



Can aerospace really close the loop?

From circular materials
to smarter manufacturing
and sustainable aerostructures



24 November 2026



10:00 - 12:00 CET



online

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HERE**



FLIGHT PATHS

#ATLAS webinar series

About the webinar

What would it take to make the next generation of aircraft not only lighter and more efficient, but genuinely more circular?

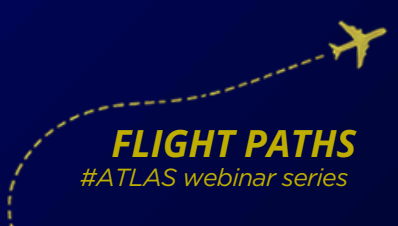
From recycled carbon fibres and recyclable thermoplastic composites to life-cycle assessment, digital twins and smarter manufacturing, researchers across Europe are exploring new ways to reduce the environmental footprint of aerospace while maintaining the performance and reliability the sector demands.

But circularity cannot be achieved through one technology alone. It requires changes across the entire aerostructure lifecycle: how materials are designed, how components are manufactured, how quality is controlled, how environmental performance is assessed, and how value can be retained at the end of a component's first life.

As part of the ATLAS **#FlightPaths webinar series**, this session brings together five Horizon Europe projects to explore different routes towards more circular aerospace. Each presentation will offer a different perspective on the journey, from sustainable design and recycled materials to advanced manufacturing and digital technologies.

Join **CompSTLar**, **pAlramid**, **TOSCA**, **PLEIADES** and **HyperMorph** to discover how complementary research and innovation approaches can contribute to a more sustainable and circular aerospace value chain.

Can aerospace really close the loop? Join us to explore the routes, challenges and opportunities ahead.



FLIGHT PATHS
#ATLAS webinar series

FLIGHT PATH

ATLAS webinar



10:00 - 10:10

BOARDING

Setting the Course for Circular Aerospace

Where are we today, and what will it take to make aerospace more circular?

Chris Page, Senior Project Engineer, TWI, United Kingdom

[PLEIADES](#)

A short introduction to the ATLAS Cluster, the five participating projects and the key challenges shaping the transition towards more circular and sustainable aerospace.

10:10 - 10:25

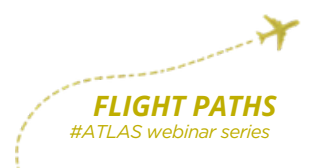
ROUTE 1: Measuring Sustainability

Can We Measure Sustainability Beyond Lightweighting?

Dr. Sadik Omairey, Senior Research Fellow, Brunel Composites Centre, United Kingdom

[PLEIADES](#)

How can aerospace designers assess environmental performance from the earliest stages of development? This presentation explores how Life Cycle Assessment can help move sustainability considerations beyond lightweighting and towards a more holistic understanding of aerospace design.



10:25 - 10:40

ROUTE 2: Rethinking Materials

Can Recycled Carbon Fibre Meet Aerospace Quality Demands?

Abhiram Kolli, Senior Researcher, Profactor, AustriaEngineer, TWI, United Kingdom

[TOSCA](#)

Recycling carbon fibre is an important step towards a more circular composite value chain, but recycled materials must still meet demanding quality requirements. This presentation explores approaches to quality control for recycled carbon fibre textiles and the challenges involved in bringing recycled materials back into high-performance applications.

10:40 - 10:55

ROUTE 3: Designing for Circularity

Can Recyclable Composites Deliver Both Performance and New Possibilities?

Andreia Araújo, Advanced Materials Coordinator, INEGI, Portugal

[HYPERMORPH](#)

Can materials be designed from the outset with both performance and end-of-life considerations in mind? This presentation explores the potential of thermoplastic composites for demanding aerospace applications, including cryogenic electric propulsion and morphing aerostructures.

10:55 - 11:10

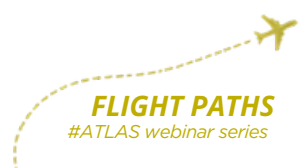
ROUTE 4: Digitalising Circularity

Can Digital Twins Help Make Aerospace More Circular?

Marc Wilms, Research Associate, Fraunhofer IPT, Germany

[COMPSTLAR](#)

Digital technologies can help connect decisions across the aerospace lifecycle. This presentation explores how digital twins and circular manufacturing approaches can support more sustainable aerospace development, with Life Cycle Assessment (LCA) providing an additional perspective on environmental impacts, based on the work contributed by AIMEN.



11:10 - 11:25

ROUTE 5: Preventing Waste

Can Smarter Manufacturing Reduce Waste Before It Happens?

Nihad Siddig, R&D Engineer, IRT Jules Verne, France

PAIRAMID

Manufacturing efficiency is an important part of the circularity challenge. This presentation explores how process modelling and simulation can help optimise liquid resin infusion and improve the manufacturing of complex composite aerostructures.

11:25 - 10:50

FINAL APPROACH

Can We Close the Loop?

ATLAS Cross-Project Panel & Audience Q&A

Moderator: Dr. Sadik Omairey, Senior Research Fellow, Brunel Composites Centre, United Kingdom

11:50 - 12:00

LANDING

Key Takeaways & Closing

Dr. Sadik Omairey, Senior Research Fellow, Brunel Composites Centre, United Kingdom

