SUPPORTING NEW PRODUCT DEVELOPMENT AT BENTLEY MOTORS

The Virtual Engineering Centre’s unique ‘sandpit’ model allows technology organisations to enhance their capabilities through virtual innovation, accessing academic research and the latest scientific and technology infrastructure.

The Virtual Engineering Centre (VEC), in partnership with specialist light simulation experts, Optis has enabled Bentley Motors to integrate the use of virtual prototypes into their new product development process, improving design at an early stage when changes are less costly, accelerating time to market for new models.

THE ISSUE
Definitive British luxury car manufacturer, Bentley Motors is dedicated to developing the world’s most desirable high performance cars. Bentley was keen to work collaboratively with the VEC and technology partner Optis to assess the value of integrating Virtual Reality (VR) and high fidelity simulation into their product development process and, if proven, to integrate into all future new product programmes.

THE SOLUTION
Sharing engineering data on their flagship model the Mulsanne, Bentley Motors and the VEC developed a unique framework to evaluate the assessment, verification and integration of VR technologies and immersive environments. Through the integration of key software into a fully tracked 3D stereoscopic environment, verification studies were undertaken on the existing design. The studies demonstrated that utilising the expertise and technology available, provided a platform for robust decision making and supported improvements for design. Due to the success of this project, Bentley engineers have now adopted this approach for the development of their next generation products.

THE BENEFITS
Having developed a robust and accurate process in the development of their virtual prototypes with the VEC, Bentley engineers are now able to recreate new models virtually, providing a powerful design review tool. This process framework, incorporating the latest technologies, has enabled Bentley Motors to speed up their product development times through better understanding of design data at a earlier stages in the design process, reducing the number of physical prototypes required, eliminating the need for late stage modification and resulting in a reduction in overall development costs.

WORK WITH US
The Virtual Engineering Centre (VEC) delivers 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 for industrial and commercial applications.

A collaboration between the University of Liverpool and the Hartree Centre, Science and Technology Facilities Council (STFC) Daresbury Laboratory, the VEC delivers advanced modelling, simulation and visualisation solutions and ease of 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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