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Digital Engineering & Test Centre

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Loughborough University London

The Digital Engineering

We live in exciting times!

We are at a point in history where gaming technology is moving from teenagers' bedrooms into the world of automotive product and manufacturing process design.

This coincides with industry's need for more efficient testing and validation of complex systems, while controlling an increasing number of safety related functions on vehicles.

All this at a time when the UK's valuable High Performance Computing (HPC) clusters are becoming more available and affordable for computationally demanding industries such as automotive engineering.

Welcome to the Future

Even the simple passenger car is changing into an autonomous, driverless, multifunctional 'pod', and will quickly become the normal transport mode to Generation Z.

So what has all this got to do with Digital Engineering & Test?

These fantastic developments don't happen overnight or without cross-sector co-ordination.

Working with the automotive, gaming, HPC and big data sectors, the Digital Engineering & Test Centre (DETC) was set up to find digital solutions to the next big automotive challenges.

Its focus is on making sure these new technologies and the skilled jobs they create are anchored in the UK, by supporting cross-sector collaborators with the DETC's own engineering staff, virtual engineering labs, and PhD researchers.

About us

The DETC is a joint venture between the High Speed Sustainable Manufacturing Institute and Loughborough University London.

Based on the university's campus on the Queen Elizabeth Olympic Park in London, the DETC is also a Spoke of the Advanced Propulsion Centre, and its core activity is funded by the department for Business, Energy and Industrial Strategy (BEIS).

We offer

- Practical and financial support for innovative research into digital engineering, test and manufacturing
- Connections between SMEs, universities, Tier1s and OEMs
- Insight into the challenges faced by the automotive industry
- A route to getting involved in finding the solution



THE DIGITAL ENGINEERING & TEST CENTRE AFFILIATION

We run an 'affiliate' model of engagement, making the DETC free to join and open for all. Our aim is to help businesses halve the time and double the value of automotive engineering in the UK.

Pathways to Collaboration

ROADMAPPING THE DIGITAL FUTURE

Two roadmaps were produced following a workshop with representatives from academia, automotive and gaming industries. Download them at **www.detc.uk**.

CROSS SECTOR ENGAGEMENT

The DETC is keen to engage with all sectors, from finance to medical, to find the best digital solutions for the automotive industry.

GAMING IN ENGINEERING

The Centre aims to bridge the gap between gaming and digital technologies by using software platforms and High Performance Computing (HPC).

FUNDED COLLABORATIVE PROJECTS

These industry-led projects are independently assessed for novelty, industry need, business case, additionality, and their ability to add to the Centre's DETC capability.

INDUSTRY 4.0

The DETC co-funds a number of PhDs, whose research covers Digital 4.0 and how it interfaces with manufacturing systems.

VIRTUALLY CONNECTED HYBRID VEHICLE

A network of PhDs is aiming to provide an environment where the UK hybrid vehicle powertrain innovators can develop, test, and demonstrate their geographic distributed hardware in the loop solutions.