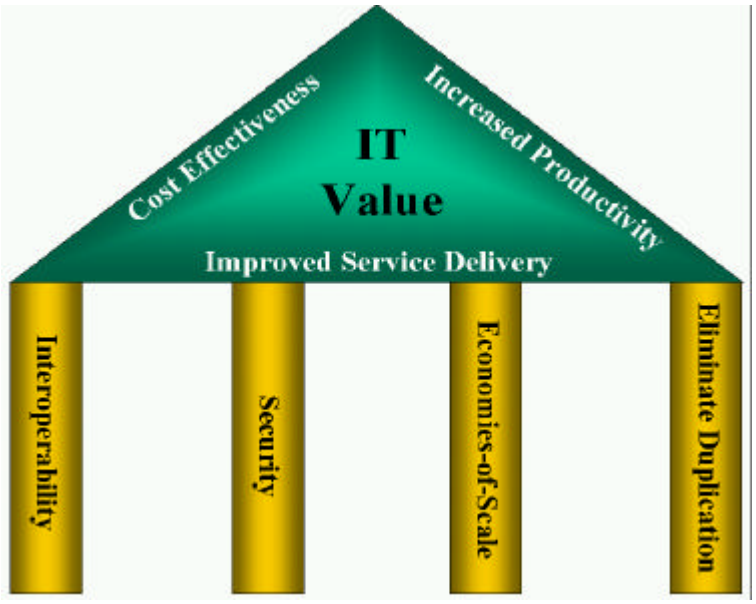
Electronic Government
The Digital Future

A Public Service
IT Policy Framework

February 2001



Department of Public Service and Administration

Republic of South Africa

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1. INTRODUCTION

1.1. What is e-Government ?

Today, governments in both developed and developing nations are following the 'new economy' transformation of manufacturing and service industries, which turned the customer from 'product taker' to 'product maker'. Governments move away from the bureaucratic organisation around agencies operating like 'stove pipes', and streamline their functions according to the needs of the citizens. At the same time, governments strive to dramatically improve their internal efficiency and effectiveness - the costs and quality of *governance*.

Information Technology (IT) plays the role of a key enabler of this modernisation of government. It allows offering both individual citizens and companies the opportunity to interact (even to conduct business) with government 7 days a week and 24 hours a day, and to do so using different means of communication: desktop and handheld computers, telephones and cellphones, self-service kiosks and ATM's. On the other hand, IT brings endless possibilities for improving the internal operational and support functions within the realm of government.

Thus, an electronic ('e-') government initiative must address at least three major issues:

1.1.1. E-governance

– the application of IT to intra-governmental operations, including the interaction between central, provincial and local government. This includes paperless messaging and reporting, electronic document management and archiving, integrated systems for finance, asset and human resource management (including training), as well as systems for real-time collaboration and project management, conferencing, decision support and executive information.

1.1.2. E-services (delivery *and feedback*)

– the application of IT to transform the delivery of public services from 'standing in line' to online: anytime, anywhere, by any means, and in *interactive* mode. The services affected include general information and regulations, education and culture, health consulting and telemedicine, benefits, taxation etc. The new delivery vehicles also offer the opportunity to let people participate in government, by collecting direct and immediate public input in respect of policy issues, specific projects, service delivery problems, cases of corruption etc.

1.1.3. E-business

– the application of IT to operations performed by government in the manner of business-to-business transactions and other contractual relations. An obvious example is the procurement of goods and services by government: *e-*

procurement covers the steps from electronic tender to electronic payment. More cases become available for IT application with the spread of outsourcing and the development of public-private partnerships.

1.2. Making it Happen

A comprehensive e-government effort is a mammoth task even for developed countries with huge government resources, good telecommunication infrastructure, cheap and fast access to the Internet, affordable computers and appliances, and appropriate legislation already in place. E-Government requires both strategic and in-depth planning, major co-ordination and consolidation of government IT projects and resources, process re-engineering, introduction of new business models and public-private partnerships. Last, but not least, it depends critically on the development of skills – not only in IT proper, but also in customer relationship management and even marketing.

Evolving the e-government initiative requires systematic and methodical approach, informed by clear understanding of the objectives, affordable scale and interdependencies of issues. For example, no meaningful development in e-services and e-business can take place without advancement in the area of e-governance. And even conducting transactions (such as accepting tax returns or receiving electronic applications for services) is now considered ‘no-brainer’ by experienced governments. Not one ambitious agency has wasted time and money trying to create its own Internet portal, only to learn what unfortunate ‘dot-com’ companies have already discovered: that "You can build it, but they [in this case, the citizens] won’t necessarily come".

It is important, therefore, first and foremost to put in place a policy framework which:

- spells out the e-government vision;
- defines clearly how progress is to be measured, in other words, what benefits are to be achieved in the process;
- sets priorities by identifying focus areas for immediate attention;
- defines the generic prerequisites (in areas like human resources, research, legislation etc) that must be in place for advancements in the key areas to succeed, and
- gives specific recommendations on how to deliver results in each focus area.

The e-government vision was presented in section 1.1 . The other major areas of the policy framework are discussed in detail in the ensuing chapters.

1.3. Extensive Consultations

This document was produced by the Department of Public Service and Administration (DPSA) after a long consultative process. Diverse stakeholders have contributed on issues of relevance with the view of achieving the major e-government objectives in a harmonised manner and within a reasonable time frame. This document should also guide further discussions and inputs into the continuing process of consultations, necessary to formulate a broad, inclusive policy framework for the adoption of e-government strategies.

The **first phase** of the consultation process kicked off in June 1999, when the first public meeting was held at SITA in Pretoria under the banner of IT Policy for Government process, chaired by Dr Stephen S. Mncube from the Development Bank of South Africa. The public meetings were attended by a broad range of stakeholders from the private sector, community organisations, and the public service, many of whom later participated in four task teams. The process culminated in a set of recommendations, presented in May 2000, that formed the basis for the second phase of consultations.

The **second phase** of the consultation process used the report by the Steering Committee of the IT Policy for Government process to consult the government departments to seek further direction. This was done in an IT workshop held at the ABSA Conference Centre in Montana on 28-29 July 2000. The workshop culminated in an IT Policy discussion paper that was produced through an inter-departmental effort.

The **third phase** of the consultation process began in early October 2000, when the Government IT Officers (GITO -- the IT heads from all national departments and the nine provinces) Council considered the second phase draft. The GITO Council refined several issues reflected in the body of the document and adopted positions on some of the issues.

The **fourth phase** took place on 23-24 October 2000 in Magaliesburg through an Electronic Government seminar. The inputs from this seminar were used by the GITO Council to produce this particular e-Government Policy Framework, which is being submitted to Cabinet for consultation.

The **fifth** and final **phase** involved soliciting inputs from Ministers and Directors General of different departments through a written invitation in November 2000. The inputs received were considered in the final document.

Implementation thereafter will take various forms, either as rules and regulations, policy directives or legislation governing the deployment and use of information technology within the entire public service. All role-players will also prepare their IT strategies within the policy framework, and include these in their annual Business Plans for the coming financial year.

2. DELIVERING MEASURABLE IT VALUE

Information technology is a powerful enabler for delivery of services to the public, but the starting point in the e-government drive should always be to identify what the customer wants, and then look how to use IT to achieve this economically and effectively. Hence, it cannot help to acquire IT for its own sake. IT must bring value to government's service delivery initiatives, and government agencies should have a universal understanding of IT value.

In simple terms, the IT value should be regarded as the collective benefits -- both economic and social - which are derived by all stakeholders (citizens, public servants, suppliers, etc) from the usage of equipment, software and/or services. Based on that, IT applications should be valued only if they enable their users to achieve the following benefits:

2.1. Increased Productivity – better output in terms of the quantity *and* quality of traditional results, or the performance of previously impossible tasks;

2.2.Cost effectiveness – due to reduction in time duration, complexity or possible repetition/duplication of tasks;

2.3. Improved Service Delivery – achievement of the *Batho Pele* objectives for offering equal access to government services, more and better information, choice of level/quality of service and guaranteed standards (including privacy), remedies for failures and, ultimately, value for money.

This measurable IT value is in accordance with established economic theories, and should assist government in determining whether or not to invest in any given IT project or IT programme. IT should never be acquired if it does not achieve all aspects as depicted in the equilateral triangle above. However, the IT value must be underpinned by imperative government IT focus areas. Such focus areas must be few, and must be vital to the electronic government initiatives.

3. KEY IT FOCUS AREAS

Success of the e-government initiatives is underpinned by the following four primary focus areas:

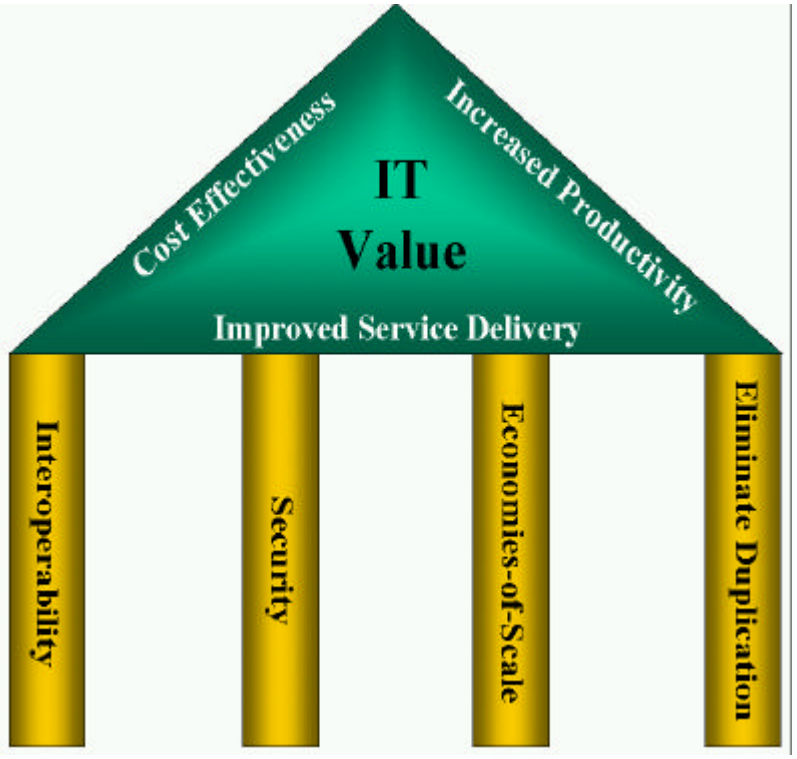
3.1. Interoperability – government IT systems (including networks, platforms, applications *and data*) must 'talk' to each other, allowing for automatic sharing and exchange of electronic messages and documents, collaborative applications, distributed data processing and report generation, seamless transaction services, 'whole-of government' search and queries, integrated IT systems management etc.;

3.2. IT Security – government operates in an environment, where both electronic documents/data and IT systems must be protected from unauthorised access, malicious code and denial-of-service attacks;

3.3. Economies-Of-Scale – government must leverage its IT buying muscle to encourage compliance with other key IT focus areas. Currently the government's economic muscle is fragmented, and leads to unnecessary exploitation by some IT vendors. Such an economic muscle must be used to influence the development of local IT industry that is not only limited to selling products made elsewhere. Development of local IT skills that are crucial to e-government initiatives should be encouraged through the government's IT economic muscle. Also, IT research can be steered towards answering service delivery imperatives through the government's IT economic power.

3.4. Eliminate Duplication – government must abolish unnecessary duplication of similar IT functions, projects and resources (including collection, processing and archiving of the *same* data), as well as practices of 're-inventing the wheel'.

The diagram below attempts to illustrate the relationship between the IT value and the key focus areas. It should be noted, that it is not possible to obtain IT value without addressing the primary IT focus areas, while at the same time, developments in the key IT focus areas do not necessarily lead to IT value.



However, these government IT focus areas assume that some minimum resources are readily available to the entire government machinery.

4. WHAT SUSTAINS THE IT FOCUS AREAS

To transform government into information age, it is necessary to address a range of issues which are common to all key IT focus areas. These include the development of IT skills, the advancement of service delivery focused IT research, the establishment of proper channels and functions for communication and liaison, and co-ordination and monitoring. Each of these issues is briefly explained below.

4.1. Crucial IT Skills

Skills development in IT must no longer be left to chance by the government machinery. The current situation develops IT skills in a haphazard fashion that is not necessarily beneficial to government service delivery initiatives. For instance, IT vendors prefer to develop more local IT marketing professionals to assist is increasing sales quotas. This is done at the expense of making South Africa dangerously dependent on foreign products, which require core IT skills from traditionally privileged communities or foreign workforce.

Currently, unscrupulous IT vendors claim to be developing appropriate government IT skills in every contract they obtain from government. Existing service level agreements are silent on how transfer of IT skills to government is measured and must happen.

The IT research and development skills are also left to chance as Government does not give research grants to specifically answer pressing national IT questions, that strive to benefit South African citizens. Regrettably, research sponsored by vendors is not necessarily geared to help South African citizens, but rather primarily geared to improve the vendor's bottom line regardless of any negative impact to government service delivery programme.

South Africa has a number of tertiary and research institutions that endeavour to research, among others, on IT questions. Government rewards such research, by subsidy grants to institutions, on the basis of publications in accredited journals. However, such incentives are elitist and cannot channel researchers to produce knowledge or answers to South African IT development questions.

Policy Recommendation	Target and Responsibility
• Encourage a code of ethics for anyone who must trade as an IT professional. This can no longer be left to chance given the cyber-crime and the impact of such criminality.	Immediately, and all organs of State shall execute. Impact within 1st quarter

Policy Recommendation	Target and Responsibility
• The education system must be persuaded to develop IT skills that address the service delivery imperatives of the country: • neglected communities must receive IT education from primary educational level; • fundamentals of IT, as opposed to transient aspects of IT should form the basis for IT syllabi; • room for exploitative fly-by-night IT academies must not exist;	Immediately, and the Department of National Education, PSETA, and SITA must execute. Impact immediately after 1st year of execution
• Visa issues to foreign IT experts must be linked to producing a local understudy with the requirement to transfer specific skills in a specific timeframe. Renewal of such visas must be on the basis of past performance.	Immediately, and all organs of State shall observe, while the Department of Home Affairs executes. Benefits after 1st anniversary of issuing visas under the recommended guideline
• Conscious effort must be made to attract designated groups to IT professions – specifically African females.	Immediately, and all organs of State shall execute.
• Appropriate skills transfer, to develop and maintain IT infrastructure, must be packaged in contracts of government IT providers.	Immediately for any new IT contract, and SITA implements training. 75% impact by year of execution
• Service Level Agreements and continued use of an IT vendor must include transfer of crucial skills to beneficiaries of the solution. • Such skills must be accreditable through the South African educational system. • IT vendors must have a minimum of 60% utilisation of local IT skills.	Immediately, and all organs of State shall execute. Impact after anniversary of visas issued after execution Will address so called IT skills shortage in South Africa
• Participation in international programs (G7, EC, OECD, etc.) must be supported, with a view to craft solutions that are responsive to the South African developmental questions.	Immediately, All organs of State. Benefits within 12 months of execution
• The Department of Education must take a leading role in stimulating IT education and research throughout its systems.	Within 1st academic year after adoption, the Department of Education should execute

4.2. IT Research Programme

The e-government initiative will, to a great extent, be dependent on research aimed, among other things, at the government needs and the development of solutions to these needs based on future IT trends and offerings.

Policy Recommendation	Target and Responsibility
• IT research funded by public money or conducted by public institutions must seek to address the developmental or service delivery imperatives of the country.	Immediately, and all organs of State shall execute. Impact after the 1st semester of implementation

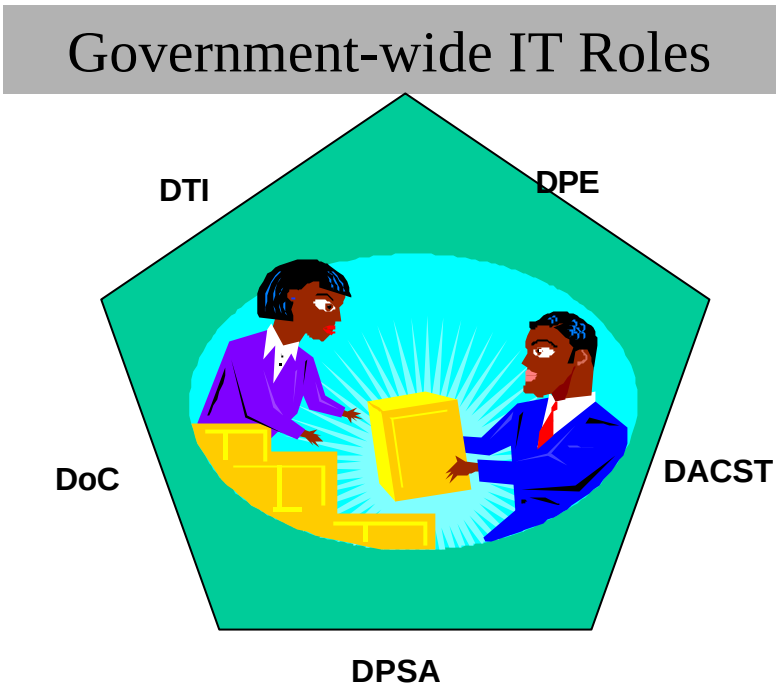
4.3. Co-ordination and Monitoring

The digital revolution has the potential to alter our lives as comprehensively as the industrial revolution. The wide variety of activities that will be generated by the above recommendations will pose a co-ordination challenge to government.

Wide consultations are crucial for implementing a government policy and strategy of impeccable integrity. South Africa is counted among countries that lack laws governing Internet crime, a factor that is undermining international co-operation to eradicate IT viruses, denial of service attacks, identity theft, child pornography, and other forms of cyber crimes. Broader co-operation must be pursued with a view to achieve: promotion of and compliance with international standards, collaboration with NGOs, collaboration with our neighbours and enhanced integration of developing countries.

The major players within the information technology arena within government are: the Department of Arts, Culture, Science and Technology (DACST), the Department of Communications (DoC), the Department of Trade and Industry (DTI), the Department of Public Service and Administration (DPSA) and the Department of Public Enterprises (DPE).

The diagram below attempts to depict the delicate balance that needs to be struck in order to obtain a perfect pentagon relationship, sustaining the respective IT roles of these departments government-wide.



The **DACST** is responsible for the promotion of science and technology in South Africa. This involves the development of school syllabus and research in institutions of higher learning. DACST is the department, which signs international agreements on science and technology on behalf of Government. Most of these agreements include IT as a major area of interest.

The **DoC** manages portfolio organisations which are IT-intensive, such as the SABC, Telkom, the Post Office and Sentech. The DoC deals mainly with policy formulation for its portfolio organisations, all of which operate throughout the country, and also focuses on the roll-out of communications infrastructure throughout the country, especially to previously disadvantaged communities.

The **DTI** deals with information technology within the economic sector, such as the South African Information Technology Industry Strategy (SAITIS), the Council for Scientific and Industrial Research (CSIR) and the diffusion of technology within the economic sector.

The **DPSA** has the task of overseeing the deployment of information technology within the entire public service and managing of the State Information Technology Agency (SITA).

The **DPE** manages all State-Owned Enterprises (SOE's), especially the 'big four': Transnet, Eskom, Telkom and Denel. The DPE has recently taken great interest in the information technology capabilities and activities of the SOE's, especially with preparations to licensing a second national telecommunications operator to rival Telkom. It also has a plan to merge the IT divisions of some of these companies into a single national IT company.

SITA was created to continually deliver on aspects of transformation, to free government departments and agencies from dicey and turbulent IT aspects, and

allow organs of state to focus on their core competencies. Organs of state will articulate their problems and desired outputs, while SITA gets suitable solution partners who must provide solutions and results to improve service delivery of various organs of state. The only true asset of SITA will be the relationship SITA has with its customers. The products SITA sells to its customers will consistently be in flux; therefore, the business relationship that SITA enters in order to service its customers will also be transient, with SITA retaining no stake in the products or services it leaves behind in order to bring its customers the next demand item, saving the government millions of rands.

SITA should strive to be a 'zero asset' manufacturer, i.e. SITA should deliver its products by striking outsourcing deals with strategic partners.

The **Government IT Officers' (GITO) Council** was created to serve as an IT co-ordination and consolidation vehicle in government, and as a radar that will assist in informing the government, on a continuous basis, when and how to intervene in the interest of enhanced service delivery to citizens. The GITO Council must:

- co-ordinate and consolidate IT initiatives in the whole of government, with a purpose of improving overall service delivery;
- assist to eliminate unnecessary IT duplications, share experiences on government IT initiatives, propose useful IT policy, and propose effective IT strategy;
- monitor the impact of IT on the overall government programmes;
- lead in determining IT skills needed to enhance government service delivery on the medium and long-term;
- assist in determining IT research questions to enhance service delivery.
- have a communication strategy to promote awareness and implementation of IT initiatives.

This is premised on the requirement, that each Government IT Officer is part of the executive team in the respective organ of state and responsible for the IT strategy and plan. Thus, brought together in the GITO Council, the Government IT Officers are best placed to pronounce on co-ordination and consolidation of the government IT initiatives.

Policy Recommendation	Target and Responsibility
• Government uses IT only as it improves government service delivery to citizens, and negative aspects of criminal consequences must be closely managed. The GITO Council could, as a government vehicle that monitors the use of IT, recommend strategies to squash emerging problems or to leverage emerging	1st quarter of agreement. GCIO leads and GCIS assists in the development of strategy and its co-ordinated implementation.

Policy Recommendation	Target and Responsibility
opportunities, including: • the emergence of *new partners and intermediaries* in the delivery of services; • *structural changes* within national government and in its relationships to other levels of government; • concerns about *privacy and confidentiality* in a world in which sensitive information flows across networks and the potential exists for amassing large files of information about individuals; • impact of IT on the country's developmental agenda (i.e. *is IT advancing or hampering growth?*); • accessibility by the previously neglected communities to government IT resources (i.e. *is the IT gap being closed or exacerbated?*); • effects on government service delivery; • influence on democratisation, patriotism and responsible citizenship.	

5. POLICY RECOMMENDATIONS

Target Date - 2003

It is recommended that the target date to attain the necessary critical mass on the success of all e-government related projects be the Year 2003. This target date takes into consideration various factors, such as the policy consultation and formulation process, which is ongoing, and the business strategy planning process, which will resume later this year when the policy framework is adopted.

The target date also takes into consideration the fact that technology changes occur every two years, implying policy framework review. Features that require policy consideration in this area have been isolated as best as possible.

5.1. Achieving Interoperability

At least 80% of the South African citizens were neglected by the erstwhile apartheid system in respect of access to IT infrastructure. Failure to provide access to the previously disadvantaged communities will further impede any effort on electronic government initiatives.

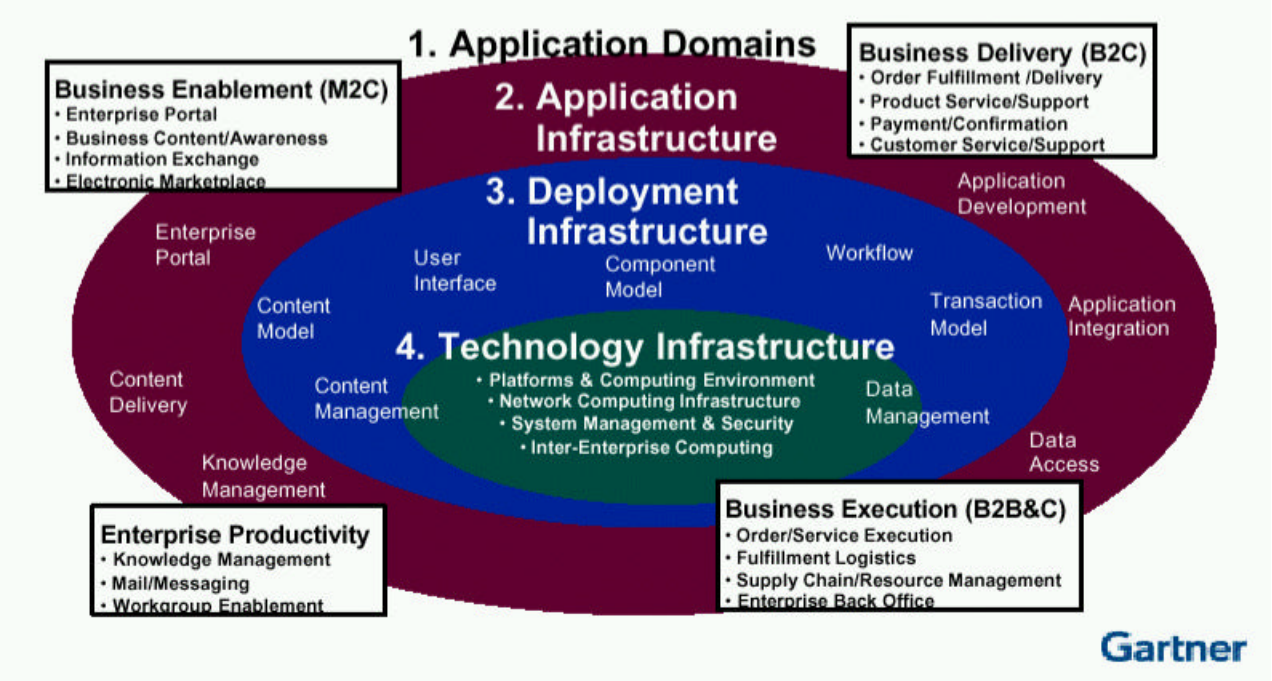
In a fair society, all individuals have equal opportunity to participate in, or benefit from, the use of IT resources regardless of race, gender, religion, age, disability, language, or any other such factors. Empirical research in all nations confirms the growing gap between the rich and the poor, as well as between the well educated and the poorly educated users of IT. As researchers broaden their scope to examine developing nations, the digital divide becomes even more disturbing.

Of note is that Government has the ability to correct the situation, as well as to manage the related aspects of development of IT infrastructure, because it consumes more than half of South Africa's IT goods and services. The real nirvana of interoperability is to have machine-to-machine communication, in essence, removing manual intervention in as many steps as possible. Once this aspect is controlled, citizens will start to experience 'one-stop-shop' or seamless government service.

It should be possible to achieve this objective, while maintaining a varied mix of IT products and solutions. There is no need to unnecessarily uproot users from good IT products and solutions and to simplistically upset a productive workforce by an inconsequential new product. Each user should continue working in a familiar environment, except where there is a good reason not to, but the IT systems in the 'back office' must be capable to provide communications with any other government system.

Current government tender procedures do not seek to enforce interoperable systems. Therefore, the IT policy must insist that all IT goods or services must be compatible with existing and planned government systems.

Unscrupulous IT vendors have a tendency to manipulate the Government's legitimate quest for interoperability as an opportunity to dominate government IT infrastructure by touting "architecture" and "standards", which are carefully calculated to push competitors out of the race. Government should seek solutions that keep as much IT vendors in the competition as possible. Competition ensures that government service delivery is not singularly dependent on any IT vendor in the event of collapse. Government should also urgently address the issue of designing and implementing a coherent hierarchy of architectures, encompassing the major domains of business, applications and technology.



Just as architecture is essential to building a house, IT architectures play an important role in defining the underlying *infrastructure* needed for disparate networks, platforms, applications and data repositories to work together. Thus, IT architectures present the blueprints for achieving interoperability.

Policy Recommendation	Target and Responsibility
• Government must only get involved in IT infrastructure that enables e-government benefits such as: 1. 'One stop shops', 2. Access to a range of relevant government services, through a single service point, 3. Services appropriate for a targeted group from the most appropriate location, 4. Access where and when the clients seek the services	Immediately for every new IT initiative, and SITA should implement with the guide of the GITO Council. Expected impact of 100% by end of 2001.

Policy Recommendation	Target and Responsibility
• Government must seek strategic partnerships to reduce service delivery costs. There is absolutely no reason for Government to want to own volatile IT infrastructure, when there is a cost-effective alternative of working with private sector partners, within mutually beneficial arrangement. 1. Government should then only pay for usage and thus desist from paying for mistakes of any overzealous IT vendor. 2. When the infrastructure fails to cater for specified needs, it should be possible for Government to switch to use the facilities of a competing IT vendor that had a sound foresight. This will ensure that government is not led to invest in obsolete infrastructure by unscrupulous IT vendors.	Immediately on new IT initiatives, with SITA implementing and the GITO Council providing a consolidated guidance. Full impact should be felt by 2nd semester of implementation
• Government service delivery imperatives must determine a vendor independent IT infrastructure and interoperability: 1. Government service delivery imperatives must derive Business Architecture 2. Business Architecture must be the basis for Applications Architecture 3. Application Architecture must derive Technology Architecture	All state organs must observe immediately, and SITA must ensure. Crucial to avoid being held at ransom by failing IT vendors. A security matter
• IT infrastructure must be accessible to the intended user community.	All state organs must observe immediately, and SITA must ensure
• Extend access to IT through official languages other than English and Afrikaans. 1. In trying to improve the experience for those with slow network connections, old computers, or limited knowledge, Government should challenge IT scientists who work with operating systems, networks, databases, user interface, graphics, and other IT topics to bridge the access gap. 2. Research topics that deal with multi-lingual interfaces, on-line help, content transaction, and device independent input/output must be opened to the needs of the forgotten.	Immediately, all State organs lead by the Department of Arts, Culture, Science and Technology must execute
• IT providers should make their services accessible to persons with various social or physical impairments. For example:	Immediately, all State organs should execute

Policy Recommendation	Target and Responsibility
1. a special version that does not rely on sound could be prepared for persons with hearing impairments; 2. a version with large type fonts could be developed for visually impaired users, or 3. a version that does not require a keyboard input but takes user commands through spoken natural language processing could be designed for users with manual dexterity limitations.	
• Access to IT should be provided in previously disadvantaged areas (i.e. areas not near towns and cities), targeting the population which to date has been unable to use the IT -- either because of a lack of education, or because of difficulty of access, or not being conversant with both English and Afrikaans languages.	Immediately, all State organs lead
• Ensure that government services are available through a wide variety of media and delivery channels, such as 1. PC, digital TV, wireless application protocol (WAP), and 2. other devices, mediated through call centers or physical contact.	Within 1st quarter of adoption. All state organs, guided by the GITO Council must effect
• Streamline and integrate services and seek ways to deliver multiple services through a bigger range of providers. To achieve this, government systems must be interoperable and government agencies must not request the same information from the same citizen more than once.	Within 1st quarter of adoption. All state organs, guided by the GITO Council must effect
• European Union countries charge value-added tax for electronic transacted goods and services. As an attempt to close the digital divide, government should introduce a levy for electronic services. Some European countries have declared that Web surfing during office hours is taxable. The privileged will then be encouraged to subsidise those who have no access to IT through no fault of their own.	Within the 1st quarter of operation, with the Department of Trade and Industry giving direction, the South African Revenue Services executing. Impact within the 1st quarter of execution

5.2. IT Security

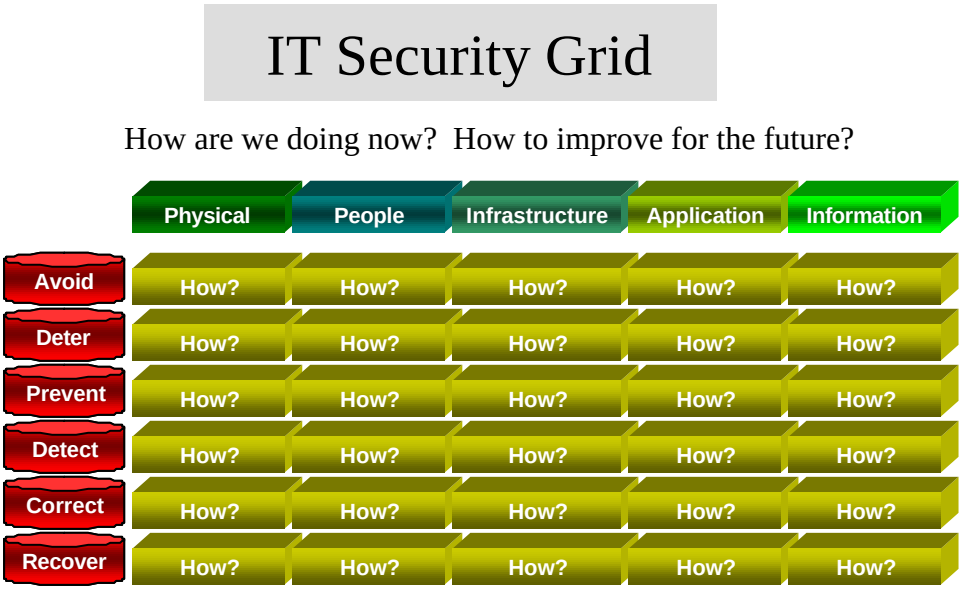
Interoperability should be achieved without compromising vital IT security concerns. Government must not readily accept naive IT vendor-driven solutions to solve the enormous problem of interoperability. Simplistic standardisation or crude rationalisation breeds serious security problems. It increases the chances

of any rogue IT professional or disgruntled employee to sabotage IT services, since knowledge of one government system may give a prospective felon easy access to all IT systems of government.

E-government is premised, among others, on the availability of the Internet, and if Web sites are compromised, then government data can be read or modified by attackers. Political statements, industrial espionage, and thievery are all reasons for cyber-terrorists to attack Web sites, to disrupt telecommunications, power supplies and even stock exchanges. There are at least 20 countries around the world engaged in, or researching, information warfare – the offensive and defensive use of information and information systems to achieve advantages over military or business adversaries.

It is always better not to employ an IT service for live production or to serve clients if competent IT security has not been catered for. It is important to note that IT security is not limited to authentication and encryption only. IT security is related to: (a) avoidance, (b) deterrence, (c) prevention, (d) detection, (e) recovery, and (f) correction in all aspects of security. Security must be provided to IT at all levels (i.e. physical, people, infrastructure, application or information).

Most government IT contracts see authentication and encryption as the only IT security concerns, and the Public Service IT policy must correct this dangerous view. Currently, only four of the 30 minimum security concerns depicted below are being catered for.



It must be noted that IT vendors often promote "standard" or "architecture" without explaining how that would enhance information security. Others argue for naive rationalisation of government networks, and simplistically ignore that a network by its nature requires as much redundancy as possible, to overcome sabotage or service denial.

As government shifts to providing most of its services through IT, and relying on IT to improve its internal working, IT security should be explicitly considered.

Policy Recommendation	Target and Responsibility
• The Security Cluster should provide a sound framework for government IT security	Within 1st quarter of adoption, the Security Cluster should execute
• The government needs to address the question of electronic and digital signatures to prevent fraud and support on-line government transactions. 1. An electronic signature, which requires authentication, non-repudiation, and data integrity, can be a literal signature placed on an electronic document. 2. A digital signature can also be provided by a smart card and password, an Internet tablet, or an iris scan.	Within the first three months of adoption, with the GITO Council giving direction, and DPSA executing. Crucial for any e-Government initiatives
• Additionally, government needs to address creation of a certification system for electronic transactions to authenticate the ownership of electronic documents.	Within the first three months, with the GITO Council giving direction, and DPSA executing. Vital for paperless government
• Accommodating laws, regulations, and policies to facilitate opportunities brought by IT (e.g. e-Government) must be arranged swiftly 1. Formulate rules for electronic transactions	Within 1st quarter of adoption, the Department of Trade and Industry
• To build a single window as a point of entry for citizens to all government services. To achieve this, matters pertaining to privacy and authentication must be addressed and government online resources must be indexed and easy to find.	Within 1st quarter of adoption. All state organs, guided by the GITO Council must effect
• South African citizens should enjoy the right to control the use of their image, voice, and most information about themselves by permitting or refusing permission for its use or reproduction..	Within 1st quarter of adoption, with the Department of Justice executing.
• Whenever identifiable personal data is employed, permission should be obtained from the individual concerned, and the use should be limited to the purpose for which permission is granted. Government IT policy should strive to ensure that: 1. No personal information or data record-keeping system may be maintained in secret, 2. Individuals must have a means of determining what information about them is on record and what it is used for,	Within 1st quarter of adoption, with the Department of Justice executing. Wisdom learned from developed countries who reacted to major citizen concerns, and after major inconveniences

Policy Recommendation	Target and Responsibility
3. Individuals must have a means of preventing information about them obtained for one purpose from being used or made available for other purpose without their consent, 4. Individuals must have a means to correct or amend a recorded identifiable information about themselves, 5. Limits should be placed on the disclosure of certain personal information to third parties, 6. The individual whose request for correction or amendment is denied may file a statement of disagreement, which must be included in the record and disclosed along with it thereafter, 7. Organisations creating, maintaining, using, or disseminating records of identifiable personal data must assure the reliability of the data for their intended use and must take reasonable precaution to prevent misuses of the data, 8. An individual should have means of seeking review of a denied request or an alleged violation of duty	
• Government should consider limiting unsolicited emails and, in an effort to strengthen data-privacy rules, data collecting cookies from the Internet.	Within 1st quarter of adoption DPSA should propose a regulation
• Government seeks to create a harmonious multicultural society, thus creation of fertile ground for illegal and harmful content should be prohibited. To guard against delinquency, Government should adjust its arsenal of legal weapons with respect to pornography, racism, revisionism or prostitution to be able to fight cyber-infractions.	Within 1st quarter of adoption, and the Department of Justice should execute. Reduced network traffic within 1st quarter of effecting
• Major impacts of IT should be premeditated in formulating laws, policies, and regulations on IT: 1. Formulate a new system for intellectual property rights 2. Dealings with illegal and harmful content 3. Address consumer problems	Within three months, the Department of Trade and Industry

5.3. Bringing Economies of Scale

Economies of scale need to be leveraged to make government work smarter, cheaper, and more efficient.

Government could leverage its economies of scale to influence IT skill development and stimulate local IT industry. Actually, economies of scale can be achieved through strategic leveraging in all key focus IT areas.

Unscrupulous IT vendors can be made to close doors if government blacklisted them, and denied them business for a determined time-period. Any director of an IT company that exploits government unethically can also be blacklisted for a determined period. This way, government will be able to form partnerships, knowing that it wields its economic stick strategically.

Policy Recommendation	Target and Responsibility
• Foreign IT companies must only be considered in exceptional circumstances. This is important to grow and develop the local IT industry that creates most needed jobs for South African citizens. • Government, as a consumer of at least 51% of all South African IT goods and services, must give priority to South African companies.	Immediately, with all State organs executing, and SITA leading. Impact within the 1st fiscal year
• Renegotiate all existing government IT contracts to ensure delivery of IT value. The government situation is such that there are still IT contracts that have not been fundamentally revisited since the democratic government took office. These irrelevant IT contracts cannot deliver a useful service that is aligned with any one priority of the democratic government. There are no competent service level agreements (SLA) that can rationally and objectively measure the value of such contracts to government service delivery targets	As soon as IT acquisition is finalised, SITA must execute with the guidance of the GITO Council. Full impact in the 1st quarter of implementation
• Government needs to shift its paradigm from buying IT goods and services (i.e. 'nut-and-bolts'), to paying for solutions or results that improve government's service delivery agenda. Revised IT contracts should seek to move away from nuts-and-bolt type contracts.	Immediately, and SITA executes. Impact within the 1st quarter of execution
• The State IT Agency must: 1. serve as an IT implementing arm for government, on all aspects that require central co-ordination in order to enhance government service delivery (e.g. IT Security, Architectural aspects, and leveraging economies-of-scale); 2. deal with IT vendors to avoid the impact of disruptive appeals, and long turn-around-time that can hamper organs of state from delivering crucial service to	Within 1st quarter of approval, the GITO Council provides direction, while SITA executes. Impact on sound IT coordination and consolidation

Policy Recommendation	Target and Responsibility
citizens. Thereby, giving organs of state some space to focus on service delivery imperatives of government.	
• The IT industry must be encouraged to: 1. develop and share volatile or costly IT infrastructure with government; 2. develop local capacity; 3. research on peculiar South African IT developmental imperatives.	Within 1st quarter of adoption. SITA implements with guidance from the GITO Council
• Procurement must be revamped to embrace innovative acquisition strategies that seek to improve service delivery whilst: 1. eliminating costly contracts and hindering vendor appeals, Improving acquisition turn-around-time; 2. allowing dynamic reduction of costs whenever IT costs drop; 3. ensuring interoperability of government systems; 4. protecting various organs of State from product based tenders or 'nut-and-bolt' contract types, and so forth.	Within the next six months, with SITA implementing and the GITO Council giving conceptual direction. Full impact within the 1st quarter of implementation
• The Department of Trade and Industry must: 1. provide a framework to encourage the IT industry to develop a substantive local IT industry (i.e. not a marketing front for foreign commodities); 2. promote a review of business processes within the public sector organisations to create space for the effective utilisation of information technology. This will include greater collaboration and partnerships between the private and public sectors; 3. set rules for the government to ensure that IT SMME's do not serve as fronts, tokens, or rent-a-black for unscrupulous IT vendors.	Within 1st quarter of adoption, and SITA executes Within three months, the Department of Trade and Industry

5.4. Eliminating Duplications

As pointed out by the Presidential Review Commission back in 1998, each state organ is doing its own thing and quite often duplicates what already exists unnecessarily. Taxpayers' money can be deployed effectively when unnecessary duplications are eliminated. Millions of rands will be saved if duplications are eliminated within government.

Unnecessary duplications are a symptom for economies-of-scale that have been left to chance. It is hoped that structures such as State IT Agency and the GITO Council will assist in eliminating this problem.

Policy Recommendation	Target and Responsibility
• Unnecessary IT duplications must be avoided	All state organs must observe immediately, and SITA must ensure
• Eliminate the need to collect the same or similar information more than once within a department or within government.	An appropriate Architecture within 6 months of execution, with SITA implementing. Benefits should be felt the 2nd semester of execution
• Provide Government programs with access to information collected by other programs, especially where this would improve the efficiency and effectiveness of service delivery.	An appropriate Architecture within 6 months of effecting, with SITA implementing. Full impact 2nd quarter