QUEST
BORN TO ENGINEER

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Solutions for the Aerospace industry

India | USA | Italy | Japan | UK | Germany | France | Spain

QuEST Global provides engineering and product development solutions to both civil and military aerospace in the areas of design and development of systems and subsystems in aero structures, aero accessories, aero engines, aircraft interiors and ground support equipment. QuEST Global has been supporting global OEMs and their tier 1 & 2 suppliers for more than 8 years. The range of services offered includes design and development, engineering analysis/simulation, manufacturing engineering, embedded systems development, technical publications and manufacturing.

We help our customers improve quality of supply, reduce time to market, grow capacity, increase revenue generation life, reduce cost of product development and enhance sustenance engineering. Our ability to combine engineering services with manufacturing enables us to help our customers meet the growing offset requirements in aerospace contracts as well as risk sharing partnerships. Through our near-site centers located in the US and Europe, we can work on ITAR / export-controlled work, as well as provide critical project engineering support.

Platforms supported

- Aero structures
- Aero accessories
- Aero engines
- Aircraft interiors
- Ground support equipment

Aerospace programs supported (partial list)

Commercial programs

- Advanced Light Helicopter
- Airbus A380F
- Airbus A320
- Airbus A340
- Beech 400
- Boeing 787 Dreamliner
- Boeing 757
- Boeing 767
- Boeing 777
- Falcon 2000
- Hawker 4000

Defense programs

- F-22
- F-35
- Joint Strike Fighter
- J-UCAS
- HPT-32
- Light Combat Aircraft

Certifications

- AS 9100
- EADS E2S Preferred Supplier for Engineering Services
- Airbus Supplier Certification
- ISO 27001
- ISO 9001:2000
- CMMI Level3
- Rolls-Royce SABRe
- Rolls-Royce IT Security
- Approved to work on NATO restricted data

End-to-end product development support

Aero structures | Aero accessories | Aero engines | Aircraft interiors | Ground support equipment

Design & development

- Design support
- CAD modeling
- Assembly modeling
- Cost modeling
- Design of structures
- Sub systems & accessories design
- Digital mockups
- Electrical harness/ clash detection
- Performance engineering

Engineering analysis/ simulation

- Linear / non-linear analysis
- Fatigue analysis
- Damage tolerance & fracture analysis
- CFD
- Dynamic analysis
  - Vibration
  - Bird hit
  - Crash
- Kinematics analysis
- Analysis - test correlation
- Optimization / reliability analysis
- Thermal / thermo mechanical analysis
- Stress justification reports

Manufacturing engineering

- CNC / CMM programing
- Casting, forging & fabrication engineering
- Process planning
- Production management
- Prototyping
- Re-engineering
- Tooling design
- Vendor qualification & management
- APQP process

Software engineering

Embedded S/W engineering

- Software requirements analysis & generation
- Software design
- Software development
- Verification & validation
- Functional testing

Automated test equipment

- D&D of ATEs
- D&D of ITAs
- D&D of testing S/Ws
- In circuit testers
- Data acquisition systems

Technical publications

- Acceptance & test procedure
- Aircraft Maintenance Manual (AMM)
- Component Maintenance Manual (CMM)
- Engine Manual (EM)
- Illustrated Parts Catalog (IPC)
- Service Bulletins (SB)
- SGML conversion
- Structural Repair Manual (SRM)
- Qualification test reports

Manufacturing

- Assembly jigs & fixtures
- Ground support equipment
- Holding & checking aids
- Precision manufacturing
- Sheet metal forming
- Special processing

Typical case study - Global engineering development center for global aerospace OEM

Customer

A leading global provider of aero engine, power systems and services for civil aerospace, defense aerospace, marine and energy market. Located in UK, the company has annual sales over USD 15 billion, employs over 38,000 people, and has manufacturing and service facilities in 50 countries.

Requirements

- Develop global engineering capability to overcome shortage of European engineering graduates
- Migrate non-core engineering elements to global locations and thus enable in-house engineers to focus on core and value added engineering
- Lower total engineering overhead cost

QuEST approach

- Develop a do-buy matrix with customer
- Roadmap progressively migrating non-core activities off-shore
- Build off-shore centers of competence fully integrated into the customer's product development cycle

Results

- 150+ member global team supporting multiple customer sites and product lines
- Competencies within the global development center cover a wide variety of engineering disciplines

Impact

- Improved time to market and cost savings of USD 6 million in three years

Customer-Speak

"We selected QuEST Global as our partner of choice to provide engineering services, as they are a purely engineering focused solutions provider with their demonstrated capabilities in engineering technologies and for their ability to evolve with time and meet our growing requirements."

About QuEST Global

QuEST Global is a leading provider of outsourced engineering services and manufacturing. The company helps customers in the Aerospace, Consumer Electronics, Healthcare, Industrial Products, Marine, Nuclear, Oil & Gas, Power Generation and Transportation verticals, to cut product development costs, shorten lead times, extend capacity, and maximize engineering resources. We do this by providing support across the complete product life cycle from design and modeling through analysis, prototyping, automation, data documentation, instrumentation and controls, embedded systems development, manufacturing support, vendor management, and in-house precision machining.

USA

Cincinnati : +1 513 563 8855
East Hartford : +1 860 290 1145
Schenectady : +1 518 370 3657
Greenville : +1 864 254 6081
Houston : +1 518 878 5447
Phoenix : +1 602 242 1971

Europe

Florence : +39 55 437 7149
Bristol : +44 1179 044530
Hamburg : +49 40 500 971 980
Munich : +49 89 108039
Paris : +33 681 938 641
Toulouse : +33 634 260 965
Madrid : +34 679 654 537

Japan

Yokohama : + 81 45 342 8744

India

Bangalore : +91 80 4119 0900
Belgaum : +91 831 4201 000

E: info@quest-global.com

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