AEROSPACE TECHNOLOGY INSTITUTE

SME Programme

ATI Funding Programmes

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Strategic Portfolio Manager

Aerospace Technology Institute

Transforming aerospace through technology and innovation

- Established in 2014
- Independent, not for profit organisation joint funded by government and industry
- Defines the national aerospace technology strategy
- £5bn+ investment through the ATI programme is enabling step changes in technologies
- Supports a sustainable and competitive UK aerospace sector
- Strengthens the ecosystem & drives innovation

ATI technology strategy Destination Zero sets our path towards:

- achieving Net Zero carbon emissions for commercial aircraft by 2050
- supporting UK industry competitiveness in sustainable design, manufacture, assembly and operations

ATI: Supporting the sector

ATI Funding Programmes

ATI Strategic Programme

- £1m - £50m (indicative)
- Average duration: 3 years
- Usually 3-5 partners
- Must be Industrially-led
- Capital projects can be led by academia or RTOs

ATI SME Programme

- Projects up to £1.5m
- 12 to 36 months in duration
- SMEs receive a minimum of 50% of the project grant funding
- Consortia applications encouraged

SME Programme Overview

Aim

- Strengthen and encourage technology innovation in aerospace supply chain in the UK and maximise benefits to SMEs
- Support and encourage industrial investment in aerospace

Benefits

- Regular funding calls (3 times per year)
- Simple application process e.g. light touch Outline Stage
- Grants of up to £1.5m
- Project duration of 12-36 months
- Funding of up to £10m per year

SME Programme

Objectives

- Deliver a funding programme tailored to the needs of SMEs

Key Message

- An open national funding programme for SMEs with no limitation based on geographical location

Department for Business & Trade

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UKRI Innovate UK

Competition Process, Dates and Funding Rules

Competition Process

Stage 1- Outline Stage (OS)

ATI Assessment Only

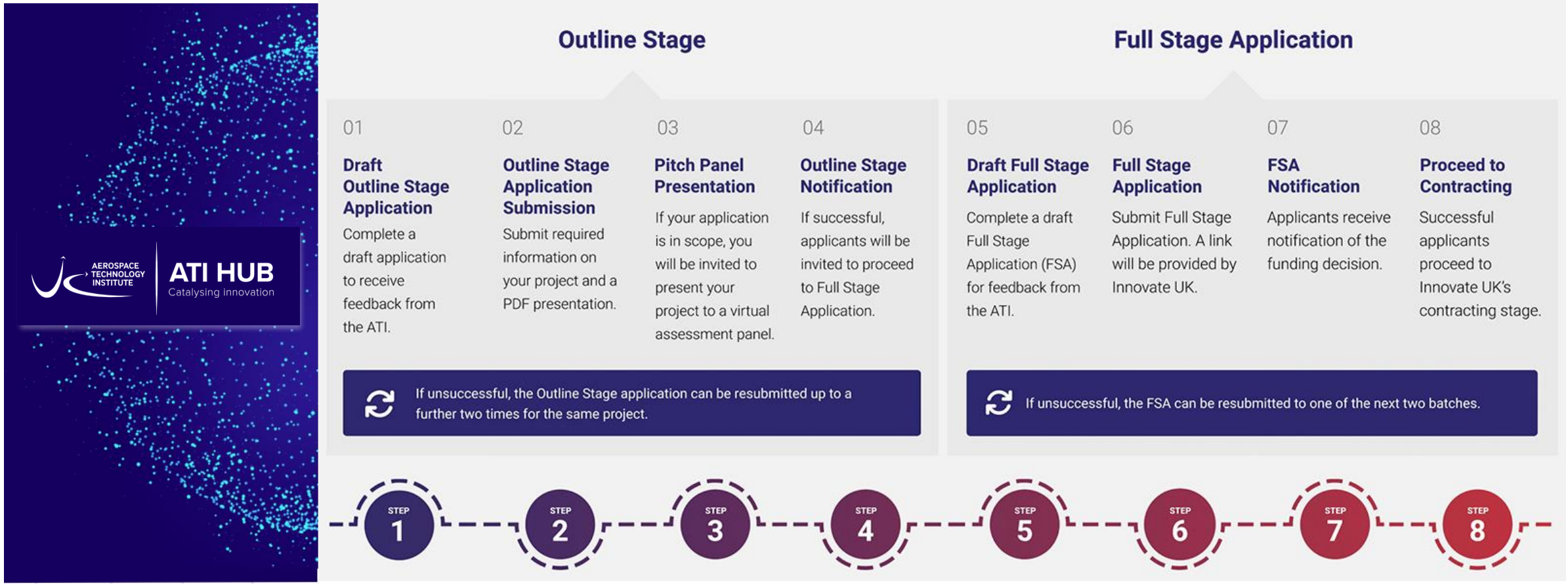
- Competition opens three times a year
- Submission via ATI website
- Opportunity to submit draft OS application to ATI for feedback
- Submission of a PowerPoint presentation (no written application)
- Eligible applications will be invited to present their project to a Pitch Panel
- Successful projects must submit to one of the two upcoming FSA batches and inform ATI of their intention to do so

Stage 2- Full Stage Application (FSA)

DBT, ATI, IUK Assessment

- Competition opens 3 times a year
- Submission by invitation only
- Successful projects at OS stage will be invited to submit on IFS
- Written application format, i.e. questions. Details will be published early 2024
- Opportunity to submit draft FSA to ATI for feedback

Application Process



Engagement with the ATI Hub

All applicants (including project partners) to the SME Programme must read and sign the ATI SME Programme Agreement.

ATI SME Programme Agreement →

Competition and Panel Dates

SME Programme

Outline Stage (OS) 2024

	February	June	September
Opening Date	Monday 5th February	Monday 10th June	Monday 2nd September
Closing Date	Wednesday 21st February	Wednesday 26th June	Wednesday 18th September
Eligibility and Pitch Panel Notifications	Friday 23rd February	Friday 28th June	Friday 20th September
Pitch Panel Dates	Monday 4th March Tuesday 5th March Wednesday 6th March	Monday 8th July Tuesday 9th July Wednesday 10th July	Monday 30th September Tuesday 1st October Wednesday 2nd October
Notifications	Tuesday 12th March	Tuesday 16th July	Tuesday 8th October

No funding will be awarded at this stage

Full Stage Application (FSA) 2024

	Batch 01	Batch 02
Opening Date	Monday 22nd April	Monday 2nd September
Closing Date	Wednesday 29th May	Wednesday 9th October
Notifications (from)	Wednesday 31st July	Wednesday 11th December

* Closing time for all competitions is 11 am on the day of the deadline. Dates and times are subject to change.

Programme Investment Board will make funding decisions

SME Programme - Aerospace Technology Institute (ati.org.uk)

Funding and Competition Rules

Eligibility

- Align with ATI Technology Strategy
- Open to organisations of any size registered in the UK
- Individual or consortium applications are accepted

Project team

- Business of any size
- Academic institution
- Public sector organisation
- RTO

Grant and project duration

- Grants up to £1.5m
- Projects from 12-36 months

Lead organisation

- Be a UK registered SME or, a business of any size with at least one SME in the consortium.
- Carry out the project and exploit it in the UK
- Sign the ATI SME Programme Agreement
- Applicants are exempt from 2.5% industrial contribution
- Collaborative projects are encouraged

Projects we will not fund

- Solely defence, space. We will recognise dual use
- Fundamental research, feasibility study, experimental development
- Research topics outside of the ATI Technology Strategy

Funding

- Up to £10m grant funding per year
- SMEs must receive at least 50% of the grant
- Large organisations can share grant for up to 30% total project costs
- If the consortium contains more than one large organisation, the 30% will be shared between them

Scope

- The primary application for technologies should be civil aerospace

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Pitch Panels and Presentations

Pitch Panel Format

Welcome and introductions	All	5 mins
Project presentation	All	25 mins
Questions and answers	All	15 mins
Panel feedback and assessment	Panel only	15 mins

- Presentations will be assessed by ATI assessors during the Pitch Panel.
- Maximum of three representatives from the project are permitted to attend. Name of the attendees from the project must be communicated to ATI at least three working days prior to the date of the Panel.
- The project lead must attend the Panel and lead the presentation.
- Maximum of ten slides (including cover slide) can be submitted by projects. If more than ten slides are submitted, they will not form part of the assessment.
- The presentation duration is strictly 25 minutes and additional time will not be allocated.
- Applicants must not bring any additional materials to the interview to share with the Panel.

Outline Stage Presentation Guidance

Technology

Demonstrate project alignment with ATI's Technology Strategy and explain the aircraft-level benefits.

- How does the technology help to deliver the ATI technology strategy roadmaps?
- How does the technology compare to current market solutions and where possible known competitor R&D solutions?
- Describe the technology benefits (e.g., cost, weight, performance, safety, sustainability, etc.)

Demonstrate the project ambition.

- Explain the innovation step.
- Why is this technology required?
- What challenges the technology will address?
- What is the key enabling technology that is being developed?
- Describe the technology developed on the project.

Exploitation and Market

What are the routes to market and business opportunities?

- Who are the customers for the technology developed?
- Describe the route to market and how it will be implemented.
- State the addressable market size for the technology.

What are the exploitation opportunities for the project?

- What engagement has there been with end-users to date with respect to the exploitation of this technology?
- What is the timeline for implementation?

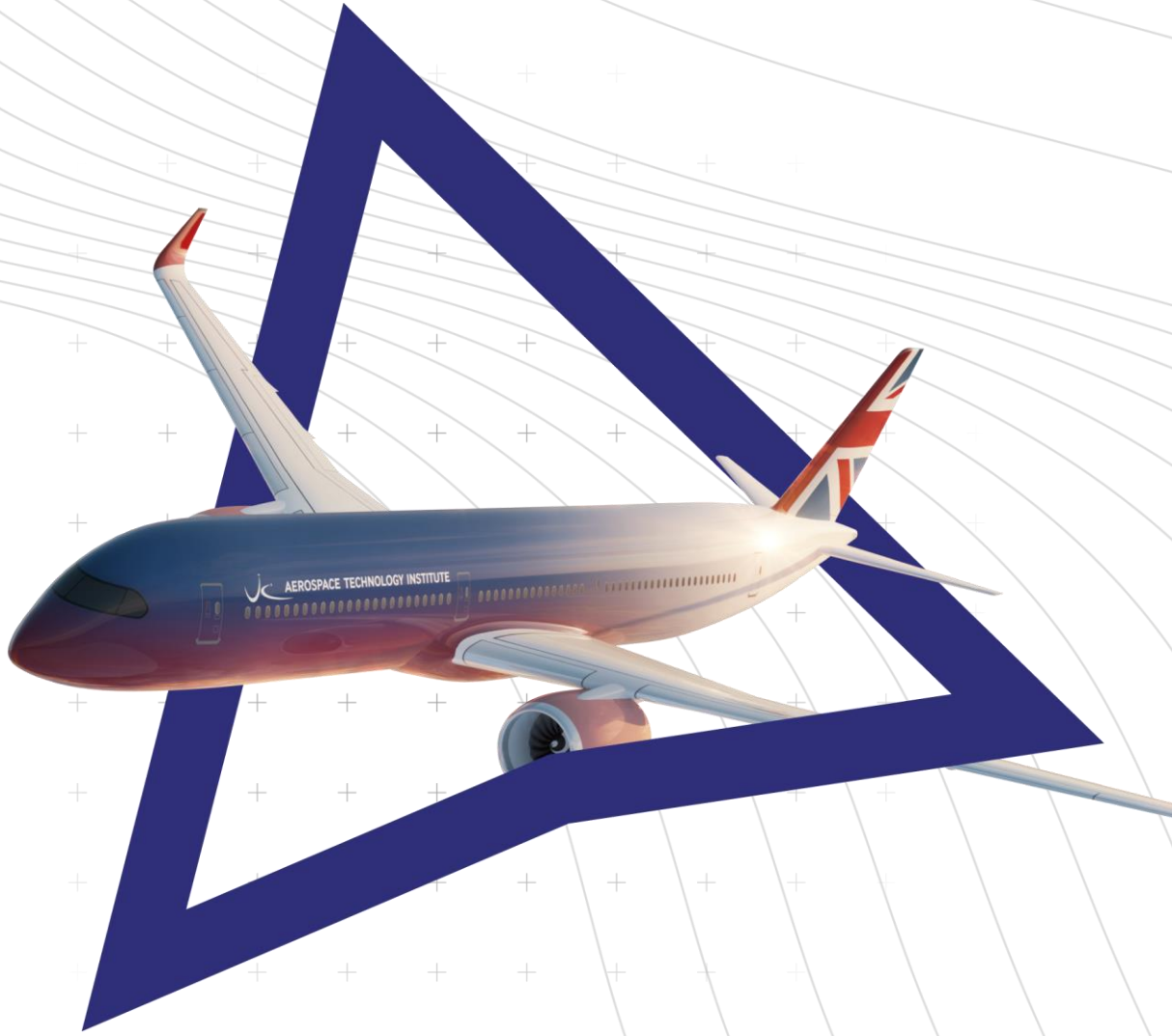
Destination Zero & the SME Programme

Using the roadmaps

Mark Scully

Head of Technology,
Advanced Systems &
Propulsion

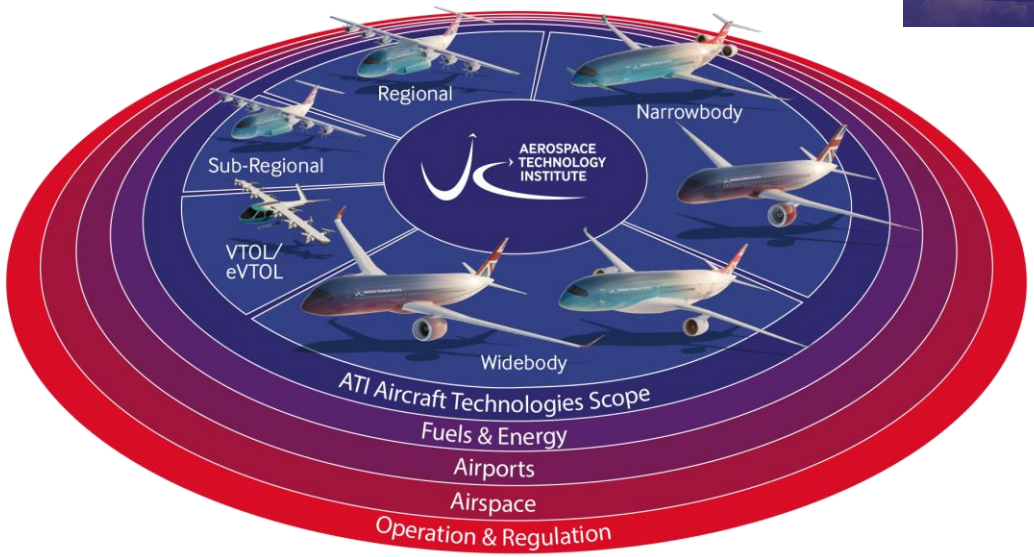
5th December 2023



Destination Zero

The ATI technology strategy Destination Zero sets our path towards achieving Net Zero carbon emissions for commercial aircraft by 2050 and supporting the competitiveness of the UK industry in sustainable design, manufacture, assembly and operations of future aircraft

- The priorities for ATI investment are widebody and narrowbody aircraft market segments which have the largest impacts on sustainability and the UK economy.
- In addition, funding will be considered for projects that can demonstrate scalable technology solutions or substantial economic, sustainability and technological advantage for the UK.
- The ATI will continue to actively influence the partners involved in collaborative projects such that a broad UK supply chain is represented.



Technology attributes

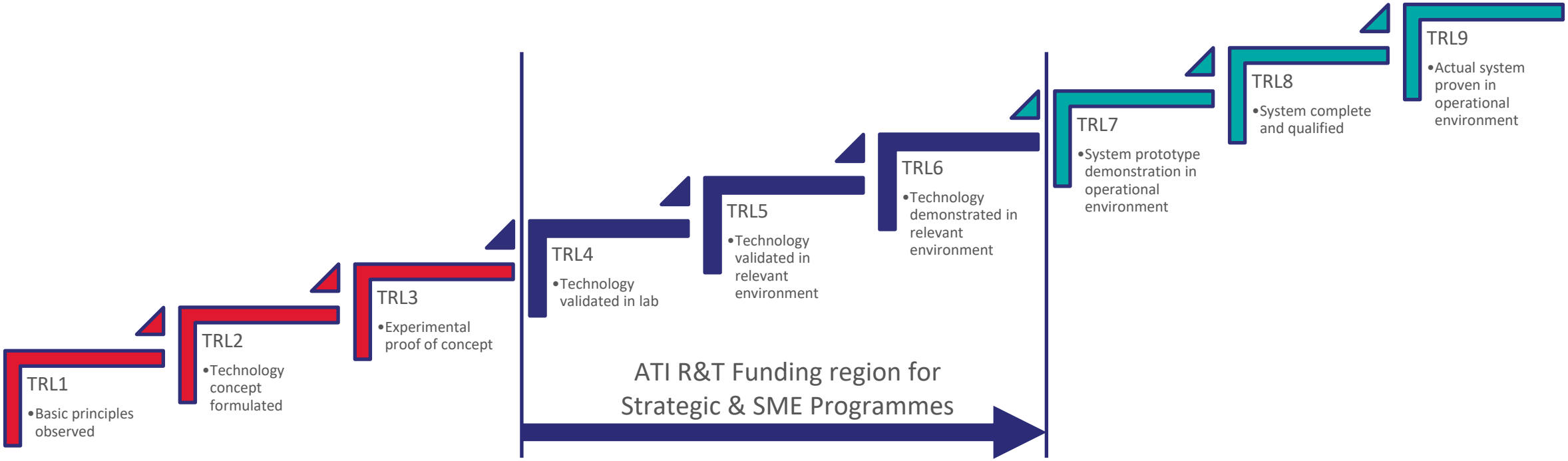
Taking advantage of the global market requires a focus on the performance qualities and requirements – or attributes – that will meet market expectations and position technology to win a place on future new aircraft and upgrades.

- **Safety:** certification basis, tolerance to human error, verifiability, predictability, intrusion tolerance, environmental tolerance, operational risk
- **Fuel efficiency:** aerodynamic efficiency, weight, propulsion system efficiency, operational impact, parasitic losses
- **Operational needs & flexibility:** performance, payload, availability, operational limitation impact
- **Cost:** non-recurring cost, recurring cost, operating cost, disruption cost, disposal cost
- **Environment:** climate impact, local air quality impact, noise, ground contamination, materials usage, materials impact, disposability/recyclability
- **Passenger experience:** passenger comfort, service quality

Technology Readiness Levels

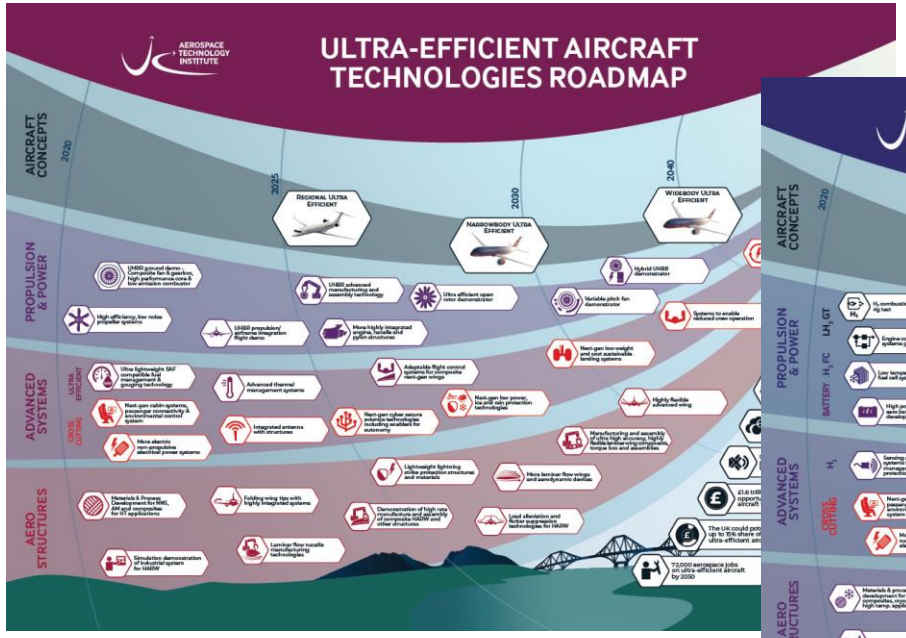
Technology readiness levels (TRL) are a type of measurement system used to assess the maturity of a particular technology. A technology project is evaluated against the parameters for each technology level and can then be assigned a TRL based on the project's progress.

There are nine technology readiness levels. TRL1 is the lowest and TRL9 is the highest. ATI uses TRL to help determine whether a project or proposal is suitable for a specific funding opportunity.

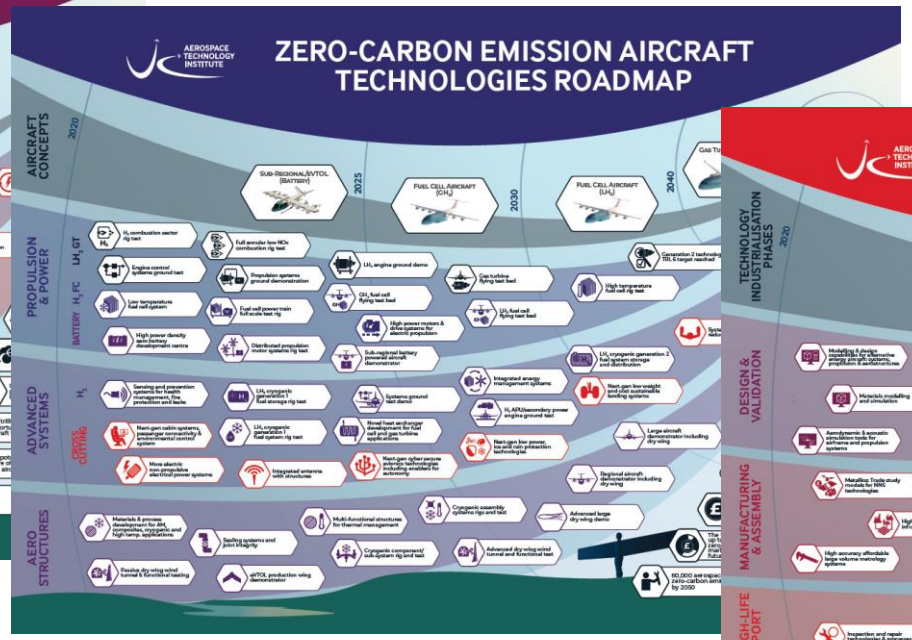


Technology roadmaps

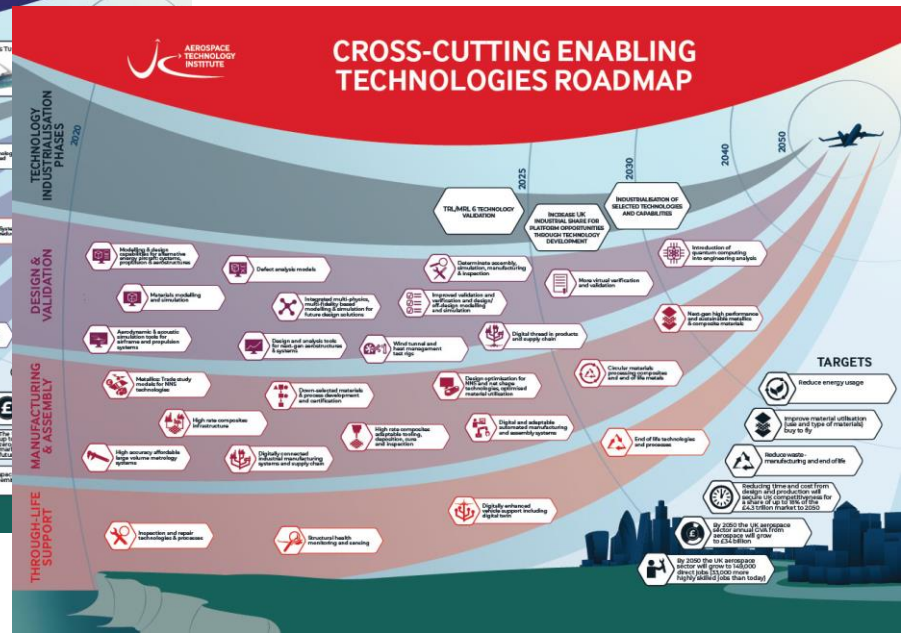
The ATI's technology roadmaps identify the technologies needed to unlock Net Zero 2050 in aviation



These technologies will benefit all future aircraft by improving efficiency to reduce fuel demand and operating costs.



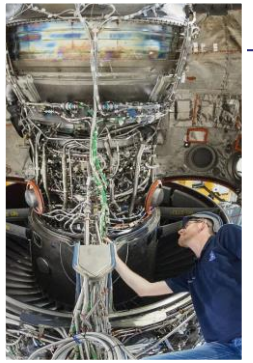
Novel technologies required to bring next-generation zero-carbon emission aircraft to reality. These technologies represent the largest in-flight carbon reduction potential and a new market opportunity for UK aerospace.



Technologies to enable and accelerate the adoption of ultra-efficient and zero-carbon emission aircraft. Vital for novel aircraft platforms and future UK leadership.

Ultra-Efficient Technologies – Example SME opportunities

Note that these are a few examples – contact the ATI with your ideas

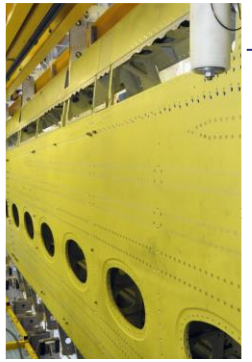


Propulsion & Power

- Robotics/mechatronics for engine or rotor assembly,
- Smart sensing for alignment and assembly
- Novel fittings and disconnects to aid pipework assembly
- Composites inspection
- Fast make
- Hybridisation

Advanced Systems

- Smart multifunctional sensors
- Advanced thermal management solutions
- Near net shape manufacturing
- Lightweight composites
- Enablers for enhanced electrical systems

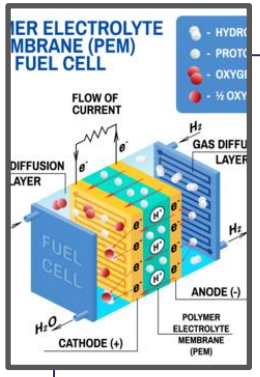


Aerostructures

- Materials and processes for near net shape
- Additive manufacturing
- Composites for high temperature applications
- Metallics forming and joining technologies
- Casting technology

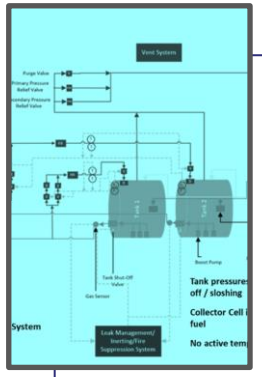
Zero-Carbon Emission Technologies – Example SME opportunities

Note that these are a few examples – contact the ATI with your ideas



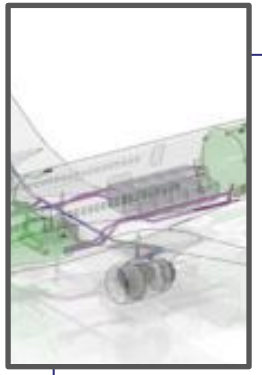
Propulsion & Power

- Fuel cell power generation, air management systems, control systems
- High efficiency electrical machines and drives
- High energy density, high power battery systems



Advanced Systems

- Liquid hydrogen pumps, valves, pipes, couplings, and tanks
- Hydrogen leak sensing and health management
- Thermal management for zero carbon power generation
- Energy harvesting



Aerostructures

- Materials and processes for near net shape
- Additive manufacturing
- Composites for high temperature applications
- Sealing systems & joint integrity
- Cryogenic components and sub-systems including LH2 storage

Cross-Cutting Enabling Technologies – Example SME opportunities

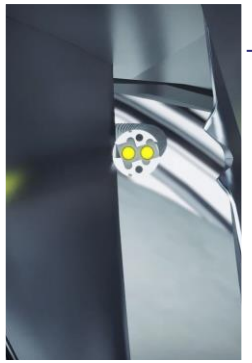
Note that these are a few examples – contact the ATI with your ideas

Design & Validation

- Modelling and design capabilities for alternative energy aircraft: systems, propulsion and aerostructures
- Materials modelling and simulation
- Defect analysis models
- Determinate assembly, simulation, manufacturing & inspection

Manufacturing & Assembly

- Near net shape including additive manufacturing & casting
- Digitally connected manufacturing systems and supply chains
- High-rate composites adaptable tooling, deposition, cure and inspection
- Digital and adaptable automated manufacturing and assembly systems.
- Circular materials processing of composites



Through Life Support

- Inspection and repair technologies
- Structural health monitoring and sensing
- End of life technologies and processes

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Support available for
SME Programme Applicants

Dr. Maria Nelson

Head of Innovation and Sustainability

What is the ATI Hub?

The ATI Hub is a space for innovators to connect, access expertise and collaborate

Designed to help companies thrive in a sustainable aerospace sector

What does the ATI Hub offer?

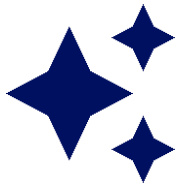
AEROSPACE TECHNOLOGY INSTITUTE | ATI HUB Catalysing innovation

Connect, access expertise, collaborate: online and in person

Meet the ATI

Clinics

Workshops



Showcases

Bootcamps

Resources

… and more on ati.org.uk/hub

What support is available for applicants?

Meet the ATI Front door to the ATI	group session	12th December 2023
Tech Clinics An opportunity to talk to an ATI Technologist	individual session	11th January 2024
SME Programme Clinic: Outline Stage Guidance on how to prepare a strong Outline Stage presentation	group session	16th January 2024
SME Programme Clinic: Full Stage Guidance on how to prepare a strong Full Stage application	group session	21st March 2024 (by invitation only)

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ATI HUB
Catalysing innovation

Register on ati.org.uk/hub