

India needs ASSURED Innovation Policy

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India needs a new national innovation policy, going beyond the national science, technology and innovation policy that was launched by the Government of India in 2011.

INNOVATION is the key to economic and social development, growth as well as competitiveness. How is India doing in terms of its global standing in innovation?

Look at the Global Innovation Index. India's rank among 140 odd nations went down from 66 (2011) to 76 (2012) to 86 (2013). Why? Not because India was doing worse, but because the other nations were doing better.

But then comes the good news. It has moved up to 66 (2016) and now to 60 (2017). So India is on the rise. But we have a long way to go to become a top ranking innovation nation.

India needs a new national innovation policy, going beyond the national science, technology and innovation policy that was launched by the Government of India in 2011. I describe such a policy simply as ASSURED Innovation Policy.

What does ASSURED stand for?

- A (Affordable)
- S (Scalable)
- S (Sustainable)
- U (Universal)
- R (Rapid)
- E (Excellent) and
- D (Distinctive)

A (Affordability) is required to create access for everyone across the economic pyramid, especially at the bottom.

S (Scalability) is required to make real impact by reaching out to every individual in the society, not just a privileged few.

S (Sustainability) is required in many contexts – environmental, economic and societal.

U (Universal) implies user-friendliness, so the innovation can be used irrespective of the skill levels of an individual.

R (Rapid) refers to speed. Inclusive growth cannot be



achieved without the speed of our action matching the speed of our innovative thoughts!

E (Excellence) in technological as well as non-technological innovation, product quality, and service quality is required, not just for the elite few but for everyone in the society, since the rising aspirations of resource-poor people also need to be fulfilled.

D (Distinctive) innovation is required because there is no use of creating me too products and services. Hopefully, D will stand for disruptive or game changing innovation.

In recent times, India has witnessed two ASSURED innovations that have been truly game changing, one from the government and the other from the industry.

JAM – J (Pradhan Mantri Jan Dhan Yojna), A (Aadhar identification and authentication) and M (Mobile telecommunications) created the fastest and largest financial inclusion in the world, with 300 million plus bank accounts opening up in record time.

Another game-changing innovation is Reliance Jio, which has catapulted India from the 155th rank in mobile data transmission globally to the First rank today! But importantly it has moved India from a jugaad ‘missed call’ innovation to ‘free voice call’ innovations.

But for successfully implementing the ASSURED innovation policy, we need to build a robust innovation ecosystem. The essential elements of such a national ecosystem



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include physical, intellectual and cultural constructs. Beyond mere research labs, it includes idea incubators, technology parks, a conducive intellectual property rights regime, balanced regulatory systems, strategically designed standards, academics who believe in not just ‘publish or perish’, but ‘patent, publish and prosper’, scientists who have the passion to become techno-preneurs, potent inventor-investor engagement, ‘ad’ venture capital, and passionate innovation leaders.

So these are buses that India has caught as ASSURED innovations. However, there are several missed buses. Let me take just one example.

Simputer was designed to be a low cost and portable alternative to PCs. The idea was to create shared devices that permit truly simple and natural user interfaces based on sight, touch and audio. Simputer was to read and speak in several Indian languages in its initial release. Simputer prototypes were launched by the Simputer Trust on April 25th, 2001.

It was hailed for its ‘radical simplicity for universal access’. Before the arrival of the smart phone in 2003, Simputer had anticipated some breakthrough technologies that are now commonplace in mobile devices. One of them was the accelerometer, introduced to the rest of the world for the first time in the iPhone. The other was doodle on mail, the ability to write on a phone, that was later a major feature on the Samsung Galaxy phones.

Bruce Sterling writing in *New York Times* magazine had said, “The most significant innovation in computer technology in 2001 was not Apple’s gleaming titanium PowerBook G4 or Microsoft’s Windows XP. It was the Simputer, a net-linked, radically simple portable computer, intended to bring the computer revolution to the third world.”

Despite having A, U, R, E & D from ASSURED, what went missing was S & S, namely scale and sustainability.

This was because of the absence of innovation-friendly public procurement policy despite many rural-specific demonstrations.

Innovations are products of creative interaction of supply and demand. Besides supply side initiatives, we need aggressive demand side initiatives – and public procurement is an obvious choice. With large procurement budgets, the Indian government can not only be the biggest, but also the most influential and demanding customer of these ASSURED innovations.

Finally, ASSURED can be a ‘one word policy statement’ for India, helping it achieve accelerated inclusive growth on one hand and global competitiveness on the other.

Dr. Raghunath Anant Mashelkar is one of twelve Indian National Research Professors at the National Chemical Laboratory (NCL) and the President of the Global Research Alliance. Dr. Mashelkar served as the Director General of the Council of Scientific & Industrial Research (CSIR) for over eleven years. Prior to this, he was the Director of the NCL for six years.



A chemical engineer from UDCT (now Institute of Chemical Technology), Mumbai, he was also the President of the Indian National Science Academy and the President of Institution of Chemical Engineers, UK.

Dr. Mashelkar was a member of the Scientific Advisory Council to the Prime Minister and also of the Scientific Advisory Committee to the Cabinet set up by successive governments.

It was through his sustained and visionary campaign that awareness of Intellectual Property Rights (IPR) has grown amongst Indian academics, researchers and corporates. He spearheaded the successful challenge to a US patent on the use of turmeric for wound healing, as well as another patent on Basmati rice.

Still deeply connected with the innovation movement in India, Dr. Mashelkar is currently the Chairman of India’s National Innovation Foundation, Reliance Innovation Council, Marico Innovation Foundation and Thermax Innovation Council.

The President of India honoured Dr. Mashelkar with Padma Vibhushan (2014), Padmabhushan (2000) and Padmashri (1991), three of the highest civilian honours, in recognition of his contribution to nation building.

Dr. Mashelkar has won many awards and medals, which include S.S. Bhatnagar Prize (1982); Pandit Jawaharlal Nehru Technology Award (1991); G.D. Birla Scientific Research Award (1993); Lifetime Achievement Award by Indian Science Congress (2004); the Science Medal by the Academy of Science for the Developing World (2005); Ashutosh Mookherjee Memorial Award by Indian Science Congress (2005) and many more.