Optimize manufacturing processes, launch new products, deploy digital technologies, maintain compliance, and control costs

Aerospace and defense companies are under constant pressure to launch new products, deliver on time, improve quality, and reduce costs. But success requires flawless execution across a wide range of manufacturing activities: designing and optimizing processes, eliminating waste, reducing nonconformances, ensuring compliance with export regulations, and deploying new digital technologies. Few organizations have enough experienced engineers to perform all these tasks at the level of skill required.

QuEST provides answers. We offer tailored engineering solutions to meet your precise needs, based on over 20 years working with many of the world’s largest airframe and aircraft component manufacturers.

PROVEN RESULTS

QuEST worked with one of the world’s largest aerospace and defense suppliers to plan the manufacturing process for gear boxes, carrier shafts, and other components, design and procure fixtures and tools, and create CNC programs. Results included:

- 35% reduction in production time
- 100% on-time delivery
- 1900 person-hours saved
Engineering Solutions for All Phases of Manufacturing
QuEST provides engineering solutions across the manufacturing lifecycle, from product design, to product launch, to high-volume production. We perform inspections, tool design, plant layout, and cost engineering. We can guide part and plant transitions, provide manufacturing engineering shop support, conduct first article inspections (FAI), generate and qualify computer numerical control (CNC) and coordinate-measuring machine (CMM) programs, and build post processors.

We also offer digital manufacturing solutions in areas such as plant layout design and simulation, 3D printing, process planning, production tooling, data analytics, ergonomics, and e-documents for manufacturing.

Solutions Tailored to Your Requirements
We tailor our solutions to your requirements. Engagements can range from individuals and small, highly skilled teams handling short-term projects, to large teams taking responsibility for complete value streams on the factory floor.

QuEST offers geographic flexibility as well. Experienced engineers and project managers work closely on site with your teams. When export regulations permit, we can create offshore centers of excellence to outsource specialized tasks and high-volume work like CNC programming. This local-global service delivery model enables you to improve operations in your plants, while leveraging difficult-to-find skills and controlling costs.

Gated Process for Product Introduction
QuEST can provide engineering resources to help you plan and set up production for new products, as well as optimizing existing manufacturing processes.

1: PLAN
- Process Planning
- Manufacturing Geometry

2: VERIFY
- Build In Quality

3: BUILD
- Inspection Planning
- Tools and Fixtures

4: DEPLOY
- CNC Programming
- CMM Programming

5: EVALUATE
- FAIR
- Shop Support
- Change Control
Solutions Across the Manufacturing Lifecycle

QuEST has the experience and resources to take on tasks that range from setting up new plants, to optimizing processes, to generating CNC programs for individual parts.

**PLANT START-UP AND NEW PRODUCT LAUNCH**

Generate part drawings and bills of material (BOMs), design process routing and tooling, assess and validate suppliers, and set up quality processes.

**CNC AND CMM PROGRAMMING**

Generate, validate, and optimize CNC and CMM programs with dedicated teams, either on-site or in offshore Centers of Excellence.

**DIGITAL MANUFACTURING**

Deploy advanced technologies for production process planning, layout and concept planning, assembly tooling, ergonomics, and virtual reality (VR) and augmented reality (AR).

**SHOP SUPPORT**

Perform value stream mapping, conduct quality clinics, perform time studies, and lead initiatives to eliminate waste and reduce nonconformances.

**PROCESS OPTIMIZATION**

Assess and improve process design, machine sequencing, inspection planning, and tool and fixture design.

**COST OPTIMIZATION**

Cost modeling, design for manufacturability (DFM), BOM scrubbing, setup reduction, manufacturing process modeling, and vendor negotiation support.
Collaboration and Innovation

QuEST engineers and technical experts bring to their assignments not only advanced skills and years of experience working in complex, highly regulated manufacturing environments but also bring a continuous improvement mindset and proactively recommend better ways to design, produce, test and support airframes and aircraft components, and work with your teams to improve and innovate every day.

Let Us Become Your Manufacturing Engineering Partner

Don’t let a shortage of engineering resources stand in your way. QuEST can provide the manufacturing engineering solutions you need to optimize manufacturing processes, launch new products faster, deploy digital technologies for smart, flexible, and efficient manufacturing, improve quality, maintain compliance, and control costs.

QuEST Expertise

QuEST has more than 20 years experience working with the world’s leading airframe and aircraft component manufacturers. We have a comprehensive knowledge of the strategic issues driving the industry and the challenges you face every day in design, production, customer support, and compliance.

QuEST offers engineering services across the entire product lifecycle: from design, to production, to supply chain management and after-market support. Our local-global delivery model lets you leverage a global talent pool, and our continuous improvement mindset helps you reduce costs and streamline your engineering and manufacturing processes.

To learn how QuEST Global’s transformative engineering solutions 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.