LOCAL AND NATIONAL GOVERNMENT

BCX

ICT and Government

ICT Challenges and Opportunities in Southern African Government Departments

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NATIONAL, PROVINCIAL AND LOCAL GOVERNMENT IN SOUTH AFRICA

The Republic of South Africa is a constitutional democracy with a three-tier system of Government. The three tiers are comprised of National, Provincial and Local Government.

National Government is composed of three inter-connected branches:

- **Legislative:** Parliament, consisting of the National Assembly and the National Council of Provinces

- **Executive:** The President, who is both Head of State and Head of Government

- **Judicial:** The Constitutional Court, the Supreme Court of Appeal, and the High Court

The President holds executive powers and is both Head of State and Head of Government. The President's tenure depends on the confidence of Parliament and the executive, legislative and judicial branches are all subject to the supremacy of the Constitution. The superior courts have the power to strike down executive actions and acts of Parliament if they are unconstitutional.

Provincial Government forms the second layer and governs the nine provinces of South Africa. The powers of the Provincial Governments are dictated by the National Constitution, which limits them to particular "functional areas". In some areas, the Provincial Governments' powers are concurrent with those of the National Government, while in other areas the Provincial Governments have exclusive powers.

Local Government consists of Municipalities. These municipalities have the right to govern, on their own initiative, the Local Government affairs of their communities, subject to National and Provincial Legislation.

Municipalities in South Africa are divided into three categories:

Category A: Metropolitan Municipalities

Metropolitan Municipalities are set up in large cities with more than 500 000 voters and are responsible for service delivery in these metropolitan areas.

Category B: Local Municipalities

These are municipalities that fall outside the main metropolitan areas. Local Municipalities will also fall within a district and share powers and functions with District Municipalities (Category C). There are 226 Local Municipalities across South Africa.

Category C: District Municipalities

South Africa is divided into 52 districts. These include the 8 Metropolitan Municipalities and 44 District Municipalities. Each District Municipality is made up of several (4-6) Local Municipalities and shares responsibilities with them.

The Constitution of South Africa prescribes a principle of 'Co-operative Government', which means the various layers of Government are required to co-ordinate their actions and legislation.

It is the responsibility of Government at every level to provide services to the citizens of South Africa and to promote social and economic development. Information and Communication Technology (ICT) can form an important pillar of this service delivery capability.

As access to information and technology becomes increasingly regarded as a right for all citizens, Government must develop strategies for rolling out infrastructure and connecting people. As more people become connected and begin utilising digital channels, there is also the opportunity for Government to leverage technology to offer more digital services, enable better communication with citizens, increase efficiency and reach more people.

02

DEVELOPMENTS IN GOVERNMENT AND ICT

Technology and Government

As Information and Communication Technology (ICT) evolves and becomes a more prominent part of everyday society, Government departments at all levels are attempting to digitalise services in order to serve citizens better in a new, more connected world.

Traditional Government processes are being replaced with new systems that are designed to enable seamless operations across a number of services, in order to better serve the needs of citizens. ICT provides opportunities for simplifying internal Government processes, thereby increasing efficiency and effectiveness. These technologies also increase and extend the reach of desired services beyond traditional delivery mechanisms. This enhances the access to, and delivery of government information and services to citizens, business partners, employees and Government entities.

ICT provides essential tools in the implementation of national development plans and supports Government's efforts to uplift its citizens. However, while ICT has had a profound effect on most socio-economic, political and cultural aspects of society, the continued prevalence of digital divisions hinders the application of ICT capabilities in areas vital for development, such as agriculture, health and education. This impedes progress towards the achievement of an inclusive society. Any approach to e-governance and digitalisation in Government must therefore also look at enabling access to ICT for citizens.

When leveraging ICT in order to improve efficiency and service delivery, it is important for Government to have a three-pronged approach:

1. **Digitally enable communities** – this includes any initiative to reduce the digital divide and enhance the digital connectivity of citizens. Examples include the roll-out of broadband, providing free public access to Wi-Fi or connecting schools or libraries. These connected citizens can then engage with Government on a digital level.

2. **Increased eGovernance utilisation** – this includes increasing the ways in which citizens can use technology to access and utilise government services.

3. **Improved eGovernment services** – as a result of greater connectivity, digitalised processes and integrated systems, Government services will become more streamlined and easy to use. Internally, there will also be a reduction in overheads and wastage, and Government will be able to make more informed decisions on how to operate its departments. This in turn allows it to serve citizens better.
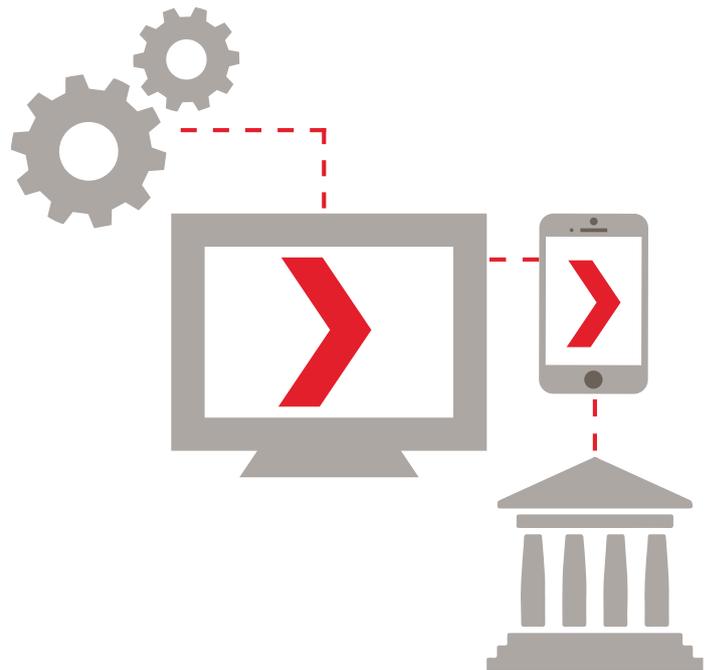
eGovernment Strategy in South Africa

In December of 2013, South Africa's Cabinet adopted 'South Africa Connect', the country's broadband policy and strategy[1].

The South Africa Connect strategy covers both the supply and demand side of broadband roll-out, with the intention of closing the identified gaps between the current status of broadband in the country and the Government's vision of a seamless information infrastructure by 2030. It also addresses the intermediate targets set to achieve this.

1. Digital readiness

This covers the facilitation of broadband roll-out, through the creation of an enabling regulatory and institutional environment. It includes harnessing the potential of existing institutions and state-owned companies as well as the establishment of new ones. It also looks at the removal of any administrative and regulatory bottlenecks that constrain network development and the co-ordination of future builds.

2. Digital development

This involves addressing public-sector broadband requirements through the pooling of demand and procuring high-capacity, future-proof network capacity at affordable rates. This will include the stimulation of private network builds through reduced investment risk. It also covers capital expenditure from Government in order to reduce ongoing operational expenditure.

3. Building the digital future

This step involves enabling sharing and co-operation on open access wholesale network bundles that will allow for better economies of scale, thereby reducing risks and guaranteeing returns.
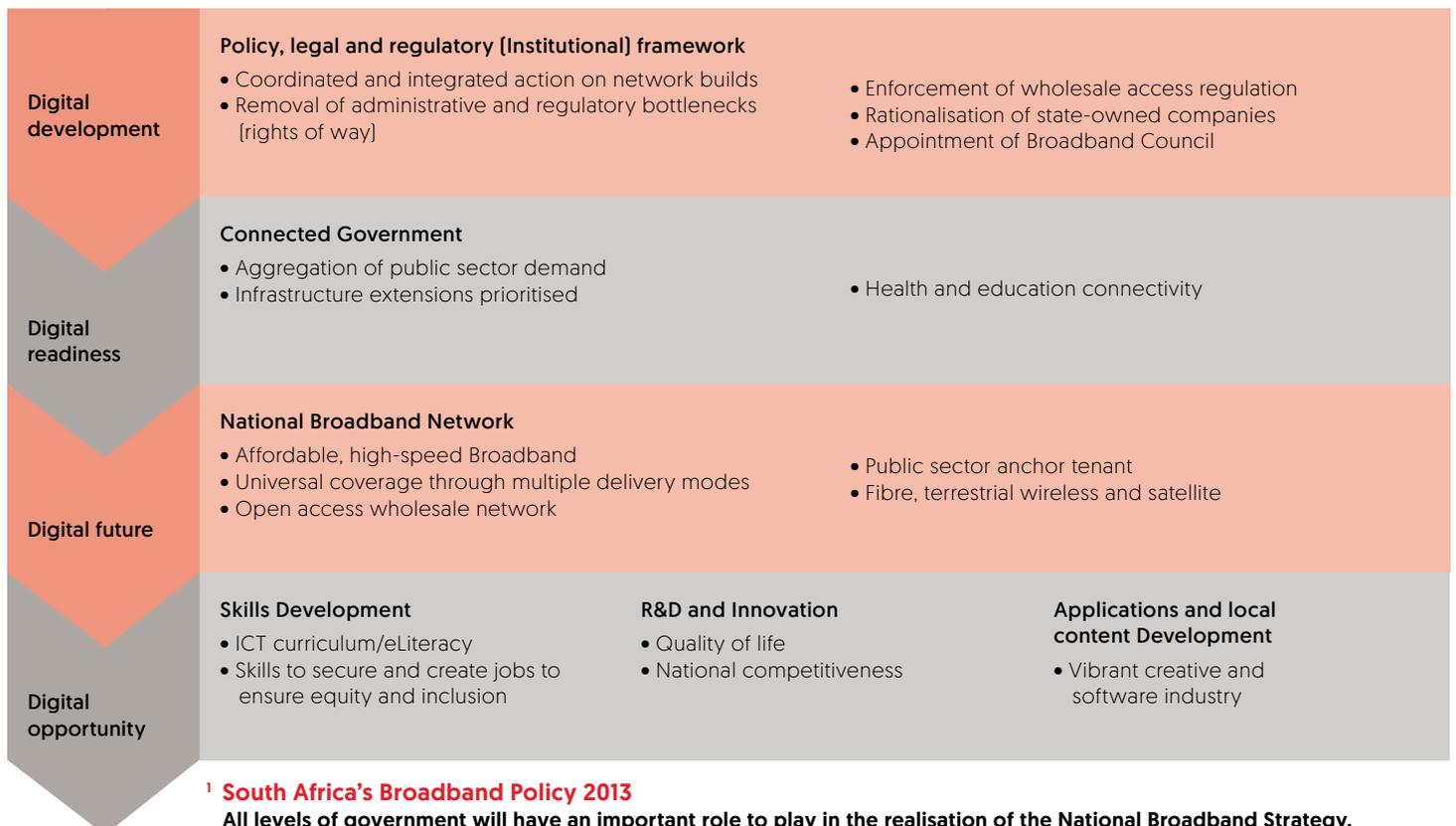
4. Realising digital opportunity

This covers making sure that people are able to reap the benefits of broadband by having the necessary awareness, skills, and relevant content and applications. Together, this will stimulate demand and uptake, resulting in more research and development (R&D), higher skill levels, and stimulated entrepreneurship and innovation.

Broadband Value Chain

Networks	Services	Devices	Applications	Content

Strategy

Digital development	**Policy, legal and regulatory (Institutional) framework** • Coordinated and integrated action on network builds • Removal of administrative and regulatory bottlenecks (rights of way)		• Enforcement of wholesale access regulation • Rationalisation of state-owned companies • Appointment of Broadband Council	
Digital readiness	**Connected Government** • Aggregation of public sector demand • Infrastructure extensions prioritised		• Health and education connectivity	
Digital future	**National Broadband Network** • Affordable, high-speed Broadband • Universal coverage through multiple delivery modes • Open access wholesale network		• Public sector anchor tenant • Fibre, terrestrial wireless and satellite	
Digital opportunity	**Skills Development** • ICT curriculum/eLiteracy • Skills to secure and create jobs to ensure equity and inclusion	**R&D and Innovation** • Quality of life • National competitiveness		**Applications and local content Development** • Vibrant creative and software industry

[1] **South Africa's Broadband Policy 2013**
All levels of government will have an important role to play in the realisation of the National Broadband Strategy.

03

ICT TRENDS AND PRIORITIES IN GOVERNMENT

Addressing the Needs of Government

The effective management of information, information systems and communications is of critical importance to the success of the public sector.

The South African Local Government Association (SALGA) recently released guidelines on how to improve the status of ICT governance within Municipalities. The association's aim is to **raise the profile of ICT as a strategic enabler for effective administration and service delivery**.

According to SALGA, some of South Africa's local Government objectives, with regard to ICT, include:

- a focus on access, i.e. the provision and maintenance of ICT infrastructure to ensure universal access at a local level;

- to facilitate the effectiveness of eGovernment services and content at local level;

- to contribute to municipal transformation and improved service delivery through the effective use of ICT; and

- ICT skills development and capacity building.

Government ICT focus

In general, the Government of South Africa has several key focus areas when it comes to leveraging the power of ICT in delivering Government services. These are:

- minimise the dependency on costly internal specialist ICT skills;

- leapfrog the business processes and ICT technology to leading-edge best practices;

- rapidly adopt new technologies;

- exploit the investments already made by leading ICT service providers;

- support the ICT challenges of reducing complexity, costs and dependency on scarce skills; and

- enable efficient Government processes and accessible and user-friendly service delivery channels for citizens.

In the Auditor-General's Report[2] there was also a focus on the ICT needs of Government highlighting the fact that IT controls "ensure the confidentiality, integrity and availability of state information, enable service delivery and promote national security".

The Auditor General therefore considers it essential for Government departments to implement good IT governance and effective IT management with secure IT infrastructure.

In evaluating the status of the IT controls in the areas audited, it grouped the IT controls into three categories:

² Auditor-General South Africa - Consolidated general report – 2013

Where IT controls are being designed – departments must ensure that the controls would mitigate risks and threats to IT systems.

Where IT controls are being implemented – departments should ensure that the designed controls are implemented and embedded in IT processes and systems. Particular attention should be given to ensuring that staff are aware of and understand the IT controls being implemented, as well as their roles and responsibilities in this regard.

Where IT controls have been embedded and are functioning effectively – departments should ensure that the IT controls that have been designed and implemented are functioning effectively at all times. Management should sustain these IT controls through disciplined and consistently performed daily, monthly and quarterly IT operational practices.

The Auditor General also highlighted five areas that Government departments should focus on in order to improve IT controls:

1. **Information technology governance** - effective IT governance ensures that the organisation's IT control environment functions well and enables service delivery.

2. **Security management** - a secure IT environment ensures the confidentiality, integrity and availability of critical IT systems and business processes.

3. **User access management** - user access controls are measures designed to prevent or detect the risk of unauthorised access to, and the creation or amendment of, financial and performance information stored in the application systems.

4. **Information technology service continuity** - IT service continuity controls enable institutions to recover critical business operations and application systems that would be affected by disasters or major system disruptions within reasonable time frames.

5. **Formal control over information technology systems** - it is necessary to have skills in place to appropriately design and implement controls for IT systems to regulate security management, user access management and IT service continuity.

Across these five areas many of the audited government departments (60%–68%) had challenges with designing solutions and furthermore 8%–16% had difficulties implementing solutions.

This challenge is worsened by shortcomings such as the budget constraints of many Municipalities that limited the development of IT policies and procedures. Many Municipalities also have service level agreements (SLAs) with vendors that do not include the management or development of IT policies and procedures.

In some areas District Municipalities are not providing adequate guidance and support to the Local Municipalities under their jurisdiction with regard to IT policies and procedures.

The Auditor General recommends the following actions to address these issues:

- management should reallocate the budget to make funds available for the upskilling of IT staff to enable the implementation of key controls, such as the development of IT policies and procedures and the implementation of disaster recovery plans and backup procedures;

- management should enforce consequence management for the non-resolution of repeat IT findings;

- municipal management should ensure that service providers transfer IT skills to municipal officials to build capacity at Municipalities;

- District Municipalities should provide support and guidance to local municipalities with regard to IT controls and this process should be formalised and regularly tracked; and

- internal audit units and audit committees should play a more effective role in tracking the progress made in the implementation of management commitments on previously raised IT audit findings.

As the successful use of ICT becomes more and more critical to the success of Government departments and services, the cost of doing nothing will far outweigh the cost of implementing ICT solutions. By reducing the losses caused by adverse or qualified audit opinions, failed projects, security incidents and operational outages, one can see the financial and intangible benefits created by ICT-enabled operational efficiency and competitive advantage.

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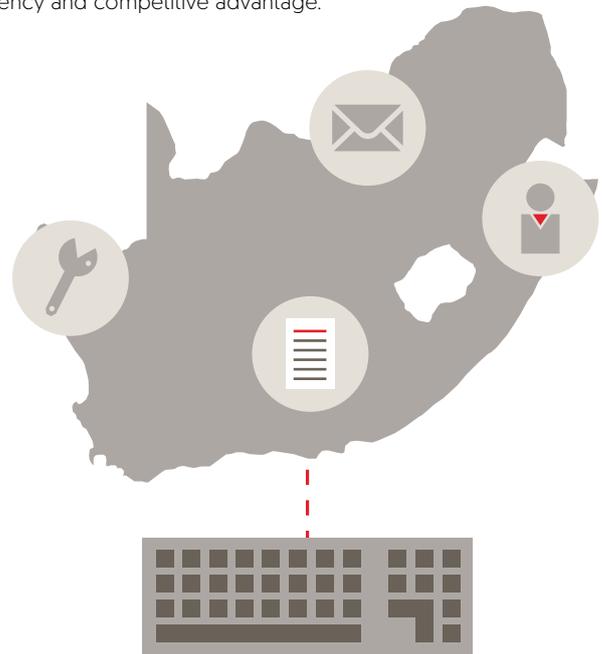
ICT CHALLENGES FOR GOVERNMENT

There are a number of ICT challenges that Government faces when it comes to implementing effective ICT solutions.

With the need to improve service delivery while still focusing on efficiency and cost reduction, it is important for Government departments to have standardised and centralised business processes that allow for productivity and accountability.

Cost

With limited budgets, Government departments must always be conscious of the cost when implementing a new system and must seek ways to improve cost efficiencies and return on investment. Solutions such as shared services or business processes should be used to exploit economies of scale, while reducing the cost of ICT and increasing its direct value.

Sourcing Adequate ICT Skills

There is an ICT skills shortage in South Africa and this can have a negative impact on the public sector and specifically on Government departments. Technology on its own cannot achieve anything. It must be supported by capable people and all new processes must be tested to ensure they provide services in which the public can have confidence.

Training

Successful adoption requires orientation, education and training, and this does not happen overnight. The availability of suitably skilled staff to perform the many different tasks associated with a new technology implementation is essential.

The Ownership of ICT Infrastructure and Services

It is important for a Government department to know what ICT services and assets it needs to retain ownership of. It must also understand the implications on costs, flexibility of service levels and risk, when deciding what to insource and what to outsource, and to consider its own access to skills and retained capabilities.

Sourcing and Management

When implementing ICT projects, it is important to identify the ideal combination of partners that will help reduce the complex internal ICT structures and manage ICT life cycles. It is also important to have standardised processes and services for efficient, scalable, quality standards.

By leveraging the power of ICT solutions, it can exploit technology capabilities and trends to get back to basics and focus on core services. Utilising third parties to enable ICT services, allows for scaling to meet requirements and enables departments to attract and retain ICT skills.
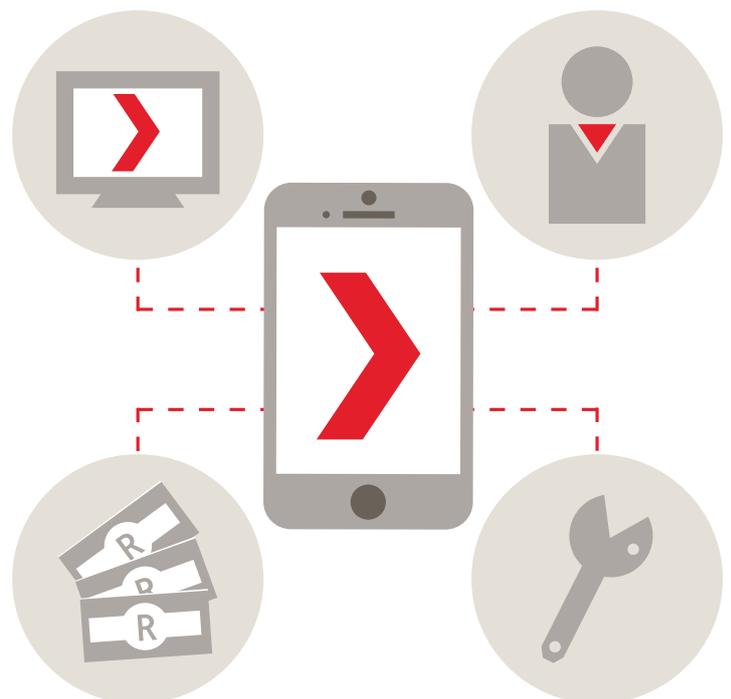
05

SOME OF THE USES OF ICT IN GOVERNMENT

## There are many areas within a Government Department where the power of ICT can be utilised.

Governance and oversight – ICT can allow for efficient and transparent institutional governance, which ensures that the department is managed in a controlled manner that ensures accountability and instils public con dence through the efficient utilisation of resources.

Financial management – financial planning, budgeting, expenditure monitoring, resource allocation, evaluation
and reporting are all processes that can be better managed through the application of digital technology.

Human resources/people management – digital applications can streamline the human resources function within a Municipality, allowing for performance monitoring, leave management, employee benefits management, recruiting and staffing management etc. This encourages a more engaged and better informed workforce, which can deliver services more optimally.

Service delivery – digitalisation allows for a 'citizen-centric' approach by making it easier for connected citizens to interact with Government, reducing turnaround time for services, and streamlining previously cumbersome processes.

Management for results – ICT can support a strategic management approach and a focus on performance in terms of achieving desired outcomes.

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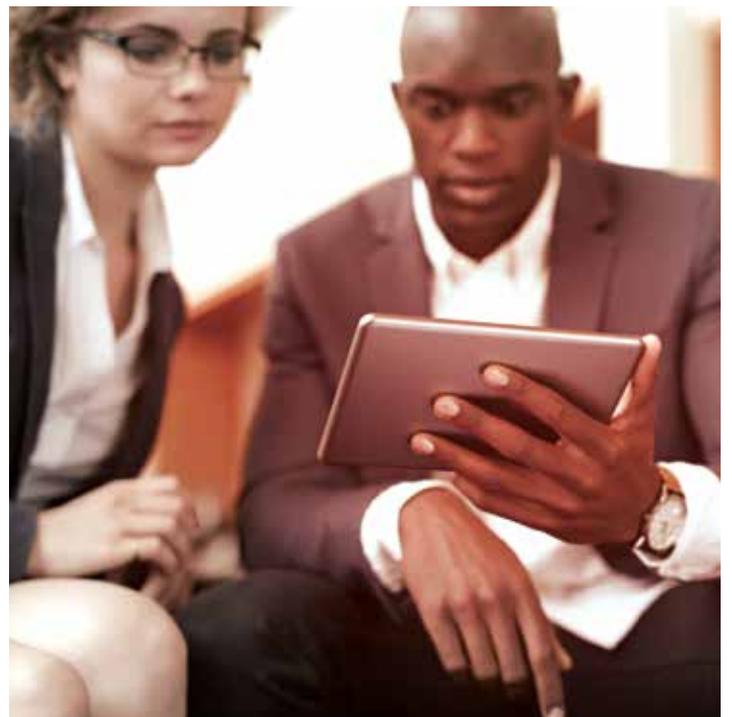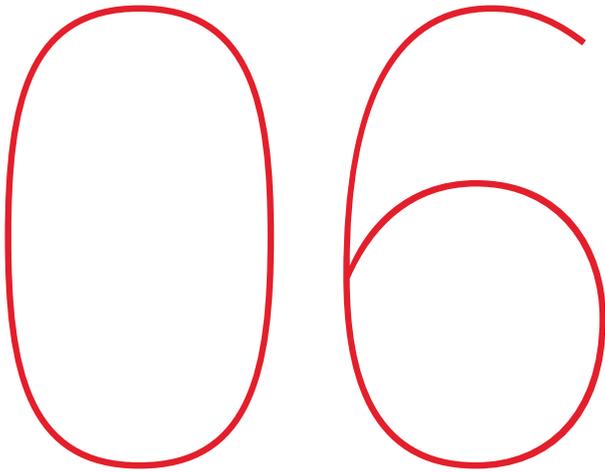
BENEFITS OF TECHNOLOGY IN GOVERNMENT

Government is responsible for a large number of services provided to citizens across the country.

By leveraging the power of ICT many of these services can be digitalised.

Advantages of eGovernance in Government

Cost effectiveness – digitalising a Government service can drastically reduce the costs of providing such a service.

Time saving – leveraging the appropriate technology can reduce the turnaround time for a number of Government services.

Improve communication – ICT is a key tool for opening lines of communication between Government and its citizens.

Improve operations and services – digitalised processes can streamline and simplify a number of Government services, improving the quality of service delivery.

Expand access – by providing online and mobile services and enabling higher levels of connectivity, more citizens are able to access Public Sector information.

Reinforce innovation – digitalisation in Government fosters a culture of innovation where departments are encouraged to continually improve its systems for better service delivery.

Increase transparency and public accountability – digitalisation allows for better tracking and reporting, which provides a higher degree of accountability within a Government department.

Increase efficiency – digitalised processes within Government services allow for higher output, saving time and money.

Increase effectiveness – digitalisation provides governance that works better, producing the same outputs at the same total cost in the same time, but to a higher quality standard.

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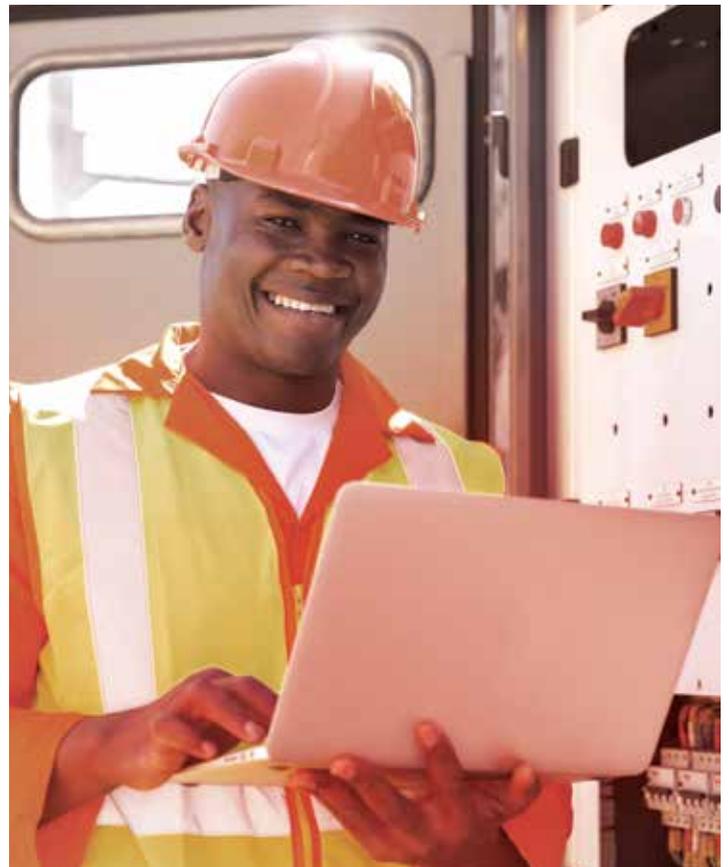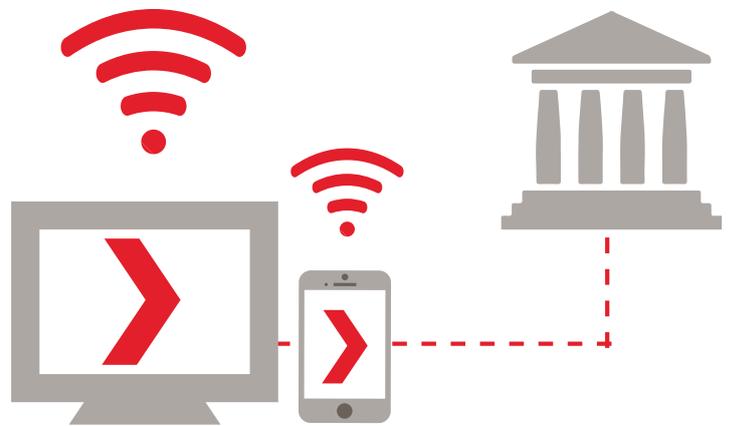
EXAMPLES OF eGOVERNANCE

On a national level, the most well-known and successful eGovernment initiative in South Africa has been the implementation of the SARS online tax revenue management system also known as 'eFiling'.

This system has seen widespread adoption across the country from businesses and individuals who use the SARS website and eFiling portal to manage their annual tax returns.

Looking at some Local Government examples, Newcastle in KZN recently purchased 32 iPads for its councillors in an effort to move towards 'paperless' council meetings. It has been calculated that the investment will pay for itself in 24 months with the savings from reduced photocopying and printing expenses.

The councillors are involved in ongoing training on how to use the tablets most efficiently. It is also expected that the digitalisation of all data will reduce simple (and sometimes costly) errors that can arise from illegible duplicate copies or transcribing errors.

In another example, Ladysmith also purchased 53 notebooks for its city councillors. While the main aim of this initiative was to reduce the cost of paper (estimated at R2 million per annum) it also has the benefit of encouraging an e-culture within the council that will streamline the digitalisation of other areas.

The metro of eThekwini is also leveraging the potential of ICT. It has created a call centre that handles over 300 000 calls a month, covering a wide range of municipal services. These include citizens reporting water and lights faults, handling queries for rates and other municipal services, waste removal and tree felling.

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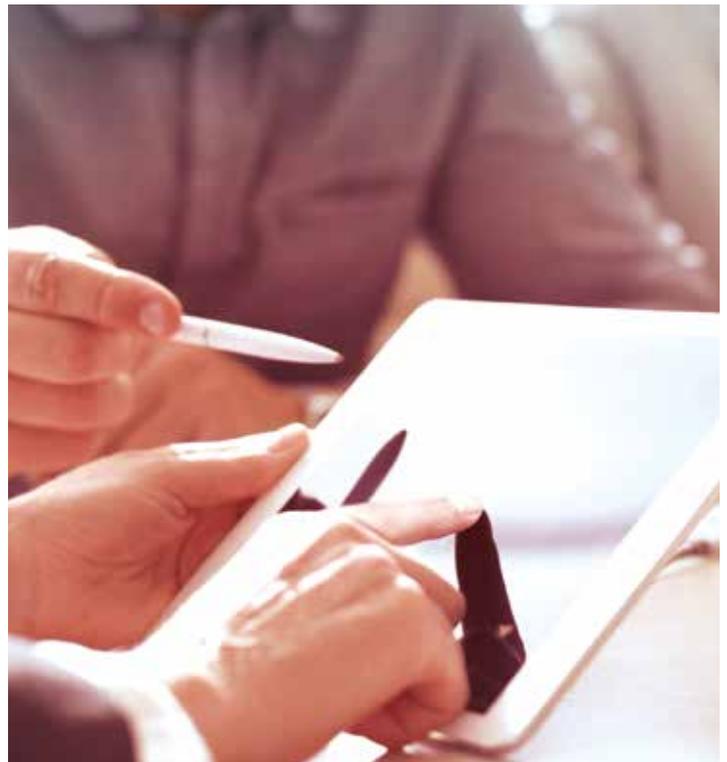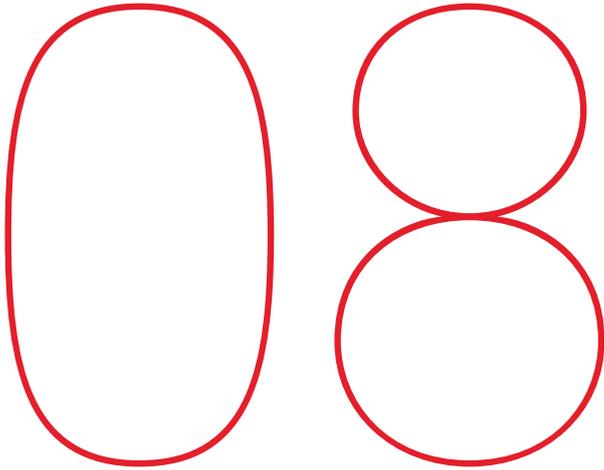
BCX FOR GOVERNMENT

BCX believes ICT should play a critical role in enhancing the business of Government.

This includes the streamlining and automation of business functions and processes to drive efficiencies and increase transparency. BCX has the size, commitment, business and technology expertise to help Government improve the lives of citizens, and can provide a critical stepping stone for progression towards citizen-centric service delivery.

BCX understands that while technology has become vital to Government, its true value can only be unlocked if we transform the way it is delivered. Technology is too important to remain solely the in-house preserve of the IT department. It is moving too fast, its scale is too important and skills are too scarce.

The solution is to engage with a trusted end-to-end service provider of connectivity, network, data centre and cloud solutions who is committed to South Africa and is able to support all levels and departments within Government.

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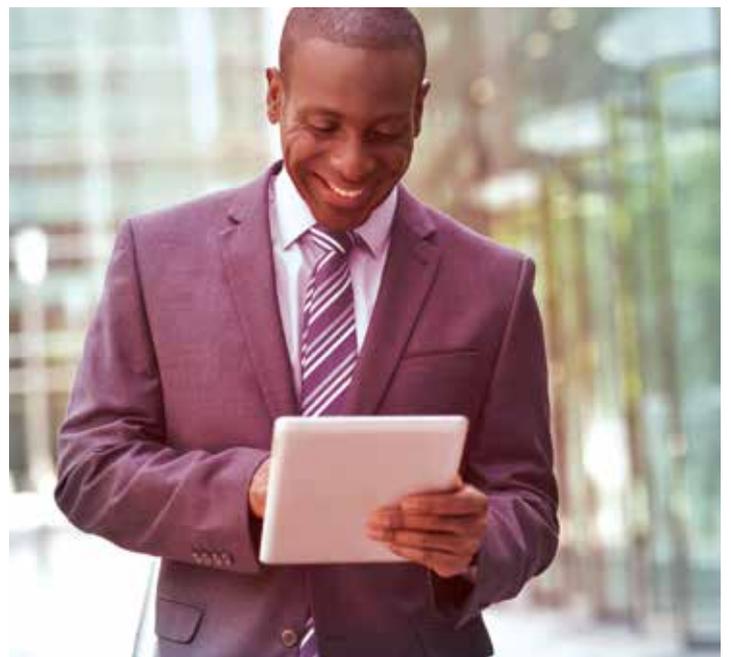
KEY DRIVERS FOR GOVERNMENT

The role of technology has been proven all over the world to be key in enabling Government service delivery, efficiency and accountability across all Government departments and levels of Government.

The concept of eGovernment and the related digitalisation of Government operations, also further enables a digital society, and additional service delivery channels to serve that society.

Government has the potential to create an environment that enables the digital inclusion of citizens, through increased affordability and access, and the creation of citizen-facing digital services that leverage the broader penetration and adoption of mobile and Internet services.

This places pressure on Government departments to ensure that they carefully consider how they select, implement and manage the Information and Communication Technologies that support the **key drivers in Government**:

Enabling service delivery

- Strategic development programmes
- Citizen-centric service delivery

Supporting eGovernment and digitalisation

- Inclusion and accessibility
- Ease of use and confidentiality

Enhancing business processes and ICT efficiency and costs

- Productivity
- Cost reduction

Improving accountability

- Performance management
- Reporting

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UTILISING ICT TO ENABLE GOVERNMENT OBJECTIVES

It is important to recognise that those in Government departments responsible for operations, finances, procurement, and IT will need to agree on a joint ICT strategy.

This includes deciding on the technology they use to support their operations, where they acquire these services, and the role of internal IT resources.

The following are critical success factors in the first steps towards achieving the ICT and service delivery goals of Government:

Focus on Core Competency

In order for a Government department to run efficiently, it should not be wasting unnecessary energy on running ICT processes, but rather focus on its core competencies and delivery objectives.

Internally, the department may not necessarily have the skills, knowledge, or infrastructure needed to maintain a large, integrated ICT function through which it can run digital/technology-driven initiatives. Partnering with a provider like BCX who can supply these competencies, allows the department to focus on improved output without constantly managing the process.

Leverage Current Technology Trends

There are specific technology trends that are driving the transformation of ICT across both public and private sectors. These include:

- Seamless connectivity;

- Machine-to-Machine (M2M) and Internet of Things (IoT);

- Mobility and Unified Communications;

- Social media;

- Cloud services; and

- Big data

These trends are supported through BCX's extensive portfolio of end-to-end solutions that are specifically customised to the requirements of Government, with basic and complex VPN (Virtual Private Networks), Voice, IT and Cloud Services, Data Networks and Mobile Technologies.

Selecting the Right Partner

Government departments will need to embrace these trends and adopt a suitable ICT sourcing strategy. A knowledgeable service provider such as BCX can provide integrated solutions and infrastructure in its dedicated field so that the Government department can focus on its key objectives.

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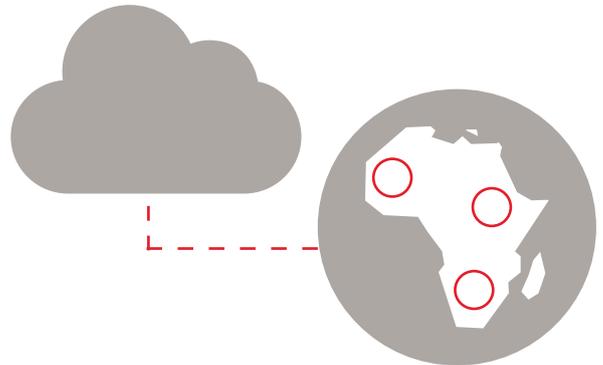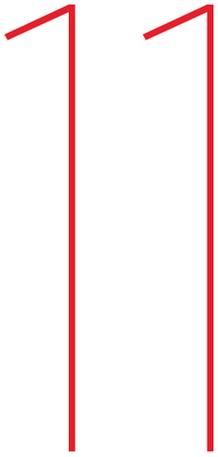
WORKING TOGETHER WITH GOVERNMENT

In order to implement solutions for Government, some of the key ICT planning components that need to be agreed upon include:

- **Key development programmes** and the dependency on ICT transformation for those programmes to be successful.

- **Primary operational processes** and the role of ICT in transforming the accessibility, efficiency and costs of those processes.

- Business and **ICT performance objectives and targets**.

- The current **ICT challenges or issues** that are hampering objectives or the delivery of services.

- A list of **areas for quick-wins** (in cost savings or ICT service improvement) that can be used to quickly demonstrate added value.

- Planned ICT **architecture and standards**.

- **Baseline information** on its current ICT deployment.

- A view on the **sourcing model** for ICT services across all technologies and the full ICT life cycle management process.
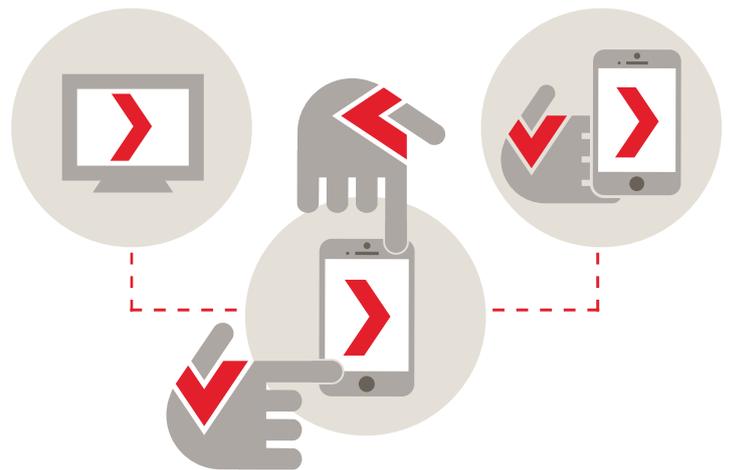
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BCX'S VALUE PROPOSITION

Making a Difference in Government

BCX appreciates that Government departments require end-to-end solutions; it has therefore also adopted a 'solutions business' approach to serving the needs of Government. This approach packages products and services to provide integrated and managed solutions that will address specific needs of National, Provincial or Local Government or the needs of a specific Government department such as health or education.

BCX has already demonstrated its ability to support Government's objectives. For example, in conjunction with the Department of Education and the Department of Communications, BCX has connected 1,650 schools across South Africa. This initiative has addressed the requirement to make technology more accessible to citizens.

Having increased broadband capabilities can revolutionise Government's ability to serve citizens, not only in a fixed setting such as an educational institution, but also in mobile service areas such as policing. For example, a combination of mobile access services, can allow police information to be captured at source, accessed on demand and analysed with enhanced trending and business intelligence capabilities.

BCX's Key Message to Support Government in the Use of ICT

BCX is growing and evolving. From a history of being a traditional fixed-line provider it now offers mobile services, managed networks, data centre hosting, cloud services and skills for integrating and managing these services in an integrated delivery structure. It has transformed from a traditional Telco to a fully-edged ICT services provider.

Government departments do not need to built their own ICT infrastructure or services. They can now source that functionality directly from BCX. BCX has the neccasary skills, knowledge and infrastructure to provide a full set of OCT solutions.

By allowing BCX to provide its core capabilities, Government is able to focus more keenly on its core operations, freeing it up to serve citizens better.

BCX:

- has scale;

- is reliable;

- has invested in a state-of-the-art network;

- has the resources and skills to support that investment;

- always plans ahead of the curve; and is focused on providing Government with business solutions customised for its needs.

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THE BCX KEY DIFFERENTIATORS

BCX is one of the largest ICT services providers on the African continent with a clear focus to serve the enterprise, public sector and Medium market segments across the continent.

Our passion is to seamlessly connect every business with its digital future. All the solutions are offered end-to-end, ensuring that your business benefits from economy of scale and superior service quality.
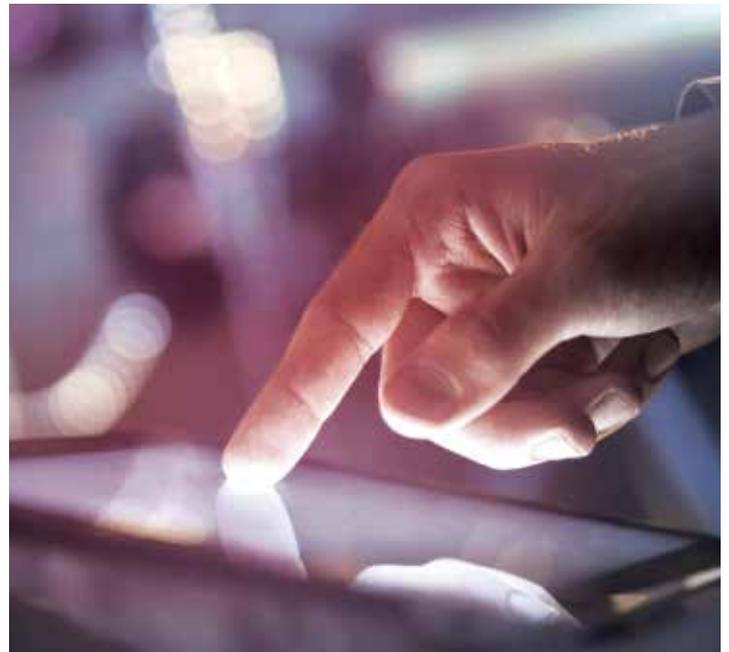
Unmatched Data Centre and Network Infrastructure	Telkom's footprint includes 3 Tier 4 data centres, 147 000 kms of fibre and over 2700 mobile sites integrated throughout South Africa.
Unrivalled ICT Solutions Set	Proven ICT capabilities, with market leadership positions on both IT and telecommunication services.
Industry-Vertical Leadership	Market leader in retail, mining & manufacturing, banking & financial services (Gartner). Also key solutions provider for the public sector.
Leader in Service Excellence	Leading IT service management with an ITIL maturity rating of 4.25 – The highest on the African continent (Pink Elephant: 2014)
Unparalleled Geographical Reach	Extensive geographical reach with trained IT field engineers in multiple locations across Africa.
Strategic Vendor Relationships	Strong relationships with key technology vendors to ensure best technology solutions.
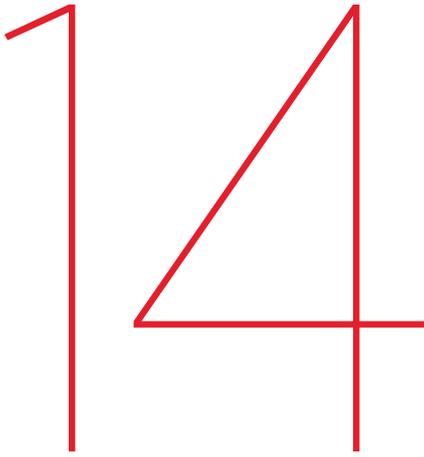
GLOSSARY OF TERMS

3G
Third-generation wireless telephone technology

4G
Fourth-generation wireless telephone technology (also called LTE)

BYOD
Bring Your Own Device

Digitalisation
Integration of digital technologies into everyday life by the digitisation of everything that can be digitised.

ICT
Information and Communications Technology/ies

IoT
Internet of Things

LTE
Long-Term Evolution (also called 4G)

M2M
Machine to Machine

POS
Point of Sale

R&D
Research and Development

SLAs
Service Level Agreements

UC/Unified Communications
the integration of real-time, enterprise, communication services

VPN
Virtual Private Network

ABOUT BCX

BCX is one of Africa's leading premier ICT solutions and service provider with the technology, capability and skills to deliver end-to-end digital solutions for large and medium enterprises in the public and private sectors. BCX leads with an unrivalled ICT solutions embedded on the foundation of unmatched Data Centre and Network Infrastructure and include world class solutions in ICT consulting and digital readiness assessments; a complete range of managed solutions that include both LAN and WAN; unified communications and connectivity solutions. In addition, cloud computing technologies underpinned by best in class security solutions and a host of value added services that include enterprise mobility services and analytics software with a specialised competency in the IOT (Internet of Things) and big data solutions.

BCX is a leader in Service excellence and boasts the largest pool of ICT skills in Africa, unparalleled geographic reach and points of network presence across the continent. Our strategic vendor relationships with leading multinationals enable BCX to deliver best in class solutions across industry verticals with skills and expertise seamlessly deliver integrated services to our customers. BCX is committed to providing ICT solutions that reduce the cost of doing business, increase overall business productivity and empower businesses to use technology as a competitive advantage.

Migrate your business into the digital future – contact thoughtleader@bcx.co.za

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BCX/@BCXworld

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BCX