

THE OEM HANDOFF

Shifting design responsibility puts greater burden on aerospace suppliers

Large aerospace manufacturers are requiring small suppliers to share more of the business risks and financial investments associated with development and production programs – all in an environment that requires the highest levels of quality and reliability, meticulous adherence to promised dates of delivery and year-on-year cost reductions.

• by Tony Velocci

Aerospace suppliers are in the vortex of turbulent times and the speed and skill with which they adapt to the tumult will determine their fate.

Among the forces that will separate the leaders from the laggards are globalization, emerging competitors, growing price pressures, unprecedented commercial aircraft production rates, a protracted downturn in defense spending in mature markets and a restructuring of relationships between original equipment manufacturers (OEM) and lower-tier suppliers.

60%

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All capital goods industries rely on a global network of parts suppliers. Today, supplier-created content represents 50%-60% of the value of an aerospace system, according to Lockheed Martin Executive Chairman Bob Stevens, and he predicts that figure will continue to grow. Relentless price pressures from end-use customers, plus their demand for more affordable products, is driving large companies at or near the top of the supply chain to shift even more responsibility for innovation and productivity gains to the smaller, lower-tier builders of components and subsystems.

"Suppliers are bearing an enormous amount of pressure today," Stevens said, referring to the smaller companies that support the large OEMs that serve defense markets. In most regions, those markets are shrinking due to resource constraints.

SEPARATING WINNERS FROM LOSERS

To survive, much less thrive, experts say, lower-tier suppliers will need to make step-change improvements in managing operating costs, be more innovative and forge closer partnerships with their OEM customers.

"Companies that simplify processes, implement lean manufacturing principles and redesign infrastructure are the ones most likely to succeed," said Scott Thompson, who leads the aerospace consulting practice of PricewaterhouseCoopers.

In parallel with shifting more responsibility to lower-tier suppliers, some OEMs are pursuing vertical integration to gain greater control over the quality of critical parts and acquire strategic technological expertise. In 2012, for example, General Electric purchased Italy's Avo S.p.A., a major low-pressure turbine and gearbox supplier, and US-based Morris Technologies, a precision manufacturing company. Both acquisitions significantly expanded GE's additive manufacturing capabilities.

THE SPEED IMPERATIVE

One market force driving change above all others is the need for OEMs and their vendors to deliver more affordable products and get them into hands of aerospace customers faster.

Kent Statler, executive vice president and chief operating officer of Commercial Systems at Rockwell Collins, a provider of avionics and information technology systems based in Cedar Rapids, Iowa (USA), believes the key to improving cycle times is for OEMs to involve suppliers earlier in the product design process.

"Growing cost pressures and the logarithmic increase in complexity of air vehicles require closer risk-sharing partnerships between systems integrators and their suppliers to meet customer expectations," Statler said. "For their part, suppliers have a responsibility to participate in the conceptual phase and contribute ideas."

Michael Yates, president of Tactair Fluid Controls, a US-based manufacturer of hydraulic and pneumatic controls for the aerospace industry, said the trend requires a closer relationship between OEMs and their suppliers. "Lower-tier suppliers must understand their responsibilities, and that happens only when there is open communications," he said. The stronger the relationship lower-tier suppliers can create with OEMs, the better the chances of the supply chain delivering the optimal customer experience. ♦



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