

**For discussion on
27 February 2018**

**Legislative Council
Panel on Commerce and Industry**

Latest Development of the Testing and Certification Industry

Purpose

This paper updates Members the latest development of Hong Kong's testing and certification ("T&C") industry since the last report to the Panel in November 2015.

Background

2. The local T&C industry has been providing testing, inspection and certification services to various sectors. By helping to assure the safety and quality of a wide range of products, the industry plays a vital role in our daily life. Through ensuring that products comply with international and regional standards, it also contributes to our manufacturing industry, external trade and high-end manufacturing industries advocated by re-industrialisation. It is thus an integral part of the supply chain. Professionalism, integrity, being responsive to market needs and having a robust accreditation system are all cornerstones of the industry. The Hong Kong Council for Testing and Certification ("HKCTC") was established in 2009 to advise the Government on the overall development strategy of the industry. It has been adopting a market-oriented approach to promote the development of the T&C sector.

Industry Profile

3. The local T&C industry has grown considerably between 2009 and 2016¹. Over this period, the number of private independent establishments engaging in testing, inspection and certification activities increased by 17.5% from 570 to 670. Persons engaged by these establishments grew by 10.1% from 12 680 to 13 960. The industry's total business receipts increased by 64.0% from \$8,622 million to \$14,138 million. In 2016, their direct economic contribution to Hong Kong's Gross Domestic Product was \$7,325 million.

¹ The 2016 statistics presented in paragraphs 3-4 of this paper are provisional figures.

4. According to the 2016 statistics, testing accounted for 68.3% (i.e. \$9,652 million) of the total business receipts of the industry. Among the testing services, the major income sources were medical testing 29.1%, toys and games 19.7%, textiles, clothing and footwear 17.7%, electrical products and telecommunications equipment 14.7%, as well as construction materials 11.7%.

Foster an Environment Conducive to the Development of the T&C Industry

5. To build an environment conducive to the development of the T&C industry, continuous efforts are being made to improve our accreditation service and factors of production of the industry.

Accreditation Service

6. Accreditation is an official recognition of the competence of a T&C establishment in carrying out specific conformity assessment tasks. The Hong Kong Accreditation Service (“HKAS”) under the Innovation and Technology Commission (“ITC”) provides accreditation service in Hong Kong.

7. HKAS has been actively participating in the international accreditation community.² As of February 2018, it has already entered into mutual recognition arrangements with 100 accreditation bodies in 99 economies, including all Hong Kong’s major trading partners. Such arrangements have allowed reports/certificates issued by HKAS-accredited T&C bodies be widely accepted in the international community – the key for our T&C bodies to support international trade. The **Annex** provides additional information on the latest development in the accreditation front.

Manpower

8. Hong Kong’s T&C industry is built upon a workforce of professionals with high integrity and technical expertise. The HKCTC has been putting much focus in attracting new blood to the industry, and continuously enhancing the capabilities of industry practitioners. Local education institutions have been offering new courses dedicated to the industry, helping to foster a pool of T&C professionals.

² At the international level, HKAS is a member of the International Accreditation Forum (“IAF”) and the International Laboratory Accreditation Cooperation (“ILAC”). At the regional level, HKAS is a member of the Pacific Accreditation Cooperation (“PAC”) and the Asia Pacific Laboratory Accreditation Cooperation (“APLAC”).

9. In June 2016, the HKCTC launched a teaching kit for senior secondary chemistry teachers. Through introducing basic chemical testing concepts in class, the kit helps apprise students of the value of T&C. Over 130 teachers have attended the briefing/testing demonstration sessions of the kit. The HKCTC has also been organising career talks and laboratory visits for secondary school and university students. In addition, it coordinates summer internship opportunities for tertiary students. These initiatives help enhance students' interests in the T&C sector.

10. In recent years, the tertiary education sector has offered more courses dedicated to T&C, ranging from the sub-degree to postgraduate levels. For instance, the Technological and Higher Education Institute of Hong Kong³ launched a new full-time top-up bachelor of science programme in T&C in 2017. Whereas the first full-time four-year bachelor's degree programme dedicated to T&C was launched by the Open University of Hong Kong ("OUHK"), with the first batch of students graduated in 2017. Since the 2015/16 academic year, the Government introduced the Study Subsidy Scheme for Designated Professions/Sectors ("SSSDP") to subsidise students to pursue designated full-time locally accredited self-financing undergraduate programmes in selected disciplines in keen manpower demand. OUHK's T&C programme has been covered. The Government will regularise SSSDP starting from the 2018/19 academic year.

11. The HKCTC has continued to collaborate with relevant parties to organise seminars and other training events for T&C practitioners to enhance their capabilities. Given that integrity is a cornerstone to the success and further development of the T&C industry, the HKCTC has been collaborating with the Independent Commission Against Corruption ("ICAC") for many years in organising seminars on integrity periodically to uphold the professional ethics of practitioners and keep them afresh on anti-corruption measures.⁴ According to the new edition of the HKAS Supplementary Criteria No. 6 "Code of Conduct" published in January 2018, all personnel in an accredited organisation are asked to attend integrity management training courses organised by ICAC as far as possible. In addition, earlier this year, the ICAC published a new pamphlet for front line staff of the T&C industry with anti-corruption tips in handling construction materials testing.

³ The Technological and Higher Education Institute of Hong Kong was set up by the Vocational Training Council, aiming to produce work-ready graduates.

⁴ In 2011, the ICAC, in consultation with the HKCTC, developed a dedicated Corruption Prevention Guide for the T&C Industry.

Capital and Technology

12. The HKCTC has been encouraging wider use of various funding sources to support the T&C sector. Among the various programmes under the Innovation and Technology Fund (“ITF”), the Innovation and Technology Support Programme is most commonly used to support research and development of testing technologies. A number of new funding schemes have also been launched in recent years which could benefit the industry. The Technology Voucher Programme (“TVP”), launched in November 2016 under ITF, aims to subsidise SMEs in using technological services and solutions to improve productivity, or upgrade or transform their business processes. Interested SMEs may apply for TVP to fund technological services and solutions for fulfilling certain T&C requirements. Launched by the Commerce and Economic Development Bureau in November 2016, the Professional Services Advancement Support Scheme (“PASS”) provides funding support for non-profit-making projects aimed at increasing the exchanges and co-operation of Hong Kong’s professional services with their counterparts in external markets, promoting relevant publicity activities, and enhancing the standards and external competitiveness of professional services in Hong Kong. A wide range of professional services, including “technical testing and analysis services”, are eligible for funding under PASS. We note that the T&C sector has already started to benefit from TVP and PASS.

13. Proficiency tests play a pivotal role in upholding the technical capability of our testing laboratories. For instance, the Government Laboratory has been supporting the HKCTC in coordinating two inter-laboratory comparison exercises on assay of ten types of Chinese Materia Medica (“CMM”) in 2016 and 2017 respectively. Through these exercises, testing laboratories were able to assess their technical competence by comparing testing results with others.

Premises

14. The Government introduced the “Nil Waiver Fee” measure effective from 1 February 2016 to facilitate the operation of testing and calibration laboratories in industrial buildings. Upon approval of application, the Government will exempt the waiver fees that would otherwise be chargeable for issuing waivers to allow the use of such laboratories under a general industrial land lease. The waiver applications concerning two testing laboratories have already been approved under this new measure.

Open Up Further Opportunities for the T&C Industry

15. Continuous efforts are being made to open up further business opportunities for the T&C industry. New liberalisation measures to the Mainland T&C market have been introduced in the last couple of years under the framework of the Mainland and Hong Kong Closer Economic Partnership Arrangement (“CEPA”). The HKCTC has also been promoting T&C services to different business sectors through various means. In addition, much publicity work is being carried out to increase public awareness of the benefits brought by T&C services.

CEPA

16. Since the signing of CEPA Supplement VII in 2010, the Mainland has been gradually opening up its T&C market to Hong Kong. This includes allowing testing organisations in Hong Kong to cooperate with designated Mainland certification bodies to undertake testing for certain products requiring China Compulsory Certification (“CCC”).⁵ As of January 2018, 11 Hong Kong testing organisations have been accredited by HKAS for undertaking CCC testing. Six of these have entered into co-operation agreements with designated Mainland organisations. In the past two years or so, two new agreements signed under the CEPA framework contain new liberalisation measures.

17. In November 2015, the CEPA Agreement on Trade in Services was signed, introducing, on a pilot basis, a mutual recognition arrangement of certification and relevant testing business among Guangdong, Hong Kong and Macao in the China (Guangdong) Pilot Free Trade Zone, with a view to carrying out “certified once, tested once, and results accepted by three places”. Under its Implementation Guide as promulgated in September 2017, the scope of testing that may be undertaken by testing organisations in Hong Kong has been extended to CCC products which are processed or manufactured in the China (Guangdong) Pilot Free Trade Zone.⁶ Besides, Hong Kong certification bodies may cooperate with Mainland CCC product certification bodies for deploying inspectors to carry out initial and follow-up CCC factory inspection on CCC product manufacturers in China (Guangdong) Pilot Free Trade Zone.

⁵ CCC is a mandatory product certification system to ensure the quality and safety of products marketed in China are up to domestic standards. CCC mark is required for both Chinese manufactured and foreign imported goods listed on the CCC catalogue (i.e. covering 22 product types).

⁶ The scope of liberalisation for the testing of CCC products given under previous CEPA Supplements cover products which are processed in Hong Kong, or products under the “audio and visual apparatus” category which are designed and prototyped in Hong Kong as well as processed or manufactured in Guangdong Province.

18. The CEPA Agreement on Economic and Technical Cooperation signed in June 2017 introduced two other new initiatives. One is to consider applications of eligible certification bodies set up by Hong Kong enterprises in the Mainland to become designated certification bodies under the CCC system. The other is to consider recommending a certification body located in Hong Kong to become a National Certification Body of China under the International Electrotechnical Commission System of Conformity Assessment Schemes for Electrotechnical Equipment and Components (“IECEE”)⁷. These new measures would facilitate the local T&C sector to play a more active role in the Mainland and overseas, thus help fostering its long-term growth.

Promotion to Potential Users

19. Under the branding of “Tested in Hong Kong, Certified in Hong Kong”, the HKCTC has been publicising the strengths of our T&C industry and assisting it in reaching out to potential users. Exhibition booths are set up in various trade fairs to promote our T&C services to local and overseas buyers/manufacturers from different sectors.⁸ The HKCTC often makes arrangements for representatives of our T&C bodies to speak on the latest testing requirements and services at these events.

20. In recent years, the HKCTC has been inviting T&C bodies to make use of the HKCTC booth at selected trade shows⁹, in and outside Hong Kong, to explore new business opportunities. The HKCTC will bear the booth rental, design and production costs, whereas the T&C bodies will only need to deploy their staff at the booth to assist in promoting the strengths of the industry. Such arrangement has been well received by the T&C bodies, which consider it a good opportunity to market our strengths, make contact with potential clients and enhance Hong Kong T&C sector’s presence in the international arena.

⁷ IECEE is a multilateral certification system based on IEC International Standards. It covers 23 categories of electrical and electronic equipment and testing services. The Certification and Accreditation Administration of the People’s Republic of China (“CNCA”) represents China in IECEE. The IECEE CB Scheme is a multilateral agreement among participating countries and certification organisations. Under this scheme, the National Certification Bodies designated by the IECEE Members may issue a Test Certificate for the electrical and electronic products that are able to meet the IEC International Standards. Currently, China only has one National Certification Body in IECEE.

⁸ In the past two years, the HKCTC has participated in trade fairs covering the business areas of lighting, electronics, houseware, gift, fashion, food, building and decoration materials, optical, toys and games, as well as jewellery.

⁹ Such trade shows for 2017-18 are the Hong Kong Fashion Week for Spring/Summer and the Hong Kong Food Expo held locally, the China Hi-Tech Fair held in Shenzhen, as well as the Spielwarenmesse International Toy Fair held in Nuremberg, Germany.

21. The HKCTC has also been organising seminars and publishing advertorials covering a wide range of topics,¹⁰ with a view to introducing the value of T&C services to different sectors. Leaders of the T&C industry and users of their services are invited to share their experience via these channels. Since mid-2017, the HKCTC has started issuing its own newsletter, sharing with stakeholders latest development of the sector and how T&C services have been assisting different businesses to achieve quality and assure product safety.

22. The HKCTC and various parties have also been supporting new T&C opportunities in different business areas. Notably –

- (a) The Hong Kong Polytechnic University (“PolyU”) has developed the Food Hygiene Standard Certification System, which was officially launched in September 2017. It is tailor-made for the local catering industry to enhance the food hygiene standard of our catering establishments, especially SMEs. The HKCTC has been working with PolyU to introduce this certification system to different stakeholders;
- (b) In March 2017, the Gemmological Association of Hong Kong (“GAHK”) formally announced its new standard methods for testing Fei Cui. To facilitate the provision of the new testing service to the jewellery trade, GAHK is reviewing and updating its Guidance Notes for Mandatory Continuing Professional Development for Fei Cui Certified Gemmologist. The HKCTC will support further promotion of such new testing methods. This includes co-organising a seminar with GAHK in early March 2018 to share with stakeholders the latest development in Fei Cui testing;
- (c) The Hong Kong Productivity Council (“HKPC”) has developed a CMM product certification scheme to help users identify safe and authentic CMM. Two batches of CMM were certified under the scheme in late 2015. In the past year, the HKCTC has considered feedback of the T&C bodies and Chinese medicines trade on the scheme, and will continue to work with HKPC to refine the scheme and improve its practicality; and
- (d) The Hong Kong Housing Authority (“HA”) has been spearheading the use of product certification schemes in its construction projects to enhance building product quality.

¹⁰ In the past two years, the HKCTC has organised and co-organised seminars and published advertorials to promote T&C in the areas of construction materials, environment, Chinese medicines, wireless and telecommunication products, food, information security management, fire safety in buildings, jewellery, quality management, toys, medical testing, textile and garment, etc.

Since September 2017, HA has extended the product certification requirement to one more building product – paint – in its works tender, bringing the total number to twelve.

The BEAM Society has been reviewing its assessment tool on BEAM Plus New Buildings, a voluntary green building labelling scheme on building quality and sustainability performance. In the new version, use of certified building materials would be given credit in the assessment of a new building. This new move is expected to give more incentive to private developers in adopting construction materials product certification schemes. The BEAM Society is planning to roll out the revised BEAM Plus scheme in 2018/2019. The HKCTC will liaise with BEAM Society and other stakeholders to continue promoting wider adoption of such certification schemes.

Promotion to the General Public

23. The HKCTC has been raising the profile and public awareness of T&C industry through various publicity and educational programmes. The aim is to enhance public understanding of the important role T&C play in assuring product safety and quality, thereby stimulating consumer demand for tested and certified products in the longer term.

24. The HKCTC has started publishing a weekly column in a local newspaper in June 2017. Through inviting T&C organisations to contribute articles to the weekly publication, the publications introduce in layman terms the value T&C bring to people's daily life. The HKCTC also seeks opportunities to publicise the benefits of T&C through events like InnoCarnival and public science seminars.

25. Since 2016, the HKCTC has been collaborating with different associations to organise student competitions with a focus on testing. The aim is to enhance our younger generation's understanding of the importance of T&C in assuring the quality and safety of our daily life.

Advice Sought

26. Members are invited to note the latest development of the T&C industry as set out in this paper.

**Innovation and Technology Bureau
Innovation and Technology Commission
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Accreditation Service – Latest Development

- HKAS has been making continuous efforts to seek international recognition of the assessment results of HKAS-accredited T&C bodies. For instance –
 - HKAS became one of the inaugural signatories of the Pacific Accreditation Cooperation (“PAC”) multilateral recognition arrangements in Energy Management System certification in March 2017; and
 - HKAS extended its mutual recognition arrangements with PAC and the International Accreditation Forum (“IAF”) to cover Food Safety Management System certification in June and July 2017 respectively.
- In December 2017, HKAS hosted meetings of the Asia Pacific Laboratory Accreditation Cooperation (“APLAC”) Board of Management as well as the Project Steering Committee on the merger of APLAC and PAC, thereby enhancing Hong Kong’s international status in the area of accreditation.
- In the past two years, HKAS has expanded its scope of accreditation services to cover –
 - certification of quality management system and environmental management system for water supply;
 - construction product certification on paint products and aggregate for concrete;
 - veterinary testing; and
 - scene of crime investigation.