

**For discussion on
26 April 2017**

LEGISLATIVE COUNCIL PANEL ON HOME AFFAIRS

**Development of New Intelligent Sports and Recreation Services Booking
and Information System**

PURPOSE

This paper seeks Members' support for the proposal to develop a new intelligent sports and recreation services booking and information system.

BACKGROUND

2. The Leisure and Cultural Services Department (LCSD) is making use of the Leisure Link System (LLS) for processing booking, enrolment and payment of government fee-charging sports and recreational facilities and programmes under its management. It provides booking and enrolment services for sports and recreational facilities and programmes through telephone, the Internet and the booking counters at leisure venues (including the 18 District Leisure Services Offices (DLSOs)) and self-service kiosks. Around 5.8 million bookings of leisure facilities and 0.6 million enrolments to programmes were recorded in 2016.

THE NEED FOR REPLACING THE EXISTING SYSTEM

3. The LLS was launched after amalgamation of the two computer-booking systems of the former Urban Council and Regional Council, and has been in use for over 20 years. Despite a number of piecemeal upgrades and enhancements in the past years, the rapid development of information technology has inevitably rendered the key components of the LLS obsolete. The LCSD commissioned a consultancy study in 2015 to review the existing system and identify further room to enhance services to meet the expectation of the public. The findings of the study confirmed that the existing LLS is incapable of meeting the present and future demands for sports and recreation services owing to the following reasons -

- (a) with the core components in service for over 20 years, both the hardware and software of the LLS are becoming obsolete and approaching the end

of its life-span, which will have serious impact on the sustainability of the booking services if the aged system not replaced timely; and

- (b) since the LLS has been in use for over 20 years, the system design cannot provide users with more convenient services and experience, such as supporting mobile app, adopting more electronic services, supporting more venue booking services, and the implementation of new measures to combat touting activities, etc. The piecemeal upgrades and enhancements cannot meet the public aspirations and operational needs. Due to technical limitation, the existing system cannot be further upgraded in capacity and functionality in a cost-effective manner to meet new service needs.

PROPOSED NEW INTELLIGENT SPORTS AND RECREATION SERVICES BOOKING AND INFORMATION SYSTEM

4. The Chief Executive announced in the 2017 Policy Address the development of a new intelligent system for Hong Kong's public sports and recreation services to allow more efficient, convenient and user-friendly booking of the sports and recreational facilities and programmes provided by the LCSD, thereby encouraging members of the public to exercise regularly and lead a healthy lifestyle. The LCSD proposed developing a newly designed leisure service electronic platform. The proposed system will make use of the Internet, mobile app and new smart self-service stations in about 270 leisure venues (including the 18 DLSOs) for management and delivery of the public sports and recreation services to enable the community to enjoy the services anytime and anywhere. With wider use of Information and Communication Technology (ICT), the new system will provide more customer-oriented functions to enable the public to incorporate leisure activities into daily life, thereby promoting a healthy and vibrant lifestyle. Apart from adoption of new technologies including mobile check-in for programme and mobile payment, big data analytics technology will be also adopted to enhance planning and management of public sports and recreational services.

5. The proposed system will extend the services to cover the following areas on top of the existing LLS services –

- (a) on sports and recreational facilities, the new smart system will expand the scope of service to about 800 non-fee charging hard-surface pitches, covering more than 160 types of fee-charging and non-fee charging facilities with about 70 000 sessions each day;
- (b) on recreation and sports programmes, the new system will provide a unified electronic service platform where members of the public can enrol in various recreation and sports programmes in the 18 districts and territory-wide major sports events, such as the Hong Kong Games.

There are about 23 000 sports and recreation programmes held annually with over 1.4 million enrolments;

- (c) the new system will also make available electronic services to enable group users such as “national sports associations” (NSAs), Community Sports Clubs and schools to submit group applications and follow up on applications, and make booking of 25 sports grounds and swimming lanes in 43 swimming pools;
- (d) members of the public can register for a personal account to enjoy a variety of personalised services, including instant viewing of bookings or enrolment records, keeping a personal profile with qualifications and eligibility information to ease the booking process for specific facility and programme, receipt of useful information with respect to individual preferences (e.g. available sessions of facilities or remaining places of programmes) and system-generated notices (such as emergency closure of venue due to inclement weather and / or cancellation of programme class);
- (e) provision of smart self-service stations in about 270 leisure venues for instant patron registration, booking, enrolment, payment and services to sign in for sessions and programmes to meet public expectation for convenient services as well as improving venues’ operational efficiency and service quality;
- (f) enhancement of data analysis capabilities for planning and management of public sports and recreational services. Data of sports and recreational facilities and programmes, and other data created by further analytics can be released as public sector information for public consumption in machine-readable digital formats to facilitate the community to provide feedback to LCSD and NSAs and facilitate the private sector, including start-ups, to develop innovative applications for sports and recreational services; and
- (g) through the electronic platform, the new system will assist the LCSD in managing the sports and recreational facilities in the 18 districts in the territory comprising 97 sports centres, five water sports centres, four holiday camps, 42 natural turf pitches, 39 artificial turf pitches, two hockey pitches, one rugby pitch, 256 tennis courts, four golf driving ranges and various free sports and recreational facilities, replacing the existing operation which is manual-based.

ANTICIPATED BENEFITS

6. The proposed system will be established on a new system framework and design to address the problems faced by the existing LLS. In addition, the new intelligent system will adopt customer-oriented design and is expected to achieve the following benefits for the provision of public sports and recreation services in Hong Kong –

- (a) as a one-stop electronic service platform, the proposed system will enable the public to enquire and book sports and recreation facilities and services through the Internet and mobile app anytime and anywhere as well as enjoy the personalised services through registration for patron accounts. The new system will be equipped with more powerful and convenient search functions with greater flexibility to enable the public to set specific selection criteria according to their needs and preferences when searching for and booking facilities and programmes. The new system will also extend the electronic service coverage to a wider range of sports and recreational facilities and programmes to eliminate the need to make bookings in-person or by post;
- (b) in order to have a more efficient and fair allocation of valuable community resources, and help curbing touting activities and preventing the abuse of facilities, the new system will introduce a new function of allocating facilities by ballot on top of the allocation mechanism on a first-come-first-served basis. The LCSD will consider adoption of balloting first for some popular facilities with high demand, such as turf football pitches and multi-purpose arenas (badminton courts, basketball courts, volleyball courts, etc.) of sports centres, with the remaining sessions to be allocated in accordance with the existing allocation mechanism i.e. advance bookings of unallocated sessions can be made within ten days from the current date on a first-come-first-served basis;
- (c) on recreation and sports programmes, the new system will provide a unified and one-stop electronic service platform for the public to enrol in the recreation and sports programmes in the 18 districts and enable a more efficient and fair allocation of places for programmes. At present, the enrolments of about 50% of recreation and sports programmes are processed manually. With the new system, all enrolments will be processed electronically. In the future, participants will only need to submit one application for each month through the system instead of filling out various application forms or queueing up at different booking counters in early morning for popular programmes. Generally speaking, the balloting approach will be adopted for allocation of recreation and sports programmes and popular facilities after the launch of the new system. The remaining programme places and facility

sessions will then be made available for enrolment or booking on a first-come-first-served basis;

- (d) with the new self-service stations to be installed at leisure venues, members of the public can use self-service for check-in of facility sessions and programmes more expeditiously and in a more user-friendly manner. Programme instructors can focus on coaching by reducing some of the administrative work;
- (e) through the self-service stations, the time for patron registration will be shortened from the existing ten working days to instant completion. The number of venues providing self-service for booking will increase from existing 47 venues to about 270 venues;
- (f) the new system will provide big data such as utilisation of sports and recreational venues and programmes to enable the Government to better understand and analyse the distribution, usage pattern and preference of customers, supply and demand of different facilities and programmes in different districts as well as the relevant changes and trend, thereby providing a stronger foundation for refinement of existing policies. The analyses will facilitate the Government in planning, designing and providing more suitable sports and recreational facilities and services to meet the changing need of the community; and
- (g) the new system will be equipped with customer relationship management functions. For instance, customers can express their views to the system administrators via the system anytime and anywhere so that venue managers can be aware of the customers' views and enhance the venue services by making timely improvement.

IMPLEMENTATION PLAN

7. Subject to funding approval of the Finance Committee (FC) in June 2017, a tendering exercise for the project implementation will be carried out as soon as possible and the contract is expected to be awarded in early 2019. The new system will be implemented in phases. The target is to have all the core functions¹ of the proposed system launched by 2021, self-service stations² to be rolled out by 2022 and other enhanced functions³ available by 2023. A tentative implementation schedule is at **Annex I**.

¹ Core functions include facility booking, programme enrolment, membership management, venue/facility management, programme management, balloting and allotment, attendance management, e-payment and mobile app.

² Smart self-service stations provide functions for patron registration, facility booking, programme enrolment, payment, check-in and pick-up booking by standby hirer, etc.

³ Enhanced functions include bookings by organisations, major events management, holiday camps allotment,

8. Prior to the launch of the new Intelligent Sports and Recreation Services Booking and Information System, the LCSO will provide the public with timely information about the new system through different channels. We will arrange staff and customer service ambassadors to station at venues to advise the public (including the elderly) on how to use the smart self-service stations for booking of sports and recreational facilities or programme enrolment when the new system is rolled out (including the installation of the smart self-service stations at the venues). At initial stage of launching the new system, the booking counter services at the 18 DLSOs will be maintained. In addition, a telephone hotline will be set up to facilitate public enquiries.

FINANCIAL IMPLICATIONS

Capital Expenditure

9. The implementation of the proposed system will incur a total capital expenditure of \$499.816 million from 2017-18 to 2024-25. Details are at **Annex II**.

Other Non-recurrent Expenditure

10. In addition, the implementation of the proposed system will entail a non-recurrent staff cost of \$75.927 million from 2017-18 to 2023-24.

Recurrent Expenditure

11. The new system will require a net additional recurrent cost of \$11.758 million per annum from 2024-25 onwards taking into account the offsetting effect of a realisable savings of \$54.581 million per annum. The requirements mentioned in paragraphs 10 and 11 will be reflected in the estimates of the relevant financial years.

Savings and Cost Avoidance

12. The proposed system will bring about an annual saving of \$121.504 million as from full launch in 2026-27 onwards.

13. The proposed system will also bring about a non-recurrent cost avoidance of \$43.783 million as the upgrading of the infrastructure and technical platforms of the existing LLS together with the peripheral systems is no longer required to address the end-of-support issue of its hardware and software.

PUBLIC CONSULTATION

14. In planning the development of the new system, the LCSD commissioned a consultancy study in 2015, which conducted consultations with members of the public and key stakeholders (e.g. NSAs and schools) through opinion surveys and meetings to gauge their feedbacks and views on user requirements and expectations. The LCSD has taken into account the feedback of the above-mentioned stakeholders in planning the proposed framework and design concept of the new system and briefed key district personalities on the proposal. The LCSD has consulted the Community Sports Committee (CSC) under the auspices of the Sports Commission on 17 February 2017. The Terms of Reference of the CSC include, among others, advising through the Sports Commission on the strategies and initiatives to promote community participation in sports and improvement of existing facilities. CSC welcomed and supported the proposed project.

WAY FORWARD

15. To take forward this new initiative, we plan to seek funding approval of the FC in June 2017 for development of the new system.

ADVICE SOUGHT

16. Members are invited to comment on the proposed Intelligent Sports and Recreation Services Booking and Information System.

Home Affairs Bureau
April 2017

**Tentative Implementation Schedule
for the New Intelligent Sports and Recreation Services Booking and Information
System**

Activity	Target Timing
(a) Tender preparation	August 2017 – January 2018
(b) Tendering and award of contract	February 2018 – January 2019
(c) System analysis and design	February – October 2019
(d) System development of core functions	November 2019 – December 2020
(e) Testing, site preparation, data migration and launch of Phase 1 for core functions	December 2020 – November 2021
(f) Roll-out of self-service stations in about 270 leisure venues	December 2021 – November 2022
(g) Development and launch of Phase 2 for other enhanced functions	December 2021 – November 2023

Annex II

Non-recurrent Expenditure for Implementation of the New Intelligent Sports and Recreation Services Booking and Information System (in \$ '000)

	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	Total
(a) Hardware					44,277	9,640	3,956		57,873
(b) Software					44,611	3,369	1,219		49,199
(c) Communication network					30,520	13,635	13,635		57,790
(d) Implementation services			20,026	12,590	16,680	27,800	44,479	11,120	132,695
(e) Contract staff	2,200	6,140	14,200	11,106	14,141	12,823	4,215		64,825
(f) Site preparation		1,680	3,020	11,040	36,327	23,783			75,850
(g) Miscellaneous (training, consumables, etc.)		611	784	1,047	5,594	5,248	2,860		16,144
(h) Contingency	220	844	3,803	3,579	19,215	9,630	7,037	1,112	45,440
Total	2,420	9,275	41,833	39,362	211,365	105,928	77,401	12,232	499,816

Note:

Item (a): comprises hardware required for development of the new system. The hardware includes database servers, application servers, web servers, other functional servers, storage and backup equipment, self-service stations/ terminals/backoffice workstations at venues, swimming pool monthly ticket/swimming lane/fitness room management equipment, etc.

Item (b): comprises system software for servers, data backup, endpoint protection/management, system and network monitoring, etc.

Item (c): comprises network equipment at data centres and venues, network security equipment.

- Item (d): comprises implementation services of the new system from external service providers. Main implementation activities include system study, system design, application development, system installation and configuration, infrastructure implementation at data centres and venues, enhancement of other systems interfacing with the new system, independence testing services, venue setup, production rollout and nursing.
- Item (e): comprises engagement of services of contract IT professional staff to supplement the in-house project management team on development of application, infrastructure, enhancement of other systems interfacing with the new system.
- Item (f): comprises setup of data communication and related renovation work at about 270 venues, engagement of services of contract IT professional staff to supplement the in-house project management team on site preparation.
- Item (g): comprises miscellaneous costs such as start-up consumables, services for privacy impact analysis, audit on balloting platform, services for security risk assessment and audit, change management, IT and computer equipment for new project office, and training for internal users and IT professional staff.
- Item (h): represents about 10% of the costs required for items set out in Items (a) to (g).