Meggitt Modular Modifiable Manufacturing (M4)

Meggitt Aerospace Limited, University of Sheffield (AMRC), Manufacturing Technology Centre Limited, IBM UK Limited

Meggitt are working in collaboration with the Advanced Manufacturing Research Centre (AMRC), the Manufacturing Technology Centre (MTC), Cranfield University and IBM UK.

This project aims to overcome the challenges associated with diverse, highly complex product offerings supplied to the aerospace sector. The work programme will challenge current value stream conventions, by capitalising on the integration of digital tools to enable multi-component work flows.

It targets improving productivity and operational excellence, through dynamic scheduling, generating simulations and data analytics to predict capacity requirements and performance, visibility and traceability of components.

Shop floor operators will be supported through fully adaptable, intelligent work benches, autonomous intelligent vehicles to provide "smart box" sub-assemblies and component parts, digital work instructions and smart tools including laser projected guides to minimise error, control traceability and minimise unnecessary waste during the production processes.

Meggitt aim to demonstrate the integration of 3 or more diverse product value streams into one, increasing both operator knowledge and capability and maximising utilisation of assets. Meggitt believe this development will yield a significant increase in productivity when applied across their product lines.

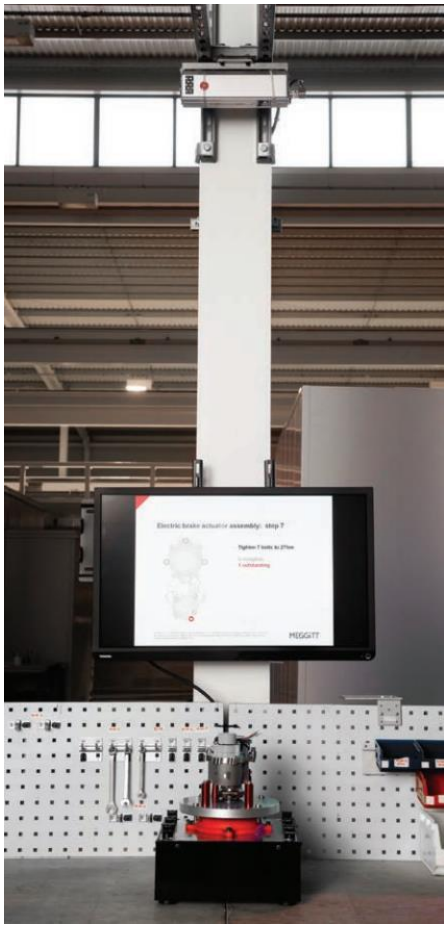

Table 1: Summary of the project details

Project	Funding	Lead Partner	No. of Partners	Partner Composition	Duration
M4	£5.0m Total £2.5m Grant	Meggitt Aerospace	4	2 large companies, 2 research organisations	Jul 2015 - Jun 2018

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	x
Propulsion		Materials		Environment		Position	x
Systems	x	Infrastructure		Fuel Burn			
		Process and Tools		Operational Needs			
				Passenger Experience			