

For discussion on  
8 December 2023

## **Legislative Council Panel on Health Services**

### **Proposed Retention of one Time-limited Supernumerary Directorate Post of Chief Systems Manager in the Department of Health**

#### **PURPOSE**

The existing time-limited supernumerary Chief Systems Manager (CSM) (D1) post <sup>Note</sup> of the Department of Health (DH), designated as CSM (Health Informatics and Technology Office) (CSM(HITO)), will lapse on 1 April 2024. This paper seeks Members' views on the proposed retention of a time-limited CSM post for five years from 1 April 2024 or upon approval of the Finance Committee, whichever is later, to 31 March 2029 to continue supporting information technology (IT) development of DH.

#### **BACKGROUND**

2. To meet increasing demand for quality service and respond to the fast evolving public health landscape, DH completed an Information Systems Strategy Study (ISSS) in 2017-18 and carved out an Information Systems Strategy Plan (ISSP) to transform DH into a data-driven organisation for better support of DH's operations and enhancement of its capability to meet Hong Kong's public health need and challenges in this digital era.

3. ISSP is an implementation programme comprising IT re-organisation and a phased development of a series of IT projects called "Strategic Plan to Re-engineer and Transform Public Services (SPRINT)", underpinned by three major pillars, namely (a) IT infrastructure enhancements; (b) development of data analytics capability; and (c) service and process enhancements.

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<sup>Note</sup> The civil service establishment includes posts on the permanent establishment and time-limited posts on the non-permanent establishment. Time-limited directorate posts are also known as "supernumerary directorate posts", which means they are time-limited posts on the non-permanent establishment. It does not mean they are counted outside the establishment.

4. In March 2019, DH established a new Health Informatics and Technology Office (HITO) to take forward the ISSP. In May 2019, the Finance Committee (FC) of the Legislative Council approved the creation of a time-limited CSM (D1) post in DH for five years from 2019-20 to 2023-24, to implement SPRINT and provide DH with technical support at directorate level.

5. The time-limited CSM post is due to lapse on 1 April 2024. After thorough review, we consider it operationally necessary to retain this post for a period of five years, to ensure uninterrupted delivery of various IT initiatives and provide senior level technical advice, as detailed in the ensuing paragraphs.

### ***Existing Structure of HITO***

6. HITO is headed by Head, HITO (D2) with specialist qualification in public health medicine and is supported by one CSM at directorate level, who is responsible for supervising IT professionals in DH. There are three operational Divisions in HITO and one planning and administration Section. The organisation chart of HITO is at **Annex 1**.

7. The scope of work of the operational Divisions are:

- (i) **“Technology Development Division”** is supported by IT professionals. They manage and coordinate departmental-wide IT project developments and support of IT infrastructure and systems;
- (ii) **“Data Application Division”** is supported by data scientists. They advise and implement departmental-wide data governance, data management policies, data literacy training and ensure that IT projects are data centric; and
- (iii) **“Digital Transformation Division”** is supported by public health doctors and nurses. They analyse public health service workflows to enable business process re-engineering and digitalisation.

8. Two of the above Divisions (Technology Development Division and Data Application Division) are headed by the CSM, who is responsible for steering and executing IT strategies and initiatives of DH, leading and coordinating the work for implementation of IT projects, as well as

ensuring the effective use and maintenance of existing systems. The incumbent will advise on IT management, governance, standards and best practices, security, and enhance IT awareness and competencies for DH in support of implementation of IT projects and initiatives.

### ***Role of CSM***

9. CSM(HITO) is a time-limited post which will lapse on 1 April 2024. Since CSM(HITO) is the only IT directorate of DH who also deputises Head, HITO, the CSM post is critical to the smooth operation of various systems of DH which aim to provide quality and uninterrupted services to the public.

10. The COVID-19 pandemic epitomised the importance of rapid-responsive systems in supporting public health measures, and underscored the need for DH to further develop its information technology to better equip itself for future public health challenges. Given DH's very broad spectrum of functions and duties, there is a genuine need for directorate support from the Analyst/Programmer (A/P) grade to oversee the IT developments / daily IT operations of DH.

11. To continue the upcoming Departmental IT initiatives; and to realise the Department's long term digitalisation goals, we consider the retention of the CSM posts is critical. The job description of the CSM post is in **Annex 2**.

### **JUSTIFICATIONS**

12. Since its establishment, HITO has enhanced the IT organisation structure, strengthened projects governance and management, enabled compliance of standards, improved IT security and awareness, and implemented IT projects timely and successfully. Over the past four years, HITO has managed to deliver the following key outputs.

#### ***SPRINT***

13. HITO's resources was planned for delivering the 35 IT projects under the initiative of "Strategic Plan to Re-engineer and Transform Public Services (SPRINT)", from financial year 2019-20 to 2025-26. Despite the unprecedented COVID-19 pandemic, HITO has put in extraordinary efforts to ensure that all the 35 SPRINT projects were developed on time

**(Annex 3).**

*COVID-19 projects*

14. During the COVID-19 pandemic, HITO had developed, facilitated and made enhancements to more than 20 COVID-19 related IT systems and platforms. Besides, HITO also provided IT support to port health measures, COVID-19 vaccination, urgent contact tracing, disease investigation, disease reporting, law enforcement, quarantine and isolation measures (**Annex 4**).

*Other IT policies and projects*

15. On top of the above, HITO proactively established Departmental IT strategies and goals, re-engineered Departmental IT governance structure, and updated Departmental IT policies and guidelines. HITO augmented IT security measures and infrastructure, staff awareness and literacy on the use of IT. At the same time, data governance structure as well as business analysis mechanism was also established.

16. In addition to supporting core DH functions, HITO had implemented numerous projects in support of Government IT initiatives such as Government Human Resources Management Services, One Health System (for control of antimicrobial resistance), Electronic Recordkeeping System, e-submissions, iAM Smart, open data. HITO also ensured that DH's overall IT development aligned with the Health Bureau (HKB)'s strategies on the new phase development of the Electronic Health Record Sharing System (eHealth) named eHealth+, which aims to build a comprehensive healthcare information infrastructure over the next five years as announced by the Government in 2023 Policy Address.

***Need for retaining the time-limited CSM (D1) post***

17. There is genuine need to retain the time-limited CSM post to oversee ongoing IT projects and to take forward new initiatives in DH.

*Department-wide initiatives*

18. DH has signed a Memorandum of Understanding to collaborate with the Hong Kong Science and Technology Parks Corporation (HKSTP) (three years starting from 1 September 2023) for trials / pilots of innovation ideas from all DH services. Implementation of the IT projects generated from such trials will be coordinated by HITO.

19. HITO will also need to implement recommendations made under Innovation, Technology and Industry Bureau's government-wide e-Government Audit exercise; as well as the Government's Smart City and e-Government initiatives. The CSM with expert technical competence and rich experience is required to lead these innovative and e-government projects.

#### *Regulatory services*

20. HITO is establishing new large-scale "data-centric" projects to support the Department's regulatory services. CSM's expertise and technical leadership is critical for these projects.

21. HITO is building the "Shared Licensing and Monitoring System", which includes a central data repository and integration of individual IT systems for all DH regulatory services. A public-facing portal will also be built to support licensee' applications and checking.

22. To control antimicrobial resistance and to enhance regulatory control of antimicrobials supply in pharmaceutical traders, HITO is developing a "Computerised Transaction Records System" for the supply of antimicrobials. This system will become a very strong support for DH's Drug Office to record and to track transactions of antibiotics at multiple levels.

23. To accelerate promotion of Chinese medicine informatisation and digitalisation, and to facilitate sharing of information, HITO is implementing a "Digitalised Chinese Medicines Information Platform" with target rollout by early 2024 for Chinese medicine identification and educational purposes.

24. To facilitate electronic applications from healthcare professionals under the purview of the Boards and Councils Office and the Chinese Medicine Regulatory Office, HITO is also developing e-platforms for application of licenses and certificates.

#### *Centre for Health Protection (CHP)*

25. To strengthen capacity to combat communicable disease, HITO will work with CHP to plan and develop a future ready "Integrated Epidemic Management System". The new system will feature a "central data repository" and multiple IT components for handling large scale

emerging diseases, as well as the daily work on control of infectious diseases. This new paradigm shift and broad spectrum stakeholder coordination requires technical expertise at directorate level.

### *Clinical and Dental Services*

26. For clinical and dental services, HITO will continue the SPRINT projects as mentioned above (which will last till FY 2025-26). In addition, HITO will expand the new Clinical Information Management System (CIMS2) to cover additional DH services, such as the Communicable Disease Branch and the Programme Management and Vaccination Division of the Centre for Health Protection. DH needs a technical directorate to ensure all technical and workflow barriers will be ironed out.

### *Data Analytics*

27. HITO will build DH's data governance and will implement a "Data Stewardship Scheme" within the Department. DH staff will be upskilled to enhance data analysis capability. HITO will also promulgate data literacy and best practices within the Department.

28. HITO will also progressively upgrade and expand various DH data shared to eHealth via CIMS2, so as to facilitate future sharing on eHealth App.

29. All the above professional IT initiatives require the technical expertise and leadership of a directorate officer at the CSM level with strategic planning and strong management capability.

### *Other Initiatives*

30. HITO will also play a critical role in facilitating HHB's and the Government's territory-wide IT initiatives, including:

- (i) Collaboration with HHB Electronic Health Record Office – to support the development of the "eHealth+" five-year programme and provide necessary facilitation for integration and interfacing of IT systems in DH with the eHealth+ platform, including One Health Data Repository for HHB's analytics and planning use.
- (ii) Collaboration with HHB Research and Data Analytics Office – to provide technical advice and performing data standardisation and data processing, for HHB's Population-based Health Dataset for

Planning Use; and

- (iii) Other e-Government initiatives - HITO is supporting and promulgating the Government's iAM Smart projects, cross-boundary public services projects, e-payment projects, Streamlining of Government Services (SGS) programmes, and other smart city initiatives.

31. All of the above planned and on-going initiatives on IT developments require the support of very strong IT expertise. There is a genuine need for continual and professional steer, strategic planning, guidance, leadership, and coordination from technical professional at directorate (D1) level for the successful implementation of IT projects and government IT initiatives, taking into consideration appropriate business transformation and data analytics requirements.

32. Moreover, DH will promote and adopt the use of innovative technology to enhance public services and improve productivity. DH will keep abreast of latest technologies and assess the applicability of new technologies. The proposed retention of the CSM, who possesses expert IT knowledge and strategic vision, will be indispensable in providing valuable advice and lead the Department to embrace innovation and technology for digital transformation of public health.

## **ALTERNATIVES CONSIDERED**

33. We have critically examined the possibility of re-deploying existing internal resources for the tasks mentioned above. However, the CSM post is the only IT directorate in DH. It is inappropriate and operationally not feasible to assign the duties of CSM to the other existing A/P grade staff who are not directorate officers, not to mention that they are all fully occupied.

34. We have also critically examined the feasibility of further redeployment of other existing directorate officers in the Department to take on the work of CSM. Having regard to the portfolio and workload of other directorate officers in the Department and their lack of IT expertise, we consider this operationally infeasible.

35. Contracting out the work of the CSM is not an option because the CSM needs to be proficient in governmental operations and regulations for overseeing mission critical duties like IT procurement and IT security. It

is essential for a civil servant to assist Head, HITO, to drive and lead the IT development and oversee the systems and infrastructure maintenance work.

## **FINANCIAL AND ESTABLISHMENT IMPLICATIONS**

36. The additional notional annual salary cost at mid-point of the time-limited CSM post proposed to be retained is \$2,028,000 and the full annual average staff cost, including salaries and staff on-cost, is \$2,985,600. Sufficient provision will be included in the estimates of the relevant years to meet the required expenditure of this proposal.

37. As this time-limited post has been included in the establishment, retention of it will not additionally increase the overall establishment of the civil service.

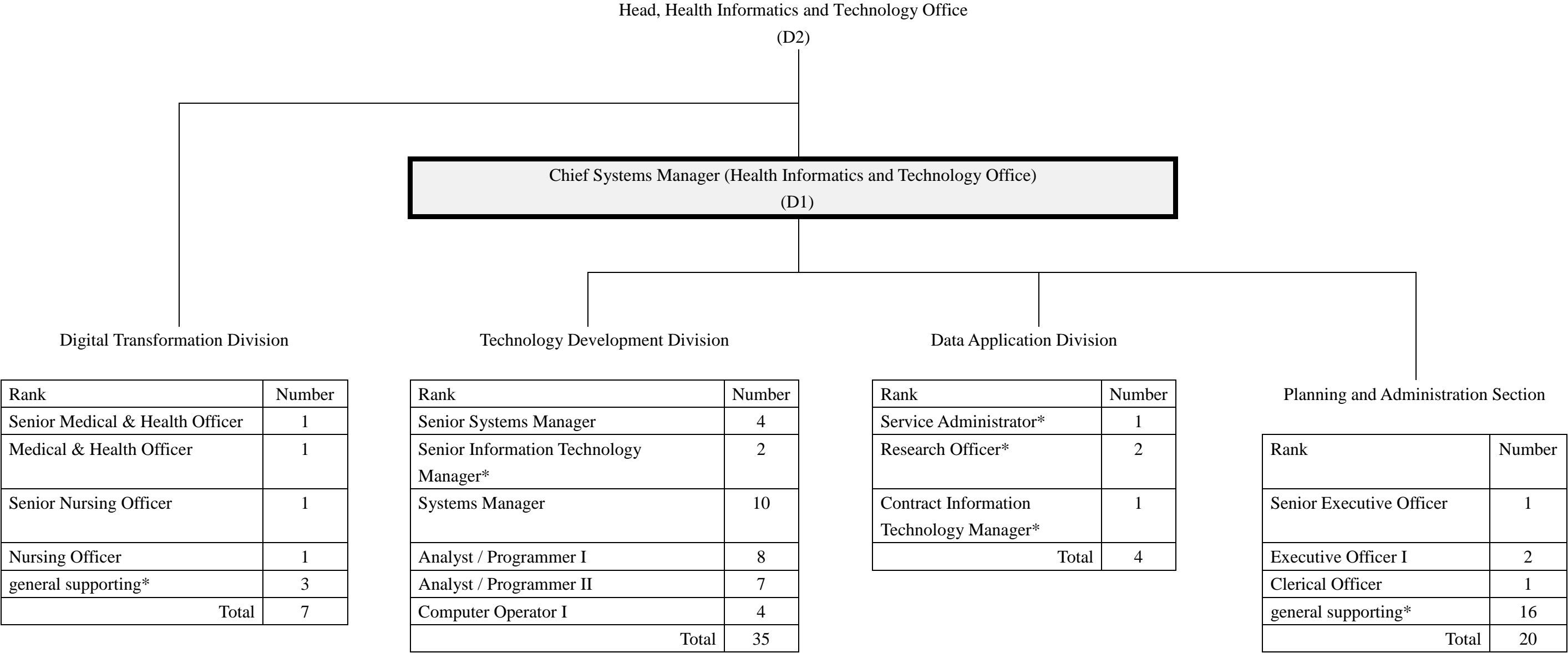
## **ADVICE SOUGHT**

38. Members are invited to give their views on the proposed retention of the time-limited CSM (D1) post. Subject to Members' support, we will submit the proposal to the Establishment Subcommittee for recommendation to the FC.

**Health Bureau  
Department of Health  
December 2023**



**Organisation Chart of Health Informatics and Technology Office under Department of Health**  
(as at 1.11.2023)



Legends:

: Time-limited Chief Systems Manager post proposed to be retained

\* Non-civil Service positions

**Proposed Job Description for the Post of  
Chief Systems Manager (Health Informatics and Technology Office)**

**Rank** : **Chief Systems Manager (D1)**  
**Responsible to** : **Head, Health Informatics & Technology Office (D2)**

**Main Duties and Responsibilities –**

1. To steer and formulate **IT strategies and innovation initiatives** for DH, and to serve as the IT lead in managing implementation of all **DH IT projects** and maintenance of these **IT systems**.
2. To provide professional advice on **IT governance, standards and best practices**, and to enhance **IT security and awareness** for DH.
3. To act as DH's **IT lead** to manage provision of prompt IT support and urgent implementation of IT systems in supporting the fight against epidemic; and to formulate development of a future ready “**Integrated Epidemic Management System**” in post COVID-19 pandemic era.
4. To act as the **IT lead** for implementation of the “**Strategic Plan to Re-engineer and Transform Public Services**” (SPRINT) of DH.
5. To support and **collaborate with HHB on eHealth and Primary Healthcare Blueprint initiatives**; coordinate **Government IT initiatives** under Policy Address and Smart City Blueprint.
6. To **deputise Head, HITO** where necessary, and to manage the Office, including the Technology Development Division, Data Application Division and the Planning and Administration Section of HITO.

**SPRINT Projects**

SPRINT comprises 4 initiatives encompassing 35 projects. These initiatives include:

Initiative 1 – Clinical Services Improvement

Initiative 2 – Business Support and Enablement

Initiative 3 – IT Operations Enablement

Initiative 4 – Studies for Future Developments

The list of 35 projects under SPRINT are summarized below –

<b>Initiative 1 – Clinical Services Improvement</b>	
	<b><i>Clinical Information Management System (CIMS) Extension</i></b>
1.	Development of CIMS Common Modules
2.	Centralised Interactive Voice Response System (IVRS) & IVRS to CIMS
3.	Digital X-ray/Imaging
4.	Measuring Device to CIMS
5.	CIMS Migration to CIMS Stage 2
6.	CIMS for Cervical Screening Programme
7.	CIMS for Child Assessment Service
8.	CIMS Family Health Service – Child Health Service
9.	CIMS Family Health Service – Family Planning Service
10.	CIMS Family Health Service – Postnatal Service
11.	CIMS Family Health Service – Woman Health Service
12.	CIMS Tuberculosis and Chest Services
13.	CIMS Port Health Office's Travel Health Centres
	<b><i>CIMS Integration</i></b>
14.	CIMS to Laboratory Information System (LIS)
15.	School Dental Care Service Management and Information in Linked Environment (SMILE) to CIMS
16.	System for Managing the Assessment of Student Health (SMASH) to CIMS
17.	CIMS Cervical Screening Programme (CIMS-CSP) to Cervical Screening Information System (CSIS)
18.	CIMS to Communicable Disease Information System (CDIS)
	<b><i>Dental Information Technology (IT) Systems Implementation</i></b>
19.	Dental Software Replacement
20.	Dental Laboratory Software
21.	Dental CIMS and Imaging
	<b><i>SMASH</i></b>

22.	Replacement of SMASH and the Internet Services for SMASH (wSMASH)
<b>Initiative 2 –Business Support and Enablement</b>	
23.	Incident Reporting System
24.	Departmental Enquiry/Complaint Management System
<b>Initiative 3 –IT Operations Enablement</b>	
25.	Centralised Helpdesk Establishment
<b><i>IT Infrastructure Consolidation and Enhancement</i></b>	
26.	Infrastructure System Analysis & Design
27.	New Data Centres
28.	Infrastructure Upgrade
29.	IT Monitoring Tools
<b><i>IT Operations Enhancement</i></b>	
30.	Mobile Device Management
31.	Access Management
32.	Secured Internal Cloud Storage
33.	Email Add-on Tool
<b>Initiative 4 –Studies for Future Developments</b>	
34.	Feasibility Study on the Shared Licensing and Monitoring System (SLMS)
35.	Data Architecture Study

**Annex 4****COVID-19 related IT systems/platforms developed,  
facilitated and enhanced by HITO**

<b>Item</b>	<b>Name of IT System</b>
<b>(A) Inbound Traveller Handling</b>	
1.	Electronic Health and Quarantine Information Declaration System
2.	Declaration of non-local COVID-19 vaccination records
<b>(B) Testing</b>	
3.	SARS-CoV-2 Nucleic Acid & Antibody Test Result Input System (Paid Test System)
4.	Laboratory Information System
<b>(C) Case Reporting</b>	
5.	Communicable Disease Public Interface
6.	Declaration System for Individuals Test for COVID-19 Using Rapid Antigen Test
<b>(D) Case Handling, Isolation and Quarantine</b>	
7.	COVID-19 Case Handling and Information Sharing Portal
8.	Community Isolation Facility Management System
9.	Quarantine Centre Management System
10.	Isolation Facility Service Logging System
11.	Communicable Disease Information System
12.	Home Confinement Support System
13.	Designated Quarantine Facility Management System
<b>(E) Law Enforcement</b>	
14.	Post-arrival Compliance Monitoring System
15.	Fixed Penalty Information System (Cap. 599)
<b>(F) Vaccination</b>	
16.	Central COVID-19 Vaccination Database
17.	Thematic Website for COVID-19 Vaccination Programme
18.	Adverse Drug Reaction Reporting of COVID-19 vaccine
<b>(G) Miscellaneous</b>	
19.	Thematic Website for COVID-19
20.	Online Checking System for Subsidised Public Healthcare Services
21.	Stock level monitoring of relevant drugs
22.	Hong Kong Health Code
23.	Release of COVID-19 related open data