

# **Talent, Technology & Trust: Cornerstones of Start-up India**

## **3<sup>rd</sup> Convocation Address**

**By**

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Chairman of the Board of Governors, Shri Ajay Piramal, Director of IIT Indore, Prof. Pradeep Mathur, Distinguished members of the Board of Governors, Distinguished members of the Senate, Distinguished Deans and Faculty, proud graduands of the day, their equally proud parents, ladies and gentlemen.

I deem it a special privilege and an honor to deliver the convocation address in the third convocation ceremony of IIT Indore. Coincidentally, last year, in the same month of August, I gave the convocation address in the fifty second ceremony of IIT (Bombay)! So I had the privilege to give convocation addresses in two IITs, separated in birth by five decades! But the young IIT, Indore has an advantage. The young can run fast, take a different path, and aim to overtake the best in less than a decade. So all my best wishes are with IIT Indore for this swift climb on the limitless ladder of excellence!

I want to begin by congratulating the graduands of the day. This is a very special day in your life. When our generation graduated, India was a third world country. When you are graduating, everyone expects India to be the third most powerful country in the world. And my friends, it is you, who will be charged with building this great future of our great nation.

You all are also entering a world, which is exciting as well as challenging. I say challenging, since we realize that we are living in a VUCA world, which is volatile, uncertain, complex and ambiguous. They say that institutions can't build the future of

the young, but they can build the young for the future. You are fortunate that IIT Indore, has equipped you fully with skills and tools to deal with this challenge most confidently.

### **Our dream**

IIT Indore must have the dream to become a world class institution. And all world class institutions have a seamless integration of education, research and innovation. Education disseminates known knowledge. Research creates new knowledge. Innovation converts knowledge into wealth and social good.

Let me elaborate. The Vice chancellor of Cambridge University Sir Lezek Borysiewicz has created a Circle of Advisors. I happen to be one of the members of this Circle of Advisors. In his very first presentation, the Vice-Chancellor told us that Cambridge University has won over eighty Nobel Prizes but at the same time, it has 15000 start-ups creating 45000 jobs with atleast five companies with revenues of US \$ 1 billion plus each! You can see here a powerful example of seamless integration of education, research and innovation. IIT Indore should have the dream of achieving such beautiful confluence of Saraswati & Lakshmi.

### **Talent, Technology & Trust**

I am already seeing the signs of the seamless integration of education, research and innovation here in IIT Indore. The IIM-IIT Indore Entrepreneurship Summit 2015 that

was concluded yesterday, I understand, was a great success. I loved the very concept of i-5, which meant ideate, innovate, inspire, induce and invest. I want to congratulate you all for the positioning of this Summit as also its timing.

Interestingly, my convocation address comes just after this event. To me, city of Indore has a competitive advantage. It is the only city in the country, which has both an IIT and an IIM. You two together can be a thriving breeding ground that can nurture entrepreneurial spirit, IIT Indore can lead in technology led entrepreneurship i.e. technopreneurship. I understand that IIT Indore has an innovation and entrepreneurship development centre, a student entrepreneurship support cell and IIM Indore runs an entrepreneurship arm in the student activity centre. Together, you can do a magic. Indore can dream of having a thriving start-up ecosystem.

The key words for this start-up ecosystem, however, will have to be Talent, Technology & Trust. Let me elaborate.

### **Indian Talent**

As regards talent, I am a great believer in Indian Talent. Our erstwhile Prime Minister Atal Behari Vajpayee used to say, 'India's future is in IT, namely IT as an Information Technology'. I also used to say 'India's future is in IT, but It as in Indian Talent!' And I am proud to see such abundant talent in front of me here.

I had attended a seminar on export competitiveness of India several years ago. There was a discussion about what could be India's best export to the world. Someone cryptically remarked 'without doubt, they are the IIT graduates!' in other words, he was saying that India is a great exporter of great talent!

And how true this is! In recent times, we in India celebrated the appointment of Sundar Pichai as the CEO of Google. Earlier we celebrated the appointment of Satya Nandella as the CEO of Microsoft. India believes in Satyam, Shivam, Sundaram. So we already have Satya and Sundar – may be now it is time to have Shiva as CEO of another global giant, may be Apple, may be IBM, may be Intel ..... who knows?

Look at Silicon Valley. 16% is the share of the new ventures of the total that are started by the Indians in silicon valley. We are ahead of all other non-US nationalities. A question that we must ask ourselves is the following. 'Why do Indian genes so easily express in Silicon Valley? Why can they not express in our own Indus Valley?'

So while we celebrate Satya and Sundar for their heading Microsoft and Google, should we, as Indians, not raise our ambition, and ask as to when will we create the new Microsofts and Googles of the 21<sup>st</sup> century in India?

## **But Trust is the Key**

Someone asked me 'Aren't there Bill Gates' in India? I said, of course, there are. But having a Bill Gates is one thing and creating a Microsoft is another thing. It requires an innovation ecosystem, which trusts the young, takes risks and indeed celebrates failure. How were the seeds of Microsoft, which become a giant tree, sown?

I recall Bill Gates narrating this story in an exclusive dinner cum discussion with him, which I was privileged to attend in New Delhi five years ago. He then mentioned about the remarks that he had made at the Harvard University Commencement 2007. After acknowledging the fact that he was the most successful drop out from Harvard University, he said, and I quote him from his Commencement address.

*"One of my biggest memories of Harvard came in January 1975, when I made a call from Currier House to a company in Albuquerque that had begun making the world's first personal computers. I offered to sell them software.*

*I worried that they would realize I was just a student in a dorm and would hang up on me. Instead they said: "We're not quite ready, come see us in a month," which was a good thing, because we hadn't written the software yet! From that moment, I worked day and night on this little extra credit project that marked the end of my college education and that was the beginning of a remarkable journey with Microsoft."*

This tells you the importance of trust. The company in Albuquerque did not hang up the phone after a youngish voice made an audacious offer of supplying software in those early days of personal computers. They trusted him. And look at the audacity of young Bill Gates, who offered the software that he did not have. Why? He did not have the software but he had the trust in himself that he would deliver.

Israel is called the start-up nation. This is because it is full of young people, who have the some audacity that Bill Gates had, and equally importantly, they have a courageous innovation ecosystem, which just does not believe in venture capital --- but in `ad` venture capital, that adventuring is based solely on the trust of the young budding Israeli technopreneurs. Can we build our India as a start-up nation?

### **Start-up India taking off**

In his inspiring independence speech this year, our Prime Minister Narendra Modi announced from the Red Fort the 'start-up and stand-up' Indian movement. Our Finance Minister was then quick to announce a Rs. 2000 crore Indian Aspiration Fund to fuel the India start-up movement. The idea is to catalyse tens of thousands of crore of equity investment in start-ups and MSME, creating employment for lakhs of persons, mostly educated youth, over the next 4 to 5 years. And there is the announcement of the SIDBI Make in India Loan for Enterprises (SMILE) scheme with an investment of Rs.10,000 crore.

Atal Innovation Mission and Self-Employment and Talent Utilisation (SETU) have been also launched. They are meant to drive innovation and entrepreneurship in India that can result in widespread job growth and the creation of globally competitive enterprises.

And there is already a lot of other good news. The Indian start-up ecosystem seems to be really taking off. The numbers speak for themselves. From 3100 start-ups in 2014 to a projection of more than 11,500 by 2020. Between 2010 and 2014, the infusion of venture capital and private equity based funding increased from \$ 13 million to \$ 1818 million. Angel investment, in the same period, increased by 8 times, from \$ 4.2 million to \$ 32.2 million.

Research parks, enablers, accelerators and incubators have to be set up in increasing numbers. The contribution by DST (incubators) and DBT (BIRAC programme) is massive in this. There is a buzz in IITs today. I am sure just as IIT (Madras) Research Park is buzzing with activities, so are the other IITs.

All this is matched by great dreams. NASSCOM has come up with an ambitious initiative called “10,000 Startups”, aiming to scale up the startup ecosystem in India by 10x. The program is supported by Microsoft, Google, Intel, Verisign, and Kotak. 10,000 Startups aims to enable incubation, funding and support for 10,000 startups in India over the next ten years.

The program has been already able to successfully impact 150+ technology startups, aiding in the raising of funds, acceptance into acceleration programs, found customers, and on-boarded members through the initiative.

And the same vibrancy is seen across the country – from east to west and north to south, Bangalore, of course, being a leader.

Let me tell you what I am seeing from my own personal lens. As National Research Professor, I am located in National Chemical Laboratory (NCL). We at NCL, set up a Venture Centre with the objective of nucleating and nurturing knowledge based enterprises. In a short time, it has supported 150 S&T based start-ups. Among the current incubators, there are 35 residents, 74% of them in biotech-biomed field. My visit there last week showed that it was house-full, with a long waiting queue, a situation in sharp contrast to what it was just two years ago!

There are so many private sector initiative too. Reliance Industries Ltd. has set up a venture capital arm GenNext Ventures Pvt. Ltd. I happen to be its Chairman. GenNext Ventures partners with Microsoft Ventures to create an Accelerator in Reliance Corporate Park, which was launched last year. One of the 'graduates' of the first batch is already close to achieving a valuation of \$ 100 million! An exciting second batch will be launched in mid-September.

But before we get excited, let us remember that city of Tel Aviv alone has over 2000 start-ups per year. So we have a long way to go. But I am happy that we have begun our journey earnestly.

### **Getting the Fundamentals Right**

For Start-up India to take off, we must create an ambition and ambience. And for that, we have to get some fundamentals right. The rightful ambience is created through a powerful national innovation ecosystem. The essential elements of such a national ecosystem comprises 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 technopreneurs, potent inventor-investor engagement, 'ad' venture capital, and passionate innovation leaders.

Let me just take one of the issues, namely IPR, specifically patents, as they pertain to start-ups. We must recognize that patents are valuable for start-ups. The 2008 Berkeley Study titled *'Patenting by Entrepreneurship: An Empirical Study'* found that 67% of venture backed start-ups reported that patents had been vital for them in securing investment. While 40% of all the start-up held patents, 80% of those receiving venture capital investments owned patents.

Patents can ensure a start-up's freedom to operate. Google is an industry heavyweight that complains about patents today. But as a start-up, back in 1998, Google deemed its seminal PageRank patent No. 6,285,999 so vital that it filed for it before it had a business plan, venture funding, or even a domain name—and then paid Stanford University, to which it had been assigned the patent, \$336 million in shares to exclusively license it. As one analyst said that without the patents “Google would have been trampled by copycat search engine offerings from Yahoo, Microsoft, and other big players, who once dominated the market.”

Patents can help start-ups form joint ventures and R&D partnerships. According to a 2014 National Science Foundation backed study, 49% of manufacturing and service firms used inventions obtained from external sources to develop their most important new products and services. Patents on those startups inventions serve as legal scaffolding around which joint venture and R&D partnerships are constructed.

Patents can help a start-up defend itself against attacks by incumbent rivals. Patents can help a start-up stop the theft of its innovations by larger rivals. Further patents can help a start up rapidly increase its market share. Patents enhance the chance of a start-up getting acquired and they can also help a start-up get ready for an IPO.

Patents can help a startup launch a billion-dollar empire. As IP folio chief executive Rupert Mayer recently observed, patents have helped at least 10 major startups launch billion-dollar empires. These include Dropbox's network folder

synchronization patent, Zynga's asynchronous challenge gaming patent, Square's patented system and method for decoding swipe card signals, GoPro's patented harness system for attaching a camera to a user, and of course Google's breathtakingly valuable original PageRank patent.

### **Young Indians generating Hope**

Let us return to Start-up India. We talked about ambience in India. Let's talk about ambition now. Our young people must have ambition. And for that they must have a trust and confidence in themselves. We do have such young people in India, who are beaming with confidence. Let me give you an example.

In my mother's name, I have created an Anjani Mashelkar Inclusive Innovation Award. This is the fifth year of the award. It is given for designing and developing a technological solution that leads to inclusion, meaning that millions of resource-poor people can benefit from it. But there are two conditions. First, it must belong to the category of affordable excellence. Second, it must be not just the "best" practice, but the "next" practice. The first condition is difficult to fulfill, but the second one is even tougher, because imagining and delivering the next practice requires bold imagination and great audacity .

One of these awards was given to a 28-year-old innovator, Myshkin Ingawale, an IITian by the way! He found that women in villages were dying of anaemia because their low

haemoglobin levels were not detected in time. He found out why: many of them were reluctant to give their blood. So he decided to create a non-invasive diagnostic tool. He found that this was something that was never been achieved before. But he was not deterred. He said let me be the first one to do it. He used photoplethysmography, spectrophotometry and an advanced software for photon scattering to create TouchHb. This was technological 'excellence' achieved by using cutting edge technology, and not jugaad.

Furthermore, he said poor must afford the cost of such diagnosis. So he set an audacious target of achieving not a 10% reduction in haemoglobin detection cost, but a ten times reduction. And he achieved it also. He could do the haemoglobin detection in just 10 rupees per test.

So we have thousands of such Myshkins in India, with ambition and self-confidence. They ride on the strength of their talent and technology. Our challenge is to put trust in them, so that they can succeed. Remember again, Talent, Technology and Trust.

### **Ten Golden Rules to Success**

My young friends, at the end, you will ask me, what will it take us to succeed?

I will give you ten golden rules. Here they are:.

First, your aspirations are your possibilities, so keep your aspirations always high. We often complain about scarcity in India. But remember, the combination of scarcity and aspiration can create disruptive and game changing innovations.

Second, I strongly believe that there is no limit to human endurance, no limit to human achievement and no limit to human imagination, excepting the limits you put on your mind yourself. So be 'limitless' in terms of your imagination.

Third, there is no substitute to hard work for becoming successful. I have myself worked 24x7, week after week, month after month, year after year and will do so till I take my last breath. The golden rule is the following. Work hard in silence. Let success make the noise.

Fourth, like instant coffee, there is no instant success. your overnight success is always a result of everything that you have done through that moment. If you really look closely, most overnight success took a long time, as Steve Job famously said.

Fifth, again about success. Please remember that success is no accident. It is hard work, perseverance, learning, studying, sacrifice, and most of all, love of what you are doing, as the legendary footballer Pele , who reached an ultimate pinnacle of success in life, had said.

Sixth, it is wrong to wait for the opportunities to knock on your door. If opportunity does not knock, build a door.

Seventh, remember, innovator is one who sees what everyone else sees, but thinks of what none else thinks. Indeed, if you master the art of visualizing the invisible, you can make even seemingly impossible, possible.

Eighth, continue to be creative. It does not get exhausted. The more you use creativity, the more you will have it.

Ninth, when someone tells you that it can't be done, take it that it is more a reflection of his or her limitation, not yours. Remember, innovator is one, who does not know that it cannot be done.

Tenth, I have always said that I in every Indian must stand for innovation, not for inhibition or imitation. Indeed, remember it is better to fail in originality, than succeed in imitation.

**Finally,**

Let me recall an anecdote as I close.

I Chair the National Innovation Foundation (NIF). I was involved in the process of interview for the Chief Innovation Officer of NIF. I found that the individual that we were interviewing was an expert in branding a product. I said 'I want to brand India. How would you do that?' He was puzzled. He had branded a soap, a refrigerator, but he wondered as to how he could brand a nation. I said 'I will make it easy for you. Let me tell you as to how other nations brand themselves. For instance, US brands itself as a land of opportunity'. He immediately replied 'I will brand India as a land of ideas'. Now here is the problem. India is a land of ideas but it is USA that is a land of opportunities. That is why young people with aspirations go to USA, which provides them an opportunity to reach their own potential. That is the opportunity Satya & Sundar got.

My friends, there is great news for you. India is becoming a land of huge opportunity. I see that not only young Indians are returning to India, but there is an ever increasing proportion of our bright IIT graduates staying back in this new emerging land of opportunity, our India. I see even foreign nationals getting increasingly employed by our Indian enterprises in India.

Let me end by saying that it was always great to be an Indian. But now, it is great to be in India.