

Hong Kong Report on Portals

Introduction

Vision and Targets

Portal is a key element of the overall E-government strategy of the Government of the Hong Kong Special Administrative Region (HKSAR). The “Electronic Service Delivery (ESD)” portal (www.esd.gov.hk) is a major E-government Internet portal web site for the provision of electronic public services and commercial services. The portal’s brand name “ESDlife” best demonstrates our vision to make “life” simpler and easier for the Hong Kong community.

The ESD Scheme was launched in December 2000 as a flagship E-government project and its portal is one of the world’s first bilingual (English and Chinese) one-stop portals providing integrated electronic public and commercial services. The main aims of ESD are: to deliver high quality public services to the community in an innovative manner; to improve the efficiency and reduce the cost of delivery of public services; and to foster the development of electronic commerce in Hong Kong. Providing an open and common information infrastructure for the delivery of public and commercial services, the Scheme drives the development and adoption of e-commerce by the business sector and the general community.

Drivers of Change

Policy Direction

The Chief Executive of the HKSAR pledged in his 1997 Policy Address to make Hong Kong a leader in the information world of tomorrow. He further emphasised in his 1998 Policy Address that we should use Information Technology (IT) to help Hong Kong to retain its competitive edge and to drive its overall economic expansion. To implement the IT vision of the Chief Executive, we promulgated the “Digital 21” IT Strategy in 1998, which aimed to enhance and promote Hong Kong’s information infrastructure and services so as to make Hong Kong a leading digital city in the globally connected world of the 21st century. The ESD Scheme is one of the major initiatives in the Strategy, and is a

flagship E-government project of Hong Kong.

An updated “2001 Digital 21” IT Strategy (www.info.gov.hk/digital21) was promulgated in May 2001 which, among others, continues to promote the development of E-government. It sets out a comprehensive E-Government Strategy including setting targets for the provision of public services online and implementing E-government projects falling into categories of Government-to-Citizen (G2C), Government-to-Business (G2B), Government-to-Employee (G2E) and Government-to-Government (G2G) which will bring substantial benefits to the Government and the community. To drive the development of E-government further, we have set a target to provide an e-option for 90% of the public services which are amenable to the electronic mode of delivery by end-2003. We will continue to develop the ESD portal as a G2C and G2B project with a view to achieving the overall target for the provision of the e-option. In 2001 and 2002, we will introduce more services which are closely related to the daily lives of people in the HKSAR.

Legal and Technical Infrastructure

To provide for the legal framework for the conduct of electronic transactions, the Electronic Transactions Ordinance was enacted in January 2000 giving electronic records and digital signatures the same legal status as that of their paper-based counterparts and establishing a voluntary recognition scheme for certification authorities operating in Hong Kong. In the same month, Hong Kong established a local Public Key Infrastructure (PKI) through the setting up of the Hongkong Post Certification Authority (under our Post Office), which now provides a full range of certification services for the conduct of secure electronic transactions. On the basis of the above legal and information infrastructure, we launched the ESD Scheme which takes the lead in adopting the PKI for the conduct of secure electronic transactions and driving community and business adoption of these transactions.

Portals – Development and Challenges

Development Pattern

An innovative business model has been adopted for the development of the portal. A private sector operator (ESD Services Limited, a joint

venture company of Hutchison Global Crossing and Compaq Computer) was selected through an open tendering process. The private sector operator is responsible for the development, operation and management of the ESD information infrastructure. The Government has not paid for the capital investment nor the recurrent operational and maintenance cost. It will only start to pay for each chargeable transaction made through the system after the number of cumulative chargeable transactions conducted has reached an agreed volume. The operator is allowed to make use of the system to provide advertisements and revenue-generating private sector e-commerce services (e.g. sale of event tickets, registration for educational courses, etc.) via the same portal web site. This provides an additional income stream to the operator.

Current Status

The ESD Scheme provides a common and secure electronic platform for the conduct of E-government services as well as commercial services. For E-government services, the range of electronic public services covered by the ESD Scheme reached 110 this September, provided by more than 30 Government departments and public agencies. Examples of ESD services include filing of tax return, renewal of driving and vehicle licences, application for business registration, payment of Government bills, registration as a voter, search for job, registration to become a volunteer, tourist and investor information, etc. The services are mostly genuine transactions or services with interactive functions.

Users can locate their needed services through three mega-channels – “People”, “Business” and “City”; or through nine service types “Transport”, “Citizenship”, “Education”, “Employment”, “Finance”, “Household”, “Leisure”, “Business” and “Tourist”; or through the list of departments providing the services

Services are available 24 hours a day and seven days a week. Services can be accessed via PC with Internet connection; public computer facilities installed at district offices, community halls, post offices and public libraries; or smartly-designed propose built public kiosks installed throughout Hong Kong at train and subway stations, shopping centres, supermarkets, cultural and exhibition centres and Government offices. With the launch of the ESD Scheme, Hong Kong citizens can now lead a simpler and easier life through greater efficiency and convenience of electronic public service provision.

The ESD system accepts a wide range of electronic payment methods, e.g. debits card, credit card, and smart card (to be available at a later stage). To ensure security of the ESD system and to protect the personal data submitted by the citizens, we have adopted stringent measures on security and personal data privacy. Advanced technologies such as SSL (Secure Socket Layer) and SET (Secure Electronic Transactions) are used to provide secure electronic payment. The ESD system adopts advanced network and system security technologies and policies. For some applications requiring authentication of user identity, the users have to make use of digital certificates for providing digital signature and for encryption of the data involved, so as to ensure the safety and security of the electronic transactions made. All personal data will be strongly encrypted for transmission, and only the specific Government department concerned is able to decrypt and read the personal data. Likewise, electronic payment information is also strongly encrypted for access by the relevant financial institutions only, and the Government and the ESD operator will only know whether a payment has been authorised or not.

The ESD operator has developed a solid and scalable information infrastructure to support the delivery of electronic public services to the community. This information infrastructure includes facilities for electronic certification; gateway for handling electronic payment; connectivity to Government backend computer systems; as well as the wide range of delivery channels. The ESD operator is pursuing new delivery channels, such as mobile phones, for selected ESD services to widen the reach of service. Meanwhile, the Government has installed public computer facilities in community halls, post offices and public libraries through the territory to allow the public to gain access to the Internet and ESD services. The ESD operator has set up a 24-hour helpdesk to answer public enquiry on using ESD services. The common information infrastructure of ESD is also available for the provision of value-added e-commerce services of the private sector.

Challenges Encountered

- (a) Tight implementation timeframe – the project was developed under an extremely tight timeframe. It was developed in only about one year;
- (b) Large number of parties involved – the private sector operator has to manage over 20 sub-contractors and business partners (including

financial institutions, technology solution partners, kiosk landlords, etc.), while about 30 Government departments and public agencies were involved in providing the electronic services. Communication, coordination, and collaboration were essential to the success of the project, particularly given the timeframe for implementation;

- (c) Adoption of advanced technology – we have adopted many leading-edge technologies such as public key infrastructure, digital certificates on smart cards, encryption and e-payment technologies, so as to ensure a high level of security and privacy protection for the users. Meanwhile, we have to ensure that services are widely accessible by the community, which may possess computers of a wide range of processing power, software and Internet connection speeds. The system has to be wisely designed to cater for all these diverging requirements; and
- (d) Access to Internet – to ensure easy public access to ESD services, we have installed over 2,200 public computers throughout the city, and over 90 smartly-designed ESD kiosks at convenient public locations. We have also addressed the needs of the disabled in the design of the web site and in the provision of public computer facilities.

User Orientation

The ESD Scheme is designed in a customer-oriented approach, which is reflected in the user-friendly user interface and easy-to-use navigation paths. Its design has also catered for the needs of various groups of users. For instance, we have set up special Community Cyber Points for the blind and the visually impaired. Computers with special devices (such as screen enlarging software, text to speech software, and power braille) were installed at these locations to facilitate the blind and the visually impaired to access ESD and other IT services. The ESD web site provides a text-only version to facilitate access by the blind and the visually impaired. The design of the ESD kiosks also caters for access by people with disabilities. Screen magnifying software is being installed for people with visual impairment, while a touch pad has been installed to facilitate use by people with physical disabilities, e.g. those on wheel chair. Braille version of ESD leaflets and cassette tapes are also produced to promote ESD to the blind and the visually impaired.

To prepare for the community's acceptance of ESD services, a territory-wide community awareness and promotional programme are on going. IT awareness courses are organised for the elderly, women and disabled. Community exhibitions and promotion are also arranged. "ESDlife" has become a landmark of electronic service provision, and the community as a whole is starting to realise how E-government and e-commerce can change our way of life, thus enhancing quality of life and leaving time for us to do other meaningful things. Together with other private sector e-commerce initiatives (such as e-banking, e-stock trading, e-procurement, etc.), e-commerce activities in Hong Kong are continuously flourishing. New modes of service delivery take time to gain public acceptance and high penetration, and we trust that the access rate and transaction volume will continue to grow steadily.

The ESD operator has carried out customer surveys to obtain customer feedback on the usage of ESD services. Such feedback is also important to improving the services under the Scheme. For instance, the front page and the navigation flow of the ESD web site has been enhanced based on the feedback of the customers, so as to facilitate easier and more convenient searches for the needed services. We also conduct annual IT surveys to obtain useful statistics on the public usage of E-government services.

Till end July 2001, just over seven months after the launch of the ESD service, nearly 13 million visitors have visited the site, generating over 184 million hits and the ESD portal has become the second most popular Government website in HKSAR. Over 610,000 transactions have been conducted. The most popular services are job search, payment of Government bills, tourist information, registration as a volunteer and booking of appointment for registration of ID card, etc. The launching of the ESD Scheme has attracted substantial interest both in the local community and international arena and aroused great public awareness of the electronic mode of service provision. Deloitte Consulting has branded Hong Kong "as a platform for a glimpse of the possibilities of e-government in Asia" with the launching of the ESD Scheme.

Lessons learned

Based on the experience so far, there are three areas which we can share observations –

- (a) Identification of high-priority “killer” services – we have selected a group of “killer” services for implementation under the ESD Scheme. These services usually have a high transaction volume and involve a large group of clients. Moreover, the electronic mode of delivery of these services would significantly enhance the convenience to the community and the business sector. Such services would help to create a critical mass, foster the interest of the public to get used to the new mode of service delivery, and increase the confidence of the public in the conduct of electronic transactions;
- (b) Adoption of innovative business model – the adoption of the innovative business model in the implementation of the ESD Scheme has substantially shortened the implementation timeframe. With the flexibility of operation and the incentive for profits, the private sector operator was able to implement the sophisticated ESD information infrastructure in only about one year after contract award. Under this partnership approach, the business risk to Government will be kept to the minimum. The financial charging model also provides an incentive for the operator to drive the public in accessing E-government services, continuously to upgrade the system with the most advanced technologies and to deliver private sector electronic services; and
- (c) Integration of public and commercial services in the same portal – this enables the public to enjoy electronic services in a seamless and convenient manner. By allowing the ESD information infrastructure to carry commercial services, the project also promotes the development of e-commerce in Hong Kong. The E-government services and the commercial services can drive the overall adoption of e-commerce in the business sector and the wider community.

Other Portals

Another major portal of the Government of the HKSAR is the Central Cyber Government Office (CCGO) portal web site which provides a central access point to common information services on the Government-wide Intranet. It caters for three major functions, including an intra-governmental information-sharing centre; a live video broadcasting station for broadcasting important events, and an intra-governmental

business centre for conducting e-business between Government departments. Examples of current services include –

- Government telephone directory;
- internal circulars, memorandums, and guidelines;
- glossaries and reference materials;
- common statistics;
- detailed weather information;
- web-based training environment;
- Government internal discussion forum;
- Frequently Asked Questions on Government procurement; and
- information on benefits and other human resources related issues.

The capacity and content of the CCGO will continue to be expanded, with a view to making it the central portal of the Government Intranet. We have plans to use the CCGO as a platform for conducting G2E and G2G applications. These initiatives include providing employment-related services to our employees (e.g. applying for and processing of leave and accessing information relating to pay and other forms of employment-related allowances), ordering intra-government services online between government departments and preparing our financial estimates online. CCGO will become a strategic Government intranet platform.

One other important portal is the Government Information Centre portal (www.info.gov.hk), which is mainly for information dissemination. It disseminates Government messages in the form of press releases and short videos, provides hyperlinks to web sites of Government departments, public agencies, Government publications and the electronic submission of Government forms. It is the most popular Government website in the HKSAR, with hits averaging 1.7 million a day. It is planned that the portal be revamped and integrated with other Government web sites in a more user-friendly manner for development into a one-stop HKSAR Government portal.

Future challenges

Looking ahead, we aim continuously to improve our ESD portal.

We will continuously enhance the usability of the services based on the feedback from our users. We will also introduce additional electronic public services under the ESD system, such as online booking of sports

and leisure activities, online booking of marriage dates, online registration of public examinations, online sale of Government publications, real time traffic video, etc. Our long-term goal is to include all public services which are amenable to the electronic mode of service provision into the ESD web site.

Through the ESD Scheme, we aim to make the theme of “ESDlife” – easier life through electronic services – a part of the daily life of the Hong Kong citizens. Through greater efficiency, convenience and better quality of public service provision, we hope to improve the quality of life of our citizens. The project can also help realise our goal to make Hong Kong a leading digital city in the globally-connected world, and an e-commerce hub in Asia-Pacific.

Despite that the Scheme has offered a substantially more efficient and effective alternative means of service delivery, we do not intend to use the Scheme to replace the existing forms of providing services to the public over the counter or over the phone. We expect that the shifting of the clients from the conventional means of public service provision to the new means of through ESD would enable Government departments to cope with increasing service demand in a more cost-effective manner.

Looking ahead, our challenges lie with how we can further encourage the utilisation of the ESD services so as to maximise the benefits it brings to the community. This may include the introduction of incentives for usage. We will also need to see at the next stage whether we can make efficiencies on the scale of the conventional modes of service delivery (e.g. reduced numbers of service counters) with greater utilisation of the e-options provided by ESD. We have pledged to review the operation of the conventional means of service delivery in the light of the Scheme’s operational experience three years after ESD launch.

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