

# Datum Tool Design, Ltd.

## CATIA improves design collaboration with customers and doubles profits



*"CATIA Version 5 gives us significant productivity gains and a clear advantage over our competitors."  
– Michael Maguire, Joint Managing Director, Datum Tool Design*

### Highlights

- *Datum Tool Design sought a computer aided design (CAD) solution to help meet the design demands of its customers and facilitate data sharing*
- *CATIA enabled Datum to become involved in its customer's projects earlier in the design process and to readily share project design data*
- *Using CATIA, Datum has won new business and doubled the company's size and profits, while tripling productivity and eliminating data translation errors.*

### Increasing use of composite materials in aerospace

Aerospace manufacturers continually strive for efficiencies in performance to reduce operational costs. To help them achieve these performance efficiencies, many are turning to the use of composite materials. Composites are a homogeneous material combining advanced fibres such as carbon, Kevlar and glass. Composite materials can reduce the weight of an aircraft by as much as 35 percent, allowing an increase in payload or range and reductions in fuel consumption.

Datum Tool Design, founded in 1996 and based near Belfast, Northern Ireland, specialises in the design of moulds for composite components and tools. Mould design requires precise knowledge of the tooling methods, tool materials, component manufacturing processes and close collaboration with the manufacturer. Tight dimensional tolerances on parts with complex 3D forms and practical matters such as stiffness and ease of handling of the moulds must be considered.

### Collaborative design requires collaborative design tools

To meet the demands of the aerospace industry for early design involvement, Datum Tool Design invested in CATIA to achieve a common design platform for its designers and those of its customers. "We align data with our customers, working on the same version of CATIA and in the same project environment to eliminate translation errors," said Michael Maguire.

Because many of the components made from Datum Tool Design's moulds are critical items in the primary aircraft structure and are subject to high loading during service, Datum manages the tool project for its customers. Tool moulds are designed with the aid of CATIA's Structural Analysis module and Datum oversees manufacturing at the toolmaker's premises to ensure optimum performance.

### **CATIA helps Datum win business and increase profits**

Initially, Datum Tool Design selected two seats of CATIA V4. After working with Airbus during its evaluation of CATIA Version 5, Datum Tool Design decided to add two seats of Version 5 and used its experience with early adoption to help Airbus set goals and standards for its own implementation.

"Designing in CATIA has enabled us to win business," Maguire said. "Our company has doubled in size and our productivity has tripled using the modelling available in CATIA. Because of our knowledge of Version 5, we were able to become more involved in the decision making process of our customer.

We also found that modelling, drafting and modifications were much quicker in Version 5, giving us significant productivity gains and a clear advantage over our competitors," he added. "CATIA has led to the doubling of our profit over the last two years."

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