

Thales UK Ltd

# THALES

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## OVERVIEW

Part of global group Thales, Crawley-based Thales Training & Simulation builds aircrew flight simulators, with a range that includes such airline workhorses as Boeing's 737 and 777, and the Airbus 320, 330, 340 and 380 aircraft families.

The manufacturing process is complex, and on-time delivery is vital to the business's success, explains operations director Paul Arnold.

“Simulator shipments are driven by the need to train pilots ahead of new aircraft deliveries to airlines,” he notes. “In the case of late delivery, penalty clauses can apply.”

Cost control, too, is vital, and in 2009 the Thales board tasked the business with achieving a 25% reduction in the 15,000 or so labour hours that go into building each simulator.

## CHALLENGE

The trouble was, the plant's existing information systems provided only very limited visibility into where those labour hours were being spent—or, for that matter, how they were spent.

Worse, without a detailed task-by-task breakdown of finished and part-completed assembly stages, it was difficult to determine if the construction of a given simulator was on-time or not.

“Hours were simply being recorded on time sheets, and entered into a computer system each week, allocated to very generic tasks,” says Arnold. “We had no way of distinguishing between productive hours and unproductive hours, or knowing if we were spending time rectifying errors that had been made by a supplier.”



## SOLUTION

A pilot project, commencing in mid-2010, sought to provide much-needed clarity.

Using the assembly of a single simulator as a test-bed, Thales deployed a small number of Mestec's Manufacturing Smart Box touch-screen terminals. Very quickly, Arnold was convinced.

"We could see the exact status of the simulator build," he enthuses. "Just as importantly, we could see where every hour went—and if it was non-productive, why. What's more, we could compare operator times for similar tasks, to identify training opportunities or flawed standard times."

Consequently, a decision was taken to deploy Mestec's Manufacturing Smart Box across the whole site, with the terminals being rolled-out in February 2011—making the Crawley operation the fifth Thales UK site to utilise Mestec technology.



## RESULTS

Today, Thales manufacturing executives have all the information they need, right on their desktops.

"For every simulator we're building, we can call up a dashboard and see its exact status," explains assembly and installations manager Rob Betteridge. "Before, gauging progress was something of an art: now, we know where we are with pinpoint precision."

Operators, too, are working more efficiently. Instead of travelling to offices to print off drawings and test data, they can now call these up at their work stations, requesting them on their touch-screen displays.

And knowing in detail where working hours are being expended has highlighted all sorts of improvement opportunities, adds Arnold.

Prompted by data on the assembly hours involved in assembling the large steel motion frame in which each simulator sits, for instance, the entire assembly operation has now been allocated to the supplier of the steelwork, at a net saving of one man-week.

"The identification of non-productive work and unproductive time is very important to us, and we've never previously had the ability to do this before," says Arnold. "Now, we know exactly where we're losing time—and can tell if the root cause is supplier failure, or issues within our own manufacturing organisation, such as engineering changes."

And it all helps to meet the challenge of reducing labour hours per simulator by 25%, he adds.

"We're about two-thirds of the way there—and as improvements become tougher to locate, the role played by Mestec is becoming increasingly important."



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