

## C Balagopal

Founder and Former Managing Director, Terumo Penpol Ltd

I want to specifically talk about one aspect, which is from the perspective of high-tech manufacturing industry operating in Kerala. More specifically, what kind of support and what kind of synergistic role the state can play with the innovation ecosystem? I think the biggest user of all the innovative science and technology products and facilities which are sought to be created by K-DISC and by the Kerala Startup Mission is going to be the MSMEs. I have been associated with the startup Mission right from its very beginning and I am impressed at the progress which has been made, but I think we are losing something by this almost exclusive focus on startups. As I said earlier, the biggest user of knowhow and innovation is going to be the existing high tech manufacturing industry. There is a saying in innovation, that necessity is the mother of invention! So somebody must be feeling the pressure. Somebody must be feeling a problem burning a hole in their balance sheet so much so that they are always seeking a solution. That burning 'necessity' to innovate can never come from a young guy who's studying in college or younger or someone who may have some idea.

The second thing is the ability to recognize the value of an innovation as a property of business and industry. Only when you're looking for something, will you be able to recognize what you're seeing. So the problem here is we have a dichotomy. We have R&D centers and high tech labs of research institutions which are working on projects, and somewhere else we have industry, which has got problems. And the two are not talking to each other, not meeting to discuss these problems. So my recommendation is that both K-DISC and Kerala Startup Mission must create such a platform to bring industry and the institutes together. I'm talking from first-hand experience because I set up a small startup, that later grew to global scale before I sold it as the world's largest maker of high quality blood bag systems. I had the great good sense to develop a personal excellent working relationship with Sree Chithira Tirunal Institute research labs. I also used the Keltron tool room, which today houses GIFT. I used the facilities and expertise of the Indian Institute of Science, Bengaluru, and several other top

R&D establishments. So I think what's very important is that the platform must be created which will enable MSMEs which are already successfully working within Kerala to be able to access and continuously have an interaction with research institutions, research labs and even the Maker Spaces, Maker Village and all the other facilities.

The second proposal, which I have, is related to the first one. These MSMEs include companies with revenue up to Rs 2000 crores and which are globally successful, with huge balance sheets, operating in very diverse areas ranging from steel casting, medical device manufacturing, electronics hardware, medical diagnostics, dental prostheses, etc. Now, here you can have a system of internships, fellowships and sponsored projects for which the platform can again be provided by K-DISC. These industries will be very happy to welcome young bright students from engineering colleges and science research laboratories to go over to their facilities to work on their projects and learn by working on the shop floor with their scientists and technologists. Similarly young technologists from industry can go to R&D institutes and do such programs. Unfortunately, today they are all working in silos.

Third, if you take the successful high tech manufacturing sector already operating in Kerala, they can be grouped into certain clusters that may or may not be contiguous. And there are natural clusters already existing: you can have a medical device cluster around Trivandrum based on TPPL, HLL, and TTK Healthcare; a steel casting products cluster around Calicut around PeeKay Steel Castings; spice extracts and food processing cluster at Kozhencherry, and then a garment cluster at Kizhakkambalam. If you create these clusters, then I think that would enable some common facilities to come up, which K-DISC can provide which will be beneficial to these clusters, since it will be difficult for an MSME to set up a lab or a testing facility.

To sum up, many elements of science, technology, and innovation eco-system are already existing here. The point is to connect the dots. So you have elements of a beautiful startup ecosystem, you have very successful high tech companies, you have one of Asia's premier research institutes in Trivandrum for medical devices, and so many others in other advanced fields, if you can create a platform for them all to talk to each other and exchange ideas, you will find a tremendous amount of cross fertilization of ideas happening which will lead to very good things. Thank you.