The National e-Government Strategy 2011-2016 is an important contributor to the ongoing development of our country. For Botswana to flourish and prosper in the 21st century, we will need to become innovative users of ICT and have a high performing government that provides convenient, efficient electronic services to all of our citizens. e-Government can help us to achieve both of these objectives, and the 2011-2016 e-Government Strategy provides us with a pragmatic roadmap to get there.

I will be a regular user of our e-Government services. I encourage everyone to join me online.

H.E Lt. General Seretse Khama Ian Khama
President of the Republic of Botswana
The modernization of our government service delivery calls for fundamental rethinking and transformational shifts in the way we look at e-government. We will need significant change in business ethic and concerted effort is required to move government towards client-centric service delivery that is centred around satisfying customer needs courteously, timeously and effectively.

I am convinced that transformation requires that we stand with courage and a collective will to act. Let us move decisively in the direction of improving the lives of our citizens.
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Introduction

Mr. Eric Molale
Permanent Secretary to the President
Chairman of the e-Government Board

Our national e-Government programme will result in a totally new way of doing business for the Botswana Public Service. For e-Government to be successful, all of our ministries and agencies will need to introduce major changes in technology, business processes and organisational structures. We will have to learn new skills and competencies as well as to work tirelessly in order to elevate service standards to a new level.

We are committed to the changes that e-Government demands and shall work diligently to provide a full range of technology-enabled services that meet the needs of all Batswana in this era of digital connectivity.
Botswana’s National e-Government Strategy 2011-2016 outlines seven major programmes and approximately twenty five interrelated projects to move appropriate government services online, significantly improving public service delivery and accelerating the uptake and usage of Information and Communications Technology (ICT) across all segments of society. Our intention is to complete priority e-Government projects by 2016, but because of the complexity of some of these projects, there will be spillage into the next planning period (NDP 11). Government consulted over one thousand people and scores of organisations across the country to incorporate their insight into the basic tenets of the Strategy. It is truly a national plan.

A broad range of reports and studies including Vision 2016, NDP 10 and Maitlamo were reviewed for alignment to Botswana’s national development effort. Four supporting documents were then developed to underpin the National e-Government Strategy. They are:

- 2009 e-Government Best Practice Report;
- 2009 e-Services Assessment Report;
- 2010 Government Current State Analysis; and
- 2010 Technical Blueprint and Rationalisation Plan.

e-Government, which is the use of the ICT and the internet web to render public services, commenced about twenty years ago and is now commonplace in developed countries. Since then, leading jurisdictions have used e-Government not only as a means of improving government service delivery, but also as a catalyst for driving the broad modernisation of the public service. Lessons from these jurisdictions paint e-Government as a transformation of government, and not simply an automation of government. For the country’s e-Government programme to be successful it will require the review and redesign of a number of interrelated components that are required to fulfil citizens’ needs and expectations:

- Service offerings;
- Business processes;
- Enabling technologies;
- Policies and procedures;
- Organisational structures;
- Roles, responsibilities and accountabilities;
- Skills requirements and job designs;
- Performance metrics; and
- Customer service ethics and business culture in the public service.

Botswana is already an active participant in the Global Information Society. Guided by the National ICT Policy, Maitlamo, the Botswana Government has invested heavily to achieve a state of the art national ICT infrastructure. Following on the completion of a fail-safe national optic-fibre network, a rural electrification programme continues, with ever more homes and villages connected to the global community through international connectivity that has been much enhanced by access to the East Africa
Submarine System. Further to, the liberalisation of the telecommunications sector has seen a dramatic increase in marketplace competition, resulting in improved service levels and lower costs for consumers. In 2010, the national number of mobile phone connections exceeded 130% of Botswana’s population.

Major banks now offer services online, as do insurance companies. Air Botswana allows travellers to make online flight bookings, and many small to medium-sized companies are using the Internet to market their goods and services. The use of computers and the Internet is increasing in homes and offices throughout the country, supported by initiatives such as Kitsong, Sesigo and Telecentres, which seek to make ICT accessible to all Batswana. These are all encouraging signs, but more is still required.

The effective introduction of e-Government is most important to sustain Botswana’s development, and can help raise public sector service quality to higher levels, allowing citizens to access public services at any time of day without having to travel long distances and queue in government offices. Government touches everyone throughout their lives, and if e-Government adds value, then increasing numbers of citizens and businesses will go online to access government services. This in turn will accelerate Botswana’s transition to a knowledge society, assuring the country’s economic diversification and development.

Following Government’s substantial investment in Information Technology (IT) in recent years, most ministries now have websites, and a central government portal has been introduced. A growing number of forms are becoming available online for users to print, and an extensive IT infrastructure is in place to support the internal operations of government. Nonetheless, there are only a handful of government services online and citizens are becoming frustrated with the lack of e-Government progress; wondering why they can carry out online transactions with private sector organisations but still have to go through lengthy and bureaucratic paper-driven procedures with Government. Both the United Nations and World Economic Forum (WEF) have reported that Botswana has been consistently slipping in the international e-Government ratings, citing lack of online services as the key contributing factor for the decline.

Ministries and directorates are well aware of the customer service and internal process efficiencies that can be achieved by leveraging IT, as demonstrated by the large number of IT projects currently underway in Government. Unfortunately, the initiatives have not been coordinated, leading to unnecessary duplication with its attendant resource costs and constrained benefits. Finite resources are stretched thin, resulting in projects that have stalled, gone beyond projected timelines and budgets, have only been partially implemented or have not being adequately sustained once implemented and have therefore “failed”. This is clearly unacceptable.

Botswana has over 60 unique major IT systems supporting government service. The current duplication and lack of coordination across systems and projects has cost implications for the Government of Botswana that are difficult to fully quantify, but are obviously substantial. There is no doubt that Government’s investment in ICT for better service delivery is well intentioned. The results have however been impeded by ineffective decision making in respect to prioritisation, planning and programme management. During consultation sessions it was mentioned that “obtaining money for new projects is sometimes easier than obtaining money to maintain initiatives and solutions that have already been implemented”. Again, this is unacceptable. Governance is pivotal to a successful e-Government agenda and must be strengthened going forward.

Government needs to switch a portion of attention away from continuously implementing new projects and look more toward “properly implementing and sustaining what we have”; which is a common thread throughout NDP 10. It is imperative to proceed with the mindset to “build once, share and reuse”.
The Government Data Network (GDN) is the basic technology platform for the rollout of e-Government services. Now twenty years old, the GDN extends throughout the country. However, due to the passage of time and a patchwork of upgrades, the overall performance of the network falls short of today’s needs.

Slow and unreliable, it must be overhauled to support the aggressive rollout of e-Services arising from the e-Government programme.

In the years ahead, Batswana will experience a very different public service.

The country’s legislation will be overhauled to remove impediments to secure, effective use of ICT for service delivery across a range of services including business and justice.

In response to a broad information and public education campaign, Batswana will enjoy access to e-Services across the population’s demography.

By 2016, over 300 services shall be available through the Government Web Portal. Packaged and presented around the needs of clients, the services will be easy to locate and simple use. A list of the identified online services is in Appendix B.

A common-look-and-feel will be introduced across the portal and all ministry sites to provide a “seamless government” or “1Gov” experience for users.

With mobile penetration beyond 130%, Government will respond to pervasive access by pushing targeted information and services directly to personal mobile devices.

The e-Government programme will allow Botswana to further demonstrate the country’s passion for inclusive and democratic participation. The Government Web Portal shall be used to gather citizen input on pressing national matters, solicit public feedback on government policies that are under consideration, provide feedback on the quality of public sector service delivery and a series of other important topics. This will be achieved via a range of online polls and questionnaires. In addition, Members of Parliament will use the electronic medium to dialogue with their constituents.

Government will advance the Kitsong, Sesigo and Telecentre initiatives with a view to providing communities with computer terminals and kiosks across the country by 2016. In-person support will also be made available for those users who need help in completing their electronic transactions in community centres. e-Government self-service kiosks will be introduced in high density service centres such as shopping malls, airports and border crossing points.

The “any door right door” mindset will be advanced through amongst others, the provision of One-stop Government Service Centres around the country. These centres will provide scores of routine and common services through one central location, removing the need for clients to visit different ministries. Further to, Government is to establish a central call-centre for those who wish to interact through the telephone.

Government’s technical infrastructure shall be significantly upgraded and the Department of Information Technology’s (DIT) capability strengthened to deliver reliable, responsive e-Government services around the clock. Government’s infrastructure acquisition and service provision model, inclusive of the GDN, will be reassessed in the context of the most appropriate model to drive participation and diffusion of e-Services.
A robust and effective governance model will be introduced to guide and direct a high-performing e-Government environment for a seamless, cross-ministry, service delivery experience for customers.

An extensive training and skills development programme shall be executed to provide new skills and competencies for everyone in the public service, to enable performance in an increasingly online, customer-centric government.

Priority shall be placed on a number of ongoing e-Government initiatives that directly “touch” citizens and have the potential to provide significant, visible improvements in service delivery. These initiatives include ICT-driven service transformation in the following areas:

- The National Identity Card - OMANG
- Vital Statistics Registration (birth, marriage, death, etc)
- Land and Property Registration
- Business Registration and Licensing
- The Passport Office
- Motor Vehicle Registration
- National Statistics
- Government Core Services (HR, Finance, Procurement, Project Management & Knowledge Management)

The e-Government Strategy is to be implemented through five major programmes:

1. **The e-Services Programme (ESP)** – The bulk of ESP work will be undertaken by various Government agencies working in collaboration with each other and non-state actors. The e-Services Programme will automate processes and continuously strengthen the Government Web Portal as the primary service delivery channel for government’s 300-plus e-Services. As a key customer management programme, it will drive the agenda for re-engineering of processes and integration of back-office systems as required for increasingly sophisticated levels of online service delivery. Under its m-Gov initiative, ESP will assure service delivery through cellular phones and other mobile devices.

2. **The Multiple Access Programme (MAP)** – The MAP Programme will consolidate a number of ongoing efforts to ensure consistent, effective service delivery through multiple channels. The programme consists of activities in four main areas:
   - Implementation of a central Government Call Centre;
   - Planning for the introduction of Integrated Service Centres across the country;
   - Integrating and standardising e-Government service delivery through community access points such as the Kitsong Centres and Telecentres; and
   - Improving the capacity of ministries for direct rendition of services.

3. **The Rationalisation And Integration Programme (RAIN)** – RAIN is a major effort to significantly improve the quality of Government’s service infrastructure. The programme will include the development of an Enterprise Architecture as well the re-engineering of processes and the integration of IT systems thereto.

Comprised of several integrated projects, the RAIN programme will also develop a long-term strategy for strengthening the GDN and Government’s organisational capacity in IT. A plan for the rationalisation and clustering of common ministry technical applications will be prepared, with the goal of reducing duplication and saving ongoing operational costs. Supporting regulations and policies will be introduced, along with appropriate monitoring and enforcement protocols. The development and implementation of a security framework for ICT will be amongst the most critical elements of RAIN, which shall also consider the feasibility of introducing a fully fledged Government Data Centre.
A national data hub of people and organisations will be established together with core applications to support whole of Government functions including management information systems, procurement, authentication and notification services.

4. **Botswana’s e-Government, Service Transformation, Reform, Organisational and Network Governance (Be STRONG) Programme** – Be STRONG is an important initiative that will review and redesign the governance arrangements required to effectively move the national e-Government programme forward over the next five years. The quality of governance is considered pivotal to the overall success of Botswana’s national e-Government programme. Given its critical role, this initiative is led by the Permanent Secretary to the President. Be STRONG will take advantage of the work done under both the Rationalisation and Integration (RAIN) Programme to ensure that ICT is effectively leveraged to support NDP 10 by amongst others, aligning e-Government structures, processes and deliverables in line with the development agenda and its institutional framework.

The role of a Government Chief Information Officer (CIO) will be considered as part of the Be STRONG Programme, as will the strengthening of the e-Government Programme Office, which shall be responsible for the day-to-day delivery and integration of the various e-Government programmes within the context of the overall National ICT Policy.

Further to the afore, the Be STRONG Programme will also address the revision of *Maitlamo*, the National ICT Policy, in order to ensure that it remains relevant to Botswana’s aspiration to transform into a knowledge society.

5. **Skills Transformation in Support of e-Government Programme (STEP)** – STEP will be driven by The Directorate of Public Service Management (DPSM). DPSM, in conjunction with other government and private sector training and skills development institutions, will carry out a comprehensive review of the skills and training requirements required for the Botswana public service to function well in an e-Government environment. Training shall reach beyond operational teams to cover middle and senior management in the public service, who shall likely have the greatest need for new skills. A review of the required skills is to take place in 2011, followed by a detailed programme design. Programme delivery shall be progressively enhanced, building on the interim training first initiated in 2009.

The exact costs required to support the implementation of the e-Government programme will only be known when each of the projects have been designed in detail and the precise human and financial resource requirements have been identified. There may be opportunities for significantly reducing the costs of implementation through the savings offered by systems rationalisation and clustering, Public Private Partnerships and Government-to-Government collaboration.

Botswana’s National e-Government Strategy 2011-2016 is an ambitious but pragmatic endeavour. Borne of Government’s experience, it avoids presenting an endless list of programmes that would defy existing implementation capacity. The strategy has assembled a suite of integrated initiatives informed by experience in other parts of the world. Going forward, success will be measured not on the number of projects underway, but by how well the initiatives have been implemented and most importantly, by the service improvements accrued thereof.

The strategy builds on achievements thus far. Botswana has put in place the essential platform for the development of a world-class e-Government programme. She has clear and visible leadership from the President. Ministries and directorates understand the value of ICT and are eager to deliver high quality services online. The country has built an extensive technical infrastructure to support e-Government, with more being added every day. ICT usage across all segments of society is increasing, with both citizens and businesses demanding that Government provide services online. The stage is set. What remains is for Government to work with broader society to expedite the delivery of e-Government for Botswana’s transition to a knowledge society.
The Government of Botswana fully understands and appreciates the developmental importance of the Global Information Society, Information and Communications Technology (ICT) and e-Government. These matters are considered essential to the country’s future and feature prominently throughout NDP10 and Vision 2016, which form the core of the country’s roadmap for national development.

ICT and e-Government have the ability to dramatically increase the access, availability and sharing of important, life-enriching information and services for all Batswana. This new form of information dissemination and exchange plays a key role in supporting all Seven Pillars of Vision 2016, as follows:

1. An Educated, Informed Nation;
2. A Prosperous, Productive and Innovative Nation;
3. A Compassionate, Just and Caring Nation;
4. A Safe and Secure Nation; and
5. An Open, Democratic and Accountable Nation.
6. A Moral and Tolerant Nation
7. A United and Proud Nation

Many of the Vision 2016 goals will be enabled through the implementation of the country’s National ICT Policy, Maitlamo. Formally released in 2007, Maitlamo outlines over one hundred programmes and projects that will offer broad and tangible benefits to all segments of society in Botswana through the effective deployment of ICT and e-Government. A significant number of the Maitlamo initiatives are now underway, and very real and visible progress is being made. Listed below are some of the advances and improvements that have taken place in recent years:
Botswana Power Corporation (BPC) has been rolling out an extensive rural electrification initiative since 2006. At the end of October 2008 over 52% of households were connected to the national grid, and a total of 270 villages had been electrified. It was estimated that all villages and settlements with a population of over 250 (80% of communities) would have been on the national electricity grid by the end of 2010.

Telecommunications access, reliability, bandwidth and consumer cost have favourable trends, in part due to connections into the West African Cable Systems (WACS), Eastern Africa Submarine Cable System (EASSy) and SEACOM cables, which free Botswana from the SAT-3 monopoly on global connectivity.

Botswana’s ongoing liberalisation of the telecommunications sector continues to deliver important benefits. Following the 2008 launch of the country’s third mobile service provider, BeMobile, the Wireless Federation reported that Botswana is likely to pass Nigeria and South Africa as Africa’s most extensive user of mobile telephones. In 2004 only 31% of the population were users of mobile phones. Today, the number of mobile phone channels activated is in excess of 130% of the population.

The Trans-Kalahari Fibre Optic Project, which was completed in 2009, ensures that good quality telecommunications infrastructure reaches major towns and villages. Additionally, progress has been made too on NTELETTSA II, which provides rural communities with access to telecommunication services including voice, data and Internet services.

A growing number of Community Access Centres and Telecentres are now being implemented as part of the Kitsong Project, a key Maitlamo recommendation. The Kitsong Project provides centres for community access to computers and Internet, as well as photocopying, printing and faxing services. By 2010, over 50 centres had been implemented across the country, providing local access to business websites and online government information.

Botswana Post has adopted an initiative to introduce online computer terminals in its post offices and postal agencies. By the end of 2010, a number of post offices had already been equipped with computers and Internet facilities to provide customers with access to online websites, information and services. This initiative is in line with a Botswana Post’s strategy to rollout electronic services, including online payment of bills and completion of government forms and documents.

The Sesigo Project sponsored through a partnership between the Government of Botswana and the Bill and Melinda Gates Foundation, is implementing free Internet access in libraries and community reading rooms throughout the country. Librarians receive computer usage and Internet training and in turn provide assistance to their customers. Ninety-eight libraries and reading rooms are targeted for implementation by 2013. Many of those benefiting from the programme have been first-time computer users, with ages spanning from five to eighty years old. It is anticipated that over 70,000 members of the public will benefit from the programme.
significantly contributing to community engagement and village development.

The Attorney General’s Chambers has placed the country’s laws online, and has been working on the development of a number of pieces of legislation that are important in enabling greater levels of ICT and e-Government usage. The Cybercrime and Computer Related Crimes Act has been passed and an Electronic Evidence Bill drafted. The Data Protection, Electronic Commerce and Electronic Signature Acts are at different levels of development, and are expected to be in place by November 2012.

The examples provided above are but a few examples of initiatives that reflect the growing level of national and international connectedness of Botswana. The trend is encouraging as it demonstrates that the nation is awakening to the societal benefits of the networked economy in the Global Information Society.

However, notwithstanding the aforementioned, Botswana is not yet making the progress it needs to be competitive in the connected world. The country’s ranking in terms of national connectivity and e-readiness is slipping. In 2004, Botswana was ranked by the World Economic Forum (WEF) as being 55th in the world in respect to national connectivity, falling to 77th in 2008 and 86th in 2010. This shows that other countries are more decisive and more effective in their implementation and usage of ICT, and are outpacing Botswana to amass the social and economic benefits that are available through gainful and productive inclusion in the digital economy.

Botswana has already invested substantially in the technical infrastructure required to fulfil Vision 2016. The country must now move forward to become an informed society with innovative use of ICT to grow and diversify the national economy. With this in mind, Government is looking to focus on the next phase of ICT evolution, moving from a connected country to an informed and innovative nation. Whilst emphasis must necessarily be on implementation, there is nonetheless a need to refresh aspects of the National ICT Policy.

The Emerging Signs of an Online Community

There are a number of positive signs that indicate Botswana is on its way to becoming an online society. Companies and businesses of all sizes, and from all sectors, are now using the Internet and wireless technologies to market and deliver their products and services.

Most of the major banks offer trusted, secure online banking to check account balances, transfer money, request bank statements and pay bills. Many are also taking advantage of the large number of mobile phone users in the country to provide “mobile banking services” directly to cellular phones. This is a very convenient and innovative way to access common banking services without actually having to visit the bank itself, and is especially useful for those in rural and remote communities who live a considerable distance from their nearest bank branch. Similarly, the major insurance and professional services companies are also moving many of their products and services online to increase sales, reduce costs...
and make it more convenient for their clients to carry out self-serve transactions from the comfort of their home or workplace.

Air Botswana has a website that allows customers to check flight times, book a flight, reserve a seat and pay for travel without having to visit either a travel agent or an Air Botswana office. The site has proven very popular for both residents and visitors, driving revenue growth as it removes the need and cost of using intermediaries to access the service.

There are examples of micro, small and medium enterprises using the Internet for sales and marketing. The “Mr. Veg.” website allows consumers to order their fruit and vegetables online and pay for their order via credit or debit cards. Product is then delivered directly to customer premises.

Botswana’s ICT era has arrived. What remains is to accelerate the country’s move towards a knowledge society. The sooner opportunities are broadly availed for Batswana to use ICT in everyday life, the sooner the country builds-up its human capital for the digital age, diversifying and growing the economy through knowledge and innovation.

**e-Government**

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**e-Government Strategy Map**

Government must be at the forefront of Botswana’s ICT, connectivity and online agenda for a number of important reasons:

1. Government is both the largest employer in the country and the largest buyer of goods and services. All members of the population have to interact with Government, using its services at various times throughout their lives. If Government can successfully package its services for convenient electronic access, then increasing numbers of citizens and businesses will go online, especially if it saves them time and money;
2. Many citizens and businesses are well aware of the convenience and benefits of online service delivery and e-Government. An increasing number are already using computers and mobile devices for conducting a wide range of transactions with banks, insurance companies both in-country and abroad. Some have travelled abroad and experienced the convenience of e-Government and e-Commerce. Some citizens are already using the online government services already available in Botswana, albeit, they are increasingly frustrated by having to wait for Government to expand its bouquet of online services whilst they suffer the inconvenience of routinely queuing to access services;

3. Government has a responsibility to taxpayers to deliver services conveniently, effectively and efficiently. e-Government provides a handy opportunity to radically overhaul levels of efficiency and productivity across the public service. Political will has been rendered by the President’s roadmap for development, which established Delivery as the fifth pillar of his leadership agenda.

At the outset, it is important to understand that investment in ICT for enhanced service delivery is not new to Botswana. Indeed, there are numerous examples of such initiatives running across various ministries and directorates. A few examples are provided below:

A sophisticated e-Passport Solution has been introduced by The Ministry of Labour and Home Affairs. The machine-readable e-Passport has biometric features of the passport owner, which cannot be forged. Further to, the Ministry of Labour and Home Affairs also has the significant task of updating and reengineering the National Identity Registration System (NIRS), the system that supports OMANG.

The Government Web Portal was launched in December 2009. This is a key e-Government project, which provides a single point of contact for citizens, businesses, visitors and the world at large to access information and services offered by the Government of Botswana. The Portal will continue to evolve over time, with increasingly sophisticated services introduced on a regular basis.

The Ministry of Education continues its major Thuto Net project to link all of the country’s secondary schools to the Internet and to introduce computer laboratories for students. Additionally, the Ministry has also begun the implementation of an Educational Management Information System (EMIS).

The Ministry of Health has integrated twenty two medical facilities and is rolling out an Integrated Patient Management System (IPMS), a Blood Management System (BMS) and a Health Professionals Registration System (HPRS) into healthcare centres around the country.

A government-wide Records Management Project, also known as the National Archives and Records Management System (NARMS), is being led by the Ministry of Youth, Sport and Culture. The aim of the ambitious project is to provide on-line management of all government information.

Many Government ministries run their own websites that provide information on the organisations and the programmes they deliver. However, there is very little consistency across the various websites in respect to both look and feel as well as content quality. Government has initiated a project to migrate ministries to a standard content management system.

The Portal offers a growing number of downloadable forms and documents for handwritten completion, laws are available online, and the Government Printer has developed an Online Book Store to sell its products over the Internet with an online payment service.
Ministries and directorates clearly understand the customer service and organizational benefits of e-Government. They are keen to move services online and are prepared to make sizable investments in systems reengineering and technical infrastructure to better serve the public. Whilst this is a positive development, there is nonetheless a risk that ministries and directorates are undertaking more projects than they have the capacity to successfully deliver.

A recent assessment of the various ongoing projects highlighted a significant number of projects that are similar, along with a number of duplicate systems and databases. For example, several ministries and directorates planned to implement Customer Relationship Management (CRM), records management or document management solutions without reference to each other. Ministries are often aware of the duplication, but sometimes are unsure who to contact and felt they had little option but to push ahead with their initiatives as a “ministry priority”. This has resulted in fragmented systems implementation characterised by inconsistent approaches, incompatible technology and inadequate project governance, ultimately resulting in suboptimal service delivery with an increased workload for an already stretched public service. This points to a significant challenge with hitherto governance and coordination arrangements, and is an area which must be addressed as a matter of urgency.

Notably, a number of ministries have reported projects that stalled, had gone beyond projected timelines and budgets, had only been partially zimplemented or were not being adequately sustained once implemented and had therefore “failed”. Thus, Government of Botswana has invested large amounts of money into state-of-the-art technology without effectively underpinning business processes. This is unacceptable. There is hence a need to switch a portion of attention from continuously implementing new projects towards “properly implementing and sustaining what we have”, which is a common thread throughout NDP 10. The duplication and lack of coordination across projects has cost implications that are difficult to quantify, but are nonetheless very substantial. In Strategy consultation sessions, it was mentioned that “obtaining money for new projects is sometimes easier than obtaining money to maintain initiatives and solutions that have already been implemented”. Going forward, it is necessary to adopt the mindset to “build once, share and reuse”.

As a result of the large number of projects underway, there also appears to be a genuine “change fatigue” creeping into many of the ministries and their project teams. It is thus important for government to improve its prioritization, sequencing and coordination of major initiatives to ensure adequate capacity for effective systems implementation.

There are over 60 unique major IT systems supporting government service today in Botswana. In addition to the major systems, there are numerous ad hoc and minor databases, as well as tracking applications deployed across government.
To date, many ICT initiatives have involved the implementation of government networks and systems that support the internal administration of government. Although these solutions look to address operational efficiencies within the public service, few of them “touch” Government’s customers, citizens, and Botswana’s business community. This lack of client-centric service delivery has been reflected in recent reports by two prominent international agencies. The 2010 UN e-Government Report ranks Botswana in 117th position in the world (out of 184 countries), stating that the primary reason for the poor ranking is the Government of Botswana’s lack of online services. In its 2010 survey, The World Economic Forum (WEF) ranked the Government of Botswana’s e-Readiness level (i.e. its technical capabilities) as being 55th in the world (out of 133 countries). This is an impressive achievement and demonstrates that government has put in place a sophisticated technical infrastructure to support e-Government. However, the WEF ranked Botswana in 90th position (out of 133 countries) in terms of government services online. These results support the position that Botswana has made the appropriate investment in its technical infrastructure and that it is now time to leverage the infrastructure for better service delivery.

A founding component of any successful e-Government programme is sound technical infrastructure that is fully integrated with the overall operations and management of government. The Government Data Network (GDN) was originally conceptualised in the 1980’s and has been developed extensively in recent years to support the growing information technology demands of Government ministries and directorates.

The GDN has since grown to cover most areas of Botswana. However, due to numerous upgrades, the overall performance and reliability of the network does not meet today’s needs. The GDN is both slow and unreliable, making it inadequate to support the aggressive e-Government implementation required by the Strategy. A comprehensive overhaul of the GDN is due, along with a strengthening of IT governance, standards, policies and procedures. Although Government has previously adopted technical policies and standards, they have not been effectively enforced, and many are now in need of review. The Department
of Information Technology (DIT) at the Ministry of Transport and Communications (MTC) has managed the establishment and operation of the GDN to date, but they have limited resources and skills sets, and continually lose staff to the private sector.

The GDN is the basic foundation for Government online. It must be available around the clock, perform well at all times and be capable of expanding to meet ever growing needs. To help ensure this, there is a pressing need to marry the skills and experience of IT practitioners in Government to the private sector. Increasing the role of the private sector in the development and maintenance of government’s technical infrastructure will provide Government with the critical skills to run it, stimulating growth and development of the country’s ICT sector, which is an important goal of Vision 2016, NDP 10 and the Maitlamo ICT Policy.

As mentioned earlier in the Strategy, e-Government must not be seen as a government IT project but as a national transformation initiative. e-Government will only be successful if it delivers improvements to public sector customer service. A 2009 Customer Satisfaction Survey showed a fairly low level of customer satisfaction (27%) among public service customers. Somewhat surprisingly, private sector businesses appear to be more appreciative of the public service than ministries and departments (internal customers), who were the least satisfied segment of those surveyed. Customer satisfaction levels should markedly increase through the introduction of a service-oriented, client-centric national e-Government programme. To assure this, Government shall introduce an implementation monitoring and evaluation framework through which e-Government investment will be tracked against service attributes such as cost, waiting times, turnaround and customer satisfaction in addition to levels of ICT usage across all segments of society.

Successful coordination of the implementation of Botswana’s national e-Government agenda requires strong and visionary leadership, explicit top-down direction setting, clearly defined roles and responsibilities, timely and effective decision making, realistic capacity planning, effective programme management and ongoing risk management. Currently, the relationship, roles, responsibilities, authorities and accountabilities between the Office of the President (OP), the Department of Public Service Management (DPSM), Department of Information Technology (DIT), Public Service Reforms Unit (PSRU) and the National Strategy Office (NSO), are not always clear and have been a contributing factor to some of the service delivery challenges faced by the public service. Disjointed, contradictory strategies are developed across these institutions. Ministries are sometimes unsure whom to approach for advice and receive conflicting advice. There are too many project committees many of which are not providing the necessary direction to project teams.

A 2009 United Nations Development Programme (UNDP) report highlighted inadequate governance as an area of concern, stating that “...governance challenges are weaknesses in service delivery due to low civil service capacity and cumbersome processes. Public sector reform to improve service delivery is itself a critical challenge”. Institutionalising a cross-cutting governance model that is informed, effective and high performing is considered pivotal to Botswana’s establishment of a sustainable e-Government programme.

In concluding the assessment of Botswana’s position in respect to e-Government, this report notes that much has been achieved. The country has a technical platform with extensive reach for delivery of e-Services. Clear, visible leadership from His Excellency the President underpins the commitment to leverage ICT’s in the transformation of the public sector. Ministries and their agencies have already demonstrated keen interest to deploy ICT for better service delivery. ICT usage across all segments of society is growing. What remains is for Government to engage broader society to delivery e-Government for Botswana’s transition to a knowledge society.
2. A CALL TO ACTION.

Botswana’s e-Government Strategy for the period 2011-2016 is relatively straightforward. The challenge over the five-year period is to move all appropriate Government services online with the aim of dramatically improving the convenience, quality and efficiency of public sector service delivery. This challenge calls for Government to pull together as one enterprise – 1Gov.

1Gov integrates information, technologies and structures to provide a seamless set of high quality services for the citizens, visitors and businesses in Botswana as well as throughout the globe. A wide array of delivery channels is envisaged to realise an “any door the right door” paradigm for customers to access services through a choice of integrated office counters, kiosks, call centres, personal computers, mobile phones, libraries and community access centres.

Learning from past experiences, Government’s approach is to prioritise initiatives for efficient, effectively implementation, taking the necessary care and attention to make sure the various business and technical solutions are implemented well, and can be maintained and enhanced over a five to ten year period.

e-Government is a journey beyond the five-year timeline of the Strategy. It has no point of arrival and
traverses an ever changing environment. The programme demands an aggressive implementation plan coupled to continual review and prioritisation, recognising that within and Beyond the strategy, there will always remain scope to do more and to do better. Many complex, sophisticated projects will spill over to the next version of the succeeding strategy and perhaps into the next decade. With this in mind, the e-Government programme must be viewed as a marathon rather than a sprint. Botswana must pace herself, stay focused, expect setbacks, measure our achievements and adjust on the go. Above all, it is necessary to stay the course and deliver on the promise of convenient, efficient, transparent and reliable service.

The main programmes under e-Government as provided in more detail below. The Strategy has deliberately avoided offering a long shopping list of projects that could never be achieved in a five year window. Instead, it provides five programmes and approximately 25 projects that are all inter-related and which can be properly implemented by 2016. The Strategy outlines at a high level “what needs to be done” by whom to advance the national e-Government agenda over the next five years. The details on “how the projects will be delivered” are to emerge from the required Project Initiation Document (PID) for each identified initiative. Some of the projects featured within this Strategic Plan are already underway and will be driven forward, others still need to be designed and supported by business cases and project plans as appropriate.

**The e-Services Programme (ESP)**

The recently implemented government portal is the face of e-Government. Over time, it will increasingly become the primary delivery channel for government information and services, ultimately providing a single window to access all appropriate services on-line.

The Portal provides a good starting point, albeit, requiring substantial enhancement to reach best-in-class benchmarks. The e-Services Assessment Report of January 2010 provides recommendations for strengthening the Portal, some of which have already been addressed. The recommendations were clustered into three phases, each dealing with greater complexity in line with the projected maturity of the e-Government programme e.g. requiring more in the way of back-office preparedness, technical integration, process reengineering and or enabling legislation.

**Phase 1 Enhancements – period up to Dec 2011:**

a. The portal content as well as its look-and-feel to be overhauled for enhanced customer service orientation, in keeping with other leading government portals around the world. Services will be grouped into intuitive client bundles underpinned by an effective search function.

b. The Portal Team to be strengthened and supported with a dedicated Content Development Team (CDT) to work with ministries to move the identified 117 “information-only services” online. These services are non-transactional and can be very easily delivered through the Portal. Further to, 104 downloadable forms need to be published on the Portal for convenient customer access. The catalogue of information-only services and downloadable forms is available in the January 2010 e-Services Assessment Report.

c. A Quality Assurance Process is required to ensure that Portal content is always relevant, complete, accurate, client-centric and fresh.

d. Security, back-up and failover provisions of the portal are to be upgraded to ensure a secure and trusted solution.

e. The potential of having the Portal hosted outside of the government technical environment is to be evaluated as a way to enhance responsiveness, security and overall performance.

f. A Portal Help Desk is to be established to assist government ministries and external clients use the site, report problems and provide suggestions for improvement.

g. A project to design and implement a common-look-and-feel across the portal and all ministry and directorate websites is to be completed by December 2011.

h. Plans for the introduction of the first batch of “m-Government services” are to be prepared, and the initial set of m-Government services and applications are to be delivered in the second half of
2011. These are to include e-notifications.

i. Appropriate content is to be loaded onto electronic media such as CDs and memory sticks, for sale to the public at a nominal price – “Government on a Stick”.

Phase 2 Enhancements – Jan 2012 – Dec 2013

a. During Phase 2, approximately 150 “fill and submit” forms will be made available through the portal. This will enable clients to fill in forms directly online and send them electronically to ministries and agencies for processing. The list of candidates for fill and submit forms can be found in the e-Services Assessment, which is available through DIT.

b. Moving to this more advanced level of e-Government will require the design and implementation of an appropriate forms engine, along with changes to business rules and operational procedures within ministries. These tasks are also to be accomplished during the Phase 2 timelines.

c. It is envisioned that the more progressive ministries and directorates will begin to develop their back-office systems and procedures during the Phase 2 period, and that the first wave of truly end-to-end electronic services will begin to appear.

d. An increasing number of m-Gov applications and services are to be introduced in 2012.

e. During Phase 2, the portal and mobile phone will be a channel for engaging citizens on Government surveys and polls, and the “Contact Your MP” feature will be released on the Portal.


a. Back-office strengthening and integration will continue throughout this phase, with increasingly complex electronic services being brought online. End-to-end application and registration services will become more commonplace. There are approximately 135 potential online applications and 35 registration services suitable for delivery through e-Government.

b. An increasing number of m-Government services will be pushed to cell phones and other mobile devices.

Multiple Access Programme (MAP)

A major focus of the national e-Government agenda is to provide clients with numerous means of accessing government services via the “any door right door” paradigm. A MAP Team will be established to consolidate a number of ongoing efforts and ensure a consistent and effective approach is introduced for providing government information and services through multiple delivery channels.

Government Call Centre

In 2011, the MAP Team will develop a business case for consolidating the various ministry call centres into one central operation. The business case is to examine the rationale for a centralised call centre; articulate the current state of ministry call centres including service offerings, costs and benefits; examine successful government call centres from other countries; prepare a series of potential operational models each with clearly defined costs and benefits and recommend the way forward.

There is considerable opportunity for accelerating this initiative through a government-to-government partnership with a country that has already implemented a high performing central call centre. This is also to be assessed as part of the business case.

Should the business case be positive, a detailed design and transition plan will be developed in 2011-2012, with the development, implementation and operation commencing in the subsequent year.
Government Service Centres

In parallel with the call centre initiative, in 2011 the MAP Team will also prepare an initial business case to examine the feasibility of introducing One-stop Government Service Centres across the country. The initial business case will articulate government’s current service delivery model, with supporting strengths, weaknesses, costs and benefits; explain the potential benefits of one-stop Government Service Centres along with a series of examples from other jurisdictions; prepare a series of potential models that may work well in Botswana; and recommend a model with associated cost-benefit.

There is considerable opportunity for accelerating the introduction of One-stop Government Service Centres through a government-to-government partnership with a country that has already implemented this type of service delivery model. This is also to be assessed as part of the business case.

A detailed design and transition plan will be developed in 2012-2013 with the detailed design, development and operation being phased-in across subsequent years. Designing and rolling out a large number of Government Service Centres across the country is expected to take in excess of ten years.

Community Access

The MAP Team is to liaise closely with the Kitsong, Sesigo and Telecentre initiatives to close alignment across all three in line with the e-Government programme. The MAP Team will also make arrangements to ensure that staff are present at each of the centres to provide clients with personal help and training for those who need help in accessing online government information and services. This requirement is an opportunity to get youth involved as part of the Youth Empowerment Programme. Having youth gainfully employed in the various community centres will assist in them learning valuable ICT skills and get them actively involved within the community.

The MAP Team are also to work closely with management and staff at Botswana Post who are responsible for introducing computer terminals and kiosks into post office and agencies around the country. These have the potential for being very valuable and trusted access points for clients to receive government information and services. Post Offices may also be ideal locations for future Government Service Centres.

In 2011, the MAP Team is also to prepare a business case that examines the cost benefit of installing kiosks and terminals into a wide variety of public centres such as shopping malls, the airport and border crossing points. The business case will identify where these types of public kiosks are in operation around the world; explain the benefits of these types of access points; and develop an initial operational model that might work in Botswana - along with associated costs, benefits and risks.

Experiences in other jurisdictions suggest that this may be a valid initiative to run as a Public Private Partnership in conjunction with industry. This is also to be explored as part of the business case.

Should the business case prove positive, design and implementation of the programme will commence in 2012-13.

Direct Ministry Services

The MAP Team will be the key liaison point with other ministries and agencies rolling out major national e-Government solutions that are high profile and directly interact with clients, for example:

- The Passport Office
- Motor Vehicle Registration
• The Central Statistical Office
• Vital Statistic Registration (birth, marriage death etc.)
• Land and Property Registration
• Business and Company Registration
• The National Identity Card – OMANG
• Tax Administration

Ensuring that these initiatives continue to make solid progress and are integrated with the Portal and other e-Government systems and infrastructure will be an important function for the MAP Team.

The RAtionalisation and INtegration Programme (RAIN)

Government’s technical infrastructure and IT management function will be extensively reviewed and strengthened in the coming years. It is essential that Government has in place a high-performing, secure and trusted technical environment, and has appropriate resources to expertly maintain and enhance the various networks, systems and applications required for e-Service delivery.

The various initiatives to be undertaken under RAIN include:

a. A project to develop, implement and maintain an Enterprise Architecture (EA) to ensure that the Government, as part of learning and growth, aligns its processes and structures to Botswana’s development agenda as articulated in various policies, and that in turn, skills and IT Systems are aligned to organisational requirements. This is a major undertaking, which shall run throughout the life of the e-Government Strategy, shaping the content of the Programme and in turn evolving against progress toward achieving 1Gov. By March 2011, Technical and Data architectures will have been produced to advance system integration, and will be followed up with Business and Application architectures to be completed by 2012.

b. Significantly enhancing the GDN to effectively support the national e-Government agenda over the next ten years. A properly funded and well coordinated GDN enhancement programme is to begin rollout in 2012; nonetheless it is recognised that a high performing GDN can only be achieved in the context of a high performance link from source to customer, which requires in addition, high-performance across national ICT infrastructure, processing and data centres, as well as the customer access loop; the development and implementation of a National Broadband Strategy will play a vital role in ensuring that the multiple tiers of infrastructure are all properly developed in alignment to required e-Services.

c. Development of people, business and land hubs as well as foundational shared services such as authentication and notification systems, that will in turn be used by practically all other systems for effective rendition of external and internal services.

d. The development of systems used across the whole of Government, such as Human Resource Management, e-Procurement, Financial Management, Project Management and a Government-only Intranet Portal.

Whilst flagging the critical role of the Enterprise Architecture (EA) in aligning all policies and standards that are required to effectively support a sophisticated national e-Government programme, it is nonetheless noted that Government has already developed an e-Government Technical Blueprint and Rationalisation Plan that goes some way toward facilitating the review and promulgation of policy and service delivery standards such as, but not limited to:

i. Online Content Management;
ii. Electronic Records and Document Management;
iii. Common-look-and-feel for portals and websites;

Government shall also prepare a process for effectively auditing and enforcing the compliance of
e-Government policies and standards across ministries and agencies, as this is an area which has been lacking in recent years.

Botswana's e-Services, Transformation, Reform, Organisational & Network Governance (Be STRONG) Programme

National e-Government agendas require the design, development, alignment and integration of scores of complex programmes and projects. By their nature, national e-Government programmes are cross-ministry and multi-stakeholder; which also means that they are notoriously difficult to manage and align. All stakeholders will have different visions and priorities, and all of the individual e-Government initiatives will be at different stages of development – complicating service alignment and technical integration – which is the ultimate goal of any national e-Government effort.

It is widely accepted that effective governance is the key component in successfully implementing and, more importantly, sustaining national e-Government programmes. It is also the most challenging; and often the most poorly executed component.

There is no doubt that the quality of governance will be the determining factor in the overall success of Botswana's national e-Government programme. If governance remains blurred, fragmented and ineffective implementation will be impeded. e-Government solutions will take longer to implement, incurring unnecessary costs and delays, and resulting in disappointing results for customers and the public service. Even with a high performing governance model in place e-Government will remain difficult; but the public service leadership will be more informed and thus more responsive and decisive leading to better management of implementation risks.

As mentioned prior, e-Government is not about automation, it is about transformation. Guiding that transformation requires an effective governance model that can successfully manage the dynamic changes that e-Government drives in the following areas:

- Customer needs and expectations;
- Service offerings;
- Business processes;
- Enabling technologies;
- Policies and procedures;
- Organisational structures;
- Roles, responsibilities and accountabilities;
- Skills requirements and job designs;
- Performance metrics; and
- Customer service ethic and business culture in the public service.

These areas articulated above clearly demonstrate that e-Government is a national endeavour that touches all Maitlamo Policy pillars in inter-dependent relationships. Within the public service, it is an initiative that requires leadership and support across the institution as a whole. Hence, a strong Programme Office is to be established under the Office of the President, with the possibility, during the life of the Strategy, to integrating it to other already existing Government structures (for public service reform and ICT implementation) to create a Transformation authority to oversee the implementation of e-Government and other Maitlamo pillars. The Programme Office shall take lead responsibility for Maitlamo II – the next edition of the National ICT Strategy. Work on Maitlamo II is to commence in April
2011 and is to focus on the activities required to take Botswana from its current level of connectivity to an Informed and Innovative Nation. The Maitlamo II plan will in essence, be the new “e-Botswana Strategy”. In the interim, e-Government will be driven from the Maitlamo perspective, as a pillar that supports the Policy’s other pillars, allowing for an integrated approach to prioritisation and implementation as per the national development agenda as driven by NDP10.

Through its governance model, the Programme Office shall facilitate the rationalisation of systems and resources into a set of e-Government Clusters that consolidate and integrate the common applications of ministries and agencies, the use of the Clusters to steer re-engineering and automation of public service processes, and pertinently, leverage ICT to drive the monitoring of NDP10 implementation through alignment to its Thematic Working Groups. The Clusters are dynamic entities whose evolution is driven by progress towards integrated service delivery under 1Gov. Further to, the Programme Office shall facilitate the work of all other Maitlamo Pillars.

The e-Government Programme is to be championed by the Minister responsible for ICT and sponsored by the Permanent Secretary to the President, respectively partnering broader society through participation in the Information Age Council, the Programme Board and subsidiary governance structures. Further to, the accounting officers for ICT and local authorities will play a critical hands-on role in the delivery of e-Government.

Skills Transformation in support of e-Government Programme (STEP)

e-Government represents “a new way of doing business” for every member of Botswana’s public service – from the Permanent Secretary to the President, to the most junior clerical assistant in a District Office. Public servants will have to think differently, collaborate in new ways, and accept new levels of authority and responsibility. New skills have to be acquired and applied with a mindset of service delivery, understanding that citizens are customers with a right to high quality, reliable and on-time service - delivered with a smile.

At first, the prospect of learning new skills and working in different ways may seem worrisome. This is understandable, but should be viewed as a positive goal and not as something to be concerned about. e-Government will provide us all with an opportunity to learn beneficial skills and experiences that will serve us well as Botswana moves more-and-more online. Let us all embrace the change that is about to occur.

The Directorate of Public Service Management (DPSM), in conjunction with the Botswana Public Service College and other training and skills development institutions such as the Botswana National Productivity Centre (BNPC), Institute of Development Management (IDM) and the University of Botswana, and others, shall periodically review the skills and training requirements required for the Botswana public service and industry to function well in an e-Government environment. Training is not only to be focused on the needs of junior staff; as it is likely to be middle and senior management in the public service who will require the greatest amount of new skills development and training.

e-Government is now widespread around the world and there will be numerous examples of well designed e-Government Skills Development Programmes in other countries. We must learn from these, and compile a comprehensive programme that is tailored to our specific...
requirements here at home. DPSM is to evaluate the potential for Botswana to engage with a foreign civil service training college for the delivery of a suite of e-Government and service transformation training. The Government of Singapore has been providing introductory e-Government workshops – perhaps they could provide broader assistance. There are other jurisdictions such as the UK, Canada or New Zealand who have excellent public sector training institutions. They may be able to help. There is also a role for the private sector in our training programme as there are already several commercial organisations providing e-Commerce and e-Business training in Botswana.

The skills development programme will be extensive and will take some time to prepare. After the needs assistance has been completed in 2011, the STEP programme will be designed in detail with the various courses and lesson plans being developed, and trainers receiving lessons and instructions, perhaps from institutions overseas. A comprehensive, progressive and government-wide training programme will then be rolled out from 2012.

Further to, the STEP agenda shall work to transform DIT, placing the organisation in a strategic position to effectively manage Government’s IT architecture while ensuring efficient IT support services. The Programme will thus address the current ICT resource capacity gap and provide for greater involvement of private sector ICT companies and individuals; this necessitates a review of Government service procurement and delivery models to obtain optimal resource allocation across the national economy, which amongst others calls for supplementation of the traditional build and transfer framework with a range of other solutions informed by amongst others, Botswana’s Privatisation White Paper, NDP10, etc. Organisational improvements within DIT are to be introduced during the 2011-2012 review period, with its transformation ultimately informed by the establishment of a Programme Office with the concomitant rationalisation of e-Government functions across Ministry of Transport and Communications, Directorate of Public Service Management, Office of the President and other agencies that deal with aspects of e-Government.
In the years ahead, Batswana will experience a very different public service.

**Government on-line.** By 2016 all appropriate government information and services (in excess of 300 services) will be available through a single government portal. Services delivered through the portal will be easy to locate and simple to complete. Online services will be “client-centric” – meaning that information and services will be written and presented around the needs of clients. The government portal will not linger on the make up, mandate or history of the Ministry responsible for the programme. Instead, the portal shall be service-oriented, providing clear instructions for users to access services such as; applying for visa applications, requesting building permits, applying for replacement birth certificates, vehicle licensing, registering a company, applying for a patent or trademark, requesting movement of livestock, applying for a wide range of social grants and benefits, payment of bills and taxes etc.

**Government-on-a-Stick.** Providing all appropriate government information and services online will take years. Government shall hence introduce information and services online in waves to ensure instant momentum and tangible longer-term progress is achieved. As an interim measure, forms and policies will be available on memory sticks and CDs, making them available for clients to purchase at a nominal fee. This will provide a simple, and temporary, way of providing clients with electronic access to useful documents. It is likely to be especially useful for those individuals, businesses or NGO’s that interact with government on a frequent basis.

**Common-look-and-feel.** Although the portal will become the principal location for online client services, individual ministries will still retain their own website to provide detailed information on their mandate and key programmes offered by the organisation. However a common-look-and-feel will be introduced across all ministry content to provide a “whole of government” or “1Gov” experience for users. Common-look-and-feel measures will include standardisation of domain names, headers and footers, page layout and formatting, use of graphics, font types, privacy statements and terms of usage etc. In addition to providing a sense of uniformity across government websites, this type of approach will stress to ministries the need to work in common and stop operating as separate entities.

**m-Gov.** With mobile telephone penetration in excess of 130% in 2010, Government’s response is to develop content for delivery to cell phones, and smart phones, with the latter expected to be dominant by 2016. Applications shall include alerts e.g. “Your drivers license is about to expire, please renew it within the next 60 days” or “Your building permit is ready for collection and can be picked up between 9am and 4pm at...”. Increasingly sophisticated transactions, such as completion of forms and processing of payments, will be conducted through mobile devices, as Government and its customers become more experienced with the m-Gov programme.

**Citizen e-Participation.** A key benefit of e-Government is that it provides simple and convenient access to government for citizens and businesses. Normally, the aim of e-Government is to provide information
electronically from government to customers. However, it also has a tremendous capacity for allowing citizens to provide their ideas, comments and concerns to government. Botswana is known around the world for being an open, tolerant and inclusive nation. The e-Government Programme provides an opportunity to enhance inclusive and democratic participation. Using the Government Web Portal as a convenient meeting place (an online Kgotla of sorts), citizens shall provide input on pressing national matters, Government policies that are under consideration, the quality of public sector service delivery and a series of other important topics that merit debate. This will be achieved via a range of online polls and questionnaires. In addition, all Members of Parliament will be provided with an email address to allow their constituents to send their comments directly to the MP via the Internet.

“Any door right door”. Government is committed to provide quality, equitable, service delivery to every Motswana. Taking cognisance of access, choice and convenience, Government will accelerate appropriate initiatives including Kitsong, Sesigo, Hole-in-the wall and kiosks. In-person support will also be made available for those users who need help in completing their electronic transactions. The Post Office, a trusted institution in local communities will provide a convenient location for customers to conduct electronic transactions. Government will provide One-Stop Service Centres. These centres will provide scores of routine and common services through one central location, removing the need for customers to visit different ministries. One-Stop Service Centres will offer a growing number of services including; applying for scholarships, applying for grants and subsidies, submission of applications for passports and driver’s licences, bill payments, applications for land registration, information and services on training and job opportunities etc. Beyond counter services, the centres will be equipped with computer terminals and kiosks for those who wish to learn interact with Government electronically.

Central Government Call Centre. Most ministries have attempted to introduce call centres in recent years – with varying degrees of success. The concept of having a single number to call to obtain information and services from a ministry or directorate is a good one. Our national e-Government programme will take the concept a stage further by consolidating all ministry call centres into a single centre that provides common telephone-based information and services across all ministries and agencies. Having a single, government-wide, telephone number will simplify matters for clients and having the current call centres consolidated into one location will assist with economies of scale and the development of a high-performing centre of excellence. The Central Government Call Centre also builds on our philosophies of “client-centric service delivery” and “build once – share with others – use many times”. There are numerous examples of high-performing government call centres in various parts of the world. We will initiate a programme to review how leading government call centres work and develop a solution that is tailored for effective use in Botswana.

High Performing Technical Infrastructure. Botswana’s e-Government programme will only be successful if it is supported by a technical platform that is secure, high-speed, reliable and scalable. The Department of Information Technology (DIT) is aware of the critical importance of the Government Data Network (GDN) in supporting our national e-Government agenda, and has a series of plans for the further enhancement of government’s technical infrastructure.

An extensive review of GDN was carried out by TATA Consultancy Service Limited in 2006. The report provided a number of valid recommendations for strengthening the network. Many of the recommendations within the TATA report are still to be implemented – these will now be addressed with an increased sense of urgency. DIT is well aware of the enhancements that need to be implemented to improve the overall performance of the GDN; however it has often been a lack of appropriate resources that has delayed progress, or resulted in suboptimal maintenance and operational performance.

Going forward, DIT is to adopt more of a “steering and oversight” approach to its IT management function – focusing more of its attention on IT strategic planning, the development and enforcement of cross-government IT frameworks, policies & standards; and the monitoring and reporting of technical systems
performance in support of e-Government. This shift of focus for DIT will facilitate greater involvement of private sector ICT companies and professionals in the design, development and ongoing maintenance of government’s various technology networks and solutions. It will provide additional stimulus to the growth of the domestic ICT sector and an influx of much needed technical expertise for DIT. We will increasingly look to engage with the private sector through innovative Public Private Partnerships (PPP) where government and industry can collaborate to share the effort, resources, risks and benefits for some of our larger transformation initiatives. In addition, we will also look to partner with foreign governments who have already successfully implemented and operated many of the e-Government solutions we are considering. This type of government-to-government (G2G) arrangement will allow us to benefit from the experiences of other jurisdictions – accelerating our national e-Government agenda and saving effort, time and money.

As mentioned earlier in this document, there are currently too many instances of unnecessary duplication across government systems, and we must move to a “build once – share with others – use many times” philosophy. To further cement this concept, we will be rationalising and integrating our IT systems into nine “technical clusters” – as proposed in a recent Technical Blueprint & Rationalization Plan (available through DIT). Each technical cluster will consolidate the common systems and applications of ministries and agencies who share a similar mandate and client base. At this time we anticipate the nine clusters to be as follows:

- **Health Services** – the systems of ministries and departments providing services that enhance the health and well-being of Batswana
- **Business Services** - the systems of ministries and departments providing services that promote industry and trade within Botswana
- **Justice Services** – the systems of ministries and departments providing services that maintain safety and justice in Botswana
- **Educational Services** – the systems of ministries and departments that support education, training and skill development in Botswana
- **Environmental Services** – the systems of ministries and departments protecting and monitoring the environmental health of the country
- **Social Services** – the systems of ministries and departments providing essential social, welfare and infrastructure services to the public
- **National Services** – the systems of ministries and departments promoting and protecting the nation from civil unrest and external threat
- **Government Services** – the systems of ministries and departments supporting the internal operations of the public service, and its officers
- **ICT Services** – this will be a supporting cluster that provides enterprise systems which are unique or external to those in the other eight clusters. It will be exclusively managed by DIT & DTPS

Moving to a technical cluster model will require a large transformation effort for the Government of Botswana, but the benefits of clustering are significant, they include:

- Fewer government systems and applications;
- Reduced support, development, maintenance and license costs on common applications;
- Leveraging common infrastructure, knowledge and architecture for future system builds and enhancements;
- The ability to streamline and focus support to a manageable core set of applications;
- Reduced duplication in information collection and rationalised data models to improve consistency and integration across all of government; and
- Building improved synergies between Ministries that share common client groups - ultimately
improving service levels and commitment to citizens and business.

In addition, government will also evaluate the introduction of a Data Centre to centrally host all of the required hardware and communication connections required to support a mature national e-Government programme. Although a detailed business case is still needed to fully justify the introduction of a Data Centre, the potential advantages appear to be:

- Improved physical and information security;
- Reduced communication costs (less inter-government communication at potentially better prices);
- More efficient use of hardware; and
- Simpler implementation of policies.

The Government of Botswana is committed to developing a “joined-up and seamless government” that is easy for clients to understand and do business with. Our goal is to provide intuitive services and structures that are centred around the needs of clients – and not the traditional hierarchy of government. Providing seamless service delivery across multiple departments will require a common framework to manage the consolidation, integration and interoperability of the numerous IT and business systems that currently exist. The Department of Technology is currently evaluating the introduction of an e-Government Interoperability Framework (e-GIF) and/or an Enterprise Business Architecture (EBA) as a method of integrating the various data, systems, services and policies into an all-inclusive enterprise environment. A detailed implementation programme for the preferred approach will follow. Furthermore, DIT will also develop an inventory of all policies and standards (including non-IT policies) required to support a fully mature e-Government environment – identifying which policies are up-to-date and which policies are either absent or require refreshing. All relevant policies and standards are then to be prepared into a National e-Government Policies and Standards Directive which will include a rigorous monitoring and enforcement plan – with clear consequences and penalties for non-compliance.
4. Integrated and Measured Implementation

Managed Implementation

A Monitoring & Evaluation Framework has been developed as part of the e-Government Strategy, which is aligned to the overall framework implemented for NDP10. The Framework will play a critical role in tracking the progress of each programme and project, ensuring alignment and integration between the various initiatives and helping us manage the Critical Path of the entire e-Government programme. The framework looks beyond measuring “outputs” such as the number of services online and more importantly, tracks “outcomes” such as customer satisfaction ratings, or cost savings.

Managed Risk

Risk is “the impact of uncertainty”. Risk is inherent in all activity. It can never be eliminated; but it can be managed, reduced, shared, transferred or avoided by alternative course of action.

Implementing Botswana’s e-Government programme involves significant risk, which can be addressed through accurate information and the consideration of variety of options and alternatives.

The table below highlights some of the risks associated with the implementation of Botswana’s e-Government Strategy 2011-2016. The table identifies the risks, the probability of them occurring, the potential impact should they occur, and the actions that can be taken to reduce and manage the risk in the most acceptable way.

Table 1. The e-Government Risk Matrix

<table>
<thead>
<tr>
<th>Risk</th>
<th>Probability of occurrence</th>
<th>Impact if risk occurs</th>
<th>Consider managing by</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Governance Model is not adequately calibrated for driving the</td>
<td>High</td>
<td>High</td>
<td>Taking a Maitlamo perspective to e-Government for an integrated approach to</td>
</tr>
<tr>
<td>programme forward in a tightly coordinated and integrated manner.</td>
<td></td>
<td></td>
<td>inter-dependent pillars, as well as locating the Programme in Office of the President</td>
</tr>
<tr>
<td>Roles, responsibilities and accountabilities remain blurred and, as</td>
<td></td>
<td></td>
<td>with visible political commitment.</td>
</tr>
<tr>
<td>a result, timelines, goals and outcomes are not satisfactorily</td>
<td></td>
<td></td>
<td>PSP to lead the design of the Governance Model. Model must be based on clear needs</td>
</tr>
<tr>
<td>achieved.</td>
<td></td>
<td></td>
<td>and analysis</td>
</tr>
<tr>
<td>Issue</td>
<td>Score 1</td>
<td>Score 2</td>
<td>Recommendation</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>---------</td>
<td>---------</td>
<td>----------------</td>
</tr>
<tr>
<td>There is a lengthy delay between completing the strategy and starting a coordinated approach to implementation. Resulting in dramatic loss of momentum and project stall.</td>
<td>High</td>
<td>High</td>
<td>Refine strategic direction and manage capacity constraints by action-learning approach rather than lengthy planning, research and classroom training. Place greater emphasis on advancing Phase 1 of the Portal Enhancement Programme as this should not be contentious and offers significant visible benefits with limited effort or investment.</td>
</tr>
<tr>
<td>Insufficient in-country capacity (within public &amp; private sector) to implement e-Government.</td>
<td>High</td>
<td>High</td>
<td>Involve private sector in the planning and execution of e-Government for informed capacity building to meet e-Government needs. Look at the possibility of a government-to-government partnership with a leading jurisdiction.</td>
</tr>
<tr>
<td>Financial constraints result in funding not being available to support full implementation of the e-Government programme</td>
<td>Medium</td>
<td>Medium</td>
<td>Revisit priorities and implement projects that provide highest client impact within the funds available. Make greater use of outsourcing and Public Private Partnerships and Government-to-Government arrangements.</td>
</tr>
</tbody>
</table>
5. ACKNOWLEDGEMENT

Over one thousand people have been consulted in the development of this Strategy – far too many to mention individually. We truly appreciate the time they spent to meet and share their stories with us. We have spoken with management and staff in every government ministry and directorate. We have met with a wide range of Parastatals, Agencies and NGO’s. We have travelled the length and breadth of the country, visiting every District and speaking with a broad cross-section of citizens in cities, towns and villages. We have consulted with industry, the banking sector and the domestic ICT community. We have left no stone unturned.

With the exception of only one or two people, we have consistently heard everyone’s desire for the Government of Botswana to deliver its services online and dramatically improve the convenience, efficiency and service quality that e-Government can provide. Thank you to everyone who has contributed. We have listened carefully to your needs and we have attempted to incorporate your expectations into our plan.

In addition to speaking with individuals and business people, we have also reviewed hundreds of government documents to ensure our plan is tightly aligned with other government strategies and initiatives. The documents we have examined range from Vision 2016 to Information Security Policies; from NDP 10 to the 2009 National Health Service Situational Analysis Report; and from The Constitution to the 2009 Public Service Customer Satisfaction and Staff Perception Survey.

We have studied previous reports from consultants and research papers from institutions such as the United Nations (UN), World Bank, the International Telecommunications Union (ITU), the World Economic Forum (WEF) and the University of Botswana. Four other documents have contributed significantly to Botswana’s National e-Government Strategy 2011-2015. They are:

- 2009 e-Government Best Practice Report;
- 2010 e-Services Assessment;
- 2010 Government Current State Analysis; and
- 2010 Technical Blueprint & Rationalisation Plan.

This truly is a national plan. It is based on the needs of everyone in our country. It is intended to dramatically enhance the quality of public sector service delivery and further accelerate Botswana into the digital age. It is very exciting, and completely achievable. We look forward to reporting back on our progress.