AEROSPACE AND DEFENSE

ENGINEERING SOLUTIONS
Engineering Drives Success in Aerospace and Defense

Aerospace and defense companies are under constant pressure to design and deliver advanced products, on time, under tight budget constraints. They must meet growing demand, improve quality, cut costs, comply with regulations, manage complex global supply chains, and support customers in the field. Engineering drives success in all these areas. Yet engineering and technical talent is in short supply, and many senior staff are projected to retire over the next few years. Where can aerospace and defense companies find the engineering resources to innovate, leverage new technologies, and enhance their competitive position?

INDUSTRY CHALLENGES

Scarcity of Engineering Resources
New programs jeopardized by shrinking pool of engineering talent.

Increasing Requirements for Quality and Compliance
Customers and regulators raising the bar for performance.

Global Demands
Complex worldwide networks of manufacturing plants, suppliers, and maintenance facilities.
Solutions for Every Phase of the Product Lifecycle

QuEST offers engineering services to help you design, manufacture and support aero systems, avionics, airframes, propulsion systems, and cabin systems. We provide individuals and multi-functional teams to supplement your staff, and can take responsibility for complete workstreams. Our offshore Centers of Excellence allow you to leverage a global pool of talent for high-volume tasks. QuEST’s engineers and managers have a continuous improvement mindset that will help you strengthen your engineering and management processes and implement cutting-edge digital technologies.

A LOCAL-GLOBAL DELIVERY MODEL

QuEST engineers perform key tasks at your sites and coordinate the work of experts in offshore Centers of Excellence.

TWENTY YEARS IN AEROSPACE AND DEFENSE

We bring comprehensive knowledge of A&D engineering and manufacturing techniques, program management, customer support, and compliance requirements.
Solutions that Cross the Product Lifecycle

From concept to design, test, certification, production, and after-market support; from parts to assemblies, to complete systems and airframes; from hardware to software, engineering data, and technical documentation, QuEST offers solutions across the entire aerospace and defense product lifecycle.

MANUFACTURING ENGINEERING
New product launch, plant start-up, cost optimization, CNC and CMM programming, and other manufacturing engineering services.

DESIGN OF AERO STRUCTURES
Structural modeling and the design, development, and validation of aero structures.

NONCONFORMANCE MANAGEMENT
Classify and investigate part nonconformances; develop, validate and document solutions.
TECHNICAL PUBLICATION SERVICES
Design, develop, translate, and publish repair and maintenance documentation; convert paper publications to advanced digital formats.

ENGINEERING ANALYSIS
Advanced modeling and engineering analysis, aircraft damage assessment, and repair analysis.

ENGINEERING PROCESS SERVICES
Project management, quality management, engineering change management and product test services.

EMBEDDED SYSTEMS AND ELECTRONICS
Design, hardware and software development, testing, integration, and post-production support for electronic and embedded systems.

SUPPLY CHAIN MANAGEMENT
Supplier assessment and readiness, delivery assurance, supply performance improvement, part transitions, strategic sourcing, and supplier rationalization.

TECHNICAL PUBLICATION SERVICES
Design, develop, translate, and publish repair and maintenance documentation; convert paper publications to advanced digital formats.

AFTERMARKET SOLUTIONS
Develop and improve maintenance and repair processes, update repair documentation, analyze part requirements and nonconformances.
Partnering for Continuous Improvement

QuEST doesn’t just supply people: we partner with you to design more innovative products, streamline processes, and uncover opportunities to reduce costs and improve quality. We can help you implement cutting-edge digital technologies, optimize manufacturing, enable digital Product Lifecycle Management (PLM), use Internet of Things (IoT) technology to track assets, and rationalize complex supply chains. We work to make your organization not only more efficient, but more competitive.
CASE STUDY

Manufacturing Engineering: Quality Clinic

A leading aerospace manufacturer was seeing a rise in defects that was driving up scrap and rework costs, reducing efficiency, and absorbing scarce engineering resources. The company urgently needed to resolve these issues while standardizing its manufacturing and quality processes.

QuEST worked to understand the organization’s quality clinic process. We identified current issues, constraints, and opportunities for improvement. We determined the skills needed to address those issues. Based on that analysis, QuEST developed a customized solution that combined on-site management with offshore resources to deliver a validated “Right the First Time” solution that documented best practices for improving quality, cut scrap and rework costs, and improved efficiency.

CASE STUDY

Component Design: Landing Gear Valve Re-Design

QuEST was selected for a product redesign initiative with ambitious targets to reduce the cost, weight, and machining time of a landing gear valve.

QuEST engineers examined design alternatives and performed a Pareto analysis of input costs. After taking account of the customer’s design best practices and considering the impact of design changes on manufacturability, the QuEST team proposed an improved design for the valve.

PROVEN RESULTS

**30% Reduction in Costs**

**Reduced Machine Time by 1 Hour**

**Minimized Raw Material Size**

**Reduced Scrap and Rework Costs**

**Improved Efficiency & Document Clarity**

**Improved Throughput of QC Processing**

**Improved Quality Through Accurate and Timely Feedback**

**Reduced Reliance on Tribal Knowledge**

**Reduced Part Weight by More Than One Pound**
Let Us Become Your Engineering Partner of Choice.

QuEST Global helps aerospace and defense companies innovate across the board, scale product development and production, improve quality, manage global supply chains, and control costs. A trusted long-term partner of many of the world’s leading manufacturers of aircraft structures, systems, controls, and engines, QuEST has the experience, skills, and mindset to help make your organization more efficient, profitable, and competitive.

The QuEST Difference

QuEST is the only engineering services and solutions partner that possesses comprehensive manufacturing expertise, fluency in enabling technologies, and an in-depth understanding of its customers and their businesses. QuEST enables companies in industries such as aerospace, energy, healthcare, technology, and transportation to conquer challenges and seize opportunities to increase profitability and transform markets with products and services that enhance quality, improve efficiency, and reduce costs.

ACCOUNTABLE
We commit to what we deliver, and deliver what we commit. We are quality-conscious, process-oriented and strive for continuous improvement.

COLLABORATORS
Our team collaborates across geographies, organizations, and cultures to do more for you.

CHANGE CHAMPIONS
We are change champions, not observers. We believe that every change is an opportunity to learn, contribute, and improve.

FOCUSED ON YOU
We are passionate about exceeding your expectations at all times and in everything we do.

Talk to us today.

To learn how QuEST Global’s services for aerospace and defense companies can help you succeed, contact salesenquiries@quest-global.com, or visit quest-global.com

QuEST Global is a trusted engineering services and solutions partner to many of the world’s most recognized Fortune 500 brands in aerospace and defense, medical device, power, and transportation. For more than 20 years, QuEST has been a trusted partner providing comprehensive support across the complete engineering lifecycle to help our customers improve efficiency, increase quality, create new products, and open new markets. Through a collaborative and customized approach, QuEST enables its customers to manage traditional engineering requirements as well as the convergence of digital and mechanical technology to help them create safe, dependable, and high-quality products and services.