

**Institution of Mechanical Engineers Hong Kong Branch**  
**Annual Dinner 2018**

**Keynote Speech by Ir Alfred Sit JP, Director of Electrical & Mechanical Services**

Good evening Chris, friends of IMechE, distinguished guests, Ladies and Gentlemen.

It is my great honor to be here, for sharing moment of happiness with all of you on the 21st anniversary of the IMechE Hong Kong Branch.

Mechanical engineering and quality of life are inseparable. You mechanical engineers apply the principles of science to tackle problems; make technological knowledge into practical use. You use creativity to turn dreams into reality. The vision of IMechE -- “Improving the World Through Engineering” is nurturing many breakthroughs for years to come.

To look into the future, we can learn from our precursors. The screen is showing three gentlemen who contributed greatly to improving quality of life. Let’s see if you could connect them with their achievements. (Wait a few second) Time’s up! Let’s take a look at the answers.

The three gentlemen are all among the 200+ honorary fellows of the IMechE and their contributions are well recognized, Mr. Hanny FORD popularized mass production methods to produce affordable automobiles for practical conveyance of people and goods. Sir Frank WHITTLE single-handedly invented the turbojet engine, which shorten a 3 and half days long-haul flight to 36 hours for a journey from London to Tokyo. Mr. Frank CHAN, our long awaited honorary fellow from Hong Kong since Sir S Y Chung was elected in 1983, oversaw safety of E&M installations and is enabling the connection of the express rail link in HK to the national high speed rail network.

I can’t help but to notice both Sir Frank WHITTLE and Mr. Frank CHAN, and I call them “Franks”, are champions in pursuing breakthroughs in speed. Sir WHITTLE’s jet engine speeded up the journey by no less than 2.3 times. The express rail link is capable of reducing the journey time from Hong Kong to Guangzhou, by more than half as well.

I am quite sure that many people in Hong Kong are also looking upon our Mr. Frank CHAN to excel with his excellent engineering knowledge to reduce the waiting time for public housing in Hong Kong by similar order of magnitude, at least.

We have no doubt that engineering greatly changes the world and life quality, but innovation and creativity can move it into another dimension. For example, when British inventor, Sir James DYSON got fed up with his vacuum cleaner that it was always losing suction due to vacuum bags, he came up with a new idea of “bag-less vacuum cleaner”. As with any problem solving, he identified the problem and created solutions, in fact he created more than 5,000 prototypes in fifteen years, that’s about 1 prototype per day. His continued effort and determination turned his “bag-less vacuum cleaner” into reality.

The story doesn’t end here. You may think no one would reject such a brilliant invention and his product would hit the market without a hitch. However, the fact was that no manufacturers in the UK was convinced of his product, may be because these manufacturers understood that Dyson’s product would impair their vacuum cleaner’s bags’ business. Dyson was heavily in debt after years of hard work and didn’t know where to bring his machine to the market at that time. The opposition he faced almost killed his innovation; as a start-up entrepreneur, he felt so lost. It was during that time Mr. Dyson travelled the world and a small Japanese company agreed to launch his product in Japan. By 1992, the sales in Japan enabled Mr. Dyson to set up his own company and unlocked a new chapter of vacuum cleaners.

The experience of Sir James Dyson has shown us an innovation will not sort itself out, it often requires support from family, colleagues, trade, employers, fellow professional members, so on and so forth. If an innovation idea lacks supports in both product development and design validation, the idea could not turn into reality no matter how great the idea is.

If Mr. Dyson is living in today's Hong Kong, I guess his story of vacuum cleaner may be much different and faced less difficulty because our Government and all stakeholders are now putting concerted efforts and resources to speed up the development of innovation and technology in Hong Kong, through investment in infrastructure, R&D collaboration, nurturing start-ups and promoting industries. To help entrepreneurs to

overcome the initial capital ridge, the Government will inject 10 billion Hong Kong dollars into the innovation and technology Fund to keep the support for local applied R&D work and innovation and technology projects through its different funding schemes; and allocate another 10 billion to Hong Kong Science and Technology Parks Corporation to enhance the support to tenants and incubates.

As one of the government departments, EMSD is also providing supports for nurturing of innovation and technology talents. We have opened up our Headquarters Building in Kowloon Bay since last November as a test ground for entrepreneurs and start-ups to field-test their novel technologies and verify their effectiveness in a real world environment. We have also created an “E&M InnoPortal”, which is an internet forum, to showcase the range of solutions undergoing tests and the successful cases by the entrepreneurs and start-ups. We hope this will outreach to all levels of start-ups to promote the use of innovation and technology, and EMSD will be one of the facilitators, to connect and collaborate.

Not only does government departments put great efforts in the development of innovation and technology, I am glad to know that IMechE has set up the Stephenson Fund in 2015 to help companies overcome the investment hurdle between R&D and bringing a product to the market. Need not to mention Stephenson Fund also connects these companies to the vast resources and network of the Institution and its membership.

We can see that government, professional institutions trade and industry are all putting in efforts and resources to share knowledge and innovative ideas, and nurturing the growth of local innovation and technology development. I appeal all of you to couple Innovation and Technology in your works. Not every one of us will be the next James Dyson, but we can be the one to support our pioneers to fulfill their dreams. Let's collaborate together to boost engineering to new dimensions (and propel Hong Kong toward innovation). Thank you.

16 May 2018