Build4Asia Conference 2020

Keynote Speech by Ir Eric PANG JP, Director of Electrical & Mechanical Services

Future Shaper - from Vision to Action

Good morning Chairman Walter, distinguished guests, ladies and gentlemen. Welcome to the Build4Asia Conference 2020. I am deeply honored to be invited for giving the opening remarks and keynotes speech for so many trade professionals from the industry in this exhibition. I am a believer of Innovation and Technology, and I always encourage fellows to imagine about our future lives. I&T is shaping our future, from home to work, from health to food, and to entertainment. I&T gives us tons of thinkable and unthinkable possibilities. When it comes to innovation, nothing is impossible! We all could be a future shaper to bridge the gap between imagination and reality.

According to the recent Smart City Index 2020 published by the IMD World Competitiveness Center, Hong Kong moved upward 5 ranks compared to 2019 and ranked 32 among 109 cities. The progress relies on the active engagement of government, trades, community, etc. to infuse technologies to respond to urban challenges in the aspects of health and safety, mobility, activities, opportunities and governance. In fact, there are opportunities for us to come even higher in the ranking. While dealing with the hustle and bustle of city life, we should imagine more how we could enhance our quality of living!

Science fiction and movies have inspired us a lot in making use of new technology to realize the fantasy therein. One of the greatest films of all time, Star Wars, has inspired us with crazy technologies that hadn't existed then. Remember one of the iconic character in Star Wars: Boba Fett, who is famous with his flying fighting style with his jet pack. Now, the jet pack concept has been realized and adopted for rescue operation of hikers. The jet pack which would enable a "flying" medic to reach patients in minutes has been tested by the Great North Air Ambulance Service. It turns the Star Wars fantasy to reality. Our imagination is the fuel of our own future of what is possible.

The jet pack is one of the successful technologies which are invented to embrace the concept of human centric design. Engineering is in fact the tool to bridge the gap between vision and application, and transform technology into reality. With engineers' "seasoning", imagination and demand of todays are realized some days through evolving technologies.

How technology has changed our daily lives? Take financial sector as an example. Alipay, FPS, PayMe, Octopus Card and etc., are the FinTech that married the economy with Internet of Things (IoT) to boost business value. It is just like a household light bulb, the value of which would never be the same after it has been digitalised with IoT functions.

Let's feel it! IoT has the power to add value to everything!

What about our building and construction industry? With reference to a study on the "Level of digitalization by industry", the adoption of digital technologies in building industry is still at a nascent stage. There are lots of room and opportunity for us to embrace and transform it into a digitalised building industry!

In the past few years, the Government has been promoting and driving for I&T development by offering various supports to stakeholders in the industry, academia and research sectors to nurture innovative ideas, and engineer them into one after another commercialized products.

Early in 2011, the Public Sector Trial Scheme, or the PSTS in short, under the Innovation and Technology Fund (ITF) was launched to provide funding support for production and conduction of trials in the public sector to facilitate and promote the realization and commercialization of research and development projects. Apart from the PSTS, over 15 nos. of programme under the Innovation and Technology Fund was established to cater for the needs of different sectors.

It is undoubted that the building and construction industry is now facing challenges brought about by the increasing construction volumes, rising construction costs and ageing and limited supply of workforce in recent years. Innovation is a key element in our Construction 2.0. The industry needs innovation and the introduction of new technologies to enhance its efficiency and professionalism so as to sustain its growth and meets the development of HK. The 1-billion Construction Innovation and Technology Fund (CITF) jointly launched by the Development Bureau and CIC aims to fund projects and activities that can boost the transformation of the industry through automation, industrialization and digitization, and to enhance the capability of existing and prospective practitioners to harness technology for the next phase of our Construction 2.0

industry.

The support on I&T from the Hong Kong Government has been further extended to the establishment of two InnoHK research clusters on “healthcare technologies” and on “artificial intelligence and robotics technologies” in the Science Park. The clusters will pool and nurture more talented future shapers for Hong Kong.

Shouldn’t forget that we EMSD is also a stakeholder in the industry. As one of the future shapers, our vision is to provide digitized E&M engineering solutions, maximize public value with the interests of the community in mind, and to move towards the new era of E&M 2.0. Imagine the opportunities brought about by the integration of digitized asset management, real-time remote monitoring on E&M assets via Building Management Systems and IoT sensors, applying big data and AI on E&M operation and facility management, etc. Our AI enabled digital assistant will predict the air-conditioning load demand, suggest the optimal operation modes, and remind you the potential hazards through the predictive maintenance solution. Energy saving coupled with reliable operation can be so easily achieved, and with a scalable design, the benefits can be automatically replicated from a single equipment to a plant; from a single plant to a building; from a single building to a city; from a city region to the Greater Bay Area; and so on. That is something budding in our new Regional Digital Control Centre (RDCC), with over 600 thousand data receiving daily from a single building and 400 more buildings targeted to be connected in coming years.

Technology helps us respond to urban challenges, prepare city’s resilience, facilitate sustainability and growth, and improve our quality of life. We apply technology to materialize the Smart City Blue Print to make our life smarter, greener and better. For example, we can shape our future mobility via IoT on roads, public transportation and parking spaces, and also shape our green policy via sharing energy data in online resources center. Through the EMSD’s Government Wide Area Network, or GWIN in short, we are constructing a territory-wide government wireless infrastructure, and are deploying IoT sensors to transform traditional facilities lying around the territories to make it “smarter”. In our facility maintenance application, we no longer need to check the healthiness of facilities on site, since their IoT sensors will tell us remotely that they will soon be in trouble. In our smart parking project, we can understand the parking pattern instantly, and even share such data to the driver; in our smart toilet project, we

introduce user friendliness and can even reshape the facility management operation. We all shall collaborate together and use digitized engineering solutions to shape our future.

Through realizing their big dreams, many people have made impacts to our lives globally. Today, we have more information, opportunities, technologies and resources than ever. It is the perfect time to imagine our future, embrace fresh ideas, and collaborate together to bridge the gap between imagination and reality to make our city more connected, smart and innovated.

Last but not least, may I wish today's conference a great success, and our audience a fruitful, enjoyable and inspiring experience. This is our time to be a future shaper today. Thank you.

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