ATKINS

Member of the SNC-Lavalin Group

Aerospace Aftermarket Engineering Services

Transforming the aerospace aftermarket for faster design, reduced downtime and lower costs.

GET STARTED

ATKINS

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Aerospace Aftermarket Engineering Services

Overview of Services

FIND OUT MORE

Engineering Capability and Design Organisation Approval (DOA)

FIND OUT MORE

MRO Business Transformation

FIND OUT MORE

Digital Tools

FIND OUT MORE

Case Studies & Thought Leadership

FIND OUT MORE

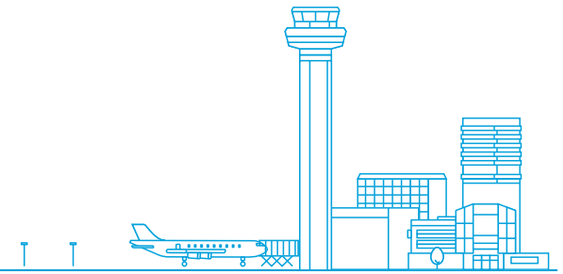
Aftermarket Engineering Services

Driven by technology advances and customer demands, the aerospace aftermarket / Maintenance Repair Overhaul (MRO) sector is seeing an unprecedented level of technological and business disruption.

The aerospace market remains in a period of strong profits driven by increasing travel demands and low fuel costs however to remain competitive the aftermarket sector must adapt in order to manage and capitalise on the major categories of disruption: digitalization, increased aircraft complexity driven by customer demand and the need to remain competitive.

Atkins has a proud history of supporting world leading global organisations in the aerospace sector.

We've been operating at the forefront of innovation for more than three decades, combining our in-depth engineering, industry knowledge and business consulting expertise to deliver engineering design modification, repair and business transformation solutions enabling you to increase your speed to market, maximise the time your aircraft spend in the sky and generate value though increased efficiencies.



Aerospace Aftermarket

Engineering Design, Repair & Modifications

Innovative design modification and repair solutions leveraging our engineering capability with both industry standard tools and our own inhouse digital developments and capabilities.

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MRO 4.0 Business Transformation

Digital Operational Excellence

Digitisation of processes, assets and documentation. Digital connectivity and toolsets throughout the whole operation, data analytics to shift from react to respond.

Digital Workforce

Exploiting technology to drive productivity, scheduling of work, automating processes, connecting people, assets and data.

Digital Security

Controlled and secure across the e2e digital thread, in an increasingly connected, digital supply chain. Risk management, security by design, security assurance and compliance.

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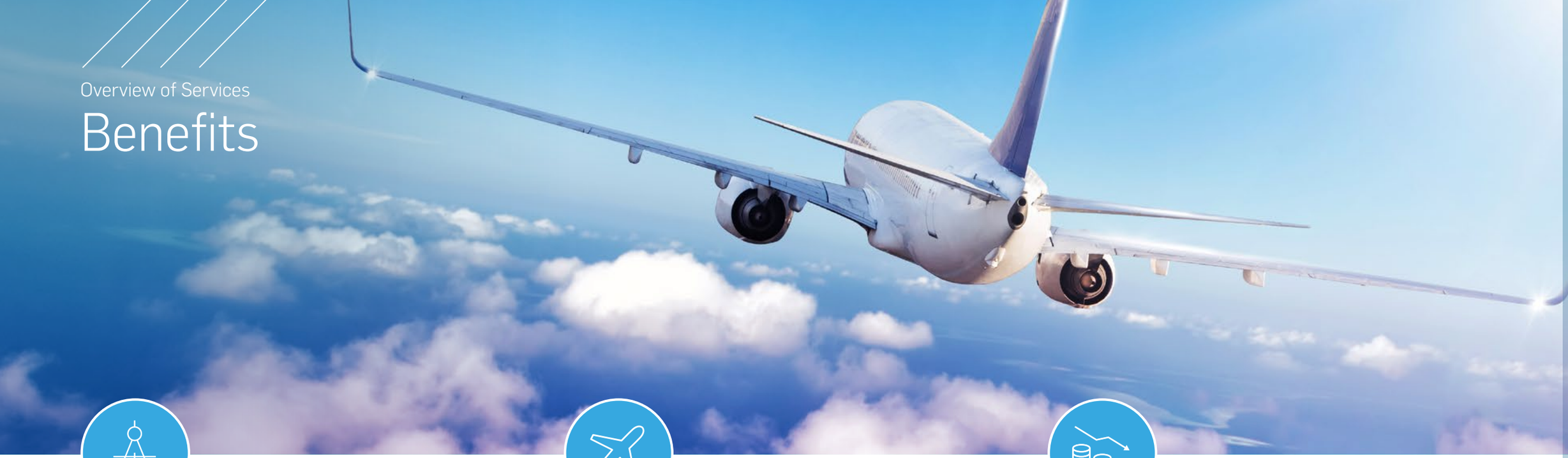
Aftermarket Engineering Services

Benefits



Faster Design

We use the latest technology, including data visualisation, virtual and augmented reality, and additive manufacturing to drive efficiency, enable faster, more informed decision making, and help you turn bold ideas into reality.

We also ensure you benefit from the depth and breadth of expertise within Atkins, and our experience and learning from the civil and defence sectors.

Reduced Downtime

We have the tools needed to get your aircraft off the ground, for example, our 3D damage assessment systems. We are renowned for our complex analysis capability, and provide a fast turnaround on intricate engineering solutions.

Our team can also help you ensure your digital assets are secure. Our cyber resilience and engineering experts will work with you to understand the threats to your organisation, put appropriate protection in place, and make sure your business remains operational in the event of an incident.

Lower Costs

We develop and utilise a range of digital tools, for example, our digital analysis and visualisation tool, D-Vis, to drive down costs and help you transition from reactive to proactive business models. We also use our network of offices across the UK, and our Global Design Centre in India, to provide the most cost-effective solutions, maintaining technical excellence through shared systems and to industry-leading standards.

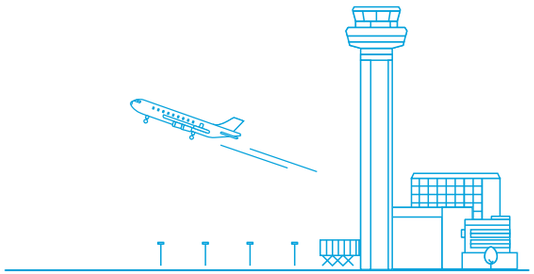
Our flexible delivery models and commitment to producing exceptional products enable you to de-risk your programmes – we take full responsibility and accountability for delivery.

Who we are

Global Operations

Atkins, a member of the SNC Lavalin Group, is one of the world's most respected design, engineering, defence and project management consultancies, which has been integrated into our Engineering Design and Project Management Sector. Today we are recognised for our sustainable project execution and tangible contributions to improving people's lives around the world.

We deliver engineering and technically integrated designs, together with project and cost management services, to a wide range of clients in the public, regulated and private sectors. Our areas of operation include water, environment, transportation, aerospace, defence and infrastructure design.



Aerospace Aftermarket

Europe

12,000 employees

Americas

16,000 employees

Asia pacific

4,500 employees

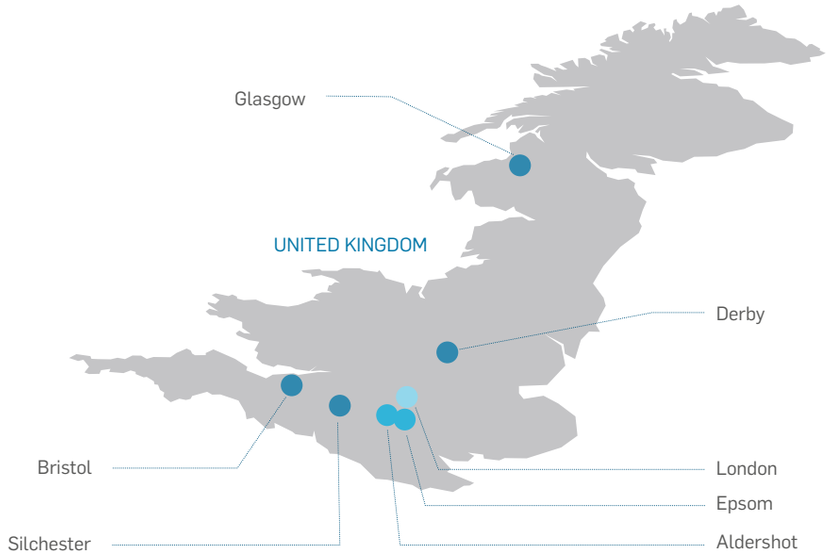
Middle East & Africa

17,500 employees

Company Operations Scope and Size

SNC Lavalin currently has 50,000+ employees spread across 50 countries.

Who we are



Aerospace Defence
Security & Technology

Aerospace

Atkins is the UK's largest engineering consultancy and has a proud history of supporting world leaders in the aerospace sector. We've been operating at the forefront of innovation for more than three decades, combining our in-depth engineering, industry knowledge and business consulting expertise to deliver modification, repair and business transformation solutions enabling clients to increase speed to market, maximise product availability and generate value through increased efficiency. Working collaboratively with our clients is key to our success and being close to our clients means we can respond to requirements quickly and efficiently.

Fully-Integrated Offshore Support

Our offshore office, established in 1995, is fully integrated with our day-to-day client delivery and helped to the same high-quality standards and systems as our European teams, with our own Design Organisation Approval (DOA). Offering clients the opportunity to achieve lower costs, and longer working hours – seamlessly.

Working in partnership to provide efficient, innovative, high quality and competitive solutions

Engineering Capability

Structures & landing gear

- Wing box, Wing tips and Control Surfaces
- Landing Gear
- Pylon Attachments
- Fuselage and Empennage
- Cockpit & Flight Deck
- External Equipment

Systems

- Software and Avionics
- System Integration
- Flight Controls
- Fuel System Architecture
- Concept Studies

Interiors

- End to end design and certification
- Cabin
- Seats
- Cockpit
- Galleys

Analysis, design & certification

- Primary and Secondary Structure
- Metallic and Composite Components
- Major and Minor Modifications & Repair
- Rapid Decompression
- Static, F&DT, Linear and Non-Linear FEA, Dynamics
- Design, Certification and SRM Justification

Particular Risk Analysis

- Crashworthiness & Ditching
- Pylon and Landing Gear Separation
- Bird Strike
- Wheel and Tyre Failure
- Uncontained Engine Rotor Failure
- Burst Duct & Burst Tyre

Design Organisation Approval (DOA)

Our DOA allows our clients to benefit from our decades of aerospace engineering experience and expertise, during which we have supported some of the leading aircraft original equipment manufacturers (OEMs) in design, analysis, certification and repair development for their newest aircraft.

Employing our Design Organisation will allow you to identify solutions that leverage our proven innovation and flexible approach to designing modifications and repairs that meet your needs – fast.

By combining our engineering capability with both industry standard tools and our own in-house digital developments and capabilities, we will deliver solutions faster, reduce fleet downtime and lower costs.

Delivery and Quality Performance

We operate under a Quality and Technical Assurance processes aligned to ISO 9001 and AS 9100D and have extensive project and programme management experience:

- Founder member of PRINCE2, MSP03/07 and Management of Risk (MoR)
- Member of the APM board and corporate member of APM
- Certified SCRUM Masters managing software development projects

Atkins projects are planned & managed according to industry best practice with delivery and performance in accordance with the Atkins project Business Management System (BMS). All resulting in controlled projects with a focus on quality, cost and on-time delivery.

	LOADS	STATIC STRENGTH & PROOF OF STRUCTURE	F&DT	MATERIALS & MANUFACTURING	AEROELASTICITY	CRASHWORTHINESS	RAPID RECOMPRESSION	IMPACT
FUSELAGE	●	●	●	●	●	●	●	●
WINGS	●	●	●	●	●	●	●	●
EMPENNAGE	●	●	●	●	●	●	●	●
CONTROL SURFACES /MOVEABLES	●	●	●	●	●	●	N/A	●
LANDING GEARS	●	●	●	●	N/A	●	N/A	●
SUPPORT FOR EXTERNAL EQUIPMENT	●	●	●	●	●	●	N/A	●

Our Design Organisation can support aircraft operations by creating solutions relating to:

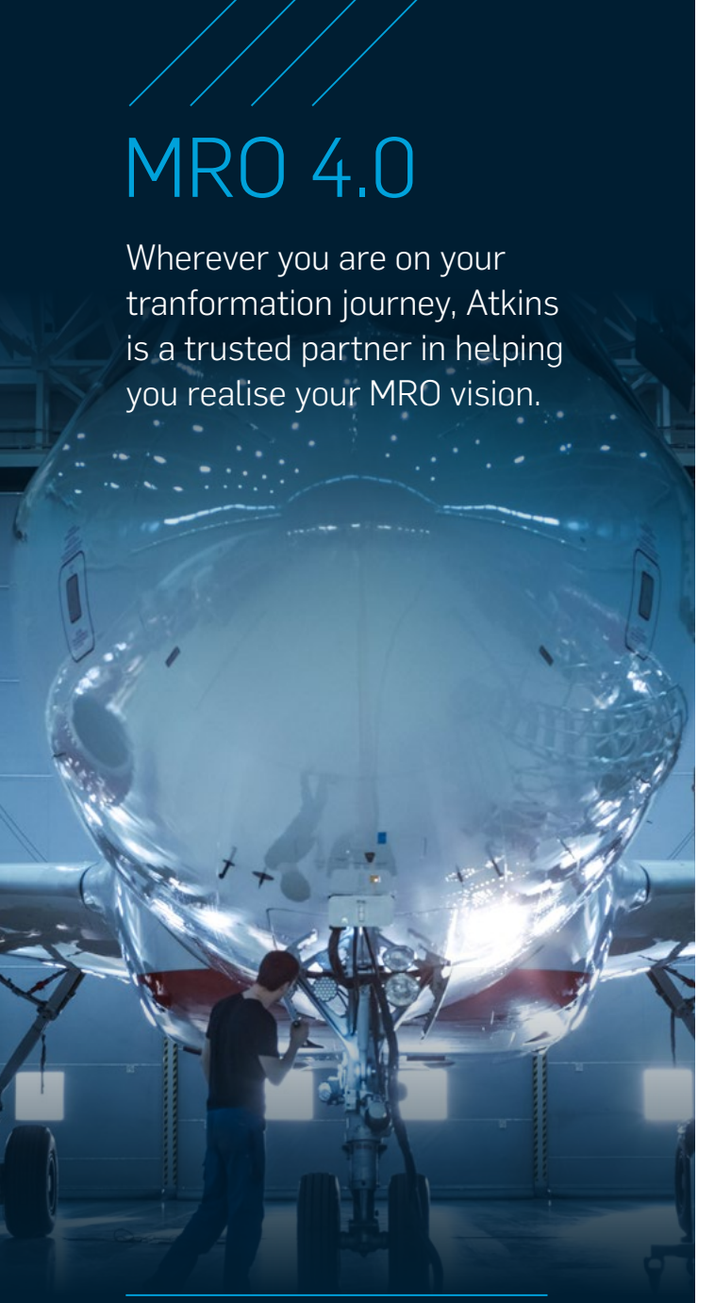
- Supplemental Type Certificate (STC) Major and Minor Changes
- Major and Minor Repairs
- Metallic and Composite
- Primary and Secondary structures

To products:

- Large Aeroplanes (CS25)
- Small Aeroplanes (CS23)
- Very Light Aeroplanes (CS-VLA)
- UAVs (Unmanned Aerial Vehicles)

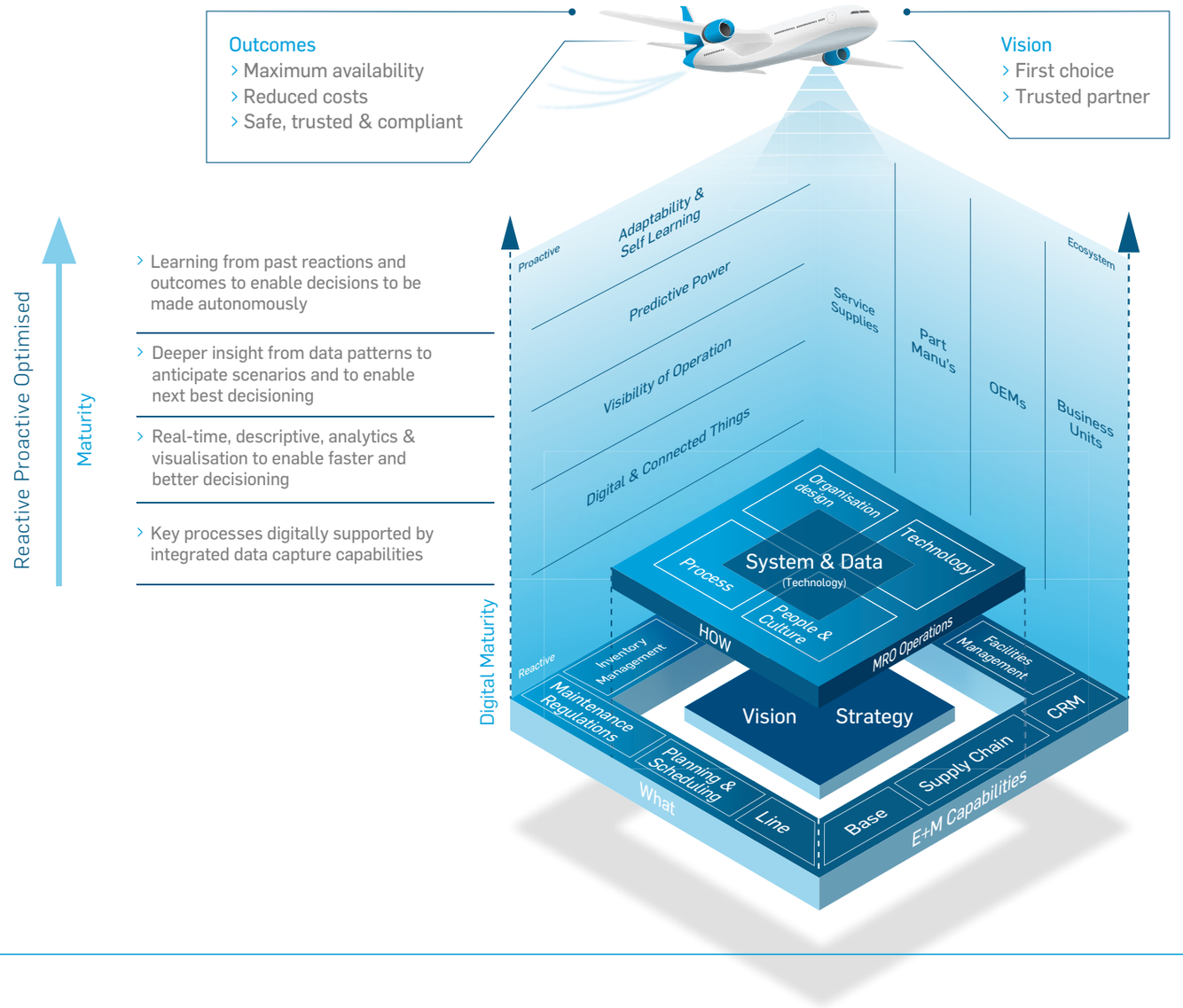
MRO 4.0

Wherever you are on your tranformation journey, Atkins is a trusted partner in helping you realise your MRO vision.



Aerospace Aftermarket

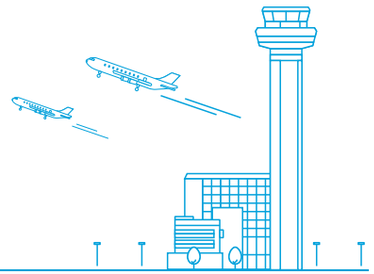
Our vision of MRO 4.0, an agile, connected and scalable operation adaptable to the opportunities of today and tomorrow.



MRO Business Transformation

Atkins is the right choice as your transformation partner. We bring unmatched global expertise at the vanguard of Aerospace Engineering together with proven and trusted business transformation delivery capability and experience.

Our vision is to establish long term and trusted partnerships with our clients. Helping them with their most stretching business objective resulting in a new business capability that is ‘world class’ and at the leading edge of Aerospace Engineering and Maintenance (E&M) organisations.



Aerospace Aftermarket

MRO 4.0 BUSINESS TRANSFORMATION

E2e Business Solutions. Organisation, Process, People, Technology Change

CAPABILITIES

Digital Operating Model	Service Oriented Business Architecture	Intelligent Automation and Decisioning	Operational Excellence	Leading Transformation Change
FIND OUT MORE	FIND OUT MORE	FIND OUT MORE	FIND OUT MORE	FIND OUT MORE
Data Analysis and Visualisation	Supply Chain Optimisation	Engineering Asset Management	Digital PMO and Programme Delivery	Our Approach to Cyber Resilience
FIND OUT MORE	FIND OUT MORE	FIND OUT MORE	FIND OUT MORE	FIND OUT MORE

Digital Tools

D-Vis

Data Visualisation
as a Service

FIND OUT MORE

Digital Tools

D-Vis

Data and information are not the same: processing data in order that it can truly inform is both a science and an art.

The Challenge

More data is being collected than ever before, however its value is rarely fully realised. The exploitation of data to enable better, faster decisions is a differentiator that increasingly drives competitive advantage across all markets and sectors.

Within the field of complex asset design and manufacture, identifying and deriving high value information from data can:

- Drive operational efficiencies and lower costs
- Increase quality
- Improve safety
- Generate new revenue streams

Enabling more informed decision making though data analytics and visualisation can transform a business from being reactive, to proactively anticipating issues and optimising operations. At Atkins we support customers to move from being data rich and information poor towards insight driven decisions at all levels.

Our digital solutions and services for complex assets blend our expertise in digital transformation with our deep understanding, experience and heritage in traditional engineering.

Digital Tools

D-Vis

Microsoft Partner
Microsoft
Gold Data Analytics

Visualisation of data can answer the questions that you hadn't yet thought of.

Introducing D-Vis

D-Vis empowers individuals to make better informed decisions through data analytics and 3D+ visualisation. Data means more when it has context, so we bring your data to life within the 3D+ space of your product. We fuse real-time analytics and historical data mining, visualising the results within a spatial context to create rich, interactive information that offers immediate meaning.

The result is a model of your asset, containing layers of data that can be interrogated quickly and easily to enable a step change in: speed of production; root cause resolution; technical and commercial insight; enhanced decision making.

Process

We believe that the visualisation of data can answer the questions that you hadn't yet thought of. The D-Vis offering is built on the following steps, that unlock value within the underlying data to provide a competitive edge:

- Consult – Understanding your needs
- Ingest – Data collection into a common environment and data cleansing
- Analyse – Descriptive, predictive and prescriptive analytics
- Visualise – 3D+ visualisation and data interrogation
- Deliver change

3D Model interrogation

Dashboard

Benefits

- Better, quicker and more informed decisions, reducing time and cost
- Supports proactive rather than reactive business decision making, putting your business on the front foot
- Contextual visualisations in 3D+; less time interpreting means more time to decide and act
- Increased meaning and enhanced insight of data through our engineering and digital consulting experience
- Tailored for every client to precisely target pain points and drive out actionable insights
- Scalable (single project to multiple programme level)
- Blends new and legacy data (multiple formats), including live data feeds and 3rd party sources
- Compliments existing IT infrastructure
- Can be offered as a cloud or on-premise solution to suit customer needs
- Promotes a culture of data as an asset, driving improved data quality and integrity

Digital Tools

D-Vis

Join the rest of our clients who have saved £Millions using our data consultancy service. Identify efficiencies. Realise working capital. Reduce costs.

Client	CONSULT	INGEST	ANALYSE	VISUALISE	DELIVER CHANGE	Savings
Confidential Oil & Gas Major Operator	✓	✓	✓		✓	£73M To date
Confidential Utilities Client	✓	✓	✓	✓	✓	£7.4M To date
Confidential Aerospace MRO Client	✓	✓	✓	✓		£1.1M
ATKINS Member of the SNC-Lavalin Group	✓	✓	✓	✓	✓	£2.3M

Digital Tools

flo

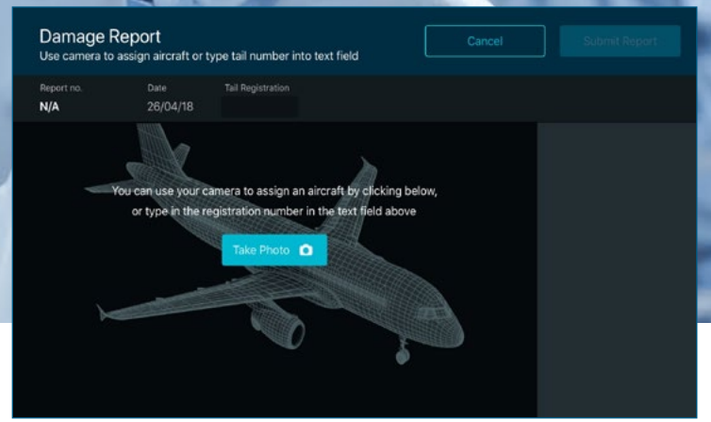
Digital Aircraft Damage Assessment System

FIND OUT MORE

Digital Tools

flo

In the modern world, where demands for air travel are increasing, and passengers' experience is key to strengthening brand position and long term revenues, it is vital for airline and aircraft operators to minimise aircraft downtime.



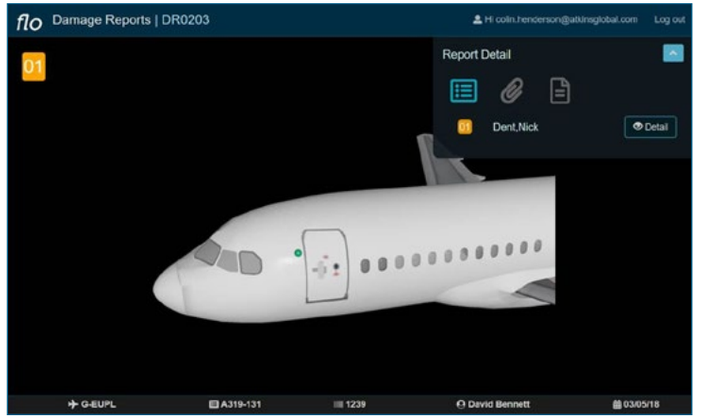
The Challenge

With more planes in operation and flying more often and turn-around times reducing, the chance of an aircraft being damaged during a flight is higher. In addition, as fleet sizes increase, it becomes more challenging to keep track of damage and repairs, thereby increasing the workload for engineers and technicians. One way to help deliver great passenger experiences and minimise 'Aircraft on Ground' situations is to streamline the process for assessing aircraft damage.

Today, if an aircraft has been damaged during flight it can take up to several hours to assess the damage. This process is typically carried out using manual measurements and a paper-based system to log and report the damage. Communication between staff is ad-hoc and the whole process is inefficient.

As a result, it can be time consuming and create inconsistencies across the globe. This can make it challenging to create a global damage report database that can be shared, analysed and understood in different locations.

These time delays can be costly for airline and aircraft operators. A lengthy assessment process can lead to flight delays which can significantly impact passenger experiences and could lead to significant delay compensation claims. This could cost the operator millions per year, coupled with brand damage that could have a lasting long-term impact on the bottom line.



Digital Tools

flo

Introducing Flo

We are focused on helping our clients deliver the best passenger experience by reducing potential delays, while improving passenger safety and optimising business operations through a real-time digital damage assessment solution. Flo is a new digital, cloud and iPad-based solution designed to reduce damage assessment time by up to 90%. Using state of the art 3D scanning technology integrated into iPads, Flo enables users to quickly record damage and share the information globally to rapidly enable real time assessment.

The system is an end-to-end cloud-based solution, enabling all damage data to be instantly uploaded to the database making it accessible to any user across the globe in real time. The cyber resilient platform produces standardised reports from every location, making it a fast and easy way to share information and make informed decisions. Flo offers a highly flexible solution which can be scaled to any customer requirement. Rapidly deployable and requiring only minimal training, it enables users to create accurate damage reports in a fraction of the time taken by the current method and create a digital, single source of truth record of an aircraft's damage.

Flo is the first end-to-end iPad and cloud-based scanning solution.

Benefits

Fast And Accurate Damage Assessment

Scans, records and communicates damage information quickly and accurately so you can make the right decisions faster.

Digital Workflow Management

Eliminates human error, ensuring consistency and eradicating lost or missing information from damage reports.

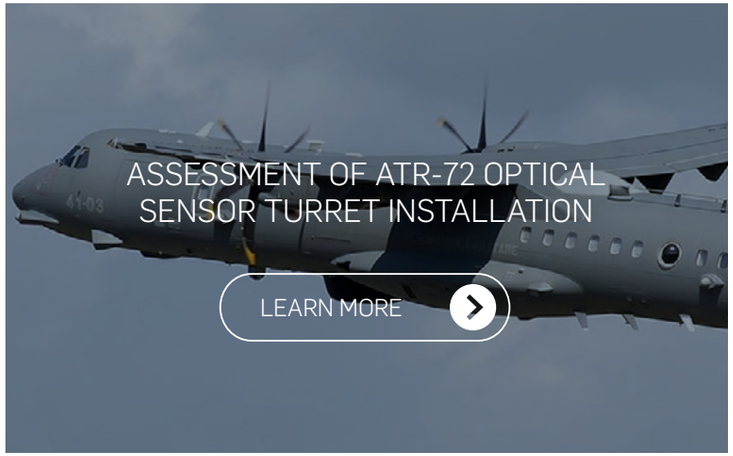
Fewer Flight Delays

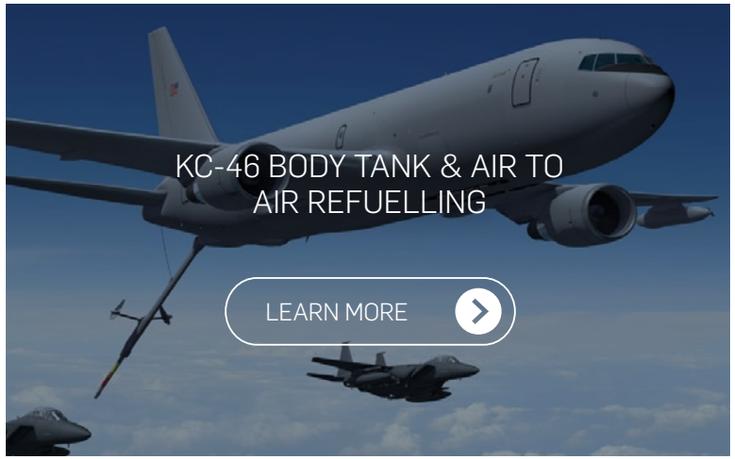
Enables faster and more accurate decisions across global locations to reduce downtime, risk of compensation costs and reputation damage.

Fast Trend And Pattern Analysis

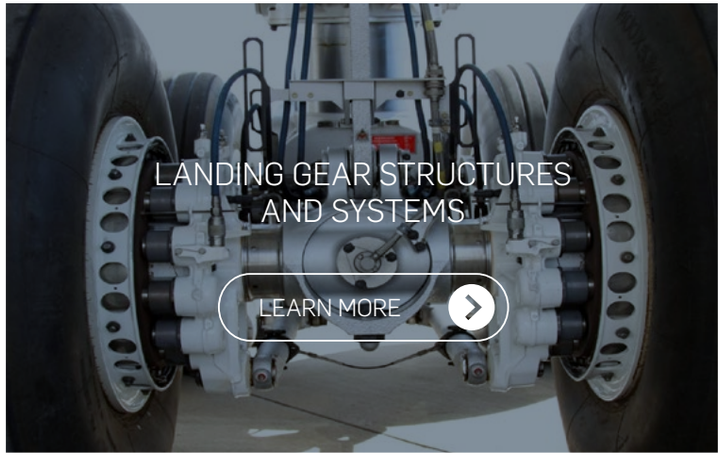
Prevents further damage and speeds up future repairs by analysing damage reports to see patterns across aircrafts, repair types or airports.

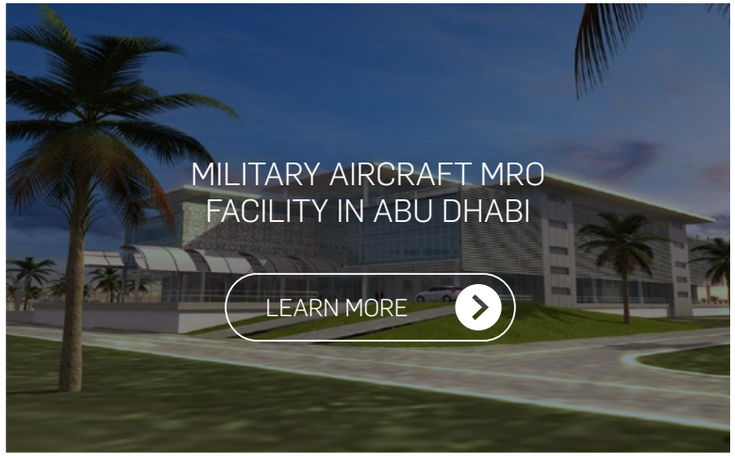
Case Studies

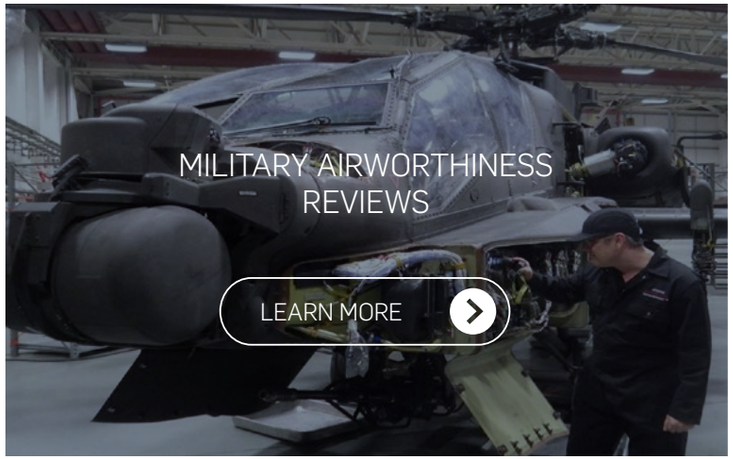


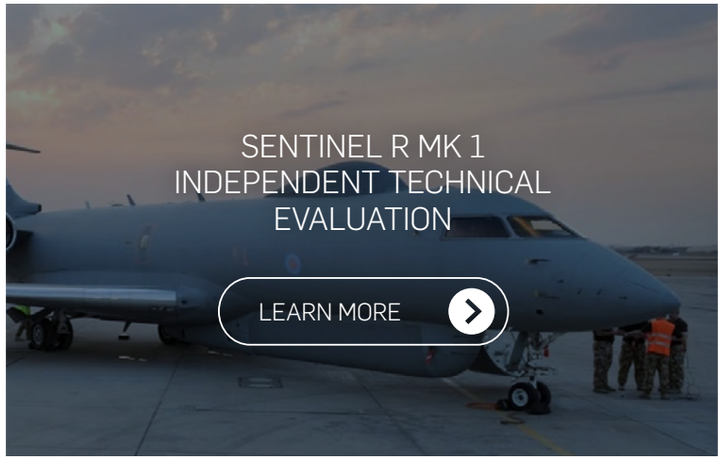


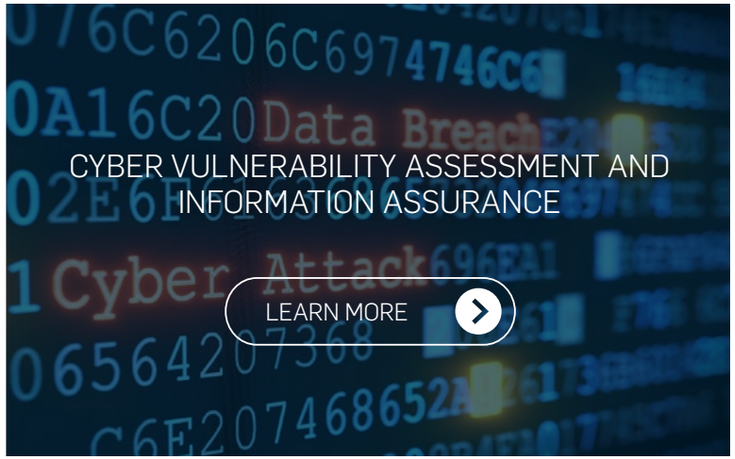
Case Studies











Thought Leadership

Further Reading

Current and Emerging Trends in the Aerospace Sector

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The Challenges and Benefits of the Electrification of Aircraft

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Digital Twin for Life Predictions in Civil Aerospace

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Cyber Security in Aerospace

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Aerospace and Defence Engineering Services

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Urban Air Mobility

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Trends in Aerospace Matthew Price

WATCH VIDEO

Thought Leadership

Get in Touch

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Over 25 years of global experience in design and maintenance activities for all aerospace systems, primarily hydro-mechanical equipment. Experienced in technical fleet management for major global airlines. Comprehensive aircraft maintenance and inventory management experience for large Asia-Pacific MRO. Head of Aircraft Systems leading large teams, scoping and launching technical projects on behalf of aerospace clients.

EMAIL

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Industry Sector Leader

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Extensive international experience helping leading aerospace and defence companies with their most challenging business transformation agendas. Julian leads Atkin's A&D industry sector and previously was a senior VP at Capgemini with accountability for all A&D service lines. He is a specialist practitioner in complex business operating models, operational excellence and business change, advising and supporting OEMs and Tier1 supplier Board teams, as well as stakeholders at all levels, to enable sustainable strategic and operational change.

EMAIL

#ShapingTheFuture