DEVELOPING A CUSTOMER-CENTRIC & INCLUSIVE E-GOVERNMENT:
LESSONS FROM THE CENTRAL PROVIDENT FUND BOARD OF SINGAPORE

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Based on the research by Barney Tan and Dr Pan Shan-Ling

Abstract
This paper documents the successful e-government implementation experience of the Central Provident Fund Board of Singapore. In tracing the process of e-government implementation in its entirety, this case study should prove to be especially useful to e-government managers and practitioners in helping them understand: (1) The process of implementing e-government and the critical steps that lead to the development of resources and capabilities required for a successful e-government, (2) how e-government transforms the nature of public service delivery and the benefits of implementing e-government, and (3) the internal and external drivers, the process, as well as the consequences of e-government enabled service transformation.

Retirement security with the CPF
In Singapore, all working citizens and employers are required by law to contribute a fixed percentage of their monthly income to the Central Provident Fund (CPF), a social security savings plan established in 1955 for the provision of financial security in retirement. Today, monies in the CPF account may be used for housing, insurance, healthcare and investment—and when the citizen retires—he/she would receive a monthly stipend paid out from their own accumulated CPF savings.

The CPF Board manages the CPF monies, which also has the mission to enable Singaporeans to save effectively for a secure retirement. At the end of 2006, the CPF Board was estimated to serve 3.1 million members1, manage US$83 billion of CPF savings and conduct over 31.2 million transactions a year. my cpf is the multi-award winning customer-service framework and online portal of the CPF Board, which leverages on information technology to manage efficiently. A customer satisfaction survey conducted in 2006 found that 99.3% of the members surveyed were satisfied with the public services provided by the CPF Board, while the complaints to compliments received ratio for the year 2007 was an impressive 1:49.

Public Service Delivery before my cpf
Before the 1990s, the CPF Board did not have an integrated customer service function. Structuring public services along functional lines was inefficient for customers; to perform a transaction or make an enquiry, customers had to know the exact service that their needs pertained to. For multiple transactions with different departments of the CPF Board, they had to join the separate and specific queues.

To improve its effectiveness, an integrated Customer Service department was established in June 1995, and structured according to three business processes:
(1) Withdrawals for CPF members;
(2) Various CPF schemes; and
(3) Employer Services; that provided services for the employers of CPF members.

The CPF Board launched its first website in 1996, beginning as an informational website and then slowly added electronic versions of various transaction forms.

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1 Singapore has a total population of around 4.5 million and more than 68% of all Singaporeans are members of the CPF Board
The website processed about 200,000 transactions within the first year of its inception when the Internet penetration rate in Singapore was only 9% and by 2002, the website was handling over 2 million transactions a year. However, the convergence of two significant events created a pressing need for a more efficient mode of public service delivery.

Drivers of my cpf
The first was the appointment of the CPF Board to a new national role by the Singapore government. At the height of the global economic downturn, the Singapore government announced the New Singapore Shares scheme on August 2001 aimed at helping the lower income group tide over the adverse economic conditions. All eligible Singaporeans were given between US$147 and US$1,250 worth of ‘New Singapore Shares’ which may be redeemed for cash, or retained for a guaranteed 3% dividend per annum. The CPF Board was appointed to implement the scheme. This was followed by the Economic Restructuring Shares scheme between 2003 and 2005, the Progress Package in 2006 and the Goods and Services Tax Offset Package in 2007, and the Growth Dividends scheme in 2008.

The second event was a market study conducted as part of an internal review; which indicated that by the end of 2001, the CPF Board had become one of the leading service organisations in the Singapore public sector. The study also found that the populace was growing increasingly sophisticated and demanding a higher level of service.

The management of the CPF Board was stirred into action.

A committee was established by the CPF Board to recommend efficiency improvements, which led to the conception of the my cpf customer service framework.

The Need for E-Government
The focus of the initial my cpf framework was to serve customers through the concept of “Service by Life Events”, which integrates the vast array of services and information provided by the CPF board relevant to the various stages of life a customer is at.

The concept was implemented in mid-2002, and the previous function-based mode of public service delivery was replaced by a customer-centric, events-based model more effective in meeting the needs of the customers. Yet, this posed another challenge.

To find a solution that mitigates the costs of serving customers by life events, the CPF Board performed comprehensive analyses of existing business processes, the external environment, and the customers. Three critical insights surfaced:

1. A significant portion of the transactions carried out at the traditional service counters could be brought onto the electronic platform, with considerable savings;
2. General population was becoming Internet-savvy; and
3. By moving most of its transactions onto the electronic platform, the CPF Board would be able to focus resources at service centers on customers who needed it the most.

Thus, the decision was made to perform a makeover of the CPF Board’s existing website and reposition the my cpf framework as an online initiative with an emphasis on electronic public service delivery. This monumental decision marked the beginning of the CPF Board’s e-government journey.
E-Government Development Phase One: 
Early 2003–Early 2004

As the customers’ perspective of the services required stems from their current life stage, the decision was made in early 2003 to replicate the “Service by Life Events” concept electronically. The first step taken by the CPF Board in December 2003 was the establishment of five major life events that typically created the highest volume of enquiries, namely: starting work, getting married, having children, buying a house, and making an investment.

With the objective to migrate the customers from using traditional counter services onto the electronic platform, the CPF Board adopted measures to introduce the revamped website. At the end of 2003, “e-lobbies”—designated areas with self-service terminals used to access the CPF website—were established at all CPF service centers across Singapore. In addition, a handful of customer service officers were on hand to assist.

To facilitate electronic transactions, “Singapore Personal Access” (SingPass), a confidential password of between 8-24 alphanumeric characters that provided a mechanism for individual customers to identify themselves, was launched in March 2003.

The initiative to replicate the “service by life events” concept on the website proved to be successful and by the end of 2003, the number of transactions handled on the website had increased to an estimated 8 million a year while the average service cost per CPF member estimated at USD$16.30.

E-Government Development Phase Two: 
Early 2004–Mid-2005

Encouraged by its initial success, the CPF Board established two objectives in the next phase of e-government development. First, the board sought to rebrand the CPF website to emphasize the new customer orientation of the online platform. An extensive rebranding exercise was conducted that led to that led to the conception of the my cpf website in March 2004.

The second was to develop a suite of e-services—the “my cpf Online Services”—that could be tailored to the needs of individual CPF members. Facilitated by SingPass, four e-services; namely “My Statements”, “My Messages”, “My Requests”, and “My Activities”, were launched in late 2004. The my cpf Online Services and my cpf Life Events formed an integrated package of information and services that members could access on anytime, anywhere. (Table 1 summarises the four e-services and how they affected service transformation at the CPF Board.)

By the end of 2004, the my cpf website was handling 16 million transactions a year, due largely to the rebranding exercise and the development of the “my cpf Online Services”. However, a growing digital divide surfaced, and highlighted the difficulties faced by the non-IT savvy, in particular, the senior citizens.

By the end of 2004, the estimated average service cost per CPF member had decreased to USD$15.70, and the number of physical service counters operated by the CPF Board was reduced by almost 20% as a result of the large-scale migration of customers onto the electronic platform. In addition, according to a customer satisfaction survey conducted in 2004, the percentage of members who were satisfied with the quality of the e-services reached 74.3%.

In the third phase of e-government development, the objective of the CPF Board was on extending the reach of their e-services, so as to cater to the segments of customers whose needs have not been adequately met thus far.
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<tr>
<th>Table 1</th>
<th><em>my cpf Online Services</em></th>
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<tr>
<td><strong>My Statement (Implemented August 2004)</strong></td>
<td><strong>Before My Statement:</strong> CPF Members had 24 different CPF statements for the various CPF schemes. To retrieve the statements, they had to request for the different statements to be mailed or navigate through layers of information on the website to retrieve the desired statement.</td>
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<td><strong>With My Statement:</strong> All the statements are integrated in a single, easy-to-read page, with an easy-to-use interface that enables customers to drill down to the required level of detail for each of the different CPF statements.</td>
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<td><strong>My Requests (Implemented September 2004)</strong></td>
<td><strong>Before My Request:</strong> The CPF Board had more than ten different schemes and offered over a hundred different transactions. Consequently, locating the right application form in order to enact the correct transaction with the CPF Board required effort and knowledge on the part of the customers.</td>
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<td><strong>With My Request:</strong> The hundreds of transactions from the various CPF schemes are organized according to a comprehensive step-by-step guide. Navigating a series of easy-to-understand options, customers are able to drill down through layers of information to the desired online form that enables them to transact electronically with the CPF Board.</td>
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<td><strong>My Activities (Implemented September 2004)</strong></td>
<td><strong>Before My Activities:</strong> After submitting a form to the CPF Board, customers are not updated with the status of their transactions. As a result, some customers may forget about the transactions or services they had requested for.</td>
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<td><strong>With My Activities:</strong> My Activities tracks the status of the transactions conducted and informs the customers of the latest status of all their electronic or paper-based transactions with the CPF Board. At a glance, customers would be able to tell immediately if their transaction has been received, is being processed, is rejected or approved.</td>
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<td><strong>My Messages (Implemented October 2004)</strong></td>
<td><strong>Before My Messages:</strong> The CPF Board took a passive approach to public service delivery. Requests for information and services had to be initiated by the consumer before a transaction could be completed. Efforts aimed at educating CPF members to actively plan for their retirement are limited on the electronic channel as they have to be initiated by the customers.</td>
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<tr>
<td><strong>With My Messages:</strong> Based on information on the customer and their transaction history, My Messages provides customers with personalized messages encompassing all the schemes and services that are relevant to the life stages they are in. This promotes better retirement planning for the members of the CPF Board as they can now make informed decisions relating to their retirement.</td>
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E-Government Development Phase Three:
Mid-2005 to Early 2007
A challenging aspect of e-government implementation at the CPF Board lies in the breadth of its customer base. Its members range from 18 to 90 years old, and span a wide range of education and income levels, with each demographic group having their unique needs and requirements.

Based on a comprehensive analysis of their existing customer base, the CPF Board identified five major customer segments:
1. Young and IT Savvy;
2. Teenagers and Kids;
3. Non-IT Savvy;
4. Senior Citizens; and
5. On the move and Busy.

The CPF Board was able to conduct an analysis of their existing services to identify the service gaps in the current mode of public service delivery. Through the identification of the service gaps, the management of the CPF Board then developed a holistic customer service philosophy that was referred to as “Different Strokes for Different Folks”, which provided an over-arching framework to guide the development of new applications, functions, and service delivery mechanisms in the third phase of e-government development.

The third phase of e-government development began in July 2005 and was completed by early 2007. The CPF Board now had services and service delivery mechanisms that catered to the needs of its five major customer segments.

By the end of 2006, the average service cost per CPF member had decreased to approximately USD$13.54 and as reported earlier, a customer satisfaction survey found that the percentage of customers who were satisfied with the quality of the CPF Board’s e-services had risen to 92.3%. At the end of the third phase of e-government development, it was estimated that the CPF Board handled more than 32 million electronic transactions a year.

E-Government Development Phase Four:
Early 2007 – Present
Facilitated by an effective e-government, the CPF Board nurtured a culture and organisational mindset for service excellence. Seeking the next step shift improvement in service quality and efficiency, the present objective of the CPF Board is to extend the breadth and depth of e-government by improving the content of its e-services.

The present phase of e-government development centers on three key strategies:

- The first strategy is to proactively reach out to the segments of the population that have traditionally been excluded from the services of the CPF Board. The management of the CPF Board is aware that there is a segment of customers that face difficulties in receiving public services from the CPF service centers. This customer segment includes four main demographic groups:
1. Citizens with lower income who cannot afford computers or Internet access;
2. Citizens who are illiterate or lack education and consequently, have no knowledge of the CPF services available and do not know where to seek help;
3. Citizens with disabilities who face immense difficulties in traveling to the CPF service centers; and
4. Senior citizens lacking proper care and social support.

To reach out to this segment of customers, the CPF Board launched the mobile-Ambassador (m-Ambassador) service in April 2007. The m-Ambassador Service
utilizes wireless technologies to enable CPF CSOs to serve customers using Ultra Mobile Personal Computers (UMPCs). With an authorisation letter, a CPF member may empower any customer service officer to access his/her CPF account and conduct online transactions on his/her behalf via the UMPCs.

The CPF Board has partnered with various grassroots organisations in organising road shows and visits to the homes of the elderly and the disabled, delivering the public services of the CPF Board to the point of need.

- The second strategy is to further enhance the content of e-services. Specifically, the management of the CPF Board there were limitations to the existing form of online transactions. This critical management insight led to the conception of the “My e-Concierge” service in November 2007, an online application that consists of a simplified, open-ended form. Designed to be used like the email, My e-Concierge allows the user to key in their requests in an unstructured form, and is intended for use by customers who are unable to locate the information or e-services relevant to their needs on the my cpf portal.

- The third strategy centers on integrating the services of the CPF Board with the services of public and private organisations to bring about one-stop services and greater convenience to the customers. While data sharing agreements between the CPF Board and public organisations such as the Housing and Development Board (HDB) have existed since the 1960s, the CPF Board is seeking a greater extent of collaboration and integration with external organisations towards the aim of providing seamless, cross-organisational services to their customers. Yet, the objective of integration brings a fresh set of challenges to the CPF Board.

While the latest phase has not been brought to fruition—and new challenges are expected to arise—the experience of the CPF Board in e-government implementation up to this point in time certainly attests to the momentous potential for enhancing the quality and delivery of public services. This also underlines the important role of information and communications technology in the course of public administration.

**Process of E-Government Development: Defining Four Phases of Development**

By constructing a timeline of the e-government initiatives implemented, a pre-implementation phase and four e-government development phases in the process of e-government development at the CPF Board can be defined based on the different strategic objectives of each phase.

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<th>E-Government Development Phases at the CPF Board</th>
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<td>Strategic Objectives</td>
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Differences from Existing Models of E-Government Development

By distinguishing between the various phases of e-government development, a comparison between the process of e-government development that unfolded in the case of the CPF Board and the stage models of e-government maturity in the existing literature can be made. In general, although many different stage models of e-government maturity have been developed in the existing literature, five common stages of maturity may be identified across the various models (Siau & Long, 2005).

The first stage of e-government maturity may be labeled as “Establishing a Web Presence” where simple and limited information is posted on the websites of public organisations. The second stage may be termed “Interaction” where basic search engines, email systems and official form downloads are provided to allow basic two way communication between citizens and the public organisation. The third stage may be labeled “Transactional” and involves allowing citizens to conduct complete service and financial transactions online. And the fourth stage may be termed “Transformational”, and involves horizontal integration between different public agencies and vertical integration across various levels of government.

The final stage may be termed “e-democracy”, which is viewed as a long term goal for e-government that adheres to the spirit of deliberative democracy. In this stage, tools such as online voting, polling and surveys are provided to improve public involvement and promote political participation (Siau & Long, 2005).

Comparing the process of e-government development at the CPF Board with the stage models of e-government maturity, two key differences may be identified:

(1) By mapping the stages of e-government maturity (according to the existing stage models in the literature) onto the different phases of e-government development that transpired at the CPF Board, it is evident that the stages of e-government development can develop in parallel and does not necessarily follow a prescribed sequence;

(2) In the case of the CPF Board, the same stages of e-government maturity can take on drastically different forms for the attainment of different strategic objectives. As an illustration, by posting electronic versions of their various transaction forms in the first CPF website launched in 1996, the CPF Board had attained the Transactions stage of maturity (Siau & Long, 2005) prior to the development of their holistic e-government framework in 2003.

But in the second phase of e-government development, they developed personalised transactions to cater to the needs of individual CPF members. In the third phase of e-government phase, the CPF Board developed a holistic suite of transactions to cater to the needs of a broad spectrum of CPF members, and finally, in the fourth phase of e-government development, they created open-ended transactions to enhance the flexibility of their e-services. The differences developed in each phase is in contrast with the monolithic definition of the various stages of e-government maturity in the existing stage models, and demonstrate how variation is possible even within a single stage of e-government maturity (Siau & Long, 2005).
The primary implication is that because e-government development does not follow a prescribed sequence—and the manifestation of each stage is not homogenous—each stage may only be considered an extension to the range of e-services, and cannot be regarded as an enhancement or an indication of growing maturity, unless it is accompanied by a corresponding improvement in the efficiency and quality of the services of the public organisation.

**Enabling Service Transformation through E-Government Development**

As e-government success is necessarily defined by the benefits derived from e-government development, knowledge of how e-government implementation success can be achieved hinges on understanding the underlying process which enhances the specific public service.

A process model may be constructed and give insights into:

1. Triggers of e-government implementation;
2. Organizational capabilities that are developed or enhanced through e-government implementation; and
3. The mechanisms through which e-government implementation enhance the services of a public organisation.

Through the development, renewal or enhancement of the two organisational capabilities, the organisation derives the benefits of e-government development. Specifically, the benefits of e-government are realised in the form of increased efficiency; as indicated by decreasing average service costs per customer, and effectiveness; as indicated by growing customer satisfaction ratings. These benefits in turn, influence customer expectations, the e-government targets established by the CPF Board, the strategic vision of the top management and staff innovation in the next iterative phase of e-government development.

With the CPF Board, the conventional stages of e-government development do not have to unfold sequentially and may be implemented in parallel. If e-government practitioners can think beyond sequential development and consider how to implement the various stages of e-government development in a way that is mutually reinforcing, the extent of success achieved by the CPF board may similarly be within reach.

2. In the development of e-government, the lesson for practitioners is not just to focus on reaching the various e-government stages, but on the actual implementation of each stage: the how, what, and why. The case of the CPF Board demonstrates how different the actual achievement of each stage of e-government development may be. And each stage should be regarded as an extension to the organisation’s repertoire of e-services.

| Conclusio | The Process of E-Government Enabled |
To derive the benefits of e-government development, e-government practitioners should focus on the development or enhancement of two key organizational capabilities.

- The first capability is the service capability, which serves as a supply-side “push” factor that increases the efficiency and quality of the services of the public organisation.

- The second capability is the service delivery capability, which serves as a demand-side “pull” factor that draws more customers into using the enhanced e-services by improving the access to these services.

While each of these capabilities may create organisational benefits on their own, e-government managers and practitioners should note that it is through the synergy created by the complementary pull-and-push capabilities of the organisation that exponentially increases the returns from e-government development.

E-government success is a moving target as success influences future customer expectations and internal organisational objectives. As such, e-government success should not be perceived as an end, but should instead be used as a driver for future e-government development. As the case of the CPF Board attests, it is only through this cycle of continuous improvement that long-term benefits from e-government development are achieved.

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(4) The overriding lesson for e-government practitioners is that the process of service transformation through e-government development is not linear but iterative.