

IT GOVERNANCE S T A N D A R D



NITA
National Information Technology Agency
GHANA





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Foreword

The National Information Technology Agency has the express mandate to, among others, set and enforce ICT standards and guidelines across all aspects of information and communication technology including systems, infrastructure, processes, human resources and technology for the public service. The overall purpose of this specific mandate is to ensure coherence and unified approach to acquisition, deployment, management, and operation of ICTs across the public service, including state agencies, in order to promote service integration, adaptability and cost savings through economies of scales in ICT investments.

In pursuit of the achievement of this mandate, the Agency established a standards Team that identified the critical standards domain areas and oversaw the standards development process. To this end, the Team consulted and researched broadly among subject matter experts to ensure conformity to acceptable international and national industry best practices as well as relevance to the Ghanaian public service context.

NITA IT Governance Standard, which falls under the overall Government of Ghana Enterprise Architecture (GGEA), has therefore been prepared in accordance with best practice and standards development guidelines which are, in turn, based on the international best practices by standards development organizations including ISO.

The Agency shall issue a certificate for compliance to Agencies upon inspection and assessment of the level of compliance to the standard. For non-compliant Agencies, a report detailing the extent of the deviation and the prevailing circumstances shall be tabled before the Highest Steering Committee who shall advise and make recommendations.

The National Information Technology Agency management, cognizant of the central and core role that standards play in public service integration, fostering shared services and increasing value in ICT investments, takes great exception to the enforcement of this standard by all Government agencies. The Agency, therefore, implores agencies to prioritize the process of certification to this standard as a foundation of their ICT investments in order to create and enhance value.

**Director General,
National Information Technology Agency**



1.0 Background

IT Governance is part of the wider Corporate Governance activity but with a specific focus on IT. IT Governance covers the culture, organization, policies, and practices that provide oversight and transparency of IT. For organizational investment in IT to deliver full value, IT has to be fully aligned to organizational strategies. The benefits of good IT risk management, oversight, and clear communication not only reduce the cost and damage caused by IT failures – but also engenders greater trust, teamwork, and confidence in the use of IT itself and the people trusted with IT services.

The biggest risk and concern to the government today is failing to align IT to real business needs, and a failure to deliver or be seen to be delivering, value to the business. Since IT can have such a dramatic effect on MDA performance and competitiveness, a failure to manage IT effectively can have a very serious impact on the organization as a whole.

The current climate of cost reduction and budget restriction has resulted in new norms – there is an expectation that IT resources should always be used as efficiently as possible and that steps are taken to organize these IT resources ready for the next cycle of growth and new IT developments. A key aspect of these factors is the increasing use of third-party service providers and the need to manage these suppliers properly to avoid costly and damaging service failures.

In addition, IT governance recognizes the critical role IT functions play in an organization and the need to place it at par with other core functions in terms of reporting lines.

IT governance shall assist MDAs to:

- Create deeper understanding and awareness of all IT related risks likely to have an impact on their organization;
- Know how to improve the management processes within IT to manage these risks;
- Ensure there are manageable relationships with suppliers, service providers and with the business customers;
- Contract and managed IT suppliers with expected level of performance
- Ensure there is transparent and understandable communication of these IT activities and management processes to satisfy interested stakeholders.
- Recruit and maintain IT Professionals who are competent and regulated.

IT Governance is not a one-time exercise or something achieved by a mandate or set of rules. It requires a commitment from top management of the organization to instill a better way of dealing with the management and control of IT. IT Governance is an ongoing activity that requires a continuous improvement mentality and responsiveness to the fast-changing IT environment.

IT governance shall result in:

a. Transparency and accountability

- Improved transparency of IT costs, IT process, IT portfolio (projects and services).
- Clarified decision-making accountabilities and definition of user and provider relationships.

b. Return on investment

- Improved understanding of overall IT costs and their input to ROI cases.
- Combining focused cost-cutting with an ability to reason for investment.
- Stakeholders allowed seeing IT risk/returns.

c. Opportunities and Partnerships

- Provide a route to realize opportunities that might not receive attention or sponsorship.
- Positioning of IT as a business partner (and clarifying what sort of business partner IT is).
- Facilitate joint ventures with other organizations.
- Facilitate more business-like relationships with key IT partners (vendors and suppliers).
- Achieve a consistent approach to taking risks.
- Enables IT participation in organization strategy (which is then reflected in IT strategy) and vice versa.
- Improve responsiveness to challenges and opportunities.

d. External Compliance

- Enables an integrated approach to meeting government legal and regulatory requirements.

1.1 Description of standard

IT governance is defined as the processes that ensure effective and efficient use of IT in enabling an organization to achieve its goals.

2.0 Scope

IT governance consists of the leadership and organizational structures and processes that ensure the enterprise sustains and extends strategies and objectives. It spans the culture, organization, policy, and practices that provide for IT management and control across five key areas:

- **Alignment** – Provide for strategic direction of IT and the alignment of IT and the business with respect to services and projects.
- **Value delivery** – Confirm that the IT/Business organization is designed to drive maximum business value from IT. Oversee the delivery of value by IT to the business, and assessment of ROI.
- **Risk Management** – Ascertain that processes are in place to ensure that risks have been adequately managed. This includes the assessment of the risk aspects of IT investments.



- **Resource management** – Provide high-level direction for sourcing and use of IT resources. Oversee the aggregate funding of IT at the enterprise level. Ensure there is adequate IT capability and infrastructure to support current and expected future business requirements. Ensure competent human resource with desired ethical behaviors and norms.
- **Performance** – Verify strategic compliance, i.e. achievement of strategic IT objectives. Review the measurement of IT performance and the contribution of IT to the business (i.e. delivery of promised business value). Ensure that IT service providers are regulated and managed so as to maintain expected level of performance in delivery of their services to government.

Application

This standard applies to:

- Government of Ghana
- Local Governments
- Constitutional Commissions
- State Corporations
- Government Institutions

3.0 Normative References

The following standards contain provisions which, through reference in this text, constitute provisions of this standard. All standards are subject to revision and, since any reference to a standard is deemed to be a reference to the latest edition of that standard, parties to agreements based on this standard are encouraged to take steps to ensure the use of the most recent editions of the standards indicated below. Information on currently valid national and international standards can be obtained from the Ghana Standards Authority.

- COBIT 5
- PRINCE2
- ITIL V4
- CISA Review Manual 27th edition
- Government of Ghana Enterprise Architecture

Managers of projects dealing with software products or software-intensive systems may find the contents of the PMBOK®6 Guide and ISO 10006:2018 helpful, in managing their projects to a successful conclusion.

4 Terms and Definitions

4.1 Enterprise Architecture

Enterprise Architecture (EA) is a conceptual blueprint that defines the structure and operation of ICT in an organization. EA involves documenting an organization's IT assets in a structured manner to facilitate understanding, management, and planning for IT investments. An EA often involves both a current state and an optimized future-state representation (e.g., a road map).

4.2 Enterprise IT Governance

EGIT is about the stewardship of IT resources on behalf of all stakeholders (internal and external) who expect their interests to be met. Management, processes, operational governance structure of the enterprise ICT.

4.3 Service desk

A Service Desk is a primary IT function within the discipline of IT service management. It is intended to provide a Single Point of Contact to meet the communication needs of both users and IT staff.

4.4. Abbreviations

Type	Detail
WAN	Wide Area Network
LAN	Local Area Network
EA	Enterprise Architecture
SLA	Service Level Agreement
MDA	Ministry, Department, and Agency
NITA	National IT Agency
ROI	Return on Investment
CIO	Chief Information Officer
QOS	Quality of Service
COBIT	Control Objectives for IT
PMBOK	Project Management Book
SWOT	Strength Weakness Opportunity and Threat
CMMI	Capability Maturity Model Integration
COSO	Committee of Sponsoring Organizations
PPP	Public-Private Partnership
GGEA	Government of Ghana Enterprise Architecture
CISO	Chief Information Security Officer
IT	Information Technology

5.0 Enterprise Architecture

- MDAs shall develop an Enterprise architecture as a conceptual blueprint that defines the structure and operation of ICT in an organization
- MDAs shall be guided by the approved Government of Ghana Enterprise Architecture when developing their enterprise Architecture based on appropriate business, application, information, and infrastructure, security, performance, and project governance architecture to support the entire ecosystem



5.1. Business Architecture

5.1.1 Business plans and objectives

- a) MDAs shall adopt principles of their specific business architecture in line with the Government of Ghana Enterprise Architecture.
- b) MDAs shall have clearly defined ICT plans, objectives and metrics that support business goals
- c) MDAs shall have mechanisms for monitoring the performance of ICT investments.

5.1.2 Business Process

- a) MDAs shall have business processes designed and applied to focus on service to Citizens provided as a single interface through multiple access platforms
- b) MDAs will seek to optimize business processes and then use performance standards to define automation requirements

5.2 Application Architecture

a. MDAs shall ensure the design; implementation and delivery of the application architecture shall adhere to the application architecture principles as guided by GGEA.

5.3 Information/data Architecture

- a) MDAs shall adopt appropriate analytical services for discovery interpretation of meaningful data patterns
- b) MDAs shall implement master data management to define and manage their critical data with integration and a single point of reference.

5.4 Infrastructure Architecture

- a) MDAs shall ensure the design, implementation, and delivery of the infrastructure architecture shall adhere to the infrastructure architecture principles as guided by GGEA. The principles are: -
 - i) Ensuring technology diversity is contained
 - ii) Technology components are able to interoperate and exchange information
- b) The MDAs shall implement LAN/WAN, internet, computing, enterprise networks, storage, and data center to support business operations in line with the GGEA and Infrastructure Standard

5.5 Security and Compliance

- a) MDAs shall ensure the design, implementation, and delivery of information security shall adhere to the information security architecture principles as guided in the GGEA
- b) MDAs shall establish information security governance structure as guided by appendix 9 b

5.6 Project Management and Governance Architecture

- a) MDAs shall ensure the design, implementation, and delivery of ICT projects shall adhere to the project management and governance architecture principles as defined in the GGEA

5.7 Performance Architecture

5.7.1 Capability Maturity Model Integration (CMMI)

- a) MDAs shall improve business goals or develop process guidance models that provide a clear definition to promote improved performance.

5.7.2 Balanced Scorecard

- b) MDAs shall have an ICT Balanced Scorecard to measure performance consisting of four perspectives: IT Value, User, Operational Excellence, and Future Orientation

6.0 ICT Governance

6.1 Independent ICT Function

- a) MDAs shall have a defined structure for the ICT function in the organization reporting to the Head of the Institution or the Director General (DG).

6.2 ICT Governance Committees

MDAs shall establish two ICT governance committees;

- a) An IT Strategy committee to provide strategic advice on ICT initiatives and investments to the board as defined in Appendix 9.
- b) An IT Steering Committee to define the IT mission and goals aligned with the strategic direction of the organization; authorize and direct the development of the services and operation plans as defined in Appendix 9

6.3 ICT Organization

- a) MDAs shall establish an ICT organization structure that adequately responds to the business goals, mandate, and vision of the organization.
- b) The head of the ICT function shall report to the Head of the Institution and shall hold either the following titles
 - i. Chief Information Officer (CIO)
 - ii. Chief Information Technology Officer (CITO)
 - iii. Chief Technology Officer (CTO)
 - iv. Director ICT (DICT) or Head of IT(HIT)

6.4 IT strategy

- a) IT shall be a strategic objective in the overall strategic plan of the MDAs.
- b) The MDAs shall prepare and maintain an ICT strategic plan with a clear IT vision and mission that defines how the MDAs plan to improve internal services and services to businesses and citizens.



- c) The strategy shall be developed with input from internal and external stakeholders.
- d) The strategy shall be informed by a situational analysis of the internal and external business environment
- e) The strategy shall define specific tasks and responsibilities for achieving value delivery from ICT investment
- f) The strategy shall be implemented to achieve ICT optimized investment

6.5 IT Project governance

- a) MDAs shall establish a Project Management Office.
- b) Projects shall be based on clear and compelling concept and business case.
- c) A project charter shall be prepared for all projects.
- d) A project implementation committee shall be created to report to the IT steering committee and shall be led by a project manager.
- e) MDAs shall adopt and approve a project's implementation methodology based on globally accepted approaches such as PMBOK or Prince 2.
- f) MDAs shall adopt software development methodologies that include waterfall, agile, SDLC and SCRUM. As guided by the Systems and Applications standard
- g) MDAs shall carry out their project management as guided in Appendix 11-19.

7.0 IT Service Management

7.1 IT Service Strategy

- a) MDAs shall develop an IT service strategy to create new and improved services.

7.1.2 IT Service management

- a) MDAs shall have a service charter for IT enabled services.
- b) The charter shall define the desired outcomes of the services.
- c) The charter shall define the assets required to offer the services.
- d) MDAs shall annually evaluate usage of the IT enabled services and customer satisfaction.

7.2 Service level management

- a) MDAs shall develop and sign service level agreement (SLA) with service providers (internet, systems support, maintenance, etc.) to ensure the availability and reliability of IT enabled services.
- b) The SLA shall define performance metrics for the service providers.
- c) MDAs shall monitor achievement of service levels and compare them with agreed service targets in the SLA

- d) SLA shall have dispute management provisions
- e) SLAs shall have penalties for failure to meet agreed service levels

7.2.1 Service desk

- a) MDAs shall establish an IT service desk management system to handle all requests from end-users
- b) The service desk shall have 1st level, 2nd level, and 3rd level support
- c) The service desk shall develop and document standard operating procedures for IT services
- d) MDAs shall have a system to track customer complaints, compliments, and resolution

7.2.2 IT Operations Control

- a) MDAs shall designate staff to manage the day to day operational activities in IT e.g. back up, routine maintenance, print and output management, installations to ensure they are done in a reliable and timely manner
- b) MDAs should manage fraud using the COSO framework
- c) MDAs should adopt IT service and governance framework such as COBIT for internal controls and management of IT

7.2.3 Business Relationship Management

- a) MDA shall conduct and document customer satisfaction surveys on IT enabled services annually for internal and external customers
- b) MDA shall conduct training and awareness programs annually to sensitize internal and external customers on IT enabled services

7.3 IT Service Design

7.3.1 Availability Management

- a) MDAs shall develop and implement quarterly preventive maintenance plans for IT equipment
- b) MDAs shall develop and maintain manuals on how to operate and maintain systems and equipment
- c) MDAs shall develop a disaster recovery plan for all services

7.3.2 IT Infrastructure Capacity Management

- a) MDAs shall annually evaluate the capacity of IT infrastructure to understand the current environment and plan for future needs. The National Information Technology Agency shall validate such evaluation
- b) MDAs shall establish a framework for IT infrastructure improvement
- c) MDAs shall set realistic targets for IT infrastructure improvement, prioritize gaps and propose achievable solutions

7.3.3 Information Security Management

- a) MDAs shall establish an information security management framework as guided by the information security standard
- b) The Information Security function shall be separate from the IT department. The head of the Information Security function may report to the CIO or have a dotted-line (indirect reporting relationship) to the CIO. The implementation of this requirement shall be guided by appendix 12 depending on the risk levels of the organization.

7.3.4 Supplier management

- a) All ICT suppliers and contractors Government shall be registered by the National Information Technology Agency in accordance with the requirements stipulated in Appendix 33

7.4 IT Service transition

7.4.1 IT Service change management

- a) MDAs shall develop a policy to ensure that any changes to IT enabled services are conducted with minimal disruption to services

7.4.2 Knowledge management

- a) MDAs shall implement an ICT knowledge base which shall contain a database of common IT service problems and how to solve them

7.5 IT Continuous service improvement

7.5.1 Service and process performance review

- a) MDAs shall conduct annual performance reviews of IT processes and IT enabled services. The review shall include suggestions for improvement. MDAs shall seek guidance from ICT

Agency

- b) MDAs shall conduct benchmarking with the aim of identifying shortcoming and developing plans for improvement
- c) MDAs shall in collaboration with National Information Technology Agency, conduct regular system audits for all systems to ensure compliance and conformity to the ICT standards.

8.0 Legal and Regulatory

8.1 Ghana laws on ICT

- a) MDAs shall identify the specific laws and regulations affecting IT in their organizations and respond accordingly. The Ghana laws on ICT include:
 - i. Cybersecurity Act 2020, Act 1038
 - ii. Electronic Transaction Act, Act 772 of 2008
 - iii. Hazardous and Electronic Waste Control and Management Act 2016 (Act 917)

iv. National Information Technology Agency Act 771 of 2008

v. Data Protection Act 2012 (Act 843)

vi. etc

8.2 Roles and responsibilities

- a) IT functions in MDAs shall seek legal advice as necessary internally or externally to better manage contracts
- b) MDAs shall seek technical advice or service from a competent third party as maybe required from the National Information Technology Agency.

9.0 ICT Risk management

9.1 General

- a) ICT risk management will be undertaken as guided in Appendix 21, 22 and 23

9.2 ICT Risk framework

- a) MDAs shall develop a risk strategy
- b) MDAs shall set acceptable levels of risk.
- c) MDAs shall undertake a regular risk assessment for identification, recording, analysis, and mitigation.
- d) Responsibility for risk mitigation shall be assigned to the relevant function for managing key risks depending on the type of risk and its possible impact, the MDAs shall adopt any of the following mitigation measures: Reduce, Transfer, Accept and Mitigate risks.

10.0 Sourcing, Resourcing, and Financing of IT functions

10.1 General

- a) To support IT Governance, MDAs shall establish structures to manage IT resources as per Appendix 11.

10.2 Sourcing of ICT equipment, products, and services

- a) MDAs shall source ICT resources while adhering to the GoG ICT standards. As per the guidelines in Appendix 10

10.3 Resourcing

- a) MDAs should develop a guideline for the engagement of consultants, contractors and external service providers. The guidelines should document the decision to acquire external support. The guidelines should provide a framework for the accounting of the consultancy, contracting and external service providers.
- b) The MDA should develop a risk assessment and management framework for the consultants, contractors and external suppliers.
- c) MDAs while resourcing the ICT functions should ensure there is clear segregation of roles in the assigned functions as per the GoG ICT Human Capacity and Workforce Development standard.
- d) MDAs must use a consistent and evidence-based ICT resources strategic planning process.



- e) MDAs can use the public-private partnership to resource their ICT functions while guided by the NITA regulatory guidelines, GoG PPP Legal framework that includes Private Public Partnership Policy
- f) All ICT professionals shall be registered as guided in Appendix 34

10.4 Financing

- a) MDAs shall allocate funds for ICT activities through the annual budget. The ratio of ICT to the institutional budget shall be at least 5%
- b) The budget shall be aligned to the ICT strategy
- c) The budget shall be allocated for development and recurrent purposes
- d) The development budget shall cover ICT Infrastructure enhancement and improvement
- e) The recurrent budget shall cover ICT infrastructure maintenance and servicing
- f) Donor funded government ICT initiatives shall be subject to the requirements of government ICT standards.

10.5 Asset management

- a)MDAs shall maintain and update an inventory of all ICT assets. The inventory system shall be automated and shall show relationships between these assets
- b)MDA should ensure that their ICT equipment are physically standard tagged for identification and tracking.

10.6 Capacity building

- a) The IT establishment shall cover all the relevant IT technical cadres including Basic support, Network, systems and database administration, IT service management, IT project management, Web administrators, information security officers, other contextual IT roles
- b) MDAs shall develop and implement ICT training policy in line with ICT human resource development standard
- c) The policy shall define required ICT qualifications for different cadres of staff as per the ICT human capacity standard IT education, training, and development needs shall be fully identified and addressed for all staff regularly
- d) IT staff shall be trained on professional courses, ethics, and code of conduct outlined in the ICT Human Capacity Development Standard

10.7 Tools

- a) ICT personnel shall be issued the relevant software and hardware tools to manage IT resources (e.g. for user support, hardware maintenance, IT service and project management, application development)

10.8 Innovation

- a) MDAs shall establish a resource centre for IT research and innovation
- b) The resource centre shall manage knowledge through databases and online resources to spur innovation.

Appendix1: Compliance Checklist for Enterprise Architecture

Enterprise Architecture	YES	NO	Comment
MDA has developed an Enterprise architecture as a conceptual blueprint that defines the structure and operation of ICT in an organization	<input type="checkbox"/>	<input type="checkbox"/>	
MDA has been guided by the approved Government	<input type="checkbox"/>	<input type="checkbox"/>	
Enterprise Architecture when developing their enterprise Architecture based on appropriate business, application, information, and infrastructure, security, performance and project governance architecture to support the entire ecosystem	<input type="checkbox"/>	<input type="checkbox"/>	
Business Architecture	<input type="checkbox"/>	<input type="checkbox"/>	
Business plans and objectives	<input type="checkbox"/>	<input type="checkbox"/>	
MDA has adapted principles of their specific business architecture in line with the Government of Ghana Enterprise Architecture.	<input type="checkbox"/>	<input type="checkbox"/>	



MDA has clearly defined its ICT plans, objectives and metrics that support business goals	<input type="checkbox"/>	<input type="checkbox"/>	
MDA has mechanisms for monitoring the performance of ICT investments.	<input type="checkbox"/>	<input type="checkbox"/>	
Business Process	<input type="checkbox"/>	<input type="checkbox"/>	
MDA has business processes designed and applied to focus on service to Citizens provided as a single interface through multiple access platforms	<input type="checkbox"/>	<input type="checkbox"/>	
MDA will seek to optimize business processes and then use performance standards to define automation requirements	<input type="checkbox"/>	<input type="checkbox"/>	
Application Architecture	<input type="checkbox"/>	<input type="checkbox"/>	
MDA has ensured the design, implementation, and delivery of the application architecture has adhered to the application architecture principles as guided by GGEA.	<input type="checkbox"/>	<input type="checkbox"/>	
Information Architecture	<input type="checkbox"/>	<input type="checkbox"/>	
MDA has adopted an appropriate analytical service for discovery, interpretation of meaningful data patterns	<input type="checkbox"/>	<input type="checkbox"/>	
MDA has implemented a master data management to define and manage their critical data with integration and a single point of reference.	<input type="checkbox"/>	<input type="checkbox"/>	
Infrastructure Architecture	<input type="checkbox"/>	<input type="checkbox"/>	
MDA has ensured the design, implementation, and delivery of the infrastructure architecture has adhered to the infrastructure architecture principles as guided by GGEA.	<input type="checkbox"/>	<input type="checkbox"/>	
MDA has implemented LAN/WAN, internet, computing, enterprise networks, storage, and data center to support business operations in line with the GGEA and Infrastructure Standard	<input type="checkbox"/>	<input type="checkbox"/>	
Security and Compliance	<input type="checkbox"/>	<input type="checkbox"/>	
MDA has ensured the design, implementation, and delivery of information security shall adhere to the information security architecture principles as guided in the GGEA	<input type="checkbox"/>	<input type="checkbox"/>	
MDA has established an information security governance structure as guided by appendix 9 b	<input type="checkbox"/>	<input type="checkbox"/>	



Project Management and Governance Architecture	<input type="checkbox"/>	<input type="checkbox"/>	
MDA has ensured the design, implementation, and delivery of ICT projects has adhered to the project management and governance architecture principles as defined in the GGEA	<input type="checkbox"/>	<input type="checkbox"/>	
Performance Architecture	<input type="checkbox"/>	<input type="checkbox"/>	
Capability Maturity Model Integration (CMMI)	<input type="checkbox"/>	<input type="checkbox"/>	
MDAs have improved business goals or develop process guidance models that provide a clear definition to promote improved performance.	<input type="checkbox"/>	<input type="checkbox"/>	
Balanced Scorecard	<input type="checkbox"/>	<input type="checkbox"/>	
MDA has an ICT Balanced Scorecard to measure performance consisting of four perspectives: IT Value, User, Operational Excellence, and Future Orientation	<input type="checkbox"/>	<input type="checkbox"/>	

Appendix 2: Compliance Checklist for ICT Governance

Checklist for ICT Governance	YES	NO	Comment
MDA has a defined structure for the ICT function in the organization reporting to the Head of the Institution or the Director General (CEO).	<input type="checkbox"/>	<input type="checkbox"/>	
ICT Governance Committees	<input type="checkbox"/>	<input type="checkbox"/>	
MDA has established two ICT governance committees;	<input type="checkbox"/>	<input type="checkbox"/>	
i) An IT Strategy committee to provide strategic advice on ICT initiatives and investments to the board as defined in Appendix 9.	<input type="checkbox"/>	<input type="checkbox"/>	
ii) An IT Steering Committee to define the IT mission and goals aligned with the strategic direction of the organization; authorize and direct the development of the services and operation plans as defined in Appendix 9	<input type="checkbox"/>	<input type="checkbox"/>	
ICT Organization	<input type="checkbox"/>	<input type="checkbox"/>	
MDA has established an ICT organization structure that adequately responds to the business goals, mandate, and vision of the organization.	<input type="checkbox"/>	<input type="checkbox"/>	
The head of the ICT function reports to the Head of the Institution and shall hold either the following titles	<input type="checkbox"/>	<input type="checkbox"/>	



a. Chief Information Officer (CIO)	<input type="checkbox"/>	<input type="checkbox"/>	
b. Chief Information Technology Officer (CITO)	<input type="checkbox"/>	<input type="checkbox"/>	
c. Chief Technology Officer (CTO)	<input type="checkbox"/>	<input type="checkbox"/>	
d. Director ICT (DICT) or Head of IT(HIT)	<input type="checkbox"/>	<input type="checkbox"/>	
IT strategy	<input type="checkbox"/>	<input type="checkbox"/>	
IT is a strategic objective in the overall strategic plan of the MDA.	<input type="checkbox"/>	<input type="checkbox"/>	
MDA has prepared and maintained an ICT strategic plan with a clear IT vision and mission that defines how the MDA plans to improve internal services and services to businesses and citizens.	<input type="checkbox"/>	<input type="checkbox"/>	
The strategy has been developed with input from internal and external stakeholders.	<input type="checkbox"/>	<input type="checkbox"/>	
The strategy has been informed by a situational analysis of the internal and external business environment	<input type="checkbox"/>	<input type="checkbox"/>	
The strategy has defined specific tasks and responsibilities for achieving value delivery from ICT investment	<input type="checkbox"/>	<input type="checkbox"/>	
The strategy has been implemented to achieve ICT optimized investment	<input type="checkbox"/>	<input type="checkbox"/>	
IT Project governance	<input type="checkbox"/>	<input type="checkbox"/>	
MDA has established a Project Management Office.	<input type="checkbox"/>	<input type="checkbox"/>	
Projects are based on clear and compelling concept and business case.	<input type="checkbox"/>	<input type="checkbox"/>	
A project charter has been prepared for all projects.	<input type="checkbox"/>	<input type="checkbox"/>	
A project implementation committee has been created to report to the IT steering committee and is led by a project manager.	<input type="checkbox"/>	<input type="checkbox"/>	
MDAs has adopted and approved a project implementation methodology based on a globally accepted approach such as PMBOK or Prince 2.	<input type="checkbox"/>	<input type="checkbox"/>	
MDA has adopted a software development methodology that include waterfall, agile, SDLC and SCRUM. as guided by the Systems and Applications standard	<input type="checkbox"/>	<input type="checkbox"/>	
MDA has carried out their project management as guided in Appendix 11-19.	<input type="checkbox"/>	<input type="checkbox"/>	

Appendix 3: Compliance Checklist for IT Legal and regulatory

Legal and Regulatory	Legal and Regulatory	YES	NO	Comment
	Ghana laws on ICT	<input type="checkbox"/>	<input type="checkbox"/>	
	MDAs has identified the specific laws and regulations affecting IT in their organizations and respond accordingly. The Ghana laws on ICT include:	<input type="checkbox"/>	<input type="checkbox"/>	
	a. Cybersecurity Act 2020, Act 1038	<input type="checkbox"/>	<input type="checkbox"/>	
	b. Electronic Transaction Act, Act 772 of 2008	<input type="checkbox"/>	<input type="checkbox"/>	
	c. Hazardous and Electronic Waste Control and Management Act 2016 (Act 917	<input type="checkbox"/>	<input type="checkbox"/>	
	d. National Information Technology Agency Act 771 of	<input type="checkbox"/>	<input type="checkbox"/>	
	e. Data Protection Act 2012 (Act 843)	<input type="checkbox"/>	<input type="checkbox"/>	
	f. etc	<input type="checkbox"/>	<input type="checkbox"/>	
	Roles and responsibilities	<input type="checkbox"/>	<input type="checkbox"/>	
	IT functions in MDA has sought legal advice as necessary internally or externally to better manage contracts	<input type="checkbox"/>	<input type="checkbox"/>	
	MDA has sought technical advice or service from a competent third party as maybe required from the National Information Technology Agency.	<input type="checkbox"/>	<input type="checkbox"/>	

Appendix 4 Compliance Checklist for IT Service Management

Service Management	Legal and Regulatory	YES	NO	Comment
	IT Service Strategy	<input type="checkbox"/>	<input type="checkbox"/>	
	MDA has developed an IT service strategy to create new and improved services.	<input type="checkbox"/>	<input type="checkbox"/>	
	IT Service management	<input type="checkbox"/>	<input type="checkbox"/>	
	MDA has a service charter for IT enabled services.	<input type="checkbox"/>	<input type="checkbox"/>	
	The charter defines the desired outcomes of the services.	<input type="checkbox"/>	<input type="checkbox"/>	
	The charter defines the assets required to offer the services.	<input type="checkbox"/>	<input type="checkbox"/>	



MDA, annually evaluates usage of the IT enabled services and customer satisfaction.	<input type="checkbox"/>	<input type="checkbox"/>	
Service level management	<input type="checkbox"/>	<input type="checkbox"/>	
MDA has developed and signed service level agreement(s) (SLA) with service providers (internet, systems support, maintenance, etc.) to ensure the availability and reliability of IT enabled services.	<input type="checkbox"/>	<input type="checkbox"/>	
The SLA shall define performance metrics for the service providers.	<input type="checkbox"/>	<input type="checkbox"/>	
MDA monitors achievement of service levels and compares them with agreed service targets in the SLA	<input type="checkbox"/>	<input type="checkbox"/>	
SLAs has penalties for failure to meet agreed service levels	<input type="checkbox"/>	<input type="checkbox"/>	
Service desk	<input type="checkbox"/>	<input type="checkbox"/>	
MDA has established an IT service desk management system to handle all requests from end-users	<input type="checkbox"/>	<input type="checkbox"/>	
The service desk has 1st level, 2nd level, and 3rd level support	<input type="checkbox"/>	<input type="checkbox"/>	
The service desk has developed and documented standard operating procedures for IT services	<input type="checkbox"/>	<input type="checkbox"/>	
MDA has a system to track customer complaints, compliments, and resolution	<input type="checkbox"/>	<input type="checkbox"/>	
IT Operations Control	<input type="checkbox"/>	<input type="checkbox"/>	
MDA has designated staff to manage the day to day operational activities in IT e.g. back up, routine maintenance, print and output management, installations to ensure they are done in a reliable and timely manner	<input type="checkbox"/>	<input type="checkbox"/>	
MDA has managed fraud using the COSO framework	<input type="checkbox"/>	<input type="checkbox"/>	
MDA has adopted IT service and governance framework such as COBIT for internal controls and management of IT	<input type="checkbox"/>	<input type="checkbox"/>	
Business Relationship Management	<input type="checkbox"/>	<input type="checkbox"/>	
MDA has conducted and document customer satisfaction surveys on IT enabled services annually for internal and external customers	<input type="checkbox"/>	<input type="checkbox"/>	
MDA conducts training and awareness programs annually to sensitize internal and external customers on IT enabled services	<input type="checkbox"/>	<input type="checkbox"/>	



IT Service Design	<input type="checkbox"/>	<input type="checkbox"/>	
Availability Management	<input type="checkbox"/>	<input type="checkbox"/>	
MDA has developed and implemented quarterly preventive maintenance plans for IT equipment	<input type="checkbox"/>	<input type="checkbox"/>	
MDA has developed and maintained manuals on how to operate and maintain systems and equipment	<input type="checkbox"/>	<input type="checkbox"/>	
MDAs has developed a disaster recovery plan for all services	<input type="checkbox"/>	<input type="checkbox"/>	
IT Infrastructure Capacity Management	<input type="checkbox"/>	<input type="checkbox"/>	
MDA annually evaluates the capacity of IT infrastructure to understand the current environment and plan for future needs. The National Information Technology Agency has validated such evaluation	<input type="checkbox"/>	<input type="checkbox"/>	
MDA has established a framework for IT infrastructure improvement	<input type="checkbox"/>	<input type="checkbox"/>	
MDA has set realistic targets for IT infrastructure improvement, prioritize gaps and propose achievable solutions	<input type="checkbox"/>	<input type="checkbox"/>	
Information Security Management	<input type="checkbox"/>	<input type="checkbox"/>	
MDA has established an information security management framework as guided by the information security standard	<input type="checkbox"/>	<input type="checkbox"/>	
The Information Security function has a separate from the IT department. The head of the Information Security function may report to the CIO or have a dotted-line (indirect reporting relationship to the CIO. The implementation of this requirement shall be guided by appendix 12 depending on the risk levels of the organization.	<input type="checkbox"/>	<input type="checkbox"/>	
Supplier management	<input type="checkbox"/>	<input type="checkbox"/>	
All ICT suppliers and contractors have been registered by National Information Technology Agency in accordance with the requirements stipulated in Appendix 33	<input type="checkbox"/>	<input type="checkbox"/>	
IT Service transition	<input type="checkbox"/>	<input type="checkbox"/>	
IT Service change management	<input type="checkbox"/>	<input type="checkbox"/>	



MDA has developed a policy to ensure that any changes to IT enabled services are conducted with minimal disruption to services	<input type="checkbox"/>	<input type="checkbox"/>	
Knowledge management	<input type="checkbox"/>	<input type="checkbox"/>	
MDA has implemented an ICT knowledge base which contains a database of common IT service problems and how to solve them	<input type="checkbox"/>	<input type="checkbox"/>	
IT Continuous service improvement	<input type="checkbox"/>	<input type="checkbox"/>	
Service and process performance review	<input type="checkbox"/>	<input type="checkbox"/>	
MDA conducts annual performance reviews of IT processes and IT enabled services. The review includes suggestions for improvement.	<input type="checkbox"/>	<input type="checkbox"/>	
MDA has sought from the National Information Technology Agency	<input type="checkbox"/>	<input type="checkbox"/>	
MDA has conducted benchmarking with the aim of identifying shortcoming and developing plans for improvement	<input type="checkbox"/>	<input type="checkbox"/>	
MDA has in collaboration with the National Information Technology Agency, conducted regular system audits for all systems to ensure compliance and conformity to the ICT standards.	<input type="checkbox"/>	<input type="checkbox"/>	

Appendix 5 IT Project Management

1.1 Project Governance

ICT Risk management					
S/No			YES	NO	Comment
ICT Risk management	General	MDA has undertaken ICT risk management as guided in Appendix 20, 21 and 22	<input type="checkbox"/>	<input type="checkbox"/>	
	ICT Risk framework	MDA has developed a risk strategy	<input type="checkbox"/>	<input type="checkbox"/>	
		MDA has undertaken a regular risk assessment for identification, recording, analysis and mitigation.	<input type="checkbox"/>	<input type="checkbox"/>	
		Responsibility for risk mitigation has been assigned to the relevant function for managing key risks depending on the type of risk and its possible impact, MDA has adopted any of the following mitigation measures: Reduce, Transfer, Accept and Mitigate risks.	<input type="checkbox"/>	<input type="checkbox"/>	

a) MDAs shall ensure that governance of all ICT projects comply with the governance structures as per Appendix 7 and Appendix 30

1 Project initiation

- a) The project shall have an objective and documented business case/ project proposal
- b) The proposal shall define the expected benefits/outputs and outcomes
- c) The project shall have appropriate approval

1.2 Project planning

- a) The project shall have a project management plan with activity schedules
- b) The project shall have risk management and communication plan
- c) The project shall have an implementation, testing and training strategy
- d) The Project shall have a stakeholder management plan

1.3 Analysis and design

- a) The project shall have user requirements
- b) The project shall have user systems and technical specifications
- c) The project shall have a system acceptance test plan

1.4 Project Building and testing

- a) There shall be a development and test environment
- b) There shall be operational and training procedures
- c) There shall be detailed test plans

1.5 Project Implementation

- a) There shall be a system installation and migration plan
- b) There shall be a data conversion plan
- c) There shall be a training and contingency plan

1.6 Project Completion

- a) There shall be a post-implementation review report
- b) There shall be a documented system support group
- c) There shall be project closure sign off

Appendix 6 Performance management

1.1 IT service management

- a) Overall financial performance (costs v. budgets)
- b) Performance with respect to reliability and availability of critical services
- c) Complaints (QOS) and customer perception
- d) Number of significant reactive fixes to errors
- e) SLA performance by third parties
- f) Relationships with suppliers (quality & value)
- g) Capability e.g. process maturity
- h) Internal and external benchmarks
- i) Business continuity status

1.2 Project management

- a) Major project delivery performance (objectives, time and budget)
- b) ROI for IT investments (business benefit)

1.3 Risk management

- a) Status of critical risks
- b) Audit weaknesses
- c) Human Resource measures for people involved in IT activities



Appendix 7 Risk management

ICT Risk management	
Subject	Requirement
Define a framework	<p>MDAs has ensured the following staff are trained in risk management in their specific areas: (e.g. CobiT, ISO17799, ITIL, ISO9000)</p> <p>PMBOK and Prince2)</p> <ul style="list-style-type: none"> • IT Auditors • IT Project Managers • IT Risk Managers • Business Analysts • Infrastructure Management • Procurement/Contract Management • IS Strategy – alignment with the business • Quality Management • Business Relationship Management • Programme Managers <p>MDAs shall conduct benchmarking to compare how risk management is being addressed within the organization in relation to best practice, industry peer groups and other organizations.</p>
Identify risks	<p>MDA has ensured that new risks are identified in a timely manner?</p> <p>The following risks are identified</p> <ul style="list-style-type: none"> • Business-specific risk (e.g. Operational risk of mandate not being delivered) • Generic common IT risk (e.g. IT availability risk) • Specific IT risk (e.g. Denial of service)
Identify probable risk owners	<p>Auditors provide initial momentum by highlighting to senior management inadequate risk management practices of specific risks that are not being adequately addressed?</p> <p>Responsibility is allocated at a senior level for managing key risks?</p> <p>Every risk has an owner?</p> <p>MDAs has adopted a mechanism for reporting issues – ultimately to the individual who has to retain overall responsibility?</p>
Evaluate the risks	<p>MDAs has set acceptable levels of risk</p> <p>MDA has developed a risk register.</p> <p>The risk register has a prioritized list of risks which must be subsequently addressed?</p>
Identify suitable response to risk	MDA has implemented suitable response to risks



Appendix 8 IT Governing Committees

a) Committees

ICT Risk management		
Level	IT Strategy Committee	IT Steering Committee
Responsibility	<p>Provides insight and advice to the board spending on topics such as:</p> <ul style="list-style-type: none"> • The relevance of the development in IT from a business perspective • The alignment of IT with the business direction • The achievement of strategic IT objectives • The availability of suitable IT resources, skills and infrastructure to meet strategic objectives • Optimization of IT costs, including the role of and value delivery of external IT sourcing • Risk, return and competitive aspects of IT investments • The contribution of IT to the • Business. • Exposure to IT Risks, including compliance risks • Direction to management relative to IT Strategy • Drivers and catalysts for the board's IT 	<ul style="list-style-type: none"> • Decides the overall level of IT and how costs will be allocated • Aligns and approves the enterprise's IT architecture • Approves project plans and budgets, setting priorities and milestones • Acquires and assigns appropriate resources • Ensures that projects continuously meet business requirements including a reevaluation of the business case • Monitors projects plan for delivery of expected value and desired outcomes on time and within budget • Monitors resource and priority conflict between enterprise divisions and the IT functions as well as between projects. • Makes recommendations and requests for changes to strategic plans (Priorities, technology approaches and resources) • Communicates strategic goals to projects teams • Is a major contributor to management's IT governance responsibilities and practices
Authority	<ul style="list-style-type: none"> • Advises the board and management on IT strategy • Is delegated by the board to provide the IT input to the strategy and prepare its approval • Focuses on the current and future strategic IT issues 	<ul style="list-style-type: none"> • Assists the executive in the delivery of the IT strategy • Oversees the day to day management of the IT service delivery and IT projects Approval • Focuses on implementation
Membership	Board members and specialists non board members	<ul style="list-style-type: none"> • Sponsoring executive • Business executive • Chief information officer • Key advisors as required (IT, audit, legal, finance)

b) Sub Committees

Information Security Sub Committee	<ul style="list-style-type: none"> • Facilitates achieving consensus on priorities and trade-offs. • Serves as an effective communications channel and provides an ongoing basis for ensuring the alignment of the security program with business objectives. • The committee will deliberate on the suitability of recommended controls and good practices in the context of the organization, including the secure configuration of operating systems (OSs) and databases. 	<ul style="list-style-type: none"> • C-level executive management and senior managers from IT, • application owners, • business process owners, • operations, • HR, audit and • legal
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Project steering committee	<ul style="list-style-type: none"> – Reviews project progress regularly (e.g., semimonthly or monthly) and Holds emergency meetings when required. – Serves as coordinator and advisor. Members of the committee should be available to answer questions and make user-related decisions about system and program design. – Takes corrective action if necessary due to project progress and issues escalated to the committee. 	<ul style="list-style-type: none"> • a senior representative from each business area • The project manager • The project sponsor who assumes the overall ownership and accountability of the project and chairs the steering committee.
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Appendix 9 Guidelines for Sourcing

a) MDAs should evaluate its ICT function and determine the most appropriate method of delivering the ICT function based on the following;

1. Is this a core function of the organization
2. Does this function have specific knowledge, processes, and staff critical to meeting its goals and objectives and that cannot be replicated externally or in another location?
3. Can this function be performed by another party or in another location for the same or lower price, with the same or higher quality and without increasing risk?
4. Does the organization have experiences managing third parties or using remote/offshore locations to execute its or business functions?
5. Are there any contractual or regulatory restrictions preventing offshore locations or use of foreign materials?

b) On completion of the sourcing strategy, the IT steering committee should review and approve the strategy. At this point, if the committee has chosen to use outsourcing, a rigorous process should be followed including the following steps

1. Define the IT function to be outsourced
2. Describe the service levels required and minimum metrics to be met
3. Know the desired level of knowledge, skills, and quality of the expected service provider
4. Know the current in-house cost information to compare with third party bids

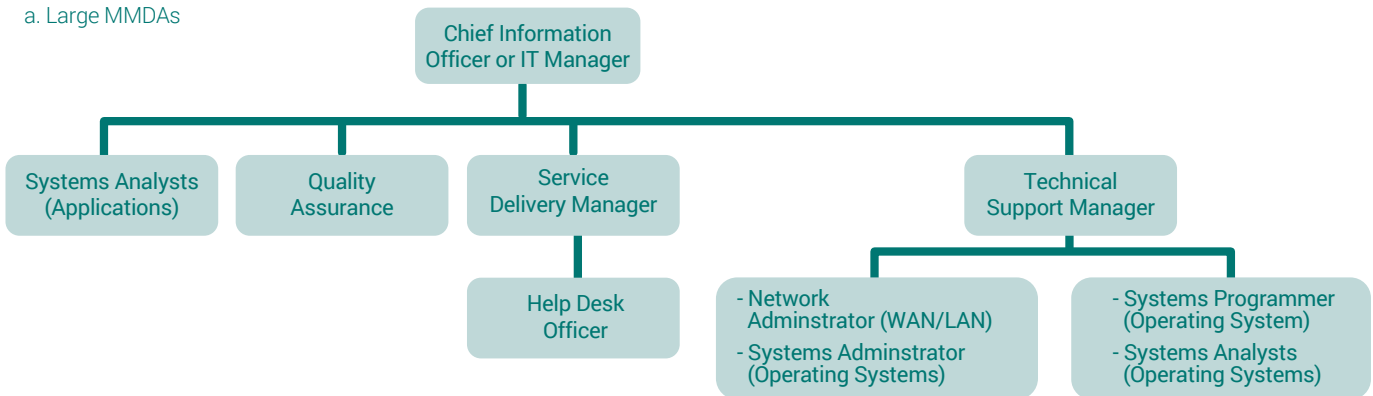
5. Conduct due diligence reviews of potential service providers
6. Confirm any considerations to meeting contractual or regulatory requirements.

Appendix 10: GoG Project Management Governance Structure



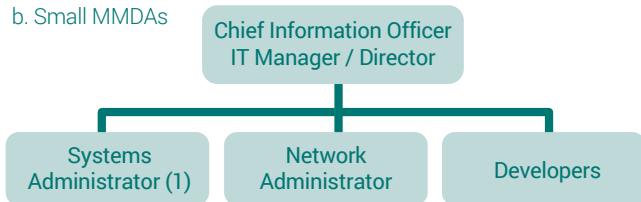
Appendix 11: ICT Organization Structures

a. Large MMDAs



Appendix 11: ICT Organization Structures

b. Small MMDAs



Appendix 12: Project governance roles

Subject	Requirement
Define a framework	<ul style="list-style-type: none"> - Has ultimate Agency in large, complex or politically driven projects. - Is the champion of the project, promotes the benefits of the project to the community and may be viewed as the 'public face' of the project? For example, the Corporate Client may be the Presidency, Minister of the State or Head of Agency. - May also be the Project Funder. <p>In a small, less complex project, there would be no Corporate Client, but the Project Sponsor would act as the champion of the project, and fulfil the role of the Project Champion.</p>
Project Sponsor	<ul style="list-style-type: none"> - Ultimately accountable and responsible for the project, and is sometimes referred to as the Project Owner. - Responsible for the attainment of the agreed Project Target Outcomes. The Target Outcomes should be secured before the project is closed formally. - Member of the Steering Committee, and is usually the Committee Chair. For projects where there is no Steering Committee, the Sponsor assumes responsibility for approving the project scope and all subsequent decision-making. - Oversight of the business management and project management issues that arise outside the formal business of the Steering Committee. - Provides support by advocacy at senior levels, and ensures that the necessary resources (both financial and human) are available to the project.



	<ul style="list-style-type: none"> - May also be the Business Owner for the project and can also be the Funder, but it varies within government, depending on the budgetary arrangements and decisions about who will be managing the Outputs after the project closes. In the case of large whole-of-government projects, the project funds may be managed by one Agency on behalf of the government, but there may be several Business Owners. <p>The Corporate Client and Project Sponsor may be the same person for some projects. The Project Sponsor must be identified for all projects, no matter what the size or complexity.</p> <p><i>Accountable to: Corporate Client (where applicable)</i></p>
<p>Steering Committee</p>	<ul style="list-style-type: none"> - Responsible and accountable for policy and resourcing decisions essential to the delivery of project Output and the attainment of project's Target Outcomes. <p>Accountable to the Corporate Client and/or Sponsor for providing the Project Manager and Team with effective management and guidance in the development of the project Outputs and implementation of required organisational change, in order to attain the project's Outcomes.</p> <ul style="list-style-type: none"> - Responsible for ensuring appropriate management of the project components outlined in the endorsed Project Business Plan, which usually includes approving the initial Project Proposal or Business Case and then the Project Business Plan. - Responsible for assessing, approving or rejecting changes to the scope as documented in the Project Business Plan as the project progresses. - Responsible for monitoring progress (not just activity) and scrutinising the project's budget. - Ultimately accountable for ensuring appropriate risk management processes are applied, which may include responsibility for undertaking specific risk management activities. - Must also consider how (or if) the project's objective (s), Outcomes, Target Outcomes, and longer-term business benefits align with the organisational strategic agenda and direction, and making the hard decisions to re-scope or terminate the project if there is little or no alignment. - Should develop an agreed Terms of Reference for how the Steering Committee will operate. <p>The composition of the Steering Committee may change as the project moves through its various phases or stages, to ensure the best expertise and experience are available when required. Not all projects require a Steering Committee. The need for a Steering Committee is dependent on the complexity and nature of the project and is determined by the Corporate Client and/or Project Sponsor.</p>
<p>Business Owner(s)</p>	<ul style="list-style-type: none"> - Responsible for managing the project Outputs for utilisation by Project Customers. - Responsible for ongoing maintenance (including costs) of the project Outputs after the project closes. - Accountable to the Project Sponsor and/or Corporate Client (or their delegate(s)) following formal project closure for the achievement of and reporting against the project's Target Outcomes and realisation of the longer-term business benefits. - Must be satisfied that the project's Outcomes (including Target Outcomes (and longer-term business benefits) are meaningful in the context of the Business Unit's operational environment and forward strategic agenda. - Contracted by the Project Sponsor and/or Steering Committee to implement the change management described in the Outcome Realization Plan, and thereby achieve the project's Outcomes, Target Outcomes and realize the business benefits. - May be required to contribute resources to the project to ensure the change management described in the Outcome Realization Plan is implemented effectively.



Project Manager	<ul style="list-style-type: none"> - Contracted by the Project Sponsor and/or Steering Committee to deliver the defined project Outputs as articulated in the approved Project Business Plan. - Works in partnership with and reports to the Project Director to implement the Project Business Plan. - Responsible for engaging the Project Sponsor, Business Owner(s) and/or Steering Committee in order to clarify the project Objectives, Outcomes, Target Outcomes, required Outputs and stakeholders within agreed time, cost and quality parameters. - Develops and maintains the Project Business Plan, Project Work/Execution and Implementation Plan(s) and related schedules. - Responsible for organising the project into one or more subprojects, managing the day-to-day aspects of the project, resolving planning and implementation issues, and monitoring progress and budget. - Reports to the Project Sponsor and/or Steering Committee at regular intervals. - Manages (client/provider/stakeholder) expectations through formal specification and agreement of the project objective(s), Outcomes, Target Outcomes, Outputs, quality requirements, resources required, budget, schedule, project structure, roles, and responsibilities. - Requires demonstrated high-level project management skills. A Project Manager cannot lead effectively unless they have credibility. For most projects, it means the Project Manager must have knowledge of how the Outputs will be created, and how the Target Outcomes will be realised from the utilisation of those Outputs as described in the Outcome Realisation Plan. <p>The Project Manager must be identified for all projects, no matter what the size or complexity. <i>Accountable to: Project Director (where applicable), Project Sponsor and/or Steering Committee</i></p>
Project Team	<ul style="list-style-type: none"> - Led by the Project Manager or Project Team Leader. - Responsible for completing tasks and activities required for delivery of the project Outputs, as outlined in the Project Business Plan and elaborated in the Project Execution and/or Implementation Plan(s). - Usually includes representatives from the Business Unit(s) impacted by the project. - Must include the requisite skills for each phase of a project to ensure success. The skills should be explicitly identified as a part of the project planning process. <p>The composition of the Team may change as the project moves through its various phases. <i>Accountable to: Project Manager and/or Project Team Leader.</i></p>
Project Team Leader	<ul style="list-style-type: none"> - Usually appointed in large and/or complex projects to work under the direction of the Project Manager. - May be a representative of a Business Unit impacted by the project. - Responsible for completing the required tasks and activities as defined in the Project Execution and/or Implementation Plan(s) for delivering the project Output(s). <p><i>Accountable to: Project Manager</i></p>
Project Officer	<ul style="list-style-type: none"> - Responsible for completing tasks and activities required for delivering project Output, as determined by the Project Manager or Project Team Leader. - Most common responsibilities are related to project coordination (e.g. administration, including development and/or maintenance of project documentation, assisting with status reporting and follow-up), stakeholder liaison (e.g. secretarial support to the project reference group or project communications) and general administrative support activities (e.g. scheduling and meeting preparations). - May also be directly involved in the development and quality assurance of specific Outputs. <p><i>Accountable to: Project Manager or Project Team Leader</i></p>

Reference Groups	<ul style="list-style-type: none"> - Provide forums to achieve consensus among groups of stakeholders. - Do not do the work of Output production, but may ratify/endorse Output quality on behalf of the stakeholders they represent. - The group may already exist, have an indefinite life span or may continue for the life of the project. - Maybe a general reference group delegated by the Steering Committee to monitor or modify the Project Business Plan for approval by the Steering Committee. - May consist of collection of people with like skills to address a particular set of issues. - May report to the Steering Committee or Project Manager, depending on who has appointed them and what they are requested to achieve. - Members provide an excellent channel to assist the project communicate information to and from their stakeholder group(s) who may be impacted by, or impact on, the project. <p><i>Accountable to: Project Sponsor and/or Steering Committee via the Project Manager or Project Director (where applicable)</i></p>
Advisory Groups	<ul style="list-style-type: none"> - Forums of stakeholders, usually experts to provide specific advice or technical expertise to the project. - Do not do the work of Output production, but may advise the Project Manager on Output quality ('fitness-for-purpose' (on behalf of the stakeholders they represent. - Members provide an excellent channel to assist the project communicate information to and from their stakeholder group(s) who may be impacted by, or impact on, the project. - Able to advise the project of any emerging issues from a stakeholder perspective. - Members may also be willing to play an ongoing role in Output maintenance after the project has closed, to ensure the Outputs remain relevant and retain their practical utility. - May report to the Steering Committee or Project Manager, depending on who has appointed them and what they are requested to achieve. - The group may already exist, have an indefinite life span or may continue for the life of the project. An information technology advisory group is an example. <p><i>Accountable to: Project Sponsor and/or Steering Committee via the Project Manager or Project Director (where applicable)</i></p>
Working Groups	<ul style="list-style-type: none"> - Small specialist work groups, each dedicated to producing a well-defined Output within a specific timeframe, appointed by the Project Manager. - Report directly to the Project Manager. May also report to the Reference/Advisory Group on Output development progress. Membership may be drawn from Reference or Advisory Groups, or the Business Unit(s) where Output implementation will occur. - May have no life beyond the delivery of that Output. - Probably involve one or more members of a Project Team to support activity. - Members provide an excellent channel to assist the project communicate information to and from their stakeholder group(s) who may be impacted by, or impact on, the project. - Members may also be willing to play an ongoing role in Output maintenance after the project has closed, to ensure the Outputs remain relevant and retain their practical utility. <p><i>Accountable to: Project Manager or Project Director (where applicable)</i></p>



Consultants	<ul style="list-style-type: none"> - Are employed from outside the organisation to provide independent, high-level specialist expertise or professional advice unavailable from internal resources, to assist project decision-making. - Typically, Project Consultants may include: <ul style="list-style-type: none"> o Information technology specialists who define and manage the technological aspects of the project • Representatives employed by stakeholders to ensure their interests are represented and managed • Legal advisers who assist in the development and review of the contractual documentation • Auditors who ensure compliance with internal and external audit requirements <p>May report directly to the Chair of the Steering Committee (or perhaps the Chair of a general Reference Group).</p> <p>Please note: The Head of Agency or Deputy Secretary (or equivalent) must approve any decision to engage a consultant prior to the Agency undertaking the appropriate procurement process.</p> <p><i>Accountable to: Project Sponsor and/or Steering Committee via the Project Manager or Project Director (where applicable)</i></p>
Contractors	<p>Are employed, external to the business area, to provide a specified service in relation to the development of project Outputs. Examples include developing guides and/or manuals, business application software, develop and deliver marketing programs, prepare and deliver training to staff in the business area.</p> <p>May be engaged to undertake work as part of the Project Team.</p>

Appendix 13: Project management documentation

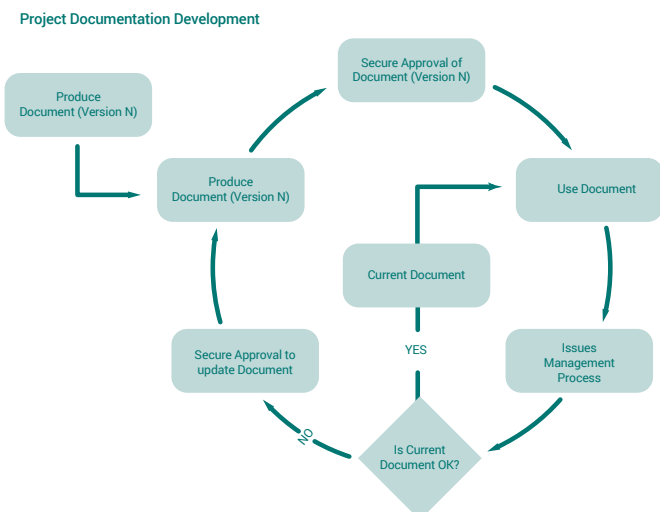
PHASE	Key documents	Other documents	Proformas
INITIATE	Project Proposal Feasibility Study Report Project Business Case	Business Needs Analysis Project Brief c	
MANAGE	Project Business Plan Project Execution Plan Project Review and Evaluation Report Project Phase Review Report	Risk Management Plan Stakeholder Engagement Plan Organizational Change Management (or Transition) Plan Implementation Plan Project Communication Strategy and Action Plan Marketing Strategy Training Strategy	Project Status Report Project Risk Register Project Issues Register
FINALISE	Outcome Realization Plan Project Closure Report Project Review and Closure Report	Handover Plan Project Output Management Plan	



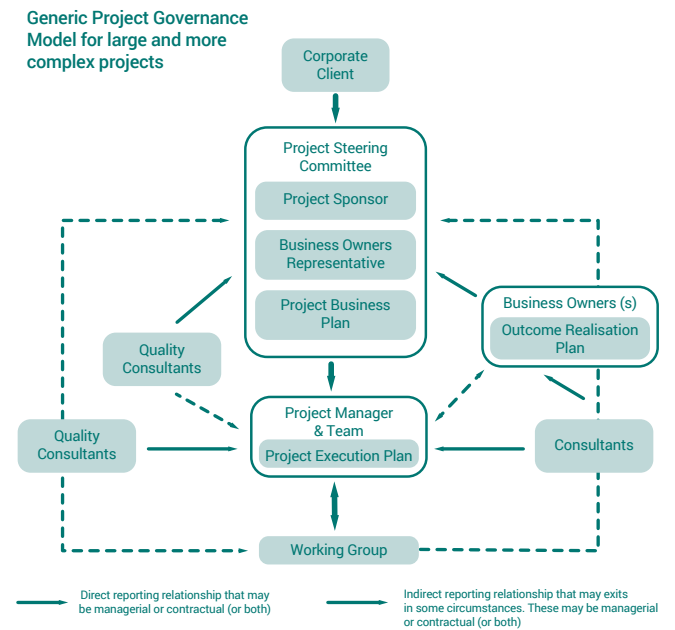
Appendix 14: Project management stages and activities

Key Element	Initiate	Set Up	Manage	Finalise
1. Planning and scoping	□□	□□	□□	□□
2. Governance	□□	□□	□□	□□
3. Outcome Realization	□□	□□	□□	□□
4. Stakeholder engagement	□□	□□	□□	□□
5. Risk management	□□	□□	□□	□□
6. Issues management	□□	□□	□□	□□
7. Resource management	□□	□□	□□	□□
8. Quality management	□□	□□	□□	□□
9. Status reporting	□□	□□	□□	□□
10. Project review and evaluation	□□	□□	□□	□□
11. Project closure	□□	□□	□□	□□

Appendix 15: Project documentation development



Appendix 16: A generic project governance model for larger, more complex projects

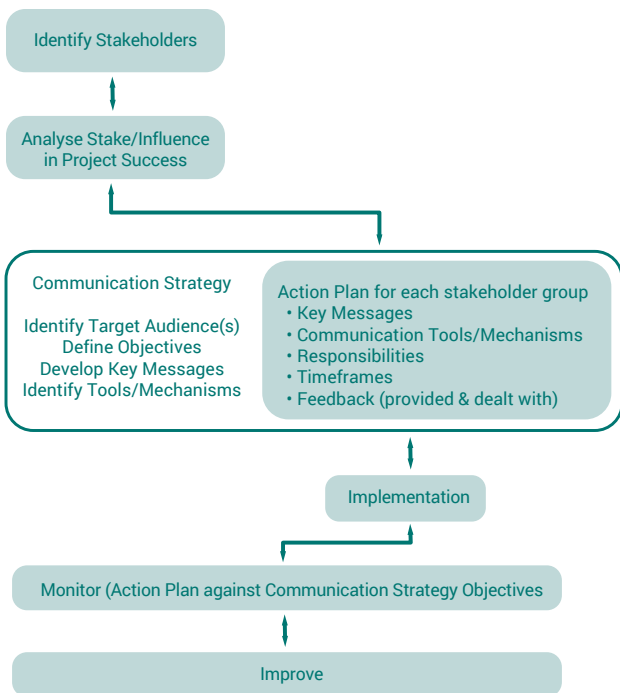


Appendix 17: Sample Outcome Realization data for the Project Business Plan

Target Outcome	Performance Indicator
The measurable benefits that are sought from undertaking a project (i.e. what we want to achieve)	A description of the type of change that will indicate performance towards the achievement of the Target Outcomes
Measure	Baseline
The actual mechanism for measuring the level of the performance indicator	The current level of the performance indicator as at [date]
Target Level	Target Date
The targeted level of performance (i.e. how success is defined)	The date by when the target levels are to be achieved
Accountability	
Who is accountable for the achievement of the targeted outcomes and reports on the progress towards the target?	

Appendix 18: Stakeholder engagement process

Stakeholder Engagement Process



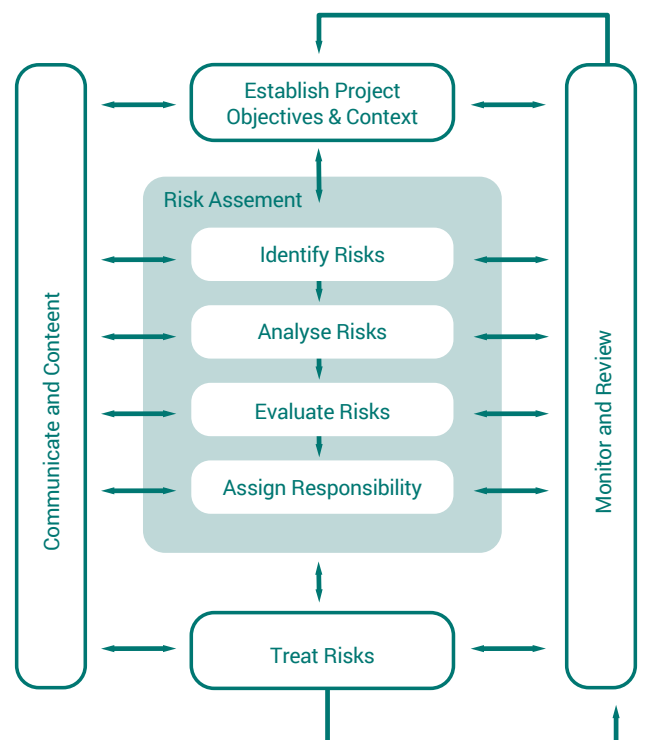
Appendix 19: Stakeholder engagement process

Verbal	Electronic
<ul style="list-style-type: none"> • Presentations/briefing sessions (one-to-one, one to-many) • Telephone (one-to-one)/ Teleconferences (one-to many) • Forums • Networking facilitation • Staff meetings • Seminars/workshops • Community meetings • Launches • Specific events • Social gatherings • Visitation programs • Radio/television 	<ul style="list-style-type: none"> • Personal email to identified stakeholders (one to one, one to many) • Broadcast email (one to many) • Internet/intranet including online forums, fact sheets, newsletter, SharePoint – web sharing of ongoing project planning with internal and/or external stakeholders • SMS messaging • Weblog • Facebook, Myspace, YouTube Twitter • RSS Feed • CD-ROM/DVDs • Fax stream, faxback

Written	Visual
<ul style="list-style-type: none"> • Mailouts of important documentation (letter, memorandum, factsheet, FAQs) • Newsletter • Advertising – newspaper, magazine, web • Pamphlets and brochures (consider shelf life issues) • Information in agency newsletters etc. • Media release • Ministerial • Request for Tender (RFT) • Contract • Project planning documentation 	<ul style="list-style-type: none"> • Display – workplace, conference • Transport advertising • ‘Roadshow’ • ‘Parody’ presentation – play, puppet show • 3D presentation

Appendix 20: Elements of the risk management process

Elements of the Risk management Process

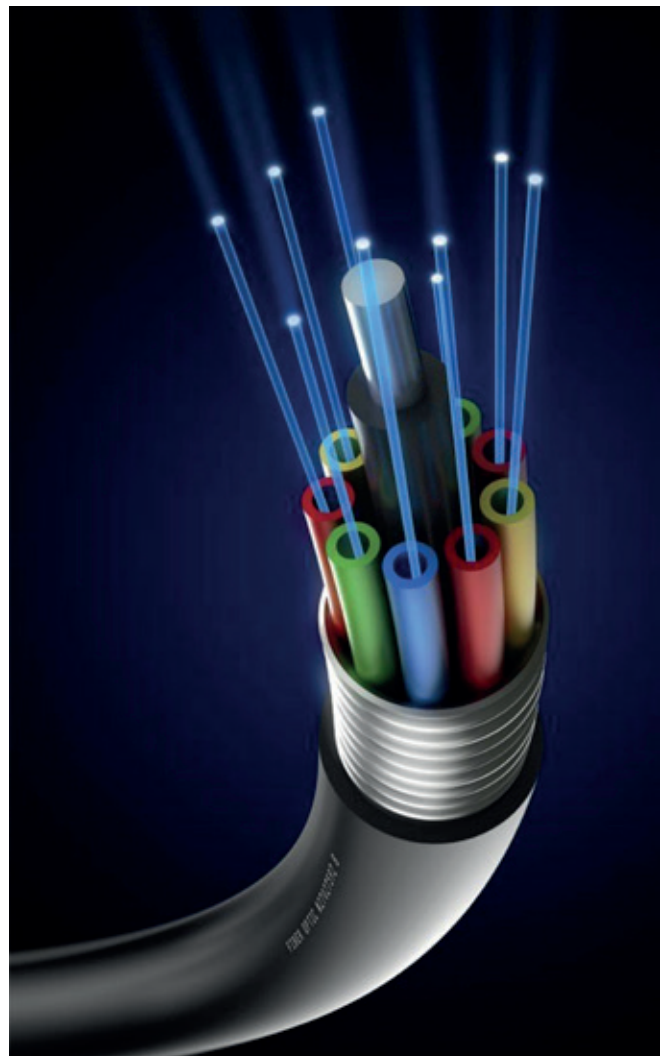


Appendix 21: Risk matrix for grading risks

		Seriousness			
Likelihood		Low (Insignificant adverse impact, note only)	Medium (Reasonable adverse impact, needs monitoring)	High (Will have significant adverse impact)	Extreme
	Low (Unlikely to occur during project)	N	D	C	Extreme
	Medium (May occur at some stage in project)	D	C	B	Extreme
	High (Probably will occur during project)	C	B	A	Extreme

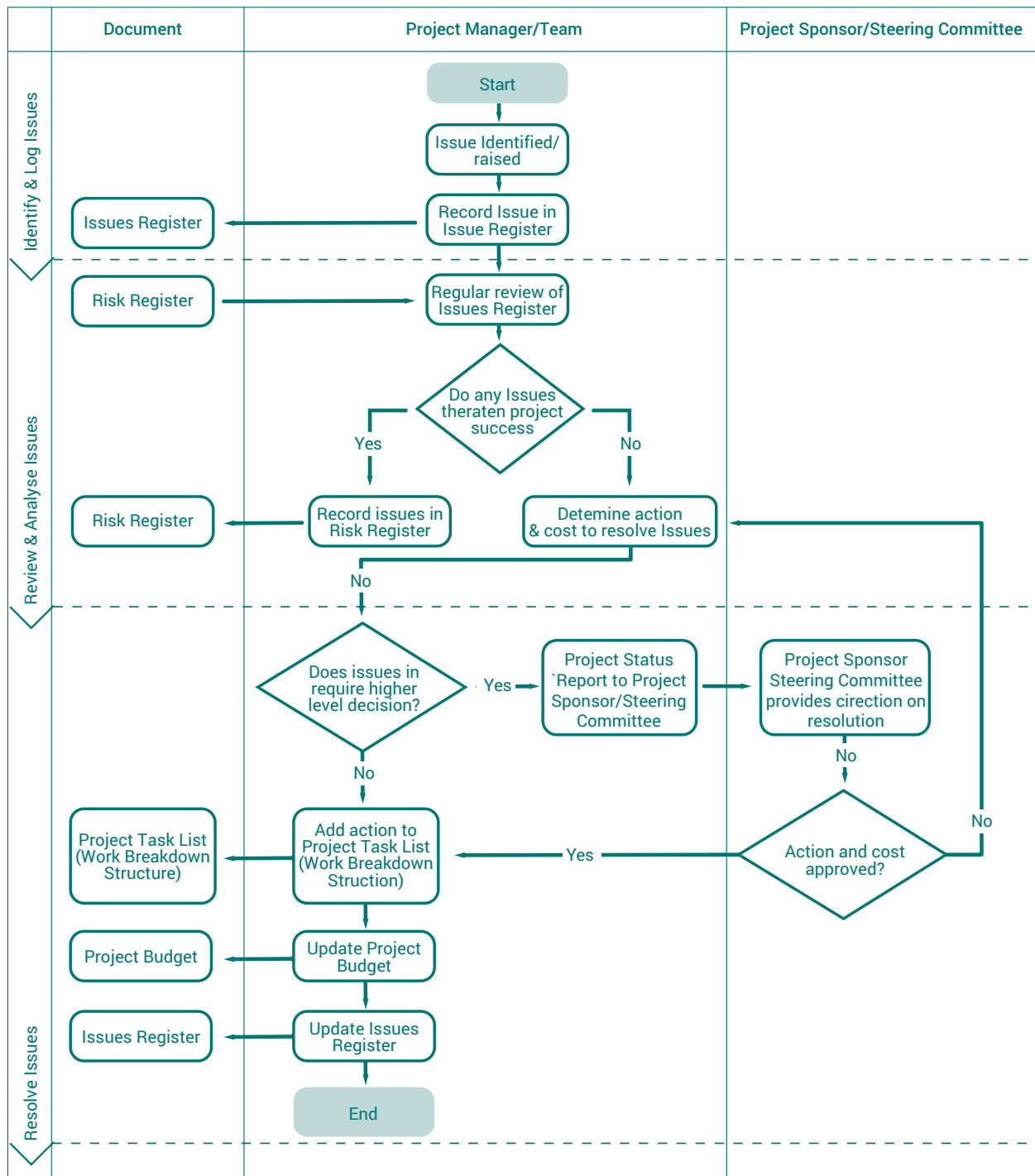
Appendix 22: Recommended actions for grades of risk

Grade	Risk Mitigation Actions	Who
A & Extreme	Mitigation actions to reduce the likelihood and seriousness to be identified, costed and prioritized for implementation before the project commences or immediately as they arise during project execution.	Project Steering Committee and/or Project Sponsor
B	Mitigation actions to reduce the likelihood and seriousness to be identified costed and prioritized. Appropriate actions implemented during project execution,	Project Steering Committee and/or Project Manager
C	Mitigation actions to reduce the likelihood and seriousness to be identified and costed for possible action if funds permit.	Project Manager
D & N	To be noted; no action is needed unless grading increases over time.	Project Manager



Appendix 23: Issue management flowchart

Issues Management Flowchart

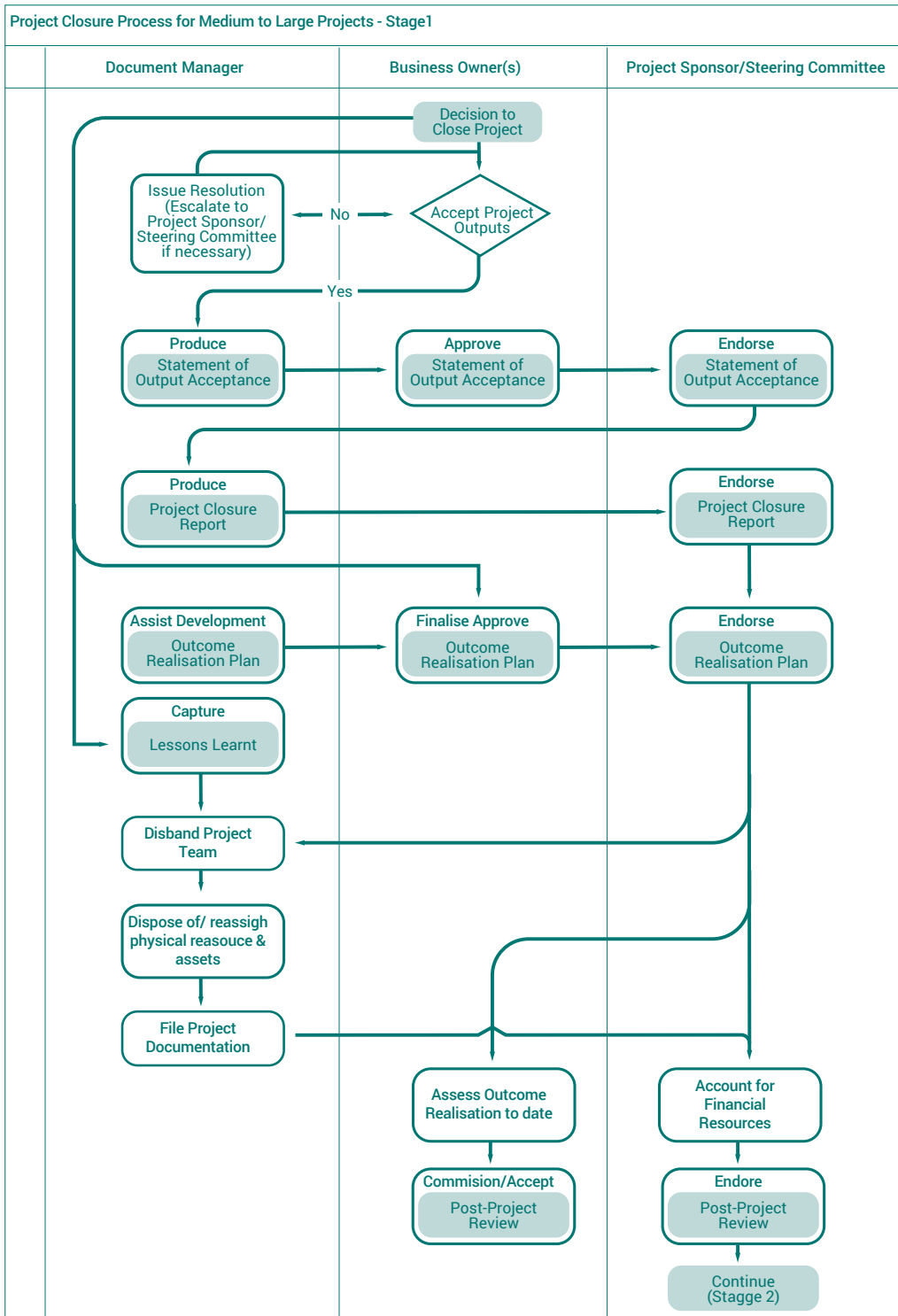


Appendix 24: Sample Project Issues Register

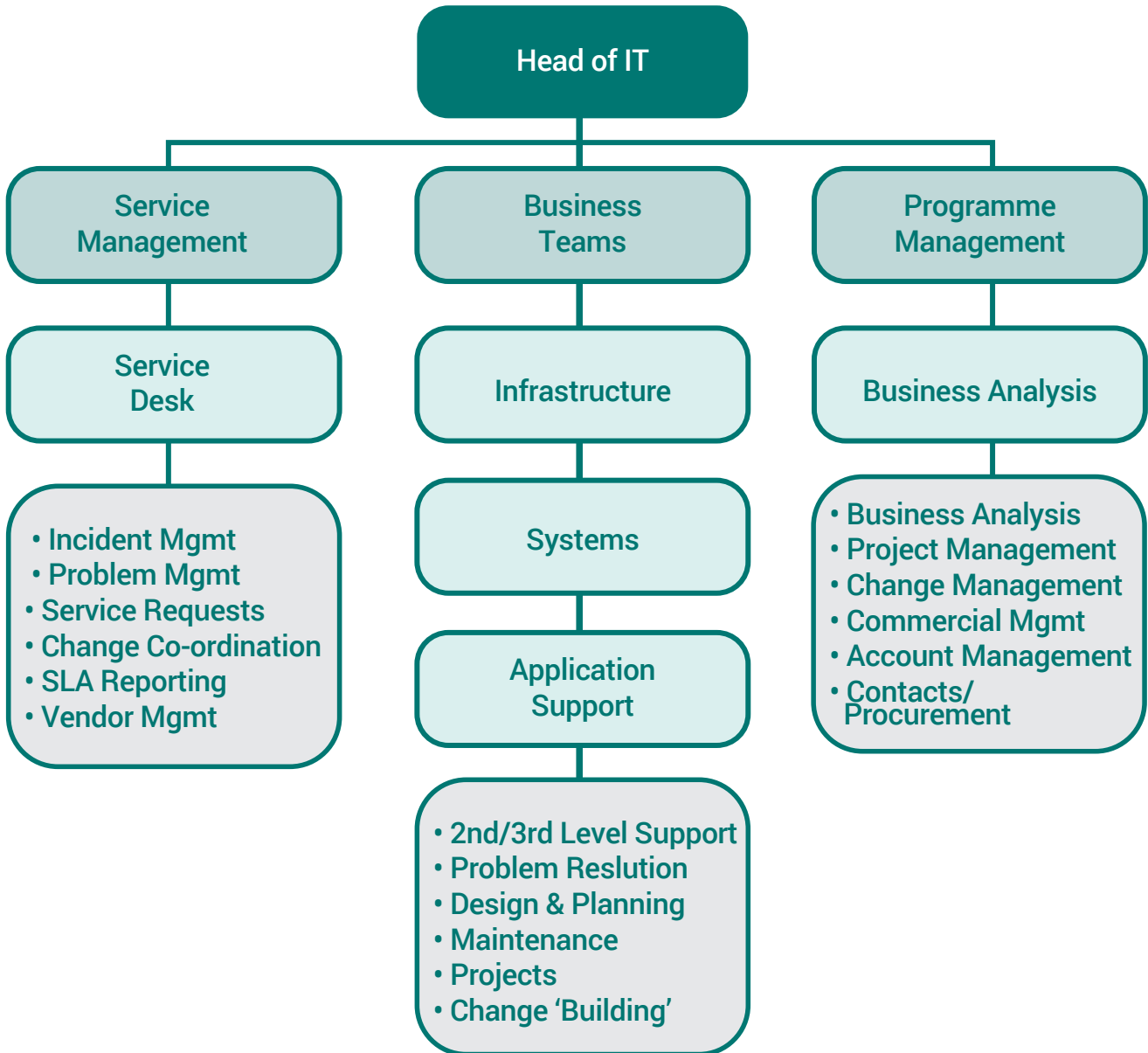
Issue Number	Description	Raised By	Date	Priority	Responsible Officer	Actions & Progress Notes	Status	Date Resolved
1.1	Lack of agency representation on Project Working Group	Working Group	1/09/302	High	Jane	Letter of invitation from Project Sponsor (i.e. Director) to agencies which are not represented	Open	
2.1	Lack of registrants for next forum	Project Manager	1/11/30	High	Senior Project Officer	Send out reminder via email to the Project management community of practice.	Open	
1.3	How to show links between PM documents	Project Team member	10/09/30	Medium	Project Officer Senior	Matrix to be developed and published	Closed	30/11/22



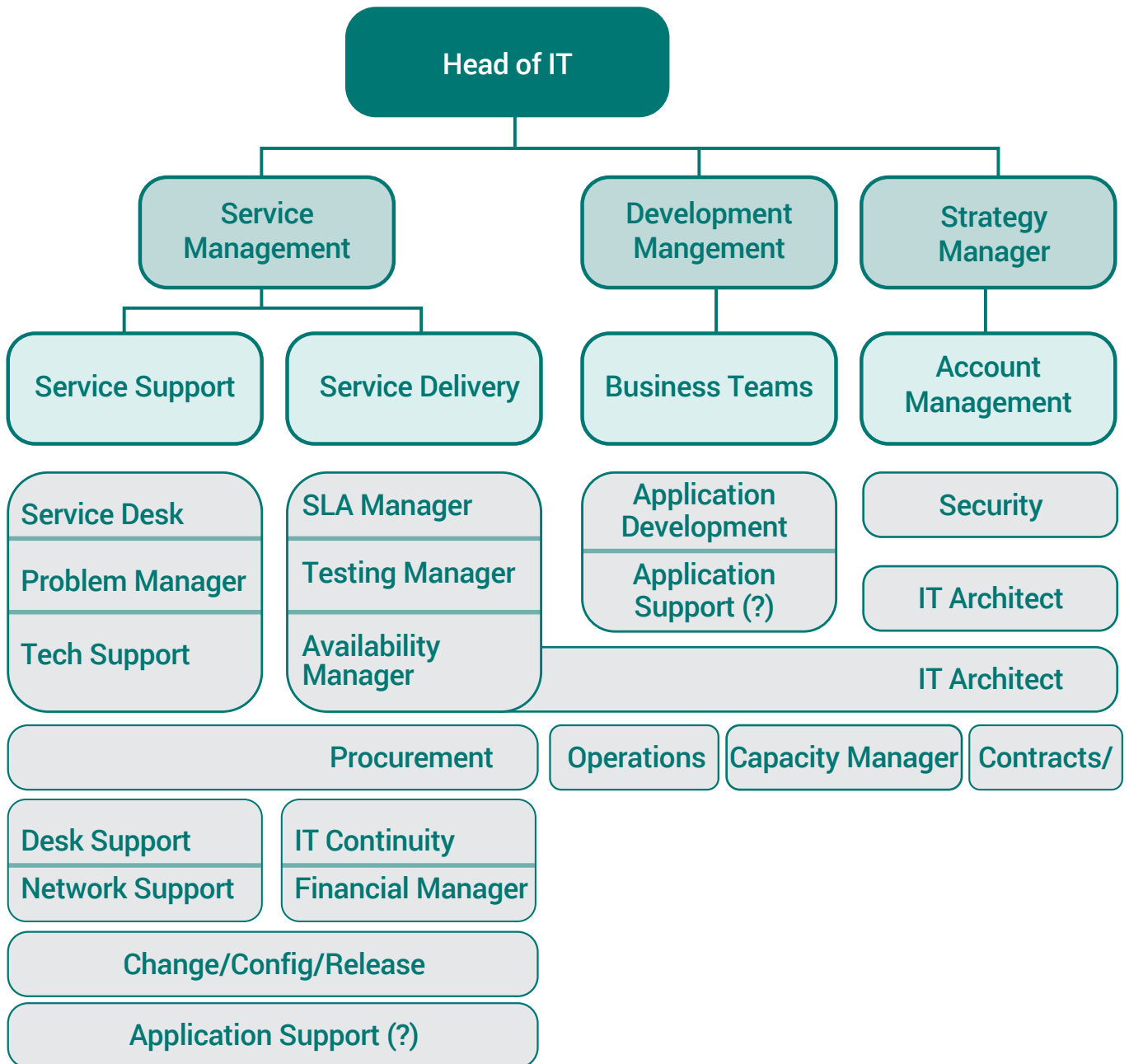
Appendix 23: Issue management flowchart



Appendix 26: Sample Service Management structure (ITIL) for Small organizations



Appendix 27: Sample Service Management structure (ITIL) for large organizations



Appendix 19: Stakeholder engagement process

General Definitions

- First Level Support**
- Dedicated and managed Support area/telephone access
 - Routine call and incident taking, logging and classification
 - Initial fast resolutions to Routine Incidents – e.g. password resets
 - Short term support to keep lines open and provide access to IT
 - Calls within target guidelines before escalation – e.g. 5 - 10 minutes
 - Generally at least 40% - 50% of calls resolved
- Second Level Support**
- Dedicated and managed Support area
 - Longer resolution Incidents – e.g. more than 5-10 minutes
 - Incidents that require greater technical knowledge or system access
 - Fast Response and Target resolution times – support is highest priority
 - Task to build Knowledgebase to ensure future response in Incident Management/1st Level
 - Involvement in the technical analysis and resolution of underlying Problems
 - Generally 40% - 50% of calls resolved
- Third Level Support**
- Long Term Problem resolution
 - Incidents/Problems that require high level of technical knowledge or system access
 - Task to build Knowledgebase to ensure future response in Incident Management/1st or 2nd Level
 - Generally less than 10% of calls handled

APPENDIX 29: Sample ICT Strategy Format

ICT Strategy Format & Template

Strategic Plan Format and Template

Strategy Development Process–

Where we are Where we want to be How we will do it How are we doing



Environment Scan	Situation-Past, Present and Future	Mission & Vision	Performance Measurement	Performance Management
Background Information	Significant Issues	Values/Guiding Principle	Targets Standards of Performance	Review Progress Balanced Scorecard
Situational Analysis	Align/Fit with Capabilities	Key Objectives	Initiatives and Projects	Take Corrective Actions
SWOT-Strengths Weaknesses, Opportunities, Threats	Gaps		Action Plans	Feedback upstream-revise plans

Note: All Strategic plan proposals should be accompanied with a 'Table of Contents' and should be in the order depicted below.



Executive Summary

Give brief outline of the (Org/Dept)

Environmental Analysis

Internal Environment

[**Internal Assessment:** Organizational assets, resources, people, culture, systems, partnerships, suppliers, etc]

External Environment

[**External Assessment:** Marketplace, competitor's, social trends, technology, regulatory environment, economic cycles, etc.]

Tools for comparison analysis

[It involves specifying the objective of the institution or project and identifying the internal and external factors that are favorable and unfavorable to achieving that objective.]

Examples:

SWOT Analysis; Six Forces Model; VRIO; PEST analysis; Porter's Four Corners Model

Benchmarking

[Benchmarking is the process of comparing one's business processes and performance metrics to industry bests and/or from other industries. Dimensions typically measured are quality, time, and cost. Improvements from learning mean doing things better, faster, and cheaper.

Benchmarking involves management identifying the best institutions in their industry, or any other industry where similar processes exist, and comparing the results and processes of those studied (the "targets") to one's own results and processes to learn how well the targets perform and, more importantly, how they do it.]

Best practices

[A best practice is a technique, method, process, activity, incentive, or reward that is believed to be more effective at delivering a particular outcome than any other technique, method, process, etc. when applied to a particular condition or circumstance. The idea is that with proper processes, checks, and testing, a desired outcome can be delivered with fewer problems and unforeseen complications. Best practices can also be defined as the most efficient (least amount of effort) and effective (best results) way of accomplishing a task, based on repeatable procedures that have proven themselves over time for large numbers of people.]

Gap Analysis

[Identify the gap between the optimized allocation and integration of the inputs, and the current level of allocation. This helps provide the institution with insight into areas which could be improved. The gap analysis process involves determining, 'where you are now' and 'where you want to be'.]

Strategic Plan

The strategic plan should be communicated to all relevant individuals, including stakeholders and sponsors. It should include the following:

Vision

[What the organisation/department wants to be; it should be compelling, vivid and concise, challenges everyone to reach for something significant – inspires a compelling future; it is time bound. An organization's Vision sets out its aspirations for the future. The Vision is the 'dream' of the future, a picture painted in words, which is intended to inspire people by appealing to the heart as well as the head.]

Mission

[Our purpose of existence; should be brief and to the point; it provides context for major decisions and capable of infinite fulfillment; it is not time bound].

MISSION Formulation

Answer each of these questions to help in formulating missions

What services and/ or products will the organization/ department offer?

Who are the people who may use or benefit from this services or products?

What are the reasons for the organization/ department?

Why will the organization/ department exist?

Now combine all the answers into one statement of purpose.

Values

[Values will guide every major decision making; it embodies the spirit of the org/ dept; revisit Vision and Mission statement.]



Strategic Objectives

List specific actionable results needed to support the vision and the mission. Use the mnemonic **SMART/ER**

- S** Specific
 - M** Measurable
 - A** Attainable
 - R** Relevant
 - T** Time bound
 - and
 - E** Evaluate
 - R** Reevaluate
- Initiatives

[These are actions that will lead to achievement of your objectives, often taking the form of projects or programs]

Measures (KPI(s), Timeline and Deliverables

[These are objective, quantifiable methods for measuring success. Indicators and monitors of success. It includes; performance measurement, initiatives and projects and action plans.]

[Each Initiative has a supporting Action Plan(s) attached to it. Action Plans are geared toward operations, procedures, and processes They describe who does what, when it will be completed, and how the organization knows when steps are completed Like Initiatives; Action Plans require the monitoring of progress on Objectives, for which measures are needed]

Quick wins

[These are improvement which are expected to provide a Return on Investment in a short period of time with relatively small cost and effort.]

Organization Structure

[Organizational structure allows the expressed allocation of responsibilities for different functions and processes to different entities such as the department, workgroup and individual. **Please provide a diagram.**

Below is a template for an organizational structure]

Resource

Personnel

Finance/ Budget

Facilities/ equipment



APPENDIX 30: Who needs to be involved in Legal contracts

Investors	Providers	Controllers
<ul style="list-style-type: none"> • The Board • IT Council/Management Team • Senior business unit managers e.g. key customers of IT services • Business Partners • External investors/shareholders – as part of corporate governance 	<ul style="list-style-type: none"> • Project and change managers (IT and Business) • Project and change managers (IT and Business) • Programme managers • Business managers and users • Technical delivery and support teams • Key players e.g. Business sponsors, Project champions • Relationship managers and internal communications teams • Suppliers (especially outsourced service providers) • Contract and procurement management • Peripheral players/influencers/Policy owners e.g. HR, Facilities Management, Legal 	<ul style="list-style-type: none"> • Internal audit and external audit (due diligence) • External regulators • Corporate governance coordinator • Risk managers • Compliance – regulatory and internal • Finance/Project Managers/IT and business managers – reviewers of benefits/ROI • Post investment appraisal/Post project review teams
Legal and regulatory Responsibilities		
<ul style="list-style-type: none"> • Understand requirements (what regulations are to be complied with) • Set the mandate • Set priorities and expectations • Establish and ensure the expected degree of compliance • Based on advice concerning risk and cost: • Assess impact on business • Provide resource and funding to ensure issues are addressed • Define who is accountable • Obtain internal or external assurance as required that issues have been addressed and controls established • Monitor and evaluate compliance programmes and significant commercial contracts • Sign off specific compliance programmes • Provide approvals when required for significant legal or regulatory decisions 	<ul style="list-style-type: none"> • Advise on IT related technical and commercial risks that could impact legal and regulatory requirements • Provide proposals and business cases for legal and regulatory programmes, projects or action plans • Formulate solutions for compliance or commercial contracts • Identify best practices for ongoing good control of legal and regulatory requirements • Exploit technology and tools where appropriate for ensuring compliance (e.g. asset registers) • Execution of compliance and contractual processes, and operation of related controls • Provide compliance framework to ensure a sustainable “business as usual” approach to compliance • Provide evidence of compliance • Provide information relating to the cost of compliance and also cost of any incidents • Evaluate impact on business environment together with business units • Ensure vendors, service providers, and subcontractors are involved properly and integrated within the overall compliance approach 	<ul style="list-style-type: none"> • Maintain awareness of current and emerging laws, and regulations affecting IT to assess their impact on the organization’s business • Develop an understanding of their impact on the organization and advise accordingly on “what is needed” - not necessarily “how” • Monitor adequacy of controls and compliance processes • Monitor the business and IT functions for performance in meeting legal and regulatory requirements and report back to management with advice regarding any shortcomings • Provide independent assurance to management that adequate controls are in place to deal with legal and regulatory requirements



Appendix 32: Certification of IT Organisations

Application Requirements for IT Organisations

- a. Various company certificates and other documents
 - i. Certificate of incorporation
 - ii. Certificate of commencement
 - iii. Regulations of the Organisation
- b. Tax Identification Number (TIN) of the IT Organisation.
- c. Certified copies of the shareholders' certificates of the Organisation.
- d. Digital Address of IT Organisation.
- e. In the case of a foreign Organisation
 - i. Proof of current registration status from their country of domicile or origin,
 - ii. Proof of registration with an association of contractors;



APPENDIX 30: Who needs to be involved in Legal contracts

Below shows the breakdown of the activities for the cost of registration for each category. The cost for each category is made available in the Registration Cost Guideline Document.

Business Category	Cost	Breakdown	
		Activity	Cost(GH ¢)
Computers and peripheral equipment	Application fee: Annual subscription:	Document Verification processes	
		Certificate cost	
		Certificate period monitoring processes	
		Other administrative activities	
Communication equipment	Application fee: Annual subscription:	Document Verification processes	
		Certificate cost	
		Certificate period monitoring processes	
		Other administrative activities	
Consumer electronic equipment	Application fee: Annual subscription:	Document Verification processes	
		Certificate cost	
		Certificate period monitoring processes	
		Other administrative activities	
Miscellaneous ICT components and goods	Application fee: Annual subscription:	Document Verification processes	
		Certificate cost	
		Certificate period monitoring processes	
		Other administrative activities	
Business and productivity software and licensing services	Application fee: Annual subscription:	Document Verification processes	
		Certificate cost	
		Certificate period monitoring processes	
		Other administrative activities	
Information technology consultancy and services	Application fee: Annual subscription:	Document Verification processes	
		Certificate cost	
		Certificate period monitoring processes	
		Other administrative activities	
Leasing or rental services for ICT equipment	Application fee: Annual subscription:	Document Verification processes	
		Certificate cost	
		Certificate period monitoring processes	
		Other administrative activities	



Appendix 33: Certification of ICT Professionals

1. Registration of IT Professionals

To commence the registration process, National Information Technology Agency will register IT Professionals according to four categories of registration. The professional registration categories include the following:

- IT Technician
- IT Graduate
- IT Practitioner
- IT Professional

2. Code of Professional Conduct

Registered professionals and NITA Certification/certification holders shall:

1. Perform their duties with objectivity, due diligence and care, in accordance with professional IT standards and procedures for effective governance and management of Information and Communications Technologies.
2. Serve for public good in a lawful manner, while maintaining high standards of conduct and character.
3. Maintain the privacy and confidentiality of information obtained in the course of their activities.
4. Perform services only in areas of their competence
5. Inform appropriate parties of the results of work performed including the full disclosure of all significant facts
6. Support the professional education of stakeholders in enhancing their understanding of the governance and effective management of information and communications technology. Failure to comply with this Code of Professional Ethics can result in an investigation into a registered professional or accredited holder's conduct and, ultimately, in disciplinary measures including exclusion from the roll of IT professionals.

3. Application Process

Step 1: Registration

Please visit the National Information Technology Agency website www.nita.gov.gh/ and check if you meet the criteria for the registration category you wish to apply for, fill in details on the form then submit. The categories for registration include:

- IT Technician
- IT Graduate
- IT Practitioner
- IT Professional

In case of any difficulties or in need of more details please contact NITA via email certification@nita.gov.gh

Step 2: Assessment Evaluation

National Information Technology Agency will conduct an evaluation of your application to make the decision on whether your application is successful or not. You will be notified within 60 days of application on the application evaluation decision. The National Information Technology Agency may contact individual's referees to ascertain the information filled in the applicant's application form.

Registration Requirements

- a. Diploma or Graduate certificate in IT/Engineering related field from accredited institution of higher learning based on level of application.
- b. Tax Identification Number (TIN) of the individual.
- c. National ID card.
- d. Letter of reference from employers confirming professional integrity.
- e. Statements of two referees detailing knowledge of applicant.



Below shows the breakdown of the activities for the cost of registration for each category. The cost for each category is made available in the Registration Cost Guideline Document.

Business Category	Cost	Breakdown	
		Activity	Cost(GH ¢)
IT Technician.	Application fee: Annual subscription:	Document Verification processes	
		Certificate cost	
		Certificate period monitoring processes	
		Other administrative activities	
IT Graduate	Application fee: Annual subscription:	Document Verification processes	
		Certificate cost	
		Certificate period monitoring processes	
		Other administrative activities	
IT Practitioner	Application fee: Annual subscription:	Document Verification processes	
		Certificate cost	
		Certificate period monitoring processes	
		Other administrative activities	
IT Professional	Application fee: Annual subscription:	Document Verification processes	
		Certificate cost	
		Certificate period monitoring processes	
		Other administrative activities	

4. Continuous Professional Development (CPD)

CPD is defined as the undertaking of development activities that lead to the systematic maintenance, improvement and broadening of knowledge and skills, and the development of personal qualities necessary for the execution of professional and technical duties throughout a person's ICT professional career.

CPD Requirements

- a) Certified Professionals (CP) must complete 90 CPD hours over a period of three years.
- b) Members shall demonstrate commitment to professional development via written evidence of CPD activities.
- c) Sources of CPD
 - Attend conferences, seminars, training courses, presentations.
 - Present papers at conferences and seminars, write articles for journals (Contributions to knowledge)



	Name of Commit.	Membership	Terms of Reference
1	The ICT Oversight Committee	His Excellency the President –Chair Members Cabinet Secretary-; Cabinet Members, Ministry of Communications, Director General, National Information Technology Agency Secretary	Review and approve projects for initiation To provide oversight of flagship ICT Projects To receive and consider reports from inter- ministerial Steering Project Committee To resolve inter-ministerial Project challenges. Appointing Agency: H.E. The President Meeting: Bi-annual
2	Inter-Ministerial Project Steering Committee	Chief Director, MoCD – Chair Members Chief Directors -; Cabinet Ministries Director General, NITA –Secretary	1. Champion Implementation of Key Projects 2. Monitor and Evaluation Projects and take necessary action for the success of the project. 3. Prepare and report Projects status to oversight Committee 4. Resolve inter-ministerial Project challenges. 5. Receive and review quarterly reports from Project Implementation and Monitoring Committee. 6. Co-opt the ministry that own the key project(s) Appointing Agency: H.E. The President Meetings: Quarterly

B: Ministries, Agencies and Department

1.0 Project Implementation and Monitoring/Steering Committee

Role	Person	Terms of Reference
Project champion (Chair)	A top-ranking officer from the organ CD for Ministry and DG for Agencies	Initiate projects within Ministries, Agencies & Counties
Project owner	The user of the system	Review and approve project concepts and implementation plans
Chair of Technical committee	This is the person who is responsible for the implementation of the system. [Head of ICT]	Resolve project challenges to ensure smooth implementation Review and approve project budget
Project Management Office	Project Manager National Information Technology Agency	Monitor and evaluate projects at implementation stage Prepare and present quarterly progress report to inter-ministerial project Steering committee Appoints Project implementing team[s] Co-opt stakeholder's representatives or other members Meetings: Regularly Appointing Agency: Cabinet Secretary/Governor/ CEO appropriately

2.0 Project Technical Committee

Role	Person
Project owner and Chair	The user of the system
Project manager (Secretary)	The person who is responsible for the execution of the project
Beneficiaries representative	Stakeholder's representative(s)
PMO Liaison officer	An officer from the NITA PMO
Consultant / Systems integrator	Representative(s) of any third party who is involved in the development of the project
Standard Liaison officer	A Standard officer from NITA
Technical liaison	Selected technical expert(s) in line with the technical requirements of the project


Appendix 35 Audit for outsourced applications

MDA has;	
a)	Defined a strategy on how acquisition will be conducted.
b)	Prepared a request for the supply of a product or service that includes the requirements.
c)	Communicated the request for the supply of a product or service to potential suppliers
d)	Selected one or more suppliers.
e)	Developed an agreement with the supplier that includes acceptance criteria.
f)	Identified necessary changes to the agreement.
g)	Evaluated the impact of changes on the agreement.
h)	Negotiated the agreement with the supplier.
i)	Updated the agreement with the supplier, as necessary.
j)	Assessed the execution of the agreement.
k)	Provided data needed by the supplier and resolved issues in a timely manner.
l)	Confirmed that the delivered product or service complies with the agreement.
m)	Provided payment or other agreed consideration.
n)	Accepted the product or service from the supplier, or other party, as directed by the agreement.
o)	Closed the agreement.












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