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.

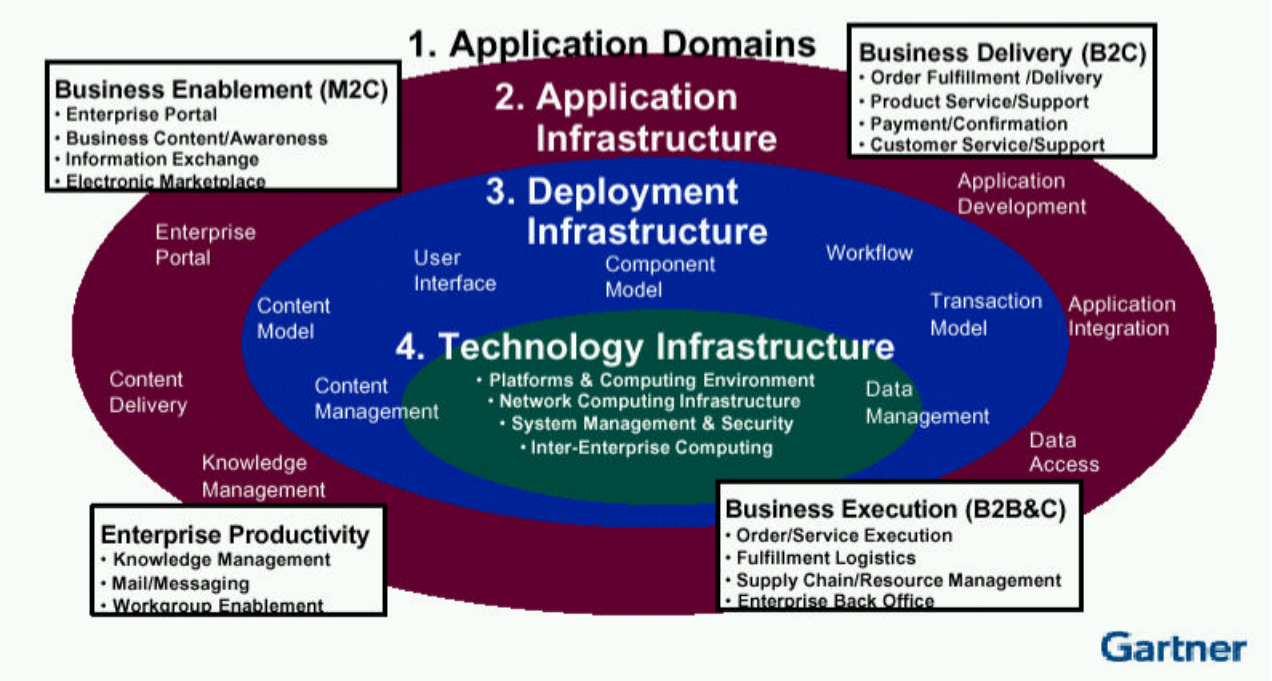
In a fair society, all individuals have equal opportunity to participate in, or benefit from, the use of IT resources regardless of race, gender, religion, age, disability, language, or any other such factors. Empirical research in all nations confirms the growing gap between the rich and the poor, as 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

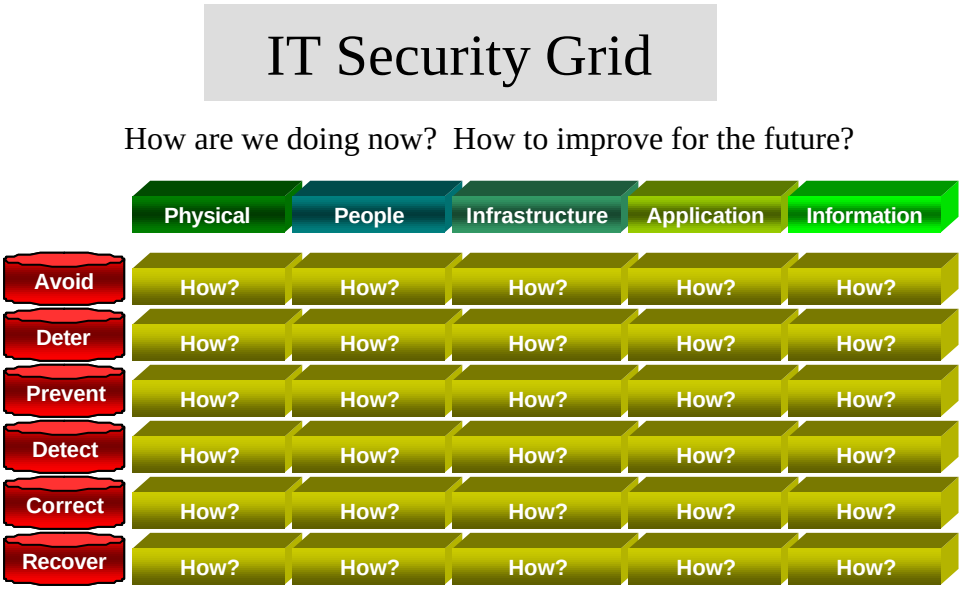
Interoperability should be achieved without compromising vital IT security concerns. Government must not readily accept naive IT vendor-driven solutions to solve the enormous problem of interoperability. Simplistic standardisation or crude rationalisation breeds serious security problems. It increases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