An Introduction to BAE Systems Regional Aircraft

January 2019
About BAE Systems **Regional Aircraft**

- Global aircraft fleet support capability
- Whole aircraft design and engineering expertise
- Premier supply chain capability and extensive in-service support experience
- Trusted provider of complex managed solutions
- Around 220 employees based at Prestwick and Weybridge in the UK plus representatives located at RAF Northolt, UK and in Nagoya, Japan
Corporate positioning

- Regional Aircraft is part of the BAE Systems Air Sector business
- Remains a self-contained operation providing governance

BAE Systems at a glance:
- Third largest global defence supplier
- Established positions in air, maritime and land domains
- Growing position in cyber security
- Principal markets – US, UK, Saudi Arabia and Australia
- Over 83,000 employees in around 40 countries
- Customers in around 80 countries
Locations

Prestwick, UK
Headquarters, Operations and Engineering Support

Weybridge, UK
European Logistics Centre (ELC) Primary spares distribution centre

Nagoya, Japan
Representation

RAF Northolt, UK
Representation

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OEM (Original Equipment Manufacturer) fleet as at December 2018

162 Operators, 379 Aircraft In-service
Type Certificate holder for five aircraft variants: BAe146/Avro RJ, ATP, J41, J31/32 and HS748

North America
81 aircraft in service
41 operators

Central America
25 aircraft in service
16 operators

Europe
92 aircraft in service
29 operators

Asia
29 aircraft in service
16 operators

Africa & Middle East
73 aircraft in service
32 operators

Australasia
27 aircraft in service
8 operators
Approvals

• EASA Part 21J Organisation Approval - Whole Aircraft Design and Flight Test

• EASA Part 21G Organisation Approval Production/Supply

• UK CAA Approval AD/1852/05 - Design, Production and Flight test of non-EASA types

• AS EN 9100 - Aerospace Specific Quality Management Requirements

• UK.MAA.DAOS.028 - MoD Design Approval Certificate for Military Aircraft and Airborne Equipment
Services and Solutions

- Apply our whole product and through lifecycle knowledge and experience to provide customers with integrated solutions that include design, supply, repair, change, upgrade/conversion and customer support services.

- Services and solutions provided to over 650 in-service aircraft operated by over 190 customers in 80 countries*.

- Services and solutions are provided across a number of market sectors, including passenger, business and special role aircraft and including adjacent markets.

* Includes all customers, aircraft types and locations
Vision and Values

Our Vision
“To be recognised and valued as a technically proficient and entrepreneurial commercial aerospace organisation”

Our Values

Trusted
We deliver on our commitments
- We are honest and take responsibility
- We can be relied upon
- Everyone matters

Innovative
We create leading-edge solutions
- We value imagination and experience
- We empower teams
- Working together we turn our ideas and technologies into solutions

Bold
We constructively challenge and take the initiative
- We operate with tenacity and resolve
- We accept challenges and manage risk
- We set stretching goals
Design and Engineering

With a heritage of aircraft design, Regional Aircraft remains at the forefront of aviation undertaking major engineering projects for aerospace OEMs and aircraft operators.

As an EASA Part 21J DOA and type certificate holder for six transport aircraft, our customers benefit from a trusted engineering resource and capability delivering intelligent solutions for any complex project, working with you to meet your deliverables and schedule.

We can deliver managed solutions for any platform...from design concept to aftermarket support including:

- Engineering projects
- Specialist Engineering Services and Consultancy
Engineering projects

- Our OEM credentials provide the experience and structured processes to manage complex projects and integrate across disciplines.

- Our EASA Part 21J DOA extends to the design of all aspects of large and small aeroplanes. We are accountable for the continued airworthiness of seven Transport Aircraft types.

- Our specialist engineering capabilities extend across the full range expected of a commercial aircraft OEM.

- We operate throughout the lifecycle from feasibility study and concept design through certification to in-service support.

- Our customers, are aircraft and major component OEMs such as Airbus, UK MoD, Mitsubishi, Pilatus...who value the experience and OEM mind set of our people.
Specialist engineering services and consultancy

• We offer high-end requirements management, solutions architecture, specialist engineering, integration and certification consultancy. Our customers benefit from our complete product life-cycle and in-depth understanding of the operator’s needs.

• Our consultancy customers seek a trusted adviser with the authority that comes from an organisation accountable for product safety and whole programme cost, quality, and schedule performance.

• They value a consultant with IPR, tools, processes and supporting infrastructure, with comprehensive Design Approvals, and with the gravitas to represent the client’s interests robustly in front of airworthiness authorities and suppliers.
Our design and engineering capabilities

**Engineering and Project Management**
- Engineering governance
- Life Cycle management
- Supplier management

**Design**
- Concept, detail and simulation
- Structures, Mechanical and Fluid systems
- Electrical
- Interiors
- Repairs

**Structural Analysis**
- Static, fatigue and damage tolerance
- Dynamic analysis and simulation
- Weight/inertia and mass distribution

**Technical Publications**
- Maintenance and parts publications
- Flight Manuals
- Training Manuals

**Systems Analysis**
- Mechanical/Fluid, Avionics/Electrical and Powerplant
- Safety and risk management
- Human factors engineering

**Flight Physics**
- Aircraft performance
- Configuration Aerodynamics
- S&C and Flight Dynamics
- Loads and Flutter
- Thermal analysis
- Ice protection analysis and simulation
Our design and engineering capabilities

**Data and Engineering Services**
- Data and records management
- Product toolset and data help desk
- Configuration and change control
- Process and procedure writing

**Airworthiness**

**Aftermarket Services**
- Continued service management
- Integrity management
- Mods, conversions, upgrades
- Repairs (Working parties)
- Spares engineering
- Life extension programmes
- Flight Operations Support
- Airline Maintenance Services

**Major Customer and OEM Toolsets**
- CATIA V4, V5, Cadds5 Anvil, Auto Cad
- FORAN
- NASTRAN, PATRAN, ABAQUS
- NASGRO, DAMTOL
- TRAJICE, ICECREMO
- MATLAB/SIMULINK, ASTAC
- ANSYS CFD, SOLAR CFD
- FAULT TREE Analysis
- BCAWD
- Documentum, Arbortext, XyVISION, Isodraw, S1000D
Special role aircraft conversions

Jet and turboprop platform conversions to meet all your special mission role requirements:

- Surveillance and reconnaissance
- Coast Guard, Search and Rescue
- Research
- Crew training
- Navigation Aids Calibration
- Water Bomber/Oil dispersant
- Passenger/Freight/Combi and quick change
- Range Extension – Additional tanks
- Medevac
- VIP finish
Role change engineering services

**Integrated Design Services**
- Modification development
  - Specific installations
  - Integrated packages
- Whole ATA coverage
- Certificated STCs or work packages
- Test equipment design

**Analysis Services**
- Finite Element Analysis
- Static Analysis
- Check Stress
- Fatigue and Damage Tolerance Assessment
- CFD Analysis
- Performance Analysis
- Stability and Control
- Loads
- Icing Assessment
- Systems Safety Assessment
- V&V
- Particular Risk Analysis
- Test Analysis
Services

Modifications
- Comprehensive range of OEM Modifications solutions
- STCs and Modification solutions for third party types
  - Wireless In-Flight Entertainment (IFE), In-Seat Power Systems (ISPS), TCAS 7.1, SATCOM, Galleys and Interiors
- Flight test equipment solutions
- Integrated modification programmes

Engineering Projects
- Consultancy and development services to new product programmes
  - MITAC MRJ-90 powerplant and fire protection
  - Pilatus PC-24 water/waste system
- Design and analysis services to special role conversions and product developments
  - Aerial firefighting aircraft operators
  - Tornado, Hawk, Typhoon design and analysis
  - Pilatus PC-12 performance analysis
Services

**Spares and Logistics Support**
- AOG - 24/7 spares support to all Regional Aircraft operators
- Full suite of Spares Customer Account services
- Field Spares representatives provide on-site expertise
- Rate per Flight Hour - JetSpares and Macro
- Warehousing and Logistics 24/7 logistics support

**Customer Support**
- Technical knowledge and operational experience combined
- Airline Operations Support
- Technical and Structural Support
- Flight Operations Support
- Airline Maintenance Services and Planning
- On-line Customer Portal providing round the clock information, on-line publications, alerts and services
- Repairs
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