

Dear IIT students

Discipline of engineering must remain relevant to Fourth Industrial Revolution that will write the script of the 21st century. For that, silos must be broken



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LIKE INDIVIDUALS, institutions are very dependent on decisions taken in their formative years. IIT Hyderabad is young; it is only 10 years old. It too is defined by energy and enthusiasm and has built a solid foundation. Today, you have 2,500 students, one in five of them being a young woman. The institute has a strong postgraduate programme, with 30 per cent of students pursuing a PhD. These are commendable figures, but the question is: What next?

The road you take today will determine your future — not just for the next few years but perhaps for the rest of the century. That may sound like an overstatement but do consider some of the world's major universities, or even the older IITs, your peer institutes. Their achievements, over several decades, have been shaped by the trajectory they took in their earliest days.

As a second-generation IIT, it is important that you borrow from as well as learn from the models of the past. Conditions are different from the 1950s and 1960s. India has changed. Technology and the very discipline of engineering have evolved. Our aspirations are no longer limited to the heavy industrial base that we created six decades ago. Rather, IIT Hyderabad has to remain relevant to the Fourth Industrial Revolution that will write the script of the 21st century.

The best scientific universities and institutions of learning are not just teaching shops or degree factories. Increasingly, they are sources of innovation and incubators of technology and technology-driven start-ups. The knowledge ecosystem of public investments in science, academic institutions and universities, research laboratories, commercial applications and private enterprise has an almost magical potential. Its best example is, of course, Silicon Valley in the United States. At the core of Silicon Valley are basic science and technology campuses and their talented faculty and students.

This IIT has been set up in a city and in a metropolitan area where several elements for such an ecosystem already exist. IIT Hyderabad, in a sense, is the element that completes the picture. Hyderabad has a long tradition of scientific discovery and application. In the 19th century, Ronald Ross, who won the Nobel Prize for

Medicine for identifying the mosquito that transmitted malaria, did pioneering work here. After Independence, Hyderabad became a location of industrial manufacture. It saw vigorous and far-sighted investments by the public sector and then the private sector.

Gradually, the city's reputation grew as a research centre. Before coming here, I called for details from the Council of Scientific and Industrial Research, the Department of Science and Technology, the Department of Biotechnology, the Department of Atomic Energy, the Defence Research and Development Organisation and the Indian Space Research Organisation. Between these institutions, I am told there are as many as 19 research facilities and laboratories in Hyderabad.

I have not even mentioned the private sector. Hyderabad-based companies are engaged in cutting-edge research and manufacture of biopharmaceuticals and vaccines and, separately, in the field of Information Technology.

Individually, many of these entities are doing excellent work. The point is: Are they pulling their collective weight? Is there adequate cross-pollination?

IIT Hyderabad is not envisaged as just an add-on to this ecosystem. Rather, it needs to be the hub of this ecosystem. It must be the connecting tissue and the catalyst for a greater synergy. This is IIT Hyderabad's mandate. I would go to the extent of urging greater engagement with schools like the Indian School of Business and the National Academy of Legal Studies and Research. After all, technology management and technology law and regulation are dynamic and critical areas. It would be extremely valuable if technology practitioners played a great role in these domains, rather than left it to non-specialists.

The true measure of IIT Hyderabad cannot be restricted to grade point averages, campus placements and number of published papers. No doubt, all of those are important but please don't limit your ambitions. Please break out of silos and please encourage others to break out of silos. India will judge your success by the vitality and the output you can ensure for not just yourself but for the entire Hyderabad knowledge ecosystem.

Do keep these thoughts in mind as you move ahead in life, as the graduating students go further in their professional careers, and as IIT Hyderabad travels into its second decade. Of course, my best wishes are always with you.

This is an edited extract from President Kovind's address at the convocation of IIT Hyderabad on August 5