

Engineer Our Future with Innovation and Excellence
Keynote Address by Ir Frank Chan, Director of Electrical & Mechanical Services
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Good morning Ir Mak, distinguished guests, ladies and gentlemen,

Welcome to the symposium in search for Innovation and Excellence. I myself am a true believer of innovation, not because I can deliver but rather I always remain hopeful no matter how difficult it is. Despite my extreme optimism, I have to confess that there are ongoing pessimistic views with regard to innovation. In the eve of 2009, Innovation was pronounced dead by the BusinessWeek. Earlier this year, the Economist questioned whether the ideas machine had broken down.

There are many different perspectives with regard to innovation, and there is one I would like to share with you. David Cameron, the Prime Minister of the United Kingdom, once said “its value lies in its ability to make things possible tomorrow that we cannot even begin to imagine today”. At the time when he spoke in 2012, he was referring to investment in road infrastructure in Britain but the remark applies equally if not better for innovation.

Indeed, when the first integrated circuit was born in 1958, nobody could have imagined its pervasive applications, from all kinds of electronic gadgets to control, automation and instrumentation of machineries, power systems, space crafts and even electric cars. When Volta invented the first battery in 1800, he could not have imagined that many of us are now carrying a few batteries, be it with our smart phones or tablet computers, and many more if we drive an electric car.

Hong Kong has little natural resources. We survive and thrive with nothing but creativity and innovation over time. We have ample research activities in universities, the Science and Technology Parks, the Applied Science and Technology Research Institute, the Institute of Biotechnology, the Plastics Technology Centre, the Productivity Council and the five Research and Development Centres that focus on information and

communications technology, automotive parts, nano and advanced materials, textile, logistics and supply chain enabling technologies.

If that's not convincing enough, please have a look at your wallet. Most if not all of us would have an Octopus card in the wallet, an innovation made in Hong Kong that changes the way we pay here in Hong Kong and in many other parts of the world. If Octopus card is all too common, what about the forceps system that was designed by Hong Kong and adopted for use by NASA for the Mars expedition.

Obviously, Hong Kong is doing well and I have no doubt about it. But how well are we doing as compared to other economies. According to the Global Innovation Index, jointly published by INSEAD, one of the top business school in the world and the United Nation's World Intellectual Property Organization, Hong Kong's overall performance in terms of innovation capabilities and results came 8th among 141 economies in the world.

We came even higher in the ranking of innovation input, being second in terms of innovative activities. However, Hong Kong was only ranked 25th in terms of innovation output. With high input and relatively low output, our innovation efficiency could not be good. As a result, Hong Kong was ranked 110th out of 141 economies in terms of innovation efficiency. If Hong Kong is to survive the relentless global competition, status quo is obviously not an option. And so our search for innovation and excellence continues.

Two weeks ago, I came across Marlene Kanga, the President of Engineers Australia, who led and developed a policy statement on innovation in engineering for the nation. She emphasized the importance of innovation as the most significant factor that can drive productivity improvement across all industrial sectors and contribute to the economic prosperity of the nation.

Engineers Australia particularly differentiates innovation from invention and creativity, citing: "Creativity is seeing what everyone sees and thinking what no one else have thought before, while Invention is transforming those new thoughts into tangible ideas. Innovation goes even further, involving preparedness to mix with the commercial world

to turn novel ideas into products. Innovation is much more than research and development. It encompasses an end-to-end process, such that it extracts value through implementation.”

As clearly reflected by Kanga, Cameron as well as the Global Innovation Index, it is the value of innovation that matters, not innovation itself. The value of innovation is the ability to make things possible tomorrow that we cannot even imagine today. It is a process that demands investment, collaboration and capacity building for enhancement of productivity, competitiveness and sustainability in a world that never used to be.

With that, I wish you all a fruitful symposium today. Thank you.