

# Board Stewardship with Foresight and Future - Driven Strategies

\*Anurag Goel, IAS (Retd.)



“Over the next decade, waves of exponential technological advance - ments will eclipse decades of breakthroughs in scale and impact. Emerging from these waves are 20 Megatrends, likely to revolutionize entire industries (old and new) and redefine tomorrow's generation of businesses and contemporary challenges and transform our livelihoods from the bottom up”, says Peter Diamandis, Founder of XPRIZE and Singularity University

Exponential/ Disruptive technologies are transforming and reshaping the world, and are leading to many of the current changes/ disruptions. Fusion of technologies is blurring the lines between the physical, digital, and biological spheres. Technological research is impacting life, societies, economies and the planet (environment, ecology) more and more. In another sign of times, much of this leading edge research is shifting from highly regarded and established academic institutions to technology giants like Google (Alphabet), Tesla etc. The research is also becoming increasingly aspirational and business-oriented (IPR creation for commercial exploitation being a major objective),

with moonshots being talked of and attempted almost routinely. Technology has turbo- boosted both the rate of the change in the world, and the scale of that change.

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How do Boards deal with the paradox exponential technologies are creating for businesses: a future where unlimited opportunities and existential threats coexist? What kind of stewardship is needed to harness the headwinds of disruption, and convert potentially destructive forces into energy for powering the sails for companies' continuing success and growth? What new skills and insights need to be acquired for this purpose?

## Strategic Foresight

Strategic Foresight is an invaluable tool available to Boards for this purpose. It uses technologies like Artificial

Intelligence, Big Data to analyze trends, capture all current developments including weak signals, and visualize alternate possible future scenarios. Joseph Voros Futures Cone helps clearly define and bring out the different kinds of possibilities:-

- What are the possible futures? This is the full range of events that could unfold.
- What are plausible futures? This is what we believe is possible but unlikely.
- What are probable futures? This is what is most likely to happen.
- What are preferred futures? This is what we want to happen.

Armed with extensive information and deep insights offered by the above outcomes deriving from the Strategic Foresight process, the Board can deliberate and select the preferred future. It can then use backcasting and other Foresight tools and techniques for formulating winning corporate strategies to achieve the desired future.

## Future-Driven Strategies

Let's look at how 3D printing can impact manufacturing, to illustrate how the

right expertise in strategic forecasting can save manufacturing companies. First off, 3D printing has been around for a long time in the manufacturing industry, being primarily used for research and development through quick prototyping. However, today's 3D printers are getting much more sophisticated and are starting to be used to replace multistage manufacturing processes into one or two steps. The process goes from raw materials like metal or plastic powder, directly into a fully functional and complex product. The more modern printers can do this using up to a dozen different materials. There is an immediate reaction from manufacturers to transform their old machines with 3D printing and given the efficiencies in doing that, and the increased speeds of the newest 3D printers, one would think this is a good move. However, 3D printers are also becoming available to consumers, in people's homes, in hobbyist's hands. And some companies like Hewlett-Packard, are offering 3D printing and shipping services if a consumer sends a 3D file to print.

Manufacturing companies cannot ignore the direct to consumer models emerging with cheap at-home printers and companies offering print-on-demand and ship services. Depending on what is being manufactured, a company may want to change their entire business model to mimic the HP print-on-demand model by partnering with fulfillment services to deliver direct to the client, bypassing middle-men in the process. Some manufacturing companies may consider changing their production altogether towards ones that require multiple materials or are too big in size for hobby 3D printing machines. Knowing what is soon coming up in artificial intelligence, 3D printing and materials research may disrupt your manufacturing business in a fundamental way. You can be a Hewlett-Packard, embracing the disruption and

being a first-mover in the space, or shift to new high demand manufacturing using more productive, profitable and sustainable methods by engaging future trends before they transform your business.

The message here is this: be the one provoking the change with the disruption as part of the plan, instead of reacting to the disruption along with everyone else. Being the leader means being informed, and being informed means having good strategic and technology foresight capabilities.

It is noteworthy that 3D printing is already much farther on the road to commercial level usage than is generally recognized. 3D printers are fabricating increasingly complex devices ranging from jet engines to apartment complexes, warehousing robots to circuit boards, real diamonds to shoes to prosthetic limbs. The technology will disrupt supply chains, transportation networks, warehouses etc., bringing in entirely new business models of manufacturing and distribution.

Let us now imagine a company in any sector/ business handling a project with far-reaching, strategic implications that will affect the future scope of operations, the company's value in the stock exchange and future investments. How will your company's Board of Directors prepare for such a critical decision?

Normally, it will pay close attention to potential risks and will determine the project's viability and to what extent the project may achieve the company's goals. As part of the validation process, the Board will analyze the project to anticipate global risks that could pose a threat to its success. That is strategic foresight, but does the board employ people with the specialized skills to do scenario planning, Delphi analysis, or trained in the Horizons Method?

What changes from boardroom to

boardroom is the methods used to determine probable outcomes and probabilities. If the company's analysts only project using historical data, then it is at risk of missing critical weak signals that a proper futurist would identify. It is getting more and more critical to identify these weak signals. In the old days, they were far in between, and black swan events were once per generation. Now, they are frequent occurrences. Directors can no longer roll the dice and take the chance that an unexpected event may not occur to disrupt a project. Companies must develop the ability to see these ahead of time to veer past them, or better yet, to take advantage of them while the rest of the world fumbles.

### Anticipating Ethical Dilemmas

Ability to visualize the future also gives better insights into likely ethical dilemmas a company working on moonshots, and venturing into new areas with application of exponential technologies, may face. For example, AI is expected to become more intelligent and capable than human beings, leading to what is called Super Intelligence. There is a real fear that AI will reach Singularity within next two decades, whereafter it's development will be irreversible and beyond control. Science fiction depicting possible take over and control of humans by robots with AI is dystopian, but is not without some technological basis. Boards would need to be very conscious of possible implications of on-going developments in this direction.

Influencing people's minds through targeted personalized marketing is no more in the realm of future. Google knows you better than your spouse. Amazon knows your shopping preferences and Netflix knows the kind of entertainment you like. Data collection, connected privacy issues and use/ misuse are already areas of major concern. In the words of Historian, Yuval Harari ("Will the Future be Human"), "We will learn how to engineer bodies,

and brains and minds, these will be the main products of the economy of the 21st century, not textiles, and vehicles and weapons. How exactly the future masters of the planet will look like, this will be decided by the people who own the data, those who control the data control the future, not just the humanity but future of life itself, because today the data is the most important asset in the world. Data is replacing machinery as the most important asset.” Strategic Foresight will help companies navigate through the complex developing ethical issues around data.

Engineering of “bodies, brains and minds” would raise even a bigger ethical issue”. Futurist Ray Kurzweil, talks about the use of machines not only to dramatically increase physical and cognitive abilities, but fundamentally change the trajectory of human life and experience. Transhumanists predict that a convergence of new technologies will soon allow people to control and change their bodies and minds. Science will allow us to take control of our species' development, making ourselves and future generations stronger, smarter, healthier and happier.

Much of the work in above pioneering areas will no doubt be done by mega-corporations, bigger and more powerful than many nations. But this is too important an area to be left only to governmental regulation. The entire society, private sector and corporate world, each company and organization across the globe, need to be conscious and informed about the societal implications of the direction application of technology could take. We need to use Foresight to be future literate, anticipate the future, and walk wisely through the maze of emerging ethical dilemmas.

### Acquiring Foresight Capabilities

The author has been sensitizing, advising and training diverse sets of people on acquisition of Foresight

capabilities. A comparison of the experience at the global level indicates that the awareness and application of Foresight skills is very low in India. There is hardly any infrastructure or eco - system for imparting necessary capabilities or building in-house systems for this purpose. As against this, most large companies abroad have technology and/or strategic foresight capabilities. The likes of Microsoft, Apple, Amazon, Alphabet (Google) and Facebook all use foresight specialists and futurists to help with strategic planning, helping Directors in developing their strategies. Clever, smaller companies outsource their foresight work to gain advantages over their competition, preparing for major industry disruptions before they occur, catching others off-guard and ill-prepared.

A survey of 77 large companies prepared by René Rohrbeck of Aarhus University, and Jan Oliver Schwarz of Germany's EBS Business School, found that formal strategic foresight efforts add value through (1) an enhanced capacity to perceive change, (2) an enhanced capacity to interpret and respond to change, (3) more influence on other actors, and (4) an enhanced capacity for organizational learning. These outcomes are increasingly truer as the pace of change is accelerating all the time. There is a distinct divide in the ability to generate revenues, between companies which use strategic foresight and those who use only traditional statistical predictive methods.

Given the growing importance of foresight for Directors, the question arises: how can they develop their foresight skills or access strategic foresight capabilities? In the absence of any in-house capacity, the first step could be to tap suitable experts and organizations to help Directors fulfil their mandates. The consultancy provides valuable resources and insights, helping organizations integrate

forecasting capabilities within existing governance systems.

The experts/ consultants can do this through consultations, webinars, presentations, and direct involvement with internal teams. Advice given will depend on the specific industry and how future scenarios illustrate best approaches and technologies to invest in. Advisers may find the industry needs to look to exponential and sustainability technologies to lessen carbon footprint while increasing productivity. They will point out weak signals from other industries that may disrupt that path and how, so the companies in that industry can benefit from them as they reveal themselves. Impact and use of convergence of technologies is another major area for review.

Futurists and foresight strategists can support the work of Directors through the technological disruptions we see all around us today. They can help companies navigate new government policies by shedding light on opportunities emerging from those changes. Finally, futurist groups/ consultants can help develop the internal strategic foresight capabilities a company really needs to survive a crisis, grow beyond it, and compete at a global scale.

In brief, companies may consider engaging experts/ consultants for the following options, depending on the size and nature of the company:-

- a) Organizing generic, non-sector/ company specific webinars, workshops and training programs for awareness and sensitization about the concepts, tools, techniques and potential/ importance of Foresight.
- b) Working closely with individual companies to put in place in-house systems for insights into possible futures for the overall business scenarios and their respective sectors, and make Foresight an integral part of their corporate strategy formulation process.

## Conclusion

Adopting future-driven strategies is essential for business success in the world of tomorrow. For this, companies need to develop necessary Strategic Foresight capabilities. Indian businesses and boards may set the ball rolling urgently with the help of currently available experts and consultants. However, this needs to be followed by putting in place necessary infrastructure and capacity building systems, for large scale development and application of Foresight expertise. Bodies like the Institute of Directors and

Industry Associations need to take the lead for launching a major initiative for this purpose.

**\*Mr. Anurag Goel, IAS (Retd.)** is the former Secretary, Ministry of Corporate Affairs, Govt. of India. He has been working with Ministries and State Governments for over 6 years as a Futurist and Governance Architect, in areas of 'Future-ready Governance', SDGs, etc. He founded the think-tank 'Shaping Tomorrow Consultants LLP' (2014) to "Invent the Future for Shaping a Better Tomorrow".

Previously, he has also been an Adviser to UNDP, IIT, IIM, Genomics Institute etc. Previously, as Secretary, Ministry of Corporate Affairs, Govt. of India (2006-09), he is credited with introducing the 'MCA-21 E-governance System', for which he received the PM's Award, other than creating new governance systems. He also conceived & executed the globally acclaimed plan to save Satyam Computers Limited within 99 days of a fraud of more than INR. 7000 crores. He also played a key role in operationalizing the Competition Commission of India (2009-14). ■

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