

Digital Reconfigurable Additive Manufacturing facilities for Aerospace (DRAMA Programme)

Key Aims

- Develop capability across UK aerospace supply chain.
- World's first digital twin reconfigurable AM facility. Enables simulation of all AM implementations.
- Help to identify and build business cases for AM.
- Reduce cost and risk of investment and set-up.
- Reduce the time and cost of planning and validation.
- Develop products and processes.
- UK skills development
- Access to knowledge and experts in all areas of AM.

Why is Additive Manufacturing important for aerospace?

Additive Manufacturing (or 3D printing) enables: -

- Complex parts, fully optimised for functionality to be manufactured, often allowing designs which are difficult or impossible to make conventionally
- Greatly reduced lead times, material and energy usage
- Lightweight parts having strengthening or stiffening only where needed
- Rapid production of prototypes, jigs and fixtures

To enable the UK to take a leading position in the exploitation of AM, a method of de-risking the adoption of AM is required to effectively deliver new and enhanced components, ensuring cost and quality targets are achieved.

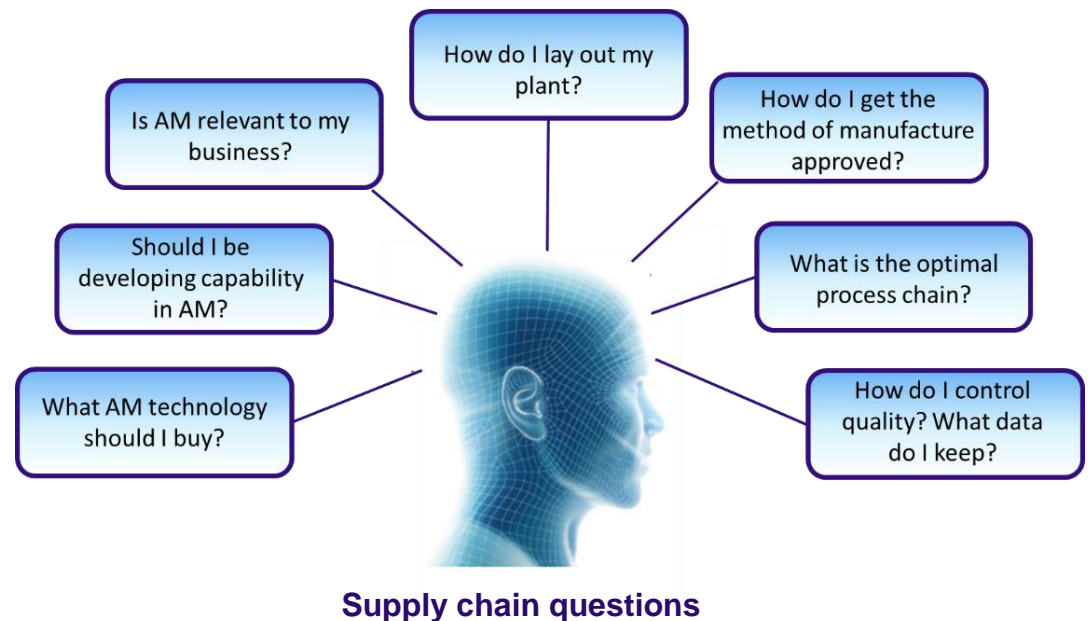


Courtesy of EWIRA Clean Skies Project

What is DRAMA?

DRAMA is a three year collaborative research project which started in November 2017.

The consortium is led by the Manufacturing Technology Centre (MTC), the home of the National Centre for Additive Manufacturing (NCAM). The project will help build a stronger AM supply chain for UK aerospace by developing a factory simulation capability. The entire AM process chain will be simulated to create a digital twin, enabling the cost of process development to be de-risked by carrying it out in a virtual environment. The facility will be reconfigurable, so that it can be tailored to fit the requirements of all hardware and software options, such that solutions for all levels of the supply-chain can be developed.



Programme Partners:



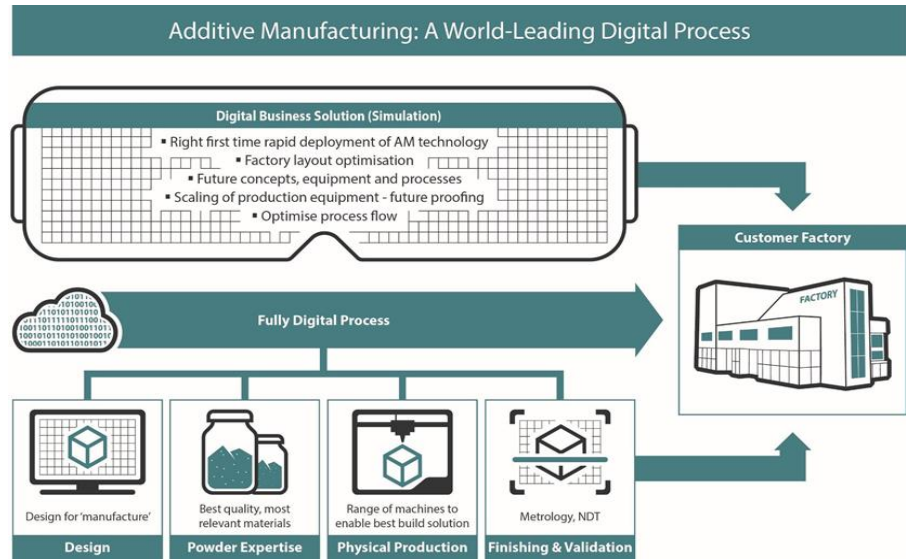
Funding Partners:



What Does DRAMA Offer?

The MAA will support DRAMA in offering the following support to the supply chain: -

- AM adoption advanced training programme
- Support for development towards supplier status
- Review product portfolio and identify potential applications for additive manufacturing
- Business case support for AM adoption
- Demonstrator products to help support suppliers design and make
- Demonstration and testing of available technologies with performance feedback



LIMITED AVAILABILITY - APPLY FOR A PLACE TODAY!

DRAMA FUNDED PILOT TRAINING AT THE ADVANCED MANUFACTURING TRAINING CENTRE

VIRTUAL CLASSROOM COURSES

1 - 1.5 hour Technical Insight into Additive Manufacturing (20 Sep 2018)

- This live online classroom session enables you with the opportunity to see presentations from our AM team and engage in an 'ask the expert' session from the convenience of any location.

1 - 1.5 hour Technical Insight into Design for Additive Manufacturing (13 Nov 2018)

- Appreciate and contextualise the unique design opportunities opened up by AM, as well as considering the challenges which come from designing for this ever-changing technology.

FACE TO FACE COURSES

1 day Advanced Introduction to Additive Manufacture (29 Oct 2018 and 4 Mar 2019)

- Delivered directly by our expert engineering team at the home of the National Centre for Additive Manufacturing, this face-to-face course will provide you with knowledge of the associated principles, processes, materials and design approaches of additive manufacturing.

5 days Practical Insight into AM (Powder Bed Fusion) (4 - 8 Feb 2019)

- Delivered directly by our expert engineering team at the home of the National Centre for Additive Manufacturing, this face-to-face course will provide you with practical experience of the end-to-end processes, including the design, production and post-processing required for AM.

3 days Design for Additive Manufacturing: Powder Bed Fusion (Metals) (12 - 14 Mar 2019)

- This hands-on practical course will provide you with the necessary skills and knowledge to be able to exploit the design freedom of Additive Manufacturing and take a design from conception through to AM processing.

A range of online E-Learning Courses are also available at: <https://training.the-amtc.co.uk>

CONTACT DETAILS

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SERVICES OFFERED

Networking Opportunities
Project Application Support
Mentoring
DRAMA Facility Access

Role of the MAA in Drama Project

- Involving SME's in the project, providing support and guidance
- Supporting potential to new entrants to AM by developing projects through part funded research
- Developing technologies relevant to the Aerospace SME supply chain in the UK
- Publicising the project throughout the Aerospace SME supply chain in the UK
- Providing support to SME's to engage in the project

