

ITEM FOR FINANCE COMMITTEE

CAPITAL WORKS RESERVE FUND

HEAD 710 – COMPUTERISATION

Department of Justice

New Subhead “Implementation of a Verified, Authenticated and Searchable Electronic Database of Hong Kong Legislation”

Members are invited to approve a new commitment of \$79,395,000 for implementing a verified, authenticated and searchable electronic database of Hong Kong legislation.

PROBLEM

Hong Kong needs an accurate and up-to-date online copy of legislation with legal status. At present, anyone who wishes to refer in court to an updated official version of Hong Kong legislation can only rely on the Loose-leaf Edition of the laws of Hong Kong. The existing Bilingual Laws Information System (BLIS) also provides a consolidated version of the laws of Hong Kong, but it has no legal status.

PROPOSAL

2. The Secretary for Justice proposes to create a new commitment of \$79,395,000 to implement a verified, authenticated and searchable electronic database of Hong Kong legislation (the Database), to replace the existing Loose-leaf Edition and BLIS with an accurate and up-to-date online copy of Hong Kong legislation with legal status.

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JUSTIFICATION

Present Position

3. At present, by virtue of the Laws (Loose-leaf Publication) Ordinance 1990, the Loose-leaf Edition of the laws of Hong Kong has statutory status. It is the official source of consolidated Hong Kong legislation published under statutory authority and, together with the Gazette, is the official source of new legislation. Anyone who wishes to refer in court to an updated official version of Hong Kong legislation can only rely on the Loose-leaf Edition.

4. However, being a printed copy, the period during which the Loose-leaf Edition is up-to-date is limited because of the time required to prepare and issue the updated replacement version. Users are obliged to manually check gazetted legislation and mark relevant amendments on their own copies in the interim, which may run up to as many as nine months. There is a risk that if parties to proceedings, and the court, do not have access to a fully updated version of relevant laws a judgment may result that is based on an incorrect version of the laws. Indeed, this has happened in another jurisdiction on at least one occasion. Furthermore, the subscription to, and maintenance of, the Loose-leaf Edition are costly. As of March 2010, a new order of a complete set of the Loose-leaf Edition costs around \$180,000. The cost for the last replacement issue (i.e. Issue 42) was \$2,120, and it takes a skillful worker two to three working days to complete the task of replacing the pages.

5. The BLIS also provides a consolidated version of the laws of Hong Kong. It was first made available to the public via the internet in November 1997 under the website of the Department of Justice (DoJ). While updates to BLIS may be more timely, it has no legal status. Indeed, it was not designed to carry legal status and is not capable of being re-designed to allow it to be used as a database that enjoys legal status.

6. The system lacks the essential security features for it to be given any legal status. It does not have the capability to track changes down to field level and provide an audit log. It is not technically feasible to upgrade BLIS on its current platform, which has been in use for over a decade, to meet the essential security requirements.

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7. Within DoJ, supporting the operation of our present dual system of the printed Loose-leaf version and BLIS necessarily results in a duplication of effort in updating and proofreading the two versions. There is also the risk of error in processing the replacement issues and updates. This inefficient use of resources and risk of error have become increasingly unacceptable, in particular when it has been proven in other jurisdictions that it is technologically feasible to implement a computer system that can provide a secure and effective solution to these problems.

The Need for the Database

8. Access to the law is a fundamental element of a jurisdiction that upholds the rule of law. In the information age, the availability of an updated, free to access, reliable and searchable online consolidated legislation database with legal status is necessary. The Database is an important infrastructure for Hong Kong to become the regional hub for legal services and dispute resolution.

9. In addition, a number of jurisdictions have already made legislation with legal status available free and online to the public. They include New South Wales, the Commonwealth of Australia (legislative instruments), Tasmania, New Brunswick and Canada (Federal). New Zealand has completed such a system and is in the process of officializing^{Note} its legislation data. Singapore and Bermuda have started to develop similar systems.

The Proposed Database

10. In the light of the above, DoJ has done a study on the establishment and maintenance of the Database. After considering the experience of overseas jurisdictions in the implementation of similar systems and the architecture of the existing BLIS, the study concluded that a new system should replace BLIS and the new system should make electronic legislation data with legal status available to the public. It also came to the conclusion that the hardcopy of legislation should be printed from this single source of data.

11. It is envisaged that the Database will provide the public with a website facilitating free and convenient access to accurate and up-to-date Hong Kong legislation with legal status. Hong Kong legislation will be available in formats facilitating public access and data download. In addition, the Database will support the operations of the Law Drafting Division (LDD) of DoJ in the following processes –

/(a)

^{Note} Officialisation is a term from the New Zealand system which means confirming legislation data as being an accurate and authoritative version of legislation.

- (a) Legislation capture – the capture of required information to facilitate the compilation of consolidated Hong Kong legislation once legislation is gazetted.
- (b) Legislation compilation – the consolidation, proofreading and verification of Hong Kong legislation in the Database.
- (c) Online publication – the generation and publication of Hong Kong legislation for online access by users.
- (d) Full chapter reprint – the generation of full chapter reprint of Hong Kong legislation in a layout similar to the Loose-leaf Edition (or an improved layout) for online access by users.
- (e) Auditing and checking – the auditing and checking of all updates made to the published Hong Kong legislation.

12. The Database will adopt a modular design so as to allow for the independent modification of different system components. This will produce a more flexible and adaptable architecture and enable subsequent changes to be made to the new system in a more effective manner. It will be designed with essential security features to enable it to be given legal status. Track changes features will be available in the system to facilitate proofreading and verification. Detailed audit log recording system activities will be available, so that any action taken on the system and changes made to the content of the legislation will be recorded and traceable.

Benefits

13. We estimate that the proposal will bring about annual savings of \$13,148,000 from 2020-21 onwards, comprising –

- (a) **Realisable savings of \$383,000 per annum**

This represents the running cost of BLIS, which includes the hardware and software maintenance costs and rental of the data lines. The savings will be ploughed back into the Database to contribute to its recurrent costs.

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(b) **Notional savings of \$12,765,000 per annum**

This represents –

- (i) \$230,000 notional savings in the staff costs of DoJ. After implementing the Database, less staff effort will be required to maintain the Database and publish Hong Kong legislation. The saved staff effort will be deployed to help ensure that laws are compiled to a quality commensurate with the legal status of the new system;
- (ii) \$6,684,000 notional cost avoidance in staff costs for bureaux and departments (B/Ds) which are subscribers of the Loose-leaf Edition for performing the replacements for replacement issues of the Loose-leaf Edition;
- (iii) \$3,051,000 notional cost avoidance in office space costs of B/Ds for housing the Loose-leaf Edition; and
- (iv) \$2,800,000 notional cost avoidance in the provision of replacement issues to non-paying subscribers of the Loose-leaf Edition comprising B/Ds and statutory bodies.

14. The Database will also bring about the following intangible benefits –

(a) **Improved accuracy in compiling Hong Kong legislation**

With a single source (i.e. the Database) for compiling Hong Kong legislation, any inconsistency arising from having two separate sources (i.e. BLIS and the Loose-leaf Edition) will be avoided.

(b) **Timely dissemination of and free access to Hong Kong legislation with legal status**

The lead time for updating Hong Kong legislation will be shortened significantly from the existing three to four weeks for BLIS and up to nine months of lead time for the Loose-leaf Edition, to between one and five days under the Database.

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(c) **Effect on legal profession**

Those in the legal fraternity, including members of the judiciary and the profession as well as the law enforcement agencies, will be able to conveniently and efficiently locate current and historical versions of Hong Kong legislation. Law drafting counsel will be able to focus more of their time in enhancing the quality of legislation to be drafted.

(d) **Effect on Hong Kong generally**

The Database will offer free online access to Hong Kong legislation with legal status to the public anywhere, anytime. This will reflect the Government's commitment to providing the public with ready and convenient access to Hong Kong legislation and will greatly improve the image of Hong Kong. In addition, this is in line with the aspiration for Hong Kong to become the regional hub for legal services and dispute resolution, and with the Government's initiative to make Hong Kong a leading digital city.

(e) **Better leverage of technology to support value-added services**

The Database will adopt a modular design, including the use of an open data format. This will open up opportunities for third parties, such as legal publishers, to provide value-added services more easily. The platform enables LDD of DoJ to integrate its other internal operations, for example the law drafting process, with the Database.

(f) **Contribution to a greener lifestyle**

With the availability of the full chapter reprint function in the Database, demand for hardcopy of Hong Kong legislation will be reduced. The corresponding savings in paper consumption will contribute to the greener lifestyle being promoted by the Government.

(g) **Benefits arising from phasing out the Loose-leaf Edition**

When the whole process of verification of and giving legal status to Hong Kong legislation in the Database (i.e. officialisation) is completed, the Loose-leaf Edition can be retired. Efforts and office space required by subscribers outside the Government (mostly legal practitioners and professionals) to perform the replacements for replacement issues and to house the Loose-leaf Edition will be saved.

Encl. 15. A cost and benefit analysis of the proposal is set out in the Enclosure.

FINANCIAL IMPLICATIONS

Non-Recurrent Expenditure

16. We estimate that the proposal will require a total non-recurrent expenditure of \$79,395,000 over a period of six years from 2010-11 to 2015-16, with breakdown as follows –

	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	Total
	\$ '000	\$ '000	\$ '000	\$ '000	\$ '000	\$ '000	\$ '000
(a) Hardware	-	-	1,612	3,871	2,117	-	7,600
(b) Software	-	-	6,783	9,544	2,520	-	18,847
(c) Implementation services	-	2,122	8,488	8,488	8,722	6,115	33,935
(d) Contract staff services	397	1,215	1,444	1,444	1,444	963	6,907
(e) Miscellaneous (site preparation, communication network, training and consumables)	-	120	282	-	3,504	981	4,887
(f) Contingency	40	346	1,861	2,335	1,831	806	7,219
Total	437	3,803	20,470	25,682	20,138	8,865	79,395

17. On paragraph 16(a) above, the estimate of \$7,600,000 is for the acquisition of computer hardware, including servers, network equipment and workstations.

18. On paragraph 16(b) above, the estimate of \$18,847,000 is for the acquisition of computer software, including system operating software, content management system, database management system, search engine, system backup tool and anti-virus software.

19. On paragraph 16(c) above, the estimate of \$33,935,000 is for the acquisition of implementation services from external services providers to develop the Database. Main implementation activities include system study, analysis and design, system development, installation and configuration, system integration and testing, data conversion and migration, production rollout and nursing.

20. On paragraph 16(d) above, the estimate of \$6,907,000 is for the hiring of contract IT professional staff services to supplement in-house IT project team to provide technical advice and support, and monitor the implementation of the project.

21. On paragraph 16(e) above, the estimate of \$4,887,000 is for the site preparation and set up for server hosting services, installation of data lines, training and consumables, such as backup tapes.

22. On paragraph 16(f) above, the estimate of \$7,219,000 represents an approximately 10% contingency on items set out in paragraphs 16(a) to (e).

Non-recurrent Staff Effort

23. The proposal will entail non-recurrent staff costs of \$35,034,000, with breakdown as follows –

	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	
	\$ '000	to	Total					
							2019-20	\$ '000
Staff cost	4,485	4,813	5,670	5,767	6,561	4,790	2,948	35,034
Total	4,485	4,813	5,670	5,767	6,561	4,790	2,948	35,034

24. The staff cost estimate above represents a total of about 1 002 person-months of legal, technical and clerical officers for procurement, project management, data conversion and migration, officialisation and user-acceptance tests. Of these, 480 person-months are for the officialisation process from 2014-15 to 2019-20. DoJ will absorb the requirements.

/Recurrent

Recurrent Expenditure

25. We estimate that the recurrent expenditure arising from the proposal will be as follows –

	2015-16	2016-17	2017-18 and
	\$ '000	\$ '000	onwards
			\$ '000
(a) Hardware and software maintenance	2,269	3,110	3,387
(b) Communication network	-	881	881
(c) System maintenance	1,648	2,385	3,203
(d) Miscellaneous (server hosting and consumables)	568	1,705	1,705
Sub-total	4,485	8,081	9,176
(e) Staff cost	1,895	5,684	5,684
Total	6,380	13,765	14,860

26. On paragraph 25(a) above, the annual estimate of \$3,387,000 is for hardware and software maintenance.

27. On paragraph 25(b) above, the annual estimate of \$881,000 is for rental of new data communication lines and internet connection.

28. On paragraph 25(c) above, the annual estimate of \$3,203,000 is for acquisition of on-going application maintenance and support from external services provider.

29. On paragraph 25(d) above, the annual estimate of \$1,705,000 is for acquisition of server hosting services and consumables.

30. On paragraph 25(e) above, the estimated annual staff cost of \$5,684,000 represents DoJ's in-house staff effort required for on-going system maintenance and support, and administration of the Database.

31. The above requirements for recurrent expenditure will be reflected in the Estimates of the relevant years.

IMPLEMENTATION PLAN

32. We plan to implement the Database in two phases. Phase one will cover core functions for use by LDD for data maintenance and officialisation. Phase two will cover functions for use by the public and B/Ds. BLIS will be retired on completion of phase two. The officialisation process will commence at the same time as the commencement of phase two and is expected to take five years. The Loose-leaf Edition will be phased out progressively according to the progress of the officialisation. If the funding application is approved, we would proceed with preparing the tender documents and the tendering process. The implementation plan is as follows –

Activity	Target Completion Date
(a) Procurement exercise for the implementation of the Database	December 2011
(b) Contract commencement	January 2012
(c) Phase one	May 2014
(d) Phase two	November 2015
(e) Officialisation and retirement of Loose-leaf Edition	May 2019

33. In carrying out the data conversion and migration, DoJ will ensure that all data stored in the existing computer system will be removed by means of de-magnetisation and the hard disks physically destroyed before they are disposed of. We will ensure that they will be disposed of in accordance with relevant Government procedures.

34. When the Database is in operation, LDD will hold briefing sessions on the use of the Database for judges, government officials and members of the two legal professions. Suitable user guides and notices will also be published on the DoJ website from time to time.

PUBLIC CONSULTATION

35. We consulted the Legislative Council Panel on Administration of Justice and Legal Services (AJLS Panel) on 26 April 2010. Members supported the proposal and raised no objection to submission of the proposal to the Finance Committee for funding approval. Representatives of the Law Society and the Bar Association have also been given a general briefing on the proposal related to access to legislation and the Database. The Law Society wrote to the AJLS Panel on 14 April 2010 to express its support for the proposal and requested that adequate funding be provided “to enable it to be a valuable resource for not only for the legal professions but also for the community generally”.

36. Both the legal professionals and the general public will welcome a database containing legislation data with legal status. Subject to funding approval, the relevant Bill will be introduced into the Legislative Council within the current session to provide for the requisite legal status of the Database.

BACKGROUND

37. Consolidated Hong Kong legislation is compiled by LDD and is currently made available to the public in two forms, hardcopy (the Loose-leaf Edition) and online copy (BLIS) over the internet.

38. The Loose-leaf Edition was first published in 1991. According to the Laws (Loose-leaf Publication) Ordinance 1990, “unless the contrary is proved” the Loose-leaf Edition is “deemed to be correct”. The public is required to pay a one-off cost for buying a whole set of the Loose-leaf Edition (currently comprising 48 volumes) and subscription fees to receive subsequent updates (which are in the form of replacement issues published by DoJ twice a year). There are currently about 1 020 subscribers and lead time of replacement issues may sometimes be up to nine months.

39. BLIS is a searchable electronic database of Hong Kong legislation, which was first developed and launched in 1990 as an internal reference tool for DoJ staff. It was subsequently made available to the public for free access over the internet in November 1997 for reference purposes without any legal status. Lead time for updating BLIS is around three to four weeks.

Cost and Benefit Analysis for Implementation of the Database

	Cash flow (\$'000)											
	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Total
Cost												
Non-recurrent												
- Expenditure	437	3,803	20,470	25,682	20,138	8,865	-	-	-	-	-	79,395
- Staff cost	4,485	4,813	5,670	5,767	6,561	4,790	931	931	931	155	-	35,034
Sub-total	4,922	8,616	26,140	31,449	26,699	13,655	931	931	931	155	-	114,429
Recurrent												
- Expenditure	-	-	-	-	-	4,485	8,081	9,176	9,176	9,176	9,176	49,270
- Staff cost	-	-	-	-	-	1,895	5,684	5,684	5,684	5,684	5,684	30,315
Sub-total	-	-	-	-	-	6,380	13,765	14,860	14,860	14,860	14,860	79,585
Total cost	4,922	8,616	26,140	31,449	26,699	20,035	14,696	15,791	15,791	15,015	14,860	194,014
Savings												
Realisable	-	-	-	-	-	-	383	383	383	383	383	1,915
Notional	-	-	-	-	159	2,371	4,289	7,821	11,353	12,530	12,765	51,288
Total savings	-	-	-	-	159	2,371	4,672	8,204	11,736	12,913	13,148	53,203
Net shortfall	4,922	8,616	26,140	31,449	26,540	17,664	10,024	7,587	4,055	2,102	1,712	140,811
Net cumulative shortfall	4,922	13,538	39,678	71,127	97,667	115,331	125,355	132,942	136,997	139,099	140,811	
