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50 Years of Growth, Innovation and Leadership

Achieving Market Leadership in Engineering and R&D Services

A Frost & Sullivan White Paper

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INTRODUCTION

Global Engineering and R&D Services: A High-Level Market View

Even against a negative global economic backdrop, the IT services sector still had a winning year in 2011, registering more than 5 percent growth over 2010. The IT spend sector totaled US$1.71 trillion, while the Engineering and R&D (ER&D) services segment amassed US$1.15 trillion, for a total expenditure of US$2.86 trillion.[1] The growth was fueled by an improved demand for overall global sourcing and record contracting activity in smaller-sized tenders, as clients endeavored to preserve cash flows while concomitantly experimenting with new business models and service offerings.

The ER&D services segment is sometimes also known as ESO (Engineering Services Outsourcing) and comprises the rendering of nonphysical engineering services such as consulting, design and preparation in support of a particular project. The design of a car engine is one such example; however, the actual manufacturing of that engine is considered a separate engineering function. ESO suppliers typically do not actually manufacture the designs they create, consult on, set up or manage.

The ESO segment usually takes a sizeable portion of projects that are suspended or postponed due to events such as the Japanese earthquake of March 2011 or the halting of discretionary telecom spending by operators during an economic downturn. However, these poor-performing quarters only represent blips in the overall picture, with the long-term trend still clearly showing that the outsourcing of engineering and R&D services is expected to continue over the next few years. So the trend is clear, with ESO continuing to be a strong prevalent market trend in the future.

Particularly after a slowdown (such as the one during 2009), when there is pent-up demand, growth in a particular year is typically strong; however, the longer-term question is how sustainable that growth is. Herein lies one of the key differentiators among ESO competitors: their strategy—i.e., how effectively they can plan ahead of the competition and ramp-up activities during a positive cycle and throttle down during a negative one.

As we will examine in this paper, ESO leaders are particularly successful at ensuring steady revenue streams that can be counted on even as the market conditions take a turn for the worse. These savvy ESO market participants are very adept at establishing themselves as trusted partners that can help their customer base transition to a new technology, manage the testing and maintenance of certain product lines, or automate some software design processes.

[1] Source: NASSCOM (National Association of Software and Services Companies), a non-profit trade association of the Indian IT and BPO industries. The association's URL is: http://www.nasscom.org/

ESO MARKET TRENDS & COMPETITIVE LANDSCAPE

Factors such as the growing need for shorter product lifecycles, faster product time-to-market, higher usage of embedded systems, and the increased localization of products are all contributing to higher engineering and R&D services spending. In addition, the mounting cost pressures on technology innovators is another catalyst for some of the R&D work shifting offshore, so there is a direct trickle-down impact on the ESO market as well. This bodes well for ESO market participants, such as the top four Indian players (HCL, Wipro, Tata Consulting Services and Infosys).

On the other hand, countering the outsourcing trend is the fact that tech consulting giants such as Accenture, HP, IBM and others have ramped up their offshore presence over the past few years and are now able to offer the benefits of the global delivery model to their clients. Given the high offshore margins, these players are not reluctant to undercut the above-mentioned Indian companies.

The bulk of the ESO industry revenues originally came from basic services such as drafting, modeling and testing, gradually evolving into higher value-added services and solutions. As a result, the value proposition shifted away from cost toward quality, on-time delivery and capacity. The next evolution step is the move toward system-level design and innovation, as shown in the illustration below.

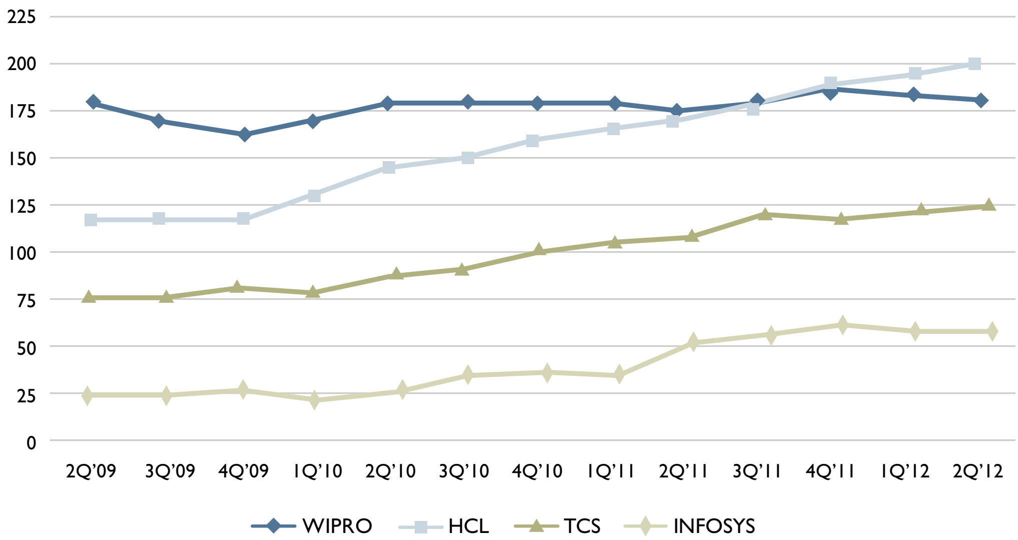
Figure 1 – ESO Industry Evolution

Source: Frost & Sullivan

In other words, the maturation of the ESO industry came as its participants were able to demonstrate their acumen in delivering alternative solutions to not just solving the design problems of their customers, but also improving their productivity via automation and engineering innovation. Not surprisingly, some of the biggest beneficiaries of this trend were Indian ESO organizations such as HCL, Wipro, TCS and Infosys.

Historically, HCL has been the second-largest vendor in the ESO industry in terms of annual revenues behind Wipro, which traditionally led the market. However, in the third (September) quarter of 2011, HCL overtook Wipro in revenues from this segment in the outsourcing industry, as depicted in the following graph.

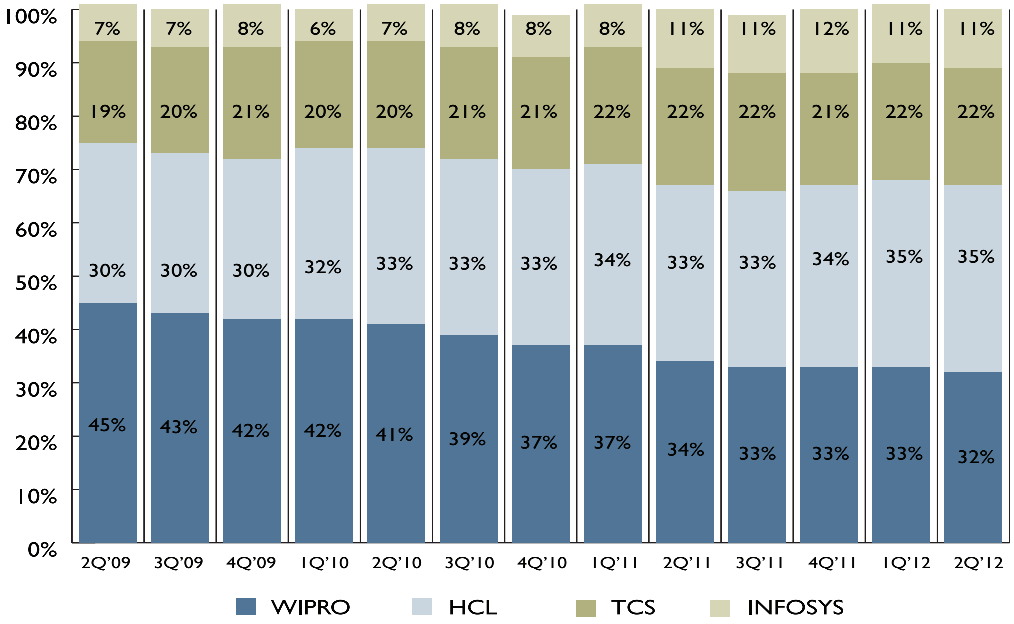
Figure 2 – ESO Quarterly Revenues (in US$ million)



Source: Frost & Sullivan and company estimates

Consequently, since 3Q 2011, HCL has catapulted itself to the leadership position in the ESO market among Indian outsourcing players, amassing a 35 percent share in the most recent quarter (2Q 2012).

Figure 3 – ESO Market Shares for Indian Outsourcing Firms



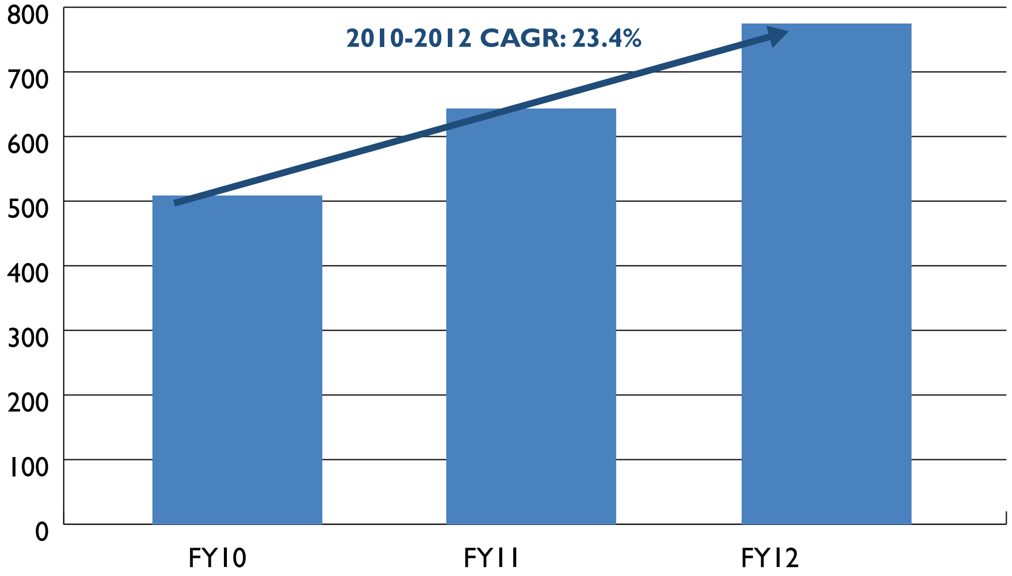
Source: Frost & Sullivan and company estimates

This result underscores HCL's extraordinary performance in the ESO space. R&D and engineering expenditure, often being discretionary in nature, is typically one of the top line items to be subjected to cutbacks during a severe market downturn. Despite that, HCL Tech is one of the few Indian IT companies that have made a significant commitment to its Engineering and R&D Services (ERS) line of business, which had a revenue contribution as high as 19 percent. As we can readily see from the above graph, that level of dedication has paid off.

Within ERS, HCL Tech offers end-to-end engineering services and solutions in hardware, embedded, mechanical and software product engineering to industry leaders across the aerospace & defense, automotive, consumer electronics, industrial manufacturing, medical devices, networking & telecom, office automation, semiconductor, servers & storage, and software products sectors.

HCL's focus on its ERS business has remained steadfast, despite some macro turbulence. In the following figure which depicts HCL's ERS revenues (since the inception of EOOTB as a value proposition for HCL ERS in FY2010), we can readily observe that the business grew steadily, far outpacing global GDP growth, at a CAGR of 23.4% from FYI 2010 to 2012.

Figure 4 – HCL ERS Revenues 2010-2012



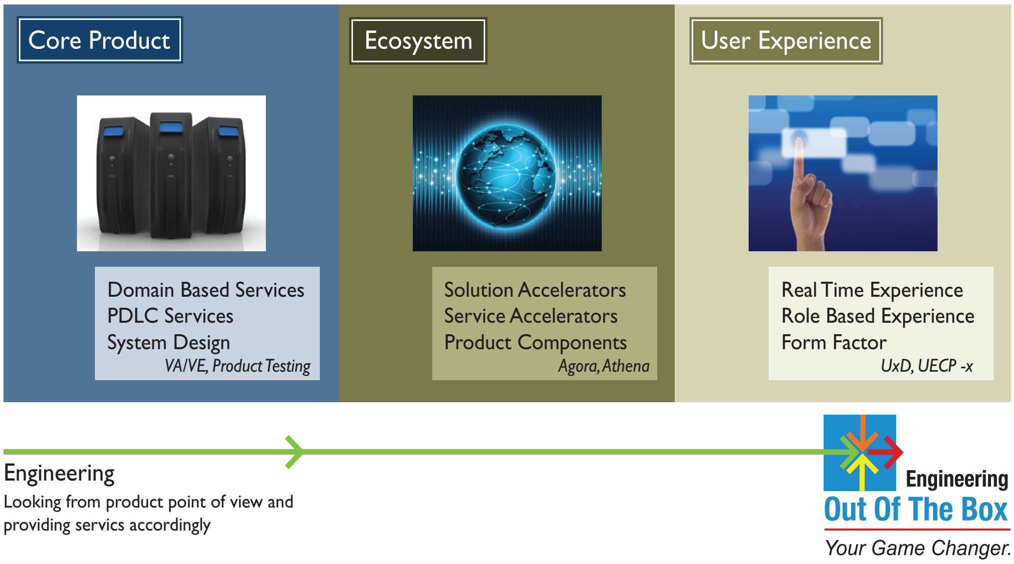
Source: HCL, Frost & Sullivan estimates

Another data point that illustrates HCL's impressive ERS performance is that according to NASSCOM, the overall ER&D industry has grown at a CAGR of 10.7 percent over 2007-2011, while HCL's ERS business has grown at a CAGR of about 13.7 percent over the same period.

HCL'S SUCCESS IN THE ESO SPACE

The HCL success story in the ESO space is the natural consequence of the company's long-term strategy in this area. Three years ago, HCL launched the "Engineering Out of the Box" (EOOTB) concept as its own market proposition of how to take its services, plus platform ecosystem innovation, to its product and technology customers. It is no longer sufficient to only think about product development by itself, because one has to also consider the entire ecosystem, platform and user experience. EOOTB delivers all of these items together for a given customer, while also integrating the perspectives of HCL's customers' customers via platform extensions, ecosystem innovation and the customers' end-user experience. The key objective is to encourage a higher adoption of the technology in the long term.

Figure 5 – HCL's Engineering Out of the Box (EOOTB) Approach



Source: HCL

For more than one-and-a-half decades, HCL has been performing core product development work for its clientele based on domain-based engineering services that provide comprehensive product development and life cycle services. The company has now added platform ecosystem innovation to its product-based solutions, which is instrumental in helping its customers deliver products to markets faster. As such, HCL has more than 20 productized solutions for distinct market segments, including cloud, mobility, social media, convergence, medical devices, automotive and other industry segments the company participates in.

In addition, HCL can also draw upon its real-time, role-based user experience in order to stimulate the adoption of these technologies. HCL clients are also able to increase their product or service agility by being able to launch products faster because they are not developing everything from the ground up.

HCL has also historically recruited a greater number of lateral hires compared to new graduates, and that bodes well for many ESO deals. While HCL does not disclose experienced employees as a proportion of its total workforce, we believe that the percentage is around the 64-65 percent level, the highest among its industry peers. As ESO deals reach a stage of maturity and the company establishes adequate credibility in executing large deals, there will likely be a shift toward a higher proportion of fresher hiring in the coming years. Just for comparison purposes, the average employee age at HCL is about 29 years, versus 27 years at a competitor such as Infosys. This also translates to a higher average compensation at HCL (about 20 percent higher than its industry peers).

Finally, another key success factor that enables HCL to achieve a good renewal success ratio in ESO contracts is the company's ability to become a trusted advisor to its customers, which is instrumental to generate sustainable long-term revenue streams, even in the middle of a macroeconomic slump. One example is HCL's work with the Cisco® Access Registrar (CAR) team. In this partnership with Cisco, HCL relied upon a revenue-sharing model. Cisco does not pay any upfront costs to HCL. Instead, HCL takes on the risk, receiving a percentage of every sale. As a result, Cisco was able to maintain its CAR product with minimal financial risk, while refocusing its internal resources on new opportunities.

CONCLUSIONS

As we have seen in this paper, despite some fluctuations that vary according to the business cycle, the long-term picture is clear: engineering services outsourcing is becoming a prevalent industry trend.

The value proposition of ESO shifted away from cost toward quality, on-time delivery and capacity, and the market is currently undergoing yet another transition toward system-level design and innovation. Consequently, the emphasis is moving away from cost-savings toward value, and ESO market players capable of delivering such value are emerging as the top players.

Within the ESO competitive landscape, HCL has captured the leadership position by successfully positioning itself as a trusted advisor, sharing risk, and enabling its clients to introduce new products faster in the marketplace. Furthermore, HCL has honed its workforce skills for specific high-growth areas within the ESO space. We believe this will enable HCL not only to maintain its top ranking, but also to be better positioned to win business, even under adverse macroeconomic conditions.

ABOUT THE AUTHOR

Ronald Gruia is the Principal Analyst for Emerging Telecom at Frost & Sullivan. His main focus areas include NGN migration strategies, IMS (IP Multimedia Subsystems), 4G (LTE, WiMAX), FMC, VoIP, Next-Gen Carrier Messaging Platforms, IPTV, Triple Play Services, Application Enablement, Software Development, Enterprise Communications Systems and Unified Communications, among others. He has authored several reports, managed subscriptions and has also led and played a key role in strategic consulting projects in these areas.

Since joining Frost & Sullivan in February of 2001, Gruia has spoken at conferences such as Supercomm, VON, 3GSM, CTIA (IMS Summit), IMS Expo, Futurecom (Brazil), IP Comm, Fierce IPTV, Intel Communications Summit, IMS World Forum, TMIA, VMA, VON Canada, IP World Canada and Comdex Canada. He also writes articles for various publications (such as IMS Magazine, VoIP Magazine, Telecommunications Magazine and Telemanagement), has appeared on CNBC (U.S.), BNN, Report on Business Television and TechTV (Canada), Decision TV (Brazil) and Telecom TV (U.K.), and has been quoted in publications such as Business Week, Financial Times, Forbes, Wired, API, DJ Newswire, Reuters, MarketWatch, Network World, IT Business, IT World, Los Angeles Times, San Jose Mercury News, Wireless Week, National Post, San Jose Mercury News and CIO Magazine.

Gruia is an MIT graduate in Electrical Engineering and has accumulated years of experience in the telecom industry, having held several roles at Nortel Networks' Enterprise Division, where he earned a U.S. patent. He also possesses years of experience in all aspects of the software development cycle, including programming, code review, unit/system testing, and SCM (Software Configuration Management). He fluently speaks Portuguese, Spanish and Romanian and has working knowledge of Italian and French.

This paper is part of the ongoing coverage of worldwide IT services markets by Frost & Sullivan (www.frost.com), an international growth consulting company. Working closely with our clients, we use advanced market research methods to identify and analyze the critical market challenges they must address to become successful competitors in their industry.

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