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Dassault Systemes Software Platform Targets Supply Base

Graham Warwick | Aviation Week & Space Technology

As the aerospace industry has broadened beyond traditional giants such as Airbus and Boeing, suppliers find themselves working closely with manufacturers around the world. This has prompted Dassault Systemes, developer of the widely used Catia 3-D design system, to introduce tools aimed at enabling suppliers to work efficiently and profitably with multiple original equipment manufacturers (OEM).

The company has introduced Engineered to Fly, a supplier-centric development platform Dassault says is tailored to help small and medium-size companies become more productive and profitable from bidding for contracts to delivering products.

Engineered to Fly incorporates elements of the Winning Program and Co-Design to Target tool suites—which Dassault calls “solution experiences”—that were introduced over the past two years and are aimed mainly at OEMs. Winning Program focuses on conceptual design and Co-Design to Target on detail design.

The new platform is the product of a detailed analysis of the topology and activity of the global aerospace supply base, says Michel Tellier, vice president for the aerospace and defense industry at Dassault Systemes.

Historically, the supply base “is not very disciplined” in its use of design tools, Tellier says, and has “come to expect to use what the OEM



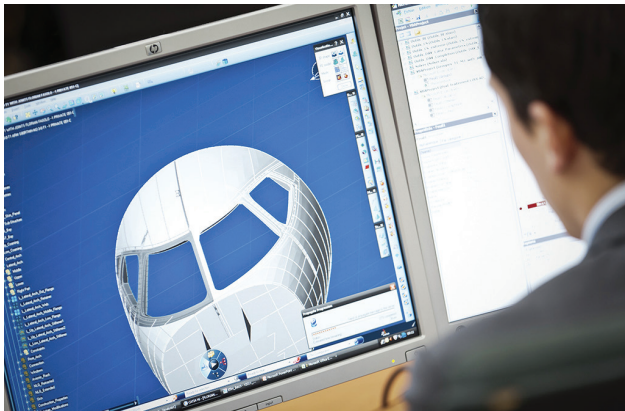
is using.” But the cost of the systems used by the OEMs, and suppliers’ lack of understanding of their value, has held back wider adoption of more integrated tools.

Dassault’s analysis found the sector’s major preoccupations include globalization and consolidation of the supply base. “They are looking at restructuring operations and need a global development platform so they can leverage their production and engineering capability from a global point of view,” he says.

Suppliers are coming under pressure from OEMs to increase rates and reduce costs, at the same time as they are under pressure to increase profitability. “They are being told they have to cut prices in half in 18 months or get cut off from existing contracts,” Tellier says. “The focus is really on margin—where it comes from and how to maintain it.”

Suppliers are looking for ways to respond to requests for information faster and reduce the cost of engaging with multiple OEMs. In another

er shift, “they are finding they can make more money from engineering than manufacturing,” he says. “It is not a loss leader. It has potential for profit.”



Also suppliers are increasingly dealing with systems, and not components. “Everything is becoming mechatronic—hydraulics, power, gear, controls, etc. It used to be a whole lot of hardware; now it is as much about the software side. Designing integrated hardware and software subsystems is a transformation for them,” Tellier says.

The front end of Engineered to Fly is predicated on helping suppliers win business by taking cost and cycle time out of the bidding process. Automated tools allow previous proposals to be adapted quickly, with the goal of enabling

a supplier to respond to an OEM’s request for information within two weeks, or even days.

The platform also is structured to enable suppliers to work with multiple OEMs while driving as much commonality as possible among products, and protecting core intellectual property, Tellier says. “There is a lot of engineering automation [in Engineered to Fly] to adapt existing products to a new specification, to take time and risk out of the process and drive the bottom line.”

Other elements of the software suite include tools from Co-Design to Target that optimize the end-to-end process—or “value stream”—from design and analysis to fabrication and inspection for individual disciplines such as composite, machined and sheet-metal components. For Engineered to Fly, these tools are simplified and more specific and tailored for suppliers.

Engineered to Fly is aimed at companies with fewer than 1,000 employees; the tools are available via the cloud for smaller suppliers. Later this year, Dassault Systemes plans to roll out a manufacturing platform, Ready to Build, that is more OEM-centric and designed to allow manufacturers to optimize the supply chain, production strategy and logistics for new programs.

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