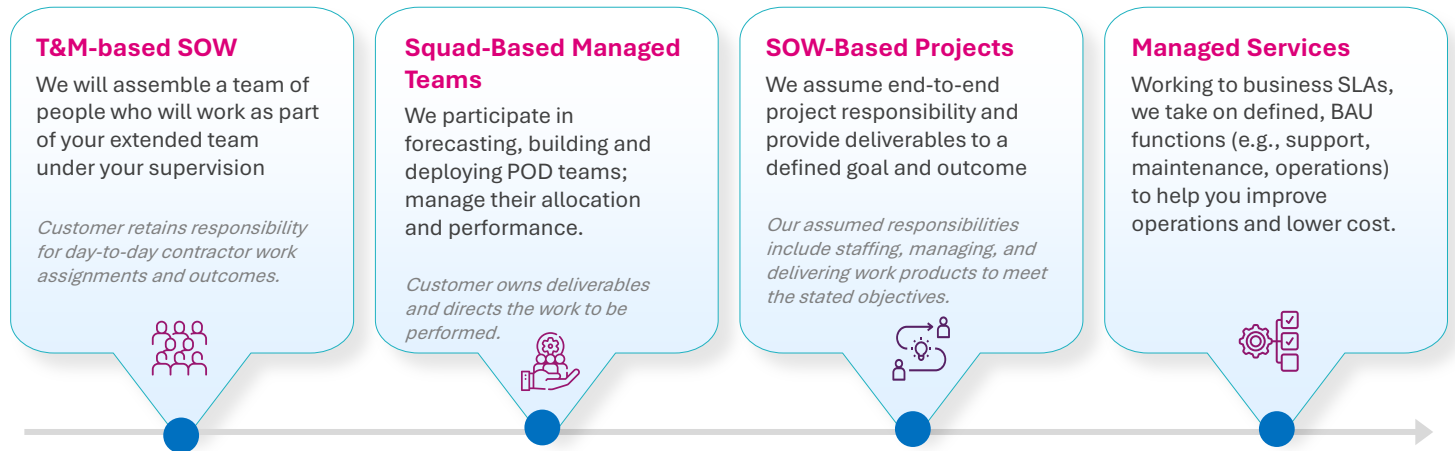
FEATURE	DESCRIPTION
Predictive Maintenance	Monitors aircraft systems in real-time using IoT, and predicts maintenance needs through AI, reducing unplanned downtime.
Optimized Inventory Management	Advanced AI-driven forecasting ensures the right parts are stocked in the right quantities, reducing overstocking and stockouts.
Automated Insights	Automates data collection, processing, and analysis to provide actionable insights and remove manual inefficiencies.
Intermittent Demand Forecasting	Specialized AI techniques (e.g., AWS Chronos, TimesFM) predict demand for rarely used but critical spare parts with high accuracy.
Blockchain-Driven Transparency	Immutable records provide secure traceability for parts and maintenance activities, ensuring regulatory compliance.
Scalable, Cost-Efficient Architecture	AWS serverless technologies ensure scalable, cost-effective solutions adaptable to any size.
Interactive Dashboards	Real-time dashboards visualize technical and business KPIs like forecast accuracy, inventory turnover, and fill rates.

# Tangible Business Benefits

- **Improved Inventory Management:** Enhanced forecast accuracy will lead to optimized stock levels, minimizing both excess inventory and stockouts
- **Reduced Operational Costs:** Lower inventory holding costs, decreased emergency shipping expenses, and more efficient resource allocation will result in significant cost savings
- **Enhanced Customer Satisfaction:** Ensuring the availability of necessary after-sale parts will improve equipment uptime, maintenance schedules, and overall customer loyalty
- **Increased Operational Efficiency:** Automation of the forecasting process will free up resources and enable more proactive and responsive supply chain management
- **Data-Driven Decision Making:** Comprehensive dashboards will provide clear visibility into forecast accuracy and business impact, empowering informed decisions regarding inventory and supply chain strategies

# Our Delivery Methodology

We offer engagement models from Staff Augmentation to SOW-based projects, spanning different levels of ownership & delivery outcomes.



# Why Innova, Why Now?

Built on **AWS’s proven architecture components**, Innova’s solution combines innovation with reliability. The aviation sector’s evolving demands call for smarter, leaner operations, and this solution is uniquely positioned to address those challenges today.

[For a deeper dive or a tailored discussion, reach out to us.](#)



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## About Innova Solutions

Innova Solutions is a trusted global technology partner specializing in transformative digital solutions for complex, real-world challenges. With teams across North America, Europe, & APAC, we blend exceptional talent and advanced technologies to enhance operations and drive sustainable revenue growth for our customers. Partnering with technology leaders who share our passion for bold innovation, we deliver cutting-edge solutions such as generative AI, data & analytics, cloud computing, digital product engineering, and cybersecurity. Since 1998, we’ve proudly supported leading organizations across critical industries—including Banking & Financial Services, Healthcare, Insurance, and Communications—with sector-specific solutions to tackle evolving business needs.

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