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Perspective

Win in the Flat World

Think Flat

Automobile companies look at engineering outsourcing for competitiveness

– Valmeeka Nathan

Abstract:

Flat World forces are compelling companies to change their business mindset and the automobile industry is no different. High costs of innovation and regulatory compliances are some of the key issues faced by corporations.

Valmeeka Nathan, Vice President and head of Product Lifecycle and Engineering Solutions (PLES) for Infosys Technologies, shares his view on how companies in the automobile industry can innovate faster and use cost as a fuel for growth. Drawing from over 20 years of experience in providing Engineering and PLM Solutions to the product engineering value-chain, Valmeeka shows how Infosys is helping companies in the automobile industry benefit from engineering outsourcing.

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Question: What is the impact of Flat World forces on the automobile sector?

Valmeeka: Globalization, changing demographics and technology ubiquity are changing business dynamics and making it a flatter world. Emerging economies such as BRIC nations offer a large consumer base. This creates a huge demand but not necessarily for the same product at the same price points. This is forcing companies to think differently and to re look at their cost structures and create products that meet the needs of under-served or new markets. Another factor that is impacting the industry is regulatory compliance e.g., emission norms. The available products are being designed at scales where energy and resource consumption cannot be sustained.

All these are forcing companies to focus on having cost structures that fuel growth and creating products that are greener.

Question: How do you think companies can benefit from outsourcing engineering to overcome challenges as a result of a flattening world?

Companies can benefit immensely by outsourcing. I would not recommend companies to consider outsourcing for labor arbitrage as a primary goal. Emerging economies like India have a large talent pool in high-end engineering, thereby helping companies innovate faster and bring down the cost of innovation at the same time.

Let me take our example to explain – We are helping clients shift their operational priorities in this flat world along four dimensions: cost, innovation, information-use and overall business strategy. Infosys has successfully set up Engineering Development Centers for many of our clients, who are very happy about their investments. In a recent meeting I had with the senior management from one of our clients, they recognized the compelling and differentiated value we were bringing to the table. We helped capture and document the product development process knowledge, which is a perennial problem and continues to be an elusive goal for most companies. This step ensures that their engineers better organize the product specification, so as to benefit from global delivery. It has brought in increased discipline, rigor and planning in the product engineering process. The company expects this to help in addressing the potential loss of knowledge due to aging workforce, in addition to gaining from increased discipline.

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Question: How important is innovation for the automobile industry and how can companies manage cost of innovation?

The automobile industry is over 100 years old - from the very first time a self-propelled vehicle was made more than 200 years back to the modern automobile that involves an estimated 100,000

patents. The point I am making here is that there is always room for improving and enhancing the products, but it only gets tougher with the maturing of the industry. This means that people have to start thinking innovatively. With growing concern of global warming and depleting fossil fuels, there would be increasing regulations which will push the costs upwards and companies will have to look at innovative ways to maintain or bring down costs.

As product lifecycle reduces, companies will have to look at lowering the cost of innovation and product development. Innovation cost can be reduced by partnering with suppliers and customers, i.e. co-creation and harnessing global talent pool.

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Question: Are many companies reluctant to outsource their advanced engineering work due to IP concerns? How are you addressing this issue?

I would say most companies were reluctant but the trend is changing. Companies have been working with outsourcing partners and have gained confidence. We are seeing more and more core engineering work being outsourced.

We have instituted a comprehensive approach to manage IP that belongs to us, to our clients and to third parties. Infosys partners with global companies through extended virtual teams with dedicated facilities, which are isolated in terms of physical infrastructure as well as network connectivity. We have installed processes and guidelines to ensure that all IP is protected from abuse internally or by third parties.

As a policy, we develop our own IP and do not use any from client engagements. We have established an IP Cell focused on developing and implementing guidelines and policies on IP creation and management. We use only legally licensed software and conduct regular training on IP management. We also educate all stakeholders on IP policies and issues. Our Education and Research Group conducts ongoing research and workshops toward increasing awareness of IP issues among employees. Moreover, IP concerns become more valid if we have businesses competing with that of the client in the local market, which could benefit from such IP infusion; Infosys doesn't have any such competing businesses.

Question: What are the other challenges and how do you manage them?

From a delivery perspective, it requires a good mix of greater domain depth and scale to serve the design needs of our customers. We therefore have an optimum mix of industry experienced laterals and fresh engineers. We invest in training fresh engineers on engineering topics, which enables them to be productive quickly. We have also set up a Center of Competence for advanced engineering to deliver complex engineering projects.

Our customers expect us to deliver from concept to manufacturing. To meet this challenge, we have partnered with component suppliers and part manufacturers to develop an ecosystem for

manufacturing. While we enable our partners to improve on process, quality and capabilities, our customers will be able to source parts without us manufacturing them.

India today is a large manufacturing base with the presence of most global auto majors. As a result we are able to get more personnel with globally relevant deep domain knowledge.

Question: How do you enable your customer in their transformational journey?

For the transformational conversation with our clients at the most senior levels, we need to be able to make a difference to the client's business closer to the core and this is exactly what engineering enables us to do.

At Infosys, we partner with our customers to help them transform their engineering value chain. Our focus is to engage with customers in long-term relationships through global engineering or R&D centers. As a group, we want to partner with all marquee customers in aerospace, automotive and discrete manufacturing. We want to engage with players in communication, retail & CPG, helping them manage the product lifecycle and NPDI process.

The opportunities are immense as global product engineering is the new reality. Also, as markets shift to Asia, companies want to create products for this market. With a large engineering talent pool, we are best positioned to be an important part of this emerging global innovation network.

Question: Can you elaborate on some high-end work you do?

Infosys has full product engineering lifecycle capabilities, best-of-breed delivery capabilities, and cutting-edge collaborative R&D methods. We have partnered with some of the best organizations to help them foster innovation and reduce their time-to-market. For example, our engineers have contributed to various patents with our automotive customers; we have successfully delivered complex engineering projects demanding weight reduction in aerospace. Infosys is quite strong in the area of composites and hybrids. We are developing competencies on advanced structural analysis and design, testing and failure mechanics and structural health monitoring. Our knowledge-based engineering solutions and lean engineering initiatives will enable our customers to improve productivity and improve re-use.

Apart from our clients, we also collaborate with various industry bodies: Infosys is a premium member of the Automotive Open Systems Architecture (AUTOSAR) development partnership. This relationship is helping us assist our automotive clients to develop innovative and cost-effective solutions for next-generation automobiles. We have proprietary solutions for design and development of composite structures and knowledge-based engineering for automotive clients.

We are able to do all this because we have access to the best engineering talent. Asia has many of the world's top engineering schools and Infosys attracts the cream of this talent pool.

Have you started leveraging Engineering Outsourcing?
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