

Foundation of Effective E-Government — The Singapore Experience

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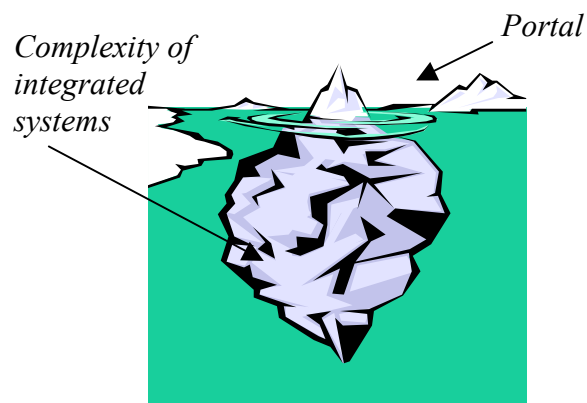
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The E-Government Iceberg

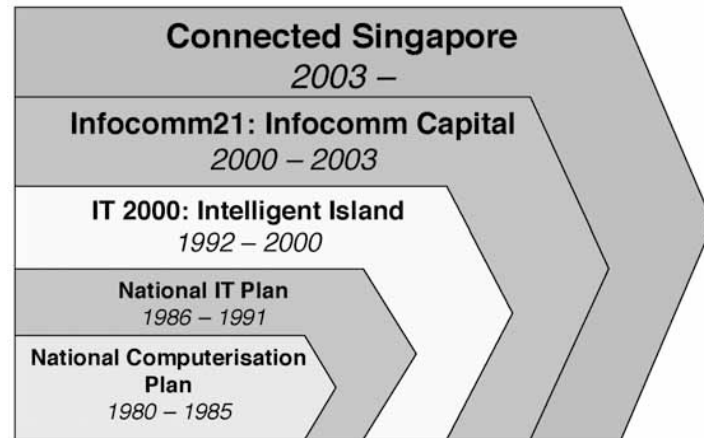
Much has been publicized about the benefits of E-Government, which has prompted governments around the world to embark on ambitious E-Government initiatives. The “race” to deploy e-services has in some instances resulted in mainly the provisioning of electronic versions of existing manual forms through a service portal. While there is the convenience of not needing to visit a government office, the benefits of end-to-end electronic processing are not realized. In some transactions, users are even required to navigate multiple disparate sites to effect an application due to the lack of cross agency integration. These inadequate experiences are not likely to encourage user adoption and could potentially impede the further development of E-Government.



Source: e-Government in Asia

The deployment of an effective E-Government requires a coherent approach that aligns all government entities toward the provisioning of customer-centric e-services. Using the proverbial metaphor of the iceberg, what is visible (the e-services interface users interact with) is only the tip, and much more lies under the surface that needs to be integrated in order to enable compelling e-services. Much more complexity also lies beneath the surface. Successful government e-services are usually the culmination of years of effort in integrating disparate systems within agencies — and between agencies. It is only when the integration between systems and agencies approach a degree of maturity that it is practical to consider planning for a government-wide portal. To achieve such a foundation, agencies need to have adequately matured technology-enabled processes, availability of a government-wide infrastructure and policies to facilitate cross agency collaboration, and a customer-oriented approach to service delivery. Effective E-Government is not just an outcome but a progressive journey to develop the enabling foundation built on the seamless integration of technology-optimized government services that facilitates a gratifying experience for users.

Singapore's E-Government Journey



Source: e-Government in Asia

Two Decades of Structured Information and Communication Technology (ICT) Developments

Singapore has a clear and integrated approach to national computerization. Over the past two decades, there has been a succession of national programs, each designed to build on the successes of the previous, and with clearly articulated goals, policies, and projects.

The Building Blocks of E-Government

Launched in 1982, the Civil Service Computerization Program (CSCP) was aimed at enhancing public administration efficiency by turning the whole civil service into a world-class information technology (IT) user. Applications were focused in the areas of transaction processing, data modelling, and database management, designed to improve productivity within the public sector. The high levels of computerization and process optimization achieved by the various ministries and agencies provided the underlining foundation for the subsequent provisioning of e-services to the masses.

The National Information Technology Plan (NITP) further established a number of nationwide electronic services that facilitated cross agency collaboration and provided significant value-add to the stakeholders. Examples included “TradeNet” which enabled the electronic exchange of structured documents between the trading, shipping, and freight forwarding community and various government agencies, and the “One Stop Change of Address Reporting Service” (OSCARS) provided citizens with a single point reporting for change of residential address.

TradeNet in particular was seen as a major national success as the electronic network allowed traders and governmental departments to exchange trade documents conveniently and efficiently. It has been widely quoted in leading publications and journals as a reference case on the successful application of technology in transforming public administration. On a national basis, it was estimated to be saving Singaporean traders about one billion USD per year.

The NITP program also addressed the softer complementary aspects of developing a sufficient IT manpower base, establishing a culture that was receptive to ICT, and encouraging creativity and entrepreneurship.

Putting the Pieces Together

While the CSCP and NITP programs delivered a myriad of efficient and effective e-services in the early 1990s, most of the applications were hosted on proprietary networks that resulted in multiple platforms and interfaces, making cross agency integration and user access cumbersome. A Government Information Infrastructure (GovII) was conceived in 1997 to make communications and transactions within the civil service and between the government and the public more accessible and convenient. Developed on various Internet technology and standards to provide easy access to the government online services, GovII brought the “Connected Government” to Singaporeans everywhere.

This was further reinforced with the launch of the Public Service Infrastructure (PSi) that provided an integrated government-wide infrastructure for the development, deployment, and operation of e-services. Designed as a unified platform for different agencies to share common components (like payment gateways, electronic data exchange, authentication services, and other security services), PSi enabled large-scale deployment of public e-services rapidly with a secured, scalable, and centralized infrastructure.

An island-wide broadband infrastructure (SingaporeONE) was subsequently established to enable citizens and businesses to interact with the government electronically. Capable of carrying voice, data, audio, and video information simultaneously and at high speed to homes, businesses, schools, and other public places throughout the country, SingaporeONE provided the connectivity with the masses and making e-services readily accessible.

Customer-Centric and High Levels of Usability

Designed with the constituents’ needs in mind, the e-Citizen portal (www.ecitizen.gov.sg) brings together online information and transaction services from many governmental agencies in one single window on the Internet. The contents of the portal are intuitively presented through the organization of services by categories of activities undertaken by an average citizen (like education, health, housing, family, recreation, etc.) rather than along government operating structures. Aggregation of relevant cross agency services and private sector participation further enriched the offerings with increased convenience and usability. Presented in an integrated manner to the users, hiding the complexity and agency-centric operations of conventional counter services, the e-Citizen portal projected a “Many Agencies, One Government” interface to the public.

To promote seamless access, a single secured identity (SingPass¹) is used for transacting with most government e-services. With SingPass, the public would only require one password to interact with different governmental agencies. The government is working toward enabling all e-services requiring authentication to eventually support SingPass access.

Continuous Improvement

Process and technology enhancements are actively pursued to progressively improve upon the usability and effectiveness of the available e-services. With each subsequent iteration, e-services are further streamlined with aggregation of value-added services and simplification of interfaces to provide a richer and more compelling experience (e.g. IRAS e-Filing, LTA Vehicle Registration and Licensing).

The pursuit of continuous improvements has resulted in significant increases in user adoption and satisfaction through the years.

¹ Singapore Personal Access

Holistic E-Government Framework

Singapore's success as a leading purveyor of effective E-Government is more than just enabling government services with technology. It also involves a monumental effort to reform the public service, which entails significant structural and operational changes. Over the last twenty years, the government's progressive and meticulously crafted national ICT programs have established a strong foundation to transform the public service, coupled with a holistic E-Government framework that addresses not only technology but also management, process, governance, and social and cultural issues to deliver accessible, integrated, and value-adding e-services to its constituents.

References

Yong, James. 2003. *e-Government in Asia: Enabling Public Service Innovation in the 21st Century*. Times Edition.