

ATI

UK Strategy in Aerospace

Aerospace Technology Congress 2016

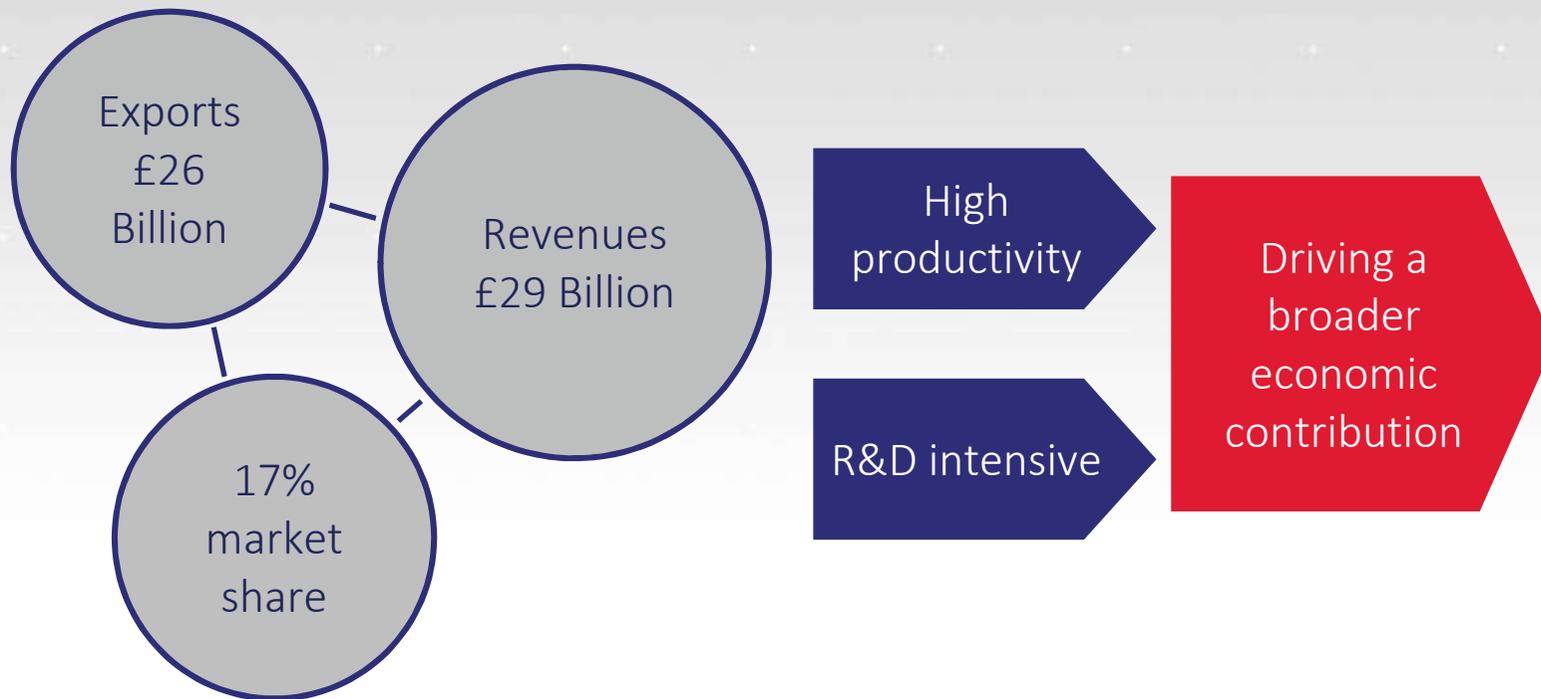




THE ATI

Aerospace - delivering broader UK economic impact

UK civil aerospace facts 2015



Source: ADS 2015 Industry facts and figures

The ATI

- The Aerospace Technology Institute (ATI) is the objective convenor and voice of the UK's aerospace technology community
- We define the UK's national aerospace technology strategy
- UK government and industry have committed £3.9 billion over 13 years (to 2026) for aerospace research & technology
- ATI works closely with Government and industry to direct this joint funding into aerospace R&T projects that align with the strategy
- We are a public-private partnership – a non profit making company
- We started in 2014 and now have 30 permanent employees

Our mission & goals

Through strategic investment in differentiating technologies,
secure the full economic potential of the UK aerospace sector

Technology investment

Providing technology leadership and maximising economic impact of R&T for UK aerospace

Provide Technology Leadership

Define a UK aerospace technology strategy that challenges industry, and create opportunities for advanced technology programmes to drive the growth of the UK aerospace sector

Maximise funding Impact

Drive the UK's aerospace R&T programme to maximise impact and embed benefits

Institute impact

Leveraging the Institute to add value in the sector

Convene strategic partnerships

Engage with a broad spectrum of stakeholders to challenge existing thinking, energise the UK aerospace sector and unlock new value

Elevate UK's international technology profile

Promote the advanced capabilities of UK aerospace technology and increase the UK's influence within European programmes and beyond



MARKET FOCUS

Key segments: focus for technology

Wide-body



- Upgrading and derivatives to dominate next 10-15 years
 - New engines and wing modifications to enhance performance
 - Cost down
 - Accelerating introduction of new systems technologies
- Keeping watch on Boeing “new midsize aircraft” and 929 / UAC

Narrow-body



- Upgrading and derivatives expected to dominate next 10-15 years
- Production system to enable higher rates / rate flexibility and reduced cost
- Upgrading ‘raises the bar’ on replacements, now expected 2030+
- Composite needs to compete with metallic on rate and cost

Business jets

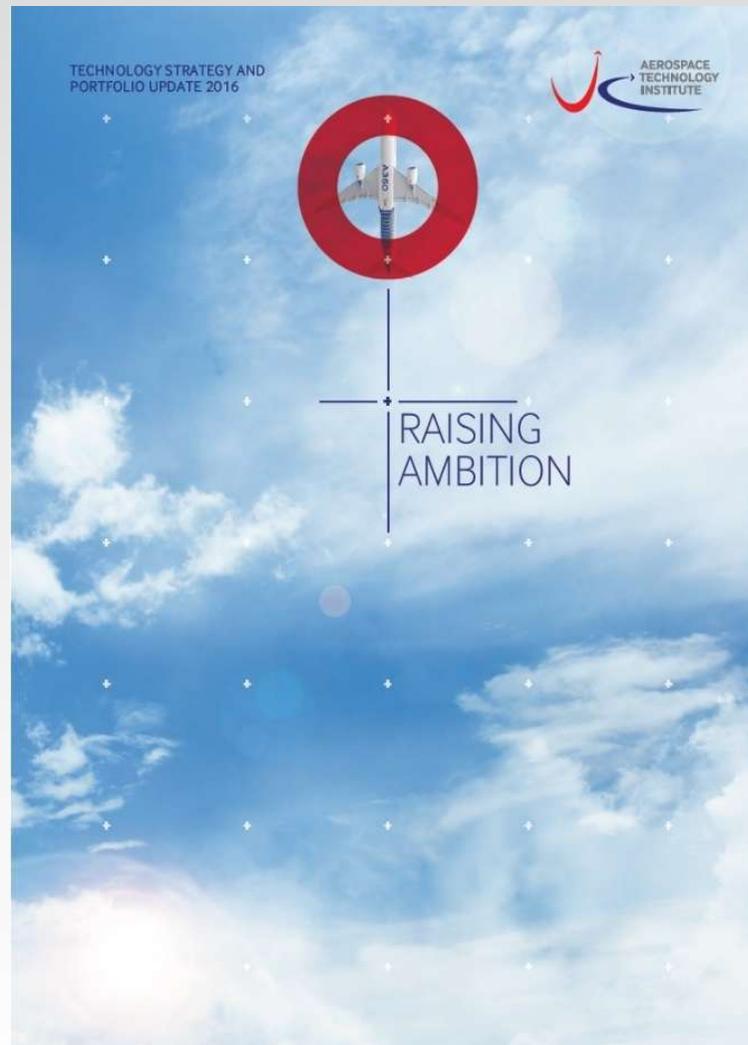


- Potential for new medium to large business jet platforms to 2025
- Focus on increased speed and range - supersonic platforms possible
- Opportunity to accelerate systems technology

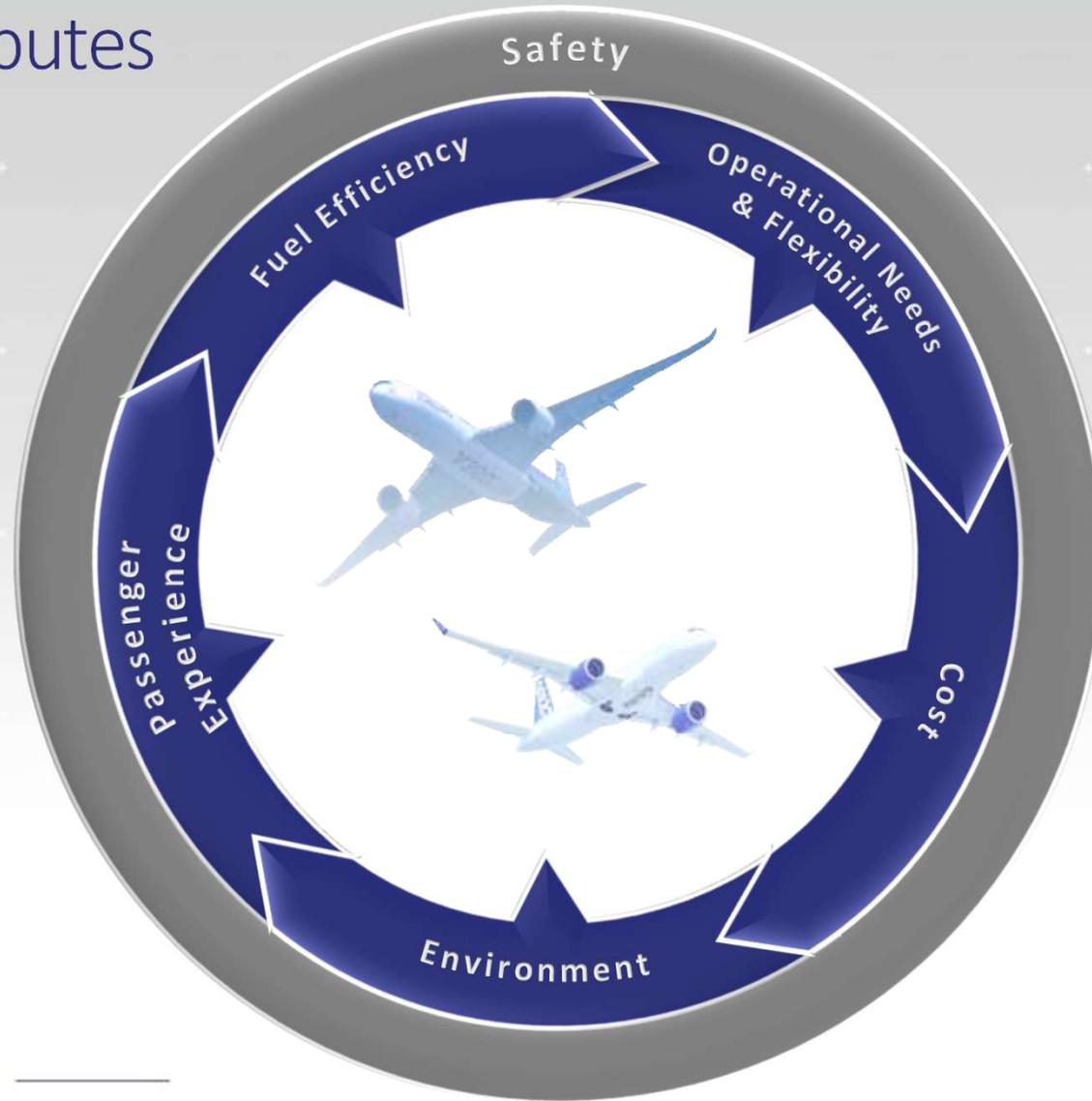


TECHNOLOGY STRATEGY

Technology Strategy Update 2016

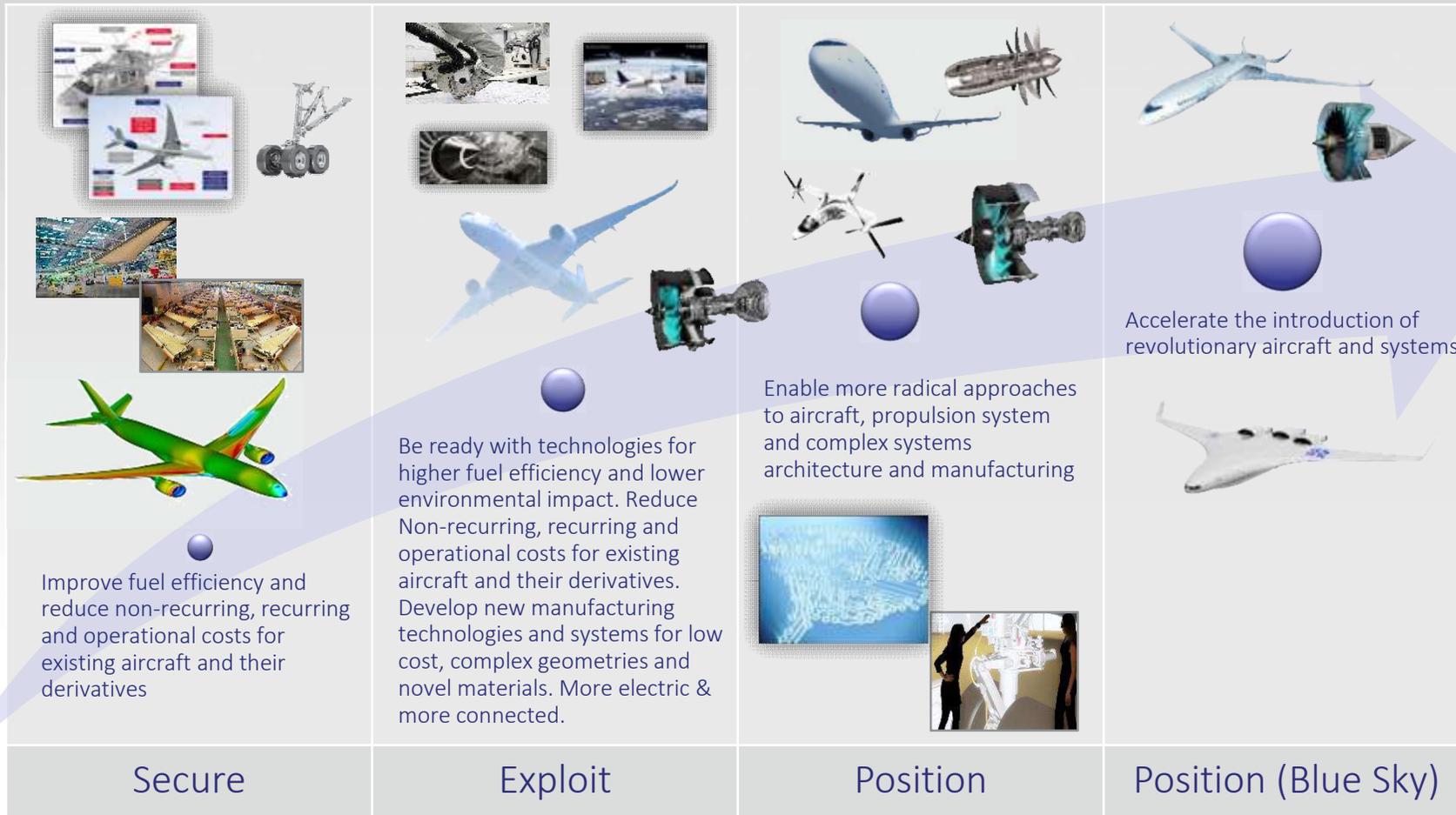


Attributes



+

A future Aerospace Roadmap



2015

2020

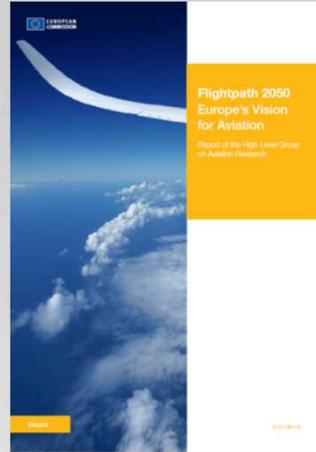
2025

2030

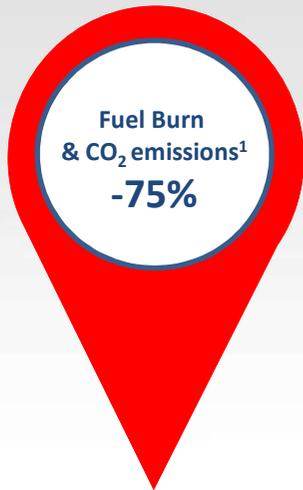
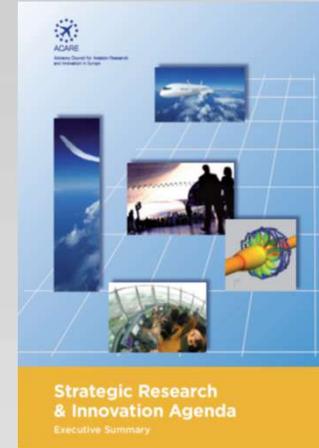


ACARE 2050 Targets

FlightPath 2050



Strategic Research &
Innovation Agenda



ACARE



Four strategic technology themes

Aircraft of the future



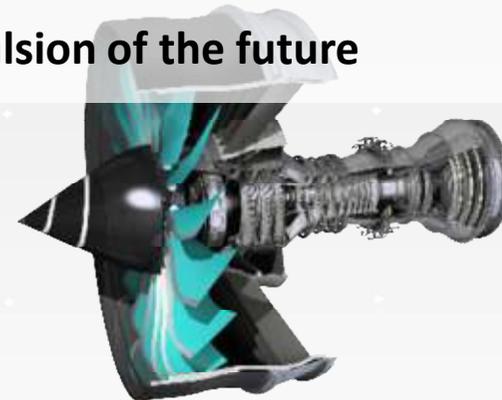
Smart, connected and more electric aircraft



Aerostructures of the future



Propulsion of the future

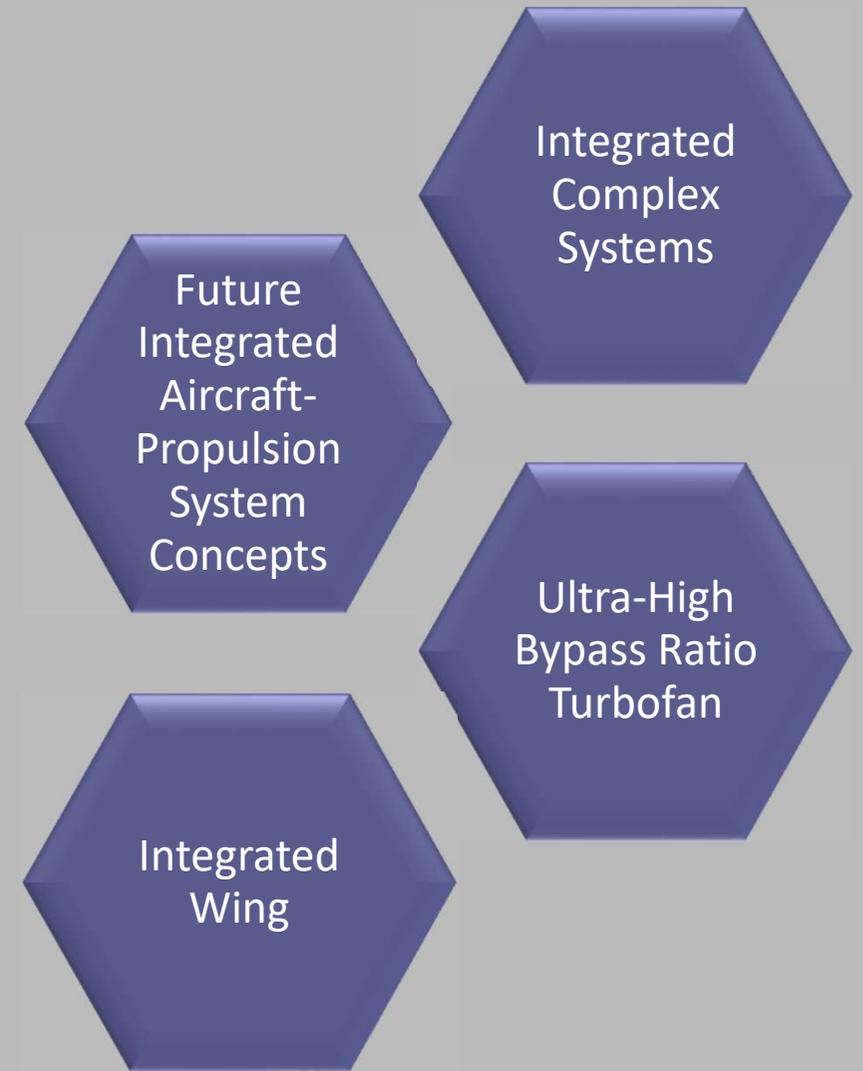


Four Major **Integration** Initiatives by 2020

Bringing new technologies together as part of an integrated system is essential to positioning the sector competitively.

These initiatives will stretch the sector's resources, capabilities and ATI funding, necessitating smarter use of existing national infrastructure and further capital investment.

Integration into whole aircraft



Cross-Cutting Technology Agendas

				
High Value Design	[Redacted]			
Digital Economy	[Redacted]			
Autonomy	[Redacted]		[Redacted]	
Additive Manufacture	[Redacted]			
Through Life Services	[Redacted]			

ATI investing in UK Aerospace Technology Infrastructure

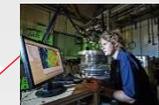
Seven UK Universities with outstanding aerodynamics capability
National Wind Tunnel Facility £13.3M



AMRC
Casting £15.4M



University of Nottingham
Transmissions £2.7M



University of Loughborough
Combustion £9.8M



The MTC
Near net shape £19.2M



ARA
Wind tunnel £9.4M

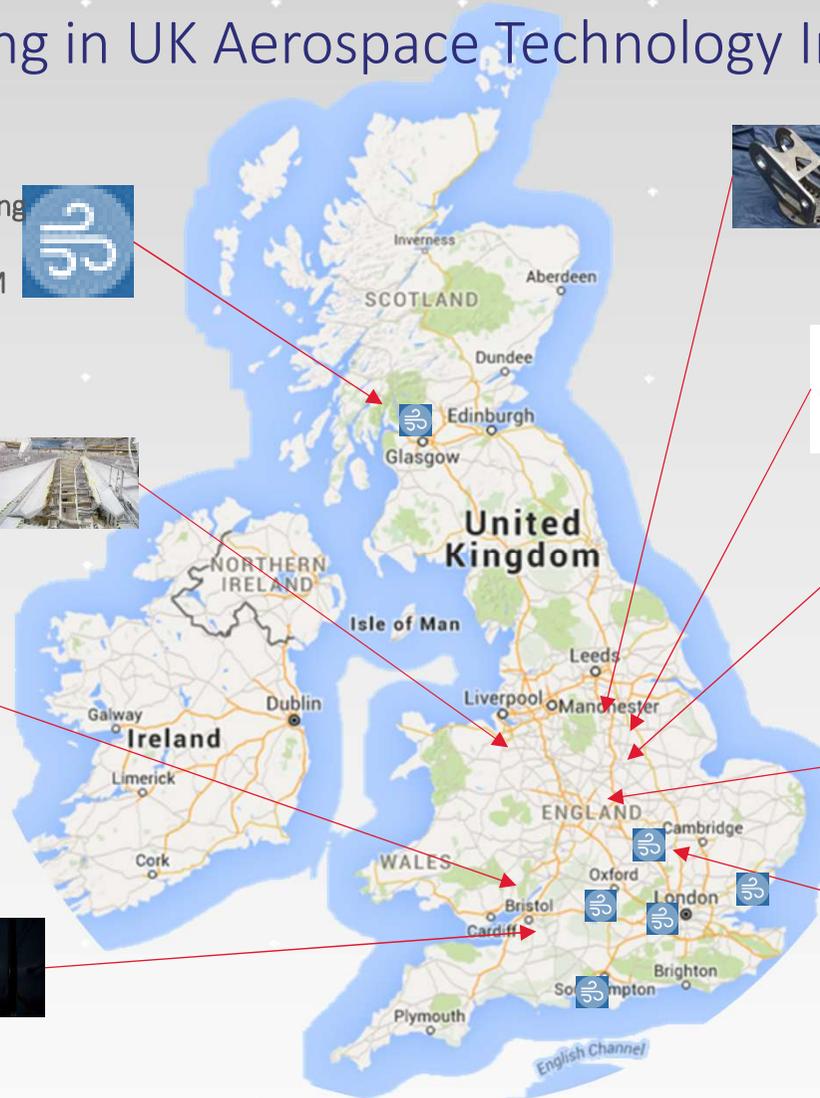
Airbus
Research Factory and Assembly £15M



Airbus
Wing Integration £37M



GKN
EBM £3.6M

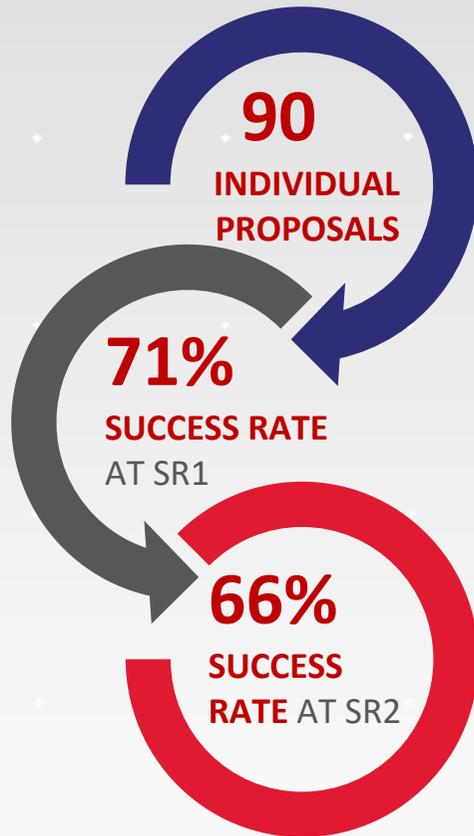




ATI PROJECT PORTFOLIO

Headline ATI Portfolio Statistics

Projects developed in the last 12 months...



WILL HELP TO SECURE OR GROW
15,000
UK HIGH VALUE JOBS



...are adding to an extensive technology portfolio

ATI PROJECTS ON CONTRACT: **160**
TOTAL VALUE: **£1.3BN**; GRANTS OF **£686M**

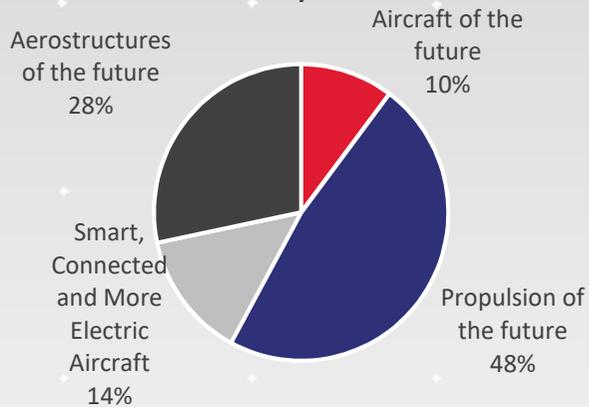
195 UNIQUE ORGANISATIONS

103 SME's DIRECTLY CONTRACTED
WITH MANY MORE SMES SUBCONTRACTED

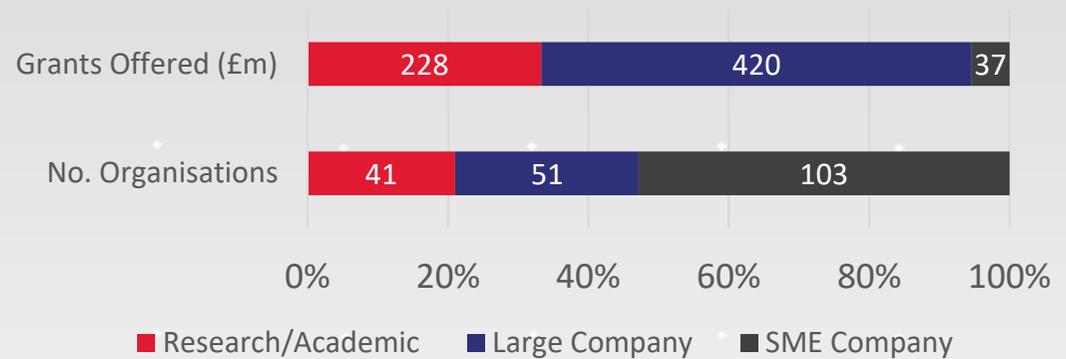


Key ATI Portfolio Statistics

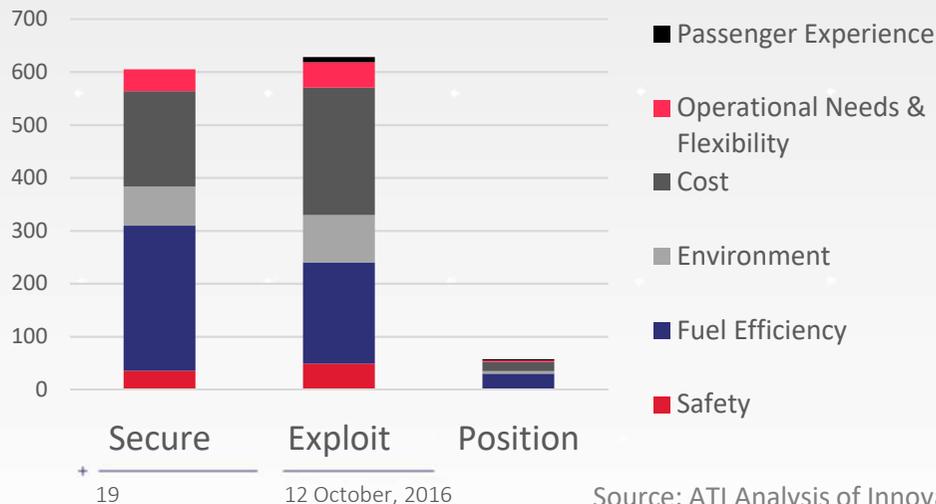
ATI Portfolio by Value Stream



ATI Grants by Company Size



By ATI Attribute (£m)



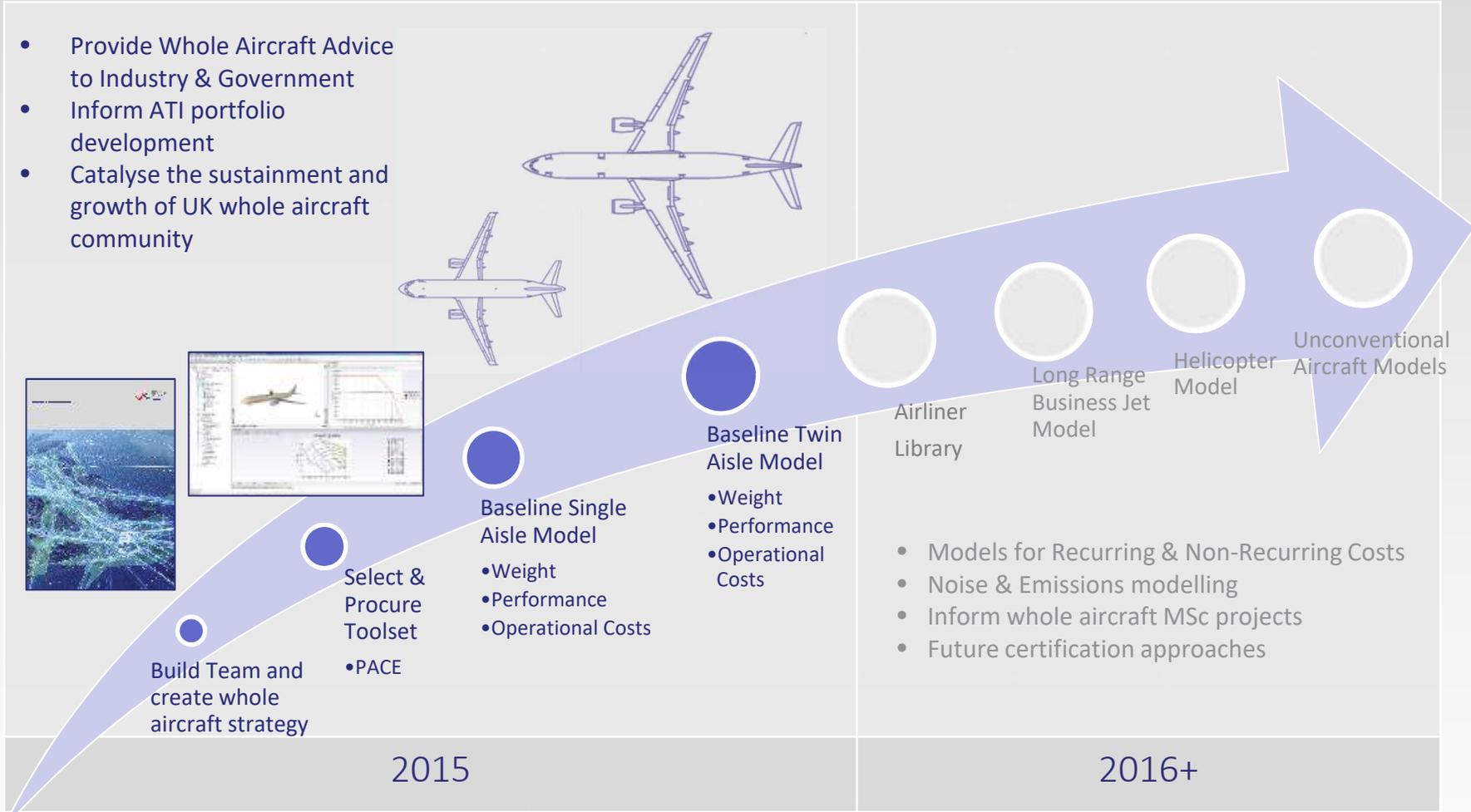
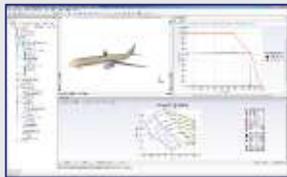
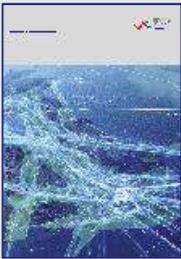
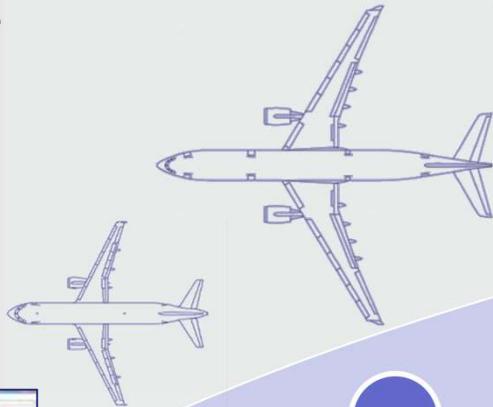
- ATI funding by value stream in line with UK aerospace sector turnover.
- Largest focus in portfolio on cost reduction and fuel efficiency projects
- Funding for exploit projects (5-10 years) has increased over the past months.
- >50% of the partners participating are SMEs, received >£35m of grant funding



ATI Whole Aircraft Capability

ATI Whole Aircraft capability

- Provide Whole Aircraft Advice to Industry & Government
- Inform ATI portfolio development
- Catalyse the sustainment and growth of UK whole aircraft community





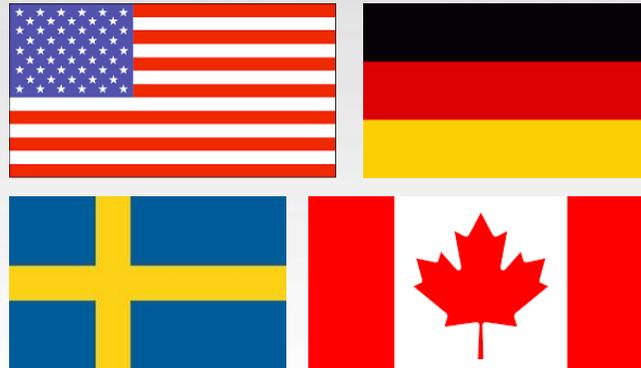
ATI international relationships

International Engagement



Europe – Representing UK interests on all ACARE committees, ASD R&T Commission and Chairing GARTEUR

Developing Bilateral Relationships



Represent UK Interests in IFAR



UK – Sweden Collaboration



- A series of meetings have identified the following areas for potential collaboration:
 - materials
 - structures
 - design and manufacturing processes
 - air traffic management
 - systems
 - MRO
- Both Swedish and UK authorities have been developing paths for national funding for collaborative research through national funding processes
 - Aiming to commence calls for collaborative research in 2017

Any Questions?

