Nomination for 2021 World Information Technology and Services Alliance (WITSA) Global ICT Excellence Awards – Public/Private Partnership Award

When Technology Meets Quality Service – Next Generation Smart Identity Card System (SMARTICS-2), Immigration Department of the Government of the Hong Kong Special Administrative Region (HKSAR)

Organisation Profile

Immigration Department of the Government of the HKSAR

The Hong Kong Immigration Department (ImmD) was set up in 1961. It is committed to exercising effective immigration control and enforcing the laws. Moreover, ImmD provides a wide range of public services to local residents including the issuance of identity cards, HKSAR passports and other travel documents, visas, the handling of nationality matters and the registration of births, deaths and marriages. Equal emphasis is also placed on providing travel document convenience and facilitation for tourists, business visitors and Hong Kong residents in order to uphold Hong Kong’s strength as an international financial and trade centre as well as a tourism hub.

REASONS FOR NOMINATION:

Background

The Hong Kong Identity Card (HKIC), as an essential proof of identity of all Hong Kong residents, is inseparable from our everyday lives. ImmD introduced its first generation of Smart Identity Card System and smart identity card in 2003 which was designed for optimal use for about ten years. Its hardware and software were already becoming obsolete nowadays, and it had become increasingly difficult to secure system maintenance and technical support due to limited and dwindling market supply of the outdated technologies. To continue issuing highly secure new smart HKICs and carry out the mega project by conducting Territory-wide Identity Card Replacement Exercise for 8.8 million Hong Kong residents in four years’ time, ImmD, working in a Public Private Partnership (PPP) approach with multinational corporations and local elite technology companies, introduced in November 2018 SMARTICS-2, which makes good use of information technology at every point of contact with residents, from appointment booking, registration to collection of HKICs, so that residents can enjoy our quality public services. The vast adoption of automation and self-service elements invite members of the public to be part of the project. For instance, residents only need to take a few simple steps to make appointments and fill application forms in
advance through the newly launched mobile application. In addition, residents can easily and efficiently complete the HKIC replacement process by using the Self-service Registration Kiosks and the Self-service Collection Kiosks. To cater to the needs of the elderly and persons with disabilities residing in private residential care homes (RCHs) and spare them the trouble of visiting our replacement centres for HKIC replacement, ImmD has also developed a secure and reliable mobile registration system and worked closely with different private RCHs for providing on-site HKICs replacement service so that they can enjoy our one-stop services at their RCHs. In a nutshell, the adoption of PPP approach contributes significantly to the successful development of SMARTICS-2 and carrying out the Territory-wide Identity Card Replacement Exercise by soliciting advanced technology and project management expertise from the private sector to benefit public good in a very cost-effective manner. Moreover, this PPP project has created over 1000 job opportunities and $1.5 billion revenues in the private sector, whilst avoiding the unnecessary creation of civil service jobs.

**Content**

- Implementation of SMARTICS-2

- Promotion of use of self-service devices
  - On-line Form Pre-filling Service
  - Form Filling Bench / Mobile Device
  - Self-service Kiosks
    - Self-service Tag Issuing Kiosk (STIK)
    - Self-service Registration Kiosk (SRK)
    - Self-service Collection Kiosk (SCK)

- Introduction of Electronic Cabinet (e-Cabinet)

- On-site Identity Card Replacement Service

- Introduction of advanced security features

- Protection of personal data

- Benefits
  - Making appointment booking anytime and anywhere
  - Faster application process
  - Enhanced productivities
- Faster clearance time at Immigration Control Points
- Offering alternative means of application and collection of new smart HKICs
- Caring arrangements

- Recognition from ICT industry and public appreciations
  - Regional Identity Document Awards of the Year of High Security Printing Asia 2019
  - Civil Service Outstanding Service Award Scheme 2019
  - Hong Kong ICT Award 2020
  - Appreciation from local society

**Implementation of SMARTICS-2**

In view of the aging of the old system as well as to catch up with the latest global technological development, ImmD was eager to design and develop a brand new system in order to continue issuing highly secure new smart HKICs. After extensive studies and market research, ImmD had decided to adopt the PPP approach by selecting a number of partners in the private advanced technology industry of different specialised fields to develop and implement our new system, SMARTICS-2. The new smart HKICs and SMARTICS-2 were launched at the five Registration of Persons Offices in November 2018. In addition, the Territory-wide Identity Card Replacement Exercise was rolled out in December 2018, and nine Smart Identity Card Replacement Centres (SIDCCs) had been newly established to replace identity cards for residents in different parts of Hong Kong. Under SMARTICS-2, new hardware including self-service kiosks, personalization machines and electronic cabinets were employed which enhanced the operation efficiency.

**Promotion of use of self-service devices**

ImmD, like other government departments around the globe, has to serve a volume of citizens outnumbered the available manpower and resources of its own. In order to convert the challenge into opportunity, SMARTICS-2 adopted different self-service initiatives inviting the members of the public to get involved into the registration of persons process from appointment booking for HKIC registration to collection. From a wider perspective, this self-service approach also exhibits a certain degree of PPP by leveraging citizens’ resources in delivering quality public service at a much lower cost.
a) On-line Form Pre-filling Service

Filling in application form is an inevitable part in every kind of application. When an application form is received, staff of respective office has to input the relevant personal information into the computer system to create a case for subsequent processing. In other words, the same information has to be input twice, one in written form and the other in digital form. In order to spare the time for this duplicated process and allow the applicant’s information to be input once, on-line form pre-filling service is introduced. Applicants can make appointments for application for or replacement of HKICs and fill in the relevant application forms in advance through the GovHK website or Immigration Department mobile application, enjoying a faster process of registration. The information filled will be stored in the system and retrieved upon arrival of applicants at Registration of Persons (ROP) branch offices or SIDCCs for processing.

b) Form Filling Bench / Mobile Device

For applications processed at ROP offices, after obtaining a tag at reception counter or Self-service Tag Issuing Kiosk (STIK) pending for service, those applicants without completing the pre-filled form when making the appointment or walk-in applicants could scan their QR code generated on the tag in form filling bench to start the form filling process electronically in a self-service manner. The information they filled in would be linked up with their respective tag so as to facilitate the processing of application. Apart from using the form filling bench, applicants may also choose to use their mobile devices or mobile devices provided at ROP offices to start the form filling process with the devices. Processing time could be greatly reduced as the data input by applicant would be transferred to Registration Booth directly for further application process.
e) Self-service Kiosks

With the common use of computer device in private business sector and the acceptance of such modus operandi among the new generation of citizens, instead of waiting to be served, applicants are encouraged to take part in their own applications. After exchanging of ideas with our service providers, self-service kiosks, for different part of the application process, are implemented. For replacement of HKICs at SIDCCs, Self-service Registration Kiosks were installed to enable applicants to verify or enroll their fingerprints and fill in the application forms in one go. For both ROP offices and
SIDCCs, other self-service kiosks were installed to facilitate application process, including the Self-service Tag Issuing Kiosk and Self-service Collection Kiosk, therefore offering better user experience and better facilitation to the applicants.

- **Self-service Tag Issuing Kiosk (STIK)**

When arriving at ROP office / SIDCC, the applicant can approach the STIK to obtain a tag number by scanning the QR code on the appointment letter. The applicant may also scan the identity card or input his/her identity card number on the touch screen monitor at the Kiosk to obtain a tag number. The applicant may also obtain a tag number at reception desk.

- **Self-service Registration Kiosk (SRK)**

For applications processed at SIDCCs, after obtaining the tag number, the applicant should follow the instruction for his/her tag number shown on the display panel in the
waiting area to proceed to a designated SRK. At the Kiosk, the applicant may insert the existing smart identity card, undergo fingerprint verification, input and verify the information of his/her application. After that, the applicant can print and collect the completed application form. Then, the applicant can proceed to the designated registration booth to take photographs; and will be issued a notice of collection upon completion of registration procedures.

- **Self-service Collection Kiosk (SCK)**

Upon collection of new smart identity card at SCK, the applicant may insert the Acknowledgement Form (applicable for ROP offices) or existing smart identity card (applicable for SIDCCs) for identity verification by undergoing facial and fingerprint checks. The Kiosk will collect the Acknowledgement Form / existing identity card and issue the corresponding new smart identity card upon successful verification.
Introduction of Electronic Cabinet (e-Cabinet)

In the past, staff had to retrieve the HKICs manually and issue to the applicants. Human errors might be encountered if the HKIC was misplaced which in turn affected the efficiency of service. With a view to adopting automation so as to keep the element of human error to the minimal, ImmD had worked with its service provider for the design and implementation of e-Cabinet. The e-Cabinet is installed at back office for storage and retrieval of new smart identity cards in order to support card issuance by an officer to applicants over the counter in ROP branch offices and SIDCCs. The officer can retrieve specific new smart identity card(s) from the e-Cabinet through the SMARTICS-2 System.
On-site Identity Card Replacement Service

To facilitate territory-wide HKIC replacement exercise, SMARTICS-2 has introduced mobile registration device to provide on-site identity card replacement service for persons with disabilities and elderly persons residing in private residential cares homes (RCHs). By working closely with different RCHs, ImmD left no stone unturned in serving the community in need.

Introduction of advanced security features

Apart from replacing the computer system, ImmD had also introduced new smart HKIC under SMARTICS-2. The HKIC is a statutory proof of identity, a reliable means for immigration clearance, as well as a platform for inclusion of various public services delivered by different bureaux/departments to the public in accordance with laws of Hong Kong. There are enhancements in security features on the new smart HKICs. Made of higher quality materials, the new HKICs are more durable. The new smart HKIC had also employed new security features to ensure a continued low forgery rate with advancement in technology.
Protection of personal data

ImmD is always dedicated to strike for excellence, especially in the aspect of personal data protection. As the personal data of Hong Kong residents is stored in the chip embedded in the smart HKICs, making it convenience for reading of such data in a contactless manner, protection from unauthorised access to chip data is of the utmost importance. Expertise in the relevant technological fields were consulted and, by working with ImmD, had introduced enhanced chip technology for personal data protection on the new smart HKICs. Special technology was also used for development of optical card reader for secure contactless data transmission.

Benefits

The implementation of SMARTICS-2 and its self-service functions, including the online form filling and self-service kiosks, further enhance the standard of Hong Kong Immigration service by providing faster and automated means for application processing.

- Making appointment booking anytime and anywhere

With the implementation of form pre-filling service under SMARTICS-2, applicants can choose to fill in the application forms via official webpage or using Immigration Department mobile application through electronic means. By doing so, applicants can make their appointment bookings anytime and anywhere that are convenient to them.

- Faster application process

Applicants can now fill the required information online before arriving at ROP offices or SIDCCs instead of having to complete the form in person at the ROP offices or
SIDCCs with the form pre-filling service. The processing time required for application is thus shortened and applicants can experience a faster application process.

- Enhanced productivities

With the introduction of new hardware, the personalisation process of the new smart HKICs is further enhanced. The hourly rate of personalisation has been increased from 250 cards per hour to 1000 cards per hour. As a result, applicants can collect their new smart HKICs 7 working days after application, instead of 10 working days under the old system.

- Faster clearance time at Immigration Control Points

With the enhanced chip technology, the clearance time via e-Channel at Immigration Control Points of Hong Kong has been shortened by 50%, i.e. from 12 seconds to 8 seconds. Residents can enjoy a faster clearance speed when travelling in and out of Hong Kong.

- Offering alternative means of application and collection of new smart HKICs

The introduction of form prefilling service through form filling bench or mobile devices, as well as self-service kiosks provide alternative means for applicants to process their application apart from the traditional manned counter service. The application handling capacity is enhanced with less manpower required.

- Caring arrangements

On-site Identity Card Replacement Service has been provided to over one thousand residential care homes (RCHs) for the elderly persons and persons with disabilities (PwDs) across the territory. In addition to replacing their HKICs at any one of the SIDCCs in the period specified for their age groups, residents of those RCHs may choose to have their HKICs replaced on-site at the RCHs. Delivery service of new smart HKICs has also been provided so that the residents can collect their new smart HKICs at their RCHs, sparing them the trouble of visiting our replacement centres for HKIC replacement.
Recognition from the ICT industry and public appreciations

- Regional Identity Document Awards of the Year of High Security Printing Asia 2019

With the incorporation of state-of-the-art security features and sophisticated designs with a view to better deterring forgeries in the race of today’s advancing technologies, SMARTICS-2 has won Regional Identity (ID) Document of the Year 2019 of the High Security Printing Asia (HSPA) Awards for the Best New ID card.

https://hsp-asia.com/awards/
Civil Service Outstanding Service Award Scheme 2019

With the untiring spirit in providing quality public service and caring arrangements, ImmD earned its recognition by winning the Gold Prize for Team Award (General Service) with its Territory-wide Identity Card Replacement Exercise (2018-2022) and the Silver Prize for Team Award (Specialised Service) with its Territory-wide Identity Card Replacement Exercise – On-site Identity Card Replacement Service at the Civil Service Outstanding Service Award Scheme 2019 organised by the Civil Service Bureau of the HKSAR Government.
SMARTICS-2 has also won the Smart Business Grand Award and the Smart Business (Solution for Business and Public Sector Enterprise) Gold Award at the Hong Kong ICT Awards 2020. The Hong Kong ICT Awards is steered by the Office of the Government Chief Information Officer of the HKSAR Government and organized by the Hong Kong ICT industry associations and professional bodies, aims at recognizing outstanding information and communications technology inventions and applications, thereby encouraging innovation and excellence among ICT talent in their constant pursuit of better solutions to meet social needs.

- Appreciation from local society

SMARTICS-2 also earns its appreciation from the local society with its caring arrangements with the use of specially developed mobile registration device for its On-site Identity Card Replacement Service for which residents in need could enjoy a one-stop service from application to collection of their new smart HKICs without the need to approach our offices. Numerous appreciation letters were received from members of the public as well as different RCHs, expressing their gratitude to the caring arrangements provided by ImmD. Below are some highlights:

Haven of Hope Woo Ping Care & Attention Home expressed their appreciation to ImmD for providing such convenience and caring arrangement. ImmD spent six days at their RCH in carrying out the On-site Identity Card Replacement Service. Staff of ImmD took the initiative to work with their staff to clean up the area and re-arrange
the furniture setting. During the process, ImmD staff patiently explained each and every step to the elderlies to ease their worries.

KLN Ng Luen for the Aged also thanked ImmD for the arrangement. They were grateful to the caring and friendly attitude possessed by staff of ImmD. ImmD also showed great respect to the elderlies and worked harmoniously with the RCH during the whole process.

**Conclusion**

By synergising the advanced technology developed by the private sector and ImmD’s excellent public service delivery experience, ImmD is able to implement the state-of-the-art SMARTICS-2 system and carry out the gigantic Territory-wide Identity Card Replacement Exercise to benefit 8.8 million Hong Kong residents. Consolidating the successful experience of SMARTICS-2, the PPP approach will continue to be a key strategy for delivering ImmD’s quality public services in the future.