

Beat the slump by thinking offshore

- Lessons from a semiconductor company



Successful business strategies are often designed in response to rapidly changing business conditions and therefore need to be dynamic. We're going to look back today and study some success stories from past Indian design center strategies that may enable us to make some recommendations for the future. Of course, one could quote similar arguments for offshoring design to other parts of the world, but I am restricting my strategies to India for obvious reasons.

Imagine, then, that today we are back to the edge of that precipice, peering down at what we perceive as the next business slump. The feeling of uncertainty is all-pervasive, except that this time around the tech managers and the entrepreneurs have a few more options than what they had last time. The last downturn forced several players, both big and small, to seek low-cost resources across the globe, specifically in India. Since then, however, many have pulled back, citing operational issues or an easing of pressure from top management. The employee retention issues coupled with the exchange rate fluctuations has given business people much to consider with regard to offshoring. In my humble opinion, however, these developments do nothing to change one basic reality: companies that planned and executed an India strategy outsmarted and outlasted those that did not!

The truth is loud and clear that a carefully crafted India design strategy can still give the strategic edge for big companies or a fresh lease of life to the startups. The semi-con-

ductor design manager, for example, would do well to carefully study the existing IP and design services capabilities of third-party vendors in India to gain an edge in this changed environment. Last time around, the Indian semi-conductor industry was in its infancy with only a few big names boasting of capabilities that were locked in for in-house use. Today, things have changed substantially.

Of course, one needs to keep in mind that strategies vary based on given situations, which means that what worked well in the past may fall flat now. I was at the front-end of the outsourcing wave while working with Tata Consultancy Services in the late 1980s and again at Cadence in the early 1990s. Both companies were pioneers in their domains, deriving substantial value from their foresight. It should be no surprise, then, that when I co-founded GDA Technologies; our first hardware development center was at Chennai in 1998, long before others thought of having an Indian design center. Then came the 2001 crash, and software and hardware offshoring became the norm rather than an exception. In today's declining business environment, I am confident of an even bigger outsourcing wave but the strategies and their execution will be diametrically different.

The semiconductor design outsourcing wave over the past six years created design teams under service and IP companies that are as good as the ones that could be found anywhere in the world, but at one-third the costs of U.S.-based teams. An Indian design center is by itself no longer a

differentiator, however. Many of those who attempted to walk this path have since realized that setting up and running such a center can become a major challenge if it fails to attain the necessary scale fairly quickly. Though setting

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up a proprietary design center often seems a logical option especially for that Program Manager who wants to return to India many companies have come to realize the inherent challenges of such a move. Of course, the challenges of hiring and retaining semi-conductor design engineers, especially by startups, are quite well known. The probability of your key manager suddenly wanting to relocate back to the U.S. due to non-work-related pressures must also be considered, as this puts you in the position of tasking middle-level managers with managing junior staff. This is surely one of the most unenviable tasks that one can pass on to their HR department!

Meanwhile, from the other shore, there is also the question of burgeoning costs in the form of salaries in India. Services companies simply cannot afford to pay 15 percent increments annually, especially in the current rising rupee scenario. Some are adjusting their scales to contain these cost escalations and improve productivity, but very few Indian subsidiaries of U.S. firms are able to do so due to the wide gaps in economies of scale. As a result, going with an Indian service company now makes perfect sense, as many have invested in creating a proven process within a quality-focused design environment that will continue to provide better value.

With all of that in mind, it's still important to focus on where offshoring can do your organization the most good. I believe the best option is to work with third party design services companies on those aspects of your design that are fairly generic. This relieves many of the scalability concerns and allows you to maintain internal staff elsewhere for developing that differentiating block or secret sauce. The third party service companies are generally well equipped now with strong middle management cadres who are quite stable. The design environment and EDA infrastructure are also much more mature and have a wealth of expertise working with a variety of customers. Finally, there is also the advantage of these companies being able to re-use existing Intellectual Property Rights.

From there, it comes down to choice. Though your options are many, the ideal offshore company is the one that gives you the attention you deserve. The partner should have vertical expertise that you can leverage on and complement

with your internal design staff. Companies that provide complete solutions in terms of IC design, verification, layout implementation, reference board design, and embedded software design are better positioned from your perspective as they obviate your need to manage multiple third-party sources. Also, service companies that have invested in internal R&D and IP blocks provide better leverages, and you may even outsource the complete product engineering if need be.

Finally, let me end this article with an anecdote from my own experience. After working for Tata Consultancy Services in the late '80s and working for U.S. companies for the last 18 years, I find myself now working for an Indian company (L&T Infotech) that acquired GDA Technologies to enhance its hardware expertise and IP. I see this as a good omen for our customers, as they can now rely on real stability, standardization, and productivity of a large entity in L&T, plus the additional differentiating skills, IP, and near-shore support that GDA brings to the table. In this case, a blend of a U.S. team and a much larger offshore team gives the best of both worlds.



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