

## Airbus speed CAD design with witness

# AIRBUS GROUP

### Airbus Group

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### Simulation and Forecasting Technology role

Layout and operations optimization, event-based CAD tool.

### Sector

Aerospace and Defence

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**LANNER** Case Study

Airbus Speeds CAD Design with WITNESS

**Background**

Airbus has used WITNESS simulation software to play a key role in the development of a massive GBP21 million surface treatment plant at its Broughton factory in the UK. The plant is believed to be the biggest fully automated facility of its kind in the world. WITNESS was used to provide more than traditional “what if” simulation. An evolving sequence of models was built to optimise the layout and operation of the proposed plant. The software was used in effect as an animated event-based CAD tool, and the contractor’s working drawings were derived directly from the final model. According to Airbus, this is driving manufacturing simulation “to the limits.”

Airbus’s plant at Broughton near Chester manufactures wings for the Airbus family of airliners, which is currently enjoying remarkable success. Every wing for every variant of the expanding Airbus family is built at Broughton. Faced with an accelerating demand for the current range, together with new models under development, Airbus decided to install a new anodic treatment plant to prevent the process from becoming a bottleneck to production. The anodising process is used to prevent corrosion in wing components such as bulk, ribs, stringers, skins, and a variety of similar components. The components are immersed in tanks of chromic acid and heavy electric currents are passed through them. This causes a protective oxide coating to be anodically grown onto the metal surface, sealing the underlying material against corrosion.

**Related Product**

**WITNESS**  
The industry leader in 3D simulation and digital prototyping.  
The power and the flexibility.

“We’re not simulating already designed objects. We’re doing the first draft design within WITNESS, then passing it to the CAD guys saying, ‘We know this will work, now go forth, it’s out to produce the working drawings.’”  
-Jim Cruise, Airbus

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