FLIGHT PLAN | BEJOY GEORGE

10 pointers for India to make a mark in engineering outsourcing

COMMENTARY

Information technology put India on the world map of outsourcing and made it a leader in this space. It is now the turn of engineering to take the country to the next level of outsourcing.

The aerospace domain is a key component of engineering outsourcing and India's potential to become a significant global competitor in this area has been recognized. While there is some amount ($800 million-$1 billion, or Rs3,840-4,800 crore) of offshore outsourcing currently happening out of India in aerospace in the areas of mechanical engineering and design, embedded systems/avionics and components manufacturing put together, this has the potential to double or even triple in the next few years.

The opportunity exists because of offset requirements (foreign manufacturers have to locally source at least 30% of the value of defence contracts exceeding Rs300 crore) as well as the need for aerospace companies to cut costs, and the lack of young aerospace engineers in the West. However, to tap this market, India has to do a few things.

Here are some steps that can be taken:

- A national-level aerospace policy that is applicable to both the civil and defence aerospace sectors is needed. This policy should integrate the existing stand-alone policies such as civil and defence offsets, private sector participation in defence aerospace, transfer of technology and joint ventures in order to ensure proper leverage of India's buying power as well as entrepreneurism.

It should also address some open issues such as civil offsets and their applicability to private airlines' purchases of planes, the roles desired of defence public sector undertakings (PSUs) and small and medium enterprises in the development of the domestic aerospace industry, and the availability of government test laboratories and facilities for the private sector.

- The Indian private sector should build domain knowledge much more rapidly by engaging aerospace specialists from Western countries. There are a large number of aerospace engineers in the West who have retired or are close to retirement, and they can be hired by organizations in India

for training young engineers.

- There is a need for Indian companies (private sector, mainly) to go much higher up the value chain in terms of what is delivered to customers, especially in aerospace manufacturing.

This will require the ability to offer full sub-systems or assemblies, as well as testing and certification services. Investment to set up aerospace manufacturing units across the supply chain, such as castings, forgings, precision machining, sheet metal working, composites manufacture, special processing, fasteners, electrical wiring and harnesses, is needed.

- While much has been said about the availability of technical talent in India, we need more aerospace engineers. For this, a curriculum revamp is required at all levels of education as well as an increase in the number of seats available for students in educational institutions.

- An industry database of companies that play a role in aerospace engineering and manufacture, their capabilities, contact details and references need to be created for easy access to overseas companies.

Domain knowledge must be increased more rapidly by engaging specialists from Western nations

- Industry bodies such as the Confederation of Indian Industry, Federation of Indian Chambers of Commerce and Industry and the National Association of Software and Services Companies should coordinate their events and activities to promote the aerospace sector. This would avoid duplication of efforts and additional expenditure by companies to participate in these events.

- India-based aerospace and defence industry analysts should focus more on the aerospace sector from an India viewpoint, and offer affordable and actionable study reports and recommendations.

- Either the government or the private sector (or both) should create a pool of tools and equipment that can be used by all when required on a pay-per-use model. This will include computer-aided design, manufacturing and engineering software, testing chambers and other facilities, laboratories such as wind tunnels and lightning strike facilities and simulation environments.

There is definitely a business case for such stand-alone facilities that can be made available for third parties to pay for and use.

- Public awareness about the aerospace industry and the opportunities it offers both in terms of a career as well in terms of business opportunities has to be increased.

- Indian companies, whether government or private sector, should stick to commitments made to customers and deliver on promises made. Some pockets in the West believe that Indian companies oversell, and this should be avoided.

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