

## HVM-Aero - High Value Manufacturing Catapult for MTC Aerospace Centre (110135)

*Project Partners: The Manufacturing Technology Centre (lead)*

The Manufacturing Technology Centre (MTC) develops and proves innovative manufacturing processes and technologies in partnership with industry, academia and other institutions, raising the UK's competitive advantage by validating and implementing concepts identified from primary research.

The aim of this £15m project undertaken by the MTC was to establish a national Aerospace Research Centre, which would enable leading edge aerospace research and projects between MTC engineers and industry experts to define aerospace technologies for the future. The Centre forms part of the MTC's research and development campus which includes the MTC's Advanced Manufacturing Training Centre, established to address the manufacturing skills shortage.

The 8,000-square foot Aerospace Research Centre on the MTC campus is a facility which will provide a hub for the development of new aerospace manufacturing systems to full industrial scale.

Current projects are investigating processes and technologies to reduce carbon emissions from engines with research focusing on tooling for assembly, additive manufacturing and automation to improve engine design, making them more fuel-efficient and reducing the time to manufacture. The Centre is working on next generation innovations such as improved assembly technologies to improve laminar wing flows and reduce surface contamination to reduce drag and enhance aircraft performance.

Digitising manufacturing and other big data technologies are already being adopted by aerospace with many aerospace companies investing significant resources in this area, aiming to deploy it within many of their operations. This Fourth Industrial Revolution is driven by advances in sensor technology, connectivity and data analytics and the Centre is a partner in leading the UK strategy for this.

The Centre was formally opened at the MTC in Coventry in 2015. The opening ceremony was performed by Anna Soubry MP, who was the Minister for Small Business Industry and Enterprise.

**Table 1: Summary of the project grant details**

Project	Funding	Lead Partner	No. of Partners	Partner Composition	Duration
HVM-Aero	£15m	MTC	1	1 catapult	Jan-14 to Mar-15

**Table 2: Summary of the project focus areas**

ATI Value Streams	ATI Enablers	ATI Attributes	Strategic Horizon
Whole Aircraft	Aerodynamics	Safety	Secure
Structures	X Manufacturing	X Cost	X Exploit
Propulsion	X Materials	Environment	X Position
Systems	Infrastructure	X Fuel Burn	
	Process and Tools	Operational Needs	
		Passenger Experience	