IMPLEMENTATION GUIDELINE

FOR

CORPORATE GOVERNANCE OF INFORMATION AND COMMUNICATION TECHNOLOGY POLICY FRAMEWORK

Version 2

February 2014

1   Executive Summary

Information and Communication Technology (ICT) is playing an ever-increasing role as a strategic enabler of public service delivery. To enable Political and Strategic leadership to embrace ICT as an enabler of business, the DPSA developed the Corporate Governance of ICT Policy Framework, herein called the Framework. Cabinet adopted the Framework on 21 November 2012.

This Implementation Guideline was developed to support departments with the implementation of the Framework. The DPSA collaborated with the Government Information Technology Officer Council (GITOC) on the development of the Framework and this Implementation Guideline.

The Framework requires departments to implement the corporate governance of ICT (CGICT) and Governance of ICT (GICT) as an integral part of its corporate governance arrangements. A phased implementation approach is followed that should be completed by the dates indicated. These phases include deliverables as per the following:

- Phase 1 (March 2014): Creation of an enabling environment: Implementation of the CGICT and GICT
  - Departmental Corporate Governance of ICT Policy and Charter depicting how CGICT will be implemented and managed in the context of the department
  - Designation of a Governance Champion to coordinate the development and implementation of CGICT
  - Departmental Governance and Management of ICT Framework for the governance and management of the ICT unit by the Government Information Technology Officer (GITO)
- Phase 2 (March 2015): Strategic alignment: Implementation of business and ICT alignment
  - ICT Strategic Plan (ICT Plan), ICT Implementation Plan (depicted in the MTEF) and ICT Operational Plan (ICT APP); which is aligned with the departmental strategic plan.
  - Optional deliverables that will allow departments to improve the articulation of ICT enablement and management of information.
- Phase 3 (Beyond March 2015): Continuous improvement of governance and strategic alignment arrangements
  - Continuous Improvement Roadmap depicting the department's improvement plans for its CGICT, GICT and strategic alignment arrangements to optimise ICT enablement of service delivery

Although the Framework follows a phased approach for the implementation of CGICT, departments can, where possible, implement these phases concurrently.

Within the context of the Framework the Executive Authority should provide the political leadership, the HoD strategic leadership and Executive Management to ensure its implementation and management

The implementation of the Framework will be monitored annually for conformance by the Department Public Service and Administration (DPSA), performance by the Department of Planning, Monitoring and Evaluation (DPME) and audited by the AG.

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2 Terms and Definitions

AG	Auditor-General of South Africa
Business	The business of the department refers to the department's service delivery and internal support activities
CGICTPF	Corporate Governance of ICT Policy Framework
COBIT®	Control Objectives for Information Technology
Corporate	**Public Service:** A group of related departments that enables the Public Service to achieve its strategic mandate **Department level:** A group of related components that enables a department to achieve its strategic mandate For the purpose of this Framework, Corporate means the same as Enterprise
Corporate Governance	"...*The set of responsibilities and practices exercised by the board and Executive Management with the goal of providing strategic direction, ensuring that objectives are achieved, ascertaining that risks are managed appropriately and verifying that the enterprise's resources are used responsibly.*" (IT Governance Institute: ISACA [CGEIT] Glossary: 5 as amended) Procedures and processes according to which an organisation is directed and controlled. (Glossary of Statistical Terms – Organisation of Economic and Co-operation Development www.oecd.org)
Corporate Governance of ICT	The system by which the current and future use of ICT is directed and controlled. Corporate governance of ICT involves evaluating and directing the use of ICT to support the organisation, and monitoring this use to achieve plans. It includes the strategy and policies for using ICT within an organisation. (ISO/IEC 38500: 2008: 3)
Corporate Governance of ICT Policy	The departmental Corporate Goveranance of ICT Policy that implements the objectives, principles and practices of the Framework.
Department	A national department, a national government component, the Office of a Premier, a provincial department or a provincial government component (Public Service Act 103 of 1994, as amended) (PSA) For the purpose of the FRAMEWORK reference to department includes public administration in all spheres of government, organs of state and public enterprises as per Section 195 of

	the Constitution, Act No 108 of 1996, as amended
DPSA	Department of Public Service and Administration
Executive Authority	In relation to –
	(a) the Presidency or a national government component within the President's portfolio, means the President;
	(b) a national department or national government component within a Cabinet portfolio, means the Minister responsible for such portfolio;
	(c) the Office of the Commission, means the Chairperson of the Commission;
	(d) the Office of a Premier or a provincial government component within a Premier's portfolio, means the Premier of that province; and
	(e) a provincial department or a provincial government component within an Executive Council portfolio, means the member of the Executive Council responsible for such portfolio;
	(PSA 103 of 1994, as amended)
	In terms of this Policy Framework the Presidency refers to the Ministers in the Office of the President.
Executive Management	The Executive Management of the Department and could include the Head of Department, Deputy Directors-General (DDGs) /Executive Management of the Department. This normally constitutes the Executive Committee of the Department and should include the GITO.
Framework	The Corporate Governance of ICT Policy Framework (CGICTPF)
GICT	Governance of ICT
GITO	Government Information Technology Officer (Cabinet Memorandum 38(a) of 2000)
Governance Champion	The Senior Manager in the department who is responsible to drive Corporate Governance of and Governance of ICT.
Governance of ICT	The effective and efficient management of ICT resources to facilitate the achievement of company strategic objectives. (King III Code: 2009: 52)
	Is the responsibility of executives and the board of directors, and consists of the leadership, organisational structures and processes that ensure that the enterprise's IT sustains and extends the organisation's strategy and objectives (ITGI 2005)
	The system by which the current and future use of IT is directed and controlled.
Governance Principles	The vehicle to translate the desired behaviour into practical guidance for day-to-day management

GWEA	Government-wide Enterprise Architecture
HoD	Head of Department or Organisational Component as per the PSA
ICT	Information and Communications Technology, also referred to as IT
ICT Plan	The ICT Strategic Plan informed by the departmental Strategic Plan that articulate the requirements of business service delivery enablement by the ICT function
ICT Operational Plan	The ICT Annual Performance Plan that articulates the business enablement by ICT
IT	Information Technology , also referred to as ICT
M&E	Monitoring and Evaluation
MPSA	Minister of Public Service and Administration
MTEF	Medium Term Expenditure Framework
Prescriptive Landscape	All Acts of Law, Regulations, Frameworks, Policies, National and International Agreements that a Department must comply to in the execution of its work.
PSA	Public Service Act 103 of 1994, as amended
PSR	Public Service Regulations of 2001, as amended
Responsible	Refers to the person who must ensure that activities are completed successfully
Risk Appetite	The amount of residual risk that the Department is willing to accept. (PSRMF 2010:15)
Risk Management	A systematic and formalised process to identify, assess, manage and monitor risks. (PSRMF 2010:16)
The Guideline	This Implementation Guideline for the Framework

3 Purpose

The purpose of this document is to provide guidelines for the implementation of the Framework in departments. This Guideline must be adapted by departments within its individual unique environment.

4 Introduction

Information and Communication Technology (ICT) is playing an ever-increasing role as a strategic enabler of public service delivery. This importance is emphasised by the King III Report [7], the Presidential Review Commission (PRC) report of 1998 and the findings of the Auditor General (AG). The PRC Report and AG identified a lack of political and strategic leadership of ICT in the Public Service. To enable Political and Strategic leadership to embrace ICT as an enabler of service delivery, the DPSA, in consultation with the GITOC and the AG developed the Framework.

The AG identified various priority focus areas for ICT audits. These priority areas are addressed in the Framework and this Guideline through the principles, practices and minimum COBIT 5 processes, as adopted by GITOC.

The implementation of the Framework will be monitored for conformance by the DPSA, performance by the Department of Planning, Monitoring and Evaluation (DPME) in the Office of the President and audited by the AG.

5 Corporate Governance of ICT Context

Corporate governance consists of a governance system that depicts the way departments are managed and controlled. It defines the relationships between stakeholders, the strategic goals of the Public Service as a whole and those of departments individually [8].

Corporate governance is concerned with individual accountability and responsibilities within a department and is a vehicle through which value is created. Figure 1 depicts the functioning of the governance system within a model [8]. Within the governance system the Political and Strategic leadership, which is accountable, provides the strategic direction of the department. Within the departmental external and internal context strategic objectives are determined which is cascaded within the department for implementation and monitoring.

Figure 1: Corporate Governance Model
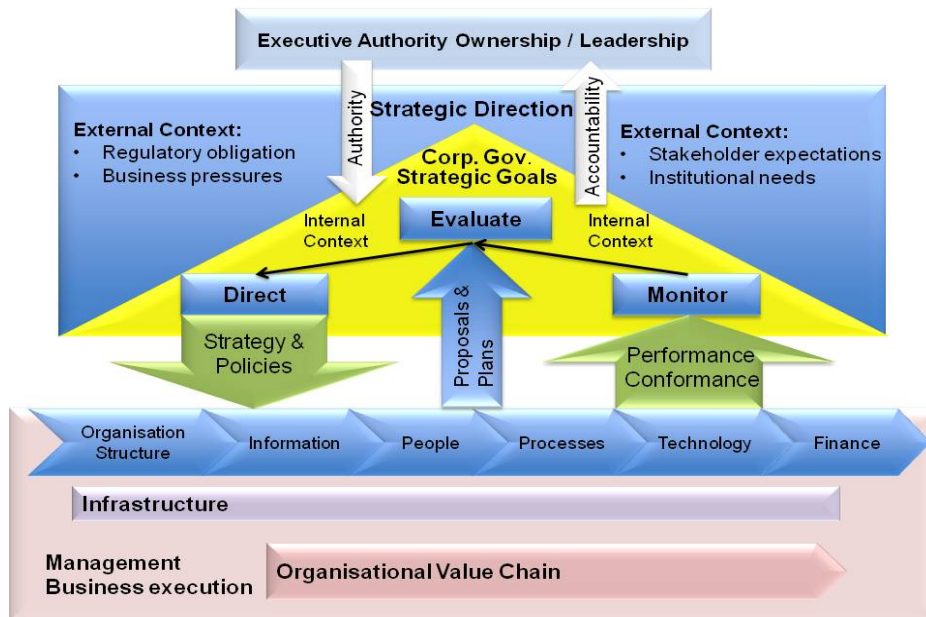
Within the corporate governance system, the Executive Authority provides the political leadership, the HoD provides the strategic leadership and Executive Management ensures implementation and management.

The Executive Authority is accountable to ensure that a corporate governance system is implemented in the department. Head of Department (HoD) is accountable for the corporate governance system whilst Executive Management is responsible for its implementation, management and continuous improvement. Within the corporate governance system of a province the Director General (DG) determines the strategy for the province and coordinates its efficient delivery.

The corporate governance of ICT is a subset of the Corporate Governance system, whilst the governance of ICT is a subset of the corporate governance of ICT. In this context the Political and Strategic leadership and Executive management is accountable/responsible for the corporate governance of ICT, whilst the GITO is responsible for the governance of ICT.

The successful implementation of the Corporate Governance of ICT is reliant on the designation of a Governance Champion function (see the Framework Paragraph 20.5 (c) (vi)). The Governance Champion will be responsible to drive the development, implementation, change management and maintenance of Corporate Governance of and Governance of ICT in the department.

The Framework makes provision for the implementation of CGICT as a subset of corporate governance as described in the following paragraphs.

6 Phased Implementation Approach

For the implementation of the Framework a phased approach, as discussed in the following paragraphs, will be followed. Departments do not have to implement the phases sequentially.

Implementation will be done in 3 phases:

- **Phase 1** (to be completed by March 2014): The creation of an enabling CGICT and Governance of ICT (GICT) environments which involves the development and implementation of a CGICT and GICT Policy depicting delegations, roles and responsibilities and organisational structure. This includes the development and implementation of the other policies indicated in the Framework (see Framework paragraph 20.5).
- **Phase 2** (to be completed by March 2015): Strategic alignment in which Political and Strategic leadership provides strategic direction for enablement of the business by ICT and the governance of ICT by the GITO; and
- **Phase 3** (to commence March 2015): Continuous improvement of CGICT is achieved through ongoing monitoring, evaluation and directing.

The following Figure 2 shows the inter-phase relationships. During Phase 1 the prescriptive environment is planned and created within which ICT enablement of the department will be governed and managed. Phase 2 relates to the planning and implementation of ICT enablement of the department. In Phase 3 shortcomings with the implementation of the previous phases are identified and rectified.

Figure 2: The Three Phases of CGICT implementation
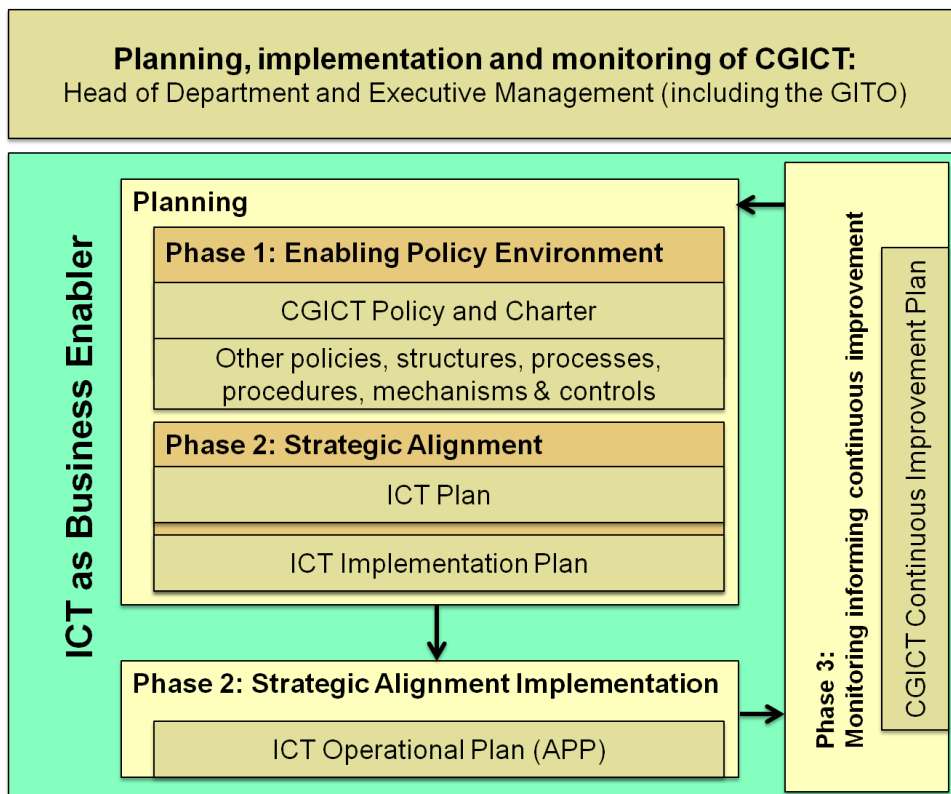
6.1   Development and Implementation Coordination

The development and implementation of CGICT should be facilitated by a cross-functional team under the leadership of the designated Governance Champion. This team should

consist of executive and senior managers with decision-making authority that represent business at a strategic level, the Government Information Technology Officer (GITO), risk management and internal audit.

7 Change Management

The successful implementation of the CGICT is dependent on effective change management, which must amongst others, address human behavioural and cultural aspects. A structured and pro-active approach should be followed to ensure acceptance and buy-in from Political and Strategic leadership down to the operational staff of the department. To ensure success change should be managed through the Governance Champion as a program.

8 COBIT 5 Priority Areas

It is indicated in the Framework that the Governance of ICT Framework will be informed by COBIT 5 processes. The GITOC (2012) adopted 12 minimum processes that should inform implementation. These processes are informed by the priority focus areas for ICT audits, as defined by the AG. The minimum processes are:

- EDM01: Governance framework setting and maintenance
- APO01: Manage the ICT management framework
- APO02: Manage strategy
- APO03: Manage enterprise architecture
- APO05: Manage portfolio
- APO10: Manage Suppliers
- APO12: Manage Risk
- APO13: Manage security
- BAI01: Manage programmes and projects
- DSS01: Manage operations
- DSS04: Manage continuity
- MEA01: Monitor, evaluate and assess performance and conformance

In order to inform the development and implementation of CGICT and GICT, the following paragraphs unpack the details of the deliverables per phase.

9 Phase 1: Creating an Enabling Environment

This phase addresses the development of departmental policies, structures, the allocation of accountability and responsibility for the implementation of CGICT.

The deliverables for this phase are:

- Designation of a Governance Champion
- Departmental CGICT Policy and Charter

- Governance of ICT Framework
- Risk Management Policy with relation to ICT
- Internal Audit Plan that includes ICT
- ICT Portfolio Management Framework
- Information Plan
- ICT Security Policy
- Business Continuity Plan (BCP), ICT Continuity Policy and Plan

9.1   Deliverable: CGICT Policy

The CGICT is about accountability and responsibility for decision making namely, how decisions are made, by whom, who should contribute to the decisions. In a departmental context this is captured in a CGICT Policy and Charter.

The Policy contains "*what*" departments should do to implement the Framework within the departmental context and governance culture. This is achieved through allocating accountability to achieve governance objectives and principles and implementing its related practices within a governance model (See Figure 1). The CGICT should describe how it is implemented through the provision of delegations, organisational structures, functions, roles and responsibilities, reporting requirements and processes.

The following documents inform the development of the Policy:

- Public Service Act and Regulations (as amended)
- Public Finance Management Act
- State IT Agency Act and Regulations (as amended)
- The Framework
- CGICT Assessment Standard
- COBIT 5 Processes: EDM01 and APO01, APO02, DSS01, MEA01 [9]

9.1.1   Objectives and critical success factors

The objectives of this policy (for complete list see the Framework Paragraph 13) should be aligned with that of the Framework and should, as a minimum, address the following:

- Embed the Corporate Governance of ICT and Governance of ICT as a subset of Corporate Governance in the department
- Create business value through ICT enablement by ensuring business and ICT strategic alignment
- Provide relevant ICT resources, organisational structure, capacity and capability to enable ICT service delivery
- Achieve and monitor ICT service delivery performance and conformance to relevant internal and external policies, frameworks, laws, regulations, standards and practices
- GITO should represent the ICT function on Executive Management level

Due to the unique nature of individual departments, departments are expected to develop critical success factors for these objectives and monitor it through the ICT Strategic Committee (see Paragraph 7.2.5.1).

9.1.2 CGICT Principles and Practices

The departmental CGICT Policy adopts principles, related accountability structures and practices of the Framework (See the Framework paragraph 14).

Table 1 below provides an example of how principles and practices of the Framework can be implemented.

Table 1: Mapping CGICT accountability, principles and practices

Structure	Principles	Practice
Executive Authority	• Must ensure that Corporate Governance of ICT achieves the political mandate	• Provide political leadership and strategic direction, determine policy and provide oversight; • Ensure that ICT service delivery enables the attainment of the strategic plan; • Ensure that the department's organisational structure makes provision for the Corporate Governance of ICT • Where applicable ensure CGICT arrangements are in place for cross sector responsibility
Head of Department	• Must ensure that CGICT supports the department to achieve its strategic plan • Must create enabling environment for CGICT within prescriptive and secure context	• Provide strategic leadership and ensure alignment • Place CGICT on strategic agenda • Ensure CGICT Policy is developed and implemented • Ensure roles and responsibilities are defined and delegate authority, responsibility and accountability • Ensure realisation of value through use of ICT • Ensure CGICT and ICT capacity and capability is provided • Ensure monitoring of CGICT and alignment effectiveness

9.1.3 Business requirement

Political and Strategic leadership should define what is expected from the ICT function in the department to realise business value.

9.1.4 Business and ICT alignment planning

ICT is expected to support the achievement of the departmental strategic goals. The policy should describe the process that the department will follow for the planning of ICT enablement of its business. This should be aligned with the department's current strategic planning and management regime.

9.1.5 Stakeholders

Departments should define all stakeholders that have an internal or external influence on the CGICT and identify their roles and functions. The following Table 3 shows an example:

Table 2: Example of departmental stakeholders

List of stakeholders	Role and Functions
Cabinet	Provide political mandate for department
Department of Public Service and Administration	Support the Minister for Public Service and Administration in leading Public Service transformation and perform compliance monitoring
Department of Planning Monitoring and Evaluation	Perform and report to Cabinet on management performance evaluation
Auditor General	Conduct independent ICT audits
Executive Authority	Provide political leadership for a department
Head of Department	Provide strategic leadership in a department

9.1.6 Prescriptive landscape

The HoD and Executive Management should ensure that the internal and external CGICT prescriptive landscape is defined and understood.

9.2 Deliverable: CGICT Charter

The Charter depicts how the departmental CGICT Policy will be implemented and describes the related delegations, roles and responsibilities, functions, processes and reporting. The Charter is not necessarily a separate document from the Corporate Governance of ICT Policy.

The Charter is informed by the following:

- Public Service Act and Regulations (As amended)
- The Framework
- Government –wide Enterprise Architecture Framework (GWEA)
- Departmental CGICT Policy
- CGICT Assessment Standard
- COBIT 5 Processes: EDM01 and APO01, APO02, DSS01, MEA01 [9]

9.2.1 Accountability, roles and responsibility

The CGICT Charter depicts "*how*" departments should execute the policy with regards to accountability, roles, responsibility, functions and organisational structures for the CGICT and how it will be implemented. The following functions should be addressed as a minimum:

- Compliance to prescriptive landscape
- Creation of the enabling environment for Corporate Governance of ICT and Governance of ICT
- The alignment and implementation of business and ICT strategies
- Conformance and performance measurement and reporting

- How business owners will oversee ICT service delivery in support of their business enablement

The responsibility to execute the abovementioned functions should be assigned to the different roles and structures and depicted in a Responsibility, Accountability, Consulting and Information (RACI) Chart and should as a <u>minimum</u> depict accountability and responsibility.

The Chart should at least address the following roles and structures:

- Executive Authority
- Head of Department
- Executive Management
- Business owners (on an executive / senior management level)
- Chief Financial Officer
- Governance Champion
- GITO
- ICT Manager
- ICT Strategic Committee
- ICT Steering Committee
- ICT Operational Committee
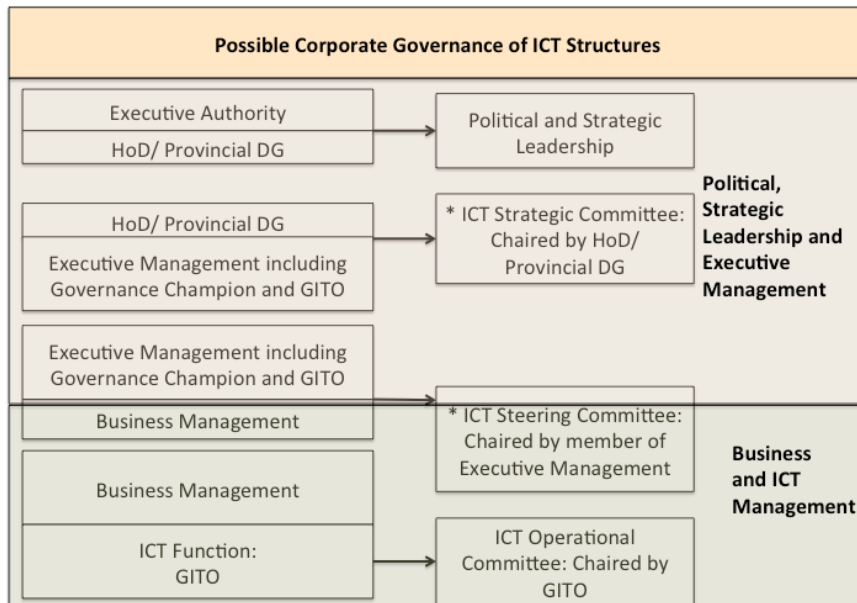
9.2.2 CGICT Structures

Within a governance system the CGICT and GICT is executed on Political and Strategic leadership, Executive Management, business and operational levels. Different decision making forums should support the Political and Strategic leadership and Executive Management in the performance of their CGICT duties, these could be:

- At a strategic and executive level: ICT Strategic Committee
- At a business level: ICT Steering Committee
- At an ICT functional level: ICT Operational Committee

<u>Where possible, departments should absorb the functions of these committees into existing structures.</u>

Figure 3 below shows the levels at which these committees should be created.

Figure 3: Typical CGICT Political and Executive Management Structures

Possible Corporate Governance of ICT Structures

| Executive Authority | → | Political and Strategic Leadership |
| HoD/ Provincial DG | | |

| HoD/ Provincial DG | → | * ICT Strategic Committee: Chaired by HoD/ Provincial DG |
| Executive Management including Governance Champion and GITO | | |

Political, Strategic Leadership and Executive Management

Executive Management including Governance Champion and GITO		
Business Management	→	* ICT Steering Committee: Chaired by member of Executive Management
Business Management		

Business and ICT Management

| ICT Function: GITO | → | ICT Operational Committee: Chaired by GITO |

9.2.2.1 Functions of Committees

The ICT Strategic Committee should conceptualise and oversee CGICT, GICT and strategic alignment. An ICT Steering Committee should coordinate and oversee the planning, implementation and execution of the CGICT, GICT and strategic alignment and related monitoring activities. The ICT function should have an ICT Operational Committee that keeps track of the day-to-day ICT service management elements and reporting.

- **ICT Strategic Committee (Executive Committee - level)**

    This committee is chaired by the HoD/Provincial DG and includes members of Executive Management, the Governance Champion and GITO/Provincial GITO.

    Evaluate the departmental strategic plan and internal and external environment to:

    – Identify stakeholder needs and how it should be realised
    – Determine value ICT is expected to create through its enablement of the business
    – Define the benefits ICT is expected to realise in its enablement of business
    – Articulating ICT risk appetite and how it should be management within the risk management regime of the department
    – Facilitate the establishment of sufficient ICT organisational structure, resources, capacity and capability
    – Evaluate and monitor significant ICT expenditure
    – Determine the monitoring criteria and reporting requirements
    – Broadly understand the implications of the ICT prescriptive environment
    – Evaluate the change management requirements for the implementation of CGICT

Conceptualise and *direct* business enablement by ICT arrangements:

– Direct the development of the ICT Plan, ICT Implementation Plan and ICT Annual Performance Plan
– Ensure integration of CGICT into the agenda of the Executive Committee
– Approve CGICT Policy and Charter, ICT Plan, ICT Implementation Plan (MTEF), ICT Operational Plan (APP) and other related plans and policies
– Approve portfolio of ICT projects and its related expenditure
– Provide direction for the change management requirements for the implementation of CGICT
– Guide implementation of the Framework and related policies and strategies

Monitor that implementation conforms to the criteria:

– Conformance, performance and assurance oversight and monitoring
– Ensure that risk is managed and the ICT is audited internally and independently
–

- **ICT Steering Committee**

This committee is chaired by a member of Executive Management and includes members of Executive and Senior Management, the Governance Champion and GITO.

Evaluate:

– Coordinate development of CGICT Policy
– Coordinate planning based on direction received from the ICT Strategic Committee
– Determine, prioritise and recommend plans, policies, strategies, resource/capacity requirements, portfolios of ICT projects and risk management to ICT Strategic Committee and/or HoD
– Oversee the identification of the ICT prescriptive environment

Direct:

– Oversee the implementation of approved plans, policies, strategies, resource/capacity requirements, risk management, benefits realisation, portfolios of ICT projects, internal and external audits
– Determine the monitoring criteria and related reporting requirements and processes for conformance, performance and assurance
– Provide direction to all ICT related decisions that may have an impact on the business operations and culture of the department that is escalated to the Committee
– Determine the change management requirements for the implementation of CGICT and report to Strategic Committee

Monitor:

   – Conformance, performance and assurance monitoring and reporting to ICT Strategic Committee
   – Oversee and report on the change management implementation for the implementation of CGICT

- **ICT Operational Committee**

  This committee is chaired by the GITO and includes business and ICT management. Provide input into the development of ICT Plan, ICT Implementation Plan, ICT Operational Plan, Governance of ICT Framework and ICT Project Program

   – Coordinate implementation of ICT Plan, ICT Implementation Plan, ICT Operational Plan and ICT Project Program
   – Day-to-day operational and service management (Manage Suppliers and Service Level Agreements)
   – Manage ICT Service delivery risk management
   – Conformance and performance reporting to ICT Steering Committee

9.2.3   Risk assessment and mitigation

ICT is a specialised environment thus departments should utilise an applicable ICT risk management framework or system. The results of applying this framework should feed into the application of the Public Sector Risk Management Framework. ICT risk must be managed within the risk tolerance of the department.

9.3   Deliverable: Governance and Management of ICT Framework

Governance and Management of ICT (G&M Framework) is concerned with the individual accountability and responsibilities with regards to the ICT function and its operations. [Refer to the Framework paragraphs 20.5(b) and 20.5(d)(v)]:

The following documents inform the development:

- Public Service Act and Regulations (as amended)
- Public Finance Management Act
- State IT Agency Act and Regulations (as amended)
- Cabinet Memorandum 38(a) of 2000
- The Framework
- Departmental CGICT Policy and Charter
- CGICT Assessment Standard
- COBIT 5 Processes: APO01, APO02, APO12, APO13, BAI01, DSS01, DSS04 and MEA01 [9]

Within this context it is necessary to, within the ICT unit, ensure that all delivery of service to the business, infrastructure, systems and related activities are focussed on fulfilling the ICT Plan. This is executed by providing a properly structured and sustainable ICT environment and ensuring that risks are appropriately managed. The G&M Framework

contains what departments should do to implement governance of ICT within the ICT unit. It is achieved through allocating structures, functions, roles and responsibilities within a governance system and implemented through:

- Processes
- Principles and policies
- Organisational structures
- Skills and competencies
- Culture and behaviour
- Service capabilities
- Information management

The G&M Framework should also address the following:

- Service delivery structure of the ICT unit with its related functions, responsibilities, delegations and authorities
- Stakeholders and role-players
- Supplier Management
- ICT Strategy management
- ICT Plan implementation
- ICT Risk management
- ICT conformance and performance audit
- Adhere to applicable ICT prescriptive requirements
- ICT Program and Project (portfolio) management
- ICT Continuity management
- ICT Security management
- ICT Service management

9.4 Deliverable: Other Related Policies and Plans

According to the Framework the following minimum enabling policies and plans should be developed and implemented and should thus be referenced in the Policy:

- **Departmental Risk Management Policy** – must include how business-related ICT risks will be managed and how capacity will be created in the Risk Management Function to address ICT-related risks. This is informed by the National Treasury Risk Management Framework and COBIT 5 Process APO12 [9].
- **Internal Audit Plan** – should include ICT audits. It should also indicate how the Internal Audit Function will be capacitated to perform ICT-related audits. This is informed by the National Treasury Internal Audit Framework and COBIT 5 Process MEA01 [9].
- **ICT Portfolio Management Framework** – should be embedded in the departmental Portfolio/Programme Management Structures. It must explain how the department will create the necessary capacity to manage ICT-related business programmes/projects. The department must standardise on an internationally accepted methodology. This is informed by COBIT 5 Process APO05 and BAI01 [9].
- **Information Plan and ICT Security Policy** – must ensure that classified information, intellectual property and personnel information are protected within ICT systems. This is informed by the MISS and COBIT 5 Process APO13 and DSS05 [9].

- **Business Continuity Plan (BCP)** – should be informed by the operational, information and data requirements of the business. The BCP must inform the ICT Continuity Policy and Plan. This is informed by COBIT 5 Process DSS04 [9].

10 Phase 2: Business and ICT Strategic Alignment

Strategic alignment of business strategy and ICT enablement provides for a consistent integrated approach to the planning of the use of ICT in departmental service delivery. The aligned strategy integrates into the Medium-term Expenditure Framework (MTEF). Strategic alignment further ensures that ICT enablement of service delivery is defined, can be effectively and efficiently managed and that monitoring and evaluation are performed through the MTEF and APP mechanisms.

Strategic alignment between business and ICT is achieved by way of an enterprise architecture methodology as prescribed in the Government-wide Enterprise Architecture (GWEA) Framework and Implementation Guide published by the DPSA in 2009.

ICT alignment is articulated in an ICT Strategic Plan (in the context of this Guideline referred to as an ICT Plan), an ICT Implementation Plan reflected with the MTEF and ICT Operational Plan reflected in an ICT Annual Performance Plan (APP). Figure 3 below shows the 5 year and annual planning and reporting cycles and how the departmental strategic plan is cascaded for implementation. Related to this cascade, it shows the ICT Plan that is informed by the departmental strategic plan and its related cascade.

Figure 5: Alignment of Business and ICT
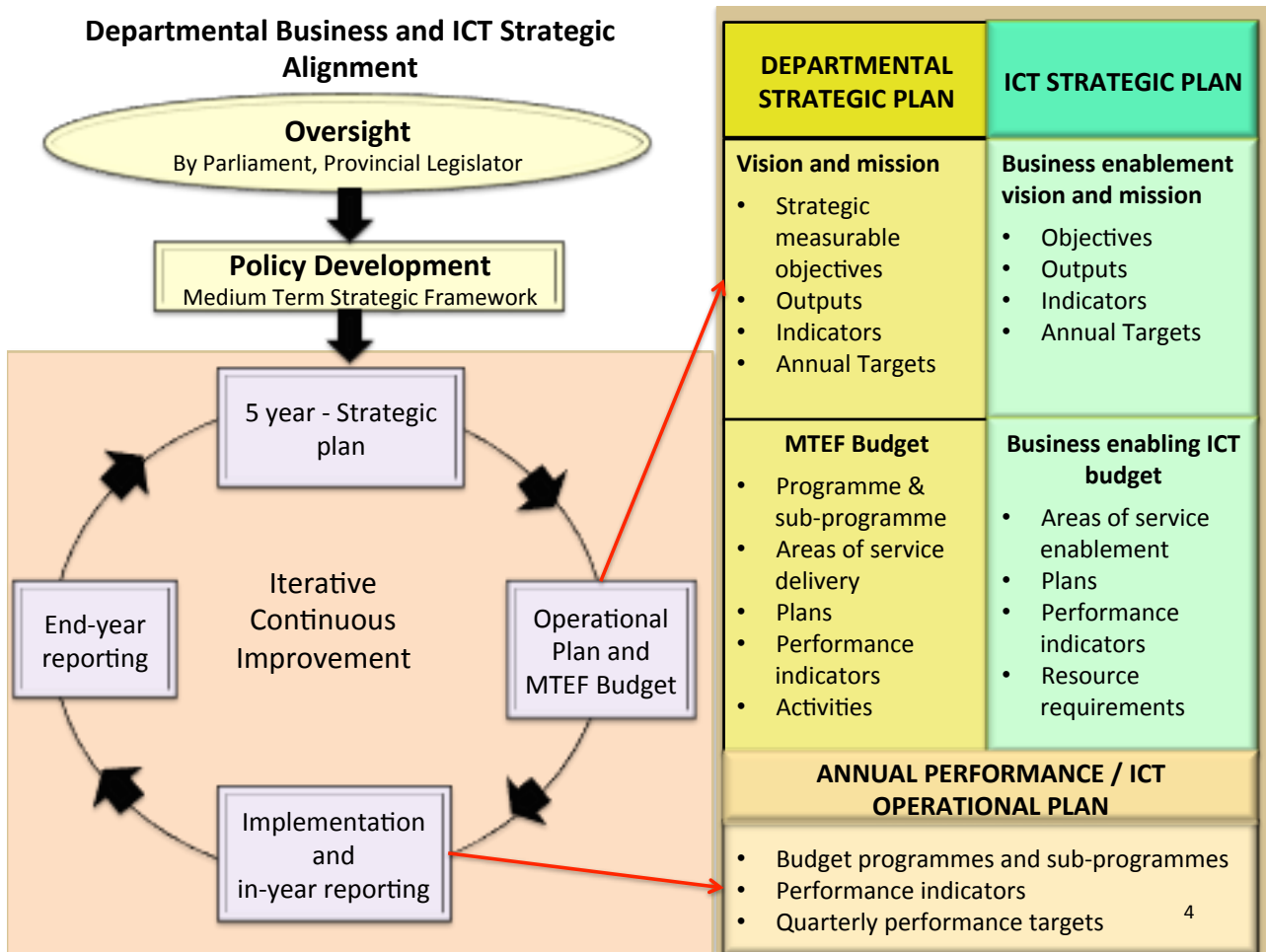
In the strategic alignment process departments should consult the following source documents:

- Public Service Regulations
- Treasury Regulations
- SITA Act and Regulations
- The Framework
- National Treasury Strategic Planning and APP Framework, Medium Term Strategic Framework
- Departmental Strategic Plan, CGICT Policy, Charter and G&M ICT Framework
- National Archives and Records Services Act
- Government-wide Enterprise Architecture Framework and Implementation Guide
- Department's Enterprise Architecture (Business, Data, Application and Technology architecture)
- CGICT Assessment Standard
- COBIT 5 Processes: APO01, APO02, APO03, APO05, APO10, APO12, APO13, BAI01, DSS01 and MEA01 [9]

The following are deliverables of Phase 2:

- Departmental Enterprise Architecture derived from the departmental strategic plan that informs the ICT Architecture to establishing the following deliverables:
  - **ICT Plan** (5 Year view), as informed by the Department Enterprise Architecture, including ICT Objectives, Annual Targets, Key Performance Indicators, ICT Functions and Services (employed or outsourced), ICT Programmes and ICT Budget.
  - **ICT Implementation Plan**, including ICT Transformation Programmes, Schedules, ICT Project organisation structure
  - **ICT Procurement Plan**, including ICT Product and Service contemplated for acquisition during the performance cycle.
  - ICT Operational Plan and **Annual Performance Plan**, as per Treasury Guideline.

The following paragraph describes the context of Enterprise Architecture relating to existing planning frameworks and methodologies.

10.1 Departmental Strategic Management

Strategic management in departments is a well-established practice, which is guided by the processes contained in the National Treasury's Strategic Planning Framework.

The DPSA has the mandate to improve the effectiveness and efficiency of public service delivery and is currently in a process to develop the Service Delivery Planning and Methodology (SDP&M). Within this context the alignment of departments to their political mandate is achieved and departments are structured with the required resources, processes, infrastructure, systems, information and related technology to perform their work. In line with the responsibility of strategic management of departments the strategic plan is articulated in the departmental Medium Term Strategic and Expenditure Framework MTS/EF), which eventually results in the operationalisation of the strategy in the Annual Performance Plans. In architecture terms, this is called an Enterprise Architecture.

Within this construct departments create an Enterprise Architecture by way of international recognised frameworks and methodologies that reflects the way in which they deliver their public service. Enterprise Architecture practice articulates a department's external and internal environment defining its service elements, the relationships between the elements and its environment, and the principles guiding its design and evolution. The purpose of enterprise architecture practice is, *inter alia*, to help a department design how to effectively and efficiently deliver on its political mandate.

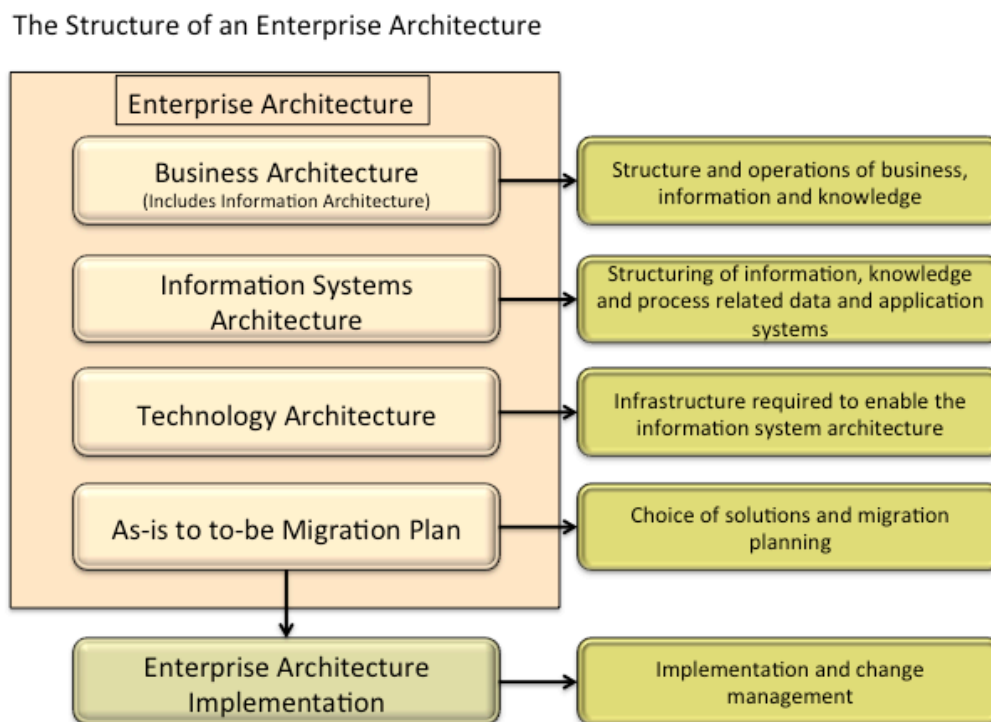The Enterprise Architecture consists of:

- Business and Information Architecture planning articulates the **business execution** format and its objectives, rules, standards, processes, information, other resources and data requirements to execute the political mandate of the department and this is known as the **Business Architecture**
- In relation to this, ICT is designed to enable the business of the organisation. The ICT architecture practice aligns ICT, as a business enabler, with the requirements of the department.

- – **Information Systems Architecture** describes what major software is required to enable and in some cases fully automate the public service delivery in a more effective and efficient way.
  - – **Technology Architecture** defines the technical **infrastructure** (such as telecommunication infrastructure, data processing centres, computers and ICT securityrequirements, to enable the information systems to communicate, store and process data at all the public service outlets of the department.
- • **Migration Planning** allows the department to develop a migration roadmap between the current state of affairs and the ideal future as defined in the Business and ICT Architectures
- • **Management of the implementation** of the migration roadmap

A formal Enterprise Architecture Methodology is used to develop the Enterprise Architecture.

Figure 6 shows the enterprise architecture development process flow from the articulation of the business, the development of information systems and technology for public service delivery, the migration roadmap and implementation thereof.

Figure 6: Unpacking of Enterprise Architecture

In the context of the Public Service the DPSA published the Government-wide Enterprise Architecture (GWEA) Framework with its related Implementation Guideline for development of their Enterprise Architecture and related ICT Plans.

10.2 Departmental Strategic Plan

The format and content of the strategic plan is well defined in the National Treasury Framework. It can either fulfil the function of a Business Architecture or inform the context

for the creation of it. The Business Architecture should guide the department in the development of related enabling architectures and should contain the following:

- A description of the all business areas depicting how business is currently conducted and interrelated. It should contain a roadmap of how the business will migrate to be more efficient in the future. This roadmap should be captured in the MTS/EF and annual performance plans.
- Description of business elements required to execute the business of the department and identifying the related business owners.
- Design of the organisational structure, processes, infrastructure, systems and related technology that enable the execution of business elements.
- Description of the secure information life cycle and related requirements across the department and, where necessary, how information interrelates to other external entities without any duplication or fragmentation of data.

The Business Architecture is used to develop and structure the business enabling ICT arrangements, which is depicted in an ICT Architecture. as discussed in the following Paragraph

10.3 ICT Architecture

The ICT Architecture addresses how ICT is planned, structured and configured in order to respond to the business needs of the department. This planning results in an ICT Plan, ICT Implementation Plan and ICT Operational Plan. The following paragraphs discuss the plans and their elements.

10.3.1 Deliverable: ICT Plan

The ICT Plan is a deliverable of the ICT Architecture process and articulates the Business Architecture into the ICT response to business requirements. It shows how ICT should enable business service delivery in a prioritised and measurable way and how its implementation will be monitored from a business perspective.

The Plan should include the following:

10.3.1.1   ICT Vision

A description of what Political and Strategic leadership expects from ICT service delivery in the light of the Strategic Plan and MTS/EF, this informs the ICT Architecture Vision.

10.3.1.2   ICT Mission

Departments should articulate what ICT is expected to translate to its Business Architecture, the enablement needs of the department and how/when it will be implemented describing the objectives, goals, targets, key performance indicators and measurement criteria, risk management and audit expectations.

10.3.1.3   ICT Plan Elements

The following architectural elements should be addressed in the ICT Plan:

- **Information Systems Architecture** – consists of two components that are used to describe the nature of data in the department and the business arrangements required to provide and manage it according to the following architectures:
    - **Data Architecture** - a structure of the information and data needs requirement of the elements of the Business Architecture, the standards it should comply to and the enabling organisational structure for the life cycle management of the data defining the optimised and ideal or Target Architecture solution.
    - **Applications Architecture** – defines the major business arrangements relevant to the department and what is required of these arrangements to manage data and to present information when and where it is required, defining the current state and optimised Target Architecture solution.
- **Technology Architecture –** Informed by the Information Systems Architecture the Technology Architecture defines the underlying required technology to enable the execution of business arrangements, representing software and hardware requirements. It describes the current state and optimised Target Architecture solution.

10.3.1.4   ICT Plan Accountability and Responsibility

Departments should allocate accountability and responsibility for Political and Strategic Leadership, Executive and Senior management and ICT management for the development and implementation of this ICT Plan. (RACI Chart)

10.3.2 Deliverable: ICT Implementation Plan

A departmental ICT Implementation Plan should reflect the current state of affairs, the Target Architecture and a structured roadmap to migrate from the current to the ideal state. It structures and prioritises the projects and expected work effort to affect the migration process and is reflected in an Architectural Migration Plan. The prioritised projects in the ICT Implementation Plan should be reflected in the departmental MTEF. The ICT Implementation Plan also should quantify and describe the ICT organisational structure, competency, capacity and resource requirements of the migration plan.

The ICT Implementation Plan can be an integral part of the ICT Plan and does not necessarily have to be a separate document.

10.3.3 Deliverable: ICT Operational Plan

The ICT Operational Plan breaks down the ICT Implementation Plan into the current year ICT Annual Performance Plan; in architecture terms it is called Implementation Governance. It should unpack the current year implementation projects and ICT operations and ensure that the elements are in place to measure the successful implementation and conformance to the Target Architecture. It should address:

- The internal ICT operational policies required
- Stakeholder analysis

- Current year business enabling ICT programmes and projects as defined in the Target Architecture
- Optimisation planning for operations, infrastructure and systems
- ICT continuity and risk management

Enterprise and its related Architectures create a complete practice for aligning ICT with the business of the department, identifying the optimal ICT solutions to enable business, defining the current Architectures with a migration roadmap to a Target Architecture. It also facilitates the implementation of the migration roadmap. This practice embraces and compliments the full spectrum of the current Strategic Planning frameworks in government and provides a mechanism to plan for the effective and efficient use of ICT in the department.

10.4 Optional Deliverable: Information Plan

The Information Plan of the department ensures that agile and reputable information is available and managed to support the core and front-line service delivery. The Information Plan thus articulates the physical and electronic information needs of the department. ICT is not the exclusive mechanism for, but is primarily utilised to create, move, store and present information. In order to ensure that information is managed according to the departmental needs, the following must be addressed in the Information Plan:

10.4.1 Alignment of the Information Plan with the Strategic Plan

Information is a strategic resource in the department and should be managed as such. It exists as an integral part of the strategic goals of the department. Information cascades in a department from a strategic level to a programme operational level. The Information Plan must articulate the strategic intent of the departmental information and should address the following:

- Strategic purpose of departmental information as a resource
- A description of the applicable classification scheme
- How information should be created, stored, presented, moved, aged and disposed
- How different classes of information should be protected throughout its life cycle, whether electronic or paper based
- Reporting and monitoring requirements

10.4.2 Information classification

Departments should classify information according to its actual value and sensitivity to ensure that appropriate management protection is applied. The classification scheme must be simple, effective and standardised across the department. The classification scheme should be communicated and adherence to it monitored. The classification scheme of the Minimum Information Security Standard applies to Public Service information.

10.4.3 Information life cycle

Information must be managed according to its life cycle and appropriately disposed as per the applicable prescripts. The life cycle should address planning, creation, usage, ageing

rules and disposal. The Information Plan must include a RACI chart that identifies the role-players in the life cycle with their accountability and responsibilities identified and assigned.

11 Phase 3: Continuous Improvement

The successful implementation of a CGICT and GICT systems lead to continuous improvement. The continuous improvement process should interrogate the effectiveness of the CGICT, GICT and strategic alignment in order to identify areas of, and opportunities for improvement. It should be measured through a maturity assessment methodology where shortcomings are addressed and articulated in a Continuous Improvement Roadmap. (See CGICT Assessment Standard Paragraph 3: Assessment Evidence No.7)

12 Monitoring and Evaluation

The DPSA is responsible to ensure conformance to the Framework and this will be monitored on an annual basis through the utilisation of the Management Performance Assessment Tool (DPME: MPAT). The reporting criteria are detailed in the CGICT Assessment Standard as adopted by the GITOC in 2012. Conformance will be monitored on implementation and continuous improvement of:

- CGICT Policy and Charter
- ICT Plan
- ICT Implementation Plan
- ICT Operational Plan
- Continuous Improvement Roadmap

The outcomes of this assessment are reported to Cabinet.

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