Dear Daniel

Digital 21 Strategy
Smarter Hong Kong, Smarter Living

Thank you for inviting me to respond to the public consultation. I am happy to contribute my views on two topics. They represent my personal views and not of any organizations with which I am associated. The numbers in [ ] refer to the paragraphs in the consultation document.

"(D) Programming in Every Child's Education" [para. 23-24]

2. The proposed new Digital 21 Strategy in the consultation document (**The Strategy**) refers to the recently promulgated EDB guidelines on the technology education curriculum and proposes to train students in structured and logical thinking through basic programming [para. 24]. This is a good idea.

3. Since the Strategy comes from CEDB, a different part of the government, it would be desirable if EDB could reflect the proposition in the relevant curriculum guidelines and package of support given to schools. If, on the other hand, the Strategy intends for private-sector education service providers to offer the basic programming training as a supplement to the formal school curriculum, then that should be clarified for the benefit of schools, parents and other interested parties.

"(J) ICT Talent Development" [para. 48-51]

4. The Strategy notes that the Committee on Self-financing Post-secondary Education plans to organize a seminar on the closer alignment of post-secondary education with industry needs under the Qualifications Framework [para. 49]. A seminar of that description has taken place on 30 October 2013 (see *http://www.info.gov.hk/gia/general/201310/30/P201310300260.htm*).

5. The Strategy notes a shortfall in ICT labour supply [para. 48] and suggests some response measures [para. 50-51]. In order to be effective in addressing this problem, we need good data.

6. There needs to be a clearer picture on the ICT manpower demand, supply and shortfall than just the gross figures on local supply and additional demand (4434 versus 4736 in 2012) that are shown in the IBM consultancy report (page 100). The ICT sector has diversified into sub-disciplines such as information systems, telecommunications, information security, etc., each with different job categories. Some jobs calls for professional competencies typically supplied by degree programmes. There are also technical positions and the graduates from non-degree post-secondary programmes are filling these positions. More in-depth analysis of the present situation should be conducted.

7. The ongoing OGCIO-led initiative on professional recognition [para. 51] is much desired for improving the competitiveness of the ICT profession in the local labour market. To provide pointers to other possible measures for addressing the manpower shortage, there are more questions to be answered. For example, what, if any, are there overlaps in competency needs among professional and technical ICT jobs and how that affect supply and demand ? How to increase labour supply by attracting more graduates from appropriate non-degree post-secondary programmes into the workforce and facilitating them to continuously upgrade their ICT qualifications, ensuring upward career mobility ? What is the likely quantitative impact on the ICT sector due to aging in the working population ? There is insufficient data to satisfactorily answer the above and other relevant questions so as to guide effective response to the manpower shortage.

8. Increasing industry training (internship, placement, sandwich programmes, etc.) opportunities in academic and vocational training programmes is important [para. 50]. Again, knowing what is the present situation and where the deficiencies are should facilitate government, industry and the academia in designing more effective response measures. For example, what is the overall level of participation by students in industry training of different types and durations, and how that correlates with entry into the ICT workforce after their graduation ? What evidence is available on the effectiveness of different industry training arrangements in attracting and preparing graduates for ICT employment ? Which type(s) of industry training places are in short supply and by how much ? On the other hand, are many (degree and non-degree) students

proactively taking up industry training in study programmes where that is neither mandatory nor credit-bearing for the purpose of graduation; what is the participation rate ?

9. Manpower shortage is of concern in view of its potential impact on the local ICT capacity in supporting Hong Kong's sustainable economic development. More focused research and analysis on the topic is imperative.

Dennis C T Pang
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