

Trusted partners

US and European companies are outsourcing increasingly sophisticated engineering tasks to India. By Lee Hibbert



Flying together: Indian company HCL is helping Italian planemaker Alenia to upgrade the production line for the Spartan aircraft

You hear a lot about the global nature of the aerospace industry. The Europeans and Americans go head-to-head in both the civil and military sectors. Brazil is a serious player in the rapidly expanding luxury jet market. And Israel is a hotspot of knowledge when it comes to unmanned aerial vehicles.

Take a few steps down the supply chain and there are some other nations making a name for themselves. India is a prime example: it has become a valued outsourcing hub for the aerospace and defence sector. As big companies like Boeing, Airbus and BAE Systems wrestle with complex projects while struggling to fill job vacancies, Indian firms are increasingly being used for a wide range of non-recurring research and development activities.

Martin Hunt is head of high-tech practice at HCL, one of India's biggest outsourcing companies. He says: "The major players have pain points around issues of increasing complexity and a shrinking workforce. That means they need to use their staff in the most business-critical ways and deploy them where they are most needed.

"What we offer is a complete outsourcing service, from detailed research through to full concept and prototype manufacture. For years, India has been considered a low-cost manufacturing centre. But it can also create value by helping other companies restructure and reallocate their workforce."

HCL is doing this with notable success. It grew its aerospace business by 80% last year, achieving revenue of \$100 million. It has 2,000 aerospace engineers, based primarily in Bangalore and Chennai, and has worked with 35 companies including Boeing, BAE, Meggitt and Volvo Aero. "There is still plenty of market left to go at," says Hunt.

So what does HCL actually do? It says it can work on embedded software projects, hardware design, engineering services, test equipment/rigs and applications development. In mechanical engineering, it works across the product lifecycle, from concept generation to detailed design, computer-aided engineering, prototyping, testing, production and documentation. It is also a specialist in obsolescence and legacy conversions such as computer language upgrades.

One of the company's biggest recent contract wins was with the Italian military planemaker Alenia, to support the improvement of the production line for the C-27J Spartan aircraft. Under the terms of the \$15 million deal, HCL is

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converting most of the structural design material of the C-27J programme into electronic format, putting it into a product lifecycle management system. It is also carrying out most of the engineering activities to support the upgrade of the production line.

The Alenia contract will involve 350 HCL engineers for 15 months. Hunt says the work is a prime example of how HCL operates as a trusted partner. "On this project, there was a start-up phase which involved a detailed knowledge-transfer process," he says. "Around 15 of our engineers went to Italy to work with their guys, learning processes and establishing how the project would be delivered.

"It was also a good relationship building

exercise. After that was done, our employees came back to India to instil that knowledge into the project leaders."

He says there is excellent two-way interaction between the engineers at HCL and their counterparts at Alenia. "It's not a fire-and-forget process – it's very much a partnership. Both teams get on very well, and there have been no real cultural issues to overcome. English is the common business language, and effective communication has proved easy."

On other projects, HCL has put in place risk-sharing agreements. It has, for example, been carrying out software verification and validation for Boeing's new 787 Dreamliner aircraft. HCL gave Boeing subsidised rates for its work, for which it will recover cash from 787 sales.

"It's a percentage kick-back arrangement which has worked very well," says Hunt. "As development costs rise, prime contractors want to initiate more of a partnership role with their suppliers. This method gives us a long-term revenue stream."

So the future is looking bright for HCL, and it has no problem attracting staff. India is producing thousands of engineering graduates each year, many of whom can be trained for the sort of aerospace contracts that HCL is winning. "We have no problem keeping our employees because they carry out a wide variety of interesting work," he says. "We're a service organisation, so we have to have happy staff."

And, looking wider to India's role in aerospace and defence, Hunt is equally optimistic. "India is undoubtedly emerging as a place for outsourcing. It has already won respect as a source of non-recurring research and development work. India can still do low-cost manufacturing, but it has also definitely started to move up the value chain."