

ERDF Catalysing Growth Through Research for Transport Equipment Manufacturing.



European Union
European Regional
Development Fund



UNIVERSITY
of **DERBY**



Loughborough
University



What it is all about?

This ERDF project is a partnership between the University of Derby and Loughborough University, focussing on activities related to transport equipment manufacturing and associated supply chains in the D2N2 area.

The project aims to support small and medium enterprises (SMEs) to:

- > Develop new products, processes and services and bring these to market e.g. design, feasibility, proof-of-concept, certification and others
- > Integrate new or existing products, systems and processes for use in different applications
- > Improve manufacturing processes and introduce equipment enhancements which improve throughput or efficiency - e.g. automation of manual processes, recovery and re-use of end-of-life materials and others

It will do this by using a mixture of:

- > Fully funded access to technical expertise from both universities
- > Part-funding (grants) towards external costs of innovation projects
- > Part-funding (grants) towards SME collaboration projects with any UK university/research institute

derby.ac.uk/researchforgrowth
lboro.ac.uk/enterprise/inet/

SAVE THE DATE:
WEDNESDAY
31ST JANUARY
BREAKFAST
EVENT
ARRIVING AT 8AM.

PLEASE COME AND JOIN US

CALL US IF YOU REQUIRE ANY FURTHER INFORMATION



Catalysing Growth for Transport Equipment Manufacturing

Data Science and Engineering Innovation Event

Rolls-Royce Heritage Centre
Wednesday 31 January
Breakfast from 8am
Lunch and Networking from 12pm

Are you:

- > an engineering, advanced manufacturing or data science business looking to design new or optimize existing products, processes or services?
- > an SME based in Derbyshire or Nottinghamshire?
- > interested in engineering simulation, product design, vehicle dynamics, additive manufacturing or data science and applications of digital technologies?

Join our morning event to find out how we can help your business - with fully funded technical expertise, access to facilities, grants for innovation projects and R&D collaboration.

e: businesshub@derby.ac.uk
w: derby.ac.uk/data-science



Access to expertise in:

Advanced materials and composites

Including

- > Advanced materials including fibre and nanocomposites
- > Advanced surface coating technologies
- > Adhesion and tribological testing of surface coatings
- > Mechanical testing and microstructural analysis of materials
- > Forensic studies of failed components

Advanced manufacturing and process optimisation

Including

- > 3D printing, metal additive manufacturing
- > Modelling and optimisation of metal forming technologies
- > Operations and supply chain management
- > Design and analysis of manufacturing systems
- > System modelling & simulation, business improvement
- > Lean operations and sustainable management

Product design and optimisation

Including

- > Mechanical design and optimisation using CFD and FEA
- > Material selection using Cambridge Engineering Selection software
- > Rapid prototyping and testing
- > Structural design for highway, railway and airport equipment

Vehicle Dynamics and thermofluids

Including

- > Advanced control in electronic power system and automation
- > Vehicle and drive simulators with closed loop control systems
- > Vehicle dynamics and dynamics modelling
- > Heat transfer, combustion and two phase flow
- > Turbomachinery
- > Development/validation/application of Large-Eddy Simulation for turbulent flow
- > Flow instability and transition

Application of digital technology and data science

Including

- > Artificial intelligence
- > Application of VR in design and manufacturing
- > Data science machine learning
- > Natural language processing (sentiments and emotions)
- > Human-computer interaction
- > Cyber security

Grants for SME innovation projects

- > For projects developing new or significantly improved products, processes or services
- > Covers external capital and revenue costs

Collaborative R&D projects

- > SME-led projects working with at least one UK based university/research institute
- > Covers internal revenue costs

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