Safety and Airworthiness Management

Atkins is the largest multi-disciplinary consultancy in Europe assisting clients across the globe in both the private and public sectors in the delivery of complex capital programmes and has over 300 aerospace engineers operating around the world, within the aerospace and defence domains.

Atkins offers independent advice, analysis and support to both MOD and industry to ensure that they deliver safe and reliable systems commensurate with mandatory project, operational & legislative requirements.

Atkins’ independence from product development enables our consultants to provide unbiased advice, free from conflicts of interest, to both Government and industry alike. The significant breadth and depth of our safety capability allows Atkins to take on projects of all sizes and complexity across all military domains.

During any air systems development or in-service programme, early recognition and successful management of factors affecting airworthiness is essential. Atkins offers a realistic and practical approach to safety and airworthiness management, based on a full understanding of the technology and issues concerning safety for aircraft and a thorough understanding of safety management.

We ensure that Safety and Airworthiness Management is made an integral part of an organisation’s business processes in the context of overall efficiency and cost effectiveness, from concept through to service operation and disposal.
This pragmatic risk-based approach provides customers with safety management systems and airworthiness assessments which ensure compliance with legislation, joint service publications and defence standards.

Atkins has an extensive through-life Safety and Airworthiness capability, including:

- Independent identification, application and management of Airworthiness requirements from concept through to disposal
- Hazard identification & risk assessment including ALARP arguments
- Identification of certification risks, including whole Aircraft certification and changes to existing certification
- Deriving and defining Safety and Airworthiness Requirements
- Advice and support in development of integrated test, evaluation and acceptance plans and their implementation
- Data capture in tools such as Cassandra, HARMS, PHA Pro, ASCE and Doors
- Independent Safety Advice and Assessment (OHSAS 18001 accredited Independent Safety Auditors (ISA))
- High integrity, resilient and dependable software
- Safety and software assessment to IEC 61508, DefStans 00-55 and 56, RTCA DO178B, MIL-STD-882D and JAR/FAA standards
- Safety case development and management for new and legacy systems
- Preparation of safety management systems including documentation and process development
- Aircraft avionics, systems and operations
- Air traffic management systems
- Certification and qualification requirements and panels
- Working in accordance with JSP 553, defence standards 00-56 and Joint Air Regulations (JAR) 25 & 29 now CS 25 and CS 29
- Human factors
- Pre-Contract Award Evaluation (PCAE) & Software Capability Evaluation (SCE)
- QA and technical evaluation of aerospace products and services

A selection of recent projects in which Atkins have been involved in Safety and Airworthiness Management across both MOD and industry. This demonstrates a broad understanding throughout the CADMID cycle.

MOD
- Chinook Mk2/2a PT safety case development for service modifications and urgent operational requirements
- Chinook MK2/2a GARP support and development of PT specific process and hazard log development
- Lynx (RTS), CLE, GARP - major systems
- A400M - Whole aircraft assessment, technical support to the safety panel & test bed
- A400M ISA - Independent Safety Auditor
- Nimrod PT - MRA4 training system ISA
- Eurofighter Typhoon - Software-based & safety critical systems
- C-17A - Whole aircraft safety proposal assessment, ISA & test bed
- PG PT - Developing platform safety cases for the Gazelle and Puma Helicopters in ASCE™/Goal Structured Notation (GSN) to support Release To Service (RTS) documentation
- Tucano - Fatigue tolerance modifications
- POSMS v 2.2 Authors
- ASTOR - mission computers
- Safety case review of DG Air Support Platforms
- VC10 Air-to-Air Refuelling Tanker - Avionic / Global Positioning System (GPS) modifications
- FSTA - Avionic / Global Positioning System (GPS) modifications, Military Avionics System (MAS) System Safety Assessment (SSA)
- Sea King - Developing and Implementing the Safety Management System (SMS)
- FsAST PT ISA and Independent Safety Advice and Support

AirTanker
- FSTA - RMS Software and Mission Planning System

Industry
- Rolls-Royce
- Aircraft engine design and analysis support:
  - Rolls Royce Trent 1000
  - Rolls Royce LiftFan
- GE Rolls-Royce Fighter Engine Team F136 LP Compressor
- Rolls Royce Pegasus (Harrier) Engine

FRL
- Hazard analysis for air refuelling pods used by the Swedish and German Air Forces

Lockheed Martin
- C130J - block up grades
- ASIC Merlin Helicopter training system

Airbus
- Airbus A400M transport aircraft - Turkey, Germany, France, Spain and Belgium (Portugal pre-contract)
- As the strategic partner to Airbus UK on A380, A400M and A350

Thales
- Chinook Mk 2/2a coherence - baseline the avionics fit across all Mk 2/2a
- Chinook Mk2/2a Service Modification (SM) 57 Project Safety Engineer
- Hostile Fire Indicator - trials Safety Case and Safety Support
- Future Lynx Helicopter - Project Safety Engineer on the Control Display & Navigation Units (CDNU), Secure Communication Control Systems (SCCS) and Navigational Sensors for Thales Avionics Ltd

Knowledge transfer is a key component of all our projects and our consultants willingly provide advice and on-going support to facilitate this. Atkins also offers a range of training courses providing a more formal approach to up-skilling.

We are constantly seeking to develop our safety and airworthiness management skills and knowledge to meet the needs of new technologies, processes and systems and, for example, we are developing Systems of Systems Safety approaches to meet the complex challenges that exist in the air domain.

For further information on how Atkins can assist you, please contact:

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