

Simulating FAB Business Improvement at BAE Systems

BAE SYSTEMS

BAE Systems

www.baesystems.com

BAE Systems plc is a British multinational defence, security and aerospace company headquartered in London in the United Kingdom and with operations worldwide. It is among the world's largest defence contractors; it ranked as the second-largest based on applicable 2012 revenues. Its largest operations are in the United Kingdom and United States, where its BAE Systems Inc. subsidiary is one of the six largest suppliers to the US Department of Defense. Other major markets include Australia, India and Saudi Arabia. The company was formed on 30 November 1999 by the £7.7 billion merger of two British companies; Marconi Electronic Systems (MES) – the defence electronics and naval shipbuilding subsidiary of the General Electric Company plc (GEC) – and British Aerospace (BAe) – an aircraft, munitions and naval systems manufacturer.

BAE Systems used simulation software (Witness from Lanner) to improve production of advanced imaging devices at its semiconductor manufacturing facility. Witness has been integral to a business improvement programme that has halved product cycle times and increased capacity of some processes by more than 50%. As a result, the company has reduced the overall cycle-time from 90 to 35 days, increased by 60% the capacity of the ceramic stages. Furthermore, the simulation helped to remove bottlenecks and therefore to identify which machines could be optimized.

Simulation and Forecasting Technology role

Reduce cycle time, remove bottlenecks, production capacity optimization

Sector

Aerospace and Defence

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"The advantage of modelling is that every bit of data we use is real"
Miles Wallis, Process Engineer, BAE Systems

"About 50 per cent of the business improvement can be directly attributed to WITNESS."
Miles Wallis, Process Engineer, BAE Systems

"At first we did not believe the improvements that WITNESS was showing were something we could make." Says Miles Wallis, Process Engineer at BAE SYSTEMS. "About 60 per cent of the business improvement can be directly attributed to WITNESS."

Success Leads to Increased Production
BAE SYSTEMS at Towcester design and manufacture pyroelectric uncooled infra-red detector arrays for use in a range of civil, industrial and military applications. The arrays incorporate a combination of silicon and ceramic based chips and are amongst the most advanced of their kind in the world. A typical application is in the detectors used by rescue teams to locate survivors of recent earthquakes buried alive under collapsed buildings.

Production volumes at the FAB are relatively low compared with semiconductors used in consumer products, although demand for the high value devices has been increasing as more applications have been designed around the product's unique performance characteristics.

To meet this increased demand BAE SYSTEMS needed to identify ways of increasing production at the FAB without a significant increase in machinery and equipment. Experience at other plants within the group suggested that simulation and modelling using Lanner's WITNESS would provide valuable insight into the manufacturing process that could be used as part of an overall business improvement programme.

Simulating FAB Business Improvement at BAE SYSTEMS

APPLICATION:
IT System Selection

VERTICAL:
Defence & Aerospace

SECTOR:
Electronics

BENEFIT:
BAE Systems used WITNESS software to improve and increase production at its manufacturing facility in Towcester

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