

**For Information
On 23 June 2020**

**LEGISLATIVE COUNCIL
PANEL ON DEVELOPMENT**

**E&M InnoPortal for Wider Application of
Innovation and Technology in the Government**

PURPOSE

This paper briefs Members on the E&M InnoPortal established by the Electrical and Mechanical Services Department (“EMSD”) under the Development Bureau to facilitate wider application of Innovation and Technology (“I&T”) in the Government in collaboration with the I&T sector.

BACKGROUND

2. The work of EMSD covers two portfolios. Firstly, the department ensures the electrical and mechanical (“E&M”) safety for the public and promotes energy saving by enforcing ordinances related to electricity, gas, lifts and escalators, amusement rides, railway and energy efficiency. Secondly, the department provides one-stop professional and quality E&M and vehicle engineering services covering project management, procurement, operation and maintenance aspects for various government departments and public organisations.

3. The EMSD has all along been promoting the application of new technologies in a wide range of government services. For example, the EMSD has spearheaded the introduction of the Liquid Petroleum Gas (LPG) vehicles to reduce emissions from vehicles, and oil-free chillers to improve the energy efficiency of air-conditioning systems. The EMSD also provides tailored technical support for government departments to adopt new technologies including the award-winning “Central Command System of Marine Police” in 2011 and “Smart Fever Screening System at

Border Control Points (BCP) for the Department of Health” in 2019. In the Civil Service Outstanding Service Award Scheme 2019, the EMSD won several awards for the I&T application projects, including the “Training Beyond Innovation”, the “Smart Prison” and the “Customer Centric e-Platform”. The EMSD also owns several technology patents such as the testing platform for constant current regulators for airfield lighting, and the application of Building Information Modelling in Asset Management (“BIM-AM”).

4. The EMSD has also been supporting universities and start-ups to apply for various funding schemes under the Innovation and Technology Bureau for E&M and energy saving related research projects. However, it is noted that even though funding support is secured, the universities or start-ups may face difficulties in convincing target users to try out their novel products and solutions. This results in a major hindrance to the further development and adoption of innovative technologies. There is a need to help them acquire real-life credible job references, through which they may collect data and feedback to refine the products to better meet the needs of the market.

5. On the other hand, government departments may sometimes encounter difficulties in identifying feasible I&T solutions to meet their needs. Hence, there is a need for publicising the needs of government departments through suitable means with a view to facilitating effective matching of suitable I&T solutions.

PROMOTION OF WIDER ADOPTION OF I&T

Use of Government Facilities as the Testing Ground for I&T

6. Against the above background and in support of the directive of 2017 Policy Address on development of I&T, the EMSD has pursued the establishment of an online platform for matching the Government’s I&T wishes with solutions from the I&T sector. The online platform, known as the E&M InnoPortal, was officially launched in June 2018. The platform lists the E&M service wishes of various government departments and public organisations. Through an automatic notification function, the platform will inform interested parties (such as universities and start-ups)

of the potential engagement or procurement opportunities of such service wishes so that they can consider proposing relevant I&T solutions for matching the wishes.

7. For successfully matched I&T wishes and solutions under the platform, the EMSD will carry out field trials to assess whether the solutions can address the intended needs of the government departments and public organisations. The trials, in the form of prototype testing, pilot projects, etc., will take place in the EMSD Headquarters or other suitable government premises. Upon completion of the tests, the EMSD will upload validated performance reports onto the E&M InnoPortal for reference by the public.

8. The E&M InnoPortal aims to help government departments and public organisations identify appropriate solutions to enhance their services by the application of new technologies. Leveraging government facilities as a testing ground, the I&T sector can make use of the opportunities for trial of their products and gain experience to refine and prove their solutions. Upon completion of the trials, the respective parties will receive objective and impartial performance reports, while other stakeholders may refer to the reports to consider adopting these solutions, thereby helping promotion of the solutions for further applications.

Facilitating Pro-innovation Government Procurement

9. In April 2019, the Government promulgated a pro-innovation policy for procuring stores and services by government bureaux and departments (“B/Ds”) with the aim of encouraging them to adopt I&T solutions when making procurement, and tenderers to propose innovative solutions to meet their needs.

10. As an Innovation Facilitator, the EMSD will support B/Ds in identifying suitable E&M solutions, and to advise on suppliers’ technical capabilities in meeting the needs of B/Ds, which involves the use of the E&M InnoPortal as a tool to facilitate the procurement process. On this front, the EMSD has stepped up the effort to leverage the E&M InnoPortal and the connection with the I&T sector to promote the I&T application in the Government and to co-create suitable solutions for B/Ds.

I&T Showcase and Demonstration

11. Whilst the E&M InnoPortal serves as an online platform to showcase I&T solutions, the EMSD established the E&M InnoZone in its Headquarters in September 2018 as an offline platform to demonstrate the latest development and application of innovative technologies.

12. The E&M InnoZone is open to visitors from B/Ds, the E&M trades, the I&T sector, etc. It also welcomes visits by secondary schools and tertiary institutions to engage the younger generation and stimulate them towards a career in the I&T and engineering field through Science, Technology, Engineering and Mathematics (STEM) education in schools. As of May 2020, the cumulative number of visitors to E&M InnoZone is over 4 500.

Establishing I&T Strategic Partnership

13. To attain a success in the I&T application, the EMSD is actively exploring opportunities to establish strategic partnership with major I&T solution providers in Hong Kong and the Guangdong-Hong Kong-Macao Greater Bay Area (“GBA”) through Memoranda of Co-operation (“MoC”).

14. The EMSD signed 12 MoCs with five local universities¹ and seven research institutions² in June 2019. The areas of collaboration include promoting the use of the E&M InnoPortal, identifying I&T solutions for government departments and fostering exchange of knowledge and experience. These twelve strategic partners, representing a significant share of local start-ups and top-notch solution experts from the research and academic institutions, provide solid support to the EMSD on its future work on I&T.

¹ Including the City University of Hong Kong, the Chinese University of Hong Kong, the Hong Kong Polytechnic University, the Hong Kong University of Science and Technology and the University of Hong Kong

² Including the Automotive Parts and Accessory Systems R&D Centre, the Hong Kong Applied Science and Technology Research Institute Company Limited, the Hong Kong Cyberport Management Company Limited, the Hong Kong Productivity Council, the Hong Kong Science and Technology Parks Corporation, the Logistics and Supply Chain MultiTech R&D Centre, and the Nano and Advanced Materials Institute Limited

15. To further extend the strategic partnership towards the GBA, the EMSD signed three MoCs with related institutions³ from the Guangdong Province in August 2019. The collaboration with the GBA not only enables the EMSD to promote the E&M InnoPortal to the GBA and hence broaden our I&T solutions sources, but also fosters knowledge and experience exchange with our counterpart and helps promote local I&T solutions to the GBA.

LATEST DEVELOPMENT

Progress of E&M InnoPortal

16. With about two years' effort in promoting the E&M InnoPortal, wide recognition from various sectors has been gradually garnered. As of May 2020, there are more than 260 I&T wishes collected through the E&M InnoPortal and more than 470 prospective I&T solutions accumulated, covering a broad range of innovative technologies, including Internet of Things, artificial intelligence and data analytics, energy efficiency and renewable energy, energy storage and transfer, robotic application, etc. More than 60 field trials (as aforementioned in paragraph 7) have been kicked off and about 20 trial projects have been completed. The E&M InnoPortal is now a registered trademark and can easily be searched by typing "InnoPortal" in the search engine.

17. A number of application areas of the I&T solutions put into trial through the E&M InnoPortal are related to the work of EMSD and other works departments such as construction safety, lift and escalator safety, enhancement of inspection for E&M installations, rain gauge data transmission, smart drainage-flood monitoring system. The EMSD would continue to coordinate with respective works departments to make further use of the E&M InnoPortal for expanding I&T applications.

³ Including the Guangdong Provincial Association for Science and Technology, the Guangdong Productivity Promotion Center and the Guangdong Academy of Sciences

Use of I&T in Anti-epidemic Application

18. The outbreak of COVID-19 epidemic has brought upon unprecedented challenges to Hong Kong. To help combat the epidemic, the EMSD launched a thematic page on the E&M InnoPortal in February 2020, where seven I&T wishes for anti-epidemic application have been published, including self-disinfecting substances/coatings and using robotic technology for fever screening, indoor disinfection and delivery of objects to minimise close personal contacts, etc. Within two weeks, the EMSD have received an overwhelming response of over 200 I&T solutions from I&T strategic partners in Hong Kong and the GBA. The EMSD has been actively collaborating with several government departments to conduct field trials of some of the received anti-epidemic I&T solutions.

WAY FORWARD

19. Leveraging the groundwork on the E&M InnoPortal, the EMSD will continue to promote the platform and strengthen the network with I&T solution providers to drive wider adoption of I&T in the Government and to co-create I&T solutions for enhancing government services to the public.

Development Bureau

Electrical and Mechanical Services Department

June 2020