



# GOVERNMENT ICT STANDARDS

## ICT Human Capital and Workforce Development

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The ICT Authority is a State Corporation under the State Corporations Act 446

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### REVISION OF ICT STANDARDS

In order to keep abreast of progress in industry, ICT Standards shall be regularly reviewed. Suggestions for improvements to published standards, addressed to the Chief Executive Officer, ICT Authority, are welcome.

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## FOREWORD

The ICT Authority has the mandate to 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 mandate is to ensure coherent and unified approach to acquisition, deployment, management and operation of ICTs across the public service in order to achieve secure, efficient, flexible, integrated and cost effective deployment and use of ICTs.

To achieve this mandate, the Authority established a standards committee to identify the relevant standard domains and oversee the standards development process. The committee 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 Kenyan public service. The committee eventually adopted the Kenya Bureau of Standards (KEBS) format and procedure for standards development. In an engagement founded on a memorandum of understanding KEBS, participated in the development of these Standards and gave invaluable advice and guidance.

For example, the ICT Human Capital and Workforce Development Standard, which falls under the overall Government Enterprise Architecture (GEA), has therefore been prepared in accordance with KEBS standards development guidelines which are, in turn, based on the international best practices by standards development organizations including ISO.

The Authority's Directorate of Programmes and Standards has the oversight role and responsibility for management, enforcement and review of this standard. The Directorate shall carry out quarterly audits in all the Ministries, Counties, and Agencies (MCA) to determine compliance to this Standard.

The Authority 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 Standards Review Board who shall advise and make recommendations to remedy the shortfall.

The ICT Authority management, conscious of the central and core role that standards play in public service integration, fostering shared services and increasing value in ICT investments, shall prioritize the adoption of this standard by all Government agencies. The Authority therefore encourages agencies to adhere to this standard in order to obtain value from their ICT investments.



**Stanley Kamanguya, OGW**  
**Chief Executive Officer**

## 1.0 INTRODUCTION

The development of quality human resources is a pre-requisite to the promotion of a viable ICT sector. It ensures that ICT development, implementation and exploitation are an integral and a sustainable component of the Public Sector Digital Skills. The ICT Human capital development standards were necessitated by the challenges faced in skill development and capacity development processes in the Kenyan Public Service. The ICT Human capital development standards have hitherto been guided by administrative circulars, human resource General letters and various guidelines issued to the Service from time to time. To address these challenges adequately and systematically, the ICT Authority has developed the ICT human and capacity development and management standards that take into account the needs and aims of all government's e-service delivery competencies, that is, public sector technical personnel, end-users and the general public. The Standards shall enhance opportunities for interoperability of public service ICT resources, ensuring uniformity in skills and competencies development, guaranteeing uniform and quality of government services everywhere and all the time.

The objectives of the standard are to:

- Promote ICT training and capacity building activities undertaken within the public service advance national goals and priorities;
- Enhance the efficiency and effectiveness of technical and non-technical government personnel to deliver public services to the citizens;
- Provide clear guidelines for efficient management of ICT trainings by agencies in the public service and
- Provide ICT capability framework for delivering capacity for the job role;
- Support public sector workforce to identify and address learning and career development needs.
- Define public sector standards of performance of ICT function and support managers in determining staff performance expectations. Help standardize and enhance the quality of ICT training in government and ensure employee accountability in service delivery.
- Guide in planning of ICT training programmes to ensure equitable ICT training opportunities for all public sector workforce across different cadres
- Streamline the ICT skill development procedures and processes such as training delivery, training interventions, certification, training institutions, training records and reporting among others;
- Design mechanisms that will ensure that budgetary resources for ICT training are aligned to defined focused on priority areas;
- Outline the mandate, expectations and responsibilities of for various stakeholders involved in public sector capacity building;
- Provide a framework for Monitoring and evaluation of ICT training;

For the government to use ICTs to increase efficiency and effectiveness in of service delivery to the public, the technical personnel must be equipped with the relevant ICT skills and competencies. These skills and competencies shall be standardized across the entire public sector to ensure quality service delivery to the citizenry. The Standards articulate the particulars of ICT capacity building across the of all stakeholders in the e-services delivery to and enhance requisite skills for utilization of government services.

## 2.0 SCOPE

This Standard sets out minimum requirements for Public Sector ICT Human Capital Development and Management to ensure that all public sector workforce and citizens needed in interacting with government services. The Standard also aims at enhancing the competitiveness in view of view of emerging digital technologies.

## 3.0 APPLICATION

This standard applies to

- a. National Government
- b. County Governments
- c. Constitutional Commissions
- d. State Corporations
- e. Autonomous and semi-Autonomous Government Agencies
- f. Institutions of learning.

## 4.0 NORMATIVE REFERENCES

The outlined standards contain provisions which guide definition, formulation and implementation of the proposed ICT standards. The standards are subject to revision based on preceding references in the previous edition. However, stakeholder engagements and incorporation will help ensure acceptability of the standards as anchored in the guiding references indicated below. The Kenya National Bureau of standards is hereby referenced as the national standards agency.

The following are some of the references that were used in developing the standards:

- i. Constitution of Kenya 2010
- ii. Kenya National Digital masterplan 2022-2032
- iii. Data Protection Act 2019
- iv. Computer Misuse and Cybercrimes Act, 2018
- v. SIFA: Skills Framework for the Information Age
- vi. ITIL: Information Technology Infrastructure Library
- vii. COBIT
- viii. PRINCE2
- ix. IS Security policy
- x. Kenya Public servants code of conduct policy
- xi. ISO Standards
- xii. Kenya Bureau of Standards

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 Kenya Bureau of Standards.

## 5.0 DEFINITIONS

### 5.1 Accreditation

means the certification, usually for a particular period of time, of a person, a body or an institution as having the capacity to fulfill a particular function in the quality assurance system set up by the ICT Authority for the ICT sector.

### 5.2 Area of knowledge, development and certification

Identifies the essential areas of learning and understandings that underpin the area of competences described in the standard. It also indicates broad areas of learning and development and certification that an individual will consider to strengthen this specific area of competence.

### 5.3 Assessment

Means the process of collecting evidence of learners' work to measure and make opinion about the achievement or non-achievement of specified ICT qualification(s) in the Kenya National Qualification Standards/Framework;

### 5.4 Assessor

The person who is registered by the relevant Education and Training Quality Assurance Body in accordance with criteria established for this purpose by the ICT Authority Standard Body to measure the achievement of specified National Qualifications Framework standards or qualifications, and "constituent assessor" has a corresponding meaning.

### 5.5 Auditing

An event conducted within a specified period to evaluate some assessment of quality and conformity.

### 5.6 Capacity building

The process by which the individuals and governments increase its ability to perform, solve problems, define objectives, understand and deal with development needs to achieve objectives in a sustainable manner. Capacity building is of relevance to many of the core functions of governments including workforce development, equipment infrastructure acquisition, intervention management and partnership development. and It involves the population, organizations and identified and related systems. Capacity building in this standard is in the context of workforce development.

### 5.7 Competency

The possession of required skill, knowledge, qualification and capacity to undertake specific functions. It is Knowledge, skill, ability, or characteristic associated with high performance on a job. A desirable quality or behavior; a performance indicator. It distinguishes high performance from average and low performance.

## 5.8 Competency Standards

ICT competency standards are statements of the skills, knowledge and attitudes expected of personnel in responsibilities in their workplace and describe the progression of competencies.

## 5.9 Computer

Any electronic, magnetic, optical or other high-speed data processing device or system which performs logical, arithmetic and memory functions by manipulations of electronic, magnetic or optical impulses, and includes all input, output, processing, storage, software and communication facilities which are connected or related as a system or network;

## 5.10 Education and Training Quality Assurance Body

A body accredited by the Act, to monitor and audit the achievements of National Education standards or qualifications.

## 5.11 E-Government service

Public services provided electronically by a ministry or Government Department, local authority, or body established by or under any law or controlled or funded by the Government.

## 5.12 E-Learning

Learning provided electronically by an accredited institution without the learner physically attending classes at the institution

## 5.13 ICT Technical personnel

Technical personnel are all the government employees whose designations fall under the ICT scheme of service. These technical personnel provide internal ICT technical services within or across MCAs.

## 5.14 Indicators

Identifies the actions an ICT professional would normally take to perform the area of competence detailed in the relevant statement. They are specific evidence of the achievement of a defined skill or knowledge level or the competent completion of a task.

## 5.15 Information and Communications Technologies (ICT)

The technologies including computers, telecommunication and audio-visual systems, that enable the collection, processing, transportation and delivery of information and communication services to users.

## 5.16 ICT Professionals

Possess a comprehensive and up-to-date understanding of a relevant body of Knowledge 4, demonstrate on-going commitment to professional development<sup>5</sup>, via an appropriate, combination of qualifications, certifications, work experience, non-formal and/or informal education; adhere to an agreed code of ethics/conduct<sup>6</sup> and/or applicable regulatory practices and, through

competent practice<sup>7</sup> deliver value for stakeholders.

### 5.17 Infrastructure

Integrated system of facilities used to provide one or more ICT services.

### 5.18 Internet

Interconnected system of networks that connects computers via the Transmission Control Protocol Internet Protocol (TCP/IP) and includes future versions thereof

### 5.19 IT graduate

An individual who has earned an IT degree from an accredited University

### 5.20 IT Practitioner

An individual actively engaged in an IT profession

### 5.21 IT professional

An individual who has a demonstrated mastery of an appropriate portion of the IT body of knowledge and commitment to abide by the code of ethics

### 5.22 IT Technician

An individual who identifies, troubleshoots and resolves computer infrastructure challenges. A Technician s possess skilled knowledge, hands-on experience and different tools to repair and maintain computer hardware, software and network/internet issues.

### 5.23 Job Description

A brief explanation of the responsibilities covered by the job role

### 5.24 Job Role

The Job Role represents the duty position an ICT professional handle in a government agency.

### 5.25 Learner

An individual who is participating in a learning programme with the purpose of achieving credits for standards and /or qualifications

### 5.26 Learning Programme

A structured set of learning offerings and related assessment and attainment requirements

### 5.27 Moderation

The process which ensures that assessment of the outcomes described in National Qualifications Framework standards or qualifications, is fair, valid and reliable

### 5.28 Monitoring

A continuous process of review of quality that can be conducted internally and/or externally against predefined key performance indicators.

### 5.29 National Accreditation Database

An electronic information system established at the ICT Authority to assist government institutional learner qualification framework.

### 5.30 Outcome

Demonstrated end-products of the learning process in this context.

### 5.31 People of Kenya

This standard applies to the individuals residing in Kenya. It aims to equip Kenyans with appropriate knowledge and skills to develop and use ICTs for national productivity

### 5.31 Profession and Professional Profession

Possession "of special knowledge and skills in a widely recognized body of learning derived from research, education and training at a high level" as well as the possession of a Code of Ethics

### Professional

A person certified by a professional body of belonging to a specific profession by having completed a required course of studies and/or practice and whose competence can usually be measured against an established set of standards.

### 5.32 Professional body

An organization that accredits industry professional qualifications It certifies successful completion of its requirements, and thereupon awards a license and bestows a recognized appellation. It P prescribes a mandatory code of conduct for their members and exercise political control over their membership, and have monopoly over the profession's formal education, certification, licensing, symbols.

### 5.33 Professional development

Focuses on improving professional competence in a specialized professional role, with the objective of enhancing personal performance and career progression opportunities. It encompasses both technical aspects (e.g. keeping abreast of latest technological trends) as well as non-technical aspects (e.g. developing better presentation skills).

### 5.34 Provider

A body which delivers learning programmes which culminate in specified National Qualifications Framework standards or qualifications, and manages the assessment thereof

### 5.35 Qualification

The formal recognition of the achievement of the required number and range of credits and other requirements at specific levels of the NQF determined by the relevant bodies registered by the ICT Authority

### 5.36 Quality Assurance

The process of ensuring that the degree of excellence specified is achieved

### 5.37 Registration

The process which ensures that the person who assesses learner competence possesses the requisite criteria for the specified qualifications and registered standards and/or qualifications

### 5.38 Registered Assessor

Means an assessor who has met the requirements for registration as an assessor of specified NQF qualifications standards and has been registered by the ICTA under whose primary focus the standards and qualifications fall

### 5.39 Relevant body of knowledge

Encompasses the requirement for a broad and deep knowledge base which is up-to-date, accommodating both a common ICT body of knowledge, and pertinent specialist knowledge and skills.

### 5.40 Requirement

The requirement point to specific elements or key areas of competence that will result in the satisfactory performance as required in the workplace.

### 5.41 Standard

Conventionally, a standard is defined as an accepted or approved example or technique against which other things are judged or measured, or which sets out a set of criteria that serves as a guideline for how something should be done; accepted level and scope of attainment of proficiency. It is a reference point against which other things are judged or measured. In the handbook, the term is used to refer to concise statements that describe the key area of competency.

### 5.42 Training

Official and on-going educational and skill enhancement programmes within an institution designed to enhance fulfillment and work performance of employees.

### 5.43 Validation

The overall process by which the ICT Authority uses to assess a programme, qualification and accreditation

### 5.44 Verification

The process managed by the ICT Authority for externally verifying moderation processes for conformity.

## 6.0 Abbreviations

GWEA Government Wide Enterprise Architecture

<b>CAATs</b>	Computer Aided Audit Techniques
<b>CGEIT</b>	Certified in Governance of Enterprise Information Technology
<b>CCNA</b>	Cisco Certified Network Associate
<b>CISA</b>	Certified in Information Systems Audit
<b>CISM</b>	Certified Information Security Manager
<b>CUE</b>	Commission for University Education
<b>DPM</b>	Directorate of Personnel Management
<b>DIY</b>	Do It Yourself
<b>GITS</b>	Government Information Technology Services
<b>HRD</b>	Human Resource Development
<b>KSG</b>	Kenya School of Government
<b>ERP</b>	Enterprise Resource Planning
<b>GHRIS</b>	Government Human Resource Information System
<b>ICT HCDM</b>	Information Communication Technology, Human capital Development and management
<b>ICF</b>	ICT Competency Framework
<b>ICT</b>	Information and Communication Technology
<b>ICTA</b>	Information and Communication Technology Authority
<b>ITCBL</b>	Information and Communication Technology Capacity Building literacy
<b>ITIL</b>	Information Technology Infrastructure Library
<b>ITSM</b>	Information Technology Service Management
<b>(IISP)</b>	Institute of Information Security Professionals Skills Framework.
<b>LAN</b>	Local Area Network
<b>MCA</b>	Ministries, Counties and Agencies
<b>MICT</b>	Ministry of Information and Communication Technology
<b>NGOs</b>	Non-Governmental Organizations
<b>PPP</b>	Public-Private Partnerships
<b>SFIA</b>	Skills Framework for the Information Age
<b>TNA</b>	Training Needs Assessment
<b>TOT</b>	Trainer of Trainers
<b>WAN</b>	Wide Area Network

Note: The list is not exhaustive

## 7.0 SUB- DOMAINS

The sub- domains of this standard are:

- a) ICT Professional in the public sector
- b) Public sector workforce
- c) Kenyan citizens
- d) Registration and Accreditation of ICT Training Institutions, Professionals and relevant bodies

## 8.0 GUIDING PRINCIPLES

### 8.1 Principles of the standard

a. Equity: There shall be equity in ICT capacity building for public sector workforce (ICT Technical, end-users) and citizens.in advancing the legal provisions on affirmative action and PWDs, the principle of equity shall reflect the aspirations of the observed groups.

The Standards will be implemented in a way such that development of competencies is cross-cutting. Requisite skills and competencies will be given to the citizenry for effective utilization of digital provisions for improved service delivery, access to government e-services and sustainability. Quality: Skill and Capacity building in ICT for public sector workforce servants and the citizenry shall be of the highest quality that meets international standards and best practices. The ICT trainings therefore, shall incorporate certifications that are global as specified in the ICT curriculum. for Value: ICT skill Capacity building will be undertaken in a manner that promotes efficiency in government service delivery, improves individual competencies and enables the citizenry to leverage available opportunities for value addition Access: ICT skill development facilities, infrastructure and opportunities shall be made accessible to all public sector workforce and the citizens. Different models of training shall be designed, developed and implemented to conform to the needs of varied learners.

Service to the people: Development of competencies shall be geared towards improving service delivery It is therefore important that the competencies are executed with a view to promoting delivery and value to the citizenry

Interoperability: The public sector shall support open standards in ICT Capacity Building for promotion of collaboration and complementary. Promotion of digital solutions and distant learning mechanisms to ensure continuous human capital development in line with government ICT adoption and improved digital space. The ICT infrastructure and platforms shall be standardized to guarantee promotion of shared services.

Personal development Special attention shall be given to personal development across cadres of staff within the public service. Each staff shall be required to possess relevant ICT skills and shall undergo ICT induction to government service upon recruitment.

## 9.0 REQUIREMENTS

### 9.1 ICT Competency for Professionals in the Public sector

ICT Competency for ICT professionals in the public sector sub domain defines the basic knowledge and skills an individual must possess at a recognized level of competence in order to perform duties as assigned in the specific ICT fields or job role including the code of conduct thereof.

a) The Knowledge and skills in competency areas in all the standards are presented with specifics on essential areas of learning, but avoids reference to specific vendors, versions or equipment. Thus, it allows flexibility in the adoption of the standard while preserving the general requirements for competence.

b) The sub domain covers core body of knowledge and common basic competencies that are either behavioral or technical that shall be required by all professionals. The areas of professionalism are:

- i. ICT Capacity Development
- ii. ICT/ Telecommunications Infrastructure, Planning, Design and Maintainance
- iii. Systems Development and Administration
- iv. Information Management and Security
- v. ICT Project Management
- vi. Risk Management & Business Continuity
- vii. ICT Service Management and Delivery
- viii. Change and digital transformation
- ix. Common and transferable Competencies
- x. Management of Emerging technologies.
- xi. E- Waste management.

### 9.1.1 ICT Infrastructure

#### 9.1.1.1 ICT/Telecommunication infrastructure planning, designing & maintaining

This sub-discipline covers the competencies of those individuals who are involved in providing high quality customer service that includes planning, designing, installing, testing, and maintaining required telecommunication infrastructure, maintaining a safe and secure work environment; and coordinating activities with other ICT and telecommunication service providers.

##### 9.1.1.1.1 Competence

ICT professionals in this field should be able to;

- i. Follow, under supervision, organisational strategy for ICT/technology infrastructure design and planning activities
- ii. Carry out, under supervision, customer requirements for ICT/technology infrastructure design and implementation
- iii. Maintain effective ICT infrastructure design and planning deliverables
- iv. Assist others with relevant information concerning ICT infrastructure design, planning and development assignments.

### 9.1.1.1.2 Certification

The professionals defined on clause 9.1.1.1 shall be trained and certified but not limited on to the following areas:

- i. Data communication
- ii. Network Architecture
- iii. Network Operating Systems
- iv. LANs and WANs management
- v. Network troubleshooting and maintenance
- vi. Network Security

### 9.1.1.2 ICT Network Management

This sub-discipline covers the Competencies of individuals who are involved in administering & managing information & communication technologies & network systems

#### 9.1.1.2.1. Competence

ICT professionals in this field should be able to;

- i. Understand and explain the basics of network architecture
- ii. Understand and explain the basics of Ethernet technology
- iii. Understand and explain the basics of token ring technology
- iv. Understand and explain the basics of token bus, Fiber Distributed-Data Interface (FDDI), and wireless LAN technology
- v. Understand and explain the TCP/IP protocol
- vi. Understand and explain basic communication protocols
- vii. Identify appropriate network operating systems
- viii. Harness emerging Network architectural technologies

#### 9.1.1.2.2 Certification

The professionals defined on clause 9.1.1.2 shall be trained and certified but not limited to the following certification areas:

- i. Network Architecture
- ii. Data communication
- iii. Network Operating Systems
- iv. LANs and WANs
- v. Network troubleshooting and maintenance
- vi. Network Security

## 9.1.2 Systems Analysis; Design, Development and Administration

### 9.1.2.1 Systems development

This sub-discipline covers the competencies required to develop/enhance, acquire, reuse and/or commission a range of systems elements, such as software, hardware and networking elements and interface them to produce an holistic, 'end-to-end' working IT/technology system that meets a specific business need.

#### 9.1.2.1.1 Competence

ICT professionals in this field should be able to;

- i. Explain the fundamental concepts of computer programming
- ii. Apply the principles of data structures and algorithm development for a specific problem
- iii. Apply appropriate techniques in the stages of program development
- iv. Create program documentation and methodology in line with changing workforce
- v. Test and debug programs
- vi. Perform system patch-up; update and upgrade
- vii. Explain and undertake system retirement

#### 9.1.2.1.2 Certification

The professionals defined on clause 9.1.2.1 shall be trained and certified but not limited to the following certification areas:

- i. Introduction to systems design and development
- ii. System life-cycle types and their rationales
- iii. Business analysis
- iv. Requirements engineering
- v. Programming and development approaches
- vi. Systems modelling and specification techniques
- vii. Quality and testing
- viii. Implementation and changeover
- ix. Evaluation and maintenance

### 9.1.2.2 System Analysis and Design

This sub-discipline covers the competencies required to contribute effectively to the analysis and design of a system.

#### 9.1.2.2.1 Competence

ICT professionals in this field should be able to;

- i. Initiate a system project
- ii. Perform a detailed system investigation and analysis
- iii. Design or review and upgrade the system. computer applications
- iv. Develop system documentation

- v. Perform system quality assurance activities
- vi. Manage requests for changes

#### 9.1.2.2.2 Certification

The professionals defined on clause 9.1.2.2 shall be trained and certified but not limited to the following certification areas:

- i) Information systems management
- ii) Organizational digital transformation
- iii) Database systems
- iv) System development methodologies
- v) ICT Project management

#### 9.1.2.3 System Administration

This sub-discipline covers competencies required for installation, configuration and maintenance of information systems

##### 9.1.2.3.1 Competence

ICT professionals in this field should be able to;

- i. Understand the life cycle of an information system
- ii. Install information system
- iii. Perform software configuration and loading
- iv. Monitor and maintain the information system
- v. Manage information backup, recovery and business continuity Undertake problem-solving, processes and document outcomes
- vi. Perform software upgrades Perform general system administration tasks

##### 9.1.2.3.2 Certification

The professionals defined on clause 9.1.2.3 shall be trained and certified but not limited to the following certification areas:

- i. Fundamentals of database management
- ii. Design , develop and manage databases. Information system security frameworks
- iii. Risk management and business continuity

#### 9.1.3 Database Administration

This sub-discipline covers competencies required for storage, management and retrieval of data in a database.

##### 9.1.3.1 Competence

ICT professionals in this field should be able to;

- i. Apply the principles of data analysis and design
- ii. Explain the principles of Database Management Systems (DBMS)

- iii. Manage implementation of a DBMS
- iv. Operate, monitor and maintain a DBMS

### 9.1.3.2 Certification

The professionals defined on clause 9.1.3 shall be trained and certified but not limited to the following certification areas:

- i. Basics of databases management
- ii. Object-oriented programming
- iii. Basic skills and competences on DBMS programming tools.
- iv. Database upgrades and technology compatibility assessment.
- v. Database design and administration
- vi. Analysis analysis and reporting .
- vii. Database integrity and security
- viii. Backup and archival technologies technologies

## 9.1.4 Information Management and Security

### 9.1.4.1 Information Management

This sub-discipline covers the competencies required for the management of data and information within and outside of an organisation. This includes the acquisition, creation, categorization, storage, transfer and disposal of data and information. It also covers the competencies required to ensure the integrity of information

#### 9.1.4.1.1 Competence

ICT professionals in this field should be able to;

- i. Carry out specified information management activities
- ii. Document information assets
- iii. Manage the classification and categorisation of information resources
- iv. Communicate information management requirements and activities

#### 9.1.4.1.2 Certification

The professionals defined on clause 9.1.4.1 shall be trained and certified but not limited to the following certification areas:

- i. Information resource organisation
- ii. Metadata definition
- iii. Data visualisation
- iv. Information law and ethics
- v. Information retrieval
- vi. Information technologies

### 9.1.4.2 Information security

This sub-discipline covers competencies required to implement and sustain a successful information security management system in an organisation.

#### 9.1.4.2.1 Competence

ICT professionals in this field should be able to;

- i. Undertake development information security governance framework
- ii. Ensure security of information .
- iii. Participate in designing of security architecture
- iv. Undertake information Security testing for compliance
- v. Assist information assurance
- vi. Promote information management operations and activities
- vii. Participate in conducting information vulnerabilities assessment Participate in information security incidences and forensics
- viii. Participate in routine information security audits and documentation

#### 9.1.4.2.2 Certification

The professionals defined on clause 9.1.4.2 shall be trained and certified but not limited to the following certification areas:

- i. Cyber security
- ii. Network security
- iii. Forensics
- iv. IT audit
- v. IT security leadership
- vi. Application security
- vii. Information Security Governance

### 9.1.5 ICT Project Management

This sub-discipline covers the competencies required to plan, organize and define responsibility for the completion of an organizations' specific ICT goals.

#### 9.1.5.1 Competence

ICT professionals in this field should be able to;

- i. Demonstrate understanding of key concepts in project management
- ii. Develop a project plan using a step-wise approach
- iii. Perform Project Costing, Scheduling and Resource Allocation
- iv. Demonstrate a clear understanding of various activities performed in ICT project environment
- v. Distinguish ICT projects from other types of projects
- vi. Provide project teams leadership.
- vii. Evaluate different types of ICT oriented contracts
- viii. Undertake Project Risk Management

### 9.1.5.2 Certification

The professionals defined on clause 9.1.5 shall be trained and certified but not limited to the following certification areas:

- i. CompTIA Project+
- ii. Certified Project Manager (CPM)
- iii. Associate in Project Management (APM)
- iv. Certified Associate in Project Management (CAPM)
- v. Project Management Professional (PMP)
- vi. Master Project Manager (MPM)
- vii. Professional in Project Management (PPM)
- viii. Program Management Professional (PgMP)
- ix. Agile Certified Practitioner (PMI-ACP)
- x. Certified ScrumMaster (CSM)
- xi. Projects in Controlled Environments (PRINCE2)
- xii. Any other globally acceptable project management standard

### 9.1.6 Risk Management & Business Continuity

This sub-discipline covers the competencies concerned with conducting and managing risk assessments on information assets, information systems and digital process control systems.

#### 9.1.6.1 Competence

ICT professionals in this field should be able to;

- i. Participate in organization risk assessment activities. Assist in information risk management and controls
- ii. Participate in IT disaster recovery management
- iii. Undertake IT disaster recovery plans development Document specified information relating to IT disaster recovery

#### 9.1.6.2 Certification

The professionals defined on clause 9.1.6 shall be trained and certified but not limited to the following certification areas:

- i. Risk-based audit programme
- ii. Implications of risk to an organisation
- iii. Business continuity plans development and management Business impact analysis and reporting

### 9.1.7 ICT Service Management and Delivery

This sub-discipline covers the competencies required to plan, implement and manage solution provision.

### 9.1.7.1 Competence

ICT professionals in this field should be able to;

- i. Carry out designated service operations and activities under supervision
- ii. Monitor and report on the progress of designated service operations activities
- iii. Assist in the review of service operations activities
- iv. Perform designated 'IT Service Help Desk and Incident Management' activities under supervision
- v. Monitor the effectiveness of customer satisfaction help desk support . Identify and implement improvements and work-arounds to 'Service Help Desk and Incident Management' activities
- vi. Manage and review problem management activities against business objectives and metrics
- vii. Help to identify root causes and trends from problem management activities
- viii. Carry out, under supervision, maintenance activities that apply to application management activities
- ix. Review and direct application management activities against business objectives and metrics
- x. Design, develop and manage identify improvements to application management activities
- xi. Carry out technical support activities under supervision
- xii. Document technical support activities and communication. Provide direction and approval where necessary to maintain or improve technical support activities
- xiii. Carry out routine system availability management activities  
Carry out routine capacity management activities and advise.

### 9.1.7.2 Certification

The professionals defined on clause 9.1.7 shall be trained and certified but not limited to the following certification areas:

- i. IT Service Management Overview
- ii. IT Infrastructure, and Cloud Computing
- iii. Internet of Things, Big Data, Smart Computing/Cities, Cognitive Computing
- iv. IT service strategy, methods, and case study
- v. IT Project / Service Management overview
- vi. IT Service team building
- vii. Soft Skills in IT Service Management

### 9.1.8 Change and Transformation

This sub-discipline covers the competencies required to manage the introduction of business-driven change into an organization in a way that will minimize the risks associated with it and best support the adoption of practices that will realize the benefits of change.

#### 9.1.8.1 Competence

ICT professionals in this field should be able to;

- i. Assist in identifying requirements for a change management assignment , under direction
- ii. Gather, document and communicate information relating to a change management assignment

- iii. Assist in the design, implementation and maintenance of change management plans and assignments
- iv. Communicate change management information Any other globally acceptable Change Management Certification

#### 9.1.8.2 Certification

The professionals defined on clause 9.1.8 shall be trained and certified but not limited to the following certification areas:

- i. Certified Change Management Professional (CCMP)
- ii. Change Management Specialist (CMS)
- iii. Certified Problem and Change Manager (CPCM)
- iv. Change Management Certificate Program from the Association for Talent Development
- v. Prosci Change Management Certification
- vi. APGM Organizational Change Management Foundation
- vii. AIM Change Management Certification

#### 9.1.9 Common and transferable Competencies

This sub-discipline covers a cluster of personal and interpersonal skills needed in dealing with customers, stakeholders, and other personnel.

##### 9.1.9.1 Competence

ICT professionals should be able to;

- i. Communicate effectively
- ii. Exhibit qualities of a good team player
- iii. Plan and manage time effectively
- iv. Demonstrate basic problem-solving skills and appropriately apply proven solutions
- v. Initiate continuous professional development
- vi. Explain current business environment and infrastructure
- vii. Advocate data security
- viii. Identify the important security and legal issues associated with using the computers

##### 9.1.9.2 Certification

The professionals defined on clause 9.1.9 shall be trained and certified but not limited to the following certification areas:

- i. Management and Leadership
- ii. Communication Management
- iii. Professional Ethics
- iv. Teamwork
- v. Time Management
- vi. Problem Solving
- vii. Information presentation and visualisation

## 9.2 Public Sector workforce

### 9.2.1 General

The standard covers the basic minimum competencies and skills that are required for an employee in the public sector to possess in order to deliver services and interact with government systems.

### 9.2.2 Requirements

#### 9.2.2.1 Introduction to e Government

MCDAs shall conduct sensitizations and training for Government employees in harnessing the potential of ICT in the delivery of Government services.

#### 9.2.2.2 Producing Government Documents

MCDAs shall conduct training programmes to end users in various Government Ministries and Departments to the use of document processing in production of standard Government documents.

#### 9.2.2.3 Government Communication

MCDAs shall conduct training programmes to end users in various Government ministries and departments in the use of ICT for effective communication and collaboration.

#### 9.2.2.4 Preparing Government Budget

MCDAs shall conduct training programmes to end users in various Government ministries and departments on the use of approved tools in preparing in preparing Government estimates.

#### 9.2.2.5 Making Presentations

MCAAs shall conduct training programmes to the end users on how to make effective presentations using presentation software.

#### 9.2.2.6 ICT Security

MCAAs shall conduct training programmes and awareness to end users on the basics of ICT security covers issues and principles of security and information assurance including confidentiality, integrity, authentication, identification, authorization, availability and access control.

#### 9.2.2.7 User Support

- a. MCAAs shall conduct training programmes on quality customer service skills for effective customer care strategies needed to provide excellent service.
- b. End users shall be trained on use of Help Desk effectiveness for their interpersonal skills, better communication, getting and giving good information, handling challenging behavior and managing telephone interactions.

#### 9.2.2.8 Specific MCDA Applications

All applications provided by vendors to an MCDAs shall have a component for end user training and operational manual for specific applications deployed by MCDAs.

### 9.2.2.9 e-Records Management

MCA shall conduct training programmes for records officers on the importance of e-Records management

### 9.2.2.10 e-Front office

MCA shall conduct customer care training for personnel handling citizen services at common service centres.

### 9.2.2.11 Project Management

- a. MCDAs shall conduct training for staff implementing, managing and working on ICT projects
- b. MCDAs shall ensure that all ICT projects have a training component in them. It shall further ensure that ICT officers are capacitated to supervise outsourced ICT projects, to undertake quality assurance and compliance and manage the project deliverable after project commissioning and enable knowledge transfer.

### 9.2.2.12 Business Process Reengineering

MCDAs shall conduct training on business process re-engineering for senior officers.

### 9.2.2.13 ICT Leadership and Governance

MCDAs shall conduct trainings on ICT leadership and governance for senior officers to champion ICT projects implementation.

### 9.2.2.14 ICT induction course

MCDAs shall conduct induction to all current and newly recruited personnel on ICT legal framework in Kenya.

### 9.2.2.15 ICT Literacy Assessment

MCDAs shall conduct basic ICT skills assessments for personnel to determine level of literacy awareness, competencies and expertise.

### 9.2.2.16 eLearning

MCDAs shall implement e-learning management systems to ensure personnel skills development and reduce cost of learning.

### 9.2.2.17 ICT Global Certification

MCDAs shall implement global standardized certification programs on productivity to end users that ensure international best practice.

### 9.2.2.18 Curriculum

MCDAs shall implement customized curriculum to suite different productivity levels of skills and competency.

#### 9.2.2.19 Skills inventory systems

MCDAs shall implement skills in inventory database systems that provide framework for monitoring and evaluating ICT training programmes and skills levels.

#### 9.2.2.20 ICT Resource Centers

MCDAs shall implement ICT resource center that have requisite computer infrastructure to ensure workforce can all access government information.

#### 9.2.2.21 Review of schemes of service

MCDAs shall regularly review the ICT scheme of service to keep up with dynamics of ICT industry advancement so that career progression is in accordance with international standards and best practices.

#### 9.2.2.22 Digitization and Automation Training

MCDAs shall conduct digitization training for personnel responsible for automation in MCAs.

### 9.3 ICT Skills for Kenya citizens

#### 9.3.1 General

The standard covers the basic minimum competencies and skills that are required for a citizen in order to access and interact with Government systems and the society

#### 9.3.2 Requirements

##### 9.3.2.1 E- literacy

MCDAs shall equip the citizens with ICT literacy skills, knowledge and competencies to access e services in an ICT driven knowledge society

##### 9.3.2.2 e-Citizen

MCDAs shall equip the citizens with knowledge and competencies in using Internet and tools for communication and access of available online services and skills

##### 9.3.2.3 Government of Kenya e-Service

MCDAs shall equip the citizens with knowledge and competencies in using GOK e-Services-access, communication and performing transactions with Government MCAs systems

##### 9.3.2.4 ICT Security

MCDAs shall conduct awareness to citizens on the basics of ICT security on confidentiality, integrity, authentication, identification, authorization, availability and access control

##### 9.3.2.5 E-Services sensitization and Awareness

MCDAs shall implement strategies/programmes and policies for creating awareness on the role of information and ICT for the improvement of quality of life and national development

### 9.3.2.6 e-Learning on Services

National and counties governments shall implement citizen online education platforms for e-services

### 9.3.2.7 Competency Surveys

National and counties governments shall conduct competencies surveys to determine the level of ICT literacy and adoption by the citizens

## 9.4 Accreditation of ICT Institutions /Training providers

The standard will strengthen and structure the ICT profession and its governance in Kenya to enhance its contribution to National economic growth and development. The following requirements shall ensure that ICT profession is conducted in a professional manner

### 9.4.1 General

- i. The Government shall develop a legislation which shall provide for the Regulation of the ICT profession in Kenya.
- ii. The legislation shall provide for the establishment of the Institute of ICT Professionals.
- iii. The standard shall provide guidelines in to certifying how a government agency (ICTA) shall validate if an ICT Institution offering ICT capacity building.
- iv. 9.4.2 All ICT providers shall be required to compile and submit a Portfolio of Evidence annually. The purpose of this exercise is to allow ICT Authority to determine whether the provider has the ability to provide evidence of Functionality, Administration, QMS and compliance to legislative requirements.

9.4.3 The Portfolio of Evidence shall be organized and evidence provided is according to the following headings and sub-headings in a neat file (if possible one only) with table of contents; clearly marked sections with dividers; avoid adding non-relevant documents and do not duplicate material.

9.4.4. All providers shall be required to develop programme/s they seek to be accredited to deliver. The purpose of this exercise is to allow ICT Authority to determine whether the provider has the Capacity to design, develop and implement National ICT Qualification framework for the aligned program. All programmes should be developed according to the ICTA structure and meet all the structural requirements

9.4.5. All providers shall be required to provide a conducive (suitable) learning environment with suitable and relevant resources for effective delivery of the learning programme/s they seek to be accredited to deliver. The purpose of this exercise is to allow ICT Authority to determine whether the provider has the Capacity to provide functional, appropriate and conducive learning environment. The provider environment should meet the ICTA structural requirements

### 9.5 Accreditation & Certification of ICT professional in the ICT Industry

This standard sets out minimum requirements for the operation, certification and accreditation of an IT professional. It describes the level of capability for different professionals entry in terms of demonstrated technical and domain knowledge in the field of specialization and demonstrated significance responsibility, influence and independence-Initiate/influence, Ensure/advise, Enable and Apply

This standard applies to ICT professional in the ICT Industry and Code of Conduct of each licensed professional

#### 9.5.1 E-Waste Management and Delivery

This sub-discipline covers the competencies required to plan, implement and manage e- waste.

#### 9.5.2 Certification

Introduction to e-waste management

Electrical and electronic equipment (EEE) readiness to minimize the effects of the infrastructure on the environment

Conserve and protect the environment from the harmful effects of waste emanating from EEE.

- Observe workplace Safety and Procedures
- Safely handle e-waste materials
- Dismantle e-waste materials
- Properly grade e-waste components and fractions
- E - Waste Recycling of E-Waste
- Valuable metals recovery process from e-Waste

Apply circular economy principles in e-waste management

Safely dispose of reject e-waste materials

Perform basic repairs in e-waste processing

Use e-waste management tools and equipment

Identify mandatory Documents and records for E-waste management

Identify Laws, Policies and Regulations Governing E- Waste Management

#### 9.5.3.Competence

#### References

1. Kenya Constitution 2010
2. Environmental Management and Coordination Act 1999 (Revised 2015) and the Waste Management Regulations (2006)
3. Extended Producer Responsibility (EPR) Regulations 2021

**ANNEXES**

**ANNEX A: ICT Professionals In The Public Sector**

**ANNEX A.1: ICT/Telecommunication infrastructure planning, designing & maintaining**

Description	This sub-discipline is part of overall service design. It concerns the design of, and planning for, resilient IT/ infrastructure and environments.		
<b>Requirement</b>	<b>Indicator</b>	<b>Compliance</b>	
		<b>YES</b>	<b>NO</b>
<b>Comply with organizational strategy for IT infrastructure design and planning activities</b>	Correctly follow the processes, tools, and techniques to use for IT/technology infrastructure design and planning activities		
	Reference and fully comply with all organizational strategy, policies, and standards relating to infrastructure design, configuration principles and planning activities, and their deliverables		
	Gather and collate all relevant information i.e contained within the service catalogue service level agreements, service improvement, and quality plans that are required for IT infrastructure design and planning activities and challenges.		
	Consider all relevant information required in assessing the suitability of IT infrastructure components for any particular design assignment, comply with the system development lifecycle, IT architecture models in the infrastructure design and planning activities.		
	Document relevant information on IT architecture design and configuration, principles and standards and best practices for the organization and estimate cost , complexity and risk for IT infrastructure decomisioning and replacement options.		
	Document requisite information for assessing suitability of infrastructure, use of existing infrastructure architecture, configuration deliverables & service improvement and quality management.		

	Identify and document current and future business requirements, considering existing IT infrastructure, implications of outsourcing ,map associated risk and reliability of guiding information for implementation and changes.		
	Develop strategy and policy guidelines for IT infrastructure design, performance assesement, impact of business changes in existing operation model, accuracy of the delivery model, operational effectiveness on the organization brand and reputation and customer needs management.		
<b>Carry out, under supervision, customer requirements for IT/ technology infrastructure design and planning</b>	map and document identified external providers of IT infrastructure for the organization, ascertain their suitability, and roles against identified customer needs and potential changes.		
	Design infrastructure component specific information and standards, ascertain error identification and corrections plans, prepare and document service level agreements and progress management plans.		
	Establish plans for infrastructure management terms , document component changes , upgrades, replacements, needs , alignment, clear reporting structures for management and or stakeholders , incorporating related risk, cost and constraints.		
	Monitor resource and cost implication of new IT infrastructure, provide advice to the management and users on associated risks, adopt effective change management plans based on approved deliverable indicators and business needs. Regularly monitor quality of change , effectiveness propose actions for future use and report.		
	Establish strategies , policies , process techniques and interventions mechanisms for IT infrastructure management in collaboration external service providers, where necessary; assess and document customer needs that will necessitate infrastructure changes and interventions against approved deliverables.		
	Ascertain effective allocation of responsibilities to individual and s and groups, and ensure minimal disruption to service delivery change and design verification plans and reporting tools.		

<b>Maintain effective IT/ technology infrastructure design and planning deliverables</b>	Monitor resource and cost implication of new IT infrastructure, provide advice to the management and users on associated risks, adopt effective change management plans based on approved deliverable indicators and business needs.		
	Regularly monitor quality of change , effectiveness propose actions for future use and report.		
<b>Disseminate IT infrastructure design and plans</b>	Disseminate information on IT infrastructure design and planning to management, users and sponsors, stakeholders.		
	Communicate information on technological viability of components, availability, scalability and respective cost and risk implications for effective interventions.		

## ANNEX A.2: ICT NETWORK MANAGEMENT

	Requirement	Indicators	Compliance	
			YES	NO
1	<b>Understand and explain the basics of organization network architecture</b>	Explain and document network characteristics, layouts, transmission methods, broadband capabilities, transmission media, local area network, protocols, compliance with approved standards, component performance, LAN frame formats, OSI reference model and topologies.		
2	<b>Understand and explain the basic token ring, bus, fibre Distributed-Data Interface (FDDI), and wireless LAN, TCP/IP control protocol</b>	Characterize the Ethernet topology media-access algorithm.		
		Explain basic Ethernet configurations, respective performance criteria, token ring, bus network, its information flow flow , controls, configurations and FBBI technology.		

3	<b>Understand and explain the basics of token ring technology</b>	Characterize a token ring network		
		Explain the token ring information-flow/ media-access control		
		Understand and explain the token ring send algorithm		
		Identify token ring configurations (simple, IBM host)		
		Evaluate the advantages and disadvantages of a token ring network		
4	<b>Outline and explain communication protocols.</b>	Outline ,identify and document services provided by TCP/IP services, ARPANET,MILNET and NSFnet, internet, respective relations, naming conventions, LAN addresses formats, gateway node differentiation;		
		Explain the IPX/SPX protocols and their relations with TCP/IP , DNS,HTTP, telnet,FTP and SNMP, particular functions of the protocols and architectures.		
5	<b>Identify appropriate network operating systems</b>	Ascertain user interface management		
		Identify file management protocols		
		Identify device management protocols		
		Confirm memory management components		
		Identify existing network operating systems		

### ANNEX A.3: SYSTEMS DEVELOPMENT

Requirement	Indicators	Compliance	
		YES	NO
<b>Contribute to the management of systems development</b>	Document the proposal system development activities , functions, alignment with national legislation, vision ,objectives, regulation, accountability, compliance and quality control.		
<b>Manage, monitor and evaluate system development activities</b>	Determine and profile sponsor and stakeholder roles, engagements, approval mechanisms and plans, deliverables definition, quality control and assessment, communication and reporting structures.		
	Define and document system performance monitoring, action and verification plans, risks and business continuity plans.		

### ANNEX A.4: SOFTWARE DEVELOPMENT

Requirement	Indicator
<b>Perform specified software development activities</b>	<p>Follow organisational standards for the systems development lifecycle</p> <ul style="list-style-type: none"> <li>• Use given information relating to IT architecture models together with business, data and HCI design deliverables to inform software development and testing and acceptable.</li> <li>• Correctly use specified software development procedures, tools and techniques to create software that meets given designs</li> <li>• Functionally test that given designs have been met</li> <li>• Use naming conventions and standards in line with organisational standards</li> <li>• Use appropriate programming constructs to produce effective software</li> <li>• Document own software development activities</li> <li>• Follow organisational standards for the systems development lifecycle</li> <li>• Assist with the collation and use of information relating to IT architecture models together with business, data and HCI design deliverables in order to inform software development and testing activities</li> </ul>

	<ul style="list-style-type: none"> <li>• Assist in specifying precisely how the software that has been developed functions</li> <li>• Assist with the documentation of software development activities</li> <li>• Assist with the identification of sponsors of and stakeholders for software development activities</li> <li>• Identify and collate information on IT architecture models and design deliverables to inform software development</li> </ul>
<p><b>Carry out software development activities under direction</b></p>	<ul style="list-style-type: none"> <li>• Verify data and information contained within software development deliverables</li> <li>• Allocate the development of software components to other staff</li> <li>• Ensure that software components will operate on the required range of technology platforms and monitor changes that may affect performance</li> <li>• Select and apply organisational standards relating to software development activities</li> <li>• Identify which development environments and programming languages are to be used for specific software development activities</li> <li>• Identify and implement the procedures, tools and techniques applicable to software development activities</li> <li>• Identify, use and apply best practice in software development assignments</li> <li>• Design, implement and maintain organisational strategy procedures, standards, tools and techniques for software development activities</li> <li>• Design, implement and maintain organisational strategy procedures, standards, tools and techniques for monitoring software development activities</li> <li>• Design and implement strategy, policies, plans and standards to ensure the alignment of software development activities with any relevant legislation, regulation and external standards</li> <li>• Advise others on which development environments and programming languages are to be used within the organisation</li> <li>• Advise others, both internally and externally, on best practice in software development activities and their deliverables</li> <li>• Correctly use software development procedures, tools and techniques as directed by superiors</li> <li>• Comply with any relevant legislation, regulation and external standards relating to software development activities</li> <li>• Create software that incorporates the full range of approved design specifications for example those relating to data and HCI, in order to produce effective software</li> <li>• Test and ascertain that the processing and functional needs specified within logical and physical software design deliverables have been met</li> <li>• Use naming conventions and standards in line with organisational standards</li> </ul>

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|  | <ul style="list-style-type: none"><li>• Use appropriate programming constructs to produce effective software</li><li>• Optimize the use of system resources in software</li><li>• Correctly select and apply software development procedures, tools and techniques</li><li>• This one is repeated</li><li>• Accurately translate a physical software design into functional designs for software components</li><li>• Define clearly and accurately the functional requirements of software components</li><li>• Update software as required to ensure continued effectiveness or in response to external factors</li><li>• Transfer own skills knowledge and understanding from one development environment and programming language to other languages and environments</li><li>• Assist with discussion, negotiation and agreement of how the software will function with sponsors and stakeholders during software development</li><li>• Advise colleagues on the use of appropriate programming constructs to produce effective software</li><li>• Advise users on how to optimize the use of system resources by software</li><li>• Monitor the effectiveness of software produced in optimizing system resources and meeting design specifications</li><li>• Analyse and interpret the results of testing in order to inform development work</li><li>• Contribute to the update of software development deliverables, where appropriate, as a result of projects and programmes</li><li>• Contribute to the integration of software development activities, where appropriate, into projects and programmes</li><li>• Contribute to the communication of the need for systems development and testing activities to align with software development deliverables</li><li>• Contribute to the monitoring of the alignment of systems development testing and implementation activities with software development deliverables</li><li>• Document software development activities clearly and accurately</li><li>• Contribute to the presentation of the information contained within software development deliverables to a wide range of sponsors, stakeholders and other individuals.</li></ul> |
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	<ul style="list-style-type: none"> <li>• Ensure that all of the required software components are produced</li> <li>• Ensure that the software developed takes account of and uses, as appropriate, technologies, software and assets that are available and can be used by an information technology system supporting the organisation</li> <li>• Verify that the rules and controls required to ensure the integrity and security of the proposed information technology system have been incorporated into software</li> <li>• Ensure that the deliverables of software development activities meet the relevant designs</li> <li>• Ensure that the deliverables of software development activities are provided to others as required</li> <li>• Manage changes to business requirements through change control mechanisms during software development activities escalating issues where appropriate</li> <li>• Integrate software development activities, where appropriate, into projects and programmes</li> <li>• Present the information contained within software development deliverables to a wide range of sponsors, stakeholders and other individuals in order to confirm understanding and ensure business needs are being met</li> <li>• Update software development deliverables, where appropriate, as a result of projects, programmes and software design activities</li> <li>• Assist with securing sign off of final software development deliverables from sponsors and stakeholders</li> <li>• Assist with the handover of responsibility for software to service management/support functions</li> <li>• Communicate the need for testing systems, development and implementation activities to align with software development deliverables</li> <li>• Advise users, both internally and externally, on all aspects of software development activities</li> <li>• Effectively manage external providers of software development services</li> <li>• Monitor, review and report on the alignment of testing system, development and implementation activities with software development activities</li> <li>• Monitor, review and report on the compliance of software development activities with any relevant legislation, regulation and external standards, in line with organisational strategy, policies and standards</li> </ul>
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|  | <ul style="list-style-type: none"><li>• Monitor and critically analyse the effectiveness and quality of software development activities to identify opportunities for improvement</li><li>• Review the alignment of software development activities with any relevant legislation, regulation, external standards, strategy, policies, plans and standards, taking action where appropriate</li><li>• Make decisions on the results provided by monitoring software development activities, as appropriate to the organisation</li><li>• Make recommendations to improve the effectiveness and quality of software development activities within an organisation</li><li>• Apply lessons learned from prior experience in IT software development assignments</li><li>• Establish effective relationships with external providers of software development services</li><li>• Negotiate effectively with external providers of software development services in line with organisational policies and procedures</li><li>• Agree contractual arrangements with external providers of software development services</li></ul> |
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**ANNEX A.5: SYSTEMANALYST**

Requirement	Indicator	Compliance	
		YES	NO
<b>Initiate a system project</b>	Identify the phases of the proposed system project	YES	NO
	Select basic fact-gathering techniques to be used in system implementation		
	Define the scope of the systems project		
	Conduct a preliminary investigation to determine need		
<b>Perform a detailed system investigation and analysis</b>	Identify time, technology and resource constraints		
	Determine investigation techniques to be used		
	Record facts gathered through system investigation		
	Perform appropriate diagnostic tests		
	Define business problem to be solved by the application		
	Define business information requirements		
	Determine hardware and software needs		
	Interpret source data, charts, and graphs		
	Interpret existing operating documents and procedures for the system		
	Document and assess existing procedures		
	Research and evaluate technical alternatives		
	Document possible alternative solutions		
	Identify processing requirements		
	Define variables		
	Analyze system specifications		
	Present findings and recommendations to users and management (e.g., work plan, project estimate)		
Review organizational structure and functions			
<b>Design computer applications</b>	Establish standards and policies to govern the development of organizational information systems		
	Align information system (IS) design with the business process		
	Identify skills requirements of the project development team		
	Develop team mission statement aligned with organizational mission		
	Determine the roles of user and management in the computer system development process		
	Outline steps for program development cycle, (e.g., prototyping, storyboarding)		

	Identify processing requirements		
	Create specs with development team		
	Divide design specifications into logical blocks (e.g., flowchart, dataflow diagram, system flow record and layout and UML)		
	Identify constraints (e.g., political, financial, time, hardware, and systems)		
	Recommend programming language		
	Recommend minimum hardware requirements		
	Define input and output (I/O) requirements		
	Design system input/output processes		
	Differentiate between system documentation and user documentation		
	Determine compilers to be used in design		
	Apply rules for naming variables		
	Apply normalization rules to data attributes		
	Define test data to be developed		
	Create design documentation		
	Perform risk analysis		
	Employ security mechanism in the application design		
<b>Develop documentation</b>	Identify documentation needs		
	Prepare system development		
	Prepare System Development Specification documentation		
	Prepare user documentation (e.g., dataflow diagram, UML)		
	Update design documentation		
	Establish documentation-update method		
	Use appropriate modeling tools		
<b>Perform quality assurance activities</b>	Identify evaluation criteria		
	Develop test plan		
	Conduct tests (e.g., system, functionality, integration)		
	Analyze test data		
	Participate in formal technical reviews		
	Present test results		
	Adhere to standards		
	Define, refine, or recommend standards		

<b>Implement computer application system</b>	Interpret existing operating documents and procedures for the system		
	Assist in the preparation of implementation plan		
	Present implementation plan to users and management		
	Assist implementation of new system		
	Perform post-implementation evaluation of new system		
	Identify deficiencies and recommend possible solutions		
	Train personnel		
	Identify ongoing support requirements		
<b>Manage requests for changes</b>	Facilitate dialogue with users and articulate issues based on user requirements		
	Collaborate with the Operations Dept., and other departments of the organization who are involved with the project		
	Apply analytical thinking to creatively solve complex problems		

**ANNEX A.6: SYSTEMS ADMINISTRATION**

Requirement	Indicator	Compliance	
		YES	NO
<b>Understand the life cycle of an information system</b>	Research the concept of information system life cycles		
	Identify criteria for deciding between acquisition of software packages and custom development of software		
<b>Install information system</b>	Develop a detailed training, conversion, and installation plan for an information system application		
	Design networked solutions		
	Install DBMS on the server environment		
	Install appropriate operating system and telecommunications hardware and software		
	Identify system requirements for various types of installations		
	Evaluate installation requirements		
	Install information system application program in accordance with requirements		
	Evaluate processes and outcomes		
	Customize a general-purpose software package to provide specific functionality beyond the default settings		
	Add capability to a software system by recording macros and storing them in the system's library		
	Access needed technical information using software help facilities		
	Operate server applications		
	Ensure that all multi-user aspects of the application function are operational		
	Operate coupled application systems		
<b>Perform software configuration and loading</b>	Develop program and system specifications		
	Load software with minimum disruption of process flow		
	Convert data		
	Resolve compatibility issues		
	Configure software appropriately for system and user application		
	Perform software coding		
	Participate in application and system development reviews		
	Evaluate emerging technologies and their potential effect on information system software		
Assemble necessary components to implement information system design			

<b>Monitor Performance of the information system</b>	Conduct post-implementation evaluation		
	Identify abnormal system performance		
	Determine required service levels		
	Monitor multiple technologies		
	Recognize system alerts		
	Recognize security problems		
	Recognize environmental problems		
<b>System maintenance</b>	Understand the basic elements of computer maintenance		
	Identify available diagnostic tools used for system maintenance		
	Identify maintenance procedures and processes		
	Identify problems using diagnostic tools		
	Document solutions		
	Tear down a computer		
	Identify (by name) new or replacement computer components needed		
	Install/replace computer components		
	Reassemble a computer		
	Establish a preventive maintenance plan		
	Perform preventive maintenance on computer components		
	Create maintenance plan for regular integrity checks		
	Evaluate maintenance processes		
	Evaluate maintenance outcomes		
<b>Manage backup and recovery, both on- and off-site</b>	Develop backup plan to be used by technical support group and users		
	Develop recovery plan to be used by technical support group and users		
	Implement backup procedures in accordance with a regular schedule		
	Implement recovery procedures as needed		
	Evaluate whether backup and recovery plans meet users' needs		
<b>Troubleshoot and manage problems</b>	Employ basic troubleshooting steps		
	Detect problems		
	Identify criticality of problem		
	Perform appropriate analyses to identify problem cause		
	Develop resolution plan		
	Identify possible solutions		
	Test identified solutions		
	Select most appropriate solution		
	Implement selected solution		
Minimize impact of problems on productivity (e.g., minimize downtime)			

<b>Evaluate problem-solving processes and outcomes</b>	Evaluate problem-solving outcomes to determine whether the problem was solved as intended		
	Evaluate whether the process was applied in an efficient and responsible manner		
	Assess the validity and usefulness of the outcomes		
	Determine needed follow-up actions		
<b>Perform software upgrades</b>	Identify principles governing software acquisition and upgrades		
	Analyze operational problems		
	Recommend solutions for operational problems		
	Upgrade software		
<b>Perform general system administration tasks</b>	Facilitate the delivery of technical services		
	Set up/maintain user accounts on multiple systems		
	Provide technical product support		
	Perform planning for overall system functions		
	Prepare cost justifications		
	Manage inventory and assets		
	Identify new application requirements within the system		
	Participate in the evaluation, analysis, and recommendation of technical computing products		
	Participate in evaluation of total system		
	Document performance problems		
	Retrieve historical data for trend analysis		
	Analyze historical data to identify trends		
	Provide input on technical procedures		
	Increase knowledge of system infrastructure		
	Formulate technical procedures		
	Prepare documentation manuals		
Prepare required reports			
Maintain technical industry knowledge			

## ANNEX A.7: DATABASE ADMINISTRATION

Requirement	Indicator	Compliance	
		YES	NO
<b>Apply the principles of data analysis and design</b>	Explain the database design life cycle		
	Formulate data flows and prepare dataflow diagrams		
	Analyze data relationships and prepare data entity relationship diagrams		
	Define and design data structures/schema		
	Use data modeling tools		
<b>Explain the principles of Database Management Systems (DBMS)</b>	Interpret terminology associated with relational databases		
	Explain the features, functions, and architecture of a DBMS		
	Trace the evolution of DBMS models and their implementation		
	Identify the uses of a DBMS in business organizations		
	Explain the concepts necessary to access organizational databases		
	Analyze the organization of data in a DBMS		
	Identify the impact of networks on DBMS		
	Explain how a DBMS ensures data integrity through transaction-control techniques		
<b>Maintain a DBMS</b>	Distribute data across a distributed DBMS		
	Analyze/model organizations using Entity-Relationship and Object technologies		
	Remove data anomalies through the process of normalization		
	Create/update a relational database using Structured Query Language		
	Query a relational database using Structured Query Language		
	Query data from an organizational repository using a database access facility		
	Perform database administration tasks		
<b>Manage implementation of a DBMS</b>	<b>Execute implementation plan according to project time line</b>		
	Implement transition plan with minimal impact on productivity		
	Define needed external informational resources (e.g., source, content, cost, and timeliness)		
	Access external information resources using Internet tools		
	Create/maintain a directory of external information resources		
	Design simple reports for validating the performance of application systems		
	Apply software development principles, methods, and tools in implementing IS applications		
	Apply database design techniques to the implementation of a solution with calls from a program to the DBMS		

	Apply networking considerations in implementing distributed models		
<b>Monitor and maintain a DBMS</b>	Coordinate security requirements, including documentation functions		
	Identify desired levels of access and security		
	Communicate decisions concerning levels of access and security		
	Select performance tools and procedures		
	Identify problems in a timely fashion		
	Propose solutions that are congruent with application requirements		
	Calibrate DBMS configuration parameters for optimum performance		

**ANNEX A.8: INFORMATION MANAGEMENT AND SECURITY**

SUB DOMAIN	DESCRIPTION	JOB ROLES
<b>Information management</b>	Are the competencies required for the management of data and information within an organization and as it crosses into and out of an organization.	<ul style="list-style-type: none"> <li>• Knowledge manager</li> <li>• Knowledge management specialist</li> <li>• Information management manager</li> <li>• GIS expert</li> <li>• Information management officers</li> </ul>
<b>Information security</b>	Covers the competencies required to implement and sustain a successful information security management system	<ul style="list-style-type: none"> <li>• Chief Information Security Officer</li> <li>• Information security officer</li> <li>• System Auditor</li> </ul>

**ANNEX A.9: INFORMATION MANAGEMENT**

Requirement	Indicator	Compliance	
		YES	NO
<b>Carry out specified information management activities</b>	Effectively carry out own responsibilities with regards to the management of data and information		
	Ensure the integrity of data and information collected and used for own work		
	Correctly classify and categorize data and information within own area of work		
	Accurately provide specified data and information to others as authorized		
	Comply with all relevant and applicable regulations, legislation and organizational standards relating to data and information management		
	Correctly use specified processes, tools and techniques for assessing the compliance of data and information against regulation and standards		
	Accurately maintain records relating to the management of data and information within own area of work		
	Correctly identify and apply the processes, tools and techniques relating to information management activities		
	Gather all appropriate and required information relevant to an organisation and the individuals within it and using its services		
	Verify the accuracy, currency and completeness of information created, collected, accessed, used and documented by information knowledge and data management activities		
	Verify the appropriateness, currency and completeness of any data, information and knowledge assets that are being disposed of		
	<b>Document information assets</b>	Correctly document and store all relevant information on those responsible for information assets, in line with organisational policies and procedures	
Accurately document all required information relating to who can create, access, use, distribute and dispose of information assets			
Correctly document all specified information assets created, collected, accessed, used, distributed and disposed of			
<b>Manage the classification and categorisation of information</b>	Ensure that the location and properties of information are collated and recorded, to enable effective management, classification and categorisation		

	Classify and categorise information, in line with organisational policies and procedures		
	Collate, accurately and concisely, information and data that define the procedures for the management of information assets supporting an organisation		
<b>Communicate with others on information management activities</b>	Provide accurate, appropriate and timely information to internal and external individuals about what information assets held within IT/technology systems, services and assets, in line with policies and procedures		
	Ensure all individuals within an organisation understand the importance and value of information assets created, collected, used, accessed, distributed, disposed of both with the organisation and as these assets are exchanged with external bodies and individuals		
<b>Contribute to information management</b>	Correctly follow the processes, tools and techniques for information management activities		
	Collate and record the location and properties of information within an organisation to enable it to be managed, classified and categorised effectively		
	Correctly classify and categorise data and information within own area of work		
	Provide timely access to information assets that are held within IT/technology systems, services and assets to authorised individuals in line with policies and procedures		
	Comply with all relevant and applicable legislation, regulations and external standards relating to the management of information assets		
	Source relevant and accurate information relating to who can create, access, use, distribute and dispose of information assets		
	Correctly document and store all relevant information on those responsible for information assets, in line with organisational policies and procedures		
	Assist in the implementation and maintenance of the procedures within IT/technology systems, services and assets to classify, categorise and manage information assets and how they are accessed		
	Assist in monitoring the creation of, access to and use, distribution and disposal of information assets		
	Ensure that those responsible for information assets are correctly identified		
	Ensure that all relevant information assets are accurately identify		

Critically analyse the properties of information within the organisation to enable it to be classified, categorised and managed effectively		
Implement and accurately maintain the procedures within IT/technology systems, services and assets to classify, categorise and manage information, data, knowledge assets and how they are accessed		
Proactively work with others to classify and categorise information assets contained within IT/technology systems, services and assets in a way that supports their use and access		
Routinely verify the accuracy, currency, completeness and relevance of information assets managed within IT/technology systems, services and assets		
Regularly monitor the creation of, access to and use, distribution and disposal of information within an organisation, analysing findings and reporting issues to superiors, stakeholders and other relevant internal and external individuals and groups		
Routinely monitor compliance with all relevant legislation, regulations, standards and professional and ethical standards relating to information management, taking action and reporting issues where appropriate		
Liaise effectively with internal stakeholders on the requirements for the management of information within the organisation		
Design, implement and maintain appropriate and effective strategy, policies, plans, processes, procedures and standards relating to information usage and management		
Design effective processes, tools and techniques to monitor the creation, use, access to, distribution and disposal of information management assets		
Identify and manage suitable and timely actions to be taken in the event of information management activities and their deliverables not supporting the business needs and/or meeting compliance requirements		
Ensure that individuals business owners act to maintain the accuracy, currency and completeness of information assets within the organisation		
Provide appropriate, understandable and timely advice and guidance to others on how to categorise, manage and use information assets contained with IT/technology systems, services and assets, applying own judgement and experience		

	Manage the comprehensive classification, organisation and administration of information data and knowledge assets, contained within IT/technology systems, services and assets that is undertaken by others		
	Manage the ongoing alignment of all information usage and management within the organisation with any relevant legislation, regulations and external standards		

## ANNEX A.10: INFORMATION SECURITY

Requirement	Indicator	Compliance	
		YES	NO
<b>Follow information security governance</b>	Identify and follow information governance processes as relating to information systems and information in relation to own area of work		
	Correctly use processes tools and techniques relevant to information governance as appropriate to own work		
	Comply with all relevant IT strategies policies and governance decisions in own area of work		
	Correctly provide specified information on information governance to others		
	Assist in the completion and storage of specified records relating to the effectiveness of IT strategy policies and governance		
	Correctly follow all relevant it strategies policies and governance decisions in own area of work		
	Correctly apply information policies and governance processes and standards within own area of work		
	Assist with the analysis of business governance to identify strategic priorities for the information systems		
	Identify internal and external stakeholders who should be involved in disseminating and the implementation of governance models as appropriate		
	Assist with the documentation of governance decisions as appropriate		
	Identify actions to be taken as a result of decisions made by governance		
	Communicate decisions made by governance to other internal stakeholders including customers and colleagues		

	Clearly identify relevant strategy, policy and standards that need to be considered within development of information security governance models, policy and standards		
	Clearly identify the objectives and scope of information governance models and standards		
	Agree executive sponsorship and governance for information security		
	Clearly identify and accurately document roles and responsibilities for managing the effective implementation and operation of information governance models and standards		
	Accurately identify and document the specific areas of information governance standards required, e.g. data storage, personnel requirements etc		
	Design and implement information governance models and standards		
	Implement and apply information governance standards to own and extended business enterprise		
	Advise and guide others on all aspects of information governance activities and their deliverables		
	Take decisive and timely action to ensure that processes and procedures to underpin information governance standards are documented, tested and implemented		
	Assess the quality and effectiveness of information governance processes, procedures and standards against relevant external policies, standards and guidelines, and take remedial action where appropriate		
	Be fully accountable for all aspects of information governance		
	Design, develop, implement and maintain the policy, processes, standards, plans and procedures to provide the framework for the governance of information assets within the organisation		
	Ensure the business strategy and objectives are fully reflected within the requirements for information governance within the organisation		
	Design, develop, implement and maintain frameworks to retain appropriate information governance expertise including regulatory and legal, within the organisation		
	Secure management commitment and resources to support the information governance structure		

	Monitor the quality and effectiveness of information governance, critically reviewing the policies and standards and making recommendations for improvement where appropriate		
	Monitor the alignment of information assurance and governance activities and their deliverables with all relevant legislation, regulation, internal and external standards, in line with organisational strategy, policies and standards		
	Provide timely and objective advice and guidance to others on all aspects of information governance including best practice and the application of lessons learned		
	Direct resource allocation and professional development strategy for information governance		
	Provide thought leadership on the discipline of information governance, contributing to internal best practice and to externally recognised publications, white papers etc		
<b>Assist secure development, of information security system</b>	Assist in secure development activities for information systems and digital solutions under supervision		
	Use a range of appropriate techniques, as directed by supervisors/ senior managers, to identify and implement security requirements during secure development activities		
	Review the development lifecycle to ensure that security needs are considered at the earliest possible stage, validated by supervisor		
	Operate with reference to organisational standards for software development activities		
	Use and apply the approved methods and tools for secure development, under supervision		
	Correctly apply the organisation's information security architecture to any particular information system or digital solution development under supervision		
	Implement and apply the processes, procedures, tools, methods and techniques necessary for any secure development		
	Complete secure development following relevant internal and external standards, under supervision		
	Accurately identify and clearly document information security requirements for any particular information system or digital solution		
	Clearly communicate how security requirements need to be built into any particular information system or digital solution		

Engage proactively with other teams, individuals and third parties involved in information systems and digital solutions development to ensure that they understand the information security standards with which they need to comply		
Critically review the deliverables from information systems and digital solutions development to ensure that they comply with any necessary internal and external information security standards		
Conduct rigorous testing of all aspects of a new information system or digital solution to identify information security issues or risks		
Assist with the improvement of information security techniques that are incorporated within secure developments		
Effectively manage secure development resources, activities and deliverables		
Ensure teams involved in information systems development understand the information security practices and standards with which they need to comply		
Correctly apply the organisation's information security architecture and development processes to complex systems information systems development		
Select and apply the tools, methods and techniques necessary to support secure development		
Clearly communicate to developers how information security requirements specified in the solution design need to be built into a particular network or information system being developed		
Take action to ensure that there is appropriate information security review of the system development lifecycle, making recommendations for improvement as appropriate		
Critically review network and information systems design and development to identify any unresolved information security issues or risks		
Update secure development processes and standards where appropriate to reflect the dynamic nature of security threats and risks		
Present information on secure development deliverables to a wide range of sponsors stakeholders and other individuals		
Be fully accountable for secure development activities and deliverables		
Define the strategy, policies and standards relating to secure development		
Design, update and disseminate the procedures, tools and techniques relating to secure development activities as required		

	Provide timely and objective advice and guidance to others on all aspects of secure development and management, including best practice and the application of lessons learned		
	Direct resource allocation and professional development strategy for secure development activities		
	Make ongoing improvements to the quality and effectiveness of secure development activities, through reviews of the approved tools and methods		
	Provide thought leadership on the discipline of secure development, contributing to internal best practice and to externally recognised publications, white papers etc		
<b>Assist design of security architecture</b>	Assist in developing architectural solutions which minimise risk exposure for information systems		
	Design, and develop secure architecture solutions that meet specified information security requirements and standards under supervision		
	Correctly use and apply information and data relating to the categorisation of information assets used by the organization		
	Operate with reference to organisational standards for the development of information security architectures		
	Accurately document roadmaps for the organisation's information systems and solutions and the information assets of the organization		
	Accurately identify and follow established design and architecture models in developing new information system architectures		
	Clearly and accurately document how and where information security controls need to be applied to the organisation's information assets, systems and digital solutions that process and use them, validated by supervisors		
	Design, develop and implement fault tolerant and robust information security architectures		
	Clearly communicate how new and existing information security architectures support business needs and risks		
	Engage and communicate with secure development and information security architecture teams to ensure that they understand the internal and/or external information security architecture standards with which they need to comply		
	Analyse developed information systems in order to determine their compliance with the information security architecture and to identify any inherent weaknesses		
	Clearly and accurately document where information security controls need to be applied in the security architecture		

Source and apply information contained within information security architecture models		
Design and develop comprehensive information security architectures relevant to complex network and information systems		
Design, implement and maintain the standards and techniques relating to information security architectures		
Securely develop information systems in compliance with the approved information security architectures		
Advise others on all aspects of the development and implementation of information security architectures		
Lead teams to implement standard architecture models and roadmaps astutely and persuasively to influence strategic IT/ technology decision making and operational business decision making		
Routinely monitor and modify architectures to reflect new products and processes to align to changing business needs		
Correctly identify the vulnerabilities and risks of existing and new information security architectures and make recommendations to improve and update them		
Implement and maintain the processes, tools and techniques for undertaking secure architecture work		
Routinely and regularly monitor the alignment of network and information systems with information security architecture models and roadmaps		
Report and communicate: the progress of information security architecture assignments, the findings and recommendations from information security architecture assignments		
Be fully accountable for information security architecture development		
Set the strategy, policies and standards relating to information security architecture		
Implement and update the procedures, tools and techniques relating to information security architecture development activities as required		
Negotiate effectively with sponsors and stakeholders on the implications of information security architecture activities for the wider business		
Set the resourcing strategy and correctly source appropriately skilled internal/external individuals, where necessary, to undertake and/or manage information security architecture and roadmap activities		

	Effectively apply information security architecture models and roadmaps to conduct security risk analysis on information systems scenario planning		
	Advise others on all aspects of information security architectures including best practice and the application of lessons learned		
	Provide thought leadership on information security architecture, contributing to internal best practice and to externally recognised publications, white papers		
<b>Perform security testing</b>	Able to assist in determining responses to a range of standard security scans and tests on network devices and information systems and components		
	Use a range of appropriate methods, tools and techniques, as directed by supervisors/senior staff, to conduct information security testing		
	Undertake a range of basic penetration tests, under controlled conditions, to assess vulnerabilities and compliance against information assurance criteria and standards under supervision		
	Assist with the development of accurate and clear security test scripts to ensure that information assurance requirements can be tested against relevant standards		
	Objectively assess the results of information security testing and vulnerability assessment against the acceptance criteria		
	Accurately collate and clearly document the outcomes from information security tests and vulnerability assessment providing prioritised rudimentary mitigation information and advice		
	Report potential issues and risks arising from security testing to supervisors		
	Undertake information security tests, under controlled conditions, to assess vulnerabilities and compliance against relevant internal and/or external standards		
	Use a range of appropriate methods, tools and techniques to conduct penetration testing		
	Clearly and accurately scope and plan the information security test approach, prioritising testing activity to proactively target the most significant threats and vulnerabilities first		
	Interpret information assurance requirements to produce information security test acceptance criteria		
	Carefully plan a context driven test approach to systematically test a system in order to validate its information security status		
	Design and develop accurate and clear test scripts, plans and acceptance criteria to ensure that information assurance requirements can be tested against relevant internal and/or external standards		

Critically review the results of penetration testing and accurately identify specific vulnerabilities within any specified information system		
Prioritise outcomes and recommend specific and timely action to address vulnerabilities identified as a result of information security testing		
Clearly report on, and communicate, the results of information security testing, recommending mitigation actions		
Ensure information security testing reports are high quality and relevant to the audience		
Be responsible for penetration testing in own area of work		
Design, implement and maintain the standards processes, procedures, methods, tools and techniques to conduct information security assessments		
Design, simulate, and execute controlled attacks on networks and systems as part of a comprehensive penetration testing approach		
Apply existing and emerging methods to test and identify vulnerabilities to network and information systems		
Select and specify the most appropriate tools to be used during penetration testing		
Clearly and accurately define the scope of any penetration testing assignment aligned to the context of the test scenario		
Lead and manage a penetration testing team, prioritising resource allocation and capability management ensuring that appropriate ongoing training and development is in place		
Source, gather and collate information and data about the vulnerabilities identified as a result of penetration testing and the potential impact on the organisation's information systems and assets		
Critically review the results of penetration testing, identifying priorities for action where appropriate		
Communicate the results of information security testing to a range of audiences justifying and evidencing any recommendations on security failures and non compliance		
Review and update information security testing processes and standards where appropriate to reflect the changing nature of security threats and risks		
Make decisions to implement improvements to the organisation's information systems and assets to reduce the risks associated with identified vulnerabilities, documenting such changes		
Be fully accountable for all penetration and information security testing activities, results and recommendations for mitigation		

	Design, develop, implement and maintain the policy and standards to provide a detailed information security testing framework for use within the organization		
	Review, improve and update penetration testing methods and tools to continue to provide effective testing services		
	Ensure penetration testing activities and reports are clearly documented		
	Design, develop, implement and maintain resourcing and training strategy and plans to retain and develop appropriate penetration and information security testing expertise within the organisation		
	Continually monitor information security threat trends and keep aware of the latest information providing informed guidance to penetration testing activities		
	Monitor the quality and effectiveness of penetration testing activities, critically reviewing the approach and process and making recommendations for improvement where appropriate		
	Provide timely and objective advice and guidance to others on all aspects of information security testing activities including penetration testing best practice and the application of lessons learned		
	Maintain an authoritative position on proactive information security testing to identify and disseminate new threats to contribute to the body of knowledge		
	Develop communication processes for internal and external parties (e.g. customers) relating to penetration testing activities and results		
	Authorise the issue of formal reports to management on the effectiveness and efficiency of security testing, in appropriate language for the audience		
	Provide thought leadership on the discipline of information security testing, contributing to internal best practice and to externally recognised publications, white papers etc		
	Take timely and decisive action in the event of information security testing activities and their deliverables not complying with relevant legislation, regulations, and internal and external standards		
<b>Assist information assurance</b>	Correctly follow the strategy, policies, plans and standards relating information assurance activities		
	Follow an appropriate information assurance methodology, under supervision		
	Use a range of appropriate tools and techniques, as directed by superiors, to conduct information assurance activities, under supervision		

Operate with integrity and confidentiality during information assurance activities		
Identify when, and how, to seek advice and guidance from other individuals during information assurance activities		
Complete, to defined standards and timelines, own assigned tasks and activities during information assurance activities		
Clearly identify, and accurately document, the organisation requirements with respect to information assurance methodology implementation		
Clearly scope and plan the approach for introducing an information assurance methodology, including any impacts internally and on third parties		
Accurately source, gather and collate information and data relating to the implementation of information assurance methodologies		
Implement and apply an information assurance methodology to own and extended business enterprise assurance, under direction		
Critically assess the implementation of information assurance methodologies and/or approaches against the requirements of the organization		
Communicate effectively the outcomes and deliverables of information assurance methodologies		
Ensure that all necessary processes, procedures, tools and techniques supporting the methodology are documented		
Be responsible for information assurance on all types of information systems		
Provide leadership on information assurance for the organization, working effectively with strategic organizational functions to provide authoritative advice and guidance		
Clearly align the scope of information assurance to the context of the business		
Plan, schedule and manage information assurance of the organization's information systems and assets		
Select and apply the most appropriate methodology for information assurance		
Accurately identify, document and communicate the selection of the most appropriate information assurance methodology to verify that information assurance risks are mitigated to acceptable levels		
Clearly identify and accurately document roles and responsibilities for information assurance		
Rigorously monitor the implementation and adoption of the information assurance methodology within the organization		

	Monitor the quality and effectiveness of information assurance activities, making recommendations for improvement where appropriate		
	Identify, source and secure the most appropriate resources and skills from within the organization to conduct information assurance activities		
	Be fully accountable for the information assurance methodology		
	Design, implement and maintain the information assurance governance mechanisms for the organization		
	Design and develop, improved information assurance methodologies to reflect changing requirements		
	Design, develop, implement and maintain the policy and standards for information assurance within the organization		
	Monitor the alignment of information assurance activities and their deliverables with all relevant legislation, regulation, internal and external standards, in line with organizational strategy, policies and standards		
	Take timely and decisive action in the event of information assurance activities and their deliverables not complying with relevant legislation, regulations, and internal and external standards		
	Create and maintain an information risk awareness culture within the organization, ensuring everyone understands their role and responsibilities in maintaining information assurance throughout the organization		
	Advise and support others on all aspects of information assurance methodology including best practice and the application of lessons learned		
	Provide thought leadership on the discipline of information assurance, contributing to internal best practice and to externally recognized publications, white papers etc		
<b>Perform Security Operations and management activities</b>	Correctly follow and apply the policies and standards relating to information security operations management activities		
	Assist in identify and assessing the new vulnerabilities on potential security violations		
	Take appropriate action to report incidents, as required by procedure, in order to avert any effect from it		
	Operate with integrity and confidentiality during information assurance activities		
	Identify when, and how, to seek advice and guidance from other individuals during information assurance activities		
	Complete, to defined standards and timelines, own assigned tasks and activities during information security operations management activities		

Assess the performance of information security controls within the information system network		
Correctly identify and document the information assets that need to be to protected, validating with the information asset owner		
Correctly source, gather and use information and procedures relating to how each information asset will be protected		
Verify that applicable security patches and upgrades are implemented according to the organisation's policy and standards		
Diagnose and resolve information security problems in response to reported incidents		
Install and operate information systems within the organisation in an information security test configuration manner following organisational policy and standards		
Install and operate information systems within the organisation in an information security test configuration manner following organisational policy and standards		
Monitor and evaluate the effectiveness of the organisation's information security procedures and safeguards for the information systems infrastructure		
Demonstrate effective communication of security issues and advice to business managers and others		
Ensure that operations and service delivery activities align together and with appropriate organisational strategy, policy and standards relating to the security of information assets		
Analyse instances of non-compliance to procedures and take appropriate administrative or technological action to correct and minimise security risks		
Implement and maintain the standards and procedures for managing secure operations and service delivery across the full range information systems		
Develop and implement the necessary information security operations management plans and procedural documentation to ensure that information security incidents are avoided during ongoing operations and shutdown/closure of information systems		
Design, implement and monitor the user access rights management framework for the full range of information systems		
Regularly schedule and conduct security and vulnerability assessments on the operational environment		
Routinely evaluate compliance to legal, regulatory, contractual and organisational requirements for the security of information assets, report the results to sponsors, stakeholders and other internal/ external individuals and bodies		
Provide advice regarding security operations management activities		

	Provide advice regarding security operations management activities		
	Be fully accountable for secure operations, service delivery and vulnerability assessment		
	Develop policies and standards for secure operations, service delivery and vulnerability assessment		
	Design and specify organisational procedures, against recognised criteria, such as ISO 27001		
	Advise appropriate stakeholders of changes affecting the organisation's vulnerability status		
	Provide leadership and guidelines on secure operations, service delivery and vulnerability assessment, providing authoritative advice and guidance		
	Direct resource strategy and resource allocation and professional development strategy for secure operations, service delivery and vulnerability assessment		
	Provide thought leadership on the discipline of secure operations, service delivery and vulnerability assessment, contributing to best practice and to externally recognised publications, white papers etc		
<b>Assist secure operations</b>	Follow organisational instructions and pre-established guidelines to perform information security tasks		
	Assist in applying appropriate access controls and privileges to an organisation's computing environment, under supervision		
	Configure, optimise and test infrastructure technology (network file servers, hubs, routers and switches) to ensure they comply with the organisation's security policy, procedures, and standards, undersupervision		
	Take appropriate action to report incidents, as required by procedure and, where applicable, legislation, in order to avert any effect from it		
	Implement response actions and reporting in reaction to security incidents following policy and standards, reporting such actions to supervisor		
	Assist in maintaining documentation of security records		
	Complete, to defined standards and timelines, own assigned tasks and activities during information assurance activities		
	Working with the information asset owners, correctly identify, document and classify the information assets that need to be to protected		
	Apply appropriate access controls and privileges to an organisation's computing environment		

	Assist in communicating to users their access rights and privileges, and operate agreed logical access controls and security systems.		
	Correctly source, gather and use information and data relating to how each information asset may be accessed, processed, used, transformed and transmitted		
	Ensure applicable patches and upgrades to security protection tools are implemented according to organisational standards and policies		
	Document security activities and maintain security records and documentation to agreed standards		
	Review security logs as per procedures		
	implement and maintain policies, plans, standards, processes, procedures, methods, tools and techniques for managing secure operations and service delivery		
	install, test, maintains, and upgrade network and information security hardware (such as firewalls, routers etc) to ensure they comply with organisational information security requirements		
	routinely monitor operational security provision, taking action to address potential vulnerabilities, in line with procedures		
	design, implement and monitor the user access rights framework designs and installs perimeter defence systems including ids, firewalls, grid sensors, etc and documenting, under direction, enhances the rule sets to block sources of malicious traffic		
	validate the planning and scheduling of the installation of new or modified hardware, operating systems, and software applications ensuring integration with information security requirements for the infrastructure		
	routinely monitor and report the results of compliance to legal, regulatory, contractual and organisational requirements for the security of information assets, to sponsors, stakeholders and other internal/external individuals and bodies		
<b>Conduct vulnerability assessments</b>	Source, gather and collate information and data about the vulnerabilities within the organisation's information infrastructure and assets		
	Identify when, and how, to seek advice and guidance from other individuals during vulnerability assessment activities		
	Complete, to defined standards and timelines, own assigned tasks and activities during vulnerability assessment activities		
	Assist in documenting the outcomes of vulnerability assessments		

	Select and apply the most appropriate methods and tools to be used during vulnerability assessments, validating selection with supervisor		
	Clearly and accurately identify specific vulnerabilities within target information systems		
	Critically review the results of vulnerability assessments, identifying priorities for action where appropriate		
	Communicate vulnerability assessment outputs informing appropriate stakeholders of the impact and potential resolutions		
	Assess vulnerability intelligence in order to determine the potential relevance and impact to the organisation's information systems infrastructure		
	Ensure the preservation of information integrity where vulnerabilities have been identified		
	Make decisions to implement improvements to the organisation's information systems infrastructure and assets to reduce the risks associated with identified vulnerabilities, document all such decisions for supervisor sign-off		
	Be accountable for undertaking accurate security vulnerability assessments on all types of information systems		
	Develop, implement and maintain plans, processes, procedures, methods, tools and techniques for vulnerability assessment activities and their deliverables		
	Clearly and accurately define the scope of vulnerability assessment activities, adjusting the process to suit specific contexts		
	Select and apply the most appropriate methods and tools to be used during vulnerability assessments		
	Set the resourcing and training plan for vulnerability assessment activities		
	Identify, source and secure the most appropriate resources to conduct specialised vulnerability assessment activities		
	Be responsible for designing, implementing and reporting metrics for monitoring information system vulnerabilities effectiveness		
	Critically review the results of vulnerability assessments, identifying priorities for action, where appropriate		
	Verify and validate new potential vulnerabilities that may impact on the organisation's information assets		

	Monitor the quality and effectiveness of vulnerability assessment activities, critically reviewing the vulnerability assessment process and making recommendations for improvement, where appropriate		
	Advise and guide others on all aspects of vulnerability assessment activities and their deliverables		
	Communicate vulnerability assessment status and results to a wide range of sponsors, stakeholders and other individuals		
<b>Assist with incident management activities</b>	Identify the sources and nature of information security incidents to information systems escalating to supervisors		
	Correctly follow the procedures and standards relating information security incident management activities under supervision		
	Operate with integrity and confidentiality during information security incident management activities		
	Identify when, and how, to seek advice and guidance from other individuals during information security incident management activities		
	Complete, to defined standards and timelines, own assigned tasks and activities during information security incident management activities		
	Clearly and accurately define the scope of any information security incident management exercise, validating with supervisor		
	Accurately source, gather and collate information relating to security incidents that may impact on the organisation's information assets, engaging with stakeholders in a professional manner		
	Perform incident management, under supervision, including incident detection, classification, investigation, resolution, reporting and closure		
	Under supervision take ownership for an incident and act as the primary level of escalation		
	Critically review information and data from security incidents to assess business impact and to determine resolution mitigation		
	Make recommendations as to the specific actions that should be applied to respond to security incidents, and escalate incidents that are outside agreed tolerance levels		
	Communicate the status of security incidents and their outcomes effectively to stakeholders		
	Review and update procedures for incident management		
	Be responsible for managing information security incidents on all types of information systems		
Act as the interface to other technical and managerial staff and other groups within the organisation in relation to specific incidents			

	Provide a prompt recovery of information assets and systems within the business to the specified service level agreement or SLA		
	Review and apply the strategy, policies, procedures, tools and techniques relating to incident response and management activities		
	Develop, implement and maintain procedures, and techniques for responding to, and managing, security incident activities and their deliverables		
	Correctly identify the range of response actions that may be used to mitigate security incidents		
	Ensure that incident management teams remain focused on resolving incidents and have clear priorities		
	Take decisive and timely action in the event of incidents impacting the integrity of information systems		
	Develop and maintain organisational capability in incident response and management		
	Objectively analyse and clearly present the findings from incident management activities appropriately to sponsors, stakeholders and external bodies		
<b>Assist with incident investigation activities</b>	Correctly follow the procedures and standards relating to security incident investigation activities		
	Assist in ensuring that all applicable logs and other records are preserved as evidence		
	Identify how access was obtained during security incident		
	Operate with integrity and confidentiality during information security incident investigation activities		
	Identify when, and how, to seek advice and guidance from other individuals during security incident investigation activities		
	Identify the need for detailed forensic examination as part of an investigation		
	Document, report and communicate the findings of an investigation		
	Clearly and accurately define the scope of any information security incident investigation, validating with supervisor		
	Identify potential sources of evidence to investigate, validating with supervisor		
	Accurately source, gather and collate information and evidence relating to security investigations, engaging with stakeholders in a professional manner		
	Perform incident investigations under supervision		
	Take ownership for an investigation and act as the primary contact, under supervision		

	Critically review information and data from information security incidents to inform the investigation, validating with supervisor		
	Make recommendations as to the specific investigation actions that should be followed, under supervision		
	Communicate the status and results of security incident investigations clearly and effectively to stakeholders, under supervision		
	Review and update procedures for investigations using information from past investigations		
	Be fully accountable for managing security investigations on all types of information systems		
	Act as the interface to other technical and managerial staff and other groups within the organisation in relation to specific investigations		
	Provide a prompt investigation of information systems within the business to the specified response level		
	Review and apply the strategy, policies, procedures, tools and techniques relating to incident investigation		
	Develop, implement and maintain procedures, and techniques for investigating security incidents		
	Develop and maintain organisational capability in incident investigation		
	Objectively analyse, and clearly present, the findings from incident investigation activities appropriately to sponsors, stakeholders and external bodies		
	Be fully accountable for security incident management, investigation and forensics		
	Define the strategy, policies and standards for security incident management, investigation and forensics		
	Ensure that security incident management, investigation and forensics is sufficient to provide the business with full assurance of information integrity and resilience		
	Direct resource allocation and professional development strategy for incident management, investigation and forensics activities		
	Oversee the alignment of security incident management, investigation and forensics across, and between, enterprises		
	Monitor the quality and effectiveness of incident management, investigation and forensics activities, critically reviewing them and making recommendations for improvement, where appropriate		

	Provide timely and objective advice and guidance to others on all aspects of security incident management, investigation and forensics activities, including best practice and the application of lessons learned		
	Develop and document communication processes for internal and external parties (e.g., media, law enforcement, customers) relating to security incident management, investigation and forensics		
	Authorises the issue of formal reports to management on the effectiveness and efficiency of security incident management, investigation and forensics		
	Provide thought leadership on the discipline of security incident management, investigation and forensics, contributing to internal best practice and to externally recognised publications, white papers etc		
<b>Assist with forensic examination</b>	Correctly follow the procedures and standards relating to forensic examination activities		
	Apply forensic examination procedures to develop leads to help to identify instigators of information security incidents, reporting to supervisor		
	Collect evidence relating to all records of the unauthorised access that lead to the incident		
	Operate with integrity and confidentiality during information security forensic examinations		
	Preserve the 'crime scene' from alteration		
	Collect and analyse data as part of a forensic examination		
	Identify when, and how, to seek advice and guidance from other individuals during forensic examination		
	Document all information, reporting the findings of a forensic examination, under supervision		
	Correctly use, and apply, the processes and procedures, methods tools and techniques to conduct forensic examinations		
	Accurately source, gather and collate data in order to conduct forensic analysis of digital activities		
	Analyse system information (e.g. system logs, network traffic, hard disks, virtual memory, etc) for evidence of breaches of security policy or laws		
	Critically analyse software for malware products		
	Examine monitoring systems to identify potential security breaches		
	Analyse system information for evidence of breaches of security policy		

	Report and escalate suspicious traffic/activities in a timely manner		
	Take appropriate and proactive action to secure information assets from any potential threats identified by forensic analysis until such time as these threats are mitigated		
	With supervisors authorisation, seize evidence in accordance with legal guidelines and in the most effective manner to minimise disruption to the business and maintaining evidential weight		
	Identify and follow information governance processes as relating to information systems and information in relation to own area of work		
	Correctly use processes, tools and techniques relevant to information governance as appropriate to own work		
	Comply with all relevant IT strategies, policies and governance decisions in own area of work		
	Correctly provide specified information on information governance to others		
	Assist in the completion and storage of specified records relating to the effectiveness of IT strategy, policies and governance		
	Correctly follow all relevant it strategies, policies and governance decisions in own area of work		
<b>Assist in information security audit activities</b>	Assist recording of assets in an asset management and tracking system		
	Conduct a range of basic information security audit activities accurately and in a timely manner, under the direction of seniors		
	Accurately gather and collate the findings from security audit activities, assisting seniors with the identification and prioritisation of issues and risks arising		
	Clearly and objectively report the results and findings from audit activities to supervisors		
	Assist with the communication and review of the results and findings from information security audits with accountable owners		
	Assist others with the action planning resulting from any particular information security audit		
	Plan and schedule information security audits and reviews		
	Conduct information security audits to assess security compliance within the organisation's networked information system environment, under supervision		

Implement and follow organisational policies, processes, and standards that exist for information security audit activities		
Objectively review the findings from information security audit activities, identifying and prioritising of issues and risks arising		
Clearly and objectively report the results and findings from information security audit activities to seniors		
Clearly record, report and communicate the results and findings from information security audits with accountable owners		
Develop clear and accurate action plans resulting from any particular information security audit		
Be fully accountable for undertaking complex, accurate information security audits on all types of information systems		
Develop, implement and maintain audit plans, processes, procedures, methods, tools and techniques for information security activities and their deliverables		
Lead and manage an audit team to conduct complex technical audits, prioritising resource allocation and capability management for information security audit activities		
Use the results from risk and vulnerability assessments to inform audit activities		
Implement organisational logging and documentation standards to comply with audit requirements		
Clearly and accurately define the scope of information security audit activities		
Advise and guide others on all aspects of information security audit activities and their deliverables		
Clearly and effectively communicate information security audit results to a wide range of sponsors, stakeholders and other individuals		
Be fully accountable for information security audit		
Define the information security audit strategy, policies and standards		
Develop plans for risk-based audit coverage of the organisations information systems for inclusion in audit planning		
Ensure audit coverage is sufficient to provide the business with full assurance of adequacy and integrity		
Oversee the development of the audit planning and review process		
Monitor the quality and effectiveness of information security audit activities, critically reviewing the approach and process, and making recommendations for improvement where appropriate		
Design procedures, tools and techniques relating to information security audit activities		

	Provide timely and objective advice and guidance to others on all aspects of information security audit activities including best practice and the application of lessons learned		
	Authorise the issue of formal reports to management on the effectiveness and efficiency of information security control mechanisms		
	Direct resource allocation and professional development strategy for information security audit activities		
	Provide thought leadership on the discipline of information security audit, contributing to internal best practice and to externally recognised publications, white papers etc		

### ANNEX A.11: ICT PROJECT MANAGEMENT

Requirement	Indicator	Compliance	
		YES	NO
<b>Follow procedures and assist with project inception and scoping activities</b>	Correctly follow the procedures, tools and techniques relating to project inception and scoping activities		
	Fully comply with all organisational strategic objectives, policies and standards relating to project inception and scoping activities		
	Operate at all times with reference to the project lifecycle		
	Assist others in the identification of the scope of any particular project		
	Assist others in maintaining the Terms of Reference/Project Charter/Project Definition Document for any particular activity of the project		
	Correctly use strategy, policies, and standards relating to project inception and scoping activities		
	Effectively implement the procedures, tools, techniques and plans relating to the inception and scoping activities for any particular project		
	Ensure the confidentiality, integrity and security of all information during project inception and scoping activities		
	Effectively manage the alignment of inception and scoping activities for any particular project with the project lifecycle		
	Provide all deliverables from project inception and scoping activities for any particular project to those individuals and/or groups responsible for the next phase of activity		
	Be accountable for own contribution to the completion of all inception and scoping activities for any particular project		

	Correctly select and effectively implement and maintain strategy, policies, standards and agreed governance mechanisms relating to the inception and scoping activities for any particular project		
	Correctly use the procedures, tools and techniques relating to programme inception and scoping activities under direction		
	Take decisive and timely action in the event of inception and scoping activities for any particular project not supporting the business and/or project objectives and needs as directed		
	Be accountable for the quality and effectiveness of the inception and scoping activities for any particular project, including specifically the accuracy, completeness, and currency of its defined scope		
	Correctly identify what roles and responsibilities need to be assigned and fulfilled within any particular project activities		
	Correctly identify the potential implications for business operations arising from the deliverables of project or programme inception and scoping activities		
	Effectively negotiate the scope, success criteria, assumptions and constraints for any particular programme with sponsors, stakeholders and other internal external individuals and bodies		
	Provide all necessary deliverables from project inception and scoping activities for any particular programme to those individuals and/or groups responsible for the next phase of activity		
	Be accountable for the completion of all inception and scoping activities for any particular programme		
	Take effective, specific and timely action in the event of inception and scoping activities for any particular programme not supporting the business and/or project objectives and needs		
	Provide timely and objective advice and guidance to others on all aspects of programme inception and scoping activities including best practice		
	Be fully accountable for the quality and effectiveness of the inception and scoping activities for any particular programme and for the accuracy, completeness and currency of the defined scope it		
<b>Document initiation and scoping activities</b>	Accurately document the business objectives scope assumptions and constraints of any particular project		

	Accurately document the Terms of Reference/Project Charter/Project Definition Document for any particular project		
	Critically interpret and accurately document all information that has been collected during inception and scoping activities for any particular project		
	Accurately document decisions made during inception and scoping activities for any particular project		
	Provide in a timely manner information contained within an agreed Terms of Reference/Project Charter/Project Definition Document for any particular project to internal and external individuals and groups		
	Participate in analysing information about the business objectives that any particular project needs to support and/or deliver		
	Participate in verifying the accuracy, currency, completeness, and relevance of information collected, used, and produced by inception and scoping activities for any particular project		
	Correctly identify what information needs to be gathered, used and documented during project inception and scoping activities and what needs to be included in any project Terms of Reference/Project Charter/Project Definition Document		
	Accurately gather all of the information required to define the success criteria assumptions and constraints relating to any particular project		
	Verify the accuracy, currency, completeness, and relevance of information collected, used and produced by inception and scoping activities for any particular project		
	Present the proposed Terms of Reference/Project Charter/Project Definition Document for any particular project, clearly and in a timely manner to sponsors, stakeholders and other internal and external individuals and groups		
	Accurately maintain the Terms of Reference/Project Charter/Project Definition Document for any particular project as it undergoes review and is agreed/signed off		
	Secure the sign off of the Terms of Reference/Project Charter/Project Definition Document for any particular project		
	Clearly communicate the scope, success, criteria, assumptions, and constraints of any particular project to sponsors, stakeholders and other internal/external individuals and bodies		
	Confidently and persuasively present the proposed Terms of Reference/Project Charter/Project Definition document for any particular project to sponsors, stakeholders and internal and external individuals and groups		

	Provide clear, accurate and timely information, contained within an agreed Terms of Reference/Project Charter/Project Definition document, for any particular programme to internal and external individuals and groups as required		
	Accurately source and collate all the relevant information required to scope any particular programme, under direction		
	Correctly gather all the information that needs to be included in a Terms of Reference/Project Charter/Project Definition document for any particular programme, under direction		
	Accurately document the business objectives for any particular programme, the scope of it and the projects that need to be included within it, under guidance		
	Critically review the Terms of Reference/Project Charter/Project Definition Document produced by others in a timely manner		
	Correctly identify whether the activities to be undertaken constitute a programme, the scope of it and the projects that need to be included within it under guidance		
	Verify the business objectives and needs that any particular programme needs to support and/or deliver, that the scope of a programme meets them and that these are fully reflected in any Terms of Reference/Project Charter/Project Definition Document produced		
	Correctly select and actively engage the sponsors of, and stakeholders for, any particular programme during project inception and scoping activities		
	Routinely monitor the alignment of inception and scoping activities for any particular programme with the business objectives and needs, any relevant business change activities, and with the project lifecycle		
	Critically analyse and make decisions on the results from monitoring inception and scoping activities for any particular programme, reporting issues and status to senior sponsors, stakeholders, and internal/external individuals and bodies as and when required		
<b>Provide supporting activities, to project inception and scoping</b>	Proactively engage and involve sponsors and stakeholders for any particular project during project inception and scoping activities		
	Verify that the scope of a project meets the business objectives and needs of an organisation and the accuracy, completeness, and currency of a Terms of Reference/Project Charter/Project Definition Document produced for it		

	Critically analyse information about the business objectives, success criteria, assumptions and constraints and the range of business functions activities and tasks to be included within its scope in order to produce an accurately worded Terms of Reference/Project Charter/Project Definition Document		
	Objectively review the business objectives, proposed scope assumptions and constraints for any particular project, under direction		
	Critically analyse the potential implications of the scope, success criteria, assumptions and constraints of any particular project		
	Regularly monitor the progress of the inception and scoping activities for any particular project interpreting and reporting findings to sponsors, stakeholders, and other internal and external individuals and groups, as directed		
	Design effective strategy, policies, standards, procedures, tools and techniques relating to the inception and scoping activities for any particular project		
	Design effective and meaningful governance mechanisms and plans for any particular programme		
	Produce clearly worded Terms of Reference/Project Charter/Project Definition Document including accurate definitions of the business objectives, proposed scope and assumptions and constraints for any particular programme		
	Design, implement and maintain effective strategy, policies and standards relating to the inception and scoping activities for programmes		
	Correctly identify the success criteria, other performance targets and range of organisational and geographical elements that need to be included in any programme		
	Make well reasoned decisions on when and how to use external providers of inception and scoping services selecting the preferred organisations and negotiating/contracting with them accordingly on behalf of the organisation		
	Correctly select and effectively negotiate governance mechanisms for any particular programme with sponsors, stakeholders, other internal external individuals and bodies during project inception and scoping activities		
	Correctly identify and clearly communicate the potential implications for business strategy and/or the operating model arising from the deliverables of project or programme inception and scoping activities to senior sponsors, stakeholders and other internal and external individuals and groups		

<b>Identify and develop project implementation criteria and governance mechanisms</b>	Design effective and meaningful governance mechanisms and plans for any particular project		
	Accurately identify what needs to be included in any Terms of Reference/Project Charter/Project Definition Document for a particular project		
	Correctly identify when, and how, to use external providers of project inception and scoping services and which ones should be used, making timely proposals for their use to relevant people		
	Effectively negotiate the scope, success criteria, assumptions, constraints and governance mechanisms for any particular project with sponsors, stakeholders and other internal external individuals and bodies		
<b>Carry out project planning and scheduling activities</b>	Correctly follow the procedures, tools and techniques relating to project planning and scheduling activities		
	Fully comply with all organisational strategy, policies and standards relating to project planning and scheduling activities		
	Operate at all times with reference to the business and project objectives, the project lifecycle and project governance		
	Operate at all times with reference to 'real world' factors that will apply to project planning and scheduling activities		
	Correctly use and apply all relevant information produced by prior phases of any particular project		
	Correctly use information contained within a Gantt chart and critical path analysis (CPA) chart for a particular project		
	Correctly select the procedures, tools and techniques to use in project or programme planning and scheduling activities		
	Correctly select and critically interpret all information required to produce the baseline plan and schedule for any particular project		
	Correctly break down the work associated with the business objectives and project scope into phases, activities and tasks accurately, estimate their duration and allocate resources to them appropriately		
	Correctly apply appropriate levels of contingency and tolerances to any particular project plan		
	Ensure that the sponsors of, and stakeholders for, any programme are fully engaged and involved during project planning and scheduling activities		
	Correctly identify the critical path for any particular project		
	Ensure that the baseline project plan is signed off by appropriately authorised individuals prior to further activity commencing		

	Effectively manage the progress of planning and scheduling activities for any particular project, reporting issues and status in a timely manner to all sponsors, stakeholders and other individuals and groups involved in its delivery and/or impacted by it		
	Handover all relevant project planning and scheduling deliverables to those individuals responsible for the next phase of activity		
	Be fully accountable for own contribution to the completion of all planning and scheduling activities for any particular project		
	Correctly identify strategy, policies and standards relating to project planning and scheduling activities, under direction		
	Gather, collate and use all relevant information about individuals who may fill roles for any particular project		
	Make objective and well reasoned decisions on the relative priority of activities and tasks within plans and schedules for any particular project, under guidance of others		
	Make timely and clear decisions on project planning and scheduling issues and risks and how they will be resolved, under direction		
	Manage any potential changes to scope during planning and scheduling activities for any particular project, under the guidance of others		
	Be fully accountable for the quality and effectiveness of the planning and scheduling activities for any particular project		
	Accurately source and collate all relevant project deliverables from individual projects that constitute any particular programme, as directed		
	Accurately source and correctly apply all deliverables produced from earlier phases of any particular programme, under direction		
	Correctly identify the relationships and dependencies between individual projects and/or between phases, activities and tasks within individual projects in any particular programme		
	Correctly break down the work associated with the business objectives and programme scope into phases, activities and tasks accurately, estimate their duration and allocate resources to them appropriately		
	Correctly apply appropriate levels of contingency and tolerances to any particular programme plan		
	Ensure that the baseline programme plan is signed off by appropriately authorised individuals prior to further activity commencing as directed		

	Effectively manage the progress of the planning and scheduling activities for any particular programme, gaining resolution to identified issues and risks and regularly reporting status to sponsors, stakeholders and internal and external individuals and groups		
	Implement and maintain the procedures, tools, and techniques relating to project planning and scheduling activities for any particular project		
	Provide all relevant deliverables from project planning and scheduling activities for any particular programme on to those individuals and/or groups responsible for the next phase of activity in a timely manner		
	Be fully accountable for the completion of all planning and scheduling activities for any particular programme		
	Correctly select the individuals who need to be involved in the management and leadership of programme activities and tasks		
	Make well-reasoned and timely decisions on the relative priority of projects activities and tasks within the plans and schedules for any particular programme		
	Provide timely and objective advice and guidance to others on all aspects of programme planning and scheduling activities including best practice		
	Correctly identify opportunities to optimise the effectiveness of the plans and schedules for any particular programme		
	Make clear objective and timely decisions on the actions to be taken in the event of programme planning and scheduling activities not supporting the business and programme objectives		
	Be fully accountable for the quality and effectiveness of the planning and scheduling activities for any particular programme		
<b>Source, document and communicate relevant information relating to project planning and scheduling activities</b>	Correctly source all deliverables produced from earlier phases of any particular project during project planning and scheduling activities		
	Correctly source and collate all relevant information that needs to be included in a plan/schedule and associated deliverables for any particular project		
	Accurately document the work breakdown, organisational breakdown, structures and milestones for any particular project		
	Accurately document the phases activities and tasks within any particular project their relationships and any internal and external dependencies		

Communicate clearly and accurately the baseline plans and schedules associated with any particular project to all individuals who may be impacted by its delivery		
Provide information contained within a baselined Gantt chart and critical path analysis (CPA) chart for any particular project to internal and external individuals and groups as required		
Verify the accuracy, currency, completeness and relevance of all information collected used and produced by project planning and scheduling activities		
Correctly recognise and correct errors in project plans and schedules and optimise their efficiency where possible		
Accurately document and maintain the baseline Gantt chart and critical path chart for any particular project together with any associated planning and scheduling deliverables		
Correctly identify and clearly report, the implications for any particular project plan of internal and external factors such as budget the business and project objectives, timescales and resources		
Clearly and accurately communicate the baseline plans and schedules associated with any particular project to all sponsors, stakeholders and internal and external individuals and groups involved in its delivery		
Verify the planning assumptions, estimates, interdependencies, contingency and tolerance levels to be used for any particular project		
Verify that that the plans and schedules for any particular project meet the business and project objectives		
Routinely monitor the progress of the planning and scheduling activities for any particular project, dealing with issues as they arise and taking action in the event of project planning and scheduling activities not supporting the business and/or project objectives		
Manage the expectations of sponsors, stakeholders and other internal and external individuals and groups, during the planning and scheduling activities for any particular project guided by others		
Effectively negotiate project plans and schedules with sponsors, stakeholders and internal and external individuals and groups as appropriate under the guidance of others		
Accurately document the work breakdown, organisational breakdown, structures and milestones for any particular programme as directed		

	Accurately document the relationships and dependencies between individual projects and/or between phases, activities and tasks within individual projects in any particular programme as directed		
	Accurately document all of the phases, activities and tasks and their relationships within any particular programme as directed		
	Verify the accuracy, currency, completeness and relevance of all information collected, used, and produced by programme planning and scheduling activities, under the guidance of others		
	Ensure that all the sponsors of, and stakeholders for, any project are fully engaged and involved during programme planning and scheduling activities and that their expectations are managed throughout the planning and scheduling		
	Accurately document and routinely maintain the baseline Gantt chart and critical path chart (CPA) for any particular programme together with any associated planning and scheduling deliverables under direction		
	Correctly identify and clearly report the implications of any particular programme plan for internal and external factors such as budget, the business and project objectives, timescales and resources, under direction		
	Effectively review and routinely report the quality and effectiveness of planning and scheduling activities for any particular programme		
	Verify the relationships and dependencies between individual projects and/or between phases activities and tasks within individual projects in any particular programme		
	Critically review the baseline Gantt chart CPA chart and other planning deliverables for any particular programme		
	Objectively review the implications for any particular programme plan of internal and external factors such as the business and programme objectives, budget, timescales, and resources		
	Effectively negotiate programme plans and schedules with sponsors, stakeholders, and internal and external individuals and groups, as appropriate		
<b>Identify project implementation gaps</b>	Correctly identify any opportunities to optimise the effectiveness of the plan and schedule for any particular project under the guidance of others		
	Provide clear and specific advice and guidance to others on the appropriate levels of contingency and tolerance to be applied to projects based on own experience and best practice guidelines		
	Design effective procedures, tools and techniques relating to project planning and scheduling activities for any particular project		

	Correctly select and critically interpret, all information required to produce the baseline plan and schedule for any particular programme under guidance of others		
	Correctly identify when and how to source specialised planning, scheduling and estimating expertise required to support the planning and scheduling activities for a particular programme, taking action to source it when required		
	Optimise the programme plan, challenging assumptions and internal and external factors that impede or impair it where appropriate and making adjustments to it in order to meet business and/or programme objectives more effectively		
	Design, implement and maintain, effective strategy, policies and standards relating to project and programme planning and scheduling activities		
	Correctly identify the potential implications for business strategy and/or the operating model arising from the deliverables of project or programme planning and scheduling activities		
	Make well reasoned decisions on when and how to use external providers of project and programme planning and scheduling services, selecting the preferred providers and negotiating/contracting with them accordingly on behalf of the organisation		
<b>Follow procedures and carry out activities relating to project execution, monitoring and control</b>	Correctly follow the procedures, tools and techniques relating to project and programme execution, monitoring and control activities		
	Fully comply with all organisational strategy, policies and standards relating to project and programme execution, monitoring and control activities		
	Operate at all times with reference to the business and project objectives, the project lifecycle and project governance during project and programme execution, monitoring and control activities		
	Operate at all times with reference to the authority of the project manager during project and programme execution, monitoring and control activities		
	Operate at all times with reference to 'real world' factors that will apply during project and programme execution, monitoring and control activities		
	Correctly identify what tasks and activities have been allocated to own work, schedule when they have to be completed, and what effort should be invested in their completion		
	Correctly select the procedures, tools and techniques to use in project execution, monitoring and control activities		

Select and apply the most appropriate style of project management for the execution and delivery activities of any particular project		
Effectively manage changes issues and risks during execution and delivery activities for any particular project		
Correctly identify and accurately report slippage against baseline plans and schedules for any particular project, selecting appropriate action to take in order to respond to its impact on the project's progress		
Correctly apply project plan contingency and tolerances, within which the project can retain autonomy as and when required, correctly identifying when the project is likely to deviate from them and escalating to relevant people accordingly		
Effectively manage the progress of any particular project against business and project objectives, baseline plans and schedules, milestones, success criteria and other performance targets and metrics		
Clearly communicate the specific needs of any particular project from sponsors, stakeholders, internal and external individuals and groups, to ensure successful delivery during execution and delivery activities under the guidance of others		
Be fully accountable for the completion of all own execution, monitoring and control activities for any particular project		
Assemble, mobilise and motivate the project team during project execution and delivery activities, communicating the allocation of activities and tasks and the interdependence of roles and responsibilities required to deliver any project's aims and objectives		
Effectively implement, maintain and correctly use strategy, policies, and standards relating to project execution, monitoring and control activities		
Correctly identify when, and how, to use external providers of project execution and delivery services, who are providers of these services, and which ones to use, under the guidance of others		
Effectively manage the expectations of sponsors, stakeholders and other internal and external individuals and groups, during the execution and delivery activities for any particular project		
Identify clear and specific actions that may be taken in the event of execution, monitoring and control activities for any particular project being inaccurate, inadequate, incomplete or inappropriate		

	Make reasoned and appropriate decisions to keep any particular project progressing to plan within agreed project contingency and tolerances, under the guidance of others		
	Agree all decisions made during execution, monitoring and control activities for any particular project with relevant people prior to their authorization		
	Diplomatically negotiate how to respond to, and mitigate against, slippage and/or unplanned changes to a project baseline plan and schedule with sponsors, stakeholders and internal and external individuals and groups		
	Be fully accountable for the quality and effectiveness of the execution, monitoring and control activities for any particular project in meeting business and project objectives		
	Correctly select the procedures, tools, and techniques to use in programme execution, monitoring and control activities		
	Correctly source all deliverables produced from earlier phases of any particular programme, including any relevant project delivery and execution deliverables from individual projects that are part of the programme		
	Provide in a timely manner, all relevant deliverables from programme execution, monitoring and control activities for any particular programme to those individuals and/or groups responsible for the next phase of activity as directed		
	Effectively manage the progress of any particular project against business and project objectives, baseline plans and schedules, milestones, success criteria and other performance targets and metrics, taking action where necessary to keep it on track against requirements, under direction		
	Make timely and appropriate decisions in the event of a project deviating from its agreed contingency and tolerance levels		
	Provide timely and objective advice and guidance to others on all aspects of project execution, monitoring and control activities including best practice		
	Assemble, mobilise and motivate the programme team during programme execution and delivery activities, communicating the allocation of activities and tasks and the interdependence of roles and responsibilities required to deliver any programme's aims and objectives		
	Ensure that all sponsors of, and stakeholders for, any particular programme are engaged and involved during programme execution, monitoring and control activities		

	Effectively manage the motivation levels and performance of internal and external individuals and groups on a programme		
	Effectively manage the progress of any particular programme against business and programme objectives, baseline plans and schedules, milestones, success criteria and other performance targets and metrics, taking action where necessary to keep it on track against requirements		
	Effectively manage planned and unplanned changes to a programme, using change control mechanisms, applying approved changes to it and identifying and taking action in the event of slippage to ensure the most successful outcome under the guidance of others		
	Be fully accountable for the completion of all execution, monitoring and control activities for any particular programme		
	Effectively implement and maintain all strategy, policies and standards relating to the programmes execution, monitoring and control activities		
	Tactfully and sensitively manage the expectations of sponsors, stakeholders and other internal and external individuals and groups during the execution and delivery activities for any particular programme		
	Make well informed and timely decisions to keep any particular programme progressing to plan within agreed programme contingency and tolerances		
	Negotiate diplomatically and effectively on how to respond to, and mitigate against, slippage and/or unplanned changes to a programme baseline plan and schedule with sponsors, stakeholders and internal and external individuals and groups		
	Secure sign off to the deliverables from programme execution, monitoring and control activities in a timely manner from sponsors, stakeholders and other individuals		
	Negotiate and contract effectively with external providers of project and programme monitoring and control services and external providers of project and programme execution and delivery services as and when required, on behalf of the organization		
	Be fully accountable for the quality and effectiveness of the execution, monitoring and control activities for any particular programme and the success of any particular programme in meeting business and programme objectives		

<b>Source and document relevant information, and report on, project execution and delivery activities</b>	Correctly source and collate all deliverables produced from earlier phases of any particular project so that they may be used to inform and direct execution and delivery activities		
	Correctly identify and accurately report, relevant information about the amount of effort that has been invested in any particular project task and activity during a specified period of time, and the effort required to complete any particular project task assigned to self		
	Correctly use timesheets in order to record what work has been completed by self in any specified period of time and the effort required to complete it		
	Correctly identify, collate and accurately document any potential changes proposed to the baseline plan for any particular project		
	Accurately document any planned and unplanned changes that may impact on any particular project's execution and delivery activities		
	Accurately source and collate all information that needs to be included in project execution and delivery progress reporting		
	Accurately document decisions made during any particular project's execution and delivery activities and proposals for the next phase of activity		
	Effectively implement all relevant monitoring and control mechanisms for any particular project's execution and delivery activities		
	Verify the accuracy, currency, completeness and relevance of all information collected by monitoring and control activities for any particular project		
	Clearly communicate the business aims and objectives of any particular project to all sponsors, stakeholders, internal and external individuals and groups involved in its delivery and to all individuals and groups who may be impacted by it		
	Provide all relevant deliverables from project execution, monitoring and control activities for any particular project to those individuals and/or groups responsible for the next phase of activity		
	Document results and routinely report the status to sponsors, stakeholders and internal and external individuals and groups involved in project monitoring and control activities		
	Correctly select the procedures, tools and techniques to use in project monitoring and control activities		
	Ensure appropriate monitoring and control mechanisms are in place to measure the progress of a project against plan and criteria		

	Routinely monitor the impact on project execution and delivery of any changes to plans and schedules, reporting accurately and in a timely manner to sponsors, stakeholders and internal and external individuals and groups		
	Regularly monitor the quality and effectiveness of execution, monitoring and control activities for any particular project, under the guidance of others		
	Make clear and timely decisions on the results provided by monitoring any particular project's execution, monitoring and control activities		
	Correctly identify when and how to implement monitoring and control activities for any particular programme, what information is required to monitor and control it and the frequency with which monitoring control and reporting activities will take place, under the guidance of others		
	Implement and maintain all relevant monitoring and control mechanisms for any particular programme's execution and delivery activities		
	Verify the accuracy, currency, completeness and relevance of information collected by monitoring and control activities for any particular programme or projects within it		
	Clearly communicate the business aims and objectives of any particular programme and how it will be monitored and controlled to all sponsors, stakeholders, internal and external individuals and groups involved in its delivery, and to all individuals and groups who may be impacted by it, under the guidance of others		
	Routinely monitor the progress of any particular programme against business and programme objectives, baseline plans and schedules, milestones, success criteria and other performance targets and metrics, reporting its status regularly to sponsors, stakeholders and internal and external individuals and groups		
	Proactively report any deviation from a programme's agreed contingency and tolerance levels and possible failure of a programme to sponsors, stakeholders and internal and external individuals and groups, so that timely decisions may be made		
	Critically review the deliverables from execution and delivery activities for any particular programme so that they may be submitted for sign off by sponsors, stakeholders, internal and external individuals and groups as appropriate		

<b>Identify and apply actions to progress project execution and control activities</b>	Design and develop effective strategy, policies, standards, procedures, tools and techniques relating to the execution, monitoring and control activities for programmes		
	Correctly identify the potential implications for business strategy and/or the operating model arising from the deliverables of programme execution and delivery activities		
	Correctly identify the actions that may be taken in the event of execution and delivery activities for any particular programme not supporting the business and/or programme objectives		
	Negotiate proposed changes to a programme's baseline plan or schedule to mutually agreeable conclusions with sponsors, stakeholders and internal and external individuals and groups		
	Make well reasoned decisions on when to re-baseline a programme plan		
	Provide timely and objective advice and guidance to others on all aspects of programme execution, monitoring and control activities including best practice		
	Design and develop effective strategy, policies standards, procedures, tools and techniques relating to project execution, monitoring and control activities		
	Optimise the execution of a programme's activities and tasks and the allocation of all resources within it based on criteria for delivery and available resources		
	Re-baseline any particular programme, where necessary, securing sign off to it from sponsors, stakeholders, and other individuals and groups, under the direction of others		
	Produce clear and specific plans for the completion phase of any particular programme under the direction of others		
	Effectively negotiate proposed changes to a project baseline plan or schedule with sponsors, stakeholders and external bodies		
	Correctly identify any potential changes proposed to the baseline plan for any particular programme		
	Re-baseline any particular project where necessary, seeking sign off from sponsors, stakeholders and other individuals and groups		
	Produce clear and specific plans for the completion phase of any particular project		
<b>Project acceptance criteria</b>	Correctly follow the procedures, tools and techniques relating to project completion, acceptance, and review activities		
	Fully comply with all organisational strategy, policies and standards relating to project and programme completion, acceptance and review activities		

	Operate at all times with reference to project governance in project completion, acceptance and review activities		
	Operate at all times with reference to relevant acceptance, quality, risk and financial criteria in project completion, acceptance and review activities		
	Correctly identify who needs to be involved in the review and acceptance of any particular project		
	Correctly identify when a project has been completed and whether or not it has been successful		
	Be fully accountable for the quality and effectiveness of own tasks during project completion, acceptance and review activities		
	Correctly identify who needs to sign off the final deliverables from any particular project		
	Ensure that all outstanding actions required to meet project acceptance criteria are resolved during project completion activities, taking action to address the needs of those individuals who will use and support its deliverables		
	Effectively negotiate the final acceptance criteria and the final closure date for a project with sponsors, stakeholders and external bodies		
	Correctly implement, and clearly present, the final project deliverables for any particular project		
	Close down a completed project in a timely manner, releasing all internal and external resources		
	Provide in a timely manner, all final deliverables from any particular project to other individuals and groups involved in project support management, and review activities within the organisation and outside it as required		
	Correctly select the strategy, policies, standards, procedures, tools and techniques to use in project completion, acceptance and review activities		
	Make objective and timely decisions in the event of a potential project failure, managing the implications and consequences of any subsequent failure		
	Make clear and timely decisions to keep project completion, acceptance and review activities progressing to plan, and as to when a project will be completed and when/how it will be closed		
	Be fully accountable for the success or failure of any particular project and the quality and effectiveness of completion, acceptance and review activities applied to it		

Correctly use the strategy, policies, standards, procedures, tools and techniques relating to programme, completion, acceptance and review activities		
Accurately identify the range of actions required in the event of failure of any particular programme		
Ensure that all business changes such as organisational structures, roles and responsibilities and business procedures required to support the final programme deliverables are in place		
Effectively negotiate the final closure date of any particular programme		
Effectively implement any particular programme and its associated final deliverables		
Effectively manage the alignment of programme completion, acceptance and review activities with business and programme objectives		
Effectively manage the timely completion and closedown of any particular programme		
Provide all final deliverables from any particular programme, to other individuals and groups involved in programme support management and review activities within the organisation and outside it as required		
Be fully accountable for the quality and effectiveness of programme completion, acceptance and review activities for any particular programme		
Take timely and effective measures in the event of the failure of any particular programme or any of the projects within it		
Make timely decisions as to when a programme will be completed and authorise the final closure date of a programme		
Provide timely and objective advice and guidance to others on all aspects of programme completion, acceptance and review activities, including best practice and the application of lessons learned		
Negotiate and contract effectively with external providers of project and programme completion, acceptance and review services, as and when required, on behalf of the organization		
Be fully accountable for the success or failure of any particular programme		

<b>Source, document and provide relevant information on project completion, acceptance and review activities</b>	Accurately source and collate information that needs to be included in project completion, acceptance and review documentation		
	Accurately gather all relevant information that will be required during a project review		
	Accurately gather all relevant information from a project review		
	Accurately document any outstanding issues and actions from a completed project, including any that need to be handed over after the completion of a project to other internal individuals groups and/or external providers		
	Provide all relevant information contained from project completion, acceptance and review activities for any particular project to internal and external individuals and groups as required		
	Verify the accuracy, currency, completeness and relevance of information collected, used, and produced by project completion, acceptance and review activities		
	Schedule a timely project review for any particular project		
	Routinely monitor and report the progress of project completion, acceptance, and review activities		
	Objectively analyse all relevant information relating to the experiences of, and satisfaction levels with, the project from those individuals who were involved in its delivery, and from those who will who will use the deliverables in order to inform project completion, acceptance, and review activities		
	Accurately use all relevant information relating to the business objectives, including the business/benefits case, that may be used to assess the effectiveness of any particular project's final deliverables and outcomes		
	Clearly present the overall performance of a project against objectives, success criteria, baseline plan, schedules, and business/benefits case to sponsors, stakeholders, and other individuals and groups		
	Conduct an effective and objective project review for any particular project, communicating the findings to sponsors, stakeholders, external bodies and other individuals		
	Ensure that that the final deliverables of any particular project are subject to independent audit, sourcing independent audit resources where necessary, and that any findings are clearly communicated to sponsors, stakeholders, external bodies and other individuals		

Correctly source and collate all relevant information relating to the business objectives, including the business/benefits case that may be used to assess the effectiveness of any particular programme's final deliverables and outcomes, as directed		
Accurately gather, and concisely document, all relevant information relating to decisions taken during programme completion, acceptance and review activities		
Accurately gather, and concisely document, all relevant information relating to the final outcomes and deliverables from any particular programme for review by sponsors, stakeholders and external bodies		
Verify the accuracy, currency, completeness and relevance of information collected, used, and produced by programme completion, acceptance and review activities		
Routinely monitor and report the progress of programme completion, acceptance and review activities		
Communicate clearly, and in a timely manner, programme completion to a wide range of sponsors, stakeholders, external bodies and other individuals		
Communicate clearly, and in a timely manner, programme success or failure and its implications and consequences to a wide range of sponsors, stakeholders, external bodies and other individuals		
Conduct an objective and timely review for any particular programme		
Ensure that the final deliverables of any particular programme are subject to independent audit, under guidance of others		
Make well judged decisions to improve the quality and effectiveness of any particular project or programme's completion, acceptance and review activities		
Objectively review the overall performance of a programme against objectives, success criteria, baseline plan, schedules and business/benefits case reporting findings to sponsors, stakeholders and external bodies		
Routinely monitor the quality and effectiveness of handover arrangements for the deliverables of a programme to those individuals who will use or support them after completion, review and acceptance		
Clearly report/communicate the findings from any independent review of a completed programme to sponsors, stakeholders, external bodies, and other individuals		

<b>Project Handover</b>	Correctly identify any issues and actions that need to be handed over after the completion of a project or programme, to individuals and/or external providers who will be supporting the final project deliverables		
	Correctly identify and successfully agree with all relevant individuals what issues and actions need to be handed over to internal and external providers, who will support the deliverables of any particular project		
	Effectively negotiate the handover arrangements for the deliverables of a project with those individuals and/or external providers who will support them		
	Effectively manage the handover of all deliverables from any particular project to the individuals who will use and/or support them		
	Routinely monitor the quality and effectiveness of project completion, acceptance and review activities for any particular project		
	Critically analyse and review final project deliverables and outcomes against objectives, plans, schedules, budgets, business/ benefits case and other criteria to assess whether it has been successful, reporting the overall performance to sponsors, stakeholders, and external bodies		
	Effectively negotiate final deliverables and outcomes from any particular project and the handover arrangements for it where necessary with sponsors, stakeholders, external bodies and other relevant individuals		
	Clearly communicate project success or failure and its implications and consequences to a wide range of sponsors, stakeholders, external bodies and other individuals		
	Design, document and effectively negotiate the final acceptance criteria for a programme with sponsors, stakeholders and external bodies		
	Correctly identify the potential implications for business strategy and/or the operating model, arising from the deliverables and outcomes of project or programme completion, acceptance and review activities		
	Design and develop effective strategy, policies, standards, procedures, tools and techniques relating to the completion, acceptance and review activities for programmes		
	Effectively negotiate the final deliverables and outcomes from any particular programme, where necessary, with sponsors, stakeholders, external bodies and other individuals		

<b>Follow and comply with project risk management procedures and standards</b>	Correctly follow the procedures, tools and techniques relating to project risk management activities		
	Fully comply with all organisational strategy, policies and standards relating to project risk management activities		
<b>Separate project Risk management Required</b>	Operate at all times with reference to project governance in project risk management activities		
	Correctly identify potential risks associated with a particular project, reporting them to relevant people in a timely manner		
	Implement the risk register for any particular project under the guidance of others		
	Correctly identify information from other risk registers within the wider business context that may be relevant to a particular project		
	Correctly implement and accurately document, effective plans and actions to manage/treat risks on a particular project		
	Effectively manage the alignment of risk management activities, with business and project or programme objectives for a particular project		
	Proactively manage actions to mitigate/control all risks that arise during the life of a particular project		
	Gain timely sign off to plans and actions to mitigate/control risks for a particular project from sponsors, stakeholders and other internal and external individuals, and bodies as appropriate		
	Take proactive action to mitigate/control all risks that arise during the life of a particular project where possible		
	Correctly select, implement and maintain the strategy, policies, procedures, tools and techniques relating to project risk management activities		
	Agree all risk management approaches, decisions, activities for a particular project under the guidance of others		
	Correctly identify the risks for a particular project that require the highest degree of attention, based on analysis of the probability and impact of potential risks		
	Correctly identify the range of actions that may be used to mitigate/control risks associated with a particular project and those which may be used to respond to risks that are realised and impact on it		
	Ensure that all individuals involved in a project understand their personal responsibilities in respect of project risk management		
	Make clear and timely decisions on the priority and category of potential risks based on information relating to their probability and impact on a particular project		

	Make objective and well reasoned decisions on those risks for which controls and mitigation are to be applied for a particular project, those for which no controls or mitigation exist		
	Take decisive and timely action in the event of risks being realised and impacting on a particular project's activities, or risk management activities not supporting the business and project/ programme objectives		
	Provide timely and objective advice and guidance to others on best practice in project risk management and the application of lessons learned		
	Be fully accountable for the successful management of a particular project's risks, including the implications and consequences of risks that are realised and any failure to mitigate/ control them		
	Advise the programme manager of any potential risks on a programme during its life		
	Authorise all risk management approaches, actions, decisions, activities for a particular project		
	Make timely and objective decisions on the findings from independent review of risk management activities for a particular project		
	Provide timely and objective advice and guidance to others on all aspects of project risk management activities		
	Implement, maintain and effectively apply strategy, policies, plans, standards, procedures, tools and techniques relating to programme risk management activities		
	Implement the risk register for a programme and ensure that it is regularly reviewed, refreshed and updated		
	Make rational and timely decisions on the priority and category of potential risks based on information relating to probability and impact for a programme		
	Take decisive and timely action to mitigate/control risks that arise during the life of a programme		
	Agree all actions taken to address risk on a programme		
	Effectively manage the implications and consequences of a programme failing to meet the expectations of the business for the management of risk		
	Take decisive and timely action in the event of risks being realised and impacting on a programme's activities, and/or risk management activities not supporting the business and project/ programme objectives		

	Provide timely and objective advice and guidance to others on all aspects of programme risk management activities, including best practice and the application of lessons learned		
	Be fully accountable for the successful management of a particular programme's risks, including the implications and consequences of risks that are realised and the failure to mitigate/control them		
<b>Source, document and provide relevant information relating to project risk management activities and assist with the risk register</b>	Accurately gather and collate relevant information about all risks that may impact on a particular project		
	Accurately source relevant information in order to assess and analyse the priority probability category and potential impact of each risk to a particular project		
	Regularly gather accurate, current and relevant information required to create maintain and update risk registers		
	Proactively advise the project manager of any potential risks that may arise and impact on the project during its life		
	Take action to report in a timely manner, risks that are not being acknowledged or managed within a project as appropriate (whistleblow)		
	Assist others in documenting the risk register for a particular project		
	Assist others in sourcing information from other risk registers within the wider business context that may be relevant to a particular project		
	Assist others in providing information contained within a particular project's risk registers to individuals involved in risk management activities, within the wider business context		
	Regularly review a particular project, to ensure that newly emerging risks are identified in a timely manner		
	Critically interpret all relevant information relating to the probability and impact of potential risks to a particular project, in order to determine their priority and category		
	Critically analyse the implications and consequences of failure to mitigate/control risks that arise during the life of a particular project		
	Accurately document, and clearly present, the risks to which controls and mitigation have been applied for a particular project, those which no effective controls or mitigation exist and those for which no mitigating action will be taken		
	Ensure that risk registers are regularly reviewed, refreshed and updated for a particular project		

	Routinely report the number, priority and category of risks that arise during the life of a particular project, their implications and potential impact to sponsors, stakeholders and internal and external individuals and bodies		
	Report when and how, risk mitigation/control plans and activities have been actioned on a particular project and the outcome of these actions to sponsors, stakeholders and other internal and external individuals and bodies		
	Provide all relevant information contained within a particular project's risk registers, to individuals involved in risk management activities within the wider business context, and to external providers of risk management services to projects and programmes as appropriate		
	Accurately document and clearly communicate, the deliverables from and lessons learned, associated with a particular project's risk management activities, to all sponsors, stakeholders and external bodies		
	Critically analyse the degree of risk posed by individual risks during the life of a programme, and the implications and impact of any risks to a programme's activities as directed		
	Verify the accuracy, currency, completeness and relevance of information collected used and produced by risk management activities for a particular project		
	Objectively analyse, and clearly present, the findings from independent review of risk management activities for a particular project to sponsors, stakeholders and external bodies		
	Correctly identify and accurately source/collate all relevant information from the business case, for a programme relating to risk assumptions and other risk registers within the wider business context that may be relevant to a programme		
	Accurately document the risk register for a programme, including information relating to the priority category probability and likely impact of any potential risks under direction		
	Accurately document when and how risk mitigation/control plans and activities have been actioned on a programme, and the outcome of these risk mitigation/control actions as directed		
	Regularly review a particular project to ensure that newly emerging risks are identified in a timely manner		

<b>Review, analyse and communicate relevant information relating to project or programme risk management activities</b>	Verify the accuracy, currency, completeness and relevance of all information collected, used and produced by programme risk management activities		
	Critically analyse the implications and consequences of failure to mitigate/control risks that arise during the life of a programme and of risks that have been realised on a programme's activities		
	Present clearly and in a timely manner the plans and actions proposed to mitigate/control risks during the life of a programme		
	Routinely review and report the number priority and category of risks that arise during the life of a programme and the degree of risk posed by them taking appropriate action on the findings as required		
	Proactively report when and how risk mitigation/control plans and activities have been actioned on a programme and the outcome from these actions to sponsors stakeholders and other internal and external individuals and bodies as required		
	Proactively communicate the role and importance of risk management activities to all individuals involved with a programme		
	Regularly review a particular programme to ensure that newly emerging risks are identified in a timely manner		
	Regularly monitor the alignment of programme risk management activities with business and project and programme objectives		
	Routinely monitor the effectiveness of plans and actions taken to mitigate/control risks on a programme's activities		
	Ensure that timely and effective independent risk review and audit of the risk management activities of a particular programme takes place		
	Make effective and timely decisions to improve the quality and effectiveness of project and programme risk management activities within an organization		
	Objectively analyse the findings from independent review of programme risk management activities to sponsors stakeholders and external bodies in order to inform actions decision making and lessons learned		

<p><b>Design strategy, procedures and plans relating to project risk management activities and gain sign off for actions to control risks for a programme – ( To be taken to the proposed risk management framework)</b></p>	<p>Correctly identify and source, risk management expertise/ resources to advise and guide on project risk management activities</p> <p>Design strategy, policies, plans, standards, procedures, tools and techniques relating to risk management activities for a particular project</p> <p>Gain sign off from sponsors, stakeholders and internal and external individuals and bodies to plans and actions to mitigate/control risks for a programme, and to plans and actions required in the event of risks being realised and impacting on its activities</p> <p>Design effective strategy, policies, standards, procedures, tools and techniques relating to programme risk management activities for programmes</p> <p>Correctly identify the potential implications of programme risks on the wider business operations and business strategy</p> <p>Negotiate and contract effectively with external providers of risk management services as and when required on behalf of the organization</p>		
<p><b>Follow and comply with project quality management procedures and standards</b></p>	<p>Correctly follow the procedures, tools and techniques relating to project quality management activities</p> <p>Fully comply with all organisational strategy, policies and internal/ external standards relating to project and programme quality management activities</p> <p>Operate at all times with reference to project governance in project quality management activities</p> <p>Operate at all times with reference to any relevant internal/ external quality management systems that may apply to a project's activities</p> <p>Correctly identify own responsibilities in respect of project quality management</p> <p>Identify and report in a timely manner any potential quality issues and/or failings within a project to relevant people</p> <p>Correctly apply all the information contained within the quality plan for any particular project in order to discharge own responsibilities</p> <p>Be fully accountable for the quality of own deliverables produced for any particular project</p> <p>Correctly apply the strategy, policies and the project lifecycle as they relate to project quality management activities</p>		

Correctly apply lessons learned from previous project quality management activities to own responsibilities in respect of project quality management		
Implement appropriate and specific quality plans, standards, criteria and a quality management system for a project		
Correctly identify and effectively implement the procedures, tools and techniques relating to project quality management activities		
Correctly use the relevant procedures, tools and techniques to conduct quality assurance reviews on the activities during a project		
Make clear and timely decisions on the 'quality ethos' required by any particular project taking action to implement and communicate it within the project under guidance		
Effectively manage the quality standards within a project, taking timely and decisive action to identify and resolve the root causes of quality failings, resolve quality failings and to assure the quality of final deliverables and outcomes		
Gain timely sign off to the quality plan and the quality of project outcomes and deliverables from any external bodies and/or individuals involved in their assessment and authorization		
Be fully accountable for the effectiveness of quality management activities and for the quality of the final deliverables and outcomes of any particular project, under direction		
Correctly identify the potential implications of quality issues and/or failings from any particular project on the wider business operations and/or business strategy		
Authorise quality standards to be applied to project deliverables and decisions and actions taken during any particular project, to maintain quality standards		
Make timely, and well-reasoned decisions on the results provided by monitoring project quality management activities, and the findings provided from independent quality audit and/or quality assurance reviews on any particular project		
Take effective and timely action in the event of project quality management activities not supporting the business, and/or project objectives being inadequate, incomplete or incorrect		
Provide timely and clear advice and guidance to others on all aspects of project quality management activities, including best practice		

	Effectively manage the quality standards within any particular programme, taking timely and decisive action to identify and resolve the root causes of quality failings, resolve quality failings and to assure the quality of final deliverables and outcomes		
	Gain timely sign off to the quality plan and the quality of programme outcomes and deliverables from any external bodies and/or individuals involved in their assessment and authorization		
	Make timely and objective decisions on the plans and actions that may be taken in the event of project quality management activities not supporting the business and/or project objectives, and/or in the event of failure to meet of the standards of quality required		
	Make effective and well-reasoned decisions in the event of failure in the standards of quality achieved by a programme against relevant quality criteria and standards		
	Take decisive and timely action in the event of programme quality management activities not supporting the business and/or project objectives and/or their deliverables being inadequate, incomplete or incorrect		
	Provide timely and clear advice and guidance to others on how lessons learned may be applied to the quality management of other programmes		
	Be fully accountable for the effectiveness of quality management activities, and for the quality of the final deliverables and outcomes of any particular programme		
<b>Project Quality Assessment Criteria</b>	Accurately source and collate all relevant information relating to quality assumptions contained within the business case for a particular project		
	Accurately document all relevant quality criteria standards and quality management systems that may apply to the activities of a project		
	Accurately document all the decisions taken during project quality management activities		
	Provide all information relating to quality management activities within any particular project to individuals involved in quality management activities within the wider organization		
	Correctly identify all the information relating to quality assumptions that is contained within the business case for a particular project		

	Accurately gather all relevant information relating to quality criteria standards and quality management system that may apply to the activities of a project		
	Accurately source and collate all the relevant information to create a quality plan, criteria standards, and a quality management system for any particular project		
	Accurately document the strategy, policies, procedures, tools and techniques relating to project quality management activities		
	Accurately document the approach to quality adopted within any particular project		
	Clearly and accurately document the implications of applying and maintaining the required levels and standards of quality on a project's financials/costs and timescales		
	Clearly and accurately document the implications and consequences of quality issues and failings within any particular project		
	Clearly document and critically analyse all relevant information relating to the expectations and assumptions of quality within any particular project		
	Accurately and concisely document the quality plan for any particular project		
	Accurately gather and document information relating to the level and standard of quality achieved by the final deliverables and outcomes from any particular project		
<b>Communicate relevant information relating to project quality management activities</b>	Provide, in a timely manner, the quality plan for any particular project to sponsors, stakeholders and other internal and external individuals and bodies		
	Communicate clearly with all individuals involved in quality management activities within the wider organisation on all matters relating to quality management within any particular project		
	Correctly identify and clearly present the implications of applying and maintaining the required levels and standards on a project's financials/costs and timescales of quality		
	Verify the accuracy, currency, completeness and relevance of all information collected, used, and produced by project quality management activities		
	Routinely monitor the alignment of project quality management activities with business and/or project objectives, and with the quality plan, standards, criteria, and quality management system, reporting issues and/or failings to sponsors, stakeholders and internal and external individuals and bodies		

Schedule and conduct regular quality assurance reviews for any particular project and ensure that independent quality audits are also conducted at appropriate intervals		
Advise the programme manager of any potential quality issues on a programme during its life		
Clearly and accurately document the approach to quality plan roles and responsibilities of individuals, and the decisions taken in respect of quality management activities for any particular programme, under direction		
Communicate the quality plan, standards criteria, and quality management system for a project to sponsors, stakeholders as appropriate		
Communicate effectively with individuals involved in quality management activities within the wider organisation, on all matters relating to quality management within any particular programme		
Correctly identify when and how to conduct independent quality audits on any particular project, sourcing appropriate internal and/or external quality management expertise/resources to carry them out		
Objectively review the quality plan produced for any particular project and the quality of its final project deliverables and outcomes		
Routinely monitor the alignment of programme quality management activities with business and/or programme objectives, and with the quality plan, standards criteria, and quality management system, reporting issues and/or failings to sponsors, stakeholders and internal and external individuals and bodies		
Schedule and conduct regular quality assurance reviews for any particular programme and ensure that independent quality audits are also conducted at appropriate intervals		
Accurately and clearly document the results from independent quality audits and/or quality assurance reviews for any particular programme		
Provide all relevant information, as appropriate, to external individuals and/or bodies responsible for assessing and authorising the quality of any relevant programme deliverables and outcomes		
Critically review the findings from independent quality audits and quality assurance reviews on any particular project making timely and appropriate decisions on them		
Objectively review the quality plan produced for any particular programme, recommending any necessary action as a result		
Correctly identify when and how to conduct independent quality audits on any particular programme, soliciting and engaging appropriate internal/external expertise in quality management activities to carry them out		

	Routinely monitor the effectiveness of quality management activities to assure appropriate standards of quality within a programme, reporting quality issues and/or failures and the subsequent actions taken to resolve them to sponsors, stakeholders and other internal and external individuals and bodies		
	Clearly present the findings from independent quality audits and quality assurance reviews for any particular programme to sponsors, stakeholders and other internal and external individuals and bodies		
<b>Develop quality plans, standards and criteria for a project</b>	Develop appropriate and specific quality plans, standards criteria and a quality management system for a project		
	Make clear and objective decisions on how the quality plan, standards criteria, and quality management system will be implemented within a project		
	Clearly define roles and responsibilities in respect of project quality management, and identify the most appropriate individuals who will be responsible for undertaking them		
	Provide timely and clear advice and guidance to others on how lessons learned may be applied to the quality management activities of other projects		
	Design effective procedures, tools and techniques to conduct project and programme quality assurance reviews		
	Make clear and timely decisions on the 'quality ethos' to be adopted within any particular programme effectively implementing and communicating it		
	Make clear and objective decisions on how the quality plan, standards criteria, and quality management system will be implemented within any particular programme		
	Clearly define roles and responsibilities in respect of programme quality management and identify the most appropriate individuals who will be responsible for undertaking them		
	Develop and implement effective quality plans, standards criteria, and any quality management system for a programme		
	Design effective and appropriate strategy, policies, plans, standards, procedures, tools and techniques relating to project and programme quality management activities		
	Correctly identify the potential implications of quality issues and/or failings from any particular programme on the wider business operations and/or business strategy		
	Correctly select who will be accountable for quality management activities within a particular programme		

	Negotiate and contract effectively with external providers of quality management services as and when required, on behalf of the organisation		
<b>Follow and comply with project and programme infrastructure and configuration management activities</b>	Correctly follow the procedures, tools and techniques relating to project and programme infrastructure and configuration management activities		
	Fully comply with all relevant and applicable legislation, regulations and standards relating to project and programme infrastructure and configuration management activities		
	Operate at all times with reference to project governance as it relates to project infrastructure and configuration management activities		
	Operate at all times with reference to the needs and requirements of the project manager in respect of project infrastructure and configuration management activities for any particular project		
	Correctly identify own responsibilities in respect of complying with project infrastructure and configuration management requirements		
	Correctly use the project infrastructure and environments, configuration items, shared resources and facilities provided to support any particular project		
	Correctly apply own delegated authority levels for project infrastructure and configuration management activities within any particular project		
	Be personally accountable for complying with all the internal administration procedures and practices that are in place within any particular project		
	Implement the policies and standards relating to project infrastructure and configuration management activities together with the procedures, tools and techniques to be used by individuals in order to comply with the project's operational practices and to use its infrastructure, configuration items and shared resources		
	Source/collate appropriate infrastructure environments, configuration items and shared resources and facilities to support any particular project		
	Implement the project configuration plan for any particular project		
	Ensure the effective use of project infrastructure environments, configuration items and shared resources and facilities provided to project team members by the project office managing the administration of delegated roles and authority levels, and the provision of adequate staffing levels within the project office itself		

	Efficiently administer all of the operational procedures required during all/any phases of a project managing the provision and operation of all necessary infrastructure, configuration items, shared resources and facilities required by a project and adapting the services provided as needs change during the life of any particular project		
	Manage the decommissioning and/or disposal of any project infrastructure configuration items and shared resources and facilities on completion of the project		
	Correctly identify the policies, internal/external standards, procedures, tools and techniques that will be used to operate, administer and manage project infrastructure environments, configuration items and shared resources and facilities during the life of any particular project		
	Correctly select the most appropriate infrastructure environments, configuration items, shared resources and facilities that will be required for any particular project during its life		
	Effectively manage the implications of any shortcomings in the services and information provided by the project office to a project during all phases of its life		
	Take decisive and timely action in the event of project infrastructure and configuration management activities not supporting the business and/or project objectives being inadequate, incomplete or incorrect and/or not meeting the needs and expectation of sponsors, stakeholders, the project manager and other internal and external individuals and bodies		
	Provide timely and clear advice and guidance to others on all aspects of project infrastructure and configuration management activities including best practice		
	Be fully accountable for the quality and effectiveness of the infrastructure and configuration management services provided to any particular project		
	Correctly identify the services that will need to be provided by the project office to support any particular programme and its associated projects during their life		
	Be fully and personally accountable for complying with all internal procedures and practices that operate within any particular programme		
	Make timely and objective decisions to improve the quality and effectiveness of project infrastructure and configuration management activities for any particular project		

	Effectively implement the policies and standards relating to programme infrastructure and configuration management activities		
	Effectively implement procedures, tools and techniques relating to programme infrastructure and configuration management activities		
	Manage the efficient provision and operation of all necessary infrastructure and configuration items required by a programme, adapting and changing the services provided through infrastructure and configuration management activities during the life of any particular programme in order to ensure it is fit for purpose		
	Accurately identify and present any actions required to deal with shortcomings in the services and information provided by the project/programme office to a programme, or in their activities being incomplete, inadequate, inappropriate or incorrect and/or not supporting the business and/or programme objectives		
	Take decisive and timely action to deal with shortcomings in the services and information provided by the project/programme office to a programme, or in their activities being incomplete, inadequate, inappropriate or incorrect and/or not supporting the business and/or programme objectives		
	Be fully accountable for the quality and effectiveness of the infrastructure and configuration management services provided to any particular programme		
	Correctly identify the most appropriate approaches to undertake infrastructure and configuration management activities for any particular programme during its life		
	Critically review and authorise the programme configuration plan for any particular programme		
	Correctly identify the range of delegated roles and authority levels that are required within the project office for any particular programme during its life		
	Correctly select those individuals who should be allocated to specific roles, and have authority levels delegated to them within the project/programme office, for any particular programme		
	Critically review and make decisions on the approach adopted for fulfilling the infrastructure and configuration management needs of any particular programme		

	Objectively review and agree the actions required in the event of programme infrastructure and configuration management activities not supporting the business and/or programme objectives		
	Critically review and agree the actions required to deal with shortcomings in the services and information provided by the programme office to a programme during all phases of its life		
	Objectively review and agree the actions required in the event of infrastructure and configuration management activities adopted for any particular programme being incomplete, inadequate, inappropriate or incorrect		
	Provide timely and clear advice and guidance to others on all aspects of programme infrastructure and configuration management activities, including best practice		
<b>Source, document, and provide relevant information on, project infrastructure and configuration management activities</b>	Source accurate information required for the creation and maintenance of the project configuration plan		
	Accurately gather and collate information that needs to be documented and stored to support the operation of a project and to monitor and report the progress of it during its life		
	Accurately document all the procedures, tools and techniques to be used by individuals involved in any particular project to comply with its operational practices and to use its infrastructure configuration items and shared resources		
	Correctly maintain and accurately document the administrative arrangements for any particular project, including the project infrastructure and environments, configuration items and shared resources and facilities for use by all individuals during the life of any project		
	Provide timely and accurate information produced by project infrastructure and configuration management activities to other projects		
	Communicate effectively, and in a timely manner, within the project and also to sponsors, stakeholders and internal and external individuals and bodies in order to ensure the efficient operation of the project		
	Ensure that that the business and project objectives, the project scope and the activities within it are understood prior to planning the infrastructure and configuration to meet the needs of a project		
	Correctly identify the information that will need to be collected, used, stored, managed and distributed by the project office during all/any phases of the project		

	Verify the accuracy, currency, completeness and relevance of all information collected used produced and stored by project infrastructure and configuration management activities for any particular project and that which is provided to the project by the project office		
	Accurately document the security arrangements and delegated authority/access levels for any information administered by the project/programme office for any particular project		
	Accurately document the procedures, tools and techniques to operate, administer and manage project infrastructure and configuration items for any particular project		
	Document and present the project configuration plan for any particular project		
	Clearly and concisely communicate the internal procedures and practices with which all individuals involved in any particular project need to comply		
	Regularly monitor the alignment of project infrastructure and configuration management activities with business and project objectives, reporting findings to sponsors, stakeholders and other internal and external individuals and bodies as appropriate		
	Correctly maintain, and accurately document, the administrative arrangements for any particular programme, including the project infrastructure and environments, configuration items and shared resources and facilities for use by all individuals during the life of any project		
	Verify the accuracy, currency, completeness and relevance of information collected, used, produced, and stored by programme infrastructure and configuration management activities for any particular programme		
	Accurately document the programme configuration plan for any particular programme, including infrastructure environments, configuration items, shared resources and facilities and the project/programme office roles, responsibilities and delegated authority levels within it		
	Ensure that information produced by programme infrastructure and configuration management activities are made available to other projects and programmes		
	Ensure that the business and programme objectives, the programme scope and the activities within it are understood prior to planning the infrastructure and configuration to meet the needs of the programme		

	Present the approach adopted for fulfilling the infrastructure and configuration management needs of any particular programme, together with the programme configuration plan for review by sponsors, stakeholders, internal and external individuals and bodies as appropriate.		
	Routinely monitor the compliance of all individuals involved in a programme with its governance, policies, methods, tools and techniques and with the internal procedures and practices that are put in place by the project/programme office, reporting findings to sponsors, stakeholders, internal and external individuals and bodies as appropriate.		
	Clearly and concisely communicate the status and progress of a programme to sponsors, stakeholders and internal and external individuals and bodies as directed by the Programme Manager.		
	Routinely monitor the quality and effectiveness of the services provided to any programme by the project/programme office, making objective and timely decisions to improve the infrastructure and configuration management activities, and reporting their status and any issues arising to sponsors, stakeholders and other internal and external individuals and bodies as appropriate.		
	Regularly monitor the quality and effectiveness of external providers of programme infrastructure and configuration management services, reporting their performance to sponsors, stakeholders and other internal and external individuals and bodies as appropriate.		
<b>Monitoring and Evaluation Criteria</b>	Accurately source, and critically analyse, all the information relating to the business and/or project objectives in order to determine what this means for the infrastructure environments, configuration items and shared resources and facilities for any particular project		
	Objectively analyse all of the information that is required to run the delivery of any particular project during its life on behalf of the Project Manager		
	Routinely monitor the compliance of all individuals involved in a project with its governance policies, methods, tools and techniques and with the internal procedures and practices that are put in place by the project office		
	Critically analyse and agree the most appropriate approach to project infrastructure and configuration management for any particular project		

	Develop the project configuration plan for any particular project, including project infrastructure and environments, configuration items, shared resources and facilities and the most appropriate project office roles, responsibilities and delegated authority levels within it to support any particular project		
	Design the procedures, tools and techniques to be used by individuals involved in any particular project to comply with its operational practices and to use its infrastructure, configuration items and shared resources		
	Design the procedures, tools and techniques to operate, administer and manage project infrastructure environments, configuration items and shared resources and facilities for any particular project together with those required to manage communication between the project and any sponsors, stakeholders, internal and external individuals and bodies		
	Authorise the project configuration plan for any particular project		
	Develop the programme configuration plan for any particular programme, including programme infrastructure and environments, configuration items, shared resources and facilities and the most appropriate project/programme office roles, responsibilities and delegated authority levels within it to support any particular programme		
	Design and implement effective procedures, tools and techniques to be used by individuals involved in any particular programme to comply with its operational practices and to use its infrastructure configuration items and shared resources		
	Design and implement effective procedures, tools and techniques to operate, administer and manage programme infrastructure environments, configuration items and shared resources and facilities for any particular programme together with those required to manage communication between the programme, any projects within it and any sponsors, stakeholders internal and external individuals and bodies		
	Design effective policies and standards relating to project and programme infrastructure and configuration management activities		
	Design effective contracts for use with external providers of project and programme infrastructure and configuration management services, selecting then negotiating and contracting with them as and when required on behalf of the organization		

<b>Follow and comply with project resource management activities</b>	Correctly follow the procedures, tools and techniques relating to project resource management activities		
	Fully comply with all relevant and applicable legislation, regulations and standards relating to project and programme resource management activities		
	Operate at all times with reference to project governance as it relates to project resource management and administration activities		
	Operate at all times with reference to any applicable organisational procurement/sourcing, commercial and contractual policies, standards and arrangements		
	Correctly use, and accurately document, all the information required to plan the fulfilment of resources for a project		
	Correctly follow the strategy, policies and standards relating to resource management activities for any particular project		
	Negotiate sensitively with individuals involved in the delivery of any particular project on the approaches that may be adopted to fulfil their resourcing requirements		
	Manage the effective deployment of resources allocated to any particular project using the most appropriate providers of internal and external resources, and/or resource management services, to meet the requirements of project activities and tasks		
	Manage the performance of internal and external resources and/or external providers of resource management services to meet the requirements and finances of any particular project		
	Carefully manage any shortcomings in the resources provided to meet the needs of any particular project during all phases of its life		
	Ensure that resources no longer required by a project are terminated, decommissioned or redeployed in a timely manner		
	Implement the resource plan for any particular project		
	Correctly select the most appropriate providers of internal and external resources and/or resource management services, and the most appropriate resources from within them to meet the requirements of project activities for any particular project		
	Correctly identify and take decisive action to deal with any shortcomings in the resources provided to meet the needs of any particular project during all phases of its life		
	Proactively manage effective relationships between the project and individuals involved in procurement, sourcing and resourcing, and human resource management activities within the wider organisation, and with those internal and external providers offering project resources and/or resource management services to the project		
	Terminate all relevant commercial/contractual arrangements with internal and external providers of resources to a project in a timely manner		

	Agree actions taken to improve the quality and effectiveness of resource management activities for any particular project		
	Be fully accountable for the quality and effectiveness of internal and external resources allocated to, and deployed on, any particular project, managing them effectively during the life of the project keeping within financial limits		
	Correctly implement and maintain the procedures, tools and techniques relating to programme resource management activities		
	Make objective and timely decisions on the resource plan for any particular project and on the internal and external providers selected for the supply of resources to it		
	Authorise actions taken to improve the quality and effectiveness of resource management activities for any particular project		
	Correctly implement the strategy, policies and standards relating to resource management activities for any particular programme		
	Objectively analyse information relating to the skills and competencies of internal and external resources who may be allocated to tasks and activities for any particular programme, selecting those who are most appropriate to meet the requirements of programme activities		
	Negotiate sensitively with individuals involved in the delivery of any particular programme on the approaches that may be adopted to fulfil their resourcing requirements		
	Implement the resource plan for any particular programme		
	Manage the effective deployment of resources allocated to any particular programme using the most appropriate providers of internal and external resources and/or resource management services, to meet the requirements of programme activities and balancing the mix of internal and external resources as appropriate		
	Proactively manage effective relationships between the programme and individuals involved in procurement, sourcing and resourcing, and human resource management activities within the wider organisation, and with those internal and external providers fulfilling programme resources and/or resource management services to the project		
	Effectively manage the performance of internal and external resources and/or external providers of resource management services to meet the requirements and finances of any particular project, routinely monitoring them and reporting progress and issues to sponsors, stakeholders and internal and external individuals and bodies as appropriate		
	Correctly identify and take decisive action to deal with any shortcomings in the resources provided to meet the needs of any particular programme during all phases of its life		

	Take timely and specific action to terminate/decommission/ redeploy resources no longer required by a programme, and close all relevant commercial/contractual arrangements with internal and external providers of resources to a programme		
	Be fully accountable for the quality and effectiveness of internal and external resources allocated to, and deployed on, any particular programme managing them effectively during the life of the programme within financial limits		
	Make well reasoned decisions on the internal and external providers selected for the supply of resources to projects and/or programmes, identifying and negotiating with the most appropriate providers of internal and external resources and/or resource management services, to meet the requirements of activities and agreeing contractual arrangements with them		
	Correctly identify any actions required in the event of resource management activities adopted for any particular programme not supporting the business and/or programme objectives or being incomplete, inadequate, inappropriate or incorrect and/or if the resources provided fall short of requirements		
	Take decisive and timely action to deal with any shortcomings in the resources provided to meet the needs of any particular programme during all phases of its life		
	Effectively manage any actions required in the event of resource management activities adopted for any particular programme not supporting the business and/or programme objectives and/or being incomplete, inadequate, inappropriate or incorrect		
	Make objective decisions on the performance of internal and external resources and/or external providers of resource management services in support of the delivery of any particular programme		
	Provide timely and clear advice and guidance to others on all aspects of programme resource management activities, including how lessons learned from other programmes may be applied to the resource management activities of this programme and the use of best practice in programme management		
<b>Source, document, and provide relevant information on, project resource management activities</b>	Accurately document information about the scope of a project, the tasks and activities within it, and the implications of these on resources		

Correctly gather, accurately collate and use all of the information about the resources required on any particular project		
Accurately document the resource plan for any particular project		
Accurately document which are the most appropriate resources, from any selected internal and external providers, to meet the requirements of project activities for any particular project		
Accurately document which are the most appropriate providers of internal and external resources, and/or resource management services, to meet the requirements of project activities for any particular project		
Correctly source and accurately document all relevant information relating to decisions taken on the resource management activities for any particular project		
Provide the resource plan for any particular project to sponsors, stakeholders and other relevant internal and external individuals and bodies in a timely manner		
Accurately source and correctly apply all relevant information relating to any commercial and contractual arrangements that may need to be considered as part of resource management activities for any particular project		
Verify the accuracy, currency, completeness and relevance of information collected, used and produced by project resource management activities		
Provide, in a timely manner, the findings from any procurement/ sourcing approaches adopted to select resources for any particular project to sponsors, stakeholders and other relevant internal and external individuals and bodies, including individuals involved in procurement sourcing and resourcing and human resource management activities within the wider organisation		
Communicate clearly, and in a timely manner, with both individuals involved in procurement sourcing and resourcing and human resource management activities within the wider organisation, and also with those internal and external providers offering a range of project resources and/or resource management services		
Communicate clearly, who are the internal and external providers of resources and/or resource management services selected to fulfil the needs of a project to sponsors, stakeholders, internal and external individuals and bodies involved with it		
Routinely monitor the progress of the resource plan for any particular project and the alignment of project resource management activities with any resourcing procurement and/ or sourcing strategy, policies and standards within the wider organisation		
Accurately gather and collate all the relevant information from any procurement/sourcing approaches that have been adopted for any particular programme		

	Correctly document all information relating to decisions taken on the resource management activities for any particular programme		
	Objectively analyse the findings from any procurement/sourcing approaches adopted in order to select resources for any particular programme, using relevant information concerning external providers of resources and/or resource management services		
	Make recommendations, based on the findings from any procurement/sourcing approaches adopted, to sponsors, stakeholders and other internal and external individuals and bodies		
	Communicate clearly, and in a timely manner, with both with individuals involved in procurement, sourcing and resourcing, and human resource management activities within the wider organisation, and also with those internal and external providers offering a range of programme resources and/or resource management services		
	Routinely monitor and document the progress of the resource plan for any particular programme, and the alignment of programme resource management activities with any resourcing, procurement, and/or sourcing strategy, policies and standards within the wider organisation		
	Critically review the proposed approaches for fulfilling the resourcing needs of any particular programme, agreeing the resource plan as and when appropriate		
	Objectively review the proposed internal and/or external providers selected to fulfil resourcing requirements of any particular programme, making decisions on the ones that should be used		
	Routinely monitor the quality and effectiveness of resource management activities in support of any particular programme, reporting findings to sponsors, stakeholders and internal and external individuals and bodies as appropriate		

<b>Design the resource plan for a project and identify resource requirements for a programme (To be taken to be proposed Risk management Framework)</b>	Design effective strategy, policies and standards relating to resource management activities for projects and programmes		
	Correctly identify when and how to use external providers of resources and/or resource management services for any particular programme		
	Accurately assess and estimate the resourcing requirements of any particular programme		
	Design an effective resource plan for any particular programme, together with any necessary contractual and commercial arrangements, relating to internal and external providers of resources		
	Correctly identify the strategy, policies, standards, procedures, tools and techniques relating to resource management activities for any particular project		
	Design an effective resource plan for any particular project		
	Ensure that any sensitivities, issues and requirements that may impact on how a project can be resourced are clarified prior to planning the fulfilment of project resource needs		
	Accurately assess internal resources and external providers in order to identify whether they can fulfil the resource requirements of any particular project, selecting and gaining sign off to those who can satisfy the needs most effectively		
	Correctly identify the resources required on any particular programme, gathering and accurately collating and documenting the necessary information required to plan fulfilment activities		
	Correctly identify the resources required for any particular project in a timely manner		
	Accurately assess and estimate the resourcing requirements of any particular project		
	Correctly select, and critically analyse, all relevant information required to plan the fulfilment of resources for a project		
	Gain timely sign off to the resourcing approaches and the resourcing plan adopted for any particular project from sponsors, stakeholders and other relevant internal and external individuals and bodies		
	Objectively analyse the findings from any procurement/sourcing approaches adopted in order to select resources for any particular project using relevant information concerning external providers of resources and/or resource management services		

<b>Follow and comply with project financial management activities, under supervision</b>	Correctly follow the procedures, tools and techniques relating to project financial management activities		
	Fully comply with all relevant and applicable legislation, regulations and standards relating to project and programme financial management activities		
	Operate at all times with reference to the business case and project governance as it relates to project financial management activities		
	Correctly identify own personal responsibilities and any financial authority delegated to self and/or others in relation to the financial management activities for any particular project		
	Correctly use any information contained within the project/project phase budget, financial forecasts and financial reports		
	Correctly use any relevant information relating to the financial authorities that are in place for any particular project		
	Be fully accountable for fulfilling own personal responsibilities in respect of the financial management of any particular project		
	Correctly follow the strategy, policies and standards relating to financial management activities for any particular project		
	Correctly identify the actual items of expenditure that need to be incurred within any particular project and the actual expenditure incurred during its life		
	Correctly use all relevant information in order to identify the most appropriate level of financial contingency to apply to any particular project		
	Effectively manage the project budget and all actual expenditure against it during the life of a project maintaining actual expenditure within budget constraints		
	Ensure that appropriate financial treatment is applied to all expenditure items on any particular project, guided as appropriate by internal/external sources of financial expertise		
	Correctly identify the strategy, policies and standards relating to financial management activities for any particular project and the most appropriate approach to manage the finances of any particular project		
	Effectively implement and maintain the procedures, tools and techniques relating to project financial management activities and the appropriate project accounting standards, financial contingency and financial authorities required for that particular project		

Correctly identify any necessary actions to deal with expenditure overspends and underspends against budgets, forecasts and actuals in any particular project/project phase, negotiating the use of a project’s financial contingency where necessary, with sponsors, stakeholders and other internal and external individuals and bodies		
Be fully accountable for ensuring a project meets its financial objectives/targets and delivers the financial benefits associated with it		
Effectively manage the budget and all actual expenditure against it during the life of a project, maintaining actual expenditure within budget constraints, taking decisive and timely action to deal with financial issues and risks and any failings in the management of the finances or realisation of the financial benefits		
Correctly identify actions required to address financial issues and risks that have been raised by internal and/or external audit and/or those required to address any misalignment of project finances with all relevant legislation, regulations and external standards		
Make timely and specific decisions on the actions proposed by others to deal with any expenditure overspends and underspends against budgets and forecasts in any particular project/project phase		
Authorise any actions required in the event of project financial management activities not supporting the business and/or project objectives, those required to deal with any expenditure overspends and underspends against budgets and forecasts, and those required to address failings in the management of the finances or realisation of the financial benefits		
Take decisive and timely action to address any misalignment of project finances with relevant legislation, regulations and external standards		
Effectively manage the application of appropriate financial/project accounting policy and standards and financial treatments to expenditure incurred during the life of any project or programme		
Correctly implement and maintain strategy, policies, plans, standards, procedures, tools and techniques relating to programme financial management activities		

	Effectively manage the programme budget and all actual expenditure against it during the life of a programme, maintaining actual expenditure within budget constraints, taking decisive and timely action to deal with any overspends and underspends, financial issues and risks and any failings in the management of the finances or realisation of the financial benefits		
	Correctly identify actions required to address financial issues and risks that have been raised by internal and/or external audit and/or those required to address any misalignment of programme finances with relevant legislation, regulations and external standards		
	Correctly identify actions required in the event of programme financial management activities not supporting the business and/or programme objectives, to address overspends and underspends, to deal with financial issues and risks identified on the programme by internal and/or external audit, and/or to address any misalignment of programme finances with relevant legislation, regulations and external standards		
	Make timely and objective decisions on actions proposed by others to deal with expenditure overspends and underspends against budgets and forecasts in any particular programme/programme phase		
	Take timely and decisive action to address any financial issues and risks identified on a programme by internal and/or external audit, and/or any misalignment of programme finances with relevant legislation, regulations and external standards		
	Effectively manage the implications and consequences of a programme failing to meet the financial expectations of the business, and/or failing to meet its financial objectives/targets, and/or realise the financial benefits associated with it		
	Correctly identify when and how to use external providers of project and programme financial management services, selecting, negotiating and contracting with the most appropriate providers		
	Be fully accountable for ensuring a programme meets its financial objectives/targets and delivers the financial benefits associated with it		
<b>Project Resource management</b>	Accurately source and collate any relevant information in order to identify the causes of any actual and/or forecast underspend and/or overspend on a project		
	Ensure that any sensitive business information is not disclosed inappropriately during project financial management activities		

	Accurately gather, collate and document information required to produce the financial reports that need to be prepared for sponsors, stakeholders and other internal and external bodies and individuals during the life of a project		
	Accurately source and collate all relevant information required to compile the final finances and actual financial benefits realised by any particular project once completed		
	Communicate clearly, and in a timely manner, with internal and external financial expertise where appropriate to support project financial management activities		
	Communicate clearly and accurately, with individuals involved in the management of finances and financial/project accounting policies and standards within the wider organisation, on matters relating to a project's finances when requested to do so		
	Accurately gather information relating to the expectations and requirements of the business in respect of the finances and financial benefits associated with any particular project		
	Accurately document the financial authorities that apply within any particular project and the individuals to whom financial authority has been delegated		
	Capture all actual expenditure during the life of any particular project reporting it, together with any causes of actual/forecast project underspends and overspends against budget and forecasts, to sponsors, stakeholders and external bodies		
	Maintain accurate records of all financial transactions incurred on a project		
	Routinely monitor and critically analyse the types of expenditure incurred during the life of a project		
	Effectively manage the regular production of financial forecasts and reports during the life of a project		
	Ensure that all project finances are subject to internal and/or external audit as appropriate		
	Communicate clearly with internal and external audit in respect of all aspects of project finances		
	Report the project budget, including capital and operating expenditure required for any particular project to sponsors, stakeholders and other internal and external individuals and bodies		

	Regularly monitor the alignment of any actual and forecast project expenditure against budget and financial objectives/targets/benefits, identifying the causes of underspends and overspends, reporting potential financial issues, risks and decisions taken, together with actions taken to address expenditure overspends and underspends		
	Critically analyse the implications and consequences of a project failing to meet the financial expectations of the business, and/or failing to meet its financial objectives/targets, and/or realise the financial benefits associated with it, taking decisive and timely action in response		
	Clearly present the progress of a project against financial objectives/targets/benefits during its life, negotiating the proposed actions to deal with any expenditure overspends and underspends with all relevant individuals and bodies		
	Critically interpret the results gained from monitoring the alignment of project financial management activities with all legislation, regulations, external standards and internal finance governance principles and standards, taking timely and decisive action to deal with any potential and/or actual failing in the management of finances or the realisation of the financial benefits		
	Clearly present the final finances and actual financial benefits realised by any particular project, once completed, against its financial objectives/targets and the intended financial benefits to sponsors, stakeholders and internal and external individuals and bodies		
	Correctly identify and accurately capture the actual expenditure incurred during the life of any particular programme, regularly monitoring the type of expenditure that has taken place		
	Communicate effectively, with all relevant individuals involved in the management of finances and financial/project accounting policies and standards within the wider organisation, on matters relating to any particular programme's finances		
	Provide all relevant information relating to the financial transactions associated with a programme to individuals involved in the management of finances and financial/project accounting within an organisation		
	Critically review the progress of a project against financial objectives/targets/benefits during its life, the level of actual project expenditure incurred against budget, any actual and/or forecast overspends and underspends and their causes, together with actions proposed to address them		

	Review the final finances and actual financial benefits realised by any particular project, once completed, against its financial objectives/targets and the intended financial benefits		
	Regularly monitor the alignment of actual and forecast programme expenditure against budget and financial objectives/targets/benefits, identifying the causes of any underspends and overspends, reporting potential financial issues, risks and decisions taken, together with actions taken to address expenditure overspends and underspends		
	Clearly present the progress of a programme against financial objectives/targets/benefits during its life, negotiating the proposed actions to deal with any expenditure overspends and underspends with all relevant individuals and bodies		
	Clearly present the final finances and actual financial benefits realised by any particular programme, once completed, against its financial objectives/targets and the intended financial benefits to sponsors, stakeholders and internal and external individuals and bodies		
	Routinely monitor and report the quality and effectiveness of programme financial management activities		
	Objectively analyse the findings from internal and/or external audit of programme finances, and the final finances, and actual financial benefits realised by any particular programme, once completed, against its financial objectives/targets and the intended financial benefits		
	Clearly present the quality and effectiveness of external providers of project and programme financial management services to sponsors, stakeholders and other internal and external individuals and bodies		
	Clearly present the compliance of a programme's finances with all relevant legislation, regulations external standards and internal financial policy and financial/project accounting standards to sponsors, stakeholders and other internal and external individuals and bodies, as appropriate		
	Accurately report the final finances and actual financial benefits realised by any particular programme, once completed, to sponsors, stakeholders and other internal and external individuals and bodies		

<b>Prepare a budget and analyse financial performance for a project</b>	Critically analyse the budget required/provided for any particular project during its life, using the financial information contained within the business case and/or other relevant project documents for any particular project, together with information about the expected/actual financial payback		
	Correctly prepare accurate budgets for any particular project/project phase, documenting any capital and operating expenditure and its expected/actual financial payback		
	Regularly analyse any actual, and/or forecast, overspends and underspends on any particular project/project phase and their causes, in order to inform decision making		
	Correctly select the procedures, tools and techniques to use in project and programme financial management activities, identifying what information is required to compile and maintain financial budgets, forecasts, and actuals for any particular project		
	Correctly identify the required/actual financial payback of any particular project/project phase		
	Develop effective budgets and financial forecasts for any particular project		
	Gain timely sign off to the project budgets, having verified the adequacy and appropriateness of the amounts requested		
	Correctly identify the implications of the finances and the financial benefits associated with any particular project on the wider business operations and/or business strategy		
	Authorise the project budget and make decisions on how financial authorities should be delegated for any particular project		
	Correctly identify the financial payback of any particular programme, the actual expenditure that needs to be incurred, the budget that needs to be in place for it, and the information required to compile and maintain financial budgets, forecasts, and actuals during its life		
	Prepare and gain timely sign off to accurate and appropriate programme budgets, having identified the budgets associated with any projects within it		
	Design effective strategy, policies, external standards relating to financial management activities and the most appropriate approach to manage the finances of any particular programme		
	Design effective project accounting standards, financial contingency and financial authorities for use within any particular project and/or programme		

	Critically review and authorise the programme budget, having assessed the adequacy and appropriateness of it, together with the delegated financial authorities and financial contingency for any particular programme		
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## ANNEX A.12: RISK MANAGEMENT AND BUSINESS CONTINUITY

Requirement	Indicator	Compliance	
		YES	NO
<b>Contribute to risk assessment activities, under supervision</b>	Assist in identifying information assets		
	Identify the sources and nature of risk to information assets and systems		
	Undertake a security risk assessment for non-complex systems under supervision		
	Identify, assess and document the specific risks and threats that may impact on information assets and systems, and provide basic remediation advice, under supervision		
	Review internal and external sources of up to date information to ensure that newly emerging threats and risks are identified in a timely manner		
	Follow an appropriate risk methodology under supervision		
	Regularly review and assess potential threats and vulnerabilities in terms of their risk potential, probability and potential impact on information assets		
	Clearly and accurately define the scope of any particular risk assessment exercise, validating scope with the information asset owners/business, and recognising the dynamic nature of risk		
	Accurately source, gather and collate information relating to potential risks that may impact on the organisation's information assets, engaging with stakeholders in a professional manner		
	Perform risk assessments that clearly identify and assess potential risks in terms of their probability of occurrence and potential impact on information assets and the business, reporting to supervisors		
	Analyse the identified risks to assess vulnerability and impact to determine whether they are within the business specified risk tolerance levels		
	Make recommendations as to the specific actions that should be applied to mitigate risks and escalate risks that are outside agreed risk tolerance levels		

	Communicate the outcomes of risk assessments effectively		
	Be fully accountable for undertaking accurate security risk assessments on all types of information systems		
	Develop, implement and maintain plans, processes, procedures, methods, tools and techniques for risk assessment activities and their deliverables		
	Clearly and accurately define the scope of risk assessment activities in line with business requirements, conducted by self and others adjusting the process to suit specific contexts		
	Clearly and accurately define the scope of risk assessment activities in line with business requirements, conducted by self and others adjusting the process to suit specific contexts		
	Monitor the quality and effectiveness of risk assessment activities, critically reviewing the risk assessment approach and process and making recommendations for improvement where appropriate		
	Advise and guide others on all aspects of security activities and their deliverables		
	Communicate risk assessments and their deliverables to a wide range of sponsors, stakeholders and other individuals		
<b>Assist risk management under direction</b>	Apply the agreed range of management controls that are used to mitigate information security risks within the business context, under direction		
	Review and apply security risk management plans and recommended actions		
	Review risks against the stated risk tolerance levels and act in a timely manner to mitigate/control or escalate risks that exceed tolerance levels as appropriate		
	Follow the internal strategy and policies and internal/external standards relating to risk management activities		
	Take proactive action to manage all risks that arise during the life of particular information assets under the guidance of supervisors		
	Review and use the strategy, policies, procedures tools and techniques relating to information security risk management activities		
	Correctly identify and assist in the development of a risk contingency plan for a non complex system, based upon analysis of the probability and impact of potential risks to that system		
	Correctly identify the range of response actions that may be used to mitigate risks		

Take decisive and timely action in the event of risks being realised and impacting the integrity of information systems		
Contribute to the development and maintenance of risk management plans used to mitigate risks in accordance with relevant internal and external standards		
Review and apply relevant external standards and legislation for risk management		
Objectively analyse and clearly present the findings from risk management activities to sponsors, stakeholders and external bodies		
Implement, maintain and effectively apply strategy, policies, plans, standards, procedures, tools and techniques relating to risk management activities		
Clearly and accurately define the scope of risk management activities		
Make recommendations on which risk management controls should be applied to mitigate risks, making decisions where appropriate		
Provide timely and objective advice and guidance to others on all aspects of risk management activities		
Monitor the implementation and execution of risk management plans used to mitigate risks that exceed risk tolerance levels		
Critically monitor the quality and effectiveness of risk management activities, taking action to address issues where appropriate		
Manage and prioritise resource allocation and capability management for information security risk management activities ensuring that appropriate training is in place		
Define the information security risk assessment and management strategy, policies and standards		
Design procedures, tools and techniques relating to risk assessment and management activities		
Be fully accountable for successful information security risk assessment and management		
Correctly identify the potential implications of emerging risks on the wider business operations and business strategy		
Provide timely and objective advice and guidance to others on all aspects of risk assessment and management frameworks and activities including best practice and the application of lessons learned		

	Direct resource allocation and professional development strategy for information security risk assessment and management activities		
	Make effective and timely decisions to improve the quality and effectiveness of risk assessment and management activities within an organisation		
	Provide thought leadership on the discipline of risk assessment and management, contributing to internal best practice and to externally recognised publications, white papers etc		
<b>Carry out specified IT disaster recovery activities</b>	Correctly carry out specified own role and responsibilities during disaster recovery planning and real life disaster recovery scenarios		
	Correctly follow the processes, tools and techniques relating to disaster recovery activities.		
	Comply with all legislation, regulations and external standards, policies, procedures and guidelines that impact on disaster recovery activities and their deliverables		
	Comply fully with all organisational requirements for business continuity and all strategy, policies and standards relating to disaster recovery activities		
	Correctly use information and data contained within configuration and other operational documents in order to establish the interdependencies between IT/technology systems, services and assets, in order that it may inform disaster recovery activities		
	Document and provide, accurate and timely information on disaster recovery plans, tests and 'dry runs' to other individuals involved in business continuity management activities within the organization		
	Advise and guide others on suitable disaster recovery options to meet the business needs to restore individual IT/technology systems, services and assets		
	Critically interpret the information and data contained within configuration and other operational documents in order to establish the interdependencies of IT/technology systems, services and assets		
	Verify the accuracy, currency, completeness and relevance of all relevant information collected, used produced and stored during disaster recovery activities		
	Correctly follow disaster recovery plans in order to conduct tests, dry runs and execute action in real life disaster scenarios, documenting the results and outcomes		

Apply relevant and applicable learning from disaster recovery testing and dry runs in order to improve the effectiveness of disaster recovery plans		
Design, develop, manage and monitor the operation of appropriate and comprehensive disaster recovery tests and 'dry runs' that are sufficiently well constructed to provide an accurate, current and complete reflection of a real life scenario, presenting the findings to sponsors, stakeholders and other individuals		
Regularly and rigorously monitor the alignment of disaster recovery plans with business continuity management plans and all relevant legislation, regulations and external standards, reporting issues to superiors where appropriate		
Verify that disaster recovery tests and 'dry runs' are sufficiently well constructed to provide an accurate, current and complete reflection of real life scenarios, in line with business needs and under the direction of superiors		
Critically analyse and clearly communicate/report the implications of business continuity management plans and assumptions on disaster recovery activities		
Critically analyse and clearly communicate/report the implications of the extent of disaster recovery provision for an organisation and their impact on business continuity plans to a wide range of sponsors, stakeholders, external bodies and other individuals		
Apply best practice and relevant learning from other potentially disastrous/disastrous and real life disaster scenarios to improve own disaster recovery plans		
Design, develop, implement and maintain effective strategy policies, plans, standards and a specified management control structure with named individuals and clear communication channels for disaster recovery activities		
Identify, agree and make reasoned decisions on the cost and value of disaster recovery provision for IT/technology systems, services and assets negotiating with sponsors, stakeholders and superiors where appropriate		
Identify precisely the appropriate individual(s) and their roles in leading and/or executing disaster recovery plans and activities		
Accurately identify the logistical, technical and financial implications of the required level of disaster recovery provision on an organisation communicating findings clearly to sponsors, stakeholders and other individuals and bodies		

	Critically analyse the appropriateness of disaster recovery plans against business continuity needs, reporting and presenting the cost and value of disaster recovery provision of IT/technology systems, services and assets to sponsors, stakeholders and other individuals for endorsement		
	Critically review disaster recovery plans for completeness and potential improvement against information contained within risk registers and assessments and threat and vulnerability assessments, feasibility, currency, best practice and lessons learned from other potentially disastrous/disastrous scenarios and real life disaster scenarios		
	Identify when and how to use external providers of disaster recovery services, selecting suitable providers and agreeing contractual arrangements that will support the business needs		
<b>Contribute to IT disaster recovery management</b>	Correctly identify the processes, tools and techniques relating to disaster recovery activities		
	Correctly carry out own role and responsibilities during disaster recovery planning and real life disaster recovery scenarios		
	Collate and record, the business requirements and criteria for restoration of specific IT/technology systems, services and assets to support ongoing operation of an organization		
	Accurately gather information relating to external providers involved in disaster recovery plans and activities, so that it may be used in plans and procedures		
	Gather all relevant information and data contained with business continuity management plans that have a consequence on disaster recovery activities and planning		
	Gather all relevant information and data contained within business risk registers and vulnerability assessments that have an impact on disaster recovery planning		
	Regularly source and gather all relevant information relating to the external environment, including legislation, regulations, external standards, market forces and technology in order to keep disaster recovery plans current, complete and accurate		
	Routinely monitor internal and external changes that may trigger an update to disaster recovery plans		
	Clearly communicate updates required to the disaster recovery plan, and document changes made to it, to a wide range of sponsors, stakeholders and other internal and external individuals and bodies		
	Provide clear and accurate information to sponsors, stakeholders and external bodies and individuals, on the implications and consequences of an IT/technology disaster, communicating the importance of relevance of disaster recovery activities		

	Develop effective disaster recovery plans that meet the needs of the business and are logistically , technically, and financially feasible, and support the organisation's brand, reputation and organisational effectiveness, presenting findings relating to their accuracy, currency and completeness to a wide range of sponsors, stakeholders and other individuals as directed by superiors		
	Critically analyse all relevant information and knowledge relating to risks, vulnerabilities and threats that may need to be considered within disaster recovery plans		
	Verify the assumptions contained within business continuity management plans that have a consequence on disaster recovery and the business requirements and criteria for restoration of specific IT/technology systems, services and assets		
	Effectively manage the execution of disaster recovery plans, using triggers for invocation correctly and identifying and making decisions on the relative priorities of IT/technology systems, services and assets to be restored, where appropriate		
<b>Manage the development of IT disaster recovery plans</b>	Accurately identify the information and data contained within business continuity management plans that have a consequence on disaster recovery activities, so that it may be used to inform the development of disaster recovery plans		
	Correctly document the potential implications of disaster recovery plans on business continuity management activities and communicate regularly with those individuals involved in business continuity management within the wider organisation		
	Correctly apply information contained within risk registers, risk assessments, vulnerability and threat assessments to inform disaster recovery plans for an organization		
	Effectively manage relationships with external bodies who provide a range of disaster recovery services and communicate disaster recovery roles, responsibilities, processes and procedures to individuals who may be required to carry them out		
	Implement and maintain effective, current, comprehensive and complete education and training on disaster recovery plans and activities for all individuals within the organisation		
	Accurately identify the sponsors, stakeholders, individuals, external providers and partners who need to be involved in disaster recovery plans and activities and/or who need to be informed in the event of a disaster		
	Identify when and how to use external providers of disaster recovery services, selecting suitable providers and agreeing contractual arrangements that will support the business needs		

	Be accountable for the effective end to end implementation and operation of all disaster recovery and the cost and value of DR provision supporting an organization		
	Effectively manage disaster recovery tests and dry runs, reviewing and presenting the results and outcomes to a wide range of sponsors, stakeholders and external bodies/individuals in order to inform business risk management and business continuity management plans and activities		
	Make reasoned and timely decisions on when to invoke the disaster recovery plan and when and how to invoke a return to normal operations		
	Manage real life disaster recovery activities for an organisation in the event of appropriate triggers, closing down and reporting the results and outcomes to a wide range of sponsors, stakeholders and external bodies		
<b>Document specified information relating to IT disaster recovery</b>	Accurately capture and document all relevant information, required in order to reinstate or restore IT/technology systems, services and assets		
	Accurately document relevant information relating to external providers involved in disaster recovery, so that it may be referenced in plans and activities		

## ANNEX A.13: ICT SERVICE MANAGEMENT AND DELIVERY

Requirement	Indicator	Compliance	
		YES	NO
<b>Carry out designated service operations activities under supervision</b>	Follow the procedures, tools, and techniques that apply to service operations and event management activities, as directed		
	Comply with any relevant legislation, regulations, and external standards relating to service operations and event management activities, in own area of accountability		
	Provide information, as appropriate, to relevant people on the progress of service operational tasks against schedules		
	Restart tasks within operational schedules, where appropriate, under direction		
	Assist others in communicating with internal and external individuals and groups involved when issues arise in service operations		
	Identify and document the procedures, tools, and techniques relating to, and required for, service operations, as directed		
	Communicate with internal and external individuals and groups involved when issues arise in service operations, as directed		
	Assist others in identifying when tasks within the operations schedule need to be rescheduled		
	Assist others in the rescheduling of service operations activities, as necessary, to complete schedules		
	Implement and maintain strategy, policies, plans, standards, procedures, tools, techniques, and plans that apply to service operations		
	Implement and maintain service operations schedules		
	Implement and maintain the service levels operational hours and metrics that apply to service operations, under direction		
	Identify when tasks within the operations schedule need to be rescheduled		
	Reschedule service operations activities as necessary to complete schedules, reporting action taken to relevant people		
	Ensure that staffing levels and skills are in line with the needs of service operations so that service operations can respond appropriately to any major incident(s) that may arise		
	Assist others in identifying the interdependency of tasks within the service schedule, and the priorities for service operations tasks		

	Assist others in identifying the backup strategies and implementing backup and recovery procedures as part of service operations schedules		
<b>Monitor and report on the progress and completion of designated service operations activities</b>	Monitor the progress and completion of service operations tasks as directed		
	Track the progress of events taking appropriate and timely action in response to them, in line with operational procedures		
	Gather and document all necessary information from monitoring operational tasks and schedules		
	Report issues arising from monitoring the progress and completion of service operations tasks		
	Monitor adherence to, and progress against, operations schedules		
	Gather information from tracking the progress of operational schedules		
	Document information relating to the resolution of issues experienced during service operations activities for re-use to inform future activities		
	Source information to support the reporting of performance of service operations against schedules, targets, and/or metrics		
	Provide metrics and management information produced by service operations to internal and external sponsors, stakeholders, individuals, and other bodies as appropriate		
	Assist others in monitoring the quality and effectiveness of service operations		
	Monitor the quality and effectiveness of service operations presenting performance against metrics to relevant people		
	Monitor and analyse the personal effectiveness of individuals working in service operations taking action where appropriate to address issues, under direction, and in line with procedures		
	Apply the metrics to measure the performance of service operations as directed		
	Ensure that that service operations meet strategic, financial, and operational service targets, under direction		
Identify the level of expertise required to perform service operations, and the effectiveness of individuals working in service operations in meeting relevant targets/metrics			
Monitor customer satisfaction and the alignment of service operations with business needs, service delivery/operation objectives and the service strategy			

	Monitor the quality, effectiveness, and customer satisfaction of service operations against business needs, service delivery/ operation objectives, and the service strategy		
<b>Assist in the review of service operations activities</b>	Accurately interpret information gathered during the completion of service operations tasks		
	Identify and document the procedures, tools, and techniques relating to, and required for, service operations, as directed		
	Communicate with internal and external individuals and groups involved when issues arise in service operations, as directed		
	Assist others in identifying when tasks within the operations schedule need to be rescheduled		
	Assist others in the rescheduling of service operations activities, as necessary, to complete schedules		
	Manage relationships with all internal and external individuals involved in the provision of support to service operations activities, under supervision		
	Ensure that service operations can respond appropriately to any new/enhanced IT/technology systems, services, or assets that are introduced		
	Review the results from monitoring the operation and performance of service operations against metrics		
	Make decisions on the appropriateness of using external suppliers of service operations and event management services, presenting proposals for their use to relevant people		
	Assist others in adapting/changing service operations in support of changing business needs		
	Identify and implement the actions to be taken in the event of service operations not supporting the business needs, service delivery/operation objectives, and/or the service strategy		
Proactively adapt/change service operations in support of changing business needs			

<b>Perform designated 'IT Service Help Desk and Incident Management' activities under supervision</b>	Apply designated procedures, tools, and techniques to respond to incident management and service request activities, under the direction of others		
	Comply with any relevant legislation, regulations, and external standards relating to service desk/help desk activities and their deliverables, in own area of accountability		
	Communicate with customers of the service desk/help desk effectively, empathetically, courteously, and in a timely manner, in relation to incidents and service requests relevant to them		
	Accurately validate, categorise, prioritise, and assign incoming incidents and service requests in line with procedures		
	Fulfil service requests and close incidents where possible within the service desk/help desk in line with procedures		
	Refer or escalate unfulfilled service requests and unclosed incidents in line with procedures		
	Follow the standards relating to the operation of incident management and service request activities		
	Proactively escalate incidents to appropriate people based on knowledge and understanding of customer needs		
	Track the progress of incidents and service requests communicating, as required, with internal and external individuals and groups involved in their resolution and closure		
	Assist with the operational management of the service desk/help desk, including staffing, skilling, monitoring performance, and compliance with procedures		
	Document the metrics that will be used within the service desk/help desk		
	Manage service desk/help desk activities, including staffing, skilling, provision of appropriate resources, monitoring performance, and compliance with procedures		
	Take action to resolve issues relating to the skills and effectiveness of service desk/help desk personnel in meeting targets		
	Assist others in the tasks required to ensure that service levels for incident management service request activities and the service desk/help desk are met		
	Assist others in the event of incident management and service request activities not supporting the business needs, service delivery/operation objectives, and/or the service strategy		

	Identify the definitions of priorities and classifications, and take appropriate action in the event of incidents and service requests not being resolved, fulfilled, and/or closed, in line with service levels		
	Design and develop the policies, standards, procedures, tools, techniques, and plans that apply to service desk/help desk activities and their deliverables		
	Implement and maintain standards, procedures, tools, and techniques for the service desk/help desk, taking account of changing business needs and other internal and external factors		
	<p>Provide advice and guidance to others relevant to the service desk/help desk on:</p> <ul style="list-style-type: none"> <li>• all aspects on incident management, service request activities and their deliverables</li> <li>• the application of best practice</li> <li>• identification of the implications of business objectives</li> <li>• the service strategy and service delivery/operation objectives on incident management and service request activities</li> <li>• the development of appropriate strategy, policies, and plans identifying and meeting the strategic, financial, and operational targets</li> </ul>		
	Manage the provision of appropriate resources, equipment, media, and information resources to ensure service desk/help desk services is effective during its operational hours to its customers		
	Be accountable for meeting service levels for incident management service request activities and the service desk/help desk		
	Identify the implications of business objectives, the service strategy, and service delivery/operation objectives, on incident management and service request activities, including the type of service desk/help desk that is required and what hours and service levels it will support		
	Design standards relating to the management of incidents and service requests		
	Be accountable for identifying and meeting strategic, financial, and operational targets for incident management service request activities, and the service desk/help desk		

<b>Congregate data to monitor and report on the effectiveness and customer satisfaction of 'Service Help Desk and Incident Management' activities that you provide</b>	Gather and document all necessary information required for the diagnosis of, and assignment of, incoming incidents and service requests		
	Take responsibility for the level of customer service and satisfaction that you provide		
	Follow the standards relating to the operation of incident management and service request activities		
	Proactively escalate incidents to appropriate people based on knowledge and understanding of customer needs		
	Track the progress of incidents and service requests communicating, as required, with internal and external individuals and groups involved in their resolution and closure		
	Assist with the operational management of the service desk/help desk, including staffing, skilling, monitoring performance, and compliance with procedures		
	Analyse and report on the quality and effectiveness of service desk/help desk activities, and their deliverables, to appropriate people, including sponsors, stakeholders, and other individuals and bodies		
	Monitor customer satisfaction with the service provided by the service desk/help desk		
	Monitor open incidents and ensure that work- around for them are only kept in place for the minimum period of time		
	Review and report the effectiveness of incident management and service request activities and the operational performance of the service desk/help desk against metrics		
	Review the implications of business needs for IT/technology service on the service desk/help desk, and the quality and effectiveness of the service desk/help desk in meeting them		
	Identify, and make decisions, on what metrics and targets should be used to measure the performance		
<b>Support the Identification and implement improvements and work-arounds to 'Service Help Desk and Incident Management' activities</b>	Accurately interpret information gathered from individual customer calls/contacts to the service desk/helpdesk in order to ascertain the correct course of action/response, under supervision		

	Assist others with the development of work-arounds and resolutions for incidents and service requests where appropriate		
	Develop suitable work-arounds and resolutions for incidents and service requests where appropriate		
	Negotiate with customers on the provision of work- arrounds and resolutions for incidents and service requests		
	Assist with the identification of work-arounds where appropriate		
	Apply best practice in incident management activities		
	Identify work-arounds where appropriate		
	Proactively identify the implications of business needs for IT/ technology service, including the introduction of new services on the service desk/help desk, presenting findings to appropriate people		
	Develop the metrics, service levels, and operational hours for the service desk/help desk to meet business needs, service delivery/ operation objectives, and the service strategy		
	Review the implications of business needs for IT/technology service on the service desk/help desk, and the quality and effectiveness of the service desk/help desk in meeting them		
	Identify when and how to use external providers for all, or part, of incident management and/or service/access request services, negotiating and contacting as necessary with them		
<b>Carry out, under supervision, assigned problem management activities</b>	Correctly follow the procedures, tools, and techniques that apply to problem management activities, and their deliverables, as directed by others		
	Correctly document the classification and priority allocated to any problem, as directed by others, and in line with procedures		
	Apply any relevant information from internal and external sources about resolutions and fixes that are included in future product and service releases, as directed by others		
	Operate at all times with reference to the priority and severity of problems under supervision		
	Take action to escalate problems correctly and in a timely manner to superiors, and other colleagues as appropriate, in line with procedures		
	Accurately identify who is likely to be impacted by any problem, assisted by appropriate people where necessary		
	Correctly apply the standards relating to problem management activities		

	Identify what classification and priority to allocate to any problem assigned to problem management if the current classification is incorrect, in line with policies and procedures		
	Accurately document any work-arounds applied to		
	keep business activities on track whilst problems are diagnosed and/or resolved, as directed by others		
	Liaise effectively with internal and external individuals and groups who can provide resolution to problems, as directed by others		
	Take appropriate action to close as many problems as possible via the identification and implementation of long term resolutions/ fixes, in line with targets and the service strategy		
	Reclassify/reprioritise incoming problems, where appropriate, after review in order to focus attention on those problems which if resolved would provide maximum benefit to the organisation		
	Manage the timely and effective resolution of problems, as directed by appropriate people, and in line with procedures and the service strategy		
	Provide clear and concise change request information about what is required for the long term resolution of problems, for use by a wide range of internal and external individuals and groups		
	Correctly identify any correlation between changes to the configuration of IT/technology systems, services, and assets and the occurrence of incidents and problems		
	Source appropriate expertise from internal and external sources to advise and guide on the resolution of problems, using own judgement and experience		
	Effectively delegate problems to individuals, within		
	own area of accountability, on the basis of the problem priority/ category to ensure timely resolution of problems		
	Ensure that all open problems are routinely monitored, taking action where appropriate		
	Design, implement and maintain effective standards for conducting problem management activities		
	Design appropriate procedures, tools, techniques and plans relating to problem management activities and their deliverables		
	Identify and implement appropriate metrics and targets to be applied to problem management activities		
	Identify what management information will be provided from problem management to customers and other relevant people		

	Identify correctly the implications of business objectives, the service strategy and service delivery/operation objectives on problem management activities, taking action where appropriate		
	Effectively manage the alignment of problem management activities and their deliverables with business needs, service delivery/operation objectives and the service strategy		
	Make correct decisions on the revised priorities and categories to be applied to problems		
	Proactively monitor and report the impact of long term resolutions/fixes on incident/problem volumes/rates and customer satisfaction		
	Proactively identify potential/actual problems based on the analysis of incident, trend, and other related sources of information		
	Regularly monitor the volume, severity, and age of open/outstanding problems, and the volume/rate of problems that are resolved/closed, proactively reporting findings against targets and metrics to sponsors, stakeholders, and other relevant individuals as appropriate		
	<ul style="list-style-type: none"> <li>• Correctly identify where work-arounds are required to keep business activities on track whilst problems are resolved, referencing the service catalogue and/or portfolio, and the priority and classification allocated to problems, under the direction of others</li> <li>• Critically analyse all relevant information relating to future product and service releases to establish if this will resolve current problems, as directed by others</li> </ul>		
<b>Manage and review problem management activities against business objectives and metrics</b>	Correctly identify the root cause of IT/technology problems and any possible solutions to resolve them, under the direction of others		
	Implement and maintain effective work-arounds that are proposed or applied to keep business activities on track whilst problems are diagnosed and/or resolved, reporting them to relevant people, sponsors, and stakeholders, as appropriate		
	Critically analyse all relevant information gathered about incident and problem trends and patterns in order to inform future action		
	Recommend the priority and attention that application/technical support groups should apply to any particular problem, based on an accurate assessment of the impact of the problem on individuals and/or the organisation		

	Persuade internal and external support groups to develop and provide long term resolutions/fixes for problems, using information gained from identifying those problems which if resolved would have the greatest impact on the organisation		
	Design appropriate work-arounds for problems ensuring that they are kept in place for the minimum period of time and replaced with appropriate longer term solutions		
	Report findings from the analysis of incident trend information to relevant people		
	Gather all relevant information about what is needed for the long term resolution of problems so that it may be referenced by others and used in change requests		
	Verify where appropriate the accuracy, currency, completeness, and relevance of any information already collected by other individuals about problems in order to inform future action		
	Track the progress of change requests for long term resolutions/ fixes to problems escalating to relevant people where appropriate		
	Source and accurately interpret all relevant information about individual problems in order to diagnose the root causes of them		
	Source, use, and accurately document, where appropriate, information from internal and external sources about known errors that may relate to problems, under the direction of others		
	Design, implement and maintain effective standards for conducting problem management activities		
	Design appropriate procedures, tools, techniques and plans relating to problem management activities and their deliverables		
	Identify and implement appropriate metrics and targets to be applied to problem management activities		
<b>Help to identify root causes and trends from problem management activities</b>	Correctly identify any significant problems that are likely to have an impact on the organisation, in line with procedures and with the assistance of appropriate people		
	Correctly identify where work-arounds are required to keep business activities on track whilst problems are resolved, referencing the service catalogue and/or portfolio, and the priority and classification allocated to problems, under the direction of others		

	Critically analyse all relevant information relating to future product and service releases to establish if this will resolve current problems, as directed by others		
	Correctly identify the root cause of IT/technology problems and any possible solutions to resolve them, under the direction of others		
	Implement and maintain effective work-arounds that are proposed or applied to keep business activities on track whilst problems are diagnosed and/or resolved, reporting them to relevant people, sponsors, and stakeholders, as appropriate		
	Critically analyse all relevant information gathered about incident and problem trends and patterns in order to inform future action		
	Recommend the priority and attention that application/technical support groups should apply to any particular problem, based on an accurate assessment of the impact of the problem on individuals and/or the organisation		
	Persuade internal and external support groups to develop and provide long term resolutions/fixes for problems, using information gained from identifying those problems which if resolved would have the greatest impact on the organisation		
	Design appropriate work-arounds for problems ensuring that they are kept in place for the minimum period of time and replaced with appropriate longer term solutions		
	Effectively advise and guide others on how to negotiate with other individuals, groups and organisations to develop and provide resolutions to problems		
<b>Carry out, under supervision, maintenance activities that apply to application management activities</b>	Correctly follow the procedures, tools and techniques that apply to application management and their deliverables, under supervision		
	Comply with any relevant legislation, regulations and external standards relating to application management activities and their deliverables in own area of accountability		
	Undertake routine maintenance on applications, in line with procedures, documenting action taken and reporting issues arising to appropriate people		
	Respond promptly to incoming incidents, problems and change requests affecting applications, in line with their identified priority, as directed		
	Identify and use appropriate contacts/escalation paths with external providers of support for applications, where appropriate		

	Communicate effectively, courteously and in a timely manner with all internal and individuals and groups involved in the provision and progression of application support		
	Correctly select the procedures, tools and techniques to use for application management activities and their deliverables		
	Accurately document and store changes that need to be developed, presently or in the future, to address incoming incidents, problems and or change requests		
	Manage relationships with those internal and external individuals involved in the development, testing, scheduling and implementation of application changes		
	Follow the service/systems lifecycle during applications management support activities, referencing the service catalogue and portfolio to guide and inform action		
	Follow the standards relating to application management activities		
	Identify the routine maintenance required to ensure the ongoing performance of applications, ensuring it is undertaken regularly within own area of accountability		
	Manage effective relationships with individuals and groups requesting changes to applications and external providers offering application management and services		
	Reallocate and reprioritise application management activities undertaken by others, according to the rate, incident and severity of incoming incidents, problems and change requests		
	Present reasoned proposals relating to the use of external providers of application management services, including identifying potential providers		
	Advise and guide others on all aspects of application management activities and their deliverables		
	Design, implement and maintain standards for conducting application management activities		
	Identify the implications of business objectives, the service strategy and service delivery/operation objectives on application management activities, taking action where appropriate		
	Ensure that change requests with external application support providers are escalated, where appropriate, in line with business needs		
	Negotiate with sponsors, stakeholders and other individuals in relation to the release schedule/plan and the contents of each release for any application		

	Review and make decisions on proposals made by other individuals regarding the use of external suppliers of application management services, contracting with providers where appropriate		
<b>Review and direct application management activities against business objectives and metrics to maintain and improve performance</b>	Monitor and report the impact of implemented application changes and releases to sponsors, stakeholders and other individuals and groups, as appropriate		
	Monitor the quality and effectiveness of external providers of application management services, taking action where appropriate		
	Verify, and make appropriate decisions on, the content and delivery schedule of any proposed application releases		
	Take action to ensure the delivery of the release schedule/plans and other application management activities are in line with business needs and identify and implement improvements		
	Review any issues arising from the implementation of changes and releases and routine maintenance activities, taking action where appropriate		
	Manage and monitor the progress of development for any application releases against plan and schedule		
	Provide metrics and management information produced by application management activities and their deliverables to internal and external sponsors, stakeholders individuals and other bodies, as appropriate		
	Design, implement and maintain standards for conducting application management activities		
	Identify the implications of business objectives, the service strategy and service delivery/operation objectives on application management activities, taking action where appropriate		
	Ensure that change requests with external application support providers are escalated, where appropriate, in line with business needs		
	Negotiate with sponsors, stakeholders and other individuals in relation to the release schedule/plan and the contents of each release for any application		
	Review and make decisions on proposals made by other individuals regarding the use of external suppliers of application management services, contracting with providers where appropriate		
	Monitor the quality and effectiveness of application management activities and their deliverables		
	Identify the information required to support the reporting of the performance of application management against its targets and/or metrics		

	Identify and provide accurate estimates for changes to applications required in response to incidents, problems and or change requests for review and approval		
	Assist others with the preparation of supporting information in support of scheduled releases to an application		
	Help identify information required to support the reporting of the performance of application management against its targets and/or metrics		
	Accurately and comprehensively document the results of testing that has taken place on changes to an application, in line with procedures and standards		
<b>Design, develop and manage to maintain and identify improvements to application management activities</b>	Verify the appropriateness of any proposed change identified in response to incoming application incidents, problems and change requests and the accuracy of any estimated effort, complexity, risk and elapsed time developed by other individuals		
	Make timely and appropriate decisions on which application changes to approve		
	Manage the development of approved changes in response to any incoming application incident, problem or change request		
	Design and present the proposed release schedule and plan and the content of each release within it, for any application		
	Ensure that proposed application releases support the identified business needs and priorities		
	Communicate effectively and in a timely manner with sponsors and stakeholders, reporting on the progress versus plan/schedule of application releases and providing proposals for future application releases		
	Negotiate effectively and in line with organisational policies and procedures, with external providers of application support in relation to individual changes required		
	Apply best practice in all aspects of application management activities and document lessons learned so that they may inform and direct the future activities taken by self and others		
	Ensure that change control mechanisms are followed, either in advance or retrospectively, as appropriate within own area of accountability, during application management activities		
	Produce suitable designs for approved changes to applications, under supervision		
	Accurately estimate the effort, complexity, risk and elapsed time that may be required to develop releases to applications		

	Accurately document the content and delivery details associated with any application release, under the direction of others, where appropriate		
	Assist others with the documentation, implementation and maintenance of any proposed release schedule and plan for an application		
	Assist others in ensuring that proposed application releases support the identified business needs and priorities		
<b>Carry out technical support activities under supervision</b>	Correctly select the procedures, tools and techniques to use for technical support activities and their deliverables, under supervision		
<b>Monitor, document and provide effective</b>	Comply with any relevant legislation, regulations and external standards relating to technical activities and their deliverables in own area of accountability		
	Comply with change control mechanisms that apply to technical support activities, under supervision		
	Undertake efficient and timely routine maintenance on technical infrastructure and services to ensure their ongoing performance and availability, in line with procedures, documenting action taken and reporting issues arising to relevant people		
	Respond promptly to incoming incidents, problems, change requests and other events relating to technical infrastructure and services , in line with their identified priority, as directed by others		
	Estimate accurately own effort, and the complexity,		
	risk and elapsed time associated with changes and repairs to and/or replacements of technical infrastructure and services in response to incidents, problems, change requests and other events, under supervision		
	Implement changes and releases to technical infrastructure and services into pre-production		
	environments ready for their validation and release into the production environment, where appropriate, under supervision		
	Implement infrastructure repairs and refreshes, where appropriate and approved, under supervision		
	Identify and use appropriate contacts/escalation paths with external providers of support for technical infrastructure and services, where appropriate		

	Verify, where appropriate, the accuracy, currency, completeness and relevance of any information already collected about incoming incidents, problems, change requests and other events relating to technical infrastructure and services, as directed by others		
	Assist others in the preparation of estimates for changes and repairs to and replacement of technical infrastructure and services required in response to incidents, problems, change requests or other events, for review and approval		
	Negotiate effectively on the timing and schedules associated with any technical infrastructure and services changes, repairs or replacements with individuals for whom technical support is being provided in response to incidents and problems, where appropriate		
	Identify when it is appropriate to decommission existing technical infrastructure and services, presenting what options are available and suitable for the replacement and decommissioning of infrastructure		
	Correctly identify when changes or repairs to technical infrastructure and services are ready to be reintroduced and made available		
	Follow the standards relating to technical support activities, under direction		
	Correctly identify what routine tasks and activities need to be rescheduled in order to resource incoming incidents, problems and changes associated with technical infrastructure and services that need immediate/emergency response		
	Ensure that change control mechanisms are followed, either in advance or retrospectively, as appropriate within own area of accountability, during technical support activities		
	Accurately estimate changes and repairs to and replacement of technical infrastructure and services required in response to incidents, problems, change requests or other events, for review and approval		
	Accurately document changes, repairs and replacements to be used to address incoming incidents, problems, change requests and other events associated with technical infrastructure and services, under direction		

Accurately and comprehensively document the results of testing that has taken place on changes and repairs to or replacements of technical infrastructure and services , in line with procedures and standards		
Communicate effectively, courteously and timely with all external individuals and groups who provide technical support in response to incidents, problems, change requests and other events, under supervision		
Communicate effectively, courteously and timely with internal and external individuals and groups on the progress of changes and repairs to and replacements of technical infrastructure and se requests and other events, as directed by others services, in response to incidents, problems, change		
Provide timely and suitable advice and guidance to others on the appropriateness of repairing existing infrastructure, in line with procedures and under supervision		
Correctly identify which incidents, problems, change requests and other events can be tackled internally and which required external provider support, in line with procedures and as directed by others		
Accurately document the procedures, tools and techniques relating to technical support activities and their deliverables, under supervision		
Correctly reference the service catalogue and/or portfolio and service levels during technical support activities		
Assist others with the preparation of documentation relating to changes, repairs and replacements to be used to address incoming incidents, problems, change requests and other events associated with technical infrastructure and services		
Assist in monitoring and identifying improvements relating to technical support activities		
Correctly identify when and how change, configuration, release and asset management procedures may be required to introduce changes to technical infrastructure and services and or new/ repaired equipment, in line with procedures		
Apply best practice in technical support activities so that they may inform and direct the future activities taken by self and others		

	Produce suitable designs for approved changes, where appropriate, to technical infrastructure and services in response to incidents, problems, change		
	requests and other events, under direction		
	Manage effective relationships with those internal and external individuals involved in the development. testing and implementation of changes and repairs to or replacement of technical infrastructure and services, under direction		
	Assist others in ensuring that proposed infrastructure product or service releases and/or refreshes support the identified business needs and priorities		
	Design and present an effective proposed schedule/plan and scope for any technical infrastructure and services release and/or refresh programme		
	Effectively manage and regularly monitor the progress of development of any technical infrastructure and services releases and/or refresh programmes against plan and schedule		
	Ensure that proposed technical infrastructure and services refreshes support the identified business needs and priorities		
	Design, implement and maintain suitable and effective standards for conducting technical support activities		
	Correctly identify the implications of business objectives, the service strategy and service delivery/operation objectives on technical support activities, taking action where appropriate		
	Ensure the delivery of any planned infrastructure product/services release and/or refresh to schedule/budget, in line with business needs		
<b>Provide direction and approval where necessary to maintain or improve technical support activities</b>	Verify, and make appropriate decisions on, the plans and schedules for any proposed technical infrastructure and services releases or refresh programmes		

Negotiate effectively with sponsors, stakeholders and other individuals with sponsors, stakeholders and other individuals in relation to any proposed infrastructure refresh/release schedule/ plan and their contents for any technical infrastructure and services		
Review and make reasoned decisions on the schedule/plan and scope of any technical infrastructure and services release or refresh programmes, in line with service strategy, architecture and design principles, where appropriate		
Design and present an effective proposed schedule/plan and scope for any technical infrastructure and services release and/or refresh programme		
Effectively manage and regularly monitor the progress of development of any technical infrastructure and services releases and/or refresh programmes against plan and schedule		
Ensure that proposed technical infrastructure and services refreshes support the identified business needs and priorities		
Correctly identify when and how change,		
configuration, release and asset management procedures may be required to introduce changes to technical infrastructure and services and or new/repaired equipment, in line with procedures		
Apply best practice in technical support activities so that they may inform and direct the future activities taken by self and others		
Produce suitable designs for approved changes,		
where appropriate, to technical infrastructure and services in response to incidents, problems, change requests and other events, under direction		
Manage effective relationships with those internal and external individuals involved in the development. testing and implementation of changes and repairs to or replacement of technical infrastructure and services, under direction		
Assist others in ensuring that proposed infrastructure product or service releases and/or refreshes support the identified business needs and priorities		

<p><b>Design, develop and manage to maintain and identify improvements to application management activities</b></p>	<p>Correctly follow the procedures, tools and techniques that apply to availability management and their deliverables, under supervision</p>		
<p><b>Review and analyse availability management activities</b></p>	<p>Comply with any relevant legislation, regulations and external standards relating to availability management activities and their deliverables in own area of accountability Comply with all change control mechanisms that apply to availability management and support activities, under supervision</p>		
	<p>Comply with any relevant legislation, regulations and external standards relating to availability management activities and their deliverables in own area of accountability</p>		
	<p>Comply with all change control mechanisms that apply to availability management and support activities, under supervision</p>		
	<p>Operate with reference to all relevant infrastructure architecture, designs, configurations and standards, under supervision and in line with procedures</p>		
	<p>Assist others in the routine monitoring of the availability of IT/technology systems, services and assets, under supervision</p>		
	<p>Routinely maintain and monitor the availability of IT/technology systems, services and assets within the organisation, under supervision</p>		
	<p>Routinely monitor the availability of external provided/hosted IT/technology products/services and equipment, under supervision</p>		
	<p>Communicate in a timely manner with those external providers of IT/technology products and services that need to be available, under supervision</p>		
	<p>Assist others with the timely reporting of the availability of IT/technology systems, services and assets against targets and other metrics</p>		

Critically analyse and accurately document the actual availability of IT/technology systems, services and assets against targets and other metrics, reporting findings to sponsors,		
stakeholders and other individuals as directed		
Correctly identify which IT/technology systems, services, assets, products and components may be unavailable, and why this may be the case, as directed		
Correctly identify which IT/technology systems, services, assets,		
products and components need to be available to underpin the provision of an end to end service for a customer		
Report in a concise and timely manner, the availability plan(s) to relevant people		
Report actual availability against agreed plan and, if required, implement action(s) to maintain alignment		
Assist others with the presentation of the availability plan, availability targets and other metrics, to a range of individuals, under direction		
Effectively implement and maintain standards relating to availability management activities and their deliverables		
Identify and take timely and appropriate preventative action to anticipate and avoid possible issues with the availability of IT/ technology systems, services and assets		
Take account of all relevant current and future internal and external factors that may impact on the availability of IT/ technology systems, services and assets		
Correctly identify and plan for, in a timely manner, potential changes to the infrastructure required in order to maintain availability of IT/technology services		
Effectively manage and monitor the availability of any IT/ technology services with any relevant legislation, regulations and external standards		
Correctly identify the implications of business objectives, the service strategy and service delivery/operation objectives on availability management activities		
Design effective strategy, policies, standards, procedures, tools, techniques and plans for conducting availability management activities		
Regularly review the availability plan(s), availability targets and other metrics		
Regularly review the results from monitoring the availability of IT/ technology systems, services and assets against metrics, making decisions as required		

Clearly and concisely report the availability of IT/technology services, on a regular basis, against metrics to a range of internal and external individuals and groups		
Assist others with the identification of all relevant metrics that are to be used to measure the performance of IT/technology availability		
Correctly identify and report what are the availability targets that apply to IT/technology systems, services assets, products and components, as directed		
Verify where appropriate, the accuracy, currency, completeness and relevance of all information relating to the impact on availability arising from incidents, problems and other events, as directed		
Source all relevant information in order to accurately document and effectively implement and maintain the availability plan(s) and targets		
Correctly identify and accurately document all relevant procedures, tools and techniques to use for availability management activities and their deliverables, under supervision		
Source and gather, in a timely manner, all relevant information from monitoring the current availability of IT/technology systems, services and assets		
Gather all information to support the reporting of availability against targets and/or metrics, under supervision		

<b>Carry out routine capacity management activities, under supervision</b>	Correctly select and use the procedures, tools and techniques that apply to capacity management activities and their deliverables, under supervision		
<b>Review, assess and report on capacity management activities</b>	Fully comply with all relevant change control mechanisms during capacity management activities, under supervision		
	Correctly implement and maintain the IT/technology capacity plan(s) and any relevant metrics to measure the performance of IT/technology capacity, as directed		
	Effectively manage the routine/ongoing provision of IT/technology capacity to meet demand, ensuring change control mechanisms are followed correctly, where required		
	Routinely tune and balance the performance of existing IT/technology capacity, analysing and reporting the impact of action taken, as directed and in line with procedures		
	Correctly implement and maintain strategy, policies, plans, standards, procedures, tools and techniques relating to capacity management activities and their deliverables		
	Effectively manage the response to routine and intermittent peaks, spikes and troughs in IT/technology capacity utilisation		
	Effectively plan the timely introduction of new/incremental IT/technology capacity and resources		
	Correctly identify potential external providers of capacity, negotiating and managing relationships with them where		
	Manage and monitor the progress of any proposals and plans to upgrade IT/technology capacity, reporting issues and status to sponsors, stakeholders and other relevant individuals, where appropriate		
	Correctly identify the most effective ways of deploying and redeploying IT/technology capacity/resources, providing timely and understandable advice and guidance to other individuals on the course of action to take		
	Correctly identify and report the impact of future demand on existing IT/technology capacity/resources and their likely performance, applying information about what actions may be required through assessment and modelling techniques		
	Correctly identify what actions are required as a result of monitoring and analysing the utilisation of IT/technology capacity		
	Monitor the results of any tuning and balancing activity on IT/technology capacity and the results of any upgrades to IT/technology capacity, as undertaken by others		

<b>Carry out change and release activities, under supervision</b>	Correctly follow the procedures, tools and techniques to use for change and/or release management activities, under supervision		
<b>Gather and document information relating to change and release activities, under supervision</b>	Comply with all organisational strategy, policies, plans/schedules and standards relating to change and release management activities, under supervision		
	Provide accurate and timely information about windows for change and/or freeze periods to any individuals who may be involved in the submission or sponsorship of change requests, under supervision		
	Correctly select the procedures, tools and techniques to use for change and/or release management activities , under supervision		
	Comply fully with all relevant and applicable legislation, regulations and external standards relating to change and release management activities and any relevant commercial and contractual arrangements with external suppliers providing releases and changes		
	Correctly identify when releases and changes are scheduled to be issued by internal and/or external providers, under supervision		
	Proactively liaise with all individuals involved in the raising or sponsorship of change requests, advising them of decisions made by the change management/advisory board (or equivalent body/ individual), under supervision		
	Correctly apply strategies, policies, plans/schedules, standards and targets relating to change and release management activities		
	Report clearly and in a timely manner all change requests approved for a particular window for change to sponsors, stakeholders and other individuals involved in change and release management activities		
	Accurately report any emergency changes that need to be scheduled and implemented to sponsors, stakeholders and other individuals involved in change and release management activities		
	Liaise proactively with all internal and external individuals and groups who have developed/provided IT/technology elements that are included in a release and/or change request and any individuals affected by the implementation of changes and/or releases		
	Correctly implement and maintain the strategy, policies, plan, standards, procedures, tools, techniques and plans/schedules that apply to change and/ or release management activities		

Correctly identify the implications of business objectives, the service strategy and service delivery/operation objectives on change and release management activities		
Correctly identify when, why and how unplanned/emergency changes need to be progressed and implemented		
Effectively implement and maintain the schedule of windows for change and freeze periods		
Implement and maintain an effective and accurate release plan and associated schedule for any particular IT/technology system, service and/or asset		
Correctly identify what actions are needed in the event of a failure during change and/or release management activities, to facilitate informed decision making by others		
Provide specific, understandable and timely advice and guidance to others on all aspects of change and/or release management activities , including the application of best practice and when it is appropriate to seek internal and/or external assistance for the assessment of proposed changes and/or releases		
Negotiate effectively with all internal and external providers and groups who have developed/provided IT/technology elements that are included in a release and/or change request and/or all individuals who may be impacted by the implementation of a change/release		
Design effective and suitable strategy, policies, plans, standards, procedures, tools, techniques, plans/schedules, metrics and standards relating to change and/or release management activities		
Correctly identify what actions to take in the event of change and release management not supporting the business needs, service delivery/operation objectives and/or the service strategy for the/ an organisation		
Ensure that accountability for any particular release of an IT/ technology system, service and/or asset is delegated appropriately		
Effectively manage the assessment of external providers of change and release management services, reviewing and making appropriate decisions on proposals for their use and contracting with providers where appropriate		
Make well reasoned decisions on the release plan and associated schedule relating to any IT/technology system, service and/or asset		

Negotiate and make considered decisions on the size and frequency of windows for change and freeze periods as required to meet the needs of sponsors, stakeholders and other individuals within the organisation		
Correctly source and accurately collate all relevant information about the releases and changes that are to be provided by internal and/or external providers, under supervision		
Correctly gather and accurately collate all relevant information about scheduled change freeze periods the schedule of windows for change, under supervision		
Accurately and completely document all change requests received, in a timely manner, in line with procedures and under supervision		
Correctly collate and accurately document the necessary information about all proposed changes for any particular window for change, so that it may be used to inform change management decision making		
Assist others in sourcing information about any scheduled/planned change so that it may be assessed through change management		
Assist others in sourcing information relating to the content and schedule of any release provided by any internal and/or external provider		
Correctly select the procedures, tools and techniques to use for change and/or release management activities , under supervision		
Comply fully with all relevant and applicable legislation, regulations and external standards relating to change and release management activities and any relevant commercial and contractual arrangements with external suppliers providing releases and changes		
Correctly identify when releases and changes are scheduled to be issued by internal and/or external providers, under supervision		
Proactively liaise with all individuals involved in the raising or sponsorship of change requests, advising them of decisions made by the change management/advisory board (or equivalent body/ individual), under supervision		
Correctly apply strategies, policies, plans/schedules, standards and targets relating to change and release management activities		
Report clearly and in a timely manner all change requests approved for a particular window for change to sponsors, stakeholders and other individuals involved in change and release management activities		

Accurately report any emergency changes that need to be scheduled and implemented to sponsors, stakeholders and other individuals involved in change and release management activities		
Liaise proactively with all internal and external individuals and groups who have developed/provided IT/technology elements that are included in a release and/or change request and any individuals affected by the implementation of changes and/or releases		
Correctly implement and maintain the strategy, policies, plan, standards, procedures, tools, techniques and plans/schedules that apply to change and/or release management activities		
Correctly identify the implications of business objectives, the service strategy and service delivery/operation objectives on change and release management activities		
Correctly identify when, why and how unplanned/emergency changes need to be progressed and implemented		
Effectively implement and maintain the schedule of windows for change and freeze periods		
Implement and maintain an effective and accurate release plan and associated schedule for any particular IT/technology system, service and/or asset		
Correctly identify what actions are needed in the event of a failure during change and/or release management activities, to facilitate informed decision making by others		
Provide specific, understandable and timely advice and guidance to others on all aspects of change and/or release management activities , including the application of best practice and when it is appropriate to seek internal and/or external assistance for the assessment of proposed changes and/or releases		
Design effective and suitable strategy, policies, plans, standards, procedures, tools, techniques, plans/schedules, metrics and standards relating to change and/or release management activities		
Ensure that accountability for any particular release of an IT/ technology system, service and/or asset is delegated appropriately		
Effectively manage the assessment of external providers of change and release management services, reviewing and making appropriate decisions on proposals for their use and contracting with providers where appropriate		
Make well reasoned decisions on the release plan and associated schedule relating to any IT/technology system, service and/or asset		

Negotiate and make considered decisions on the size and frequency of windows for change and freeze periods as required to meet the needs of sponsors, stakeholders and other individuals within the organisation		
Correctly source and accurately collate all relevant information about the releases and changes that are to be provided by internal and/or external providers, under supervision		
Correctly gather and accurately collate all relevant information about scheduled change freeze periods the schedule of windows for change, under supervision		
Accurately and completely document all change requests received, in a timely manner, in line with procedures and under supervision		
Correctly collate and accurately document the necessary information about all proposed changes for any particular window for change, so that it may be used to inform change management decision making		
Assist others in sourcing information about any scheduled/planned change so that it may be assessed through change management		
Assist others in sourcing information relating to the content and schedule of any release provided by any internal and/or external provider		
Correctly identify what information needs to be gathered and/or referenced about any particular change and/or release to inform change request assessment		
Accurately source and gather all relevant information about any unplanned/emergency change, under supervision		
Ensure that all change requests received contain correct and complete information for them to be assessed by the change management/advisory board (or equivalent body/individual)		
Accurately and fully document the procedures, tools and techniques relating to change and/or release management activities, under supervision		
Accurately document the release plan and associated schedule relating to any IT/technology system, service and/or asset, under supervision		
Accurately document all decisions made by the change management advisory board (or equivalent body/individual) on all change requests reviewed, including which changes have been approved for inclusion and scheduled for implementation in any particular window for change, under supervision		

Provide accurate and timely information about any change and/or release that is required by individuals involved in its assessment, under supervision		
Manage and monitor all change requests received by change management, critically analysing them in order to inform the decision making, change management/advisory board (or equivalent body/individual)		
Correctly identify the implications of not implementing or delaying a release provided by an internal and/or external provider		
Ensure that the build of any particular release is reflected in the plan, schedule and contents documentation as directed		
Correctly identify and concisely present, any particular release plan and associated change schedules for approval and review by relevant people, sponsors, stakeholders and other individuals		
Correctly identify the risks and benefits associated with any proposed change and/or release as directed		
Correctly identify all individuals and groups who needs to be involved in the assessment of any particular change request as directed		
Ensure that timely and thorough analysis and review of all proposed changes and releases takes place against the current IT/ technology configuration as directed		
Ensure that all change conflicts are identified, analysed and resolved prior to any approval of changes and/or releases		
Correctly identify and report any potential change conflicts and the action taken to resolve them through the identification of their relative priority, to sponsors, stakeholders and other individuals involved in change and release management activities		
Correctly use all relevant findings from the assessment of the impact of proposed changes on the current IT/technology configuration, so that they may inform the decision making of the change management/advisory board (or equivalent body/ individual)		
Clearly report all relevant decisions made by change management/ advisory board (or equivalent body/individual) to the sponsors, stakeholders of each change request		
Design appropriate releases and associated, effective release plans and schedules for a particular IT/technology system, service and/or asset		

	Critically analyse the implications of not implementing or delaying a release provided by an internal and/or external provider to inform decision making		
	Closely monitor and effectively manage the planning, scheduling and implementation of required changes and release, including the timely progression of emergency changes		
	Routinely monitor and accurately report the quality and effectiveness of change and release management activities		
	Critically review and make appropriate and well-reasoned decisions on all change requests received by change management, their relative priority and any change request conflicts, prior to their authorisation to the board (or equivalent body/individual)		
	Make timely and appropriate decisions on what actions are needed in the event of failure during change and/or release management activities		
	Critically review the quality and effectiveness of external providers of change and/or release management services, taking action in the event of them not supporting the business needs, service delivery/operation objectives and/or the service strategy		
	Provide understandable and specific advice and guidance to other individuals on the most appropriate approaches to use to build/combine any release for an IT/technology system, service and/or asset		
	Provide clear and considered advice and guidance to others on the potential implications to the organisation of not implementing any release provided by internal and/or external providers		
<b>Carry out designated service operations activities under supervision</b>	Follow the procedures, tools, and techniques that apply to service operations and event management activities, as directed		
	Comply with any relevant legislation, regulations, and external standards relating to service operations and event management activities, in own area of accountability		
	Provide information, as appropriate, to relevant people on the progress of service operational tasks against schedules		
	Restart tasks within operational schedules, where appropriate, under direction		
	Assist others in communicating with internal and external individuals and groups involved when issues arise in service operations		

## ANNEX A.14: CHANGE A TRANSFORMATION

Requirement	Indicator	Compliance	
		YES	NO
<b>Assist in identifying requirements for a change management assignment, under direction</b>	Assist others in the identification of business requirements for a specified change management assignment		
	Assist others in identifying the information necessary to conduct a change management assignment		
	Assist others in gathering evidence for any change management proposals and plans that have been developed by others to meet the business requirements		
	Follow the strategy, policies, plans and standards relating to change management		
	Correctly use the procedures, tools and techniques for undertaking a change management assignment		
	Comply with any relevant legislation, regulations and standards relating to change management, in own area of accountability		
	Correctly select and apply the procedures, tools and techniques for undertaking change management assignments		
	Use and apply the systems development lifecycle, as appropriate to change management assignments, in line with organisational strategy, policies and standards		
	Identify the scope, characteristics and requirements of change management assignments, through the evaluation of information available and the application of own judgement		
	Identify the internal and external drivers for a change management programme and the associated benefits		
	Proactively identify and evaluate the range of complex and non-routine business opportunities that require change management support for them to be realised		
	Identify and select an appropriate range of change management options, proposals and plans that meet business requirements that may incorporate a range of complex and non-routine issues and involve one or more business functions		
	Identify, proactively, the range of strategic, complex and non-routine business opportunities that require the support of change management programmes for them to be realised		
	Identify the internal and external drivers for change management programmes and the associated benefits, for an organisation		

	Identify when and how to use external providers of change management services and which providers to use, applying knowledge of the organisational culture		
<b>Gather, document and communicate information relating to a change management assignment, under direction</b>	Gather and document clearly and accurately information relating to a change management assignment		
	Source and collate relevant information about projects and programmes that require change management to be applied in order for them to be effective		
	Assist others in documenting options, proposals and plans arising from a specified change management assignment		
	Assist others in communicating effectively and in a timely manner with a range of individuals during a change management assignment		
	Gather all information relevant to the organisational structure and culture that may impact on change management assignments		
	Gather and collate qualitative and quantitative evidence to support any options, proposals and plans to address change management requirements, as directed		
	Document any proposals, plans and benefits associated with change management assignments clearly and accurately, as directed		
	Document, clearly and precisely, the progress of change management implementation, as directed		
	Document any organisational, process, IT and other technology implications of change management deliverables, clearly and accurately		
	Verify information used during change management assignments		
	Design, implement, document and maintain an appropriate change management plan to support business needs, clearly, accurately and in a timely manner		
	Apply lessons learned from prior relevant experience and best practice in change management as appropriate to the context and characteristics of the current change management programme		
	Interpret change management approaches, proposals and plans, applying own judgement to information available, in order to establish which may meet the business requirements most effectively		
	Design the vision for change management programmes that will be realised in an clear and understandable manner		

	Design, develop, implement and maintain effective strategy, policies and standards associated with change management programmes and their alignment with legislation, regulations and standards		
	Develop and present sound and persuasive proposals to use change management programmes to ensure the realisation of strategic business opportunities for an organisation		
	Develop and implement appropriate education and training programmes to support change management programmes		
<b>Assist in the design, implementation and maintenance of change management plans and assignments</b>	Assist others in the design of a change management plan to support business needs		
	Assist others in the planning, implementation and maintenance of change management assignments, under direction		
	Manage change management programmes, within own area of accountability, in a timely manner as required to meet the specified business needs		
	Manage relationships effectively with a wide range of internal and external individuals and bodies during any change management programme		
	Monitor change management programmes, within own area of accountability, to ensure quality and compliance with all legislation, regulations and standards		
	Review and take account of culture, the influence of particular individuals and relevant real life factors and constraints, in any change management programme		
	Respond effectively and in a timely manner to the different stances that individuals may adopt in response to change		
	Verify any information used by self and others, as appropriate, during any change management programme		
	Ensure information produced by business analysis activities is available to and applied correctly to a change management programme		
	Review the quality and effectiveness of change management programmes and any external providers involved in their delivery, taking action where appropriate		
	Monitor the implementation of change management programmes, using judgement and experience to ensure that business needs are being met		
	Manage any potential resistance to change from a wide range of individuals and groups across the organisation or organisations		

	Make decisions on the actions required by self and or others, in the event of change management programmes not meeting the business needs		
	Advise and guide other individuals on all aspects of change management, including best practice through application of own experience and knowledge		
<b>Communicate change management information, under direction</b>	Select and use the most appropriate communication styles with sponsors, stakeholders and other individuals during change management assignments		
	Assist others in the reporting of change management assignments		
	Assist others in the clear and empathetic communication of the vision and benefits associated with change to a wide range of sponsors, stakeholders and other individuals		
	Communicate the vision and benefits associated with change clearly, persuasively and in a timely manner, to a wide range of sponsors, stakeholders and other individuals and bodies		
	Report the progress of any change management programme to a wide range of sponsors, stakeholders and other individuals and bodies		
	Communicate effectively and persuasively with senior sponsors, stakeholders and external bodies and individuals on the strategic value, role and importance of change management		
	Negotiate, agree and authorise contracts, decisions, actions and approaches that are required by other individuals across the organisation during change management programmes		

## ANNEX A.15: COMMON COMPETENCIES: INTERPERSONAL COMPETENCIES

Requirement	Indicator	Compliance		
		YES	NO	
<b>Communicate effectively</b>	Communicate accurately, clearly, and timely, relevant information			
	share information honestly and tactfully			
	Predict others' responses and respond appropriately to the situation			
	Communicate work status and issues			
<b>Exhibit qualities of a good team player</b>	Motivate others to develop a shared vision of the organization's future			
	Encourage and accept other people's ideas			
	Perform all delegated duties as necessary			
	Interface and build good relationship between customers and stakeholders			
	Participate openly on team discussions			
<b>Plan and manage time effectively</b>	Prioritize assigned tasks to ensure timely delivery of services			
<b>Demonstrate basic problem-solving skills and appropriately apply proven solutions</b>	Gather information, evaluate options, and offer appropriate solutions			
	Anticipate hindrances and plan alternative courses of actions			
<b>Initiate continuous professional development</b>	Use computer-based and other training materials			
	Explain the need for lifelong learning			
	Adhere to standards and industry practices			
<b>Explain current business environment and infrastructure</b>	Describe the overall systems environment			
	Identify systems maintenance support, Internet connectivity needed, security			
	services, and technical problems that may arise			
	Identify alternative products			

<b>Advocate data security</b>	Build credibility by being trustworthy and reliable			
	Make decision, initiate urgent actions, and remain calm in stressful situations			
	Competently and patiently respond to customer requests			
	Explain data confidentiality, integrity, and audit ability (CIA)			
	Conduct periodic Risk Assessment and Management			
<b>Identify the important security and legal issues associated with using the computers</b>	Deal with the challenge of preventing inappropriate use of computer equipment and peripherals			

**ANNEX A.16: CAPACITY DEVELOPMENT FOR END USERS (PUBLIC SECTOR WORKFORCE)**

Requirement	Indicator	Compliance	
		YES	NO
<b>Introduction to e-Government</b>	MCA's have conducted sensitizes and training for Government employees in harnessing the potential of ICT in the delivery of Government services		
<b>Producing Government Documents</b>	MCA's have conducted training to end users in various Government ministries and departments to the use of word processing in production of standard Government documents		
<b>Government Communication</b>	MCA's have conducted training to end users in various Government ministries and departments to the use of ICT for effective communication and collaboration		
<b>Preparing Government Budget</b>	MCA's have conducted training to end users in various Government ministries and departments to the use of word processors and spreadsheets in preparing Government estimates.		
<b>Making Presentations</b>	MCA's have conducted training to end users s in various Government ministries and departments on how to make effective presentations using presentation software		

<b>ICT Security</b>	MCA's have conducted training and awareness to end users on the basics of ICT security covers issues and principles of security and information assurance including confidentiality, integrity, authentication, identification, authorization, availability and access control		
<b>User Support</b>	MCA's have conducted training on quality customer service skills for effective customer care strategies needed to provide excellent service.		
	Are end users acquired skills on of Help Desk effectiveness for their interpersonal skills, better communication, getting and giving good information, handling challenging behavior and managing telephone interactions.?		
<b>Specific MCA applications</b>	Are all applications provided by vendors to an MCAs shall have a component for end user training and operational manual for specific applications deployed by MCAs?		
	Are Vendors include an e - learning component on the MCAs web portal for systems provided		
<b>e-Records Management</b>	MCA's have conducted training programmes for records officers on the importance of e-Records management		
<b>e-Front office</b>	Are MCA conducting Customer care training for personnel handling citizens services at common service centres?		
<b>Project management</b>	MCA's have conducted training for staff implementing, managing and working on ICT projects MCAs shall ensure that all ICT projects have a training component in them. It shall further ensure that ICT officers are capacitated to supervise outsourced ICT projects, to undertake quality assurance and compliance and manage the project deliverable after project commissioning and enable knowledge transfer		
<b>Business Process Reengineering</b>	MCA's have conducted training on business process reengineering for senior officers		
<b>ICT Leadership and Governance</b>	MCA's have conducted trainings on ICT leadership and governance for senior officers to champion ICT project implementations		
<b>ICT induction course</b>	MCA's have conducted induction to all current and newly recruited personnel on ICT legal framework in Kenya		
<b>Digital Literacy Assessment</b>	MCA's are conducting skills assessments for personnel to determine level of literacy awareness, competencies and expertise		
<b>e-Learning</b>	MCA's have implemented learning management systems to ensure personnel skills development and reduce cost of learning.		

<b>ICT Global Certification</b>	Are MCAs implementing global standardized certification programs on productivity to end users that ensure international best practice?		
<b>Curriculum</b>	MCAs shall implement customized curriculum to suite different productivity levels of skills and competency.		
<b>Skills inventory systems</b>	MCAs have implemented an skills inventory database systems that provide framework for Monitoring and evaluating ICT training programmes and skills levels		
<b>ICT resource centres</b>	MCAs have implemented ICT resource centre that has computer facilities to ensure all personnel can all can access and receive government information		
<b>Review of schemes of service</b>	MCAs shall regularly review of the ICT scheme of service to keep up with dynamics of technology advancement so that training career progression is in accordance with international standards and best practice.		
<b>Digitization and automation training</b>	MCAs shall conduct digitization training for personnel responsible for automation in MCAs		
<b>e-Literacy</b>	MCAs have equipped the citizens with ICT literacy skills, knowledge and competencies to access e-services in an ICT-driven knowledge society		
<b>e-Citizen</b>	MCAs have equipped the citizens with knowledge and competencies in using Internet based tools for communication available online services and skills on searching for, accessing and using information from the Internet		
<b>Government of Kenya eService</b>	MCAs have equipped the citizens with knowledge and competencies in using GOK e-Services- access ,communication and performing transactions with Government MCAs systems		
<b>ICT Security</b>	MCAs have conducted awareness to citizens on the basics of ICT security on confidentiality, integrity, authentication, identification, authorization, availability and access control		
<b>E-services sensitization and Awareness</b>	MCAs have implemented strategies/programmes and policies for creating awareness on the role of information and ICT for the improvement of quality of life and national development		
<b>eLearning on eservices</b>	National and counties governments have implemented citizen online education platforms for e-services		
<b>Competency surveys</b>	National and counties governments have conducted competencies surveys to determine the level of ICT literacy and adoption by the citizens		

## ANNEX A.17: ICT COMPETENCY REQUIREMENTS FOR CITIZENS

## ANNEX A.18: ACCREDITATION OF ICT INSTITUTIONS / TRAINING PROVIDERS

Requirement	Indicator	Compliance	
		YES	NO
<b>Legislative Requirements</b>	Registration as a legal entity		
	Registration with KRA		
	Registration with ICT Authority		
	Audited financial statement		
	Health and safety certificate		
	Owner registration document/lease agreement. (Proof of Ownership or Lease Agreement of learning facilities)		
<b>Contact information</b>	Provider has functional office.		
	Provider can provide postal address.		
	Provider can provide physical.		
	Provider has telephone and fax facilities.		
	Provider has email and internet facilities.		
<b>Administration Systems</b>	Provider has Business plan.		
	Provider has Organ gram which outlines different job positions for the functionality of the organisation, indication of filled and vacant position where applicable.		
<b>HR Policies and Procedures</b>	Staff recruitment, selection and appointment policies and procedures.		
	Staff Performance Management.		
	Skills Audit and Staff Development Procedure		
<b>Management of Staff</b>	Facilitators, Assessors and Moderators CV's,		
	Facilitators, Assessors and Moderators Qualifications		
	Assessors and Moderators registration letters from ICTA.		
	Facilitators, Assessors and Moderators employment contracts outlining job		
<b>Learner Management</b>	Learner Recruitment		
	Admission policy and procedure		
	Cancellation policy and procedure		
	Guidance and support Policy and Procedure		
	Placement policy and procedure		
<b>Assessment Management</b>	Assessment policy and procedure.		
	Moderation policy and procedure.		
	Certification policy and procedure.		

<b>Curriculum Programme Outline</b>	Purpose of programme.		
	Targeted group		
	Duration/Notional Hours		
<b>Curriculum Alignment/ Mapping against registered ICT National Qualification/ Standard</b>	Qualification/Unit Standard Title		
	An ID		
	National ICT Qualification Framework Level		
	Credits		
	Unpacking of every unit standard; its specific outcomes and assessment criteria		
	Material where they are covered.		
	Chapters, paragraphs and page numbers.		
	How they are covered <ul style="list-style-type: none"> <li>• Delivery strategy.</li> <li>• Learning strategy.</li> </ul>		
	How they are assessed <ul style="list-style-type: none"> <li>• Assessment methods</li> <li>• Assessment tools.</li> <li>• Frequency of assessment</li> </ul>		
Required learning resources. <ul style="list-style-type: none"> <li>• Learner Materials.</li> <li>• Facilitator Material.</li> <li>• Assessment Guide</li> </ul>			
<b>Learning environment</b>	Floor Plan of the learning facilities		
	Number of Inventory list of Training equipment and furniture -		
	Adequacy and appropriateness of equipment /resources.		
	Number of Functional computers		
	Layout of the Network-topology		
	Number of Software and relevance to programmes offered.		
	Testing centre with required equipment (evidence of vendor certification of test centre)		
	Organization web portal		
	Digital /eLearning portal for continuous learners learning		
	Internet & E-mail connectivity		
<b>Customer Care</b>	Waiting rooms		
	Clear reception area		
	Tea rooms		

<b>Health</b>	Adequate bathrooms/toilets		
<b>Compliance</b>	Cleanliness		
<b>Safety</b>	First Aid Kit		
<b>Measures</b>	Adequate fire extinguishers		
	Cables neatly placed.		
	Emergency exits.		

## ANNEX A.19: ACCREDITATION OF ICT PROFESSIONALS

### 1. REGISTRATION OF ICT PROFESSIONALS

Applicant should be compliant with the standard on ICT Human Capital and workforce development, both ethically and in terms of professional qualifications in the area of expertise. ICT Authority shall issue a certificate of accreditation on compliance with the standard.

To commence the registration process, ICT Authority will register ICT Professionals according to four categories of registration. The professional registrations category includes the following:

- a. ICT Professional
- b. ICT Practitioner
- c. ICT Graduate
- d. ICT Technician

### 2. CODE OF PROFESSIONAL CONDUCT

Registered professionals and ICTA accreditation/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 ICT Authority website [www.icta.go.ke/standards/resources/](http://www.icta.go.ke/standards/resources/) and check if you meet the criteria for the registration category you wish to apply for, fill in details on the form then submit to the ICT authority offices. Pay the registration fee as tabulated below;

	REGISTRATION FEES	ANNUAL FEES
ICT TECHNICIAN	600	500
ICT GRADUATE	1000	1000
ICT PRACTITIONER	2000	1000
ICT PROFESSIONAL	5000	3000

#### Table 1:- Registration of ICT professionals

*In case of any difficulties or in need of more details please contact us via email [standards@ict.go.ke](mailto:standards@ict.go.ke)*

#### Step 2: Assessment Evaluation

ICT Authority 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 ICT Authority may contact individual's referees to ascertain the information filled in the applicant's application form.

## REGISTRATION FORM

PERSONAL INFORMATION		
<b>Personal Details</b>	Surname	
	Other Names	
	ID Number	
	Date of birth	
	Gender	
	Telephone	
	Email	
<b>Home Address</b>	Town/City	
	Address	
	Postal code	
	Country	
	Residence	
<b>Details of Employer</b>	Employer Name	
	Telephone	
	E-mail	
<b>Details of Contact Person</b>	Name	
	Telephone	
	E-mail	
MEMBERSHIP CATEGORY	REQUIREMENTS	SELECT CATEGORY
<b>ICT Technician Form:(ICTA/STD/TECH/F001)</b>	<p>Application fee: Ksh. 600 Annual subscription:Kshs.500 Submit</p> <ul style="list-style-type: none"> <li>• A duly filled Registration Application form for ICT Technician (ICTA/STD/TECH/F001) and signed Code of Conduct (ICTA/STD/PROF/F005)</li> <li>• Diploma certificate in ICT/ Engineering related field from accredited institution of learning; or Diploma certificate in any field from accredited institution of learning with proof of two years' experience practicing ICT;</li> </ul>	<p>Annual Registration</p>

	<ul style="list-style-type: none"> <li>• Copy of National ID/Passport.</li> <li>• Fees as above.</li> </ul>	
<p><b>ICT Graduate</b> <b>Form: ICTA/STD/GRAD/F002</b></p>	<p>Application fee: Ksh. 1000 Annual subscription:Kshs.1000 Submit</p> <ul style="list-style-type: none"> <li>• A duly filled Registration Application form for ICT Technician (ICTA/STD/TECH/F002) and signed Code of Conduct (ICTA/STD/PROF/F005)</li> <li>• Graduate certificate in ICT/ Engineering related field from accredited institution of higher learning</li> <li>• Copy of National ID/Passport.</li> <li>• Fees as above.</li> </ul>	
<p><b>ICT Practitioner</b> <b>Form:(ICTA/STD/PRACT/F003)</b></p>	<p>Application fee: Ksh. 5000 Annual subscription: Kshs.1000</p> <p>Submit</p> <ul style="list-style-type: none"> <li>• A duly filled Registration Application form for ICT Practitioner (ICTA/STD/PRACT/F003) and signed Code of Conduct (ICTA/STD/PROF/F005)</li> <li>• Proof to show that the applicant has been practicing ICT either through employment or private engagement for at least 2 years.</li> <li>• Copy of National ID/Passport</li> <li>• Fees as above.</li> </ul>	
<p><b>ICT Professional</b> <b>FORM:(ICTA/STD/PROF/F004)</b></p>	<p>Application fee: Ksh. 5000 Annual subscription: Kshs.3000 Submit</p> <ul style="list-style-type: none"> <li>• A duly filled Registration Application form for ICT Professional (ICTA/STD/PROF/F004) and signed Code of Conduct (ICTA/STD/PROF/F005)</li> </ul>	

	<ul style="list-style-type: none"> <li>• Graduate certificate in ICT/ Engineering related field from accredited institution of Higher learning or A Copy of the Registration Certificate for either ICT Graduate/Practitioner from ICTA.</li> <li>• Professional Certificate in the specific area from recognized institution by ICTA/government body</li> <li>• Letters of reference from employer(s) covering the previous two years confirming professional integrity</li> <li>• Statements of two referees detailing their knowledge of the applicant.</li> <li>• Fees as above.</li> </ul>	

#### 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)

**ANNEX A.20:INFORMATIONAL CHECKLIST**

Requirement	Indicator	Compliance	
		YES	NO
<b>Personnel Recruitment and Retention</b>	ICT shall ensure that IT personnel recruitment processes are in line with the overall Government personnel policies and procedures		
	Management shall implements processes to ensure that the organization has an appropriately deployed IT workforce that has the skills necessary to achieve organizational goals		
<b>Personal competencies</b>	ICT Managers in MCAs shall regularly verify that personnel have the competencies to fulfill their roles on the basis of their education, training and/or experience.		
	ICT Managers in MCAs shall define core IT competency requirements and verify that they are being maintained, using qualification and certification programs where appropriate.		
<b>Induction Competencies</b>	These are essential and mandatory foundation training administered to all ICT technical staff on entry into public sector, or as a refresher for new deployments in the ICT technical areas.		
	The purpose is to equip the technical personnel with essential knowledge to demonstrate fundamental concepts of the overall government's ,e-service delivery environment and code of regulations to effectively manage their specific ICT responsibilities		
	All employees shall be inducted with appropriate ICT orientation when hired and ongoing training to maintain their knowledge, skills, abilities, internal controls and security awareness at the level required to achieve organizational goals.		
<b>Performance Evaluation, Coaching and knowledge transfer</b>	MCAs shall be required to perform timely evaluation on a regular basis against individual objectives derived from the organization's goals, established standards and specific job responsibilities.		
	Each MCA shall establish an ITCB results oriented performance management system which should be implemented in the context of the MCA strategic plan.		
	MCA shall incorporate specific ICT training and capacity building performance indicators in the performance contract of the ICT function and ensure that the same indicators are reflected at higher levels of the performance contracting.		
	Employees should receive coaching on performance and conduct whenever appropriate.		

	MCA's shall take expedient actions regarding job changes, especially job terminations to ensure knowledge transfer needs to be arranged, responsibilities reassigned and access rights removed such that risks are minimized and continuity of the function is guaranteed		
<b>Training strategies</b>	Each MCA shall develop a strategic ICT training framework to address the training priorities articulated in the Vision 2030 and national ICT Master plan and shall be guided by the strategic objectives of the MCA a strategy framework under which the ICT training is implemented shall be communicated and understood by all HRD's and ICT functions.		
<b>Competency Framework</b>	Each ICT professional shall have defined minimum ICT skills/ qualifications to ensure that they have the knowledge to perform the ICT activities.		
	There shall be a program to upgrade the skills, qualifications, competencies of those employees who do not meet that minimum threshold.		
<b>Mode of Training</b>	The training shall have a blend of elearning and face to face implementation- Classroom/Lab setup, e-Learning		
<b>Institutions delivering capacity building programmes</b>	ICT Trainings and capacity building shall be conducted only by institutions that have been accredited by ICT Authority		
<b>e-competency assessment</b>	Each MCA shall undertake a multi-level e-competency assessment on new deployments to ascertain the viable service delivery areas to deploy the staff.		
	Each MCA shall develop its specific e-Competency framework that supports the national ITCB vision. These competencies shall incorporate technical, core skills and soft skills which should be possessed by each player at different levels of proficiency for different e-services. The framework shall include competencies required for service delivery, individual career and entrepreneurial development. In order to achieve competency-based human resource development, the TNA should be cognizant of the mapping of training priorities to the e-competency framework.		
	PPP shall be strengthened to enable knowledge and technology permeation between the government, private sector, institutions of higher learning and non State actors.		

<b>Multi-skilled</b>	MDAs capacity building initiatives shall ensure that ICT technical staffs are multi-skilled, are able to efficiently translate business requirements into technical requirements. ICT technical activities shall be aligned		
<b>Accredited professional qualifications</b>	The government ICT scheme of service shall align the structure so as to provide due consideration for accredited professional qualifications to enable employees who acquire them grow in their public sector careers.		
<b>Incentives and motivation</b>	The MCA shall devise incentives (within the government framework) to retain skilled employees to reduce incidents of brain drain and ensure that the MDAs get the returns on its training investments		
<b>ICT Literacy adoption</b>	MCA shall ensure there is a minimum ICT literacy, skill and competency for all government employees.		
<b>Multi-skilled</b>	MDAs capacity building initiatives shall ensure that ICT technical staffs are multi-skilled, are able to efficiently translate business requirements into technical requirements. ICT technical activities shall be aligned		
<b>Management skills</b>	ICT training for technical personnel shall include training on management skills that are appropriate for the individual MCA.		
<b>ICT resource centers</b>	Each MCA shall have an ICT resource, research and development center which shall be adequately equipped to handle all challenging ICT issues escalated to them. This center shall also facilitate other officers in undertaking tasks that require more powerful, unique, or higher specification resources. ICT staff shall be facilitated with the tools and resources within the MDA in which they provide technical support.		
	MCA shall provide a resources center/lab consisting of a min of 10 computer to enable support staff have access emails services, and provide for e-learning and other eservices.		
	MCA shall be established Community ICT resource centers to provide public access to government e-services and to enable equal access to government services for all.		
<b>Partnership</b>	NCA shall set administrative structures to support and monitor community resource centers.		
<b>ICT road shows</b>	MCA shall partner with the local private institutions, public institutions, cyber centres in the rural areas and provide incentives to deliver e-services.		
	MCA shall undertake government e-services awareness and sensitization activities at the local levels		

<p><b>Management of and implementation of capacity activities</b></p>	<p>ICT managers shall provide a key role in the MCA's Training Committee (MTC), and ICT personnel shall be involved in the planning of ICT training activities for all levels of staff in MCAs and citizens. All ICT competencies programs shall be managed/coordinated centrally by ICTA</p>		
<p><b>Compliance to related national policies and priorities</b></p>	<p>The national ICT policy shall prevail and standard shall operationalize and support such national ICT policy, national ICT Masterplan. Each MDA shall be responsible for communicating the national ICT agenda. All training shall be undertaken in the context of ICT best practices and as guided by the national ICT policies and guidelines</p>		
<p><b>Equity and standardization</b></p>	<p>Capacity building frameworks shall be harmonized and shall reflect the needs of the individual MCAs.</p>		
	<p>There shall be equity in ICT capacity development opportunities for end users to ensure that development of competencies for improved service delivery is across the entire public service.</p>		
	<p>Group training shall be planned and executed based on the circumstances of the various target groups to ensure that all employees, irrespective of their age, get trained and achieve the objective of such training.</p>		
	<p>Each training program shall inculcate the ICT value systems and ICT professional ethics in the public sector</p>		
<p><b>Skills inventory systems</b></p>	<p>MCAs have implemented an skills inventory database systems that provide framework for Monitoring and evaluating ICT training programmes and skills levels</p>		
	<p>Each MCA shall keep an up to date skills inventory and training database of its end users. Such records will inform ICT staff career growth as well as inform on literacy level to meet competency and institutional requirements of those skills.</p>		
	<p>MCAs provide evidence for every training undertaken and shall include a training report, dissemination of curricula contents and a knowledge sharing mechanism.</p>		
<p><b>Monitoring and evaluation framework</b></p>	<p>Each MCA shall employ an appropriate and continuous improvement, monitoring and evaluation framework to assess the impact of the ICT training investments. This assessment shall be undertaken annually before the next planning period.</p>		

<b>Training curriculums</b>	All ICT training programmes shall comply with an approved/ acceptable curriculum so as to ensure that the trainees acquire the competencies and deliver the value that the training was intended. ICT training curricula developments shall be aligned to the national government's ICT objectives and government pledges		
<b>Training institutions</b>	ICT Trainings for the public servants and the citizens will only be conducted by institutions certified and accredited by ICTA		
	The MDA shall ensure that training is only conducted in accredited institutions using the approved curricula. Qualifications from non-accredited training providers shall not be recognized by the Government.		
	There shall be an accreditation review forum for all the public service and private training providers (KSOG, KIM, Universities, NGOs, etc). The forum shall liaise with relevant accreditation bodies such as the Kenya Qualifications Agency established by the Kenya Qualifications Framework Bill (2012) and shall guide on authentication of training certifications, examining bodies, curricula, minimum training durations, type of training providers, etc.		
<b>Professionalism</b>	Each MCAs shall adhere to the requirements of a national ICT professional body to vet ICT training quality. In the absence of the professional body, the MCA shall adequately consult other relevant ICTA to ensure that ICT training activities are done professionally and harmonized across the public sector.		
<b>Induction, coaching and mentorship</b>	Each MCAs shall implement mechanism for staff induction program, mentoring and coaching, over and above the conventional ICT training, to ensure that staff career growth. Induction of ICT staff will be essential in ensuring that they provide critical support that is line with the core functions of the MDA.		
<b>TNA</b>	Each MCA shall undertake comprehensive Training Need Assessment (TNA) during the budgeting period to ensure ICT training plans shall be based on actual and current needs and give feedback on prioritizations through transparent processes.		
<b>Youth Internships</b>	Each MCA, provide internship and management graduate trainee programs to the youth to ensure they gain experience for employability Special ICT talents and innovations shall be identified and nurtured		

<b>Information security awareness</b>	Each MCA shall conduct an on-going information security awareness and training program for all employees to explain specific ICT security responsibilities and practices. Information Security personnel within the ICT department and functional heads shall be responsible for developing, implementing, and maintaining the awareness and training program.		
<b>Citizen training locations</b>	Each NCAs shall establish centers for training and shall be placed in locations convenient to the citizens, such as shopping malls and major public transportation hubs. They shall offer citizens tremendous time savings, while also delivering services with greater courtesy and professionalism and reducing overhead expenses of the government		
<b>Training manual</b>	A training manual shall be developed for end user and citizens training programs to ensure that capacity building are harmonized		
<b>ICT training Strategy</b>	MCAs develop an ICT training strategy		
<b>ICT Capability framework</b>	Are MCAs implemented a capability framework in training of personnel		

## APPENDIX I: IMPLEMENTATION

Implementation of Standards will be the responsibility of individual MCA while ICTA shall provide enforcement and an oversight role for its implementation.

### ROLES AND RESPONSIBILITIES

#### MCAS RESPONSIBILITIES

ISSUE	DESCRIPTION AND REQUIREMENT
<b>ICT policies and guidelines</b>	MCAs shall develop ICT policies and strategies to enable citizens enhance their capacities to consume and interact with government services.
	In circumstances where the ICT human capacity standards implementation is challenging, specific Government policies and guidelines shall provide how the objectives will be achieved.
<b>Performance management</b>	MCAs shall integrate the Standards into their strategic planning cycle and performance management system to provide a sustained implementation.

#### ICT AUTHORITY RESPONSIBILITIES

ISSUE	DESCRIPTION AND REQUIREMENT
<b>Coordination</b>	<ul style="list-style-type: none"> <li>a. Provide oversight, enforcement and coordination role for the management and review of the standard standards</li> <li>b. Develop ,review the standards and required policies and frameworks and cascaded to the relevant bodies</li> <li>c. Champion and act as a clearing house for ideas and information of the e-Competency Standards and process in Kenya</li> <li>d. Inform on best practices, global trends, international practices of e-Competency Standards</li> </ul>
<b>Auditing</b>	Human capacity standards shall be implemented in all government services through its monitoring & evaluation oversight function.
<b>Resources</b>	Shall ensure adequate mechanisms are put in place to operationalize and sustain the Capacity competency activities
<b>Stakeholder engagement</b>	Provide a platform for engaging all the stakeholders within the government and other sector players on the development and administration of the e-Competency framework in the public sector

<b>Standard committees</b>	<p>a. Establish a national ICT Human capital standards sub-committee in conjunction with private sector alliances that contribute to the national ICT capacity objectives and gather likeminded institutions to develop methodologies for standards implementation.</p> <p>b. This committee shall work in collaboration with the national standards and quality assurance entity in the government.</p> <p>c. A national ICT Standards secretariat shall be established within ICTA to monitor compliance to Capacity Competency Standards. This committee shall be part of the national standards development and regulatory body</p>
<b>Certification</b>	ICTA shall certify all firms and professionals in the iCTA sector as per the standards and policies on accreditation and professionalism

## APPENDIX II: MONITORING AND EVALUATION

1. An M&E framework as a management tool shall be used to enable continuous and timely feedback mechanisms to strengthen and rectify deficiencies
2. The M&E structure shall facilitate the necessary ICT capacity building; prompt decision-making; accountability to stakeholders; and objectivity.
3. The framework shall ensure that a suitable results-oriented approach is adopted and institutionalized for human capital activities.
4. MCAs shall develop capacity indicators and reporting mechanisms to ensure that the agreed standard objectives are monitored effectively.
5. There shall be regular review of the standard to ensure it remains relevant to the modern day realities.
6. The standards shall be used as reference points to ensure public compliance to capacity competency activities.
7. The e-competency framework and national qualification framework shall provide the parameters and indicators for comparing the competency levels with the implementation status.

<b>NATIONAL LEVEL</b>	The national entity responsible for standards, quality assurance and compliance will monitor the implementation of this policy based on a systematic approach to ITCB
<b>MCA</b>	Each MCA will develop a Training Management Information System (TMIS) to administer all aspects of ITCB strategy.
<b>TRAINEES</b>	The trainees will comply with the specific training requirements as established in the human capital standards
<b>TRAINING INSTITUTION/ PROVIDERS</b>	This will be based on accreditation. Pre-training and post-training information on courses, trainer resources and course content based on pre-determined criteria and intended impact shall be provided to the MCAs upon completion
<b>AMENDMENTS</b>	This ICT competency standard shall be reviewed at most every five years. However, the MCA in charge of executing the policy may, from time to time, propose amendments that are necessary to enhance the objectives of this policy. Before the completion of such amendments, the ICTA Chief Executing office shall provide opportunities to its stakeholders to comment on the proposal

## CONCLUSION

In order to implement the ICT human capital Standards, the government shall develop capacity building and competency framework, human capital development and management policy, National ICT qualification framework, Institution accreditation framework and policy in order to align to international IT best practice.

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