

WECA invests £5m to kick-start revolution in digital engineering



TD-Info¹ welcomes this valuable initiative and is pleased to be supporting it. This document shares information provided to us in a Press Release that was issued to coincide with the DETI launch.



Plans to revolutionise the region's advanced digital engineering sector have been kick-started by the [West of England Combined Authority \(WECA\)](#).

Watch DETI video <https://youtu.be/ynngAWO9KR4> (2:45)

At its meeting on 31 January 2020, WECA awarded £5m to the new **Centre for Digital Engineering Technology & Innovation (DETI)** – to match-fund £5m from West of England businesses who are at the forefront of industry. It is a flagship investment which supports the region's Local Industrial Strategy and is one of the building blocks in creating a Global Centre of Innovation Excellence – bringing together innovative expertise to solve future challenges.

DETI is a research, innovation and skills initiative – it's a collaboration of industry and academic partners led by the [National Composites Centre \(NCC\)](#) – which sets out to develop and accelerate digital engineering across multiple industry sectors – to benefit future generations of engineers and engineering products, and to help tackle global challenges.

West of England Mayor, Tim Bowles said: "Our region is a global leader in high value design and innovation, and we want to make sure we retain that position in the face of global competition. DETI will help us do that by putting the West of England at the forefront of the fourth industrial revolution and bring together the worlds of digital technology and advanced engineering.

"DETI will be nationally important centre, based in the West of England. It will help secure the future of the aerospace and advanced manufacturing industries and is a key part of our Local Industrial Strategy ambition to strengthen cross-sectoral innovation and support our region's ambition for clean and inclusive growth."

The DETI project will develop training courses related to advanced digital engineering, with the aim of increasing the skills and retraining those in the current workforce. It will also engage with schools, particularly in less affluent parts of the West of England, with the aim to reach 1,000 children and inspire them to pursue a career in digital engineering.

DETI is not a new building but will use existing facilities and assets – at the National Composites Centre (NCC) and another crucial partner in the collaboration, the [Centre for Modelling and Simulation \(CFMS\)](#), at the Bristol and Bath Science Park – to undertake its

¹ [Team Defence Information](#) is an established and trusted membership organisation based near Bristol. We are a collaborative association that facilitates the UK Ministry of Defence (MOD) and Industry working together on transforming secure information sharing across the supply chain and through-life support network. We bring into play the collective insights, knowledge and [innovations](#) of our members to help the MOD deliver its objectives for equipment and information. TD-Info is supporting the [MOD LOGNET event](#) in March 2020 and LOGNET sub-groups on **Additive Manufacturing, Artificial Intelligence and Robotics & Autonomous Systems**.

research, innovation and skills initiatives. It brings together the wealth of specialist expertise from around the region and harnesses it to maximise opportunities for a better future.

It will work with leading companies and support industry to reduce carbon emissions by producing better products – products that are lighter, more fuel efficient and have less waste – through undertaking research and innovation in the virtual world.

Businesses investing in DETI alongside WECA and the NCC include **Airbus, Rolls-Royce, GKN, Baker Hughes, CFMS** and **UWE**. DETI will also receive contributions in kind from Siemens and Toshiba. The project has already engaged with over 100 companies across the region, including disrupters TechSPARK and Smartia, and companies covering sectors such as renewable energy, marine, aerospace and electronics.

Richard Oldfield, CEO of the NCC, said: “The world faces unprecedented challenges which will require step changes in how society uses resources. DETI will bring together leading companies and tech disruptors to create the design and digital engineering of the future. It will help cement the UK’s world leading position as an engineering nation, helping to overcome the world’s most complex challenges.

“We have already engaged with a really diverse range of companies across the tech, design, creative and engineering sectors to create an exciting collaboration where skills collide. With this investment from WECA, matched by industry, we will spend the next two years building skills, creating jobs and making the West of England the go-to place for UK high value design and engineering – putting the region on the world stage as a globally significant engineering and tech area.”

DETI aims to provide a focal point for industry, researchers, educators and technology providers to co-create new tools, techniques and methods to transform key aspects of advanced engineering and systems integration. It will support future generations socially, economically and environmentally.

Leader of South Gloucestershire Council, Cllr Toby Savage said: “Over the past decade or so the **Filton Enterprise Area, UWE, MoD** and the **Bristol and Bath Science Park** have formed a powerful network of world-leading innovation in aerospace, engineering and defence. We are therefore delighted to see South Gloucestershire hosting the DETI project which we believe will be of national and international significance to the future of clean energy and low carbon transport.

“This geography is increasingly recognised as the South Gloucestershire ‘TEC ARC’ and we look forward to working closely with multiple stakeholders to ensure that the project grows this critical sector of our economy, but also engages widely across the region through schools and colleges to give new experiences and opportunities in the development of STEM skills.”

APPENDIX

DETI is a collaboration between The National Composites Centre, The Centre for Modelling and Simulation, University of the West of England, University of Bristol and will involve the University of Bath. Its WECA funding of £5m will be matched with £5m of industry investment.

Advanced engineering is a priority sector in the West of England. It employs 30,000 people directly with many thousands more in the supply chain, and supports 2,000 businesses. The region specialises in complex high value design – such as cars, aircrafts and ships – and engineering.

However, the sector is facing challenges and needs a new approach. Disruptive and new digital technologies, such as artificial intelligence and virtual reality, are changing the way we live and work. These technologies provide the capability to develop complex products quicker, at lower cost, with increased quality and reliability. DETI is the West of England's answer to turn these challenges into opportunities.

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DETI is not a new building. It will use existing facilities and assets to undertake its research, innovation and skills initiatives.

DETI will develop technologies, tools, methods and skills across three core areas:

- *Digital design* - Developing digital design tools and processes powered by advanced simulation and artificial intelligence, providing the basis for more innovative and sustainable engineering products to be developed. This will minimise the need for physical prototyping and testing and therefore reduce the time to market for new products.
- *Digital manufacturing* - Expanding and advancing the application of digital and automation technologies to address the challenges of manufacturing productivity and cost whilst empowering the workforce.
- *Skills and workforce development* - Providing digital skills, training and career development for the engineering workforce of the future. Creating an integrated education and workforce development capability programme and talent pipeline that will inspire, introduce, convert and specialise, promoting an inclusive diverse workforce, crucial for creativity and innovation.

Digital technologies will play a major role in helping the UK address the climate change challenge, and DETI will therefore also play a significant role.

DETI supports the delivery of the West of England's Local Industrial Strategy, which sets out our region's ambition for clean and inclusive growth, including plans to strengthen cross-sectoral innovation.

DETI has the potential to reduce carbon emissions on a scale that achieves lasting and transformational change. DETI is working with leading companies in a sector of the economy that can have a major impact on reducing carbon emissions. DETI's role is to support industry to produce better products; products that are lighter, more fuel efficient and have less waste through undertaking research and innovation in the virtual world. DETI's services will be used by companies in transport, energy and construction, which all must play a major role in meeting this legally binding target.

The NCC is crucial partner in the Airbus Wing of Tomorrow Programme – the biggest research and technology programme taking place in the whole of Airbus globally – and is working hard to push the boundaries of composites manufacturing way beyond the current capabilities.

About Team Defence Information

TD-Info is a membership organisation funded by Industry with MOD as partner that facilitates “*collaborating and optimising the value from business information working across Team Defence*”.

As a trusted membership organisation, Team Defence Information (TD-Info) brings together Industry and the MOD, collaborating to optimise the value from business information working across Team Defence. Funded by Industry, with MOD as partner, TD-info acts as a catalyst and facilitator whose activities complement those of fellow trade organisations ADS and techUK.

TD-Info represents the interests of both suppliers of ICT services and of Industry users of the same ICT services. Typically, these users are materiel manufacturers and through-life support providers to the MOD. TD-Info members include prime contractors and Small to Medium Enterprises (SMEs) involved in defence supply chains and support networks. Our joint Industry-MOD governance drives coherence and continuity, with representation through to the Defence Suppliers Forum.

Participation in TD-Info activities provides strong 'multiplier' benefits. Working in a trusted forum, collectively we can draw on real-world use cases involving Team Defence (i.e. MOD and Industry) and engage subject matters experts from varied disciplines to develop pragmatic solutions for the common good. TD-Info helps shape and promote global standards and interoperable ways of working designed to increase efficiency and effectiveness. Corporate knowledge is captured and shared via our members' website www.teamdefence.info.