

Developing efficient modelling of manufacturing capabilities

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Industrial & societal challenge:

- The reduction of composite parts costs is critical for a wider range of industries to utilise their engineering benefits and the deployment of manufacturing simulation tools is key to this cost reduction
- The two main challenges for greater use of simulations in the design and manufacturing cycle of a composite part are the accuracy and speed of these simulation predictions

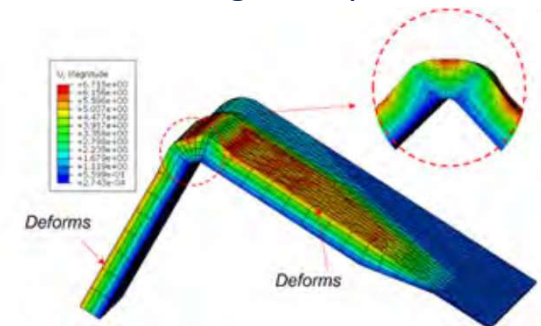
What have we developed:

- A simulation tool that provides uniquely fast, and accurate simulations for the manufacturing of composite components
- The automated software accurately predicts the prediction of thickness and optimises tooling for increased part quality (validated by a physical demonstrator of industrial size and complexity)
- The simulation model process is entirely automated, which allows users with only a cursory knowledge of the complex mathematical models behind the software to be able to use it

What does this offer:

- The automated simulation tools developed are available for industry use from the University of Bristol and the National Composites Centre, which results in significant cost savings per part by reducing the need for physical trials, which could in turn eliminate one or more design cycles

The Digital aspects



The Physical aspects

