



The Virtual Engineering Centre (VEC) is leading the field in how the digital revolution can be maximised by industry, delivering innovative solutions to industry through the exploitation of academic research and the latest scientific and technology infrastructure. Enhancing capability through Virtual Innovation, the VEC is the UK's leading centre of Virtual Engineering technology integration and digital solutions for industrial and commercial applications.

Underpinned by the academic excellence of the University of Liverpool, the VEC delivers advanced modelling, simulation and visualisation solutions. Through a strategic partnership with the Science and Technology Facilities Council's Hartree Centre, the VEC also provides access to the UK's most powerful supercomputing facilities to enable business growth and competitiveness.

For more information about how your organisation could benefit from working with the Virtual Engineering Centre:

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STRIVE: Driving virtual engineering across the supply chain

A three year collaborative R&D project, STRIVE (Simulation Tools for Rapid Innovation in Vehicle Engineering) aimed to deliver a new digital supply chain to develop globally competitive products.

To address the challenges set by Bentley Motors, the Virtual Engineering Centre (VEC), in conjunction with the Northern Automotive Alliance (NAA) brought together Liverpool City Region-based technology SME's OPTIS Northern Europe and OPTIS Pristine (formerly Icona Solutions) and Valuechain.com to provide collaborative, integrated solutions.

As technical lead the VEC provided new innovation process models and cutting-edge virtual tools, with the NAA bringing project management expertise and an understanding of the automotive sector.

Access to the VEC's open innovation 'sandpit' facilities and bespoke virtual reality labs, enabled the companies to co-innovate, develop and explore solutions in a virtual world and work on innovative solutions.

An essential element of the project was to gain understanding of Bentley's existing processes to

ensure smooth integration and adoption of new developments, as well as to demonstrate the benefits of virtual engineering and gain trust in the new toolsets and processes across various teams at Bentley.

OUTCOMES: BENTLEY

"The positive impact on the business gained from the deployment of the new toolsets at the Bentley site has been a direct result of this innovative collaboration between us, the VEC and agile Northwest SMEs. Existing 'off the shelf' hardware and software solutions, including toolsets already in use, did not offer the 'step change' we have achieved through STRIVE to reach our strategic goals."

Mark Harding, Manufacturing Project Leader for Continental and Flying Spur at Bentley Motors

Through STRIVE and its development of new digital processes and procedures, Bentley was able to achieve a key strategic target, reducing its product development time, while enhancing build quality.

The project contributed to the development of staff at Bentley, learning new digital processes resulting in new roles and with increased responsibility for team members.

OUTCOMES: SME PARTNERS

As a result of STRIVE all SME partners have experienced growth within their businesses, in both revenue and new jobs created, with OPTIS seeing an increase of 11 jobs and Valuechain.com employing new staff and securing 3.2M Euro project to innovate supply-chain collaboration and intelligence solutions.

OPTIS now has significant sales potential with Bentley as they roll out the new tools into their product development process, and as the tools become available to the wider automotive sector and beyond.

Through the collaboration project, Valuechain.com has been selected by Bentley to provide business intelligence solutions through the virtual and physical product lifecycle, something that would have been extremely difficult for an SME to achieve without such a high profile and collaboration with key partners and academic rigour.

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