



Transforming engineering for the future  
Inspiring the next generation of engineers



Net-zero emission legislation is changing our future- everything we make will need to be completely re-imagined and re-engineered to meet these targets.

The global engineering landscape is shifting. Shorter product development times, faster routes to market and the need for through-life product sustainability for some of the most complex products the world has ever seen provides us with an exciting opportunity. To maintain engineering leadership, UK businesses need to develop new ways of working that enable agility, flexibility and competitive advantage, that will support future generations socially, economically and sustainably.

Digital technologies will transform the way engineers operate to meet new product demands. Industry requires new skills and digital test beds, from exploring the best tools to use, the technologies to invest in, to exploiting value from vast quantities of data

generated through the product lifecycle. The digital revolution is changing the way we live, work and learn.

DETI is part of the UK's action plan for digital transformation. Capitalising on the West of England's highly collaborative network of R&D, academia, and industry, it brings together leading companies, technology disruptors and universities to push the boundaries of the digitally enabled engineering of the future. It forms part of the West of England Combined Authority's commitment to prioritising cross-sectoral innovation, which will help businesses become more productive and resilient, develop new workforce skills and employment opportunities, and help the shift towards a low-carbon economy.

Underpinning the UK in its vision to become global leaders in future engineering, DETI will be the West of England's delivery mechanism for national industrial programmes such as Made Smarter and the Industrial Strategy Challenge Fund (ISCF).

*The West of England is home to an advanced engineering and aerospace cluster, along with the world's leading composites technology R&D facility, the National Composites Centre (NCC). Combined with leading universities and a vibrant digital community, the region has become a test bed for the innovative use of technology in manufacturing and is uniquely placed to lead advances in digital engineering for the UK and beyond.*



DETI will showcase world class digital engineering practice and concepts on industrial scale test beds, enabling industry to engineer sustainable high-performance products, with reduced cost and time to market.

# How DETI can help you



DETI is your research and innovation partner, supporting you on your digital journey, helping you to become more productive, agile and effective in meeting future challenges.

Digital Engineering Technology & Innovation (DETI) is a strategic programme of the West of England Combined Authority (WECA), delivered by the National Composites Centre (NCC) in partnership with the Centre for Modelling & Simulation (CFMS), Digital Catapult, the University of the West of England (UWE), the University of Bristol, and the University of Bath. DETI is funded by £5m from WECA, with co-investment from the High Value Manufacturing Catapult and industry.

## Showcase your digital technology and engineering applications

DETI will develop and maintain a state-of-the-art industrial test bed, built on 5G technology<sup>1</sup>. Utilising collaborative design, connected manufacturing facilities and high-performance computing capabilities, we can give you secure access to industry relevant data and problem statements.

We will pioneer development and testing of powerful new engineering tools and methods including Artificial Intelligence/Machine Learning, digital twin, visualisation, high-performance computing and cyber security technologies, helping you to showcase your capabilities to your potential customers.

## Accelerate your digital engineering transformation

DETI will provide IT, digital technology and advanced engineering expertise to architect and prove out digital engineering solutions, coordinating on your behalf with the digital supply chain, building solutions which are ready for adoption.

Developing and demonstrating an effective digital transformation strategy for your business is crucial to retaining your competitive position. We can provide access to digital prototypes that will de-risk implementation, demonstrate ROI and increase your agility.

We will coordinate and deliver on key industry challenges and invite companies of all sizes to collaborate with us on proof of concept projects. These PoC studies will address barriers to digital transformation across multiple sectors, demonstrating the value proposition of today's market ready adoption opportunities and tomorrow's innovation solutions.

## Enhance your digital capability

Encouraging diversity and inclusivity, we want to inspire the next generation of engineers and the creative opportunities that engineering offers to solve global problems and bring about real change.

DETI will initiate a comprehensive skills programme to ensure the current and future workforce is digital-ready. We will create courses based on the analysis of capability gaps discovered through the DETI programme, contributing to a sustainable economy.

We will help you to examine the tools, technologies and processes you need to rapidly accelerate engineering capabilities and identify the skills needed to embed a digital culture into your organisation.

<sup>1</sup> 5G-ENCODE is a £9m Department for Digital, Culture, Media and Sport (DCMS) project to deliver clear business cases and value propositions for 5G application for the manufacturing industry. Led by Zeetta Networks, the project will deliver a private 5G network at the National Composites Centre.

To invest or collaborate  
with DETI visit;

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