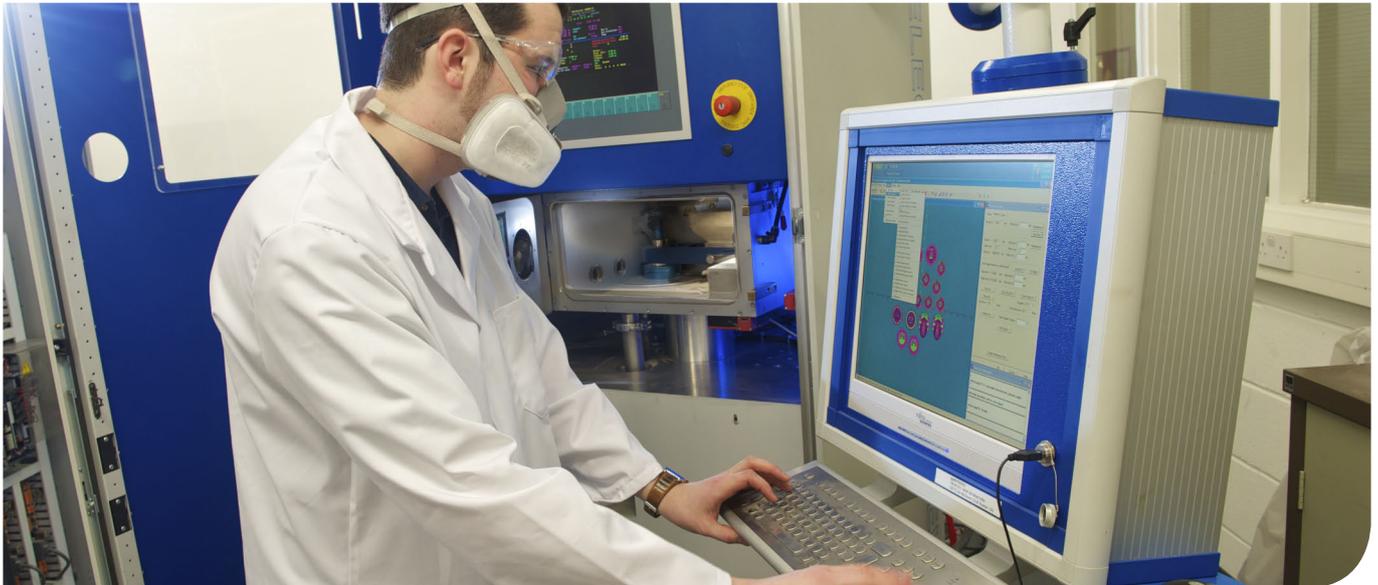


Engineering Design Academy

Sustainable Design for Rapid/Additive Manufacturing



The Sustainable Design for Rapid/Additive Manufacturing: Engineering Design Academy has been devised to enable small and medium-sized enterprises (SMEs) to access advanced design and additive manufacturing expertise at different levels of capability, dependent upon the existing knowledge of the business. The aim is for companies to develop new opportunities and embed the principles of sustainable manufacturing at the heart of product development.

Additive Manufacturing (3D Printing)

Additive manufacturing is the term used to describe a number of technologies that build parts in a layer-by-layer method in a variety of materials.

Sometimes referred to in the popular media as '3D printing', additive manufacturing allows increased geometric freedom and is particularly applicable to high-value, low-volume products, where the ability to customise is important.

Additive manufacturing processes take three-dimensional (3D) computer aided design (CAD) data and directly print or grow parts in a variety of materials, such as plastics, ceramics and metals.

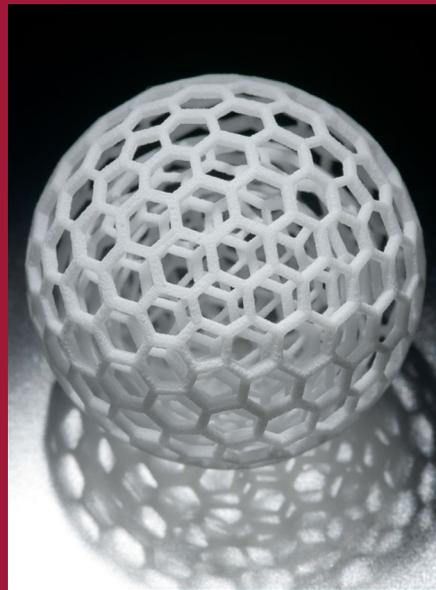
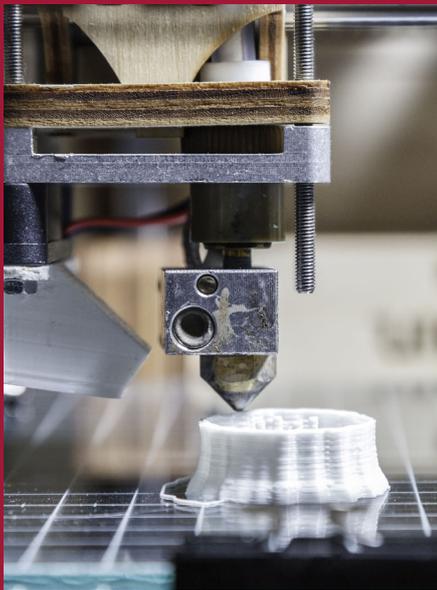
What the Project Offers Your Business

Managed by the Lancaster Product Development Unit at Lancaster University's Engineering Department, our experienced staff work with SMEs to provide:

- Specialist expertise and advice on product development
- Intensive research and development projects undertaken by Lancaster University Engineering students or graduates (typically up to four weeks)
- Software subsidy support for implementation of advanced design and manufacturing packages
- Access to a range of design and additive manufacturing technologies and processes, both at Lancaster University and via private sector partners
- Tailored workshops on design and additive manufacturing for different sectors
- Identification of wider funding opportunities and collaborators

"If not for the university's manufacturing support, our project's progress could have been delayed for a number of months. Once introduced, the potential benefits of both (medical) products will be significant because of the patent protection and patient increased safety; there is nothing similar on the market. It will help increase turnover and win us new business."

James Lyon, Managing Director,
AmDel Medical Limited.



Cost

The cost is fully met by the European Regional Development Fund and Lancaster University with input from private sector partners.

Benefits

- Develop ideas you've lacked the time and resources to explore
- Respond to market opportunities, develop new products and increase profitability
- Develop prototypes in a wide variety of materials
- Design, analysis and optimisation of parts, components and assemblies
- Enhanced design capability and technical knowledge
- Complimentary benefits such as waste reduction, recyclability of parts and materials

Eligibility

- The project can assist SMEs with fewer than 250 employees and a turnover of less than €50M, located in Cheshire, Cumbria, Greater Manchester or Lancashire
- SMEs should possess clear identifiable growth potential, in creating and safeguarding jobs
- SMEs should be able to identify a relevant need to be addressed and for which the company are not seeking support from elsewhere
- Most sectors are eligible excluding retail and agriculture. The project has previously benefited companies in the healthcare and bio-medical, creative and consumer products sectors as well as those allied to advanced engineering and materials

Case Study: AmDel Medical Limited

AmDel Medical Limited is a Liverpool based business that provides medical devices to the UK and Ireland healthcare markets. The business works closely with the NHS and has collaborated with Lancaster University on several product development projects.

New medical device for eye injections

Lancaster University's advanced manufacturing team helped AmDel Medical Limited modify the design for an 'optical speculum' based on feedback from surgeons, and built 30 rapid prototype fabricated sterile prototypes for clinical assessment. The new device could potentially reduce treatment times by approximately 30% and costs by 40%, which would equate to approximately a £2m annual saving to the NHS.

For further information contact:

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