

**For discussion
on 14 April 2014**

**Legislative Council
Panel on Information Technology and Broadcasting**

**Establishing a Unified Information and Communications Technology
Professional Recognition Framework in Hong Kong**

Purpose

This paper briefs Members on the proposal to establish a unified information and communications technology (ICT) professional recognition framework in Hong Kong.

Background

2. ICT has fuelled the economy, businesses and individuals with unlimited potentials for growth and development. At the same time, businesses and the community have been increasingly reliant on robust and secure ICT infrastructure and services. To ensure that we can fully unleash the ICT power for our society, we need a highly qualified and competent ICT professional workforce. It is essential to establish ICT as a profession in Hong Kong that is recognised and valued, and will keep on improving and assuring its professional standing.

3. The Government set up a Task Force on ICT Professional Development and Recognition (Task Force) under the Digital 21 Strategy Advisory Committee in November 2012 to examine the case of establishing a unified framework for ICT professional recognition in Hong Kong, with reference to international practices and frameworks of other economies. The Task Force is led by Professor Roland Chin of the University of Hong Kong, with members coming from ICT professional bodies, industry, academia and Government. The vision and mission of the Task Force are provided below and the list of membership is provided in the **Annex** for Members' reference.

Vision

4. To establish ICT as a highly qualified and internationally recognised profession in Hong Kong with high level of competence and professionalism.

Mission

5. To establish a unified ICT professional recognition framework in Hong Kong by aligning with international practices, which is sustainable and widely accepted by the higher education sector, ICT workforce, industry, community and the Government.

Existing Local and International Practices

6. The Task Force has examined the major ICT qualification and competency frameworks that are adopted locally and internationally, including the Qualifications Framework (QF) administered by the Education Bureau, which is designed to apply to various industry sectors to facilitate articulation among academic, vocational and continuing education; and the Skills Framework for the Information Age (SFIA) maintained by the SFIA Foundation, which is a popular qualification and competency framework being used in over 100 countries/economies.

7. The Task Force has also examined the local and international professional qualification schemes including Certified Professional in Australia, IT Certified Professional in Canada, Chartered IT Professional in the United Kingdom, National Qualification Certificate of Computer and Software Technology Proficiency of the Mainland of China, Certified Professional of IT and Registered Professional Engineer in Hong Kong, as well as the professional memberships offered by the Hong Kong Computer Society, Hong Kong Institution of Engineers, British Computer Society, and the Institution of Engineering and Technology.

The Proposed ICT Professional Recognition Framework

8. With reference to the existing local and international practices, the Task Force has come up with a proposed ICT professional recognition framework (the Proposed Framework) after considerable deliberations. The objectives, key principles, operational arrangement, recognition criteria, sustainability consideration and anticipated benefits of the Proposed Framework as agreed by the Task Force are described in the ensuing paragraphs.

The Proposed Framework - Objectives

9. The Proposed Framework should aim to –
- (a) Raise the ICT professional profile of Hong Kong;
 - (b) Enhance the quality of ICT human resources and professional services;
 - (c) Attract more young and talented people to join the ICT profession;
 - (d) Facilitate professional and career development; and
 - (e) Advance Hong Kong's position as a leading knowledge-based society.

The Proposed Framework - Key Principles

10. The Proposed Framework is designed with the following key principles –
- (a) *Voluntary-based* - Having a voluntary framework can help establish a standard for the local ICT profession, thereby raising the ICT professional profile of Hong Kong, while at the same time, will not be seen as a barrier for entry into the ICT profession or career advancement. This can ensure that ICT manpower supply would not be disrupted. The aim is to make the framework compelling but not compulsory.

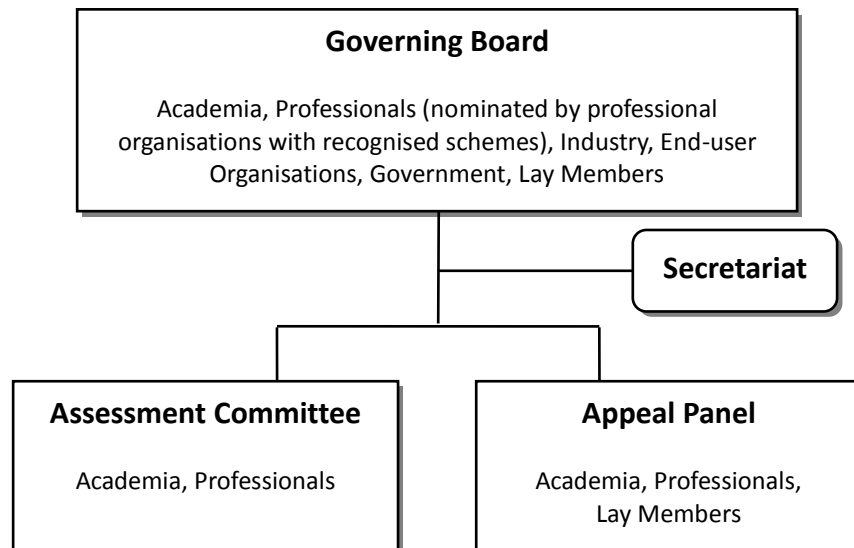
- (b) *Recognise the ICT professional qualification schemes (rather than individual professionals)* - Recognising the professional qualification schemes that have achieved a certain level of professional standard would avoid duplicating efforts as otherwise if we introduce another new scheme. This multiple pathways approach not only helps ensure and provide an alignment on the assessment standards of the different schemes, but also enables practitioners to select the schemes that best suit their career path and development needs to attain the recognition. Initially, the framework will focus on recognising qualification schemes at the “professional level”. Recognition of schemes at the “technologist level” can be considered at a later stage.
- (c) *Align with local and international ICT qualification and competency frameworks* - Making reference to existing well established qualification and competency frameworks (such as SFIA and QF) can gain local and international recognition more easily.

The Proposed Framework – Operational Arrangement

11. A non-profit making, non-statutory Awarding Body incorporated under the Companies Ordinance will be established as a company limited by guarantee with the following organisation components for the management, operation and on-going development of the Proposed Framework –

- (a) A Governing Board to set the overall direction and perform quality control; it will be responsible for the governance, planning, development and management of the recognition;
- (b) An Assessment Committee to propose to the Governing Board the qualification standards and assessment criteria of the recognition for approval, and to perform assessment on the applications;
- (c) An Appeal Panel to handle appeal cases; and

- (d) A Secretariat to perform executive support functions.



The Proposed Framework – Recognition Criteria

12. The following will be considered when giving recognition to a professional qualification scheme –

- (a) Whether the type of qualification awarded meets an appropriate professional standard, for example, the award is made based on a combination of academic qualification, examination, experience assessment, and/or other forms of competency-based assessment, and the competency requirements are set at an appropriate level;
- (b) Whether continuing professional development requirements and enforceable code of ethics and conduct are put in place to ensure the ongoing quality of the individuals;
- (c) Whether the necessary processes and expertise to evaluate qualification of individuals are put in place; and
- (d) Whether the professional organisation has the necessary organisational capability (such as governance, assessment processes, quality of assessors) and maturity to manage the qualification programme.

The Proposed Framework – Sustainability

13. Government funding will be considered for the initial set-up of the framework to cover areas such as legal expenses for setting up the Awarding Body, website set-up, publicity and promotion. Before the stable running of the framework in achieving a critical mass in the adoption of the framework, the Government will also consider providing funding for the operating expenses for the first three years.

14. After the first three years of operation, it is expected that the professional organisations with their professional qualification schemes recognised would attract a critical mass of professionals joining their schemes and thus be able to jointly bear the operating cost of the Awarding Body, including staff cost, office rental charges and other office expenses, which is estimated to be around \$2 million per annum.

15. After successful implementation and stable running of the framework, subject to market demand, one possible future development might be requiring certain critical ICT activities to be performed by recognised professionals only, which would require the establishment of a statutory body. This would be subject to further study and consultation.

The Proposed Framework – Anticipated Benefits

16. It is anticipated that the Proposed Framework would achieve the following benefits –

Practitioners

- (a) Provide an aligned and consistent yardstick for ensuring ICT practitioners' competency and professionalism;
- (b) Remove confusion brought about by apparently similar and overlapping professional qualifications;
- (c) Give practitioners a clearer direction on career and professional development;
- (d) Prove their value to their employers or prospective employers, thereby improving their prospects of job selection or promotion; and

- (e) Practitioners' competency and professionalism can be readily accepted worldwide as the recognition is in alignment with international standards.

Employers

- (f) Easily identify and employ competent and qualified ICT practitioners and service providers; and
- (g) Achieve enhanced quality of deliverables and increased productivity, contributing to business success and protection of investment.

ICT Industry Sector

- (h) Raise professional image and profile of ICT practitioners and the whole sector.

Community

- (i) Have clearer expectations and understanding of the roles and responsibilities of ICT practitioners and service providers; and
- (j) Fortify the community's confidence on the ICT profession in managing and implementing ICT-enabled services and systems.

Consultation

17. We briefed the Digital 21 Strategy Advisory Committee at its meeting of 20 January 2014 on the Proposed Framework and members of the Committee gave their support in taking the initiative forward.

18. In February and March 2014, we organised eight consultation and exchange sessions with the relevant stakeholder groups including employers (chambers of commerce and SME-related trade associations), practitioners, academia and professional bodies with several hundred participants joining these sessions.

19. The overall feedback from the consultation and exchange sessions was positive. Participants generally welcomed the Proposed Framework and believed it would build a stronger ICT community in Hong Kong. They agreed with leveraging on existing professional recognition schemes in view of its cost effectiveness and virtually no disruption to the market dynamics. In addition, participants generally agreed that the Proposed Framework should be voluntary based and it would provide a clear development roadmap for ICT professionals. From the employers' perspective, it would provide an objective yardstick for them to assess ICT practitioners' competency and professionalism and help assure consistent quality of their ICT employees in terms of their skills and professional ethics. With regards to the possibility of driving up the cost to recruit qualified ICT practitioners, as the Proposed Framework would target at the "professional level" such as project managers and system architects, employing qualified professionals can raise product quality and increase productivity, thus resulting in overall cost reduction. Finally, by raising the ICT professional profile of Hong Kong and providing a clear roadmap for ICT professionals, we anticipate that it would help attract more young and talented people to choose ICT-related disciplines in their study and pursue ICT as their career.

Way Forward

20. We aim to conduct a two-month public consultation from May to June 2014. Subject to the results of the public consultation and further refinements as necessary, our target is to launch the framework by the end of 2014.

**Office of the Government Chief Information Officer
Commerce and Economic Development Bureau
April 2014**

Annex – Membership List of the Task Force on ICT Professional Development and Recognition

Convenor:

- Prof. Roland CHIN, B.B.S., J.P.

Non-official Members:

- Mr. Raymond CHENG
- Mr. Edmand CHEUNG
- Ir. Stephen LAU, J.P.
- Ir. Sunny LEE, J.P.
- Dr. Wendy LEE
- Ir. Prof. LEUNG Kwong-sak
- Ir. William LI
- Hon. Charles MOK
- Ir. Dr. NG Chak-man
- Ir. Dennis PANG
- Ir. Dr. George SZE

Official Members:

- Government Chief Information Officer
- Deputy Government Chief Information Officer (Consulting and Operations), OGCIO
- Assistant Government Chief Information Officer (Governance and Resources), OGCIO

Secretary:

- Senior Systems Manager (Human Resources & Professional Development), OGCIO