

**KEY NOTE ADDRESS DELIVERED AT THE CONFERENCE ON SPECIALTY  
CHEMICALS: FROM OPPORTUNITY TO REALITY, CHEMTECH FOUNDATION**

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The global market for chemicals is expected to grow to about US \$ 6 trillion by 2035 with Asia accounting for more than 60 % of this market. The Indian market is likely to exceed US dollars 200 billion by 2020 and is growing by a healthy 10 % per annum. The centre of gravity of demand is shifting to emerging economies while the source of supply will shift to those who have feedstock advantages. This implies great opportunity for India and must be ground for great optimism for the chemical industry, especially in emerging economies like India. Yet one finds the level of enthusiasm subdued and investments on ground lacklustre. Are we ceding our domestic markets to manufacturers elsewhere? Under these circumstances, is there an “innovate and make in India” strategy that makes sense?

Innovation requires us to understand the future consumers that we will serve. It also requires us to understand the contours of change and discern the weak signals of future change. Mere extrapolation of the present will not suffice. Many issues confront humanity today and their solution is possibly more relevant to the emerging economies than mature economies. As Einstein once said “we cannot solve tomorrow’s problem with the same thinking we used when we created them”.

Constrained natural resources, demands of a circular economy, wellness and health needs of both young and old, climate change, energy, water and food will all be major drivers of innovation. Shared economy and new ownership models of goods and services will need to be factored into our thinking. Innovating efficiently and frugally will be important since the consumers in the emerging markets also have lower purchasing power and occupy lower rungs of the economic ladder.

We have to develop entirely new perspectives on innovation. While learning from others, India has to develop its own approaches and processes for innovation. We have to shun excessive short-termism; the pressure to deliver strong short term results has increased in the last five years and companies are increasingly using short term horizons in their strategic planning; yet evidence indicates that incremental problem solving does not generate long term performance on key economic and financial metrics (McKinsey Discussion Paper, February 2017). Anecdotal evidence suggests that attempt to realize the quickest, largest and most rapid return on the research investment actually leads to lesser innovation!

We need to find ways to insulate innovation from the economic cycle. Conventionally, investment flows in times of plenty and taps go dry when the down-cycle comes. Budgets are slashed, labs are closed and talented work force are reassigned or laid off. This leads to organizational scepticism and resistance to future innovation initiatives. These are disruptive forces that are inimical to the culture of innovation.

Contrary to popular belief, larger the size of the company, lesser is the ability to sustain innovation. For a 20 billion dollar company an innovation must reach at least 100 million in revenues in three years to be financially interesting. Since a large number of innovation initiatives do not reach this threshold in the given time, most

companies are burdened with many promising ideas that have no natural homes within the company. When abandoned ideas grow large in number, a company's interest in sustaining innovation weakens. Most Indian specialty chemical companies are relatively small and, hence, offer a fertile ground for sustained innovation where a modest return on investment can be acceptable. This could turn out to be our competitive advantage.

There is a strong case for creating a new strategy for sustainable innovation for Indian enterprises, innovation that creates new markets, new business opportunities, new technologies and new solutions. Most global companies talk about partnerships with academia, alliances, mergers, acquisitions, customers, suppliers and new hires as opportunities to enhance their innovation potentials. However, often these are informal, haphazard and unstructured. New hires often find themselves constrained in a culture resistant to new ideas. Looking for new business ideas in academic laboratories is like searching for a needle in a haystack, highly inefficient. Customers and suppliers only provide a short-term perspective to growth. Most M&A's tend to be in the comfort and familiarity zone of the company. Most often partnership evolves too late in the innovation process, not early when one is exploring opportunities.

Indian companies must resist blindly following this well-trodden path.

Most companies' world over still perpetuate an excessive culture of secrecy. IP and patents, once touted, as a tool for innovation and competitive advantage has now become a barrier to innovation. Undesirable predatory practices such as frivolous patenting, ever greening and trolling have undercut the benefits of patents; such practices will eventually lead to many good ideas being buried without ever being exploited. State granting monopoly rights to inventors in return for full disclosure was aimed at greater public disclosure and sharing of ideas, not less. Whether the current IP practices fulfil this objective is debatable.

Sustainable innovation strategies require more openness, larger information sharing and greater public disclosure. In India, where the corporate innovation culture is still evolving, we need new models where sensitive information is shared amongst companies with least impact on market competitiveness. We need a new breed of "Innovation Enablers" to facilitate the exchange of sensitive information among companies while protecting the company's commercial interest. For resource and competency constrained Indian companies more cooperation and sharing of information may be a better strategy for driving innovation.

In short, we need a shared model of innovation.

Models of innovation emerged in the western world over a century of practice. Not all of them are now relevant as evidenced by the innovation deficit that we are witnessing today. The nature of the problems that confront us today are also different. India has a unique latecomer advantage in the sense that we do not have an overbearing legacy, which require unlearning and relearning. We can learn from the mistakes of others. We have an opportunity to write a new book on sustainable innovation, consistent with our culture, values and the needs of the society, which we aspire to serve.