

Next Generation Citizen Centric e-Services

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Abstract: The emergence of new technology calls for fundamental rethinking and transformational shifts in the way we look at government functions and its service provisioning to the public. Governments are increasingly being solicited to take on the roles of a facilitator and enabler – to collaborate with the public, private and community sectors in creating new digital channels and solutions to be closer to citizens and businesses. This paper deliberates on the role of the Mauritian Government for creating a society of the future for citizens. To build a one stop shop model for public services, Government is required to view itself through different lenses: citizen-centricity, internal-external balance and sustainable outcomes. Servicing citizens digitally has been a successful model across developed countries. This model has to be embraced and adapted locally under Public and Private Partnerships.

Keywords: Connected Government, Single Window Public Services, Service Delivery Channels, Next Generation E-Governance, E-Services, Self Service Delivery

1. Introduction

Reforms in the public sector aimed at improving service delivery have received considerable focus over the last decade, both within Mauritius and globally. Driving this focus is an increased demand for Government to find ways of improving the efficiency and effectiveness of its service delivery towards its stakeholders - citizens and businesses. Public service delivery has acquired new dimensions as governments need to respond not only to changes in the global environment but also to the demands of an active citizenry [1]. Delivering on these demands is prompting Governments to adopt citizen-centric service delivery models which can significantly improve the customer experience, the focal point being outcomes based on citizens' needs, expectations and preferences, in addition to enhanced service levels at the same or reduced cost.

The public agencies are still battling with the long lines of citizens at government offices and technical capacity constraints in terms of adequate human management resources. Governments are using digital technologies to reinvent how they operate, complete with new economy acronyms like Government to Government (G2G) for common transactions (e.g. issuing driver's licenses and permits), Government to Citizen (G2C) is centered on the democratic process, particularly online registration of application and file tracking, and Government to Business (G2B) deals with deregulation and relations with the private sector. Opportunities to do things better and cheaper abound — they can be found wherever Governments connect internally, with citizens and businesses. The extent of Internet access has a huge impact on countries' e-Government plans. In Mauritius, the Government aims to provide fiber optic lines to homes with dedicated Internet access within 2-3 years.

E-Government matters because it can intertwine, potentially with almost all aspects of life, from health care to taxes and to public safety and the workplace. Already e-Government initiatives are shaking up public agencies globally, dramatically changing the quality of services in both developed and developing countries. In the United Kingdom, for instance, a single portal connects citizens with services dealing with life transitions, such as having a baby, finding a job, and retiring. In Mauritius, the Government Online Portal was launched in early January 2013 to provide 53 e-services and payment services to both citizens and businesses. In Egypt, the government is teaming up with multinationals to create home-grown high-tech industries and e-skilled college graduates [2].

Traditionally prior to the launch of e-government portals, citizens were expected to go to one or multiple service counters situated at the department premises for availing the services. The service counters of different departments were usually scattered across cities and the citizens were expected to go from one counter to another travelling long distances. As the number of counters was few, the waiting time for the citizens used to be very high. From a citizen's perspective, it was nearly impossible to know the actual process being followed inside the department to provide the service. It was also very difficult to know the status of the applications for a service at any point in time [3].

Nearly a decade ago, government departments started using Information Technology (IT) for automating their processes and improving their efficiency. Gradually, the trend shifted to computerization of data and development of applications to maintain the data. The applications were designed in a way to be more department centric than citizen centric. The computerisation initiated by government departments achieved gains in terms of efficiency, convenience for the departments and storage of data in digitized format. It also helped the management to have quick access of the relevant data for their decision-making. This type of projects did not make much of an impact on the citizen in terms of providing services to them. The end outcome such as cycle time of processing a particular citizen requests or accessibility to avail the services did not alter significantly [4].

These improvements in government functioning, therefore, could not enhance the quality of services available to the citizen. Moreover these computerization projects continued to have manual interventions, lengthening the duration for service delivery, and inefficiencies in re-dressing citizen's complaints. There was no single point of presence for the citizens to avail the government services. The fundamental requirement of redefining the public service, thus, was not achieved [3].

Another big challenge in delivering government services is to find the right mix of channels such as online, telephone, and face to face interaction to provide one stop shop for public services at a reasonable cost. In health services, for instance, citizens may have access to online diagnostic information and 24-hour phone advice, plus face-to-face help from doctors and nurses [5].

2. Objectives

One of the objectives of this paper is to demonstrate how e-government can provide citizen centric solutions to make government services available round the clock. If government services are designed in a way that it is integrated with different government applications and provides access to citizens and businesses, then the services can be made available on a real time basis through the portal. This will help the citizens in reducing their waiting time at a particular department counter and at the same time will help them in using the services outside of their working hours.

Another objective of this paper is to demonstrate how e-government can be a medium for transparency, efficiency and secured service delivery. As these services are integrated through the portal, the citizen and businesses can track the status of their service request and get all the information required to avail the service. This allows the citizen and

businesses to understand the process of the government department. The portal also assists the department employees to gather required information to provide the service and in turn increases the efficiency of the department resources. Citizens and businesses can also perform the transactions in a secured manner with options available such as online application for driving licenses and e-payment for registration fees.

In line with the above objectives, Mauritius Public bodies must decide if they want to consume the legacy left behind by predecessors, or create a new legacy for the next generation, while navigating some seismic shifts as set out in the table below.

Table 1: The roadmap to bridge from now to the future

The roadmap to bridge from now to the future	
From	To
Citizen under control	Citizen in control
Governing for citizens	Governing with citizens
Organisation silos	Organisation networks
Public sector organisations as big, all-in-one giants	Public sector organisations as small, flexible, purpose-driven entities
Government as service provider	Government as service facilitator/ broker/ commissioner
Government owning inputs and processes	Governments and citizens owning outcomes
Measuring outputs	Measuring outcomes
Forced cooperation based on enforcement	Mutual collaboration based on trust

3. Methodology

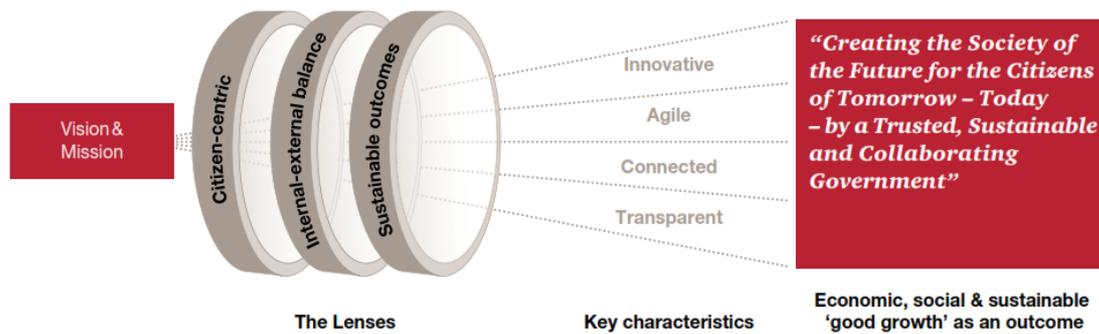
The following approach and methodology has been adopted for the study:

- review of research and practice regarding self-service delivery at all levels of government in countries such as Canada, Australia, India amongst others where considerable progress in e-government has been denoted;
- reference to selected case studies of stakeholders associated with programmes of e-government in Mauritius;
- lessons learnt in delivering e-governance strategic engagements locally and internationally.

To what we have learnt there are five common challenges for public sector organisations, or ‘strategic enablers’ which are:

1. Understanding customers through customer insight;
2. Pulling down the silo walls to create a connected government;
3. Building capacity to deliver results;
4. Realising the benefits; and
5. Continuously innovating to sustain them.

Governments and public sector leaders have a key role in projecting a clear and vibrant picture for the future. For this to happen, a number of elements need to be aligned to create the desired public body of the future, one that is adaptive to its circumstances and ready to deliver its defined purpose in the face of a world in constant change as referred in Figure 1 below.



Source: PwC

Figure 1: The Lenses

To build a one stop shop model for public services, government is required to view itself through the different 'lenses' which needs to guide its behaviour:

- **Citizen-centricity:** Always keeping the citizen at the very centre, meeting citizen needs effectively, affordably and on a timely basis.
- **Internal-external balance:** Ensuring the right balance between managing internal organizational efficiency and effectiveness and externally delivering 'good growth'.
- **Sustainable outcomes:** Strategically building the assets for society by managing the 'capitals' needed for long term prosperity: social, environmental, cultural, intellectual, infrastructural, ICT and political participation capitals.

Finally, public bodies need to act and behave differently from the past and be equipped with the internal management capabilities to channel resources effectively and efficiently towards accomplishing the vision. These range from implementation planning to managing finances effectively and prioritising the projects, performance, risks, partnerships, assets and human capital.

4. Technology Description

Over the last few years, a significant number of countries have been adopting citizen inclusion as part of their e-government agenda, termed as participatory governance through online platforms [6]. While perceptions of e-government vary widely, the governments have been leveraging multitude of themes and multiple technology channels to enable e-participation e.g. through online surveys or feedback forms, chat rooms, listservs, newsgroups and social media such as Twitter and Facebook [7]. Some of these initiatives include [11-18]:

- Have Your Say section (National Portal), Australia
- e-Government Site, Brazil
- e-Democracy Site, Hungary
- Ministry of Education and Ministry of Health websites, Mozambique
- Citizen Participation Portal, Panama
- e-Petition (National Portal), UK.
- Civil Society & Government Portal, Government of Ukraine
- Government Online Portal, Mauritius

With an increasing number of people using social networking in their personal lives, online platforms are becoming powerful tools for engagement between governments and their constituents, as illustrated below:

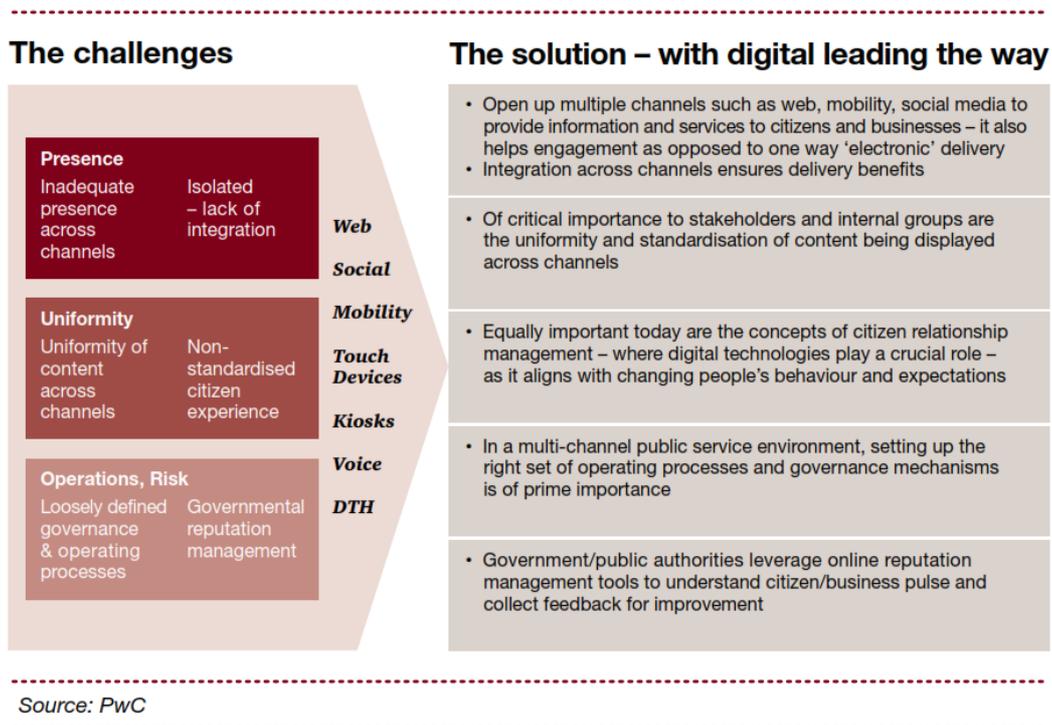


Figure 2: Challenges and online platforms

Public leaders also have a key role to inspire and 'lift the tone', energising public sector staff with their vision. If all of these elements are in place, the result will be the successful execution of the organisation's strategy, aligned to its vision and mission, delivering the outcomes and impacts that citizens need. The leading public body of the future will then serve to create a society for the future for the citizens of tomorrow – today – by a trusted, sustainable and collaborating government [8].

5. Developments

Both in Mauritius and across the world, there are significant opportunities to improve the citizen experience and reduce cost to serve by transforming the way governments deliver services through a One Stop Shop. There are four e-government transformation stages to distinguish road to transformation: (1) the bill-board stage; (2) the partial-service-delivery stage; (3) the portal stage, with fully executable and integrated service delivery; and (4) interactive democracy with public out-reach and accountability enhancing features [9]. In Mauritius, five key guiding principles of a citizen-centric service include:

- Listen to your customers
- Break down the silos
- Enable a multi channel service experience
- Continuous improvement through customer feedback
- Set customer centric service standards

5.1 Listen to your customers

Understanding a department customer base is a prerequisite in being able to deliver services to meet their needs in the way they want them delivered. Private sector organisations have successfully embraced and delivered on better understanding their customers, providing the public sector with key lessons and success factors which should be adopted in developing a citizen-centric One Stop Shop model. In general, government policies have traditionally been internally focused. In the absence of truly understanding their citizens, public sector

departments have traditionally left citizens with a model of things being “done to them” rather than “with them”. Not only does this exacerbate a non-citizen-centric culture but it fundamentally inhibits the achievement of outcomes for citizens which it exists to serve. To understand customer’s awareness, needs, expectations and preferences a number of techniques are available to public sector departments including voice of the customer research, touch point journey mapping and customer segmentation. [10].

5.1.1 Voice of the Customer

Voice of the customer research is critical in understanding customer awareness, needs, expectations and preferences. Engaging and having citizens participate in designing a One Stop Shop through voice of the customer research (such as surveys and focus groups) enables citizen ideas and perspectives to include in a citizen-centric service delivery model.

At a national level in Mauritius, it is essential to understand and engage with the citizen and businesses through a citizen survey to collect feedback on citizen’s satisfaction with government service delivery.

It is evident that services that are designed by citizens are much more likely to be responsive to their needs than ones directed from a government department. Involving citizens in the design and delivery of public services by engaging in voice of the customer research, sends a strong and proactive message that their views and opinions matter. This approach has been found to engender trust and confidence in a government.

5.1.2 Using customer insight to inform effective customer segmentation

Segmentation of customer base for the purposes of improving the customer experience in the public sector is just as important as the private sector. Contrarily to the private sector, where the organisations are at liberty to define their customer segments, the public sector is mandated to service a diverse customer segments. In addition to this, unlike the private sector, where customers are treated differently according to their capacity to pay for services, the public sector is required to satisfy the rights of its entire customer base – equally and to acceptable standards. It is therefore essential to develop clear strategies for ensuring the inclusion of all the segments of society as well as meeting their needs. The needs of these various segments can be quite distinct and will be driven by multiple factors. From our experience, government departments like social security in Mauritius, entail servicing various communities from the elderly to the disabled to juvenile delinquents, amongst others.

5.2 Break down the silos

While the customer should sit at the centre of public sector transformation, the design and delivery of a One Stop Shop needs to take into account the way in which public sector departments are generally structured; namely hierarchical and siloed. This siloed structure of government creates service efficiency and effectiveness issues across all stakeholder groups.

For the customer, the siloed structure of public sector departments means customers are often left joining-up between agency silos rather than the customer seeing a single organisation who is working for them. For the public sector organisation, the siloed structure tends to create a territorial mentality inhibiting cross-agency collaboration, inter-agency mobility, and leads to a narrow perspective of citizen needs. In turn, the lack of data sharing across services, agencies and customer channels due to various structural, cultural and technology challenges, results in duplicated processes and higher cost structures. A significant challenge facing public sector organisation in becoming truly citizen-centric is successfully breaking down the silos to create a ‘connected government’.

When seeking to break down hierarchical structures, emphasis should be placed on how to make agency silos more networked, rather than abandoning them altogether. In such, while this is no simple task, it does not imply that a complete government restructuring is required. Instead, it means addressing the silos which exist within individual public sector departments integrating them to form what we refer to as a ‘connected government’.

A connected government means the seamless integration, or joining up, of various departments to provide services that are aligned to the complete customer journey – and not to the dictates of agency silos. In moving towards a connected government, the pace and order of change are both key factors. In line with a customer centric approach, the optimal route is to start with understanding customer needs – redesigning the front office to interact effectively with the customer and realigning the back office to effectively deliver through the front office, before attempting to address the integration of individual agencies and departments. This approach allows multiple public sector agencies to come together to service customers blurring the agency silos without affecting agency structures.



Source: Adapted from PwC

Figure 3: Customer centric approach

In building a successful connected government strategy, we believe there are 4 key elements public sector organisations should consider, namely:

1. Visible leadership at a strategic level – Essential to having robust commitment to change at the highest organizational level to drive buy-in from.
2. Common goals for a connected government (service standards)–Implementing and adhering to specified service standards enables seamless integration of various government agencies by ensuring dynamic and uniform information and process flows, as well as better customer journeys.
3. Focus on front end of public service delivery – Given ultimate objective of connected government takes time, process through which it takes place should be seen as incremental – not dramatic. Focus should first be placed on improving front-end service delivery capabilities, before tackling back-end processes. Integration of front-line services has a visible impact on the customer and also aids in the rapid realization of benefits.
4. Enable regulatory and legal framework – Legacy technology interfaces and privacy laws can inhibit connected government. Upfront investment may be needed to ensure processes are satisfactorily re-engineered. There is also the need to enable regulatory and legislative framework, together with supporting budgets for cross agency transformation.

Table 2: One Stop Shops case studies

Service Ontario	New York 311	Mauritius -National ID Card
<p>Service Ontario is an example of a one stop shop geared to providing routine government information and services to its citizens in convenient and user-friendly ways.</p> <p>Breaking down the silos has enabled driver and vehicle licenses, outdoor cards, health card, and replies to general enquires delivered through a variety of channels, including publically-accessible terminals, via telephone, the internet, mail and face-to-face.</p>	<p>New York 311 one stop shop model, the Agencies Service department within the Mayor's Office of Operations is being used to break through existing agencies silos to ensure the right links are made whenever a project requires a multiagency response to achieve a particular outcome.</p>	<p>The MNIS offers Mauritian citizens a new, high-security ID card, as well as a new population database, advanced security systems for ensuring and protecting citizen data and privacy. The new card incorporates state-of-the-art fingerprint biometric technology, and will eventually serve as an ID document that requires lesser paperwork to prove identity.</p> <p>With the new card and system, citizens will be able to enjoy more secure and reliable citizen-to-government transactions, as well as overall increased efficiency and shorter processing time in using government services.</p>

Paving the way for the next generation of eservices: How the public sector can meet Canadian's expectations' to next Generation e-Services [10].

5.3 Enable a multichannel Service interface

Citizen needs, expectations and preferences are being shaped by their experience in the private sector and consequently, citizens are increasingly demanding the same level of channel choices when interacting with the public sector organisation. Communication between an organisation and its customers has always been the foundation of good customer service. However, today customers expect customer service to be accessible anytime, anyplace – and by whatever means of communication they prefer.

Channels provide a means for public sector departments to deliver services to citizens and for citizens to access government through a variety of communication and delivery methods (e.g. mail, telephone, face-to-face, social networks, mobile, SMS, fax and kiosks).

In designing a channel strategy for public sector departments, care should be taken not to force customers in any one direction. Because of the diversity for their customer base, public sector departments need to focus on creating multiple delivery channels, so that customers can have 'channels of choice', depending on specific needs at specific times. Providing channel options to meet identified segment preferences can provide significant benefits for both public sector departments and their customers. For customers, multi-channel service delivery options drive customer satisfaction by enabling flexibility for customers in how, when and where they access government services.

Social media has the potential to enable public sector departments to engage with citizens across alternative channels. Social media is offering a scalable way to co-create, inform and engage with citizens. The high level of engagement is due to citizens selecting to opt in and is subsequently enabled to engage and have a two-way conversation.

Social media is immediate and allows public sector departments to proactively push out large volumes of information to large numbers of people via a trusted source. In addition, it

can be used to obtain feedback and involve the online community to continuously make improvements in reduced timeframes.

Contact Centre is an extension of the traditional Public Relations Office concept except that it operates on a virtual mode. Contact Centre shall play a critical role in achieving the stated objectives of the public sector department and can provide the citizen with the option of contacting the government officials from anywhere anytime mode through a single unique and easy to remember 3-4 digit number. This is another global trend which has been implemented by various Governments to provide the “Anytime anywhere” access of services to their respective citizens.

Contact Centre shall serve as a first point of contact for citizens and has the unique advantage of providing both:

- Human interface as first point of response for citizen
- Technology (Interactive Voice Response System) interface for handling citizen queries / calls

Contact Centre provides for a cost effective means to disseminate information to citizens and can minimise the need to visit public sector departments for information. Contact centre shall also provide for multi-lingual support.

Mobile platform shall provide for an effective and easy to use option for citizens to reach out to the public sector e-services. Through the Mobile platform, citizens can request services and information through mobile phones and hand-held digital personal assistants. The government departments can also send citizens regular alerts through SMS / USSD based messaging.

The Mobile platform can be leveraged for providing various types of services:

- Message based information services through SMS / USSD options
- Mobile application for government services like an application store
- Mobile based e-Payment services

Service kiosk refers to the establishment of a self sufficient service desk at every nodal office of government facility which shall act as the front-end and facilitate information dissemination, application submission and service delivery for the citizens.

Service kiosks are an inclusive means of service delivery as service delivery is not dependent on technology requirements, and technical knowledge on part of the customer is not required. Service kiosk can be considered as another means of are required since:

- some citizens may prefer assisted service delivery to electronic delivery;
- some government services may require manual signatures on documents and manual submission of documents at least for first time; and
- for citizens who do not have Internet access, there would be an information help desk for assistance, and self-service (or facilitated) kiosks for accessing the Internet to avail government services.

While the above channels should not replace face-to-face communication, it can provide well accepted alternatives to enhance the overall customer experience and create scalable ways to engage with customers and citizens by fostering an environment of co-creation.

5.4 Continuous improvement through customer feedback

Customer feedback is a powerful tool, not only for understanding customers’ experience and satisfaction with public services, but also for developing strategies to improve those services. Despite this, customer feedback has traditionally been under-utilised by public sector departments. For public sector departments, the lack of customer feedback can be a source of major operational risk, as well as severely hinder their continuous learning

capabilities. As a result any One Stop Shop model should ensure an ongoing, iterative approach to incorporating customer feedback into service design, processes and customer interfaces.

Proactively seeking and using customer feedback from both customers and front-line staff, public sector departments can ensure that service improvement strategies focus on those areas that will make the greatest positive impact on the customer experience.

In addition, public sector departments can leverage greater engagement with their citizens through customer feedback, helping them deepen the relationship between the public sector and citizen. This approach has been successfully implemented within the private sector, for example, Apple gathers customer insight for its own use as well as the customer community, by encouraging users to rate iTunes content. Customer feedback drives higher levels of engagement through participation and the usefulness of the resultant content. Similar strategies are equally applicable and available to the public sector to drive stronger engagement and relationships between governments and their citizens. For example an online channel provides the opportunity for users to contribute content, rank usefulness of services, provide service feedback and give recommendations for other users to try a particular service.

5.5 Set Customer Centric Service Standards

Rising demand for better standards of governance in the private sector have spurred initiatives aimed at improving disclosure and corporate governance. In particular, heightened customer awareness has driven demand for greater accountability and transparency, forcing public sector Departments to respond in a positive manner. One of the ways in which this can be achieved is through the passing of legislation setting out the customer's right to information and service standards that are mandated by law. This provides positive evidence of the public sector's desire to place its customers in a central position and assists in driving citizen trust and belief in public sector departments.

To achieve transparency, there is increased visibility of operations (e.g. agency scorecard performance, update status of service requests). Performance information is used to improve service levels and hold departments accountable for achieving targeted service levels and hold agencies accountable. Setting, measuring and enforcing citizen-centric service standards for public sector Departments enables the evaluation of the public sector on customer metrics which have not hitherto formed part of public sector Key Performance Indicators (KPIs). In setting and measuring service standards, it is important public sector Departments recognise and establish service levels appropriately to each customer and their transaction.

For example for certain routine requests, many customers prefer an automatic, but easy to obtain and accurate response, whereas the same customer faced with complex transaction may demand a more personal, relationship-based approach. Key to balancing these service levels is public sector departments analysing information requests, such as high frequency requests and analysing the degree of personal response required for each category of request.

The Canadian Governments of Ontario and Alberta has been particularly successful in two predominant methods for setting and measuring service standards. The first approach to setting and measuring service standards focuses on the operational aspects of service delivery. This is the approach used by the Government of Ontario where standards exist for everything from the maximum number of times a telephone should ring before a call is answered to the length of time a client should wait in line at a service counter. This method uses the public's service expectations as measured in 'Citizen's First' to both establish and meet performance targets [10].

The second method uses the measure of client satisfaction to determine how successful the organisation is at meeting the needs of its clients. The Service Alberta model, for example, sets service standards for each of the main drivers of service satisfaction, namely timeliness, courtesy, knowledge fairness and outcome. From there, the percentage of each citizen who expresses satisfaction with each of these drivers is measured, and the overall level of success is calculated.

6. Results

6.1 *Challenges and Lessons Learnt*

There are several challenges and barriers that can delay progress of e-government implementation. These include:

Centralised e-government initiative: A centralised e-government initiative, managed under a Public Private Partnership, such as in Kenya, has proved to fasten the structural reform process. This involves a coordination of customer oriented re-engineering of service delivery processes across government bodies. It also involves interoperability and security frameworks backed by co-operation across government levels. This avoids having multiple e-government plans across ministry levels which are altogether sparsely aligned and sometimes diverging from each other. Ultimately multiple e-government plans across government institutions may result in implementation delays because of misalignment with government objective or desired outcomes not being realised because of interlinkages with other government departments.

Having an entity, essentially under a Public Private Partnership, managing the e-government programme at the central government level, provides a monitoring and evaluation framework for the realisation of intended benefits.

Regulatory changes: e-Government initiatives need to be formalised in laws and regulations. For instance the regulation of information collection, data interchange by and across government bodies should be well-defined so that citizens are aware of the purpose and the security of the information being collected. ICT requires adequate regulation of aspects such as human rights protection with regard to the processing of personal information, protection against ICT crime, ICT security, probative value of electronic information, electronic signatures, equal access to public services, and transparency of administration, amongst others. As per an e-government survey conducted by the Central Informatics Bureau, there is a very low sharing of data among systems of government agencies coupled with a lack of policies to regulate sharing and information dissemination.

Lack of citizen awareness and participation: A lot of services have been provided via ICT in Mauritius from several years. The adoption rates of these services are way below expectation. The mobile banking service is one of the best facilities introduced by banks but citizens still prefer to spend hours in a bank just to get an account balance or to transfer funds. E-government is faced with the same problem. As per an e-government survey conducted by the Central Informatics Bureau, 47% of respondents were not aware that government offers its services across the internet and 69% of internet users do not make use of government e-services.

Underlying ICT Infrastructure: The most common challenges plaguing the successful implementation of e-government initiatives are ICT infrastructure along with other issues such as human resources, legal framework, Internet access and connectivity, digital divide, language and illiteracy.

Political mandates: Very often, e-government initiatives are dependent on the political willingness of government to drive innovation within the public sector. As there are political shifts, very often e-government initiatives are abandoned midway.

6.2 *Mandates for e-government*

Identifying the right channels is primordial to contain costs of servicing citizens, whilst maintaining the expected quality standards. As such, developed countries have identified the right mix of channels, categorising interactions that require face-to-face interventions, contact centres, social media, portal, amongst others. It was noted that these initiatives have been closely backed up with technology and associated innovations.

As a first step, the government needs to identify what the future of digital services looks like in bringing citizens closer to the government services. To get the citizen-centred service delivery right, the government need to conduct research on citizen preferences and channel of choice.

Finally, the next generation of e-services needs to be supported by certain building blocks such as citizen- centred digital service delivery model, identifying how people can be securely authenticated online and building a common platform at the backend. The NY 311 model is a great example which provides a ‘virtual’ agency for one stop shopping, initially implemented through 24/7 single number 3-1-1 call centre and later online through nyc.gov. Today residents can call 3-1-1 at any time and speak to a customer service agent in up to 180 languages to assist them with over large range of services.

To enable quick responses, customer service agents have access to a comprehensive repository of information on over 6,000 aspects of the NY government. Averaging 30,000 calls a day, an anticipated 10million calls a year. The table below details the different projects and their implications on the return on investment of return of operations for the Government of Mauritius:

Nature of e-government project	Type of application	Efficiency (time/money/effort for getting the process done)		Accountability (transparency/wastage/speed)		Empowerment (participation/ accessibility/equity)	
		Before	After	Before	After	Before	After
Mauritius Card Scheme	Identity National enabled Card	Traditional paper based Identity Card for citizens	Electronic Card System which will act as a single point of contact to access different government services	Duplication of records difficult to maintain integrity	Single identity per citizen	Ambiguity	Transparency/ access information for quick action
Ministry of Social Security, National Solidarity and Reform Institution	Computerisation of Social Security Services	Manual processing of application and require physical movement of files	99% compliance to online processing of application and eliminating physical movement of files	Approval/rejection of application takes longer and difficult to track	Online approval/rejection of application by process owners	Citizens have to visit personally to track their application status	Service uptake through portal and mobile services to track your application status
		Citizens requesting services from Ministry to make on average 3-4 trips to access services	Reducing no of trip through enablement of digital channels such as mobile, portal and service kiosks				

Table 3: One Stop Shops case studies

7. Business Benefits

For public sector departments, engaging and communicating with citizens through their natural channels such as Web 2.0 and online social networks has enabled quick, direct and cost effective method to engage with their citizens. An additional benefit for public sector departments is the ability to migrate high volume simple transactions to self service channels (e.g. kiosks, SMS and contact centre), inevitability freeing up public sector staff capacity enabling significant cost savings to be realised. Departments are now able to focus on more complex, high involvement transactions as well as those segments with greater need for mediated service delivery (e.g. face-to-face, telephone).

In Mauritius, e-government promises to bring efficiency gains in terms of government providing same services at lower costs and in less time. E-government aims to bring along unique information collection points, less re-encoding of information, government services available anywhere, any-time and from any device. E-government also aims to reduce waiting and travel time. The e-Government initiative in Mauritius, aims therefore to launch 13 e-services in the next couple of years in addition to the 66 existing e-services. Since the e-services and recently launched, further detailed studies will provide an insight about ROI and ROO.

8. Conclusions

This paper has highlighted the scope of the challenge, and the issues that need to be considered in order for public sector departments to successfully deliver a better customer experience to their citizens through e-government transformation programmes. There is no single 'correct' approach for undertaking the transformation of public sector service delivery. However, there are a number of critical success factors that need to be considered to ensure that intended benefits from the e-government transformation programme is realised. These include:

- The drivers for the e-government initiative require access to and the support of policy makers at the highest level to support the necessary changes across government and supporting regulations;
- A long term political vision and profound re-engineering of service delivery, whilst at the same time motivating civil servants to change;
- A radical cultural change within government to primarily meeting the needs of the customer, empowering rather than serving, rewarding entrepreneurship within government, shift from hierarchy to participation and team work;
- The creation of service integrators at each government level that cooperate to propose a common vision and stimulate and coordinate e-government initiatives;

The risks that have to be managed during e-government transformation roadmap include:

- Security and privacy protection;
- Risk management of the project due to interactions with a larger number of stakeholders, less stable environment, regular changes of policy makers; and
- Public sector trends to favour tailor made, high risk, state of art solutions even when alternative, off the shelf, cheap, tried and tested systems are available.

Although there are common trends for critical success factors and key risks faced by public sector departments around the world, these factors will vary depending on individual contexts. There is a need to focus on delivering better customer experience for citizens, thereby ensuring that they can achieve better outcomes from their interactions with the public sector. Future avenues for research can investigate on the critical success factors depending on country maturity such as e-government mandates across developed and

developing countries. Further investigations can also be carried out on the extent of benefits realised when e-government is undertaken at a central government level as compared to the ministry level or in the context of local level with much perspectives on investments and reaped benefits.

References

- [1] United Nation Development Programme (UNDP), Public Service Reforms: Trends, Challenges and Opportunities, 2013.
- [2] Invest in Egypt, Communications and Information Technology, <http://www.gafi.gov.eg/>, website accessed on 14 December 2013.
- [3] Ministry of Social Security, National Solidarity and Reform Institutions, E-Government Master Plan, 2013.
- [4] Central Informatics Bureau, Ministry of Information and Communication Technology, e-Government Strategy (2013-2017).
- [5] Ministry of Health and Quality of Life (2006), “e-Health Strategy 2009-2015”.
- [6] PwC, Under pressure, 2013.
- [7] G.M. Bonham and J. Seifert, Public Management. Electronic journal Issue № 2. 22 October 2003
- [8] PwC, Future of Government: Tomorrow’s leading public body, 2013.
- [9] D.M. West, E-Government and the Transformation of Service Delivery and Citizen Attitudes, Public Administration Review, Vol. 64, No. 1 (Jan. - Feb., 2004), pp. 15-27
- [10] PwC, Paving the way for the next generation of eservices: How the public sector can meet Canadian’s expectations’ to next Generation e-Services, 2013.
- [11] Australian government, <https://my.gov.au/LoginServices/main/login?execution=e1s1>, website accessed on 9 Dec 2013.
- [12] Brazilian government, <http://www.governoeletronico.gov.br>, website accessed on 9 Dec 2013.
- [13] Hungarian government, <https://edemokracia.magyarorszag.hu>, website accessed on 20 Dec 2013.
- [14] Government of Mozambique, <http://www.mec.gov.mz>, website accessed on 20 Dec 2013.
- [15] Government of Panama, <http://www.participa.gob.pa>, website accessed on 18 Dec 2013.
- [16] UK Government, <http://www.direct.gov.uk>, website accessed on 20 Dec 2013.
- [17] Ukraine Government, <http://e-gov.net.ua>, website accessed on 18 Dec 2013.
- [18] PwC, <http://www.pwc.com/ca/en/public-sector-government/citizen-compass.jhtml>, website accessed on 18 Dec 2013.