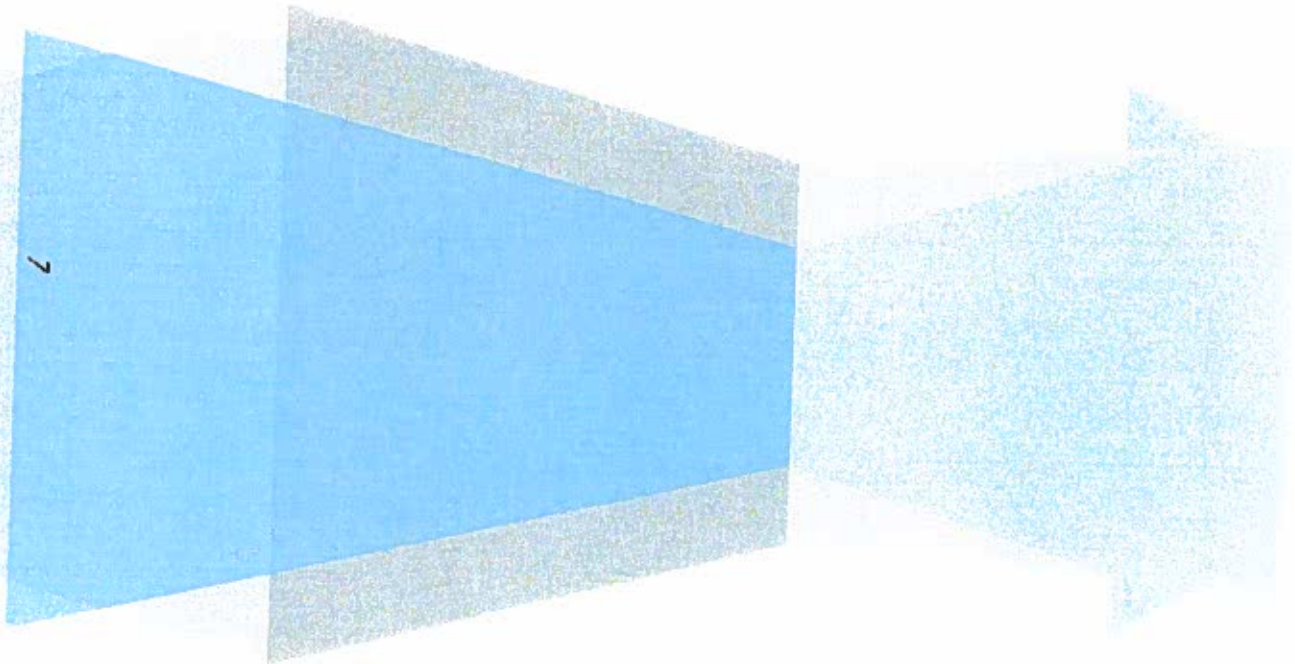


**NORTHERN CAPE
DEPARTMENT OF TRANSPORT, SAFETY AND LIAISON**



ICT Implementation Plan

(2020– 2022)



DOCUMENT CONTROL

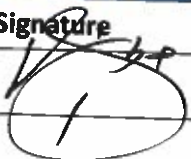
Document Details

Province Northern Cape
Document ICT Implementation Plan
Document Name ICT Implementation Plan for the Department of Transport, Safety & Liaison
Document Number: Version 2
Document Status: Final
Customer Contact: 083 283 8328
Customer Reference:
File Location: Department of Transport, Safety & Liaison
Author(s): Mr. Thembekile Aaron

Revision information

Revision Number	Revision Date	Change Reference
1.1	March 2020	

Document Approval

Name	Designation	Signature	Date	Approval (Y/N)
Mr. M. P. Dichaba	Head of Department		26/06/2020	Yes

LIST OF ABBREVIATIONS

- AD	Active Directory
- AV	Antivirus
- BAS	Basic Accounting System
- CCR	Cluster Continuous Replication
- CD	Compact Disc
- COMSEC	Communications Security
- COTS	Commercial Of The Shelf
- CSIRT	Computer Incident Response Team
- DC	Data Centre
- DHCP	Dynamic Host Configuration Protocol
- DNS	Domain Name System
- EA	Enterprise Architecture
- EIA	Enterprise Information Architecture
- GITO	Government Information Technology Officer
- PGITO	Provincial Government Information Technology Officer
- DGITO	Departmental Government Information Technology Officer
- GWEA	Government Wide Enterprise Architecture
- IDS	Intrusion Detection System
- IP	Intellectual Property
- IP	Internet Protocol
- IPS	Intrusion Prevention System
- ISA	Internet Security Acceleration
- iSCSI	Internet Small Computer Interface
- ICT	Information Communication Technology
- IT	Information Technology
- ITIL	Information Technology Information Library
- ITSM	IT Service Management
- KPI	Key Performance Indicator
- LAN	Local Area Network
- MOM	Microsoft Operations Manager
- NDS	Novell Directory Services
- NIC	Network Interface Controller
- NLB	Network Load Balancing
- OS	Operating System
- OU	Organisation Unit
- PAIA	Promotion of Access to Information Act
- PERSAL	Personnel Salaries System
- POP	Point Of Presence
- PST	Personal Storage Table
- RAM	Random Access Memory
- SAN	Storage area Network
- SARS	South African Revenue Services
- SITA	State Information Technology Agency
- SLA	Service Level Agreement

- SMS System Management Server
- SQL Structured Query Language
- TOGAF The Open Group Architecture Framework
- TRM Technical Reference model
- USB Universal Serial Bus
- VLAN Virtual Local Area Network
- VM Virtual Machine
- VPN Virtual Private Network
- WAN Wide Area Network
- WSUS Windows Server Update Services

INDEX

DOCUMENT CONTROL.....	2
LIST OF ABBREVIATIONS.....	3
1. STATEMENT OF INTENT.....	6
1. Existing ICT business enabling landscape.....	8
2. New ICT business enabling initiatives.....	10
3. ICT component operations and administrative initiatives.....	19
3.1 ICT component current annual operations and administration initiatives.....	19
3.2 ICT component new annual operations and administration initiatives.....	20
4. ICT life cycle, maintenance and upgrade management.....	21
5. Human resource costs for ICT initiatives.....	22
5.1 Internal ICT human resources.....	22
5.2 External ICT human resources.....	23
6. Budget.....	25
7. Risk management.....	26

1. STATEMENT OF INTENT

Department of Transport, Safety and Liaison

The Department of Transport, safety and Liaison has prioritised a set of strategic goals, which would make provision a reality and enable the mission statement. Targets are set for each of the Departmental strategic goals required to achieve economic growth and social development in the Northern Cape.

The Department has to deliver and improve on mandated services provided to their customers. These services could be provided by either manual or automated processes. ICT solutions and services would be required to automate the required business functions. In doing so, various types of interactions with Vendors and Suppliers are required for the acquisition of services, hardware and software, in addition to the core Departmental IT team.

Interactions and exchange of information is also required between government departments and with service providers. This would assist in keeping abreast with improved business strategies in the various sectors. Latest technologies and new ways of organising functional areas and resources.

Implementation of some of these worldwide trends and strategies could contribute towards an improved strategy and implementation thereof. In turn this would achieve:

- Improved Frontline Service Delivery [E-Government],
- Improved front / back-office functions, management practices and governance;
- Better customer service and service delivery.

The functional area within the Department may or may not align to the organisational structure. These functions are required for them to operate their business and to deliver the services they are mandated to perform.

These functions support departmental divisions in the execution of their line of business functions. Examples of these functions are: administration and management of finance, management of the facilities, recruitment of human resource and administration of personnel functions, procurement asset management, legal administration and cases, etc. The support functions and related processes are common across each of the Northern Cape Province Government Departments.

The ICT Implementation Plan (ICTIP) reflects the 3-year plan for ICT enabling business service delivery and is informed by the ICT Plan. This planning should be done in collaboration with business, who is the users of these initiatives.

The Departmental employees execute on administrative function on a day to day basis, to fulfil their responsibilities for the specific, role within a Department. The functions is to compile and publish required letters, memo's and documents, send and receive emails and faxes, schedule meetings, telephone interactions, etc., this contributes towards collaboration and knowledge share between the various employees within the business environment.

A governance framework is required within the Province with the related committees, processes, policies and standards implemented for all the levels of the Provincial business in terms of planning, budgeting, organisation structure and execution of the business functions. Together with this solid management practices, processes and procedure for the management of the daily ICT activities, incidents and problems as well as changes and new releases of hardware and software into the environment.

Collectively all the business support functions, processes, standards, skilled resources and supporting tools shall assist the Province to execute on its mandate and to fulfil its strategic goals in its mission to provide:

- Strategic Leadership;
- Economic and Social development and growth to the citizens of South Africa; and
- Opportunities for the poor to share, partake and enjoy what the Province has got to offer.

To achieve this, the Departmental IT team Strategy aims to centralise, simplify and standardize the business support and enabling capabilities, rather than having scattered, unique and complex support and enabling hardware and software and software solutions, where duplication and lack of skilled resources are prevalent.

As ICT cannot implement its objectives in isolation of the business requirements and its participation, it is necessary that the strategic objectives and the ICT objectives must be evaluated by the strategic management of a Department in order to formulate a statement of strategic intent.

The ICTIP unpacks existing and new initiatives such as projects and related budgets that will be undertaken over the next three financial years to realise the first 3-year targets of the ICT Plan. The ICTIP should address the following:

1. Existing ICT business enabling landscape

Institutions should, for each existing ICT initiative (systems and infrastructure, including line and staff function systems), provide the information on the as-is environment per Table 4 below. It indicates how each relates to the business of the institution, taking into account the value derived, see Annexure A. It should further indicate the annual targets for the next 3 years as well as the budget requirements.

Existing ICT business enabling initiatives

Institutional objective linked to	Related business service linked to	Name of business owner of the service	Name of ICT initiative	Purpose of the initiative	Value criteria (See Annexure A)	Objectives of the ICT initiative	Annual targets and budget		
							Y 1	Y 2	Y 3
Related objective as reflected in the institutional strategic plan;	Name of the business service as per the institutional catalogue of services;	The line or staff function official that ultimately owns and is responsible for the service being delivered;	The general name that the user community uses to refer to the business enabling technology either as an individual ICT element (i.e. e-mail) or a collective name (i.e. IFMS);	Description of the purpose of the business enabling ICT initiative;		Specify the objectives that the ICT initiative sets out to achieve over the 3-year period; and			
To provide professional Information Technology	- Laptops and Notebooks - Standard		Distributed Computing	Distributed Computing Services includes the					Targets

Institutional objective linked to	Related business service linked to	Name of business owner of the service	Name of ICT initiative	Purpose of the initiative	Value criteria (See Annexure A)	Objectives of the ICT initiative	Annual targets and budget
<p>services as an enabler to the Office of the Premier and other provincial departments to ultimately improve service delivery through e-Government initiatives.</p>	<p>Office Suites - Web Browsers - e-Mail and Calendarin g</p>			<p>provision and support of workstation hardware (i.e. PCs and notebooks) and the set of capabilities that support office productivity suites, email and calendaring, browsers, anti-virus and common utilities, etc.</p>			
<p>- Applications development and maintenance services - Application delivery - Software engines - Integratio</p>			<p>Application Development and Maintenance</p>	<p>Application Development and Maintenance Services include the provision and support for application development services that create new or</p>			

Institutional objective linked to	Related business service linked to	Name of business owner of the service	Name of ICT initiative	Purpose of the initiative	Value criteria (See Annexure A)	Objectives of the ICT initiative	Annual targets and budget
	n services - Database management system			enhanced functionality in support of programme-specific and corporate/administrative services (e.g. finance, material, human resources).			
2. New ICT business enabling initiatives							
							Budget

Institutions develop and commission new ICT initiatives in support of its service delivery improvement as per the SDIP, to-be environment. These new ICT initiatives, for the year of the ICTIP, should be reflected per Table 5 below. It should further indicate the annual targets for the next 3 years as well as the budget requirements.

TABLE 4. New ICT business enabling initiatives

Institutional objective linked to	Related business service linked to	Name of business owner of the service	Name of ICT initiative	Purpose of the initiative	Value criteria (See Annexure A)	Objectives of the ICT initiative	Annual targets and budget		
							Y 1	Y 2	Y 3
Related objective as	Name of the business service	The line or staff function	The general name that the user	Description of the		Specify the objectives that			

Institutional objective linked to	Related business service linked to	Name of business owner of the service	Name of ICT initiative	Purpose of the initiative	Value criteria (See Annexure A)	Objectives of the ICT initiative	Annual targets and budget
<p>reflected in the institutional strategic plan;</p>	<p>as per the institutional catalogue of services;</p>	<p>official that ultimately owns and is responsible for the service being delivered;</p>	<p>community uses to refer to the business enabling technology either as an individual ICT element (i.e. e-mail) or a collective name (i.e. IFMS);</p>	<p>purpose of the business enabling ICT initiative;</p>		<p>the ICT initiative sets out to achieve over the 3-year period; and</p>	
<p>To provide professional Information Technology services as an enabler to the Office of the Premier and other provincial departments to ultimately improve service delivery through e-Government initiatives.</p>	<ul style="list-style-type: none"> - Laptops and Notebooks - Standard Office Suites - Web Browsers - e-Mail and Calendar 		<p>Production and Operations Computing</p>	<p>The Production and Operations Computing Services includes the provision and support for the enterprise' s day-to-day operations</p>			<p>Targets</p>

Institutional objective linked to	Related business service linked to	Name of business owner of the service	Name of ICT initiative	Purpose of the initiative	Value criteria (See Annexure A)	Objectives of the ICT initiative	Annual targets and budget
				production application system and database computing environments, including web application hosting environments, regardless of where they reside in the enterprise (centralised or within departments). In addition, this service			

Institutional objective linked to	Related business service linked to	Name of business owner of the service	Name of ICT initiative	Purpose of the initiative	Value criteria (See Annexure A)	Objectives of the ICT initiative	Annual targets and budget
				group enables web-hosting environments within the intranet, Internet, and extranet environments.			
<ul style="list-style-type: none"> - Applications development and maintenance services - Application delivery - Software engines - Integration services - Database management 			Telecommunications (Data and Voice)	The Telecommunications Network services group includes both data and voice services. Data network services include the provision			

Institutional objective linked to	Related business service linked to	Name of business owner of the service	Name of ICT initiative	Purpose of the initiative	Value criteria (See Annexure A)	Objectives of the ICT initiative	Annual targets and budget
	system			and ongoing support of multi-platform, multi-protocol electronic data and communications networks, which includes all software as well as wiring, switches, hubs, routers and all other hardware required to support data communications between computing devices.			

Institutional objective linked to	Related business service linked to	Name of business owner of the service	Name of ICT initiative	Purpose of the initiative	Value criteria (See Annexure A)	Objectives of the ICT initiative	Annual targets and budget
	<ul style="list-style-type: none"> - Network Systems Management - Network Management and Operations - Intra and Inter Networks - Other Network Devices 		System Management				Budget
<ul style="list-style-type: none"> - Antivirus and Malware - Directory Services - Physical environment services - Identification, authentication, authorisation services - Detection, 			IT Security	IT Security Services is concerned with applying "safeguards to preserve the confidentiality, integrity, availability			

Institutional objective linked to	Related business service linked to	Name of business owner of the service	Name of ICT initiative	Purpose of the initiative	Value criteria (See Annexure A)	Objectives of the ICT initiative	Annual targets and budget
	<ul style="list-style-type: none"> response, recovery, audit services - Perimeter defence services - GSOC 			<p>, intended use and value of electronically stored, processed or transmitted information".</p>			
	<ul style="list-style-type: none"> - Patch Management - Software Licence Management - Software Install and Distribution 		System Management	<p>Systems Management Services is the enterprise-wide management of IT systems. This discipline includes Patch Management, Service</p>			

Institutional objective linked to	Related business service linked to	Name of business owner of the service	Name of ICT initiative	Purpose of the initiative	Value criteria (See Annexure A)	Objectives of the ICT initiative	Annual targets and budget
				Level Management, Availability Management, Capacity Management, Business Continuity Management and IT Security Management.			
<ul style="list-style-type: none"> • IT Service Desk - WSUS server 			Service Management	Systems Management Services is the enterprise-wide management of IT systems. This discipline includes Patch Management			

Institutional objective linked to	Related business service linked to	Name of business owner of the service	Name of ICT initiative	Purpose of the initiative	Value criteria (See Annexure A)	Objectives of the ICT initiative	Annual targets and budget
				ent, Service Level Management, Availability Management, Capacity Management, Business Continuity Management and IT Security Management.			

3.2 ICT component NEW annual operations and administration initiatives

Initiative	Short description	Operational / administrative element	Annual targets and budget					
			Target	Budget	Y1	Y2	Y3	
Name by which the operational initiative is known;	Describe what the initiative will achieve at the end of the financial year; and	Examples	Indicate the annual targets that the initiative should meet together with its estimated budget for each year.					
		Policy development, implementation and monitoring	Target	Budget	None			
		Governance of ICT development, implementation and monitoring	Target	Budget	None			
		Third-party management development, implementation and monitoring of service level agreements	Target	Budget	None			
		ICT Service Delivery Enablement Planning development, implementation and monitoring	Target	Budget	None			
		Monitoring and Evaluation	Budget	Budget	None			
		Other						

4. ICT life cycle, maintenance and upgrade management

ICT elements life cycle management, maintenance and upgrade management ensure that ICT systems/infrastructure stay relevant with the needs of the institution. In this regard institutions should perform a regular assessment and evaluation of the relevance of its service delivery enabling ICT systems and infrastructure.

ICT life cycle, maintenance and upgrade management

ICT Elements	Purpose <i>Describe the purpose of the element with regards to the business services it enables.</i>	Current age <i>The age of the ICT element from its delivery date.</i>	Life expectancy <i>Informed by the decisions the institution makes with regards to Annexure B.</i>	Indicate: retirement, maintenance, upgrade	Annual targets and budget <i>Indicate the annual targets that the initiative should meet together with its estimated budget for each year.</i>		
					Y 1	Y 2	Y 3
Applications							
Database systems							
Mainframes / servers / others							
Data storage							
LAN switches							
WAN switches							
Routers							
Other							

Note: a separate table could be compiled for each ICT element and/or period.

5. Human resource costs for ICT initiatives

It is important for an institution to understand its ICT human resource requirements and related expenditure within the context of its business and service delivery requirements. These are reflected in terms of internal (government officials) and external (consultants /contractors/service providers) human resources.

The following paragraphs provide templates that distinguish between these two. Table 9 provides for current internal human resources and Table 10 for current external resources.

NOTE: A gap analysis could be conducted to determine the skills shortage between the current human resources and related budget and future skills requirement. These two tables (Tables 9 and 10) can be converted to indicate the future (planned) skills requirement for internal and external ICT human resources.

5.1 Internal ICT human resources

In terms of this ICTIP, human resources are loosely categorised as per the following categories:

- a) ICT leadership senior management
- b) ICT leadership middle management
- c) ICT operational management
- d) ICT functionaries and specialists
- e) ICT administration and support

* *Categories depend on the context of the individual institution.*

Internal ICT human resources could be reflected according to Table 9.

TABLE 6. Internal ICT human resources and budget

Category	Function	ICT catalogue of services	Post level(s)	Number	Budget
According to the categories identified above.	Functional area according to the approved institutional organizational structure.	Catalogue of service rendered by the ICT function. This includes resources within the ICT component and business where applicable.		Total number of officials involved in the function (b).	Collective budget for functions based on "total cost to institution" and should include any allowances.
None					Y 1
None					Y 2
None					Y 3

5.2 External ICT human resources

External ICT human resources reflect the use of consultants, contractors and/or service providers to render ICT related services. It includes the use of SITA and any other external supplier (as contracted per business agreement and/or service level agreement on which once-off or recurring expenditure is involved). This can be reflected in line with the following Table 10:

External ICT human resources and budget

Category	Function	Role and service	SLA	Name of ICT initiative	Budget
According to the categories identified above.	Functional area according to the approved institutional organizational structure.	Describe the role of the consultants/contractors/s service providers and the ICT service, staff or line function service are linked to;	Describe the role of the consultants/contractors/service providers and the ICT service, staff or line function service are linked to;	The general name that the user community uses to refer to the business enabling ICT initiative. This can be reflected either as an individual ICT element (such as Microsoft Exchange) or a collective name (such as roads management system) that the consultants/contractors/service providers are linked to; and	3-year budget of the SLA with regards to human resources.
None					Y 1
None					None
None					None
None					None
None					None
None					None
None					None
None					None
None					None
None					None
None					None
None					None
None					None

6. Budget

The budget reflects the three-year financial requirements for the consolidated ICT needs identified in paragraphs 11.1 - 5 above. It is displayed as per the following **Table 11**:

ICT budget for the three-year period

Consolidated Budget			
	Budget Year 1	Budget Year 2	Budget Year 3
Existing ICT business enabling initiatives	None	None	None
New ICT business enabling initiatives	None	None	None
ICT component current annual operations and administration	None	None	None
ICT component new annual operations and administration	None	None	None
ICT life cycle, maintenance and upgrade management	None	None	None
Internal ICT human resources and budget	None	None	None
External ICT human resources and budget	None	None	None

7. Risk management

A risk analysis should be performed with regards to the impact and implementability of this ICT Implementation Plan in line with the National Treasury Public Service Risk Management Framework. The HoD or a delegated official should be comfortable that all critical risks were considered and are managed within the institutional risk appetite.