SFIA 9 BETA July 2024

This document presents the content of the SFIA 9 beta release. The purpose of the beta is to get additional feedback from the global SFIA community.

While this content is likely to be close to what is finally published as the SFIA 9 Release all content is subject to change at this stage.

Content may be substantially modified prior to launch or may never be released. Any queries you may have contact The SFIA Foundation.

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# Strategic planning ITSP

Creating and maintaining organisational-level strategies to align overall business plans, actions, and resources with high-level business objectives.

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| **Guidance Notes:**This skill is primarily focused on enterprise-wide strategic planning and management, rather than developing strategies for specific technical or functional areas. For senior managers or individuals working on their own technical or functional strategies, this skill may be too broad and high-level. Instead, they may require more specific skills related to their particular domain or area of expertise.Activities may include, but are not limited to:* conducting environmental analyses to inform strategy development
* collaborating with stakeholders to formulate and implement strategies and action plans
* using data analytics and digital tools to support strategic decision-making and monitor progress
* ensuring agility and flexibility in strategy execution to adapt to changing business needs
* communicating and embedding strategic management through objectives, accountabilities, and progress monitoring
* continuously reviewing and iterating strategic plans to maintain alignment with business goals
 |

## Level 4

Contributes to the collection and analysis of information to support strategy development.
Assists in the preparation of reports and insights for strategic planning.
Supports the communication of strategic plans and related change initiatives to relevant stakeholders.
Helps monitor progress against strategic objectives and provides feedback.

## Level 5

Collates information and creates reports and insights to support strategy management processes.
Ensures that all stakeholders are aware of the strategic management approach and timetables. Provides support and guidance to help stakeholders adhere to the approach.
Develops and communicates plans to drive forward the strategy and related change planning.
Contributes to the development of policies, standards and guidelines for strategy development and planning.

## Level 6

Sets policies, standards, and guidelines for how the organisation conducts strategy development and planning.
Leads and manages the creation or review of a strategy that meets the requirements of the business.
Develops, communicates, implements and reviews the processes which embed strategic management in the operational management of the organisation.

## Level 7

Leads the definition, implementation, and communication of the organisation’s strategic management framework.
Directs the creation and review of a strategy and plans to support the strategic requirements of the business.

# Information systems coordination ISCO

Coordinating information and technology strategies where the adoption of a common approach would benefit the organisation.

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| **Guidance Notes:**This skill is typically applied within a large organisation in which information and technology strategy function is devolved to autonomous units, or within a collaborative enterprise of otherwise independent organisations. Examples where a common approach would benefit the organisation include, but are not limited to, shared services, service integration and management, sourcing, supplier management, cloud strategy, enterprise architecture, security. |

## Level 6

Maintains awareness of the global needs of the organisation.
Promotes the benefits that a common approach to technology deployment will bring to the business as a whole.
Coordinates and collaborates with others on the promotion, acquisition, development, and implementation of information systems and services.

## Level 7

Establishes the organisation's strategy for managing information and communicates the policies, standards, procedures and methods necessary to implement the strategy.
Coordinates all aspects of management of the life cycle of information systems.
Represents the interests of the entire organisation to general management and external bodies on matters relating to information strategy.

# Information management IRMG

Enabling the effective management and use of information assets.

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| **Guidance Notes:**Information assets represent information deemed valuable by an organisation and may be held in many forms including, but not limited to, digital documents, printed material, microform, e-mail, chats and websites. Information may be structured or unstructured and may be created by internal or external sources.Specific laws and regulations may require organisations to maintain records of certain business activities and transactions for a minimum period.Activities may include, but are not limited to:* identifying, classifying, processing information that is used to support decision-making, business processes and digital services
* developing innovative ways of managing the information assets of the organisation
* governance of how information is used to support decision-making, business processes and digital services
* ensuring information can be discovered and delivered in line organisational policies and practices
* developing and promoting strategies and policies for the design of information architectures, structures and taxonomies
* implementing systems of cataloguing, metadata, indexing, and classification standards and methods used to organise information
 |

## Level 3

Supports teams and individuals to identify and organise information assets and repositories, in line with policy and practices.
Conducts routine searches for non-sensitive information needed to support organisational decision making.
Supports users to find and access information resources based on their requirements and approved access.

## Level 4

Enables the organisation to organise, control and discover information assets.
Supports the organisation to identify, catalogue and categorise information types and information repositories, in line with information management strategies and practices.
Enables users to find information through appropriate use of metadata and search tools.
Provides advice and guidance to enable good information management practices to be adopted across the organisation.

## Level 5

Ensures implementation of information and records management policies and standard practice. Communicates the benefits and value of information management.
Plans effective information storage, sharing and publishing within the organisation. Develops organisational taxonomy for information assets.
Provides expert advice and guidance to enable the organisation to get maximum value from its information assets.
Assesses issues that might prevent the organisation from making maximum use of its information assets. Contributes to the development of policy, standards and procedures for compliance with relevant legislation.

## Level 6

Leads and plans activities to communicate and implement information management strategies and policies.
Develops organisational policies, standards, and guidelines for information management.
Ensures that the information required to support the organisation is defined, and devises information management processes.
Coordinates internal and externally sourced information resources to meet specific business objectives.

## Level 7

Establishes and communicates the organisation's information management strategy.
Specifies at a strategic level the information needed to support the business strategy and business functions.
Directs information resources to create value for stakeholders.
Accountable for compliance with regulations, standards and codes of good practice relating to all aspects of information management.

# Enterprise and business architecture STPL

Aligning an organisation's technology strategy with its business mission, strategy, and processes and documenting this using architectural models.

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| **Guidance Notes:**Enterprise architecture is typically considered across four domains: business, data, applications and infrastructure technologies. It may also include information security or legal and regulatory compliance.Activities may include, but are not limited to:* translating business strategies and objectives into an operating model
* assessing current capabilities and identifying required changes to achieve objectives
* developing and maintaining roadmaps to guide the transition from the current state to the future state
* describing the interrelationships between people, organisation, service, process, data, information, technology and the external environment
* creating, iterating, and maintaining architectural models and views that embody key principles for the organisation's future state and evolution
* implementing enterprise architecture working practices to support and enable iterative/agile working
* interpreting business goals and drivers
* documenting and communicating constraints, standards and guiding principles necessary to define, assure and govern the required evolution
* using architectural models and processes to facilitate changes in the organisation's structure, business processes, information or data, business systems and infrastructure
* describing where and why the enterprise will benefit from cloud-based services.
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## Level 5

Develops models and plans to drive the execution of the business strategy, taking advantage of opportunities to improve business performance.
Contributes to creating and reviewing a systems capability strategy which meets the business's strategic requirements.
Creates and maintains roadmaps to guide the execution of business strategy and capability improvements.
Determines requirements and specifies effective business processes, through improvements in technology, information or data practices, organisation, roles, procedures and equipment.

## Level 6

Develops enterprise-wide architecture and processes to embed strategic change management within the organisation.
Leads the creation and review of a systems capability strategy aligned with business requirements. Develops and communicates roadmaps for enterprise architecture and strategic initiatives, ensuring stakeholder buy-in.
Captures and prioritises market and environmental trends, business strategies and objectives, , identifying the benefits of alternative strategies. Develops and presents business cases for approval, funding and prioritisation of high-level initiatives.
Sets strategies, policies, standards and practices to ensure compliance between business strategies, technology strategies, and enterprise transformation activities.

## Level 7

Directs the development of enterprise-wide architecture and processes to embed the strategic application of change in the management of the organisation.
Directs the creation and review of an enterprise capability strategy to support the strategic requirements of the business. Oversees the creation and implementation of roadmaps to guide long-term enterprise transformation and strategic alignment.
Identifies the business benefits of alternative strategies.
Ensures compliance between business strategies, enterprise transformation activities and technology directions, setting strategies, policies, standards and practices.

# Solution architecture ARCH

Developing and communicating a multi-dimensional solution architecture to deliver agreed business outcomes.

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| **Guidance Notes:**Activities may include, but are not limited to:* defining the planned operation and maintenance of the solution within a production environment, including changes to services, process, organisation, and operating models as well as technology
* ensuring that existing and planned solution components are compatible with relevant architectures, strategies, policies, standards and practices
* considering requirements for security, privacy and testing of solutions
* taking account of relevant architectures, strategies, policies, standards and practices
* identifying appropriate cloud services, evaluating their cost implications and optimising for cost-efficiency
* developing roadmaps to migrate components to cloud services
* developing and communicating an implementation roadmap
* providing guidance and risk-based governance to support solution implementation including managing requests for changes and deviations from specifications.
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## Level 4

Contributes to the development of solution architectures in specific business, infrastructure or functional areas.
Identifies and evaluates alternative architectures and the trade-offs in cost, performance and scalability. Determines and documents architecturally significant decisions.
Produces specifications of cloud-based or on-premises components, tiers and interfaces, for translation into detailed designs using selected services and products.
Supports projects or change initiatives through the preparation of technical plans and application of design principles. Aligns solutions with enterprise and solution architecture standards (including security).

## Level 5

Leads the development of solution architectures in specific business, infrastructure or functional areas.
Leads the preparation of technical plans and ensures that appropriate technical resources are made available. Ensures that appropriate tools and methods are available, understood and employed in architecture development.
Provides technical guidance and governance on solution development and integration. Evaluates requests for changes and deviations from specifications and recommends actions.
Ensures that relevant technical strategies, policies, standards and practices (including security and cost management) are applied correctly.

## Level 6

Leads the development of architectures for complex solutions ensuring consistency with agreed requirements.
Establishes policies, principles and practices for the selection of solution architecture components.
Manages trade-offs and balances functional, service quality, cost efficiency, and systems management requirements within a significant area of the organisation. Communicates proposed decisions to stakeholders.
Coordinates and manages the target architecture across multiple projects or initiatives. Maintains a stable, viable architecture and ensures consistency of design and adherence to appropriate standards across multiple projects or initiatives.

# Innovation INOV

Identifying, prioritising, incubating and exploiting opportunities provided by information, communication and digital technologies.

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| **Guidance Notes:**This skill focuses on a systematic, organisational approach to innovation. It is not describing personal behaviours, such as creativity.Activities may include, but are not limited to:* developing and implementing processes, tools and infrastructures to support innovation
* implementing innovation practices to support iterative/agile working
* facilitating internal and external communities, employees, commercial partners, customers, users and other stakeholders in the innovation process
* providing a framework for governance, monitoring and reporting on the innovation process.
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## Level 5

Manages the innovation pipeline and executes innovation processes.
Develops and adapts innovation tools, processes and infrastructures to drive the process of innovation. Identifies resources and capabilities needed to support innovation.
Encourages and motivates innovation communities, teams and individuals to share creative ideas and learn from failures.
Manages and facilitates the communication and open flow of creative ideas between interested parties and the set-up of innovation networks and communities.

## Level 6

Obtains organisational commitment to innovation.
Develops organisational capabilities to drive innovation.
Leads and plans the development of innovation capabilities and implementation of innovation processes, tools and frameworks.
Leads the communication and an open flow of creative ideas between interested parties and the set-up of innovation networks and communities.

## Level 7

Leads development of a culture that encourages innovation, risk-taking and collaboration.
Embeds innovation processes throughout business units and links strategy execution with innovation.
Aligns organisational and individual objectives, measures and rewards with innovation.

# Emerging technology monitoring EMRG

Identifying and assessing new and emerging technologies, products, services, methods and techniques.

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| **Guidance Notes:**Activities may include, but are not limited to:* assessing relevance and potential impacts, which may be threats or opportunities
* communicating the impact of emerging technologies.

Assessments may relate to business enablers, cost, performance or sustainability |

## Level 4

Supports monitoring of the external environment and assessment of emerging technologies.
Contributes to the creation of reports, technology roadmapping and the sharing of knowledge and insights.

## Level 5

Monitors the external environment to gather intelligence on emerging technologies.
Assesses and documents the impacts, threats and opportunities to the organisation.
Creates reports and technology roadmaps and shares knowledge and insights with others.

## Level 6

Plans and leads the identification and assessment of emerging technologies and the evaluation of potential impacts, threats and opportunities.
Creates technology roadmaps that align organisational plans with emerging technology solutions. Engages with, and influences, relevant stakeholders to obtain organisational commitment to technology roadmaps.
Develops organisational guidelines for monitoring emerging technologies.
Collaborates with internal and external parties to facilitate intelligence gathering.

# Formal research RSCH

Systematically creating new knowledge by data gathering, innovation, experimentation, evaluation and dissemination.

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| **Guidance Notes:**Activities may include, but are not limited to:* determining research goals and the methods by which the research will be conducted
* actively participating in a community of researchers
* communicating formally and informally through digital media, conferences, journals, books and seminars.

The Formal research skill defined in SFIA is used for creating new knowledge including, but not limited to, commercial research and development or academic institutions.Because of its name, this skill can be confused with general search and investigation into a topic of interest. In most cases, general investigations are covered by responsibilities described by the SFIA generic attributes. Many of the SFIA professional skills also make reference to investigation or similar activity. |

## Level 2

Within given research goals, assists in selection and review of credible and reliable resources.
Searches for relevant material using specialised websites and sources, reads relevant articles to update knowledge of the relevant field.
Reports on work carried out and may contribute sections of publication-quality material.
Curates, under guidance, a personal collection of relevant material.

## Level 3

Within given research goals, builds on and refines appropriate outline ideas for research, including evaluation, development, demonstration and implementation.
Applies standard methods to collect and analyse quantitative and qualitative data. Creates research reports to communicate research methodology, findings and conclusions.
Contributes sections of publication-quality material.
Uses available resources to update knowledge of any relevant field and curates a personal collection of relevant material. Participates in research communities.

## Level 4

Builds on and refines appropriate outline ideas for the evaluation, development, demonstration and implementation of research.
Contributes to research goals and funding proposals. Collects and analyses qualitative and quantitative data as required.
Contributes to research plans and identifies appropriate opportunities for publication and dissemination of research findings. Makes an active contribution to research communities.
Presents papers at conferences, contributes significant sections of publication-quality material, and presents reports to clients.

## Level 5

Agrees research goals and methods and performs research projects to generate original ideas.
Attracts and manages external research funding. Maintains a strong external network within own area of specialism.
Provides advice and guidance on performing research. Selects, adopts and adapts data collection tools and techniques. Develops, reviews and constructively criticises the research and ideas of others. Shares practical demonstrations of research findings.
Takes part in professional activities outside own employing organisation. Presents papers at significant conferences, writes articles for specialist journals, and presents reports to key stakeholders.

## Level 6

Develops the organisation's research policy and supervises the work of research functions.
Promotes activities externally, attracts and manages significant portfolios of research funding.
Sets research goals and authorises research proposals. Leads strategic and/or interdisciplinary research projects. Maintains a strong external network reaching beyond own immediate area of specialism.
Takes a leading part in professional activities outside own employing organisation. Presents keynote papers at major conferences, writes articles for high impact journals, and presents reports to major clients.

# Demand management DEMM

Analysing and proactively managing business demand for new services or modifications to existing service features or volumes.

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| **Guidance Notes:**Activities may include, but are not limited to:* collaborating with the business to prioritise demand to improve business value
* developing and communicating insights into patterns of demand
* performing what-if analyses and scenario planning to develop insights and proposals to improve business value
* proposing responses to meet both short-term and long-term demand and facilitating decision-making and planning
* integrating demand analysis and planning with complementary strategic, operational and change planning processes.
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## Level 4

Performs demand management analysis and planning activities within a specific business or operational area.
Monitors patterns of demand and identifies insights and proposals to improve business value.
Identifies and assesses opportunities to prioritise or improve alignment between business demand and capacity to deliver.
Engages stakeholders to communicate insights, plans and decisions regarding business demand.

## Level 5

Implements demand management analysis and planning activities.
Provides advice to help stakeholders adopt and adhere to the agreed demand management approach. Manages the process of integrating demand management with complementary strategic, operational and change management processes.
Maintains a register of business requests and routes requests to the right place. Reports on the status of each request.
Reviews new business proposals and provides advice on demand issues. Works with business representatives to agree and implement short-term and medium-term modifications to demand.

## Level 6

Defines the approach and sets policies for discovering, analysing, planning, controlling and documenting demand for services and products.
Organises scoping and business priority setting for strategic business changes involving business policy-makers and direction setters.
Engages with and influences senior stakeholders to improve the business value delivered from new or existing services and products.
Leads the development of demand management capabilities. Leads the integration of demand management with complementary strategic, operational and change management processes.

# Investment appraisal INVA

Assessing the attractiveness of possible investments or projects.

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| **Guidance Notes:**Activities may include, but are not limited to:* selecting and using appropriate techniques to compare financial investments and returns
* using recognised investment appraisal techniques to compare investment and returns include payback period, accounting rate of return, discounted cash flow (net present value and internal rate of return)
* collecting data using appropriate top-down or bottom-up approaches
* including other factors into the appraisal approach, such as legal considerations, environmental or social impact, operational benefits, risk
* developing scoring methods to allow for subjective benefits or dis-benefits and to aggregate the results of multiple appraisal methods to help compare options
* documenting and presenting the results of investment appraisals
* establishing investment appraisal as a tool for selecting projects/initiatives for further investigation
* identifying possible sources of funding and the impact on the investment appraisal.
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## Level 4

Develops and documents investment appraisals for a range of different projects.
Identifies suitable appraisal techniques based on the characteristics of a project.
Collects the information required to create an investment appraisal in collaboration with internal and external stakeholders. Presents findings of investment appraisals to selected stakeholders.
Refines and maintains investment appraisals.

## Level 5

Advises on investment appraisal approaches and tailors organisational standards to the context of portfolios/programmes.
Leads investment appraisal activities for simple portfolios and programmes and complex projects.

## Level 6

Develops organisational policies, standards, and guidelines for investment appraisals.
Leads activities to establish consistent appraisal across the component projects and programmes within a portfolio.
Reviews investment appraisals for high-value initiatives to assure their quality.
Leads investment appraisal activities for complex programmes of work and portfolios.

# Financial management FMIT

Managing the effective use and control of financial resources to support business strategies, compliance, and risk mitigation.

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| **Guidance Notes:**This skill typically applies to dedicated financial management roles, not to managers of operational or project budgets.Financial management should align with business strategies and practices in areas such as governance, risk management, portfolio, programme and project management, and asset management.Activities may include, but are not limited to:* managing financial control and stewardship of assets and resources
* supporting strategic financial decision-making and business unit collaboration
* aligning budgeting, forecasting, and accounting practices with organisational goals
* guiding financial management for consumption-based costs like cloud services
* promoting financial practices to support iterative/agile working across the organisation
* overseeing development of service, project, and component cost models to meet strategic objectives
* defining and overseeing charging models for service provision
* ensuring compliance with accounting standards, policies, and regulatory requirements
* providing proactive risk management and mitigation strategies
* monitoring business unit performance against financial targets and KPIs, offering insights and recommendations.
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## Level 4

Monitors and maintains financial records to ensure compliance and audit requirements are met.
Provides general support in financial planning and budgeting by compiling and reporting on financial data.
Supports decision-making by collating and summarising financial information at a high level.
Collaborates with business units to gather financial data and understand operational needs.

## Level 5

Provides general advice and guidance on financial planning, budgeting, and accounting using recognised practices and standards.
Develops high-level financial plans and forecasts to guide organisational strategies and plans.
Monitors expenditure to ensure alignment with budgetary goals.
Contributes to financial control frameworks and supports strategic decision-making by summarising expenditure trends and variances.

## Level 6

Develops organisational policies, standards, and guidelines for financial management to support strategic business goals.
Promotes financial governance and drives adherence to financial policies and standards. Collaborates with senior leaders and business unit heads to ensure financial strategies support overall business objectives.
Oversees the setting and management of financial budgets and targets at a strategic level.
Leads high-level reviews of financial performance and implements improvements to align budget usage with organisational priorities.

# Measurement MEAS

Developing and operating a measurement capability to support agreed organisational information needs.

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| **Guidance Notes:**Measurement can be applied to organisations, projects, processes, and work products.Activities may include, but are not limited to:* planning, implementation, and control of activities to measure attributes of processes, products, and services
* using measures to assess performance, progress, and provide indications and insights to actual or potential problems, issues, and risks
* identifying requirements for measurement
* implementing measurement to support iterative/agile working practices
* selecting measures and measurement scales, setting target values and thresholds
* establishing data collection and analysis methods, including automation
* real-time and near-real-time measurement.

The measurement skill has diverse applications across industries, including customer experience, IT systems and services, marketing, supply chain, software development, finance, healthcare, project management. |

## Level 2

Assists in the collection and maintenance of data for measurement purposes under routine supervision.
Follows standard procedures for measuring attributes of processes, products, and services.
Helps generate and distribute measurement reports.

## Level 3

Applies standard techniques to support the specification of measures and the collection and maintenance of data for measurement.
Generates, produces and distributes reports.
Uses measurement tools for routine analysis of data.
Identifies and implements improvements to data collection methods.

## Level 4

Identifies and prioritises appropriate measures, scales, and targets.
Supports projects, functions or teams in the development of measurement methods.
Specifies base and derived measures which support agreed information needs. Specifies how to collect and store the data for each required measure. Provides guidance on collection of data.
Designs reports and reporting formats.

## Level 5

Establishes measurement objectives and the scope of measurement for functions, teams and projects.
Plans and implements improvements to measurement capability. Provides advice and guidance for effective use of measures and measurement.
Selects measures appropriate to the context and organisational objectives. Reviews data collection and storage mechanisms to support measurement.
Contributes to organisational policies, standards, and guidelines for measurement.

## Level 6

Leads the development of organisational capabilities for measurement (including automation).
Creates the measurement framework and aligns measurement objectives with business objectives.
Develops organisational policies, standards, guidelines for measurement.
Provides resources to ensure adoption and adherence to policies and standards.

# Sustainability SUST

Providing advice, assistance and leadership to enable the organisation to minimise negative environmental impact.

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| **Guidance Notes:**Activities may include, but are not limited to:* developing policies, standards and guidelines to minimise the negative environmental impact of factors such as, but not limited to, hardware, software, networks, storage, power supply, care, maintenance and disposal of assets, paper, packaging or transport
* advising on regulations and standards
* benchmarking and establishing metrics and dashboards
* communicating and promoting sustainability policies and programmes.
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## Level 4

Assesses and reports on how different tactical decisions affect sustainability.
Evaluates factors and risks (political, legislative, technological, economic, social) that impact on operational processes and strategic direction.
Evaluates and reports on the implementation of sustainability measures in specific areas.

## Level 5

Provides expert advice and guidance on planning, designing and implementing sustainability solutions.
Evaluates and selects sustainability methods, tools, and practices to be used in line with agreed policies and standards.
Identifies and recommends improvements to the organisation's approach to sustainability.

## Level 6

Develops and promotes organisational strategies, policies, standards, and guidelines for sustainability.
Leads the introduction and use of sustainability techniques, methodologies and tools.

# Continuity management COPL

Developing, implementing and testing a business continuity framework.

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| **Guidance Notes:**Activities may include, but are not limited to:* identifying potential threats and assessing their business impact
* developing plans and procedures to respond to an incident
* ensuring critical business functions can continue with a planned level of disruption
* ensuring an acceptable level of service can be restored after a disruption
* developing organisational resilience
* assuring that continuity is being designed into systems, processes and ways of working
* implementing continuity management practices for cloud-based services
* enabling continuous delivery, deployment and integration of applications and infrastructure without adverse impact or disruption to service
* collaborating with external partners and suppliers to ensure continuity across the supply chain
* using technologies and tools for enhanced risk assessment, monitoring, and decision-making
* regularly communicating and training staff on their roles and responsibilities during disruptive events.

Incidents have a variety of causes, including, but not limited to, cyber-attacks, data breaches, organised crime, fires, floods, natural disasters, pandemics, health emergencies and supply chain failure. |

## Level 2

Maintains records of all related testing and training and ensures the availability of all documentation.
Records the actions taken and the consequences following an incident or live testing of a continuity plan for a lessons-learned report.

## Level 3

Applies a structured approach to develop and document the detail for a continuity plan.
Maintains documentation of business continuity and disaster recovery plans.
Supports the development of a test plan and implementation of continuity management exercises.

## Level 4

Contributes to the development of continuity management plans.
Identifies information and communication systems that support critical business processes.
Coordinates the business impact analysis and the assessment of risks.
Coordinates the planning, designing, and testing of contingency plans

## Level 5

Manages the development, implementation and testing of continuity management plans.
Manages the relationship with individuals and teams who have authority for critical business processes and supporting systems.
Evaluates the critical risks and identifies priority areas for improvement.
Tests continuity management plans and procedures to ensure they address exposure to risk and that agreed levels of continuity can be maintained.

## Level 6

Sets the strategy for continuity management across the organisation.
Secures organisational commitment, funding and resources for continuity management.
Leads continuity management exercises.
Communicates the policy, governance, scope, and roles involved in continuity management. Has defined authority and accountability for the actions and decisions for continuity management

# Information security SCTY

Defining and operating a framework of security controls and security management strategies.

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| **Guidance Notes:**The purpose of security controls and management strategies is to:* maintain the security, confidentiality, integrity, availability, accountability of information systems
* ensure information systems comply with legislation, regulation and relevant standards.

Activities may include, but are not limited to:* selecting, adopting and adapting security control frameworks
* designing, justifying and implementing security management strategies
* identifying risks with technical solution architectures
* ensuring security principles are applied during design and development to reduce risk.

Examples of types of security controls include, but are not limited to:* physical controls
* procedural or administrative controls
* technical or logical controls
* legal and regulatory or compliance controls.

These activities are typically performed in collaboration with specialists in other areas including, but not limited to, legal, technical infrastructure, audit, architecture, software engineering. |

## Level 2

Assists with information security tasks under routine supervision.
Supports the application of basic security controls.
Helps document and report security issues and risks.
Helps investigate suspected attacks and security breaches.

## Level 3

Applies and maintains specific security controls as required by organisational policy and local risk assessments.
Communicates security risks and issues to business managers and others. Performs basic risk assessments for small information systems.
Contributes to the identification of risks that arise from potential technical solution architectures. Suggests alternate solutions or countermeasures to mitigate risks. Defines secure systems configurations in compliance with intended architectures.
Supports investigation of suspected attacks and security breaches.

## Level 4

Provides guidance on the application and operation of elementary physical, procedural and technical security controls.
Explains the purpose of security controls and performs security risk and business impact analysis for medium complexity information systems.
Identifies risks that arise from potential technical solution architectures. Designs alternate solutions or countermeasures and ensures they mitigate identified risks.
Investigates suspected attacks and supports security incident management.

## Level 5

Provides advice and guidance on security strategies to manage identified risks and ensure adoption and adherence to standards.
Contributes to development of information security policy, standards and guidelines.
Obtains and acts on vulnerability information and conducts security risk assessments, business impact analysis and accreditation on complex information systems. Investigates major breaches of security, and recommends appropriate control improvements.
Develops new architectures that mitigate the risks posed by new technologies and business practices.

## Level 6

Develops and communicates corporate information security policy, standards and guidelines.
Ensures architectural principles are applied during design to reduce risk. Drives adoption and adherence to policy, standards and guidelines.
Contributes to the development of organisational strategies that address information control requirements. Identifies and monitors environmental and market trends and proactively assesses impact on business strategies, benefits and risks.
Leads the provision of authoritative advice and guidance on the requirements for security controls in collaboration with subject matter experts.

## Level 7

Directs the development, implementation, delivery and support of an enterprise information security strategy aligned with the business strategy.
Ensures compliance between business strategies and information security.
Leads the provision of information security expertise, guidance and systems needed to execute strategic and operational plans.
Secures organisational resources to execute the information security strategy.

# Information assurance INAS

Protecting against and managing risks related to the use, storage and transmission of data and information systems.

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| **Guidance Notes:**Activities include, but are not limited to:* management of risk in a pragmatic and cost-effective manner to ensure stakeholder confidence
* formal system certification and accreditation
* assessing the effectiveness of cryptographic controls
* technical assessment and evaluation to determine control effectiveness.

Information and data are typically protected by following five principles:* availability - ensuring that authorised users can easily access the information they need
* integrity - protecting information from unauthorised modification, retrieval or deletion
* authenticity - validating the identity of users and devices
* confidentiality - restricting access to authorised users only
* non-repudiation - preventing possible denial that an action occurred by ensuring data is true to its origin.
 |

## Level 2

Assists with information assurance activities under routine supervision.
Helps perform basic risk assessments and supports the implementation of information assurance measures.
Assists in maintaining records and documentation related to information assurance.

## Level 3

Follows standard approaches for the technical assessment of information systems against information assurance policies and business objectives.
Makes routine accreditation decisions. Recognises decisions that are beyond their scope and responsibility level and escalates according.
Reviews and performs risk assessments and risk treatment plans. Identifies typical risk indicators and explains prevention measures.
Maintains integrity of records to support and justify decisions.

## Level 4

Performs technical assessments and/or accreditation of complex or higher-risk information systems.
Identifies risk mitigation measures required in addition to the standard organisation or domain measures.
Establishes the requirement for accreditation evidence from delivery partners and communicates accreditation requirements to stakeholders.
Contributes to planning and organisation of information assurance and accreditation activities. Contributes to development of and implementation of information assurance processes.

## Level 5

Interprets information assurance and security policies and applies these to manage risks.
Provides advice and guidance to ensure adoption of and adherence to information assurance architectures, strategies, policies, standards and guidelines.
Plans, organises and conducts information assurance and accreditation of complex domains areas, cross-functional areas, and across the supply chain.
Contributes to the development of policies, standards and guidelines.

## Level 6

Develops information assurance policy, standards and guidelines.
Contributes to the development of organisational strategies that address the evolving business risk and information control requirements.
Drives adoption of and adherence to policies and standards. Ensures that architectural principles are followed, requirements are defined and rigorous security testing is applied. Ensures that accreditation processes support and enable organisational objectives.
Monitors environmental and market trends and assesses any impact on organisational strategies, benefits and risks.

## Level 7

Directs the creation and review of an enterprise information assurance strategy to support the strategic requirements of the business.
Ensures compliance between business strategies and information assurance by setting strategies, policies, standards and practices.
Leads the provision of information assurance expertise, advice and guidance across all of the organisation's information and information systems.

# Information and data compliance PEDP

Implementing and promoting compliance with information and data management legislation.

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| **Guidance Notes:**Includes legislation regulating the holding, use and disclosure of personal data.Activities may include, but are not limited to:* providing expert advice on policies, procedures and governance
* designing privacy-friendly products, services and systems that respect customer privacy and embed data protection
* performing impact assessments, identify risks whilst enabling prudent use of data and addressing issues with products and services
* responding to incidents
* following legislative developments
* creating risk models and frameworks
* working with subject matter experts in areas such as, but not limited to, legal, public relations, learning and development, procurement, security, data management, architecture.
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## Level 4

Supports the implementation of policy, standards and guidelines related to information and data legislation and compliance requirements.
Monitors the implementation of effective controls for internal delegation, audit and control relating to information management.
Reports on the consolidated status of information controls to inform effective decision-making.
Identifies risks around the use of information and data that is subject to specific legislation.
Recommends remediation actions as required.

## Level 5

Contributes to the development of policy, standards and guidelines related to information and data legislation and compliance requirements.
Provides expert advice and guidance on implementing information and data legislation controls in products, services and systems. Investigates compliance breaches and recommends appropriate control improvements.
Creates and maintains an inventory of data that are subject to legislation. Conducts risk assessments, business impact analysis for complex information systems and specifies any required changes.
Ensures that formal requests and complaints elating to data or information compliance are dealt with according to approved procedures. Prepares and submits reports and registrations to relevant authorities.

## Level 6

Develops strategies for compliance with information and data legislation.
Ensures that the policy and standards for compliance with information and data legislation are fit for purpose, current and correctly implemented.
Acts as the organisation's contact for the regulatory authorities.
Operates as a focus for information and data legislation for the organisation, working with specialists to provide authoritative advice and guidance.

# Vulnerability research VURE

Conducting applied research to discover, evaluate and mitigate new or unknown security vulnerabilities and weaknesses.

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| **Guidance Notes:**A security vulnerability is a weakness, flaw or error found within a security system that has the potential to be leveraged by an external agent to compromise a secure system.Activities may include, but are not limited to:* researching new threats, attack vectors, risks and potential solutions
* researching new or emerging cryptographic vulnerabilities
* reverse engineering hardware or software
* applying tools such as disassemblers, debuggers and fuzzers
* analysing embedded devices
* developing techniques and tools to analyse and expose vulnerabilities
* designing new vulnerability discovery techniques
* sharing mitigation techniques with relevant stakeholders.
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## Level 2

Assists with vulnerability research tasks under routine supervision.
Helps document and report findings from vulnerability research activities.

## Level 3

Applies standard techniques and tools for vulnerability research.
Uses available resources to update knowledge of relevant specialism.
Participates in research communities.
Analyses and reports on activities and results.

## Level 4

Designs and executes complex vulnerability research activities.
Specifies requirements for environment, data, resources and tools to perform assessments.
Reviews test results and modifies tests if necessary. Creates reports to communicate methodology, findings and conclusions. Advises on deception methods by exploiting identified patterns.
Makes an active contribution to research communities.

## Level 5

Plans and manages vulnerability research activities.
Maintains a strong external network in the area of vulnerability research. Gathers information on new and emerging threats and vulnerabilities.
Assesses and documents the impacts and threats to the organisation. Creates reports and shares knowledge and insights with stakeholders.
Providing expert advice and guidance to support the adoption of tools and techniques for vulnerability research. Contributes to the development of organisational policies, standards, and guidelines for vulnerability research and assessment.

## Level 6

Plans and leads the organisation’s approach to vulnerability research.
Identifies new and emerging threats and vulnerabilities. Maintains a strong external network. Takes a leading part in external-facing professional activities to facilitate information gathering and set the scope of research work.
Engages with, and influences, relevant stakeholders to communicate results of research and the required response.
Develops organisational policies and guidelines for monitoring emerging threats and vulnerabilities.

# Threat intelligence THIN

Developing and sharing actionable insights on current and potential security threats to the success or integrity of an organisation.

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| **Guidance Notes:**Activities may include, but are not limited to:* gathering data from a variety of open or proprietary intelligence sources
* processing and classifying threat data to make it useful and actionable by others
* packaging the data for use by consumers of the information
* enabling the use of the data automatically by security tools
* providing threat intelligence to help others mitigate vulnerabilities or to respond to security incidents.
 |

## Level 2

Contributes to routine threat intelligence gathering tasks.
Monitors and detects potential security threats and escalates in accordance with relevant procedures and standards.

## Level 3

Performs routine threat intelligence gathering tasks.
Transforms collected information into a data format that can be used for operational security activities.
Cleans and converts quantitative information into consistent formats.

## Level 4

Collates and analyses information for threat intelligence requirements from a variety of sources.
Contributes to reviewing, ranking and categorising qualitative threat intelligence information.
Creates threat intelligence reports.
Evaluates the value, usefulness and impact of sources of threat intelligence sources.

## Level 5

Plans and manages threat intelligence activities.
Identifies which are the most impactful threat categories and what types of information can help defend against them. Reviews, ranks and categorises qualitative threat intelligence information.
Provides expert advice on threat intelligence activities.
Leads the production and editing of threat intelligence reports that enhance the intelligence production workflow. Distributes information and obtains feedback about the value, usefulness and impact of the data.

## Level 6

Sets direction, plans and leads the organisation’s approach to threat intelligence, including the use of suppliers.
Identifies requirements for threat intelligence based on the assets to be protected and the types of intelligence that can help protect those assets.
Engages with, and influences, relevant stakeholders to communicate results of research and the required response.
Ensures quality and accuracy of threat intelligence information. Reviews threat intelligence capabilities.

# Governance GOVN

Defining and operating a framework for making decisions, managing stakeholder relationships, and identifying legitimate authority.

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| **Guidance Notes:**Governance can be applied to specific activities or may be a single integrated framework across an organisation.Specialisms include, but are not limited to, security, information, technology, architectures, enterprise IT, service management.An organisation’s obligations may be external or internal including, but not limited to, legislative, regulatory, contractual and adherence to agreed standards/policies or ethical frameworks. Activities may include, but are not limited to:* defining and operating the system of rules, practices, and processes by which an organisation makes decisions, manages stakeholders’ relationships, and identifies legitimate authority
* determining how to direct, evaluate and monitor an organisation’s activities
* developing and operating strategic and operational frameworks, policies, decision-making, business processes and plans to meet stakeholder requirements.

Governance is explicitly referenced in many SFIA skills. Professionals may contribute specialist knowledge to governance processes, reviews and developments, but that does not imply they need the SFIA skill of Governance. |

## Level 6

Implements the governance framework to enable governance activity to be conducted.
Within a defined area of accountability, determines the requirements for appropriate governance reflecting the organisation's values, ethics and wider governance frameworks. Communicates delegated authority, benefits, opportunities, costs, and risks.
Leads reviews of governance practices with appropriate and sufficient independence from management activity.
Acts as the organisation's contact for relevant regulatory authorities and ensures proper relationships between the organisation and external stakeholders.

## Level 7

Directs the definition, implementation, and monitoring of the governance framework to meet the organisation’s obligations under regulation, law, or contracts.
Provides leadership, direction, and oversight for an organisation’s governance activities.
Secures resources required to execute activities to achieve the organisation’s governance goals with effective transparency.
Provides assurance to stakeholders that the organisation can deliver its obligations with an agreed balance of benefits, opportunities, costs, and risks.

# Risk management BURM

Planning and implementing organisation-wide processes and procedures for the management of risk to the success or integrity of the enterprise.

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| **Guidance Notes:**Risk management can be applied to many enterprise functions as well as technical and engineering specialisms, such as, but not limited to, information and technology systems, operations, environmental, information and cyber-security, safety, energy supply. Risk is also explicitly referenced in many SFIA skills. Activities may include, but are not limited to:* identifying risks
* classifying and prioritising risks, their impact and probability, and mitigation actions
* planning, developing, and implementing organisational approaches to risk management to ensure the integrity of the business, its products and services, and the end-users
* communicating and reporting on risks and mitigation actions to key stakeholders.
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## Level 2

Assists in collecting and reporting data to support risk management activities under routine supervision.
Helps create and maintain documentation of risks and risk management activities.
Helps identify and report issues and discrepancies.

## Level 3

Undertakes basic risk management activities.
Maintains documentation of risks, threats, vulnerabilities and mitigation actions.

## Level 4

Carries out risk management activities within a specific function, technical area or project of medium complexity.
Identifies risks and vulnerabilities, assesses their impact and probability, develops mitigation strategies and reports to the business.
Involves specialists and domain experts as necessary.

## Level 5

Plans and implements complex and substantial risk management activities within a specific function, technical area, project or programme.
Implements consistent and reliable risk management processes and reporting to key stakeholders.
Engages specialists and domain experts as necessary.
Advises on the organisation's approach to risk management.

## Level 6

Plans and manages the implementation of organisation-wide processes and procedures, tools and techniques for risk management.
Considers organisation-wide risk and mitigation activities within the context of business risk as a whole and the organisation’s appetite for risk.
Provides leadership on risk management at the organisational and business levels.

## Level 7

Establishes organisational strategy for risk management.
Defines and communicates the organisation's appetite for risk.
Provides resources to implement the organisation's risk strategy.
Delegates authority for detailed planning and execution of risk management activities across the organisation.

# Audit AUDT

Delivering independent, risk-based assessments of the effectiveness of processes, the controls, and the compliance environment of an organisation.

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| **Guidance Notes:**Audit activity is conducted with appropriate independence from the organisation’s management and may be conducted internally or for a third-party client organisation.Audit includes the structured analysis of the risks to the achievement of business objectives.  |

## Level 2

Assists in collecting evidence and conducting audit activities under routine supervision.
Maintains documentation and audit trails.
Helps identify and report issues and discrepancies.

## Level 3

Adopts a structured approach to executing and documenting audit fieldwork, following agreed standards.
Maintains integrity of records to support and satisfy audit trails.
Identifies typical risk indicators and explains prevention measures.

## Level 4

Contributes to planning and executing of risk-based audit of existing and planned processes, products, systems and services.
Identifies and documents risks in detail.
Identifies the root cause of issues during an audit, and communicates these effectively as risk insights.
Collates evidence regarding the interpretation and implementation of control measures. Prepares and communicates reports to stakeholders, providing a factual basis for findings.

## Level 5

Plans, organises and conducts audits of complex domains areas, cross-functional areas, and across the supply chain.
Confirms the scope and objectives of specific audit activity with management. Aligns with the scope of the audit program and organisational policies.
Determines appropriate methods of investigation to achieve the audit objectives. Presents audit findings to management describing the effectiveness and efficiency of control mechanisms.
Provides general and specific audit advice. Collaborates with professionals in related specialisms to develop and integrate findings.

## Level 6

Leads and manages complex audits and programs of audit activity.
Obtains and manages appropriate specialist expertise to contribute highly specialised technical knowledge and experience.
Develops organisational policies, standards and guidelines for the conduct of audits. Ensures the objectivity and impartiality of the audit process.
Identifies areas of risk and specifies audit programs. Ensures audit coverage is sufficient to provide the business with assurance of adequacy and integrity. Authorises the issue of formal reports to management on the effectiveness and efficiency of control mechanisms.

## Level 7

Leads the definition, implementation, and communication of the organisation’s audit function.
Defines audit strategy, plans audit cycles and ensures appropriate audit coverage across the organisation. Ensures that the audit function adds value to the organisation. Liaises with internal and external stakeholders to ensure audit coverage is relevant and understood.
Directs use of risk analysis to identify areas for in-depth review. Ensures appropriate resources are available to deliver organisational requirements for audits.
Reports at the most senior level on the findings, relevance and recommendations for improvement for audit activity.

# Quality management QUMG

Defining and operating a management framework of processes and working practices to deliver the organisation's quality objectives.

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| **Guidance Notes:**Activities may include, but are not limited to:* establishing a quality management system and a quality culture
* applying techniques for the monitoring and improving the quality of any aspect of a function, processes, products, services or data
* providing advice on the application of appropriate quality management techniques
* achieving and maintaining compliance to, national and international standards and to internal policies.

Internal or external standards are typically related to areas such as, but not limited to, quality, service, sustainability and security. |

## Level 2

Assists with quality management tasks under routine supervision.
Supports the development, maintenance, and distribution of quality standards.
Helps document and track updates to quality management processes and standards.

## Level 3

Uses appropriate methods and a systematic approach to developing, maintaining, controlling and distributing quality and environmental standards.
Makes technical changes to and controls the updates and distribution of quality standards.
Distributes new and revised standards.

## Level 4

Assists in the development of new or improved practices and organisational processes or standards.
Assists projects, functions or teams in planning the quality management for their area of responsibility.
Facilitates localised improvements to the quality system or services.

## Level 5

Ensures that projects, teams and functions have appropriate practices in place and are meeting required organisational quality levels.
Advises on the application of appropriate quality management techniques and standards.
Determines areas where existing processes should change from analysing audit findings. Facilitates improvements to processes by changing approaches and working practices, typically using recognised models.
Takes responsibility for controlling updating and distributing organisational standards.

## Level 6

Achieves and maintains compliance against national and international standards, as appropriate.
Prioritises areas for quality improvement by considering strategy, business objectives and results from internal and external audits. Initiates the application of appropriate quality management techniques in these areas.
Initiates improvements to processes by changing approaches and working practices, typically using recognised models.
Identifies and plans systematic corrective action to reduce errors and improve the quality of the systems and services.

## Level 7

Determines the quality strategy and secures commitment to it from executive leadership.
Develops policies for approval and adoption by organisational management. Ensures that adequate technology, procedures and resources are in place to support the quality system.
Plans and monitors the performance of the quality management system and the internal quality audit schedule.
Determines the extent to which quality policies and quality systems meet organisational needs and reviews as necessary.

# Quality assurance QUAS

Assuring, through ongoing and periodic assessments and reviews, that the organisation’s quality objectives are being met.

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| **Guidance Notes:**Quality assurance provides confidence to internal and external stakeholders that quality requirements will be fulfilled.Quality assurance may relate to any area where quality standards are applied including, but not limited to, products, data, services and business processes.Quality assurance findings and reports may provide evidence and recommendations for quality improvement programmes.  |

## Level 2

Assists with quality assurance tasks under routine supervision.
Supports the collection of data and evidence related to quality assurance.
Assists in reviewing records to ensure compliance with quality standards.
Helps identify and report quality issues and discrepancies.

## Level 3

Contributes to the collection of evidence and the conduct of formal audits or reviews of activities.
Examines records for evidence that appropriate testing and other quality control activities have taken place.
Determines compliance with organisational directives, standards and procedures and identifies non-compliances, non-conformances and abnormal occurrences.

## Level 4

Plans, organises and conducts assessment activity and determines whether appropriate quality control has been applied.
Conducts formal assessments or reviews for given domain areas, suppliers, or parts of the supply chain. Collates, collects and examines records, analyses the evidence and drafts all or part of formal compliance reports.
Determines the risks associated with findings and non-compliance and proposes corrective actions.
Provides advice and guidance in the use of organisational standards.

## Level 5

Plans, organises and conducts formal reviews and assessments of complex domains areas, cross-functional areas, and across the supply chain.
Evaluates, appraises and identifies non-compliances with organisational standards and determines the underlying reasons for non-compliance.
Prepares and reports on assessment findings and associated risks. Ensures that appropriate owners for corrective actions are identified. Identifies opportunities to improve organisational control mechanisms.
Oversees the assurance activities of others, providing advice and expertise to support assurance activity.

## Level 6

Leads, develops and is accountable for an organisational approach and commitment to quality assurance.
Ensures that quality assurance processes and activities are robust and reliable, and appropriately tailored to the organisation’s quality objectives. Plans and resources the organisational quality assurance activities, using internal or third-party resources.
Considers the implications of emerging technology, approaches, trends, regulations and legislation.
Monitors and reports on quality assurance activities, levels of compliance, and improvement opportunities.

# Consultancy CNSL

Providing advice and recommendations, based on expertise and experience, to address client needs.

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| **Guidance Notes:**Consultancy may deal with one specialist subject area, or be wide ranging and address strategic business issues. May also include support for the implementation of any agreed solutions.Activities include, but are not limited to:* leading and managing a consultancy practice
* leading and managing consultancy teams and/or consultancy assignments
* delivering consultancy assignments.

The Consultancy skill defined in SFIA applies to the delivery of consultancy as part of formal or informal consultancy agreements. SFIA describes the general provision of advice, guidance or problem solving related to an individual's responsibilities by:* the responsibilities described by the SFIA generic attributes
* the SFIA professional skill descriptions which make reference to providing advice and guidance.
 |

## Level 4

Takes responsibility for elements of a larger consulting engagement.
Collaborates with clients as part of formal or informal consultancy engagements. Understands client requirements by collecting data and delivering analysis.
Works collaboratively to develop and implement solutions. Seeks to address client needs within the defined scope of responsibility.
Ensures that proposed solutions are properly understood and appropriately exploited.

## Level 5

Takes responsibility for understanding client requirements, collecting data, delivering analysis and problem resolution.
Identifies, evaluates and recommends options.
Collaborates with, and facilitates stakeholder groups, as part of formal or informal consultancy agreements. Seeks to fully address client needs and implements solutions if required.
Enhances the capabilities and effectiveness of clients, by ensuring that proposed solutions are fully understood and appropriately exploited.

## Level 6

Manages the provision of consultancy services and/or a team of consultants.
In own areas of expertise, provides advice and guidance to consultants and/or the client when delivering consultancy services.
Engages with clients and maintains client relationships.
Establishes consultancy agreements/contracts and manages completion and disengagement.

## Level 7

Directs the strategy and operations for a significant consultancy practice.
Oversees practice development, proposals, sales, account management and the delivery of consultancy services over a wide range of topics.

# Specialist advice TECH

Providing authoritative, professional advice and direction in a specialist area.

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| **Guidance Notes:**This skill entails developing and using specialist knowledge to offer authoritative advice and direction, distinct from general guidance or troubleshooting.Professional advice is the provision of expert, objective, and evidence-based recommendations, guidance, and solutions to address specific challenges or opportunities, drawing upon the advisor's in-depth knowledge, skills, and experience. Expertise may cover a particular aspect of information or communications technology, digital practices, methodologies, or application areas, and can extend to applying knowledge from other disciplines, such as legal, finance, public relations, ethics or human resources, to technology-related topics.Activities include, but are not limited to:* research and analysis to stay current with the latest developments in the specialist area
* providing subject matter expert advice and recommendations based on thorough understanding of the subject
* collaborating with other specialists to ensure comprehensive and cohesive advice
* clearly communicating complex information to non-experts
* creating guidelines, standards, and best practices related to the specialist area
* providing mentorship and guidance to support the development of specialist knowledge within the organisation
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## Level 4

Provides detailed and specific advice to support the organisation's planning and operations, typically related to the immediate area of responsibility.
Actively maintains recognised expert level knowledge in one or more identifiable specialisms.
Recognises and identifies the boundaries of their own specialist knowledge.
Where appropriate, collaborates with other specialists to ensure advice given is professionally sound and appropriate to the organisation's needs.

## Level 5

Provides professional advice that informs operational leadership and influences the translation of strategy into operations in their specialist area.
Oversees the provision of specialist advice by others. Consolidates expertise from multiple sources, including third-party experts, to provide coherent and professionally sound advice to further organisational objectives.
Supports and promotes the development and sharing of specialist knowledge within the organisation.

## Level 6

Leads and promotes the development and application of specialist knowledge across the organisation, delivering professional advice that shapes direction and high-level decisions.
Maintains a network of recognised experts (inside and/or outside the organisation) who can deliver expert advice in relevant areas.
Actively influences professional development planning across a significant part of the organisation to further the development of appropriate expertise and provision of high-quality professional advice.

# Methods and tools METL

Ensuring methods and tools are adopted and used effectively throughout the organisation.

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| **Guidance Notes:**There is a wide range of methods and tools supporting areas such as, but not limited to, planning, development, testing, operation, management and maintenance of systems.Activities may include, but are not limited to:* assessing, selecting and implementing methods and tools
* measuring, tailoring, improving and automating the use of methods and tools.
 |

## Level 2

Provide routine support using agreed guidelines on the use of well established methods and tools.
Assists in configuring and maintaining methods and tools under routine supervision.
Supports the creation and updating of documentation related to methods and tools.

## Level 3

Provides support on the use of existing methods and tools.
Configures methods and tools within a known context.
Creates and updates the documentation of methods and tools.

## Level 4

Provides advice and guidance to support the adoption of methods and tools and adherence to policies and standards.
Tailors processes in line with agreed standards and evaluation of methods and tools.
Reviews and improves usage and application of methods and tools.

## Level 5

Provides advice, guidance and expertise to promote adoption of methods and tools and adherence to policies and standards.
Evaluates and selects appropriate methods and tools in line with agreed policies and standards. Contributes to organisational policies, standards, and guidelines for methods and tools.
Implements methods and tools at programme, project and team levels including selection and tailoring in line with agreed standards.
Manages reviews of the benefits and value of methods and tools. Identifies and recommends improvements.

## Level 6

Develops organisational policies, standards, and guidelines for methods and tools.
Sets direction and leads in the introduction and use of techniques, methodologies and tools, to meet business requirements.
Leads the development of organisational capabilities for methods and tools to ensure consistent adoption and adherence to policies and standards.

# Portfolio management POMG

Developing and applying a management framework to define and deliver a portfolio of programmes, projects and/or ongoing services.

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| **Guidance Notes:**Activities include, but are not limited to:* alignment of investment with specific business strategies and objectives
* a strategic investment appraisal and decision-making process
* assessment of cost, risk, inter-dependencies, and impact on existing business activities
* identifying issues with portfolio structure, cost, risk, inter-dependencies, impact on current business activities and the strategic benefits to be realised
* implementing portfolio management practices that support iterative/agile working
* measurement and objective evaluation of potential changes and the benefits to be realised
* prioritisation of resource utilisation and changes to be implemented
* regular review of portfolios
* management of the service pipeline (proposed or in development), service catalogue (live or available for deployment) and retired services.
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## Level 5

Ensures that programme/project leads and/or service owners adhere to the agreed portfolio management approach and timetable.
Explains what information is needed and ensures they provide this information to agreed targets of timelines and accuracy.
Produces reports as appropriate for portfolio governance, including making recommendations for changes to the portfolio.

## Level 6

Engages and influences senior managers to ensure the portfolio will deliver the agreed business objectives.
Leads the definition of a portfolio of programmes, projects, and/or on-going service provision. Plans, schedules, monitors and reports on portfolio-related activities. Ensures that each part of the portfolio contributes to the overall achievement of the portfolio.
Identifies portfolio-related issues. Notifies projects/programmes/change initiatives of issues and recommends and monitors corrective action.
Collects, summarises and reports on portfolio measures. Reports on portfolio status as appropriate.

## Level 7

Authorises the structure of portfolios and aligns the portfolio with strategies, objectives and emerging opportunities.
Leads the definition, implementation and review of the organisation’s portfolio management framework. Sets parameters for the prioritisation of resources and the changes to be implemented.
Recommends and implements corrective action by engaging and influencing senior management.
Leads the on-going monitoring and review of portfolios for impact on current business activities and the strategic benefits to be realised. Implements portfolio governance arrangements and effective reporting.

# Programme management PGMG

Identifying, planning and coordinating a set of related projects and activities in support of specific business strategies and objectives.

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| **Guidance Notes:**Activities may include, but are not limited to:* managing interdependencies in support of specific business strategies and objectives
* maintaining a strategic view over the set of projects
* providing the framework for implementing business initiatives, or large-scale change
* implementing programme management practices to support iterative/agile working
* conceiving, maintaining and communicating a vision of the programme's outcomes and associated benefits
* agreeing business requirements, and translation of requirements into operational plans
* determining, monitoring and reviewing programme scope, costs, schedule and expected benefits
* scheduling programme resources, inter-dependencies and programme risk.
 |

## Level 6

Plans, directs and co-ordinates activities to manage and implement a programme from initiation to final transition into operational, business-as-usual management.
Plans, schedules, monitors, and reports on programme-related activities. Ensures appropriate and effective governance arrangements and comprehensive reporting and communication policies are in place and followed.
Maintains an awareness of current technical developments that may provide opportunities to the programmes.
Ensures that programmes are managed to realise agreed business benefits within agreed timescales.

## Level 7

Sets organisational strategy governing the direction and conduct of programme management, including the application of appropriate methodologies.
Plans, directs, and co-ordinates activities to manage and implement complex programmes from initiation to full integration with operational, business-as-usual management. Aligns the programme objectives with business objectives, and authorises the selection and planning of all related projects and activities.
Plans, schedules, monitors, and reports on programme-related activities.
Ensures alignment with and adherence to appropriate and effective governance arrangements supported by comprehensive reporting and communication strategies.

# Project management PRMG

Delivering agreed outcomes from projects using appropriate management techniques, collaboration, leadership and governance.

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| **Guidance Notes:**This skill is applicable to all project management techniques and life cycles - which can be on a continuum from predictive (plan-driven) approaches to adaptive (iterative/agile) approaches.Activities may include, but are not limited to:* selecting techniques and life cycle models based on the context of the project
* establishing team structures and a collaborative working environment
* communicating with stakeholders and maintaining awareness of business needs and priorities
* using visual techniques for project tracking and reporting
* timeboxing and incremental deliveries
* defining deliverables, milestones and dependencies
* applying change control and risk management processes
* acquiring the necessary resources and skills
* agreeing constraints of cost, timescales, quality and scope
* reviewing experiences and learning from current and previous projects
* ensuring that projects are formally closed and reviewed.

An understanding of project size and complexity is helpful when applying the project management skill. Typical factors that influence project complexity include the complexity of resourcing, scale of organisational impact, use of new technologies, number of interdependences, stability of requirements, business implications, and risks. |

## Level 4

Defines, documents and executes small projects or sub-projects.
Works alone or with a small team actively participating in all phases of the project. Applies appropriate project management methods and tools. Identifies, assesses and manages risks effectively.
Agrees project approach with stakeholders and prepares realistic project plans (including scope, schedule, quality, risk and communication plans). Tracks activities against the project schedule, managing stakeholder involvement as appropriate.
Monitors costs, times, quality and resources used takes action where these exceed agreed tolerances.

## Level 5

Takes full responsibility for the definition, approach, facilitation and satisfactory completion of medium-scale projects.
Provides effective leadership to the project team. Adopts appropriate project management methods and tools. Manages the change control process and assesses and manages risks. Ensures that realistic project plans are maintained and delivers regular and accurate communication to stakeholders.
Ensures project and product quality reviews occur on schedule and according to procedure. Ensures that project deliverables are completed within agreed cost, timescale and resource budgets, and are formally accepted, by appropriate stakeholders.
Monitors costs, times, quality and resources used and takes action where performance deviates from agreed tolerances.

## Level 6

Takes full responsibility for the definition, documentation and successful completion of complex projects.
Adopts and adapts project management methods and tools. Ensures that effective project monitoring and control processes, change control, risk management and quality processes are employed and maintained.
Monitors and controls resources, revenue and capital expenditures against the project budget.
Manages the expectations of key project stakeholders.

## Level 7

Sets organisational strategy governing the direction and conduct of project management, including selection and application of methodologies.
Authorises the management of large-scale projects.
Leads project planning, scheduling, controlling and reporting activities for strategic, high impact, high risk projects.
Directs the risk management approach for projects and ensures that risks and issues are managed in line with policy.

# Portfolio, programme and project support PROF

Providing support and guidance on portfolio, programme and project management processes, procedures, tools and techniques.

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| **Guidance Notes:**Activities may include, but are not limited to:* defining portfolios, programmes, and projects
* cultivating and applying new or changed working practices across a portfolio
* managing the rate at which new projects are started to fit the available capacity
* advising on the development, production and maintenance of business cases time, resource, cost and exception plans
* advising on the use of software tools
* tracking and reporting progress and performance
* facilitating portfolio/programme/project meetings and workshops
* advising and sharing knowledge on standards and how to comply.
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## Level 2

Assists with the compilation of portfolio, programme and project management reports.
Maintains programme and project files from supplied actual and forecast data.

## Level 3

Provides administrative services to project boards, project assurance teams and quality review meetings.
Uses recommended portfolio, programme and project control solutions for planning, scheduling and tracking.
Sets up project files, compiles and distributes reports.
Provides guidance on project management software, procedures, processes, tools and techniques.

## Level 4

Supports programme or project control boards, project assurance teams and quality review meetings.
Takes responsibility for the provision of support services to projects. Uses and recommends project control solutions for planning, scheduling and tracking projects.
Sets up and provides detailed guidance on project management software, procedures, processes, tools and techniques.
Provides basic guidance on individual project proposals. May provide a cross programme view on risk, change, quality, finance or configuration management.

## Level 5

Takes responsibility for the provision of portfolio, programme and project support.
Advises on the available standards, procedures, methods, tools and techniques.
Evaluates project and/or programme performance and recommends changes where necessary.
Contributes to reviews and audits of project and programme management to ensure conformance to standards.

## Level 6

Leads implementation and delivery of portfolio, programme and project office services.
Defines the approach/policy and sets standards for the support provided for managing and monitoring portfolios, programmes, and projects.
Manages resources to ensure delivery of effective services/resources in line with current and planned demand.
Reviews and improves the delivery portfolio, programme and project office services.

# Business situation analysis BUSA

Investigating business situations to define recommendations for improvement action.

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| **Guidance Notes:**Activities may include, but are not limited to:* planning for business situation analysis
* establishing the investigative approach
* engaging with relevant stakeholders
* reviewing the strategic context, including the organisation’s vision, mission, objectives, strategy and tactics and external business environment
* defining problems and analysing root causes
* identifying potential changes to address problems or to take advantage of opportunities
* gaining agreement to conclusions and recommendations.
 |

## Level 2

Assists in the investigation of business situations to support the identification and analysis of problems and opportunities under routine supervision.
Helps collect and organise data and information to support recommendations.

## Level 3

Investigates straightforward business situations to identify and analyse problems and opportunities.
Contributes to the recommendation of improvements.
Follows agreed standards and techniques to investigate, analyse and document business situations.
Engages with stakeholders under direction.

## Level 4

Investigates business situations where there is some complexity and ambiguity.
Adopts holistic view to identify and analyse problems and opportunities.
Contributes to the selection of the approach and techniques to be used for business situation analysis.
Conducts root cause analysis and identifies recommendations for improvements. Engages and collaborates with operational stakeholders.

## Level 5

Plans, manages and investigates business situation analysis where there is significant ambiguity and complexity.
Advises on the approach and techniques to be used for business situation analysis. Ensures holistic view adopted to identify and analyse wide-ranging problems and opportunities.
Engages and collaborates with a wide range of stakeholders, including those at the management level. Gains agreement from stakeholders to conclusions and recommendations.
Contributes to definition of organisational standards and guidelines for business situation analysis.

## Level 6

Initiates and leads business situation analysis where there is extensive ambiguity, complexity and potentially significant organisational impacts.
Establishes and promotes the need for holistic business situation analysis prior to change programme initiation.
Engages with stakeholders at executive level and advises on recommended change initiatives.
Defines organisational policies, standards and techniques for business situation analysis.

# Feasibility assessment FEAS

Defining, evaluating and describing business change options for financial, technical and business feasibility, and strategic alignment.

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| **Guidance Notes:**Activities may include, but are not limited to:* generating and defining options
* ensuring options align with the organisation’s vision, mission, objectives, strategy and tactics
* engaging with relevant stakeholders and specialists
* evaluating options for financial, technical and business feasibility.

Feasibility assessment is multi-dimensional. Options for change must be evaluated from several dimensions including, but not limited to, financial, technical, organisational capability and culture, strategic context, economic and/or commercial environment.Feasibility assessment typically results in a documented business case used to support organisational decision-making about proposed investments. This skill is focused on the generation, analysis and documentation of investment options. |

## Level 2

Assists in feasibility assessment tasks under routine supervision.
Helps gather information required for feasibility assessments.
Supports the identification and documentation of options for business change.

## Level 3

Supports option identification and feasibility assessment.
Selects and employs standard techniques to get the information required for feasibility assessment.
Supports identification of tangible costs and benefits, and development of business cases.

## Level 4

Selects relevant feasibility assessment approaches and techniques.
Identifies the range of possible options. Undertakes short-listing of options and feasibility assessment.
Engages with internal and external stakeholders to get the information required for feasibility assessment.
Supports preparation of business cases including cost/benefit, impact and risk analysis for each option.

## Level 5

Manages investigative work to enable feasibility assessments.
Collaborates with stakeholders and specialists to get the information required for feasibility assessment.
Advises on the selection of feasibility assessment approaches and techniques relevant to the business situation and options.
Prepares business cases, including cost/benefit, impact and risk analysis for each option.

## Level 6

Establishes an organisational framework and standards for feasibility assessment and business case development.
Directs and leads feasibility assessments for initiatives that will have a significant impact on the organisation.
Engages with senior stakeholders to clarify the strategic context for investment options. Directs and leads the selection of feasibility assessment approaches and techniques that are relevant to the business situation and options.
Presents feasibility assessments and business cases to senior stakeholders and supports decision-making regarding investment options.

# Requirements definition and management REQM

Managing requirements through the entire delivery and operational life cycle.

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| **Guidance Notes:**Requirements may be related to software, systems, data, processes, products or services.Activities may include, but are not limited to:* eliciting and analysing requirements, both functional and non-functional, with a focus on testability and measurability
* ensuring that customer requirements, priorities, and acceptance criteria are accurately captured and validated
* organising and prioritising requirements using techniques such as, but not limited to, product roadmaps, epics, user stories and backlogs
* specifying and validating requirements, constraints, and acceptance criteria to a level that enables effective development and operations of new or changed software, systems, processes, products or services
* negotiating trade-offs that are acceptable to key stakeholders and within budgetary, technical, regulatory, and other constraints
* adopting and adapting requirements management life cycle models.

The requirements life cycle approach will be based on the context of the work and may be selected from predictive (plan-driven) or adaptive (iterative/agile) approaches. |

## Level 2

Uses standard techniques to elicit, specify, and document requirements for simple subject areas with clearly-defined boundaries.
Assists in the definition and management of requirements.
Assists in the creation of a requirements baseline/backlog.
Assists in investigating and applying changes to requirements.

## Level 3

Defines and manages scoping, requirements definition and prioritisation activities for small-scale changes and assists with more complex change initiatives.
Follows agreed standards and applies appropriate techniques to elicit and document detailed requirements. Provides constructive challenge to stakeholders as required. Reviews requirements for errors and omissions.
Prioritises requirements and documents traceability to source.
Provides input to the requirements baseline/backlog. Investigates, manages and applies requests for changes to requirements, in line with change management policy.

## Level 4

Defines and manages scoping, requirements definition and prioritisation activities for initiatives of medium size and complexity.
Contributes to selecting the requirements approach.
Facilitates input from stakeholders, provides constructive challenge and enables effective prioritisation of requirements.
Establishes requirements baselines or backlogs, obtains appropriate agreement to requirements, and ensures traceability to source.

## Level 5

Plans and drives scoping, requirements definition and prioritisation activities for large, complex initiatives.
Selects, adopts and adapts appropriate requirements definition and management methods, tools and techniques. Contributes to the development of organisational methods and standards for requirements management.
Obtains input from, and agreement to requirements from a diverse range of stakeholders. Negotiates with stakeholders to manage competing priorities and conflicts.
Establishes requirements baselines or backlogs. Ensures changes to requirements are investigated and managed.

## Level 6

Champions the importance and value of requirements management principles and selecting effective requirements management life cycle models.
Develops organisational policies, standards, and guidelines for requirements definition and management.
Plans and leads scoping, requirements definition and priority setting for complex, strategic programmes.
Drives adoption of, and adherence to, policies and standards. Develops new methods and organisational capabilities for requirements management.

# Business modelling BSMO

Producing abstract or distilled representations of real-world, business or gaming situations.

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| **Guidance Notes:**Predominantly focused on the representation of processes, roles, data, organisation and time. Models may be used to represent a subject at varying levels of detail and decomposition.Business models are typically created to communicate and provide insights about existing, conceptual or proposed scenarios. As such, they are likely to be working models that allow comparisons of alternative outcomes based on changing inputs and parameters.This skill shouldn't be applied to the creation of all diagrams related to describing and explaining business concepts. Refer to other SFIA skills, including, but not limited to, Business situation analysis, Data design and modelling, Enterprise and business architecture, Organisation design.  |

## Level 2

Understands the purpose and benefits of modelling.
Uses established techniques, as directed, to model simple subject areas with clearly-defined boundaries.
May assist in more complex modelling activities.
Develops models under the guidance of subject matter experts.

## Level 3

Conversant with techniques covering the full range of modelling situations.
Models current and desired scenarios as directed. Selects appropriate modelling techniques for meeting assigned objectives.
Gains agreement from subject matter experts on models produced.
Reviews resulting models with stakeholders and resolves identified issues.

## Level 4

Conducts advanced modelling activities for significant change programmes and across multiple business functions.
Has in-depth knowledge of organisation-specific techniques.
Plans own modelling activities, selecting appropriate techniques and the correct level of detail for meeting assigned objectives. May contribute to discussions about the choice of modelling approach.
Obtains input from and communicates modelling results to senior managers for agreement.

## Level 5

Produces models in support of the business strategy.
Has in-depth knowledge of a broad range of industry-wide modelling techniques. Advises on the choice of techniques and approaches and influences customers accordingly.
Develops bespoke models for unusual contexts.
Responsible for planning and coordinating team modelling activities and for ensuring the quality of their work.

## Level 6

Defines modelling standards and quality targets for an organisation.
Has continuing responsibility for the maintenance of models for a designated function.
Initiates organisation-wide modelling improvement activities and obtains customer buy-in to general changes.
May represent own organisation as a modelling expert in industry initiatives.

# Acceptance testing BPTS

Validating systems, products, business processes or services to determine whether the acceptance criteria have been satisfied.

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| **Guidance Notes:**Activities include, but are not limited to:* setting and applying standards for acceptance testing
* planning, identifying, designing, managing, executing and reporting on the outcomes of acceptance tests
* encouraging effective and efficient collaboration with a range of relevant stakeholders
* requesting and enabling formal acceptance of systems, products or services
* creating measurable acceptance criteria related to functional and non-functional requirements, features, business processes, user stories and business rules
* devising acceptance test cases and scenarios from acceptance criteria
* enabling exploratory testing by stakeholders to discover unexpected behaviours
* deploying model office testing to simulate real-world working practices and system usage.

The acceptance testing approach will be based on the context of the work and may be selected from predictive (plan-driven) or adaptive (iterative/agile) approaches. |

## Level 2

Assists in planning and preparing acceptance tests for systems, products, business processes or services.
Assists in collecting feedback from acceptance testing.

## Level 3

Follows agreed standards and techniques to devise test cases and scenarios based on pre-defined acceptance criteria.
Analyses and reports on test activities, results, issues and risks.

## Level 4

Develops acceptance criteria related to functional and non-functional requirements, business processes, features, user stories and business rules.
Designs and specifies test cases and scenarios to test that systems, products and services fulfil the acceptance criteria and deliver the predicted business benefits.
Collaborates with project colleagues and stakeholders involved in the analysis, development and operation of products, systems or services to ensure accuracy and comprehensive test coverage.
Analyses and reports on test activities, results, issues and risks including the work of others.

## Level 5

Plans and manages acceptance testing activity.
Specifies the acceptance testing environment for systems, products, business processes and services. Manages the creation of acceptance test cases and scenarios. Ensures that defined tests reflect realistic operational conditions and required level of coverage.
Ensure tests and results are documented, analysed and reported to stakeholders, and required actions taken. Highlights issues and risks identified during testing to stakeholders.
Provides authoritative advice and guidance on planning and execution of acceptance tests.

## Level 6

Leads the implementation and delivery of the organisation's approach to acceptance testing.
Engages with senior stakeholders to secure organisational commitment and resources needed for effective acceptance testing.
Reports on any significant risks or issues related to acceptance testing and recommends required actions.
Develops organisational policies, standards, and guidelines for acceptance testing. Develops acceptance testing capabilities and methods for the organisation.

# Business process improvement BPRE

Creating new and potentially disruptive approaches to performing business activities.

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| **Guidance Notes:**Activities may include, but are not limited to:* analysing and designing business processes to improve business performance, create business opportunities, deliver new or improved products/services, or improve product/service value chains. Including the adoption and exploitation of data, information, new or existing technologies and cloud-based services
* using process mapping, value stream mapping, process mining and analytics, root cause analysis, and visual modelling
* identifying and implementing improvements to business models, business operations and services with improved processes
* exploiting technologies, such as robotic process automation, artificial intelligence, and machine learning
* assessing the costs and potential benefits of new approaches to the organisation and all stakeholders
* developing enterprise business process management capabilities to increase organisational agility and responsiveness to change.
 |

## Level 2

Assists in gathering data and documenting current business processes under routine supervision.
Participates in process mapping exercises and helps identify areas for potential improvement.
Assists in creating process documentation.
Supports the implementation of minor process changes and improvements.

## Level 3

Applies standard techniques to analyse existing business processes and identifies opportunities for improvement.
Collaborates with stakeholders to ensure process changes align with business objectives. Proposes and implements process improvements that enhance efficiency, effectiveness, and quality.
Develops and maintains process documentation.
Supports the adoption of new technologies and tools to enable process automation and optimisation.

## Level 4

Analyses and designs business processes to identify alternative solutions to improve efficiency, effectiveness and exploit new technologies and automation.
Develops graphical models of business processes to facilitate understanding and decision-making.
Recommends implementation approaches for process improvement initiatives.

## Level 5

Manages the execution of business process improvements.
Assesses the feasibility of business process changes and recommends alternative approaches.
Selects, tailors and implements methods and tools for improving business processes at programme, project or team level.
Contributes to the definition of organisational policies, standards, and guidelines for business process improvement.

## Level 6

Plans and leads strategic, large and complex business process improvement activities aligned with automation, or exploiting existing or new technologies.
Develops organisational policies, standards, and guidelines for business process improvement.
Leads the introduction of techniques, methodologies and tools to meet business requirements, ensuring consistency across all user groups.
Leads the development of organisational capabilities for business process improvement and ensures adoption and adherence to policies and standards.

## Level 7

Directs the identification, evaluation and adoption of new or existing technologies to improve business processes.
Aligns business strategies, enterprise transformation, and technology strategies.
Embeds strategic business process improvement into the governance and leadership of the organisation.
Directs the creation and review of a cross-functional, enterprise-wide approach and culture for embracing business process management.

# Organisational capability development OCDV

Providing leadership, advice and implementation support to assess organisational capabilities and to identify, prioritise and implement improvements.

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| **Guidance Notes:**Activities may include, but are not limited to:* selecting, adopting and integrating appropriate industry frameworks and models to guide improvements
* using capability maturity assessments, metrics, process definition, process management
* building repeatable and reliable capabilities through a process of trial, feedback, learning and continual evolution
* developing appropriate techniques, tools and enhanced skills
* designing and delivering integrated people, process and technology solutions to deliver improved organisational performance in line with strategic plans and objectives
* identifying organisational priorities for enhancing performance, satisfying new business opportunities or responding to external drivers.

The scope of improvement is typically organisation-wide but may also be highly focused on areas such as, but not limited to, business agility, software development, systems development, project delivery, service integration and management, service delivery, information and cyber-security. |

## Level 5

Contributes to identifying new areas of capability improvement within the organisation which may be enhancements to skills, technology or processes.
Develops and maintains a detailed knowledge of capability improvement approaches and techniques and selects appropriate approaches for the organisation.
Carries out capability improvement assignments, such as maturity or performance assessments to identify strengths and weaknesses. Selects and prioritises improvement opportunities, generates buy-in and plans improvement activities justified by measurable organisational benefits.
Offers support, guidance, advice and suggestions to help continual improvement activities.

## Level 6

Seeks out, identifies, proposes, and initiates capability improvement activities within the organisation.
Leads substantial improvement programmes. Plans and manages the evaluation or assessment of organisational capabilities. Selects frameworks, approaches and techniques for use.
Takes action to exploit opportunities to deliver measurable, beneficial impacts upon operational effectiveness. Devises solutions and leads change initiatives, including communication, transition and implementation activities.
Monitors international, national, and sector trends in order to establish the needed capability.

## Level 7

Represents and leads organisational capability improvement at the highest level.
Determines the need for strategic organisation-level capability improvement to satisfy the organisation's strategic goals and long-term objectives.
Liaises with the organisation's functions to establish requirements and identifies, proposes, initiates and leads significant organisational capability improvement programmes.
Manages the quality and appropriateness of the work performed and delivers measurable business benefits. Adopts and/or modifies existing capability improvement approaches as necessary.

# Organisation design and implementation ORDI

Planning, designing and implementing an integrated organisation structure and culture.

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| **Guidance Notes:**Activities may include, but are not limited to:* facilitating changes needed to adapt to changes in technologies, society, new operating models and business processes
* identifying key attributes of the required culture and how these can be implemented and reinforced to bring about improved organisational performance.

The scope of organisation design can be wide, including the workplace environment, location strategy and number of locations required, role profiles, performance measurements, competencies and skills. |

## Level 4

Assists with the development of organisational structures such as creating role descriptions and career paths.

## Level 5

Implements organisational structure and culture change activities.
Conducts impact assessments to ensure organisational structure and cultures are aligned to changes in processes, systems, technology and tools.
Develops graphical representations of organisation models and structures to facilitate understanding and decision-making. Identifies and evaluates alternative solutions.
Aligns existing organisational structures, roles, jobs, and career paths to new processes. Advises on implications of introducing new workplace models and tools.

## Level 6

Champions the value of new ways of working to address internal and external opportunities and threats.
Sets direction and leads in selecting and using organisation design techniques, methodologies and tools.
Plans and leads organisation design activities, identifies alternatives, assesses feasibility, and recommends solutions. Identifies major changes affecting the organisation, and mobilises resources to implement changes.
Initiates the definition of new organisation boundaries and creates future organisation design. Outlines performance measurement objectives and the high-level implementation approach.

## Level 7

Establishes and communicates the need and rationale for organisational structure and culture change.
Secures organisational commitment and resources needed for organisational and culture change.
Leads organisational change by removing obstacles, advocating and lobbying for change at the highest levels.
Puts in place mechanisms to reinforce and embed organisational and culture change. Acts as a role model for desired behaviours and sets consistent standards and expectations.

# Organisational change management CIPM

Planning, designing and implementing activities to transition the organisation and people to the required future state.

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| **Guidance Notes:**Activities may include, but are not limited to:* developing a business change implementation plan to identify required changes to processes, procedures, systems, structures, ways of working
* using a structured process and set of tools for leading the people side of change
* assessing change readiness and capacity including, but not limited to, planning around key business cycles, selecting appropriate customers for migration
* assessing and developing change management capabilities
* engagement and tailored communication with stakeholders and everyone impacted by the change
* monitoring the impact of the change management plan and sustaining and embedding change
* coaching change sponsors.
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## Level 2

Assists with organisational change management tasks under routine supervision.
Supports the collection and analysis of data related to change readiness and impact.
Helps document and communicate change management plans and activities.

## Level 3

Follows standard techniques to investigate and analyse the size, nature and impact of changes to operational activities.
Contributes to the recommendations for change management plans and actions.
Supports implementation and engages with stakeholders under direction.

## Level 4

Conducts readiness assessments to assess the size, nature and impact of organisational change.
Defines tactics to use considering the challenges to be addressed. Provides guidance and makes suggestions to support individuals responsible for operational implementation of change management activities.
Gathers feedback to analyse the impact and effectiveness of the change management activities being deployed. Takes corrective action as required.
Develops and communicates tailored change management plans. Establishes and builds relationships with the project sponsors and key stakeholders.

## Level 5

Develops the change management approach and a change management plan in collaboration with sponsors, users and project teams.
Creates and implements action plans to ensure everything is ready for the change before going live. Acquires change management resources and develops their capabilities to deliver the required changes.
Gathers feedback to allow timely improvements to the change management plan and approach. Assesses risks and takes preventative action.
Develops and communicates tailored change management plans for senior stakeholder groups. Provides guidance and makes suggestions to support change sponsors.

## Level 6

Defines and communicates the approach for change management for a significant part of the organisation.
Initiates, plans and leads strategic, large and complex change management initiatives. Provides guidance and raises awareness to help change leaders demonstrate effective behaviours to deliver organisational change.
Establishes feedback processes and leads analyses of change management successes.
Enables continual improvements to change management methodology, tools and training necessary to enhance the maturity across the organisation.

# Benefits management BENM

Forecasting, planning and monitoring the emergence and effective realisation of anticipated benefits from projects and programmes.

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| **Guidance Notes:**Activities may include, but are not limited to:* implementing a benefits management framework and approach
* identifying and implementing the actions needed to optimise the business impact of individual and combined benefits
* confirming the achievement of expected benefits
* adapting benefits management practices for agile projects
* using data-driven analysis for benefits identification, tracking, and reporting
* engaging stakeholders to embed a value-driven culture.
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## Level 3

Supports the identification and tracking of benefits for projects and programmes. Collects data to measure benefits realisation.

## Level 4

Contributes to the development and implementation of benefits management plans for projects and programmes.
Engages with stakeholders to identify and quantify benefits, and to establish metrics and mechanisms for tracking benefits realisation.
Monitors and reports on progress towards benefits realisation.
Identifies risks and issues that may impact benefits delivery and escalates as appropriate. Supports the embedding of benefits management practices across the organisation.

## Level 5

Leads activities required in the realisation of the benefits of each part of the change programme.
Identifies specific metrics and mechanisms to measure benefits and plans to activate these mechanisms at the required time. Monitors benefits against what was predicted in the business case.
Ensures that all participants are engaged throughout the change programme and fully prepared to exploit the new operational business environment.
Supports operational managers to ensure that all plans, work packages and deliverables are aligned with the expected benefits.

## Level 6

Works with operational managers to ensure maximum improvements are made as groups of projects deliver their products into operational use.
Communicates the change programme vision to staff at all levels of the business and keeps a focus on business objectives.
Maintains the business case for funding the programme and confirms continuing business viability of the programme at regular intervals.

# Product management PROD

Managing and developing products or services through their full life cycle from inception, growth, maturity, decline to retirement.

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| **Guidance Notes:**Activities may include, but are not limited to:* using market and/or user research insights to inform product strategies
* defining product vision, strategy, and roadmaps aligned with organisational goals
* developing and implementing pricing/charging strategies and tactics based on competitive analysis, cost analysis, and customer insights
* collaborating with cross-functional teams to develop, launch and manage products over their lifecycle
* managing product lifecycle and continuously improving products based on data and feedback
* monitoring product performance, market trends, and competitor activities
* applying product management principles to both internal and external products:

For customer-facing products (including government digital services and commercial products), focusing on measures such as customer needs, service quality, public sector objectives, revenue, profitability, and cost recoveryFor internal products, focusing on user needs, operational efficiency, and business valueA product life cycle typically moves from inception, growth, maturity, decline to retirement. The product development life cycle model used will be based on the context of the work and may be selected from predictive (plan-driven) or adaptive (iterative/agile) approaches. |

## Level 2

Assists with product management tasks under routine supervision.
Helps create and curate content to support product usage.
Assists in monitoring results and feedback from product activities.
Supports problem resolution by acting on feedback and usage data.

## Level 3

Creates and curates various content to support the adoption and usage of products or services.
Monitors results and feedback from product campaigns.
Applies standard techniques and tools to carry out analysis and performance monitoring activities for specified products.
Supports problem resolution, resolves issues and acts on feedback and usage of in-life products.

## Level 4

Manages one or more lower-value products or services.
Prioritises product requirements, develops product roadmaps, and owns the product backlog. Manages elements of the product life cycle to meet customer/user needs and achieve financial or other targets.
Uses insights from market and/or user research, feedback, expert opinion, and usage data to understand needs and opportunities.
Facilitates uptake of products by developing content, supporting and evaluating campaigns, and monitoring product performance. Rolls out product trials and product launches.

## Level 5

Manages the full product life cycle to meet customer/user needs and achieve targets.
Selects and adapts appropriate product development methods, tools, and techniques.
Uses insights from market and/or user research, feedback, and usage data to understand needs and opportunities. Develops product propositions and determines positioning and variants for different segments. Prioritises requirements and develops product roadmaps.
Coordinates customer testing, product launches, and supports communications and training. Adapts products based on changing customer/user needs, and creates retirement and transition plans.

## Level 6

Oversees the organisation’s product and services portfolio and the delivery of customer value and/or user satisfaction over time.
Creates the product life cycle management framework for internal and external customers and users. Champions the importance and value of product management principles and appropriate product development models.
Aligns the product management objectives with business objectives and authorises the selection and planning of all product management activities.
Initiates the creation of new products and services. Identifies how developing new products or adapting existing products can new opportunities.

# Systems development management DLMG

Planning, estimating and executing systems development work to time, budget and quality targets.

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| **Guidance Notes:**Systems development include the delivery of projects, initiatives, enhancement requests, and the maintenance of existing systems.Activities may include, but are not limited to:* planning and estimating work
* adopting and adapting systems development life cycle models based on the context of the work and selecting appropriately from predictive (plan-driven) approaches or adaptive (iterative/agile) approaches
* collaboration and open communication with stakeholders with a focus on delivering value from systems development
* managing risks and allowing for timely adjustment of plans and deliverables to continue to meet customer requirements and deliver value
* ensuring that systems development work meets the required quality standards
* aligning systems development activity and deliverables with architectures and standards and ensuring quality, security and privacy are built in
* developing roadmaps to communicate systems development plans
* identifying, allocating and managing resources (including staff, equipment, and budgets) and how demand will be met with a supply capacity
* continuous improvement to refine and optimise systems development processes.
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## Level 4

Contributes to the planning and management of systems development work.
Adopts and applies appropriate systems development methods, tools, and techniques in line with agreed standards.
Engages with stakeholders to ensure systems development deliverables meet requirements and quality expectations. Manages risks and issues related to systems development activities, escalating as needed.
Contributes to the continuous improvement of systems development processes and practices.

## Level 5

Plans and drives systems development work to deliver the organisation's objectives and plans.
Selects, adopts and adapts appropriate systems development methods, tools and techniques. Ensures that stakeholders are aware of required resources and that they are made available. Facilitates availability and optimum utilisation of resources.
Monitors and reports on the progress of development projects. Ensures projects are carried out in accordance with agreed architectures, standards, methods and tools and addresses security and privacy requirements.
Develops roadmaps to communicate future development activity.

## Level 6

Sets policy and drives adherence to standards for systems development.
Leads activities to make security and privacy integral to systems development.
Identifies and manages the resources necessary for all stages of systems development projects.
Ensures that technical, financial and quality targets are met.

## Level 7

Directs the definition, implementation and continual improvement of the organisation’s systems development management framework.
Aligns systems development to business strategies and objectives and with emerging technology and digital opportunities. Maintains an overview of the contribution of systems development programmes to organisational success.
Authorises the structure of systems development functions and platforms.
Sets strategy for resource management within systems development and authorises the allocation of resources for systems development programmes.

# Systems and software life cycle engineering SLEN

Establishing and deploying an environment for developing, continually improving, and securely operating software and systems products and services.

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| **Guidance Notes:**This skill is associated with interdisciplinary approaches to developing and operating software and systems products and services across the full life cycle. Typically, but not exclusively, labelled with terms such as DevOps, DevSecOps, site reliability engineering, developer productivity engineering.Activities include, but are not limited to:* establishing secure and reliable software lifecycle principles and practices
* developing a supporting framework of methods, procedures, techniques, tools, and people with required skills, knowledge and competencies
* deploying and using this environment with the people and teams that are responsible for all systems and software life cycle engineering
* building repeatable and reliable capabilities through a process of trial, feedback, learning and continual evolution
* adapting working practices to the needs of specific products and services
* defining, controlling and improving software life cycle processes
* building in risk management, quality, security, privacy and safety
* maximising the automation of activities
* establishing software architecture and design principles to enable the desired life cycle processes
* focusing on mission, value and customers
* establishing a culture of collaboration, learning, knowledge management, adaptation and resilience
* adopting and integrating appropriate industry frameworks to guide improvements:
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## Level 4

Elicits requirements for systems and software life cycle working practices and automation.
Prepares design options for the working environment of methods, procedures, techniques, tools, and people.
Selects systems and software life cycle working practices for software components and micro-services.
Deploys automation to achieve well-engineered and secure outcomes.

## Level 5

Collaborates with those responsible for ongoing systems and software life cycle management to select, adopt and adapt working practices.
Supports deployment of the working environment for systems and software life cycle working practices.
Provides effective feedback to encourage development of the individuals and teams responsible for systems and software life cycle working practices. Provides guidance and makes suggestions to support continual improvement and learning approach.
Contributes to identifying new domains within the organisation where systems and software life cycle working practices can be deployed.

## Level 6

Obtains organisational commitment to strategies to deliver systems and software life cycle working practices to achieve business objectives.
Works with others to integrate organisational policies, standards and techniques across the full software and systems life cycle.
Develops and deploys the working environment supporting systems and software life cycle practices for strategic, large and complex products and services.
Leads activities to manage risks associated with systems and software life cycle working practices. Plans and manages the evaluation or assessment of systems and software life cycle working practices

## Level 7

Represents and leads systems and software life cycle working practices at the highest level in the organisation.
Identifies opportunities for innovation in systems and software life cycle working practices to achieve organisational goals and objectives.
Leads the essential cultural and environmental changes and communicates the benefits to all stakeholders.
Oversees the quality of the work performed and delivers measurable business benefits.

# Systems design DESN

Designing systems to meet specified requirements and agreed systems architectures.

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| **Guidance Notes:**Activities may include, but are not limited to:* using design concepts to develop system design and provide the basis for systems construction and verification
* designing or selecting system components
* designing systems compatible with contemporary computing architectures and selection of components such as cloud computing service models and edge computing
* designing cyber-physical systems that integrate computational and physical components
* considering human factors and socio-technical aspects when designing systems that involve significant human interaction
* developing a complete set of detailed models, properties, and/or characteristics described in a form suitable for implementation
* adopting and adapting of system design life cycle models based on the context of the work using predictive (plan-driven) approaches or adaptive (iterative/agile) approaches for system design
* adhering to regulatory requirements and organisational standards including security.
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## Level 2

Assists in the creation and documentation of system design elements under routine supervision.
Follows established procedures and guidelines.
Helps create and maintain documentation.

## Level 3

Follows standard approaches and established design patterns to create new designs for simple systems or system components.
Identifies and resolves minor design issues.
Identifies alternative design options and seeks guidance when deviating from established design patterns.

## Level 4

Designs system components using appropriate modelling techniques following agreed architectures, design standards, patterns and methodology.
Identifies and evaluates alternative design options and trade-offs. Creates multiple design views to address the concerns of the different stakeholders and to handle functional and non-functional requirements.
Models, simulates or prototypes the behaviour of proposed system components to enable approval by stakeholders.
Produces detailed design specifications to form the basis for the construction of systems. Reviews, verifies and improves own designs against specifications.

## Level 5

Designs large or complex systems and undertakes impact analysis on major design options and trade-offs.
Ensures that the system design balances functional and non-functional requirements.
Reviews systems designs and ensures that appropriate methods, tools and techniques are applied effectively. Makes recommendations and assesses and manages associated risks.
Adopts and adapts system design methods, tools and techniques. Contributes to development of system design policies, standards and selection of architecture components.

## Level 6

Develops and drives adoption of and adherence to organisational policies, standards, guidelines, and methods for system design.
Champions the importance and value of system design principles and the selection of appropriate systems design life cycle models.
Leads system design activities for strategic, large and complex systems development programmes. Develops effective implementation strategies consistent with specified requirements, architectures and constraints of performance and feasibility.
Develops system design requiring the introduction of new technologies or new uses for existing technologies.

# Software design SWDN

Specifying, architecting and designing software to meet defined requirements by following agreed standards and principles.

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| **Guidance Notes:**Activities may include, but are not limited to:* designing and architecting software applications, components, interfaces and related characteristics (including security)
* designing for scalability, performance, resilience, security, and privacy from the outset, aligned with cloud computing, distributed systems, and data protection
* using design concepts, patterns, modelling techniques and architectural styles (e.g., microservices, serverless, domain-driven design) to develop software designs and architectures, providing the basis for software construction and verification
* evaluating alternative solutions and trade-offs to facilitate design decisions
* considering functional and non-functional requirements such as the target environment, performance, security, scalability, and integration with existing systems
* adopting and adapting software design models, tools, and techniques based on the context of the work, including contemporary practices such as cloud-native architectures, edge computing, cyber-physical systems, and agile and iterative design practices
* developing prototypes/simulations to enable informed decision-making
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## Level 2

Creates and documents detailed designs for simple software applications or components.
Applies agreed modelling techniques, standards, patterns and tools.
Contributes to the design of components of larger software systems.
Reviews own work.

## Level 3

Undertakes complete design of moderately complex software applications or components.
Applies agreed standards, guidelines, patterns and tools. Assists as part of a team in the design of components of larger software systems. Specifies user and/or system interfaces.
Creates multiple design views to address the different stakeholders' concerns and to handle functional and non-functional requirements. Assists in the evaluation of options and trade-offs.
Collaborates in reviews of work with others as appropriate.

## Level 4

Designs and architects complex software applications, components, and modules.
Uses appropriate modelling techniques in line with agreed software design standards, guidelines, patterns, and methodologies. Produces and communicates multiple design views to address stakeholder concerns and meet both functional and non-functional requirements.
Identifies, evaluates, and recommends design alternatives and trade-offs. Models, simulates, or prototypes proposed software behaviours to secure stakeholder approval and facilitate effective software construction.
Reviews, verifies, and enhances own designs against specifications and leads reviews of others' designs.

## Level 5

Specifies, designs and architects large or complex software applications, components and modules.
Adopts and adapts software design methods, tools and techniques. Undertakes impact analysis on major design options, makes recommendations and assesses and manages associated risks. Specifies prototypes/simulations to enable informed decision-making.
Evaluates software designs to ensure adherence to standards and identifies corrective action. Ensures that the software design balances functional, quality, security and systems management requirements.
Contributes to the development of organisational software design and architecture policies and standards.

## Level 6

Leads the selection and development of software design and architectural methods, tools and techniques.
Defines and maintains architectural principles, patterns, and frameworks to guide software design and development across the organisation.
Ensures adherence to technical strategies and systems architectures (including security).

# Network design NTDS

Designing communication networks to support strategic and operational requirements and producing network strategies, architectures, policies and related documentation.

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| **Guidance Notes:**Network design covers all aspects of the communications infrastructure, including, but not limited to, networks that are wired or wireless, digital or analogue, virtual or physical, local area, wide area, mobile/cellular, and any other defined protocols and scales of operation. In the cloud context, network design also includes designing virtual network topologies, hybrid cloud connectivity, and leveraging cloud-native networking services to ensure scalability, security, and performance. Activities may include, but are not limited to:* analysing business requirements and translating them into network design specifications
* designing network topologies, security measures, and connectivity solutions for various environments
* defining network configurations and policies using code
* planning for network scalability, redundancy, and high availability, including in cloud-based networks
* defining network infrastructure as code to enable automation and streamline provisioning and management
* designing disaster recovery and business continuity solutions to ensure network resilience and minimize downtime
* collaborating with stakeholders to ensure network designs align with business objectives and industry best practices
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## Level 2

Assists with defining configurations for networks and network components under routine supervision.
Follows established network architectures and standards.
Assists in documenting network configurations and producing detailed network specifications under guidance.

## Level 3

Specifies the technical configurations and components required for a small network or a network segment in a more complex infrastructure.
Follows organisational architectures and standards.

## Level 4

Designs specific network components using agreed architectures, design standards, patterns and methodology.
Translates logical designs into physical designs that meet specified operational parameters for capacity and performance.
Reviews and verifies network designs against non-functional requirements, including validation and error correction procedures, access, security and audit controls.
Contributes to the development of recovery routines and contingency procedures. Contributes to alternative network architectures, networking topologies and design options.

## Level 5

Produces, or approves network providers', network architectures, topologies and configuration databases for own area of responsibility.
Specifies design parameters for network connectivity, capacity, speed, interfacing, security and access, in line with business requirements.
Assesses network-related risks and specifies recovery routines and contingency procedures.
Creates multiple design views to address the different stakeholders' concerns and to handle both functional and non-functional requirements.

## Level 6

Takes responsibility for major aspects of network specification, standards, technologies and overall network design models within the organisation.
Produces network design policies, principles and criteria covering connectivity, capacity, interfacing, security, resilience, recovery and access.

# Hardware design HWDE

Specifying and designing hardware systems and components to meet defined requirements by following agreed design principles and standards.

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| **Guidance Notes:**The scope encompasses a wide range of hardware systems and components, including but not limited to processors, specialized computing units, embedded systems, control systems, and various sensor and actuator devices. The hardware design should factor in integration needs with IT infrastructures, networking environments, as well as systems architectures such as cloud service models, edge computing, and cyber-physical systems.Activities may include , but are not limited to:* defining how hardware components fit into the system architecture and integrate with software, firmware and other systems
* selecting, designing, specifying, integrating and prototyping hardware components and subsystems
* considering target environments, performance, security, safety, reliability, sustainability, and compatibility requirements
* adhering to industry standards including compatibility, safety, security, reliability and sustainability
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## Level 2

Assists in the design of simple hardware components or subsystems under guidance.
Follows established design principles, patterns, and methodologies as directed. Participates in the translation of logical designs into physical implementations.
Tests hardware components or subsystems against provided specifications and documents results. Contributes to the documentation of hardware designs using required standards, methods, and tools.
Seeks guidance and support for deviations from standard practices or when facing unfamiliar scenarios.

## Level 3

Follows selected standard approaches and design patterns to design simple hardware components.
Seeks guidance when deviating from established design patterns. Takes account of target environment, performance, security, safety, reliability and sustainability requirements.
Translates logical designs into physical designs. Tests the performance of prototypes and production output against specification.
Submits hardware designs for approval. Documents all work using required standards, methods and tools.

## Level 4

Designs hardware components, taking account of target environment, performance, security, safety, reliability and sustainability requirements.
Translates logical designs into physical designs and delivers technical prototypes of proposed components for approval and production.
Designs the tests to measure the performance of prototypes and production output against specification and inform iterative development.

## Level 5

Specifies and designs complex hardware components/systems.
Selects appropriate design standards, methods and tools, consistent with agreed enterprise policies and ensures they are applied effectively.
Undertakes impact analysis on major design options and assesses and manages associated risks. Ensures that hardware designs balance functional, quality, safety, security, systems management, reliability and sustainability requirements.
Reviews others' designs to ensure selection of appropriate technology, efficient use of resources, and effective integration of multiple systems and technology. Contributes to policy for selection of components.

## Level 6

Provides overall direction and leadership in the hardware design practice within an organisation.
Influences industry-based models for the development of new technology and components.
Develops effective procurement strategies, consistent with business needs.
Drives adoption and ensures adherence to organisational policies, strategies and standards for hardware design.

# Programming/software development PROG

Developing software components to deliver value to stakeholders.

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| **Guidance Notes:**Activities may include, but are not limited to:* identifying, creating and applying software development and security standards and processes
* planning and designing software components
* estimating time and effort required for software development
* constructing, amending and verifying software components
* applying test-driven development and ensuring appropriate test coverage
* using peer review techniques such as pair programming
* documenting software components
* understanding and obtaining agreement to the value of the software components to be developed
* selecting appropriate development methods and life cycles
* applying recovery techniques to ensure the software being developed is not lost
* implementing appropriate change control to software development practices
* resolving operational problems with software and fixing bugs

Depending on requirements and the characteristics of the project or assigned work, software development methods and life cycles can be predictive (plan-driven) approaches or adaptive (iterative/agile) approaches. |

## Level 2

Designs, codes, verifies, tests, documents, amends and refactors simple programs/scripts.
Applies agreed standards and tools to achieve a well-engineered result.
Reviews own work.

## Level 3

Designs, codes, verifies, tests, documents, amends and refactors moderately complex programs/scripts.
Applies agreed standards and tools to achieve a well-engineered result.
Monitors and reports on progress. Identifies issues related to software development activities. Proposes practical solutions to resolve issues.
Collaborates in reviews of work with others as appropriate.

## Level 4

Designs, codes, verifies, tests, documents, amends and refactors complex programs/scripts and integration software services.
Contributes to the selection of the software development methods, tools and techniques.
Applies agreed standards and tools to achieve well-engineered outcomes.
Participates in reviews of own work and leads reviews of colleagues' work.

## Level 5

Takes technical responsibility across all stages and iterations of software development.
Plans and drives software construction activities. Adopts and adapts appropriate software development methods, tools and techniques.
Measures and monitors applications of project/team standards for software construction, including software security.
Contributes to the development of organisational policies, standards, and guidelines for software development.

## Level 6

Develops organisational policies, standards, and guidelines for software construction and refactoring.
Plans and leads software construction activities for strategic, large and complex development projects.
Adapts or develops new methods and organisational capabilities and drives adoption of, and adherence to policies and standards.

# Systems integration and build SINT

Planning, implementing and controlling activities to integrate system elements, subsystems and interfaces to create operational systems, products or services.

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| **Guidance Notes:**The scope of integration includes system elements, subsystems, interfaces and software components including computing, storage, networking and cloud services.Systems integration is used to create systems for testing purposes as well as for operational use by customers and users.Activities may include, but are not limited to:* developing organisational capabilities, processes and procedures for automation and continuous integration of build, packaging, testing, security and deployment
* building and operating a continuous integration (CI) capability when required employing version control of source code and related artefacts
* ensuring security and privacy requirements are an essential part of systems integration and build
* collaborating with development, testing, and operations teams to streamline the integration process
* testing, validation and sign off of integration to satisfy requirements, architectures and design
* monitoring and controlling integration activities and recording and reporting on the results of integration
* keeping stakeholders informed and providing feedback into risk management processes
* developing and testing disaster recovery plans and applying incident management processes for major systems integrations.
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## Level 2

Produces builds from system components using appropriate build automation tools and processes.
Conducts tests as defined in an integration test specification and records the details of any failures.
Analyses and reports on integration test activities and results. Identifies and reports issues and risks.

## Level 3

Defines the modules and components and dependencies needed for an integration build and produces a build definition. Accepts completed modules and components, ensuring they meet defined criteria.
Produces builds from system components for loading onto target environments.
Configures the hardware, software, and infrastructure environment as required by the system being integrated.
Produces integration test specifications, conducts tests, and records and reports on outcomes. Diagnoses faults and documents the results of tests. Produces system integration reports.

## Level 4

Provides technical expertise to enable the configuration of system components and equipment for systems testing.
Collaborates with technical teams to develop and agree system integration plans and report on progress. Defines complex/new integration builds. Ensures that integration test environments are correctly configured.
Designs, performs and reports results of tests of the integration build. Identifies and documents system integration components for recording in the configuration management system.
Recommends and implements improvements to processes and tools.

## Level 5

Plans and drives activities to develop organisational systems integration and build capabilities including automation and continuous integration.
Identifies, evaluates and manages the adoption of tools, techniques and processes to create a robust integration framework. Provides authoritative advice and guidance on any aspect of systems integration.
Leads integration work in line with the agreed system and service design. Assesses risks and takes preventative action. Measures and monitors applications of standards.
Contributes to the development of organisational policies, standards, and guidelines for systems integration.

## Level 6

Leads the development of organisational systems integration and build capabilities including automation and continuous integration.
Develops organisational policies, standards, and guidelines for systems integration and build.
Provides resources to ensure systems integration and build can operate effectively and ensures adoption and adherence to policies and standards.

# Functional testing TEST

Investigating products, systems and services to assess behaviour and whether this meets specified or unspecified functional requirements and characteristics.

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| **Guidance Notes:**The scope of functional testing includes technology, system components, configurations, packages and their interfaces which are intended to deliver specific functionality. This skill is applicable to all testing methodologies, which can be delivered using predictive (plan-driven) approaches or adaptive (iterative/agile) approaches. Activities may include, but are not limited to:* planning, designing, managing, executing and reporting of functional tests
* functional testing of capabilities or features
* static testing and static analysis
* managing risks associated with testing and taking preventative action when needed
* adopting and adapting testing methods including waterfall, incremental or agile approaches
* conforming to agreed process standards, industry-specific regulations and data protection legislation
* engineering, using and maintaining testware to measure and improve the quality of the software being tested
* promoting productivity through test automation, tools and best practices
* developing scalable and reliable automated tests and frameworks.

Examples of the risks addressed by Functional testing:* functions do not perform as specified, causing errors in the system
* user interactions do not produce the expected results
* integration points between system components fail
* functions fail under specific conditions or inputs
* inconsistencies in data processing and handling
* non-compliance with functional requirements and user expectations.
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## Level 1

Executes given manual test scripts under supervision.
Uses basic automated testing tools.
Records results and reports issues.
Develops an understanding of the role of testing as a tool for design improvement and a validation process.

## Level 2

Designs test cases, creates test scripts and test data, and automates repeatable tasks working to the requirements or specifications provided.
Defines test conditions for given requirements.
Executes and records manual and automated testing in accordance with test plans.
Analyses and reports on test activities, results, issues and risks.

## Level 3

Designs test cases and test scripts under own direction, mapping back to pre-determined criteria, recording and reporting test outcomes.
Participates in requirement, design and specification reviews, and uses this information to design test plans and test conditions.
Applies agreed standards to specify and perform manual and automated testing. Automates testing tasks and builds test coverage through existing or new infrastructure.
Analyses and reports on test activities, results, issues and risks.

## Level 4

Selects appropriate testing approach, including manual and automated testing.
Develops and executes test plans and test cases. Implements scalable and reliable automated tests and frameworks.
Collaborates across parties involved in product, systems or service design and development to enable comprehensive test coverage. Identifies improvements in requirements, design or specification processes to increase the effectiveness and efficiency of testing.
Analyses and reports on test activities, results, issues and risks, including the work of others.

## Level 5

Plans and drives testing activities across all stages and iterations of product, systems and service development.
Provides authoritative advice and guidance on any aspect of test planning and execution. Adopts and adapts appropriate testing methods, automated tools and techniques to solve problems in tools and testing approaches.
Measures and monitors applications of standards for testing. Assesses risks and takes preventative action.
Identifies improvements and contributes to the development of organisational policies, standards, and guidelines for testing.

## Level 6

Develops organisational policies, standards, and guidelines for testing.
Plans and leads strategic, large and complex testing activities. Leads activities to manage risks and opportunities associated with testing.
Adapts or develops organisational testing capabilities and methods to solve complex business and engineering problems in tools and testing.
Promotes a culture of quality throughout the organisation and drives adoption of and adherence to testing policies and standards.

# Software configuration PORT

Designing and deploying software product configurations into software environments or platforms.

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| **Guidance Notes:**This skill is typically applied to the design and deployment of configurations of large, complex software.This includes, but is not limited to:* software for enterprise resource planning (ERP) and customer relationship management
* server/mainframe operating systems
* software as a service (SaaS) solutions
* integration platforms/suites
* tools provided by infrastructure as a service (IaaS) and platform as a service (PaaS) providers.

Activities may include, but are not limited to:* porting software configurations across different environments or platforms
* refactoring complex or overlapping configurations across different software modules and capabilities
* designing and implementing configurations that use architectures and services like microservices, serverless, and containers
* optimising configurations for performance, scalability, and cost-efficiency
* managing configurations across multiple environments and ensuring interoperability
* applying infrastructure as code principles to automate configuration deployment and management

Depending on requirements and the characteristics of the project or assigned work - software configuration methods and life cycles can be predictive (plan-driven) approaches or adaptive (iterative/agile) approaches. |

## Level 2

Assists with software configuration tasks under routine supervision.
Supports the setup and customisation of software environments and platforms.
Helps document and report on configuration changes and deployments.
Reviews own work.

## Level 3

Designs, verifies, documents, amends and refactors moderately complex software configurations for deployment.
Applies agreed standards and tools, to achieve a well-engineered result.
Collaborates in reviews of work with others as appropriate.

## Level 4

Designs, verifies, documents, amends and refactors complex software configurations for deployment.
Contributes to the selection of the software configuration methods, tools and techniques.
Applies agreed standards and tools, to achieve well-engineered outcomes.
Participates in reviews of own work and leads reviews of colleagues' work.

## Level 5

Takes technical responsibility across all stages and iterations of configuration development and deployment.
Plans and drives software configuration activities. Adopts and adapts appropriate software configuration methods, tools and techniques.
Measures and monitors the application of standards for configuration design and deployment including software security.
Contributes to the development of organisational policies, standards, and guidelines for software configuration design and deployment.

## Level 6

Develops organisational policies, standards, and guidelines for software configuration design, deployment and refactoring.
Plans and leads software configuration and deployment activities for strategic, large and complex deployment projects.
Develops new methods and organisational capabilities and drives adoption of, and adherence to policies and standards.

# Real-time/embedded systems development RESD

Designing and developing reliable real-time software typically within embedded systems.

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| **Guidance Notes:**Embedded systems provide a dedicated function within a more extensive mechanical or electronic system with real-time, safety, security, and reliability constraints. Typically, it involves interfacing with hardware, sensors, and actuators for monitoring and control in industrial, automotive, aerospace, medical or robotic equipment, including IoT (Internet of Things) devices and intelligent systems.These systems typically perform critical functions and have demanding requirements including, but not limited to, integrity, reliability, safety, security or power consumption.Activities may include, but are not limited to:* defining non-functional system requirements such as performance, reliability, safety, and security, including requirements for power, cost, physical space or response time
* building in fail-safe/secure characteristics for graceful degradation
* using specialist techniques to define systems and to assure essential attributes are achieved
* applying comprehensive verification, validation and testing methods and techniques
* using specialised tools such as in-circuit emulators, logic analysers and digital oscilloscopes.
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## Level 2

Designs, builds and tests simple real-time/embedded components as part of an overall larger systems design.
Uses appropriate programming languages to drive simple sensors and actuators.
Learns to use specialised tools such as in-circuit emulators, logic analysers and digital oscilloscopes.

## Level 3

Designs, builds and integrates medium-complexity real-time/embedded components as part of an overall larger systems design.
Follows agreed standards and uses specialist tools such as in-circuit emulators and logic analysers.
Drives specialist hardware, typically sensors and actuators, and optimises component code for performance.
Applies a range of approaches to the verification and testing of real-time components.

## Level 4

Designs, builds and integrates complex real-time/embedded components and sub-systems.
Designs physical layouts that reflect the connection between system components to test and optimise performance.
Builds system prototypes and simulations to aid development and enable debugging, testing and troubleshooting of embedded software.
Applies a range of approaches to the validation, verification and testing of real-time components and sub-systems. Is fully familiar with a range of specialist tools.

## Level 5

Designs and develops real-time/embedded architectures and systems to meet agreed system requirements.
Plans and manages the development of complex real-time/embedded systems and selects the approaches and techniques to be used.
Analyses design options and trade-offs between hardware and software, makes recommendations and assesses and manages associated risks. Ensures that effective validation, verification and testing is undertaken throughout development.
Oversees the integration of multiple sub-systems into the overall system.

## Level 6

Provides overall direction and leadership in the development of real-time/embedded systems.
Develops organisational policies, standards and guidelines for real-time/embedded systems architectures and designs.
Plans and leads strategic, large and complex real-time/embedded system developments. Identifies opportunities to exploit new technologies and improve existing technologies and practices.
Drives adherence to technical strategies, systems architectures and the implementation of risk-based verification, validation and testing. Develops effective implementation and procurement strategies.

# Safety engineering SFEN

Applying appropriate methods to assure safety during all life cycle phases of safety-related systems developments.

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| **Guidance Notes:**Safety-critical systems are those in which a system failure could harm human life, other living things, physical structures, or the environment. Activities may include, but are not limited to:* safety hazard and risk analysis
* safety requirements specification
* safety-related systems architectural design
* formal method design
* safety validation and verification
* safety case preparation
* applying generic safety standards such as IEC 61508, IEC 61511 or industry-specific safety standards.

System safety is engineered and measured by safety levels based on hazard and risk analysis. |

## Level 2

Assists with safety engineering tasks under routine supervision.
Supports the documentation of hazard and risk analysis activities.
Helps collect safety assurance evidence using agreed methods and procedures.

## Level 3

Contributes to hazard and risk analysis during system development and implementation using agreed methods and procedures.
Documents the results of hazard and risk analysis activities.
Contributes to the collection of safety assurance evidence using appropriate methods and tools.
Undertakes all work in accordance with agreed safety, technical and quality standards.

## Level 4

Contributes to identifying, analysing and documenting hazards and safety risks using agreed methods and procedures.
Contributes to the specification of safety requirements.
Analyses and documents safety validation results during system development and implementation.
Contributes to developing and maintaining project safety assurance plans, and gathers safety assurance evidence for safety case preparation.

## Level 5

Identifies and analyses hazards and contributes to identifying and evaluating risk reduction measures, ensuring these are adequately documented.
Specifies safety-related systems architectures for defined safety levels.
Develops and maintains project safety assurance plans. Monitors implementation and compliance. Ensures that safety assurance evidence is gathered for safety case preparation.
Works with system architects, designers and developers to assure safety requirements implementation.

## Level 6

Takes full responsibility for hazard analysis and risk evaluation, safety-related systems architectural design and safety compliance planning.
Leads the definition and allocation of safety requirements for the system, according to the system's nature and required safety level.
Takes responsibility for the safety-related aspects of multiple complex or high safety integrity level projects.

# Safety assessment SFAS

Assessing safety-related software and hardware systems to determine compliance with standards and required levels of safety integrity.

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| **Guidance Notes:**Activities may include, but are not limited to:* making professional judgements on software and hardware engineering approaches
* assessing the suitability of design, testing, and validation and verification methods
* identifying and evaluating risks and how they can be reduced
* establishing, maintaining and managing a safety assessment framework and practices
* using techniques such as failure modes effects analysis, hazard and operability studies, component failure impact analysis, fault tree analysis, event tree analysis and criticality analysis.
 |

## Level 4

Collects safety assurance evidence using appropriate methods and tools.
Undertakes all work in accordance with agreed safety, technical and quality standards.

## Level 5

Undertakes safety analyses using agreed techniques to verify or validate that safety requirements are implemented.
Participates in system safety assessments.
Creates safety assessment reports and recommends and defines how a system's safety requirements can be satisfied.

## Level 6

Champions and promotes safety practices in the organisation.
Leads safety assessments according to organisational safety policies and standards.
Defines and implements organisational policies and standards for system safety assessment.
Assures compliance with defined standards and policies and oversees overall safety life cycle assessment activities.

# Radio frequency engineering RFEN

Designing, installing and maintaining radio frequency based devices and software.

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| **Guidance Notes:**Activities may include, but are not limited to:* evaluating and selecting devices and software
* integrating radio frequency (RF) sub-systems into larger systems
* calibrating, tuning and maintaining devices and software
* receiving, transmitting and converting data between analogue and digital devices, in accordance with industry and regulatory standards
* developing, integrating and configuring antennas, readers and transmitters in hardware or software forms, including software-defined radio (SDR), radio frequency identification (RFID), near field communication (NFC), Bluetooth and Wi-Fi
* adhering to established safety, security and quality standards.

Applications of this skill include, but are not limited to:* wireless local area networks
* wireless communication systems for voice, data and image, cellular radio systems, global positioning systems and military communications networks
* navigation and sensor systems.
 |

## Level 2

Assists with setting up, tuning and functional checks of radio frequency devices and software.
Resolves faults down to line replaceable unit level or escalates according to given procedures.
Carries out user confidence checks and escalates faults according to given procedures.
Integrates RF devices with software applications using static configurations.

## Level 3

Deploys, sets up, tunes and calibrates RF devices and software following maintenance schedules and using appropriate tools and test equipment.
Incorporates hardware/firmware modifications. Interprets automatic fault/performance indications and resolves faults down to discrete component level or escalates according to given procedures.
Implements communication protocols between system elements in accordance with defined standards.
Integrates RF devices with software applications, incorporating dynamic reconfiguration of elements under software control to optimise their operational performance.

## Level 4

Investigates and resolves system-wide fault conditions using a wide range of diagnostic tools and techniques.
Reconfigures equipment to circumvent temporary outages. Specifies, selects and integrates RF devices in a system.
Defines internal communication protocols for transmission over the available frequencies.
Reconfigures devices and software to optimise performance.

## Level 5

Monitors system performance, recommends equipment modifications and changes to operating procedures, servicing methods and schedules.
Develops maintenance schedules and procedures. Approves equipment upgrades and modifications.
Reviews industry and national standards on relevant RF protocols and regulations.
Measures and evaluates the effectiveness of RF devices and software.

## Level 6

Provides overall direction and leadership for the use of RF based devices and software.
Specifies requirements for radio frequency equipment performance and sets maintenance policy.
Identifies opportunities to exploit new technologies and improve existing technologies and practices.
Develops effective implementation and procurement strategies.

# Animation development ADEV

Designing and developing animated and interactive systems such as games, simulations and virtual environments.

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| **Guidance Notes:**Animation development enables the creation of visually engaging and interactive experiences for various industries, such as gaming, training, scientific research, and engineering, as well as virtual reality and augmented reality applications.Components of animation systems include game engine or framework, visual assets (3D models, 2D artwork, animations), audio assets, user interface and user experience components, game logic, data and configuration files, tools and pipelines, documentation and design documentsActivities may include, but are not limited to:* employing animation techniques, including keyframe animation, motion capture, procedural animation, and skeletal animation
* using specialised software for rigging, skinning, and animation editing
* creating and integrating animations into interactive systems
* ensuring integration of animations with game logic, physics, and artificial intelligence systems
* optimising animations for performance and adhering to consistency and quality standards.
 |

## Level 2

Assists in the creation of basic visual and audio components for animations under routine supervision.
Follows established procedures and guidelines and contributes to the development of simple animations using standard tools.
Helps create and maintain documentation.

## Level 3

Builds visual and audio components using animation software.
Uses design tools to evolve rapid prototypes of interactive systems and user interfaces.
Uses visual design tools and organic modelling techniques to create and animate virtual characters within a game or system design.

## Level 4

Builds visual and audio components and integrates them into the system structure.
Uses design tools to evolve rapid prototypes and assess the viability of design concepts for interactive systems and user interfaces.
Uses complex visual design tools and organic modelling techniques to create and animate virtual characters within a game or system design.

## Level 5

Manages iterations of level design and storytelling, documenting the overall flow and architecture of a game or similar system.
Develops conceptual structures into design blueprints to create high-level structures and runtime architectures for websites and virtual environments.
Oversees the integration of animations with game logic, physics, and artificial intelligence systems.

## Level 6

Provides overall creative direction in the conception and design of animation products such as games and simulations.
Establishes animation development strategies, pipelines, and quality assurance processes.
Adapts or develops new methods and organisational capabilities and drives adoption of, and adherence to policies and standards.

# Data management DATM

Developing and implementing plans, policies, and practices that control, protect and optimise the value and governance of data assets.

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| **Guidance Notes:**Activities may include, but are not limited to:* developing and enforcing data governance policies to ensure data quality, compliance, and ethical usage
* developing plans, policies and practices related to areas including, but not limited to, classification, storage, security, quality, sharing, availability, retrieval, retention and publishing
* managing data in all its forms, ensuring alignment with business objectives and regulatory requirements
* analysing information structures, including logical analysis of taxonomies, ontologies, data, metadata, and industry reference data
* ensuring data is appropriately stored and archived, in line with relevant legislation
* implementing data management practices for cloud-based services
* applying ethical principles when handling data.
* developing innovative ways to manage data assets
* integrating data from multiple sources to support data pipelines and enable additional operations on the data.
 |

## Level 2

Assists in implementing data management activities under close guidance and supervision.
Helps create and maintain documentation of data management activities.
Helps identify and report issues and discrepancies.

## Level 3

Implements standard data management practices based on detailed requirements.
Monitors and maintains data quality through regular reviews and validation checks.
Communicates the details of data management procedures to others, helping their understanding and compliance.

## Level 4

Devises and implements data governance and master data management processes for specific subsets of data.
Assesses the integrity of data from multiple sources.
Advises on data transformation of data between formats or media. Maintains and implements data handling procedures.
Enables data availability, integrity and searchability through formal data and metadata structures and protection measures.

## Level 5

Devises and implements data governance and master data management processes.
Derives data management structures and metadata to support consistent data retrieval, combination, analysis, pattern recognition, and interpretation across the organisation.
Independently validates external information from multiple sources. Plans effective data storage, sharing, and publishing practices within the organisation.
Identifies and addresses issues preventing optimal use information assets. Provides expert advice to maximise data asset value, ensuring data quality and compliance.

## Level 6

Leads the strategic direction for data management and governance, establishing policies and frameworks that align with business and regulatory requirements. Derives an overall strategy of master data management that supports the development and secure operation of data and digital services.
Creates organisational policies, standards, and guidelines for data management, ensuring ethical principles are applied.
Plans, establishes and manages processes for regular and consistent access to external data sources, ensuring their validation and integration.

# Data modelling and design DTAN

Developing models and diagrams to represent and communicate data requirements and data assets.

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| **Guidance Notes:**Data modelling supports activities such as, but not limited to:* helping organisations understand their data assets, developing software systems, and the relationships between real-world entities
* engaging with stakeholders to gather requirements and ensure data models align with business objectives
* facilitating data engineering, integration and interoperability
* enhancing data retrieval
* supporting data governance and master data management
* incorporating industry reference data standards to ensure consistency, interoperability, and compliance.

Data models typically include components such as entities, relationships, attributes, and domains. There are various types of data models, including relational, object-oriented, NoSQL, and time-based.Data models communicate different levels of detail, including conceptual, logical and physical.  |

## Level 2

Establishes, modifies or maintains simple data structures and associated components.
Uses specific data modelling and design techniques under guidance.

## Level 3

Applies standard data modelling and design techniques based upon a detailed understanding of requirements.
Establishes, modifies and maintains data structures and associated components.
Communicates the details of data structures and associated components to others using the data structures and associated components.

## Level 4

Investigates enterprise data requirements where there is some complexity and ambiguity.
Plans own data modelling and design activities, selecting appropriate techniques and the correct level of detail for meeting assigned objectives.
Provides advice and guidance to others using the data structures and associated components.

## Level 5

Sets standards for data modelling and design tools and techniques, advises on their application and ensures compliance.
Manages the investigation of enterprise data requirements based upon a detailed understanding of information requirements.
Coordinates the application of analysis, design and modelling techniques to establish, modify or maintain data structures and their associated components.
Manages the iteration, review and maintenance of data requirements and data models.

# Database design DBDS

Specifying, designing and maintaining mechanisms for storing and accessing data.

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| **Guidance Notes:**Activities may include, but are not limited to:* designing operational databases, data warehouses, data lakes, or data stores for on-premise, cloud-based, or hybrid environments
* defining physical or virtual structures required to support applications, analytics, machine learning, business intelligence or other data-driven services
* designing operational data stores to integrate data from multiple sources to support data pipelines and enable additional operations on the data
* aligning designs with data architectures, enterprise architectures, standards, policies, and regulations
* considering scalability, performance, availability, recovery, and other operational requirements.
 |

## Level 2

Assists in the creation and documentation of detailed database designs under routine supervision.
Follows established procedures and guidelines.
Helps create and maintain documentation.

## Level 3

Interprets installation standards to meet project needs and produces database or data warehouse component specifications.
Develops appropriate physical database or data warehouse design elements, within set policies, to meet data requirements.

## Level 4

Implements physical database designs to support transactional data requirements for performance and availability.
Develops and maintains specialist knowledge of database and data warehouse concepts, design principles, architectures, software and facilities.
Assesses proposed changes to object/data structures and evaluates alternative options.
Implements data warehouse designs that support demands for business intelligence and data analytics.

## Level 5

Provides specialist expertise in the design characteristics of database management systems or data warehouse products/services.
Provides expert guidance in the selection, provision and use of database and data warehouse architectures, software and facilities.
Ensures that physical database design policy supports transactional data requirements for performance and availability.
Ensures that data warehouse design policy supports demands for business intelligence and data analytics.

# Data engineering DENG

Designing, building, operationalising, securing and monitoring data pipelines and data stores.

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| **Guidance Notes:**Activities may include, but are not limited to:* identifying data sources, data processing concepts and methods
* evaluating, designing and implementing on-premise, cloud-based and hybrid data engineering solutions
* structuring and storing data for uses including, but not limited to, analytics, machine learning, data mining, sharing with applications and organisations
* harvesting structured and unstructured data
* integrating, consolidating and cleansing data
* migrating and converting data
* applying ethical principles in handling data
* ensuring appropriate storage of data in line with relevant legislation
* building in security, compliance, scalability, efficiency, reliability, fidelity, flexibility and portability.
 |

## Level 2

Assist in developing and implementing data pipelines and data stores.
Performs administrative tasks to provide accessibility, retrievability, security and protection of data.

## Level 3

Follows standard approaches and established design patterns to create and implement simple data pipelines and data stores to acquire and prepare data.
Applies data engineering standards and tools to create and maintain data pipelines and extract, transform and load data.
Carries out routine data quality checks and remediation.

## Level 4

Designs, implements, and maintains complex data engineering solutions to acquire and prepare data.
Creates and maintains data pipelines to connect data within and between data stores, applications and organisations.
Carries out complex data quality checking and remediation.

## Level 5

Plans and drives the development of data engineering solutions ensuring that solutions balance functional and non-functional requirements.
Monitors application of data standards and architectures including security and compliance.
Contributes to organisational policies, standards, and guidelines for data engineering.

## Level 6

Leads the selection and development of data engineering methods, tools and techniques.
Develops organisational policies, standards, and guidelines for the development and secure operation of data services and products.
Ensures adherence to technical strategies and architectures.
Plans and leads data engineering activities for strategic, large and complex programmes.

# Database administration DBAD

Installing, configuring, monitoring, maintaining databases and data stores, ensuring performance and security while adapting to evolving technologies.

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| **Guidance Notes:**Database administration involves managing operational databases in production environments as well as supporting databases for development, testing, and iterative improvements. The focus is on ensuring database availability, integrity, security, and performance across a variety of database types, including relational, NoSQL, and cloud-based databases.Activities may include, but are not limited to:* identifying and acting on automation opportunities to improve performance and value from databases, data stores and data pipelines
* using database management system software and tools including both cloud-based and on-premises solutions
* applying knowledge of the logical database schema
* ensuring compliance with data privacy laws and regulations
* designing and implementing disaster recovery and backup strategies
* integrating and managing databases across hybrid environments, combining on-premises and cloud-based solutions
* monitoring emerging database technologies and trends
 |

## Level 2

Executes operational procedures, runs automation scripts, and performs routine maintenance and monitoring of databases.
Adjusts automation tasks as needed to meet operational standards for databases under supervision.
Reports on database performance, addresses issues directly when possible, or escalates to others for resolution.

## Level 3

Provisions, installs, configures, and ensures the maintenance and reliability of databases.
Monitors databases for load, performance, and security events. Reports metrics and resolves operational issues.
Executes standard operational procedures, including database backups and restorations.
Automates routine database administration tasks to specifications using standard scripts and tools.

## Level 4

Applies technical expertise to maintain and optimise databases, executing updates and employing automation tools. Configures tools and/or creates scripts to automate database tasks.
Maintains operational procedures and checks that they are followed. Uses database management tools to monitor load and performance statistics.
Investigates and enables the resolution of database operational issues. Provides reports and proposals for improvement to stakeholders.
Contributes to the planning and implementation of database maintenance and updates. Implements agreed database changes and maintenance routines.

## Level 5

Provides technical leadership to optimise the performance of databases.
Drives the adoption of tools and automated processes for effective database management and delivery.
Oversees the planning, installation, maintenance, and acceptance of new and updated database components and database-based services. Aligns to service expectations, security requirements, and other quality standards.
Ensures database operational procedures and documentation are current and effective, tracks and addresses operational issues, and reports to stakeholders.

# Data science DATS

Applying mathematics, statistics, data mining and predictive modelling techniques to gain insights, predict behaviours and generate value from data.

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| **Guidance Notes:**Data science is typically used for analysing high volume, high velocity and high variety data (numbers, symbols, text, sound and image).Activities may include, but are not limited to:* integrating methods from mathematics, statistics and probability modelling using specialised programming languages, tools and techniques
* sourcing and preparing data for analysis
* identifying, validating and exploiting internal and external data sets generated from a diverse range of processes
* developing forward-looking, predictive, real-time, model-based insights to create value and drive effective decision-making
* finding, selecting, acquiring and ingesting data sources
* integrating and cleaning data to make it fit for purpose
* developing hypotheses and exploring data using models and analytics sandboxes
* refining requirements, validating, training and evolving models over time to discover deeper insights, make predictions, or generate recommendations
* using advanced analytic techniques including, but not limited to, data/text mining, machine learning, pattern matching, forecasting, visualisation, semantic analysis, sentiment analysis, network and cluster analysis, multivariate statistics, graph analysis, simulation, complex event processing, neural networks.
 |

## Level 2

Under guidance, applies given data science techniques to data.
Analyses and reports findings and remediates simple issues, using algorithms implemented in standard software frameworks and tools.

## Level 3

Applies existing data science techniques to new problems and datasets using specialised programming techniques.
Selects from existing data sources and prepares data to be used by data science models.
Evaluates the outcomes and performance of data science models. Identifies and implements opportunities to train and improve models and the data they use.
Publishes and reports on model outputs to meet customer needs and conforming to agreed standards.

## Level 4

Investigates the described problem and dataset to assess the usefulness of data science and analytics solutions.
Applies a range of data science techniques and uses specialised programming languages. Understands and applies rules and guidelines specific to the industry, and anticipates risks and other implications of modelling.
Selects, acquires and integrates data for analysis. Develops data hypotheses and methods and evaluates analytics models. Advises on the effectiveness of specific techniques based on project findings and comprehensive research.
Contributes to the development, evaluation, monitoring and deployment of data science solutions.

## Level 5

Plans and drives all stages of the development of data science and analytics solutions.
Provides expert advice to evaluate the problems to be solved and the need for data science solutions. Identifies what data sources to use or acquire.
Specifies and applies appropriate data science techniques and specialised programming languages.
Reviews the benefits and value of data science techniques and tools and recommends improvements. Contributes to developing policy, standards and guidelines for developing, evaluating, monitoring and deploying data science solutions.

## Level 6

Leads the introduction and use of data science to drive innovation and business value.
Develops organisational policies, standards, and guidelines for data science.
Sets direction and leads in the introduction and use of data science techniques, methodologies and tools. Leads the development of organisational capabilities for data science.
Plans and leads strategic, large and complex data science initiatives to generate insights, create value and drive decision-making.

# Machine learning MLNG

Developing systems that learn from data and experience, with the capability to improve performance over time.

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| **Guidance Notes:**Activities may include, but are not limited to:* selecting and applying appropriate machine learning techniques, algorithms, and tools to solve business problems
* preparing and pre-processing data for machine learning tasks, including data cleaning, transformation, and feature engineering
* designing, training, optimising, and periodically retraining machine learning models using techniques such as supervised, unsupervised, or reinforcement learning
* evaluating trained models for performance, robustness, and bias, and selecting and using metrics to assess outcomes
* diagnosing and resolving issues before and after deployment
* anticipating the organisational implications of machine learning models, including ethics, bias, privacy, and data protection
* establishing traceability for the outcomes produced by machine learning systems
* implementing continuous learning mechanisms to ensure models adapt to new data and changing environments, including developing models that can adapt in real-time to new data inputs and evolving conditions.
 |

## Level 2

Assists in data preparation, model training, and evaluation tasks under routine supervision.
Uses standard machine learning frameworks and tools to develop basic models for well-defined problems.
Documents results and contributes to the maintenance of machine learning solutions.

## Level 3

Applies established machine learning techniques and algorithms to solve business problems.
Selects and prepares appropriate data for model training and evaluation.
Trains, optimises, and validates machine learning models using standard tools and frameworks.
Deploys models into production and monitors their performance. Communicates results and limitations to stakeholders.

## Level 4

Assesses machine learning suitability and designs and develops machine learning solutions for a range of business problems.
Selects and applies appropriate techniques and algorithms based on data characteristics and project requirements. Provides guidance to others.
Engineers features and optimises model performance. Implements algorithms, and contributes to development, evaluation, monitoring, and deployment. Applies industry-specific rules and guidelines, anticipating risks and implications.
Collaborates with cross-functional teams to integrate machine learning models into production systems. Conducts in-depth performance analysis and troubleshoots issues.

## Level 5

Leads the development and implementation of machine learning solutions for complex, high-impact business problems.
Architects end-to-end machine learning pipelines and systems. Evaluates and selects appropriate tools, frameworks, and infrastructure for machine learning projects.
Establishes good practices and standards for machine learning development and operations. Provides expert advice and guidance on machine learning techniques and applications.
Collaborates with stakeholders to align machine learning initiatives with organisational goals.

## Level 6

Sets the strategic direction and roadmap for machine learning adoption and innovation within the organisation. Establishes governance frameworks and best practices for responsible and ethical development and use of machine learning.
Leads the development of organisational capabilities, policies, standards, and guidelines in machine learning.
Collaborates with senior stakeholders to identify high-impact opportunities for machine learning and drives their implementation.
Actively follows research and industry trends and integrates them into organisational practices.

# Business intelligence BINT

Developing, producing and delivering regular and one-off management information to provide insights and aid decision-making.

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| **Guidance Notes:**Typically applied in supporting operational needs through management and governance processes. May be one-off or regular activities aligned with the organisation's planning and reporting cycles.Activities may include, but are not limited to:* understanding business needs and objectives
* identifying and validating internal and external data sets generated from a diverse range of business and operational processes
* transforming the results of analysis into information that can be communicated to stakeholders using dashboards and reports
* interpreting and analysing data, comparative analysis, benchmarking, trend analysis
* bringing data together to communicate clear themes and trends
* focusing on data quality to provide confidence for making decisions on a single version of the truth.
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## Level 2

Assists with the creation of regular business intelligence reports using standard tools.
Supports data preparation from existing sources.

## Level 3

Sources and prepares data for analysis and performs standard business intelligence analysis activities.
Creates and delivers standard reports in accordance with stakeholder needs and conforming to agreed standards.
Investigates the need for new or revised business intelligence analysis.
Contributes to the recommendation of improvements. Engages with stakeholders under direction.

## Level 4

Supports business intelligence needs of specific management or governance processes or operational areas.
Investigates the need for business intelligence reporting and analysis where there is some complexity and ambiguity.
Selects and applies non-standard business intelligence tools and techniques to provide insights and aid decision-making. Selects, acquires and integrates data for analysis.
Identifies opportunities to digitise and streamline operational data handling and optimise business intelligence capabilities.

## Level 5

Plans and manages business intelligence activities.
Ensures that business intelligence processes are robust, efficient and fit for purpose, focusing on automation, key controls and data quality. Advises on the available standards, procedures, methods, tools and techniques.
Manages reviews of the benefits and value of business intelligence techniques and tools and recommends improvements.
Contributes to the development of analytics policy, standards and guidelines.

# Data visualisation VISL

Facilitating understanding of data by displaying concepts, ideas, and facts using graphical representations.

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| **Guidance Notes:**Activities may include, but are not limited to:* condensing and encapsulating data characteristics, making it easier to surface opportunities, identify risks, analyse trends, and drive effective decision-making
* presenting findings and data insights in creative ways to facilitate the understanding of data across a range of technical and non-technical audiences
* developing narratives and storytelling around data to enhance understanding and support decision-making.

The skill is typically put into practice by using specialist analytics tools. Specialisation in this skill implies a requirement to use more than just standard office software to create graphical representations of simple data. |

## Level 2

Creates routine data visuals using an established product and visualisation techniques, as advised.
Helps maintain existing visualisations.

## Level 3

Uses a visualisation product, as guided, to design and create data visuals.
Selects appropriate visualisation techniques from the options available.
Engages with the target user to prototype and refine specified visualisations.
Assists in developing narratives around data sets to support understanding and decision-making.

## Level 4

Applies a variety of visualisation techniques and designs the content and appearance of data visuals.
Operationalises and automates activities for efficient and timely production of data visuals.
Selects appropriate visualisation approaches from a range of applicable options. Develops narratives around data sets to guide decision-making processes and enhance understanding of key insights.
Contributes to exploration and experimentation in data visualisation.

## Level 5

Leads exploration of new approaches for data visualisation. Establishes the purpose and parameters of the data visualisation.
Oversees the use of data visualisation tools and techniques. Communicates results using appropriate methods for the target audience.
Advises on the use of data visualisation for different purposes and contexts to satisfy requirements. Develops plans to meet user needs.
Collaborates with stakeholders to identify key insights and create compelling narratives that effectively communicate the story behind the data to drive decision-making processes.

# User research URCH

Identifying users' behaviours, needs and motivations using observational research methods.

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| **Guidance Notes:**This skill is inclusive of a full range of user tasks not just digital tasks. The skill can be applied in various contexts, such as, but not limited to customer experience, products, services, applications, devices, learning experience and employee experience.User research has a different set of responsibilities to academic research or user requirements elicitation. User research incorporates significant involvement of users to generate deep understanding and uncover new opportunities for systems, products, services or devices. Activities may include, but are not limited to: * using ethnography, observation techniques, task analysis, and other methodologies that incorporate both the social and technological context
* quantifying different user populations and their needs
* identifying target users and segments in order to maximise the chances of design success for systems, products, services, or devices
* including a range of users in research activities to capture the diversity of users' behaviours, needs and motivations.
 |

## Level 2

Assists with user research tasks under routine supervision.
Supports the collection and documentation of user research.
Helps organise and share the outcomes of user research activities.

## Level 3

Applies standard methods to support user research initiatives.
Engages effectively with users and customer representatives to generate high-quality research.
Documents and shares the outcomes of user research.

## Level 4

Conducts generative research for the development of systems, products, services or devices.
Plans own user research activities. Facilitates input from users and stakeholders.
Collects and analyses user research data. Supports synthesis of research and the creation of insights, reports and presentations.
Contributes to the selection of the user research approaches for projects and initiatives. Supports the adoption of agreed approaches.

## Level 5

Plans and drives user research activities providing expert advice and guidance to support the adoption of agreed approaches.
Determines the approaches to be used for including users in generative research.
Leads the collection and analysis of user research data. Synthesises research, develops insights and presents conclusions to inform decision-making and drive actions.
Contributes to the development of organisational methods and standards for user research.

## Level 6

Champions user-centred design and secures organisational commitment to the significant involvement of users in research.
Develops organisational policies, standards, and guidelines for user research.
Develops or sources organisational resources and capabilities to facilitate the adoption and exploitation of user research.
Collaborates with internal and external partners to facilitate effective user research.

# User experience analysis UNAN

Understanding the context of use for systems, products and services and specifying user experience requirements and design goals.

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| **Guidance Notes:**This skill is inclusive of a full range of user tasks not just digital tasks. The skill can be applied in various contexts, such as, but not limited to customer experience, products, services, applications, devices, learning experience and employee experience.Activities may include, but are not limited to:* identifying, analysing, clarifying, and communicating the context of use
* describing users’ goals, tasks and the environment within which the systems, products, services or devices will be used
* creating and describing personas to represent key user segments
* developing user stories or requirements to describe features or capabilities
* agreeing user experience design goals
* analysing and prioritising user experience needs with stakeholders
* understanding and specifying user experience and user accessibility requirements for all potential users.
 |

## Level 2

Assists with user experience analysis tasks under routine supervision.
Supports the collection and documentation of user requirements.
Helps organise and structure user experience data for analysis.

## Level 3

Applies standard techniques and tools for developing user stories and eliciting user experience requirements.
Organises and structures user experience analysis.
Works with stakeholders to prioritise requirements and resolve conflicts.

## Level 4

Selects appropriate techniques and tools to develop user stories and elicit user experience requirements in complex situations.
Identifies and describes the design goals for systems, products, services and devices.
Identifies the roles of affected stakeholder groups. Resolves potential conflicts between differing user requirements.
Specifies measurable criteria for the required usability and accessibility of systems, products, services and devices.

## Level 5

Determines the approaches to be used for user experience analysis.
Plans and manages user experience and accessibility analysis activities.
Provides expert advice and guidance to support the adoption and adaptation of agreed approaches.
Develops user experience tools, techniques and standards as part of the organisation's framework for user-centred design

# User experience design HCEV

Producing design concepts and prototypes for user interactions with and experiences of a product, system or service.

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| **Guidance Notes:**This skill is inclusive of a full range of user tasks not just digital tasks. The skill can be applied in various contexts, such as, but not limited to customer experience, products, services, applications, devices, learning experience and employee experience.Activities may include, but are not limited to:* understanding and addressing design goals, usability and accessibility requirements
* using an iterative design process to enhance user satisfaction by improving usability and accessibility
* designing digital and offline tasks, interactions and interfaces
* refining designs in response to user experience evaluation
* communicating the design to those responsible for design, development and implementation of products, systems and services
* sketching, ideation, creating storyboards, static wireframes or dynamic prototypes
* developing alternative design and evaluating advantages, disadvantages, constraints and trade-offs.
 |

## Level 2

Assists in the design and creation of user experience elements, such as wireframes and prototypes, under routine supervision.
Follows established procedures and guidelines.
Helps create and maintain documentation.

## Level 3

Applies standard techniques and tools for designing user interactions with and experiences of selected system, product or service components.
Reviews design goals and agreed security, usability and accessibility requirements. Creates storyboards, static wireframes and dynamic or workable prototypes.
Assists, as part of a team, with overall user experience design.
Assists in the evaluation of design options and trade-offs. Consistently applies visual design and branding guidelines.

## Level 4

Selects appropriate tools, methods and design patterns to design user interactions with and experiences of a product, system or service.
Translates concepts into outputs and prototypes and captures user feedback or evaluation to improve designs.
Evaluates alternative design options and recommends designs taking into account performance, security, usability and accessibility requirements.
Interprets and follows visual design and branding guidelines to create a consistent and impactful user experience.

## Level 5

Plans and drives user experience design activities, providing expert advice and guidance to support the adoption of agreed approaches.
Determines the approaches to be used to design user experiences.
Uses iterative approaches to incorporate user feedback or evaluation rapidly into designs.
Integrates required visual design and branding into the user experience design activities.

## Level 6

Obtains organisational commitment to strategies to deliver required user experience, usability, accessibility and security.
Defines organisational policies, standards and techniques for user experience design.
Plans and leads user experience design activities for strategic, large or complex programmes.

# User experience evaluation USEV

Validating systems, products or services against user experience goals, metrics and targets.

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| **Guidance Notes:**This skill is inclusive of a full range of user tasks not just digital tasks. The skill can be applied in various contexts, such as, but not limited to customer experience, products, services, applications, devices, learning experience and employee experience.Evaluation is typically part of an iterative user experience design process and contributes to the improvement of the product or service. An evaluation can also be the starting point if an existing system, product or service is to be replaced or improved. Methods include user trials, expert review, survey and analysis.Activities may include, but are not limited to:* providing assurance that user stories or requirements have been met and required practice has been followed to address accessibility, usability, security, health and safety
* applying a range of qualitative and quantitative evaluation techniques
* selecting from lightweight/rapid techniques or more thorough and resource-intensive approaches
* selecting appropriate use of formative or summative evaluations
* facilitating both moderated and unmoderated tests.
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## Level 2

Assists in preparing and operating the environment, facilities and tools needed to evaluate systems, products, services or devices.
Assists in the collection of feedback on prototypes and designs from users and others.

## Level 3

Evaluates design options and prototypes to obtain user feedback on requirements of developing systems, products, services or devices.
Tests the usability and accessibility of components and alternative designs. Administers a range of evaluations, recording data and feedback. Analyses evaluation data and recommends actions. Identifies areas for future user research.
Checks systems, products, services or devices for adherence to applicable standards, guidelines, style guides, and legislation.
Evaluates the usability of existing or competitor systems to provide benchmark values and as input to design.

## Level 4

Selects appropriate tools and techniques to evaluate user experiences of systems, products, services or devices.
Validates that security, usability and accessibility requirements have been met.
Checks operational systems, products, services or devices for changes in usability and accessibility needs.
Interprets and presents results of evaluations, prioritises issues and reports on remedial actions. Collates input for future user research.

## Level 5

Manages user experience evaluation of systems, products, services or devices.
Assures that the security, usability and accessibility requirements have been met and that required practices have been followed.
Advises on what to evaluate, the type of evaluation to use and the extent of user involvement required.
Works iteratively with design teams to ensure that feedback from the evaluation is understood and acted upon by designers and developers. Advises on the achievement of required usability and accessibility levels of specific designs or prototypes. Prioritises input for future user research.

## Level 6

Champions high standards in user interaction with the organisation’s systems, products and services including involvement of users in evaluation activities.
Specifies standards and methods for security, usability and accessibility and ensure that this is addressed in future designs.
Develops or sources resources and capabilities to conduct effective user experience evaluation, including specialist user-centred facilities and communities of users. Leads the provision of input and resources for future user research.
Collaborates with internal and external partners to facilitate an effective evaluation of systems, products and services.

# Content design and authoring INCA

Planning, designing, and creating content that meets user-centred and organisational needs, encompassing textual information, graphical content, and multimedia elements.

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| **Guidance Notes:**Content design and authoring encompasses a wide range of content types to meet user-centred and organisational needs. This includes textual information, graphical content, and multimedia elements. Specific content types, include but are not limited to , website and mobile app content, user interface text, chatbot scripts, interactive content, social media content, email marketing, blog posts, online advertising copy, and video scripts.Activities may include, but are not limited to:* understanding the requirements of the intended audience in collaboration with stakeholders and representatives of the intended audience
* applying tools and technologies to enhance content creation, ensuring efficiency and maintaining quality standards
* applying the principles of user-centred content design, authoring, designing, controlling, and presenting information
* considering how information may be presented, identified, and searched for
* managing the content design and authoring process and the interaction with editorial and publication processes
* gathering source information and creating draft content
* identifying appropriate illustrations, graphics, and multimedia elements
* understanding and applying copyright rules and related legal issues
* creating and using guidelines to present information clearly, concisely, and accurately
* designing collections of artefacts spread across multiple media, including digital services and marketing content.
 |

## Level 1

Contributes, under instruction, to the generation of content, and the configuration of content items and files.
Executes pre-planned testing activities under supervision and records findings.

## Level 2

Works with colleagues and stakeholders to understand audience needs and to assimilate source material.
Creates draft content to meet the requirements of the audience as clearly, simply and quickly as possible.
Applies guidelines and standards to moderate content from others, escalating where appropriate.

## Level 3

Produces information artefacts that are accurate, current, relevant and easily understood by the intended audience.
Clarifies detailed content requirements with clients and representatives of the intended audience.
Designs, creates, controls and evaluates moderately complex subject matter.
Makes informed decisions about the best way to present information to an audience. Applies moderation and editing processes to content supplied by others.

## Level 4

Designs the content and appearance of complex information deliverables.
Controls, monitors, and evaluates content to ensure quality, consistency and accessibility of messages and optimal use of chosen media. Understands and manages risks associated with publishing content.
Moderates content and ensures content can be re-purposed appropriately.
Reviews work of others and takes responsibility for ensuring appropriate publication.

## Level 5

Provides overall editorial control across the team or teams of content designers and authors.
Advises on appropriate content formats and mediums.
Develops and maintains content plans showing how the identified audience needs will be met.
Oversees the review and approval of materials to enable requirements to be satisfied.

## Level 6

Obtains organisational commitment to policies, standards, and strategies to create required content.
Specifies design standards and methods to meet organisational objectives for content creation.
Plans and leads content creation for strategic, large and complex programmes.

# Content publishing ICPM

Managing and continually improving the processes that collect, assemble and publish content.

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| **Guidance Notes:**Information content may be in structured, unstructured or semi-structured forms.Activities may include, but are not limited to:* understanding the requirements of the organisation and the desired audience
* evaluating different publishing methods and options, and their costs, features and benefit, including open source and proprietary options
* developing and implementing a framework for content publishing, including preferred media, overall information structure, and rules for formatting content
* converting content into a format suitable for publication
* delivering content to the user at the point of need
* managing copyright, data protection and other legal issues associated with publishing and re-using published information and data
* ensuring published material is in a form accessible to all potential users, including those with disabilities
* releasing or retiring content.
 |

## Level 1

Contributes, under instruction, to publication support activities.
Supports the collation of data.
Uses established publishing processes according to appropriate guidelines.

## Level 2

Understands technical publication concepts, tools and methods and how to use them.
Uses agreed procedures to publish content.
Obtains and analyses usage data and presents it effectively.
Applies principles of usability and accessibility to published information.

## Level 3

Coordinates content management processes to meet the needs of users.
Uses content publishing systems to manage published content across different channels.
Takes into account any legal issues related to publishing.

## Level 4

Applies organisational guidelines and uses appropriate tools and techniques to provide publishing interfaces to new or existing platforms and applications.
Maintains and updates content management processes to meet the needs of users.
Selects appropriate channels through which content should be published. Provides advice to users and content authors to leverage the features of the relevant channels and tools used.
Identifies the legal implications associated with publishing.

## Level 5

Plans and manages content publishing activities and assignments.
Develops standards and procedures to support content publishing across one or more platforms/channels. Advises on the approach and techniques to be used for content publishing.
Assures design of the overall content structure and style.
Ensures that publication processes comply with agreed policies and strategies and legal requirements.

## Level 6

Obtains organisational commitment and resources to ensure the appropriate quality of material published by or on behalf of the organisation.
Defines organisational policies, standards and techniques for content publishing.
Plans and leads content publishing activities for strategic, large and complex programmes.
Ensures that policies are implemented, and any legal issues related to publishing are adequately managed.

# Knowledge management KNOW

Managing vital knowledge to create value for the organisation.

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| **Guidance Notes:**Knowledge management aims to improve performance, support decision-making and mitigate risks. Activities may include, but are not limited to:* systematically capturing, sharing, developing and exploiting the collective knowledge of the organisation
* tailoring knowledge management approaches
* developing a supportive and collaborative knowledge sharing culture to drive the successful adoption of technology solutions for knowledge management
* providing access to informal, tacit knowledge as well as formal, documented, explicit knowledge
* facilitating internal and external collaboration and communications
* establishing and supporting communities of practice
* capturing, organising and developing information, knowledge and stories from employees, customers and external partners
* external benchmarking.
 |

## Level 2

Maintains a knowledge management database.
Leverages knowledge of a specialism to capture and classify content, taking expert advice when required.

## Level 3

Maintains knowledge management systems and content to meet business needs.
Supports others to enable them to complete knowledge management activities and form knowledge management habits. Supports changes to work practices to support capture and use of knowledge.
Reports on the progress of knowledge management activities.
Configures and develops knowledge management systems and standards.

## Level 4

Organises knowledge assets and oversees the life cycle of identifying, capturing, classifying, storing, and maintaining assets.
Facilitates sharing, collaboration and communication of knowledge. Implements specific knowledge management initiatives.
Monitors the use and impact of knowledge.
Interrogates existing knowledge content to identify issues, risks, and opportunities.

## Level 5

Develops and implements knowledge management processes and behaviours.
Provides advice, guidance, and support to help people to adopt and embed knowledge management. Contributes to the definition of policies, standards, and guidelines for knowledge management.
Evaluates and selects knowledge management methods and tools. Promotes collaborative technologies, processes and behaviours to facilitate sharing of ideas and work-knowledge.
Shares ideas and examples of existing practices. Implements knowledge management at programme, project and team level.

## Level 6

Develops organisational policies, standards, and guidelines for knowledge management.
Champions and leads in the development of an organisational knowledge management approach. Shares different approaches for knowledge sharing across communities of practice, business units, and networks.
Promotes knowledge-sharing through operational business processes and systems. Monitors and evaluates knowledge-sharing initiatives.
Manages reviews of the benefits and value of knowledge management. Identifies and recommends improvements.

## Level 7

Develops an organisation-wide knowledge management strategy and leads the creation of a knowledge management culture.
Embeds knowledge management across business units and develops strategic knowledge management capabilities.
Reinforces the importance of knowledge sharing by aligning individual and organisational objectives and rewards.
Identifies opportunities for strategic relationships or partnerships with customers, suppliers, and partners.

# Scientific modelling SCMO

Applying computer simulation and other forms of computation to solve real-world problems in scientific disciplines.

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| **Guidance Notes:**Activities may include, but are not limited to:* identifying relevant mathematical principles and scientific theory within a computational model
* creating, testing and tuning scientific models through the application of computing
* validating and interpreting computational models against the reality which the models attempt to represent.
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## Level 4

Analyses the real-world problem, then selects appropriate physical and mathematical models to approximate the phenomena under investigation.
Applies relevant mathematical techniques to simulate the problem.
Conducts quality and performance assessments on computational model outputs and makes improvements to the models.
Provides advice and guidance to the users of these models.

## Level 5

Investigates real-world problems to assess whether existing scientific models provide effective solutions.
Creates new mathematical representations of the underlying science that can be implemented in a computational model. Applies advanced programming techniques to implement scientific models and apply these for problem-solving.
Analyses the functioning of existing computational models to improve accuracy and performance.
Communicates limitations such as uncertainty and systematic errors. Ensures appropriate usage of computational models.

## Level 6

Initiates the creation, testing, improvement and application of mathematical model frameworks representing real-world systems and scientific theories.
Sets standards and approaches for the application of scientific modelling.
Oversees the representation of science and mathematics principles and theories in models to ensure appropriate, consistent and effective usage.
Develops or introduces new mathematical techniques where necessary.

## Level 7

Directs the creation and review of a cross-functional, enterprise-wide approach and culture for scientific modelling.
Leads the development of the organisation’s scientific modelling capabilities and champions its use in solving real-world problems.

# Numerical analysis NUAN

Creating, analysing, implementing, testing and improving algorithms for numerically solving mathematical problems.

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| **Guidance Notes:**Numerical analysis is the area of mathematics and computer science that creates, analyses, and implements algorithms for numerically solving mathematical problems. Numerical analysis is required for applications including, but not limited to:* simulations of physical systems
* machine learning
* data analytics

Numerical analysis is concerned with:* floating-point arithmetic and the resulting accumulation of rounding errors (integer arithmetic which has different considerations)
* consideration of the numerical stability, condition numbers, accuracy, computational complexity and usability of algorithms that solve mathematical problems.
 |

## Level 4

Creates moderately complex algorithms using a range of mathematical techniques and with sensitivity to the limitations of the techniques.
Uses sophisticated scientific computing and visualisation environments.
Assesses the stability, accuracy and efficiency of algorithms and makes or recommends improvements to them.
Iterates and improves models using feedback from experts as appropriate.

## Level 5

Creates, tests and improves complex algorithms that numerically solve real-world problems.
Develops mathematical and computational techniques to assist with numerical analysis.
Communicates limitations such as uncertainty and systematic errors.
Reviews algorithms for their conformance to design and performance standards.

## Level 6

Initiates the creation, testing, improvement and application of numerical algorithms that solve real-world mathematical problems.
Sets standards and strategies for the application of numerical analysis.
Leads the implementation of numerical analyses capabilities to ensure appropriate, consistent and effective usage across the organisation.

## Level 7

Directs the creation and review of a cross-functional, enterprise-wide approach and culture for numerical analysis.
Leads the development of the organisation’s numerical analysis capabilities and champions its use in solving real-world problems.

# High-performance computing HPCC

Using advanced computer systems and special programming techniques to solve complex computational problems.

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| **Guidance Notes:**High-performance computing (HPC) is the use of super computers and parallel processing techniques for solving complex computational problems. HPC technology focuses on developing parallel processing algorithms and systems.High-performance computing is typically used for solving advanced problems and performing research activities through computer modelling, simulation and analysis. HPC technology is implemented in a variety of disciplines including, but not limited to:* biosciences and molecular modelling
* geographical data
* oil and gas exploration
* climate modelling and weather forecasting
* physical simulations
* cryptanalysis.

The terms high-performance computing and supercomputing are sometimes used interchangeably. |

## Level 4

Develops moderately complex solutions that use high-performance computing environments to address real-world problems.
Applies a range of high-performance computing techniques with sensitivity to the limitations of the techniques. Uses input and feedback from experts as appropriate.
Analyses the complexity, scalability and performance of algorithms, including massively parallel implementations, and makes or recommends improvements.

## Level 5

Creates, tests and improves complex high-performance computing solutions to address real-world problems.
Collaborates with stakeholders to ensure high-performance computing solutions are effective at addressing their problems.
Guides development teams in the appropriate and effective use of high-performance computing resources

## Level 6

Initiates the creation, testing, improvement and application of algorithms that solve real-world problems in high-performance computing environments.
Sets standards and strategies for the use of high-performance computing.
Leads the implementation of organisational capabilities to ensure appropriate, consistent and effective usage of high-performance computing.

## Level 7

Directs the creation and review of a cross-functional, enterprise-wide approach and culture for high-performance computing.
Leads the development of the organisation’s high-performance computing capabilities and champions its use in solving real-world problems.

# Technology service management ITMG

Managing the provision of technology-based services to meet defined organisational needs.

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| **Guidance Notes:**Technology-based services may include, but are not limited to, IT infrastructure, audio-visual services, end-user computing, enterprise applications, facilities, communications services and industrial control systems.Activities may include, but are not limited to:* approving, preparing, planning and managing new or changed services
* managing the performance of systems and services in terms of their contribution to business outcomes, financial costs and sustainability
* end-to-end management of services, whether delivered internally or sourced externally
* integrating internal and external services as well as delivery options leveraging multiple service delivery capabilities
* developing and implementing continual service improvement plans to ensure the technology services adequately support changing needs.
 |

## Level 5

Takes responsibility for managing the design, procurement, installation, upgrading, operation, control, maintenance and effective use of specific technology services.
Leads the delivery of services, ensuring that agreed service levels, security requirements and other quality standards are met. Ensures adherence to relevant policies and procedures.
Ensures that processes and practices are aligned across teams and providers to operate effectively and efficiently.
Monitors the performance of technology services. Provides appropriate status and other reports to managers and senior users.

## Level 6

Identifies and manages resources needed for budgeting, estimating, planning, developing and delivering a specified portfolio of technology services and systems.
Engages with and influences stakeholders to ensure that services are developed and managed to meet agreed service levels, security requirements and other quality standards. Plans and manages the implementation of processes and procedures, tools and techniques for monitoring and managing the performance of technology services.
Aligns the contribution of specified systems and services to clearly stated organisational and financial goals and performance targets. Recommends options for sourcing, whether in-house, outsourced, or a combination.
Monitors performance of delivery teams and takes corrective action where necessary and in line with policies.

## Level 7

Sets strategy for the management of the portfolio of technology services.
Aligns technology service management with organisational strategies, objectives and emerging opportunities. Promotes the opportunities technology offers the organisation, including the feasibility of change and its likely impact.
Authorises the establishment of new or modified technology service delivery capabilities. Integrates in-house and outsourced options, as well as delivery options leveraging multiple service delivery capabilities.
Authorises allocation of resources for the planning, development and delivery of all technical services and products. Maintains an overview of the contribution of technology services to organisational success.

# Application support ASUP

Delivering management, technical and administrative services to support and maintain live applications.

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| **Guidance Notes:**Activities may include, but are not limited to:* investigating and resolving issues
* implementing working practices to support iterative/agile development and/or cloud-based applications
* monitoring performance of applications
* providing guidance or training to users, including enhanced levels of support following new/updated software releases
* devising permanent or temporary corrections and workarounds for faults
* adhering to established safety, security and quality standards
* capturing user feedback for subsequent analysis to inform future application development
* implementing general or site-specific modifications
* updating documentation
* maintaining application data
* defining enhancements.

Support typically involves close collaboration with application developers and other specialist areas. Application maintenance and support services may be delivered directly to users of the systems or to service delivery functions. |

## Level 2

Assists with specified maintenance procedures.
Assists in the investigation and resolution of issues relating to applications.

## Level 3

Follows agreed procedures to identify and resolve issues with applications.
Uses application management software and tools to collect agreed performance statistics.
Carries out agreed applications maintenance tasks.

## Level 4

Maintains application support processes, and checks that all requests for support are dealt with according to agreed procedures.
Uses application management software and tools to investigate issues, collect performance statistics and create reports.

## Level 5

Ensures that all requests for support are dealt with according to set standards and procedures.
Drafts and maintains procedures and documentation for applications support.
Manages application enhancements to improve business performance.
Advises on application security, licensing, upgrades, backups, and disaster recovery needs.

# IT infrastructure operations ITOP

Provisioning, deploying, configuring, operating, and optimising technology infrastructure across physical, virtual, and cloud-based environments.

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| **Guidance Notes:**Technology infrastructure encompasses a wide range of components including, but not limited to, physical devices, virtual resources, infrastructure-related software, middleware, network services, and data storage solutions. Infrastructure operations also involves implementing automation, cybersecurity measures, and the adoption of cloud technologies to enhance efficiency, security, and agility.These components may be on-premises, outsourced to third parties, or provisioned through cloud services.Activities may include, but are not limited to:* provisioning and adapting infrastructure components to meet the evolving needs of users and service providers
* managing virtual, cloud environments, and hybrid/multi-cloud strategies
* automating tasks through scripting, coding, orchestration tools, and infrastructure as code (IaC) practices
* ensuring infrastructure security through regular updates, patch management, and adherence to cybersecurity policies and best practices
* monitoring infrastructure performance and its impact on efficiency, performance, security posture, and sustainability
* collaborating with development teams (DevOps)
* using containerisation technologies to enhance application deployment and scalability.
 |

## Level 1

Supports routine infrastructure tasks and basic troubleshooting under close supervision.
Monitors infrastructure health and reports on component status to support operational continuity.

## Level 2

Executes operational procedures, runs automation scripts, and performs routine maintenance, installation and monitoring of infrastructure components.
Adjusts automation tasks as needed to meet operational standards under supervision.
Reports on infrastructure performance, addresses issues directly when possible, or escalates to others for resolution.

## Level 3

Provisions, deploys, and configures infrastructure services and components.
Monitors infrastructure for load, performance and security events. Reports metrics and resolves operational issues.
Executes standard operational procedures, including backups and restorations.
Carries out agreed system software maintenance tasks. Automates routine system administration tasks to specifications using standard tools and basic scripting.

## Level 4

Applies technical expertise to maintain and optimise technology infrastructure, executing updates and employing automation tools. Configures tools and/or creates scripts to automate infrastructure tasks.
Maintains operational procedures and checks that they are followed. Uses infrastructure management tools to monitor load and performance statistics.
Investigates and enables the resolution of operational issues. Provides reports and proposals for improvement to stakeholders.
Contributes to the planning and implementation of infrastructure maintenance and updates. Implements agreed infrastructure changes and maintenance routines.

## Level 5

Provides technical leadership to optimise the performance of the technology infrastructure.
Drives the adoption of tools and automated processes for effective operational management and delivery.
Oversees the planning, installation, maintenance and acceptance of new and updated infrastructure components and infrastructure-based services. Aligns to service expectations, security requirements and other quality standards.
Ensures operational procedures and documentation are current and effective, tracks and addresses operational issues, and reports to stakeholders.

# System software administration SYSP

Installing, managing, and maintaining operating systems, data management, office automation, and utility software across various infrastructure environments.

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| **Guidance Notes:**System software encompasses a wide range of software components that support the functioning and management of technology infrastructure, including operating systems, infrastructure software, data management products, office automation products, middleware and utility software. It may run in cloud, virtual, or physical hardware environments and enables applications to run effectively.Activities may include, but are not limited to:* monitoring and optimising the performance of system software
* developing and maintaining diagnostic tools and procedures for system software troubleshooting and performance analysis
* resolving service problems with system software components
* evaluating, provisioning, and testing new system software, including cloud based solutions
* reviewing system software updates and upgrades
* provisioning and testing system software updates and configurations
* adhering to established safety, security, and quality standards
* managing system software in hybrid and multi-cloud environments
 |

## Level 2

Assists with system software administration tasks under routine supervision.
Supports the installation and configuration of system software.
Helps monitor system performance and resource usage.
Assists in documenting system software settings and updates.

## Level 3

Monitors operational systems for resource usage and failure rates, to inform and facilitate system software tuning.
Applies system software settings to optimise performance, enabling maximum throughput and efficient resource utilisation.
Installs and tests new versions of system software.
Assists in creating software implementation procedures, including fall back contingency plans.

## Level 4

Monitors system software metrics and adjusts configurations for optimum availability and performance.
Applies technical expertise to investigates and resolve complex system software issues, requesting action from supplier if required.
Analyses system software updates and determines which ones require actions.
Develops comprehensive software implementation procedures with robust contingency plans.

## Level 5

Ensures that system software is provisioned and configured to support the achievement of service objectives.
Develops and maintains diagnostic tools and processes for troubleshooting and performance analysis.
Evaluates new system software and recommends adoption if appropriate. Plans the provisioning and testing of new versions of system software.
Ensures that operational procedures and diagnostics for system software are current, accessible and well understood. Investigates and coordinates the resolution of potential and actual service problems.

# Network support NTAS

Providing maintenance and support services for communications networks.

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| **Guidance Notes:**Activities may include, but are not limited to:* monitoring network performance, investigating issues, troubleshooting and testing network devices and testing
* implementing and managing network security measures, including access control, authentication, encryption, and intrusion detection/prevention
* configuring and maintaining network solutions in cloud-based and virtual environments
* automating network support tasks using scripting, automation tools, and orchestration platforms
* creating and maintaining network documentation, including diagrams, configuration files, and procedures
* providing technical support, advice and guidance to users and collaborating with others to resolve network issues
* analysing network performance, generating reports, and presenting findings and recommendations to stakeholders
 |

## Level 2

Assists in the operational configuration of network components and the investigation and resolution of network problems.
Assists in the implementation of basic scripting and automation tools to streamline network support tasks.
Assists with specified maintenance procedures and follows established safety, security and quality standards.
Provides basic support and guidance to network users.

## Level 3

Carries out agreed network maintenance tasks and specified operational configuration of network components.
Establish and diagnose network problems/faults using the required troubleshooting methodology tools and network management software.
Implements and maintains scripts, automation tools, and orchestration platforms to optimize network support processes.
Collects performance and traffic statistics and collaborates with others to ensure effective network support.

## Level 4

Applies technical expertise to maintain and optimise network infrastructure, executing updates and employing automation tools. Configures tools and/or creates scripts to automate network tasks.
Uses network management tools to monitor load and performance statistics. Investigates and enables the resolution of network-related operational issues.
Maintains operational procedures and checks that they are followed. Provides reports and proposals for improvement to stakeholders.
Contributes to the planning and implementation of network maintenance and updates. Implements agreed network changes and maintenance routines.

## Level 5

Leads network operations to optimise performance. Drives adoption of tools and processes for effective operational management and delivery.
Oversees planning, installation, maintenance, and acceptance of network components and services, aligning with service expectations and standards.
Maintains procedures and documentation. Investigates and resolves complex network problems. Tracks operational issues and reports to stakeholders.
Ensures network support requests are handled according to set standards and procedures.

# Systems installation and removal HSIN

Installing and testing, or decommissioning and removing, systems or system components.

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| **Guidance Notes:**Systems or systems components may include, but are not limited to, hardware, software, cabling, wiring, and monitoring equipment.Activities may include, but are not limited to:* developing and following plans and instructions in accordance with agreed standards
* adhering to established safety, security and quality standards
* testing of hardware and software components, resolution of malfunctions, and recording of results
* documenting the details of hardware and software installed so that configuration management records can be updated
* safe disconnection, decommissioning and removal of systems or system components.
 |

## Level 1

Follows agreed procedures to perform simple installations, replace consumable items and check the correct working of installations.
Documents and reports on work done.

## Level 2

Installs or removes system components using supplied installation instructions and tools.
Conducts standard tests and contributes to investigations of problems and faults.
 Confirms the correct working of installations.
Documents results in accordance with agreed procedures.

## Level 3

Installs or removes hardware and/or software, using supplied installation instructions and tools, including handover to the client.
Uses standard procedures and diagnostic tools to test installations, correct problems, and document results.
Records details of all components that have been installed and removed. Assists users and follows agreed procedures for further help or escalation.
Contributes to the development of installation procedures and standards.

## Level 4

Undertakes or supervises complex installations and de-installations of systems or components, including handover to the client.
Develops procedures and standards for installation and handover to maintain and improve the installation service.
Schedules installation work around client priorities and resource availability.
Ensures adherence to established safety and quality procedures.

## Level 5

Takes responsibility for installation and/or decommissioning projects.
Provides effective team leadership, including information flow to and from the customer during project work.
Develops and implements quality plans and method statements.
Monitors the effectiveness of installations and ensures that appropriate recommendations for change are made.

# Configuration management CFMG

Planning, identifying, controlling, accounting for and auditing of configuration items (CIs) and their interrelationships.

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| **Guidance Notes:**Configuration items (CIs) can include a wide variety of components (objects) such as, but not limited to, source code, software, products, systems, hardware, networks, buildings, suppliers, process definitions and documents. A coherent set of CIs forms a configuration.Activities may include, but are not limited to:* identifying and documenting the functional and physical characteristics of CIs
* identifying the relationships and maintain coherence between CIs for specific configurations
* identifying the associated configuration(s), status, version and other characteristics of CIs at distinct points in time
* controlling changes to CI characteristics, recording and reporting change processing and implementation status
* systematically controlling changes to a configuration and maintaining the integrity, coherence, and traceability of that configuration throughout the project, system and/or service life cycle
* adhering to established safety, security and quality standards
* verifying and auditing CI records for data quality and compliance with specified internal and external requirements.
 |

## Level 2

Applies tools, techniques and processes to administer, track, log, report on and correct configuration items, components and changes.
Assists with audits to check the accuracy of the information and undertakes any necessary corrective action under direction.

## Level 3

Applies tools, techniques and processes to track, log and correct information related to configuration items.
Verifies and approves changes ensuring the protection of assets and components from unauthorised change, diversion and inappropriate use.
Ensures that users comply with identification standards for object types, environments, processes, life cycles, documentation, versions, formats, baselines, releases and templates.
Performs audits to check the accuracy of the information and undertakes any necessary corrective action under direction.

## Level 4

Proposes and agrees the configuration items (CIs) to be uniquely identified with naming conventions.
Puts in place operational processes for secure configuration, classification and management of CIs, and for verifying and auditing configuration records.
Develops, configures and maintains tools (including automation) to identify, track, log and maintain accurate, complete and current information.
Reports on the status of configuration management. Identifies problems and issues and recommend corrective actions.

## Level 5

Plans the capture and management of CIs and related information.
Agrees scope of configuration management processes and the configuration items (CIs) and related information to be controlled.
Identifies, evaluates and manages the adoption of appropriate tools, techniques and processes (including automation) for configuration management.
Contributes to the development of configuration management strategies, policies, standards, and guidelines.

## Level 6

Develops configuration management strategies, policies, standards, and guidelines.
Champions the importance and value of configuration management and develops new methods and organisational capabilities (including automation) for configuration management.
Provides resources to drive adoption of, and adherence to, policies and standards.
Measures and monitors adherence to standards and ensures consistent execution of the process across the organisation.

# Release management RELM

Managing the release of new and updated services into production, ensuring alignment with business objectives and compliance standards.

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| **Guidance Notes:**Activities may include, but are not limited to:* planning and scheduling releases in line with business requirements, considering the size, scope, and content of each release
* coordinating release activities across multiple teams and stakeholders, including third-party suppliers
* managing the release lifecycle, including build, testing, deployment, and post-implementation review
* ensuring releases meet quality, security, and compliance standards
* communicating release plans, progress, and outcomes to stakeholders
* conducting post-release reviews and identifying areas for improvement
* maintaining release processes, procedures, and documentation
* managing staged releases, pilot releases, blue/green releases, or feature flags as appropriate
 |

## Level 2

Assists with release management tasks under routine supervision.
Supports the collection of data and information for release planning and scheduling.
Assists in the preparation of release materials and resources. Helps document and maintain records of release activities.
Participates in basic testing and quality assurance tasks and issue resolution.

## Level 3

Supports the planning and scheduling of releases.
Coordinates release activities with relevant teams. Follows defined release processes and procedures.
Participates in testing and quality assurance activities to ensure releases meet standards. Identifies and resolves issues related to the release process.
Documents and reports on release outcomes and communicates findings to stakeholders.

## Level 4

Plans and schedules releases in line with business requirements and objectives.
Coordinates release activities across multiple teams and stakeholders. Manages the release lifecycle, ensuring timely and quality deliverables.
Ensures releases meet defined quality, security, and compliance standards.
Communicates release plans, progress, and outcomes to stakeholders. Conducts post-release reviews and identifies areas for improvement.

## Level 5

Develops and maintains release approaches, processes, and automation tools.
Oversees the planning and scheduling of complex, large-scale releases. Coordinates release activities across multiple projects and programs.
Ensures that release processes and procedures are applied and that releases can be rolled back as needed.
Communicates release approaches and outcomes. Conducts post-release analysis and drives continuous improvement.

## Level 6

Defines organisational release management strategies, policies, and standards.
Aligns release management with overall business strategies and objectives. Ensures the availability of resources and tools for effective release management.
Communicates release strategies and outcomes to stakeholders.
Drives the adoption of best practices and continuous improvement in release management.

# Storage management STMG

Provisioning, configuring, and optimising on-premises and cloud-based storage solutions, ensuring data availability, security, and alignment with business objectives.

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| **Guidance Notes:**Storage management encompasses managing various storage solutions, local or external storage such as direct access storage (DAS), network access storage (NAS), storage area networks (SAN) and cloud-based storage. It involves technologies and processes such as, but are not limited to, virtualisation, replication, mirroring, security, compression, performance monitoring, automation and storage provisioning. Activities may include, but are not limited to:* backup, archiving and recovery of data
* monitoring and optimising storage performance and capacity
* resolving potential and actual storage-related issues
* developing and maintaining tools and procedures for storage troubleshooting and analysis
* evaluating, provisioning, and testing new storage solutions, including cloud-based storage
* managing storage in hybrid and multi-cloud environments
* investigating emerging technologies for storage management
* ensuring compliance with regulatory and security requirements
* addressing business goals based on information value, data classification, recovery point and recovery time objectives.
 |

## Level 2

Assists with storage management tasks under routine supervision.
Supports the setup and configuration of storage systems.
Helps monitor storage performance and capacity, and documents storage utilisation.

## Level 3

Executes routine storage management tasks following established procedures and using standard tools.
Implements documented configurations for allocation of storage, installation and maintenance of secure storage systems using the agreed operational procedures.
Identifies operational problems and contributes to their resolution.
Uses standard management and reporting tools to collect and report on storage utilisation, performance and backup statistics.

## Level 4

Prepares and maintains operational procedures for storage management.
Monitors capacity, performance, availability and other operational metrics. Takes appropriate action to ensure corrective and proactive maintenance of storage and backup systems to protect and secure business information.
Creates reports and proposals for improvement.
Contributes to the planning and implementation of new installations and scheduled maintenance and changes of existing systems.

## Level 5

Develops standards and guidelines for implementing data protection and disaster recovery functionality for all business applications and business data.
Provides expert advice and guidance to implement and improve storage management.
Manages storage and backup systems to provide agreed service levels.
Creates, improves and supports storage management services with optimal utilisation of storage resources, ensuring security, availability and integrity of data.

## Level 6

Develops strategies for managing storage and data based on the level of criticality of the information.
Ensures compliance with regulatory and security requirements.
Aligns investments in storage management with business goals and data management policies.

# Facilities management DCMA

Planning, designing and managing the buildings, space and facilities which, collectively, make up the IT estate.

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| **Guidance Notes:**Activities may include, but are not limited to:* using data centre management tools
* provisioning and managing the physical environment, including power, space, and cooling
* adhering to established safety, security and quality standards
* monitoring the environment and providing statistics on energy usage
* controlling physical access
* adhering to mandatory policies and regulations concerning health and safety at work.
 |

## Level 2

Assists with the tasks related to granting, monitoring and reporting on physical access controls under routine supervision.
Follows established procedures and guidelines to support the maintenance of the physical environment.
Helps create and maintain documentation.

## Level 3

Monitors compliance against agreed processes and investigates, assesses and resolves incidents of non-compliance, escalating where necessary.
Grants users required physical accesses and monitors and reports on overall access control.

## Level 4

Uses data centre management tools to produce management information on power, cooling and space and investigate issues where necessary.
Carries out routine audit and checks to ensure adherence to policies and procedures.
Facilitates the implementation of mandatory electrical safety testing.

## Level 5

Develops and maintains the standards, processes and documentation for data centres.
Optimises efficiency in the population of data centre space. Ensures adherence to all relevant policies and processes.
Uses data centre management tools to plan, record and manage installed infrastructure, power, space and cooling capabilities.
Monitors usage and actions to meet sustainability targets.

## Level 6

Sets the organisational policy for managing the IT estate and ensures that policy reflects best practice.
Develops strategies to ensure future requirements for data centre space can be forecast and fulfilled.
Takes overall responsibility for adherence to health & safety regulations and electrical safety policy.
Seeks out and ensures use of industry best practice to ensure future plans are aligned to meet corporate sustainability targets.

# Service level management SLMO

Agreeing targets for service levels and assessing, monitoring, and managing the delivery of services against the targets.

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| **Guidance Notes:**Activities may include, but are not limited to:* planning, implementation, control, review and audit of service provision, to meet customer business requirements
* negotiating, implementing and monitoring service level agreements
* managing operational facilities to provide the agreed levels of service
* identifying opportunities to improve service delivery
* implementing service level management practices to support cloud-based services
* identifying future trends and their impact on service delivery, for example, technical, market, industrial, socioeconomic, legislative or sustainability targets.
 |

## Level 2

Monitors and logs the actual service provided, compared to that required by service level agreements.

## Level 3

Monitors service delivery performance metrics.
Liaises with stakeholders to help them plan for a deterioration in service and/or breaches of service level agreements.

## Level 4

Performs defined tasks to monitor service delivery against service level agreements and maintains records of relevant information.
Analyses service delivery performance to identify actions required to maintain or improve levels of service.
Initiates and reports on actions to maintain or improve levels of service.

## Level 5

Ensures that service delivery meets agreed service levels.
Negotiates service level requirements and agreed service levels with customers.
Diagnoses service delivery problems and initiates actions to maintain or improve levels of service.
Establishes and maintains operational methods, procedures and facilities and reviews them regularly for effectiveness and efficiency.

## Level 6

Ensures that service delivery is monitored effectively and that identified actions to maintain or improve levels of service are implemented.
Ensures that service level agreements are complete and cost-effective across the catalogue of available services. Ensures that operational methods, procedures, facilities and tools are established, reviewed and maintained. Prepares proposals to meet forecast changes in the levels or types of services.
Reviews service delivery to ensure that agreed targets are met.
Negotiates with relevant parties in respect of disruptions and major amendments to the provision of services.

## Level 7

Sets strategies for service delivery that support the strategic needs of the client organisation.
Authorises allocation of resources for monitoring service delivery arrangements.
Develops relationships with customers at the highest level to identify potential areas of mutual commercial interest for future development.
Maintains an overview of the contribution of service delivery arrangements to organisational success. Provides leadership within the industry on the identification of future trends.

# Service catalogue management SCMG

Providing a source of consistent information about available services and products to customers and users.

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| **Guidance Notes:**Activities may include, but are not limited to:* publishing and maintaining information about available services
* tracking the list of available services as new services are introduced and current services are amended or retired
* making the catalogue useful and easy to use
* customising the information published according to the needs of specific audiences, such as for users, for customers, for service providers
* supporting discussion of standard and non-standard service offerings
* enabling automation of service requests and service fulfilment where appropriate.

The information documented in the service catalogue includes, but is not limited to, service names and descriptions, features, value propositions, costs, service support levels and availability. |

## Level 2

Assists with service catalogue management tasks under routine supervision.
Supports the collection and updating of service and product information.
Helps maintain the accuracy and relevance of the service catalogue.

## Level 3

Collates information needed to populate the service catalogue.
Edits and maintains service and product descriptions and keeps the list of available services up to date.
Acts as a contact point, receiving and handling routine updates to the service catalogue.
Identifies opportunities to improve service catalogue management processes.

## Level 4

Contributes to the design and implementation of a service catalogue.
Enables automation of service requests and order fulfilment.
Provides advice and guidance on the information to be included in the service catalogue.
Contributes to reviews and improvement of the catalogue and of service catalogue management processes.

## Level 5

Manages the creation and maintenance of a catalogue of services.
Ensures that the service catalogue is complete and current. Works with service owners to ensure consistency and accuracy of the service catalogue entries.
Completes regular reviews of the catalogue with stakeholders to ensure relevance to business needs and requirements.
Manages the service catalogue management processes.

# Availability management AVMT

Ensuring that services deliver agreed levels of availability to meet the current and future needs of the business.

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| **Guidance Notes:**Activities may include, but are not limited to:* defining and agreeing availability targets
* disaster recovery planning
* ensuring services can collect data required to measure availability
* monitoring, analysing and reporting on service availability
* implementing availability management practices to support cloud-based services
* maintaining and improving the availability of services
* controlling and managing service availability to deliver agreed levels of availability in a cost-effective manner.
 |

## Level 4

Analyses service and component availability, reliability, maintainability and serviceability.
Contributes to the availability management process and its operation. Performs defined availability management tasks.
Ensures that services and components meet and continue to meet all of their agreed performance targets and service levels.
Implements arrangements for disaster recovery and documents recovery procedures. Conducts testing of recovery procedures.

## Level 5

Provides advice and guidance on the planning, design and improvement of service and component availability.
Investigates all breaches of availability targets and service non-availability and initiates remedial activities.
Develops plans for disaster recovery together with supporting processes.
Manages the testing of disaster recovery plans.

## Level 6

Sets policy and develops strategies, plans and processes to ensure services deliver agreed levels of availability.
Develops and implements new availability tools and techniques.

# Capacity management CPMG

Ensuring that service components have the capacity and performance to meet current and planned business needs.

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| **Guidance Notes:**Service components include, but are not limited to, hardware, software, network resources and software/infrastructure as a service.Activities may include, but are not limited to:* planning, design and management of the capability, performance, functionality and sustainability of service components to meet business needs
* applying data-driven insights to model long-term changes and short-term variations in the level of capacity required to execute the service
* implementing capacity management practices to support cloud-based services and ensure flexible and scalable capacity
* deploying techniques to control the demand and add/reduce capacity in a cost-effective, timely manner to meet changes in demand
* collaborating closely with other processes and teams to ensure a holistic approach to capacity management
* considering external factors, such as regulatory requirements and market trends, when planning and managing capacity
* continuously monitoring and optimising resource utilisation to identify cost-saving opportunities and ensure efficient use of resources
 |

## Level 2

Assists in monitoring service component capacity and performance under guidance.
Collects and reports data on resource utilisation and capacity metrics.
Supports the implementation of capacity management procedures and practices.

## Level 3

Monitors service component capacity and performance, identifying potential issues and escalating as necessary.
Applies standard procedures to manage demand and capacity.
Participates in capacity modelling and forecasting activities, providing input and recommendations.
Supports the implementation of capacity management tools and techniques.

## Level 4

Monitors service component capacity and initiates actions to resolve any shortfalls according to agreed procedures.
Applies techniques to control the demand upon a particular resource or service.
Contributes to capacity modelling and planning using data-driven insights.
Supports the design of service component capacity.

## Level 5

Manages capacity modelling and forecasting activities, using data-driven insights.
Proactively reviews information in conjunction with service level agreements to identify any capacity issues and specifies any required changes. Provides advice to support the design of service components, including designing in flexible and scalable capacity.
Works with business representatives to agree and implement short- and medium-term modifications to capacity.
Drafts and maintains standards and procedures for service component capacity management. Ensures the correct implementation of standards and procedures.

## Level 6

Leads the development and implementation of policy and strategies for capacity and performance management to meet business needs. Takes into account external factors and industry trends.
Leads capacity modelling and forecasting over the organisation’s planning or budgeting cycle using data-driven insights.
Ensures that the policies and standards for capacity management are fit for purpose, current and correctly implemented. Drives continuous improvement in capacity management practices, focusing on cost-effectiveness and resource optimisation.
Reviews new business proposals and provides specialist advice on capacity issues.

# Incident management USUP

Coordinating responses to incident reports, minimising negative impacts and restoring service as quickly as possible.

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| **Guidance Notes:**Activities may include, but are not limited to:* designing and implementing different processes and procedures for different categories of incidents including, but not limited to, major incidents, information or cybersecurity incidents, complex incidents, low impact incidents
* establishing incident response teams or security incident response teams
* routing requests for help to appropriate functions for resolution
* monitoring resolution activity
* informing users, customers and key stakeholders of progress towards service restoration.

Incidents can impact many areas, such as but not limited to, business operations, information security, IT systems, services, employees, customers, or other vital business functions. Different roles/groups may be needed to diagnose and resolve incidents, such as, users, subject matter experts, service desk, support teams, suppliers, partners. Although they play a part in the incident management process, they do not necessarily need incident management skills. |

## Level 1

Follows agreed procedures to identify, register and categorise incidents.
Gathers information to enable incident resolution and allocates incidents as appropriate.

## Level 2

Provides first line investigation and gathers information to enable incident resolution and allocate incidents.
Advises relevant people of actions taken.

## Level 3

Prioritises and diagnoses incidents. Investigates causes of incidents and seeks resolution.
Escalates unresolved incidents.
Facilitates recovery, following resolution of incidents. Documents, communicates outcomes and closes resolved incidents.

## Level 4

Monitors incident queues. Ensures that incidents are handled according to agreed procedures.
Contributes to developing, testing, and improving incident management procedures.
Ensures that resolved incidents are properly documented and closed.
Supports team members in the correct use of the incident process.

## Level 5

Responsible for the operation of the incident management process.
Leads incident communications, ensuring al parties are aware of incidents and their role in the process.
Leads the review of major incidents and informs service owners of outcomes. Ensures incident resolution within service targets. Analyses metrics and reports on the performance of the incident management process.
Develops, maintains and tests incident management policy and procedures.

# Problem management PBMG

Managing the life cycle of all problems that have occurred or could occur in delivering a service.

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| **Guidance Notes:**The primary objectives of problem management are to:* proactively prevent problems and resulting incidents from happening
* reactively resolve problems that have already happened
* eliminate recurring incidents
* minimise the impact of incidents that cannot be prevented.

Activities may include, but are not limited to:* detecting and logging problems
* classifying and prioritising problems
* initiating actions to resolve problems
* investigating and diagnosing problems
* implementing remedies to prevent future incidents
* reporting on problems.
 |

## Level 2

Assists with problem management tasks under routine supervision.
Helps in documenting problems and maintaining relevant records.
Helps detect and log problems in systems, processes, and services.
Assists in the classification and prioritisation of problems.

## Level 3

Investigates problems in systems, processes and services.
Contributes to the implementation of agreed remedies and preventative measures.

## Level 4

Initiates and monitors actions to investigate and resolve problems in systems, processes and services.
Determines problem fixes and remedies.
Collaborates with others to implemented agreed remedies and preventative measures.
Supports analysis of patterns and trends to improve problem management processes.

## Level 5

Ensures that appropriate action is taken to anticipate, investigate and resolve problems in systems and services.
Ensures that such problems are fully documented within the relevant reporting systems.
Enables development of problem solutions. Coordinates the implementation of agreed remedies and preventative measures.
Analyses patterns and trends and improves problem management processes.

# Change control CHMG

Assessing risks associated with proposed changes and ensuring changes to products, services or systems are controlled and coordinated.

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| **Guidance Notes:**Change control is applied to anything that impacts live products, services or systems. This typically includes, applications, infrastructure, documentation, processes, configuration items, suppliers.Activities may include, but are not limited to:* managing the lifecycle of change requests, registering, assessing, authorising, planning, deploying
* assessing risks and reducing risks to the availability, performance, security and compliance of the products and services impacted by the change
* developing processes for standard, normal or emergency changes
* developing methods and tools to automate change control processes to enable continuous integration.
 |

## Level 2

Administers, tracks, logs, reports on change requests, using appropriate tools, techniques and processes.
Provides assistance to implement standard low-risk changes, in accordance with defined change control procedures.

## Level 3

Develops, documents and implements changes based on requests for change.
Applies change control procedures.
Applies tools, techniques and processes to manage and report on change requests.

## Level 4

Assesses, analyses, develops, documents and implements changes based on requests for change.
Ensures that operational processes are in place for effective change control.
Develops, configures and maintains tools to manage and report on the lifecycle of change requests.
Identifies problems and issues and recommend corrective actions.

## Level 5

Leads the assessment, analysis, development, documentation and implementation of changes.
Develops implementation plans for complex requests for change.
Reviews proposed implementations and evaluates the risks to the integrity of the product and service environment. Ensures appropriate change approval is applied to changes.
Reviews the effectiveness of change implementation. Identifies, evaluates and manages the adoption of appropriate tools, techniques and processes for change control.

## Level 6

Sets the organisation's policy for the management of change in live services and test environments.
Ensures effective control and treatment of risk.
Leads the development of new methods and tools for change control.
Measures and monitors adherence to standards and ensures consistent execution of the process across the organisation.

# Asset management ASMG

Managing the full life cycle of assets from acquisition, operation, maintenance to disposal.

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| **Guidance Notes:**Assets to be managed include components such as, but not limited to, hardware, software, data, networking, cloud services, devices, intellectual property, licences and agreements, warranties.The full life cycle includes acquisition, storage, distribution, movement and disposal of assets.Asset management requires knowledge of financial, legal and technical processes, tools and techniques.Activities may include, but are not limited to:* providing information and advice to optimise value, control costs, manage risks, support decision-making and meet regulatory or contractual requirements
* providing advice on asset management includes areas such as, but not limited to, the maintenance of hardware assets, licensing of software, protection of intellectual property, and legal obligations
* using international standards for asset management
* integrating with security, change, and configuration management
* resolving issues and risks with unauthorised assets such as, but not limited to, unlicensed copies of software, cloud services, devices.
 |

## Level 2

Uses agreed procedures to create and maintain an accurate register of assets.
Performs activities related to the administration of assets.
Produces routine reports to assist asset management activities and decision-making.

## Level 3

Applies tools, techniques and processes to create and maintain an accurate asset register.
Produces reports and analysis to support asset management activities and aid decision-making.

## Level 4

Controls assets in one or more significant areas ensuring that administration of full life cycle of assets is carried out.
Produces and analyses registers and histories of authorised assets and verifies that all these assets are in a known state and location.
Acts to highlight and resolve potential instances of unauthorised assets.

## Level 5

Manages and maintains the service compliance of IT and service assets in line with business and regulatory requirements.
Identifies, assesses and communicates associated risks.
Ensures asset controllers, infrastructure teams and the business co-ordinate and optimise value, maintain control and maintain appropriate legal compliance.

## Level 6

Sets the strategy for asset management across the organisation.
Communicates the policy, governance, scope, and roles involved in asset management.
Promotes awareness of and commitment to the role of asset management in the continuing economic and effective provision of services. Provides information and advice on complex asset management issues.
Initiates impact assessment arising from decisions to obtain, change or continue the possession or use of an asset, system or service.

# Service acceptance SEAC

Managing the process to obtain formal confirmation that service acceptance criteria have been met.

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| **Guidance Notes:**Service acceptance criteria are used to ensure that a service meets the defined service requirements, including functionality, operational support, performance, safety, security and quality requirements. Acceptance criteria include both utility/functional and warranty/non-functional tests.Activities may include, but are not limited to:* engaging with a variety of stakeholders and delivery life-cycle activities such as, but not limited to, external service providers, technical design, software development and project management
* implementing service acceptance practices to support iterative/agile working
* ensuring the service provider is ready to operate the new service when it has been deployed.
 |

## Level 3

Applies standard service acceptance criteria and participates in service acceptance testing.
Collaborates with delivery teams to ensure that service deliverables meet the required standards.
Documents and communicates the outcomes of service acceptance activities.
Identifies and reports issues or non-conformances, assisting with their resolution.

## Level 4

Engages with delivery teams to confirm that products developed meet the service acceptance criteria and are to the required standard.
Provides input into change control processes.

## Level 5

Engages with delivery teams to ensure correct products are produced in a timely fashion.
Evaluates the quality of project outputs against agreed service acceptance criteria.

## Level 6

Develops the organisation's approach for service acceptance, owns the transition process and defines the acceptance criteria for service transitions.
Promotes and monitors project quality outputs to ensure they are fit for purpose and fit for use within operational services.
Actively engages with stakeholders to promote awareness and compliance with service transition quality plans and processes.
Agrees the service acceptance criteria with delivery teams.

# Security operations SCAD

Manages and administers security measures, leveraging tools and intelligence to protect assets, ensuring compliance and operational integrity.

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| **Guidance Notes:**Activities may include, but are not limited to:* providing advice and guidance on the implementation and enforcement of security controls, including proactive cloud security measures
* using security tools such as Security Information and Event Management (SIEM), Intrusion Detection/Prevention Systems (IDS/IPS), and firewalls, alongside the use of automation to streamline security operations. e.g. automatic patching, vulnerability scanning, and rapid response to common threats
* acting on threat intelligence to proactively address potential security threats, and conducting routine vulnerability assessments monitoring and analysing relevant logs, alerts, and events, and responding to incidents submitted via tickets or phone
* performing rapid analysis and remediation of security issues
* ensuring compliance with relevant legislation, adherence to security policies, and maintaining standard security operating procedures
* keeping accurate security records and documentation
* implementing, managing, and monitoring cryptographic and certificate management activities to protect data, ensure compliance, and manage cryptographic keys securely
* using advanced reporting techniques for comprehensive security oversight and informed decision-making.
 |

## Level 1

Performs simple security administration tasks.
Maintains relevant records and documentation, contributing to overall data integrity.

## Level 2

Receives and responds to routine requests for security support. Maintains records and effectively communicates actions taken.
Assists in the investigation and resolution of issues relating to security systems using basic diagnostic tools and techniques.
Documents incident and event information and generates reports on exceptions and security events. Contributes to management reporting processes.

## Level 3

Investigates minor security breaches using established procedures , incorporating analytical tools and techniques.
Performs non-standard operational security tasks adapting to evolving technologies and threat landscapes.
Addresses and resolves a variety of security events to ensure system integrity and operational continuity.

## Level 4

Maintains and optimises operational security processes. Checks that all requests for support are dealt with according to established protocols, including for cloud-based and automated systems.
Provides advice on implementing and managing physical, procedural and technical security encompassing both physical and digital assets.
Investigates security breaches in accordance with established procedures using advanced tools and techniques and recommends necessary corrective actions.
Enables effective implementation of recommended security measures and monitors their performance.

## Level 5

Oversees the adherence to and effectiveness of security operations procedures, including cloud security practices and automated threat responses.
Reviews actual or potential security breaches and vulnerabilities and ensures that they are promptly and thoroughly investigated. Recommends actions and appropriate control improvements.
Ensures the integrity and completeness of security records , ensuring timely support and adherence to established procedures.
Contributes to the creation and maintenance of security policies, standards and procedures integrating new compliance requirements and technology advances.

## Level 6

Develops comprehensive policies, standards, processes, guidelines for organisational security, including automated systems and cloud environments.
Ensures the ongoing relevance and effective implementation of security policies and standards, adapting to emerging technologies and threats.
Reviews and advises on security aspects of new business initiatives considering implications in the evolving digital landscape.
Leads strategic planning for security operations, integrating advanced threat intelligence and automation to enhance organisational resilience.

# Vulnerability assessment VUAS

Identifying and classifying security vulnerabilities in networks, systems and applications and mitigating or eliminating their impact.

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| **Guidance Notes:**Activities may include, but are not limited to:* cataloguing and classifying information and technology resources (assets and capabilities) to support vulnerability assessment
* assigning quantifiable value, rank order and importance to information and technology resources
* identifying and analysing the vulnerabilities of each resource, manually or using automated tools and information sources
* prioritising, scoring and ranking the risk associated with vulnerabilities
* business impact assessment
* mitigating or eliminating the vulnerabilities.

Vulnerability assessment tools include web application scanners, protocol scanners and network scanners. |

## Level 2

Undertakes low-complexity routine vulnerability assessments using automated and semi-automated tools.
Escalates issues where appropriate.
Contributes to documenting the scope and evaluating the results of vulnerability assessments.

## Level 3

Follows standard approaches to perform basic vulnerability assessments for small information systems.
Supports creation of catalogues of information and technology assets for vulnerability assessment.

## Level 4

Collates and analyses catalogues of information and technology assets for vulnerability assessment.
Performs vulnerability assessments and business impact analysis for medium complexity information systems.
Contributes to selection and deployment of vulnerability assessment tools and techniques.

## Level 5

Plans and manages vulnerability assessment activities within the organisation.
Evaluates, selects, and reviews vulnerability assessment tools and techniques.
Provides expert advice and guidance to support the adoption of agreed approaches.
Obtains and acts on vulnerability information and conducts security risk assessments, business impact analysis and accreditation on complex information systems.

# Digital forensics DGFS

Recovering and investigating material found in digital devices.

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| **Guidance Notes:**Activities may include, but are not limited to:* collecting, processing, preserving and analysing material
* presenting forensic evidence based on the totality of findings.

The scope of digital forensics includes finding evidence on computers and any device capable of storing digital data. The evidence may be used in support of security vulnerability mitigation, criminal, fraud, counterintelligence, or law enforcement investigations. |

## Level 2

Assists with digital forensic investigations under routine supervision.
Helps recover damaged, deleted, or hidden data from devices.
Helps collect information and evidence.

## Level 3

Supports digital forensic investigations by applying standard tools and techniques to investigate devices.
Recovers damaged, deleted or hidden data from devices.
Maintains integrity of records and collects information and evidence in a legally admissible way.

## Level 4

Designs and executes complex digital forensic investigations on devices.
Specifies requirements for resources and tools to perform investigations.
Processes and analyses evidence in line with policy, standards and guidelines and supports the production of forensics findings and reports.

## Level 5

Conducts investigations to correctly gather, analyse and present findings, including digital evidence, to both business and legal audiences.
Collates conclusions and recommendations and presents forensics findings to stakeholders.
Plans and manages digital forensics activities within the organisation. Provides expert advice on digital forensics.
Contributes to the development of digital forensics policies, standards and guidelines. Evaluates and selects digital forensics tools and techniques.

## Level 6

Plans and leads the organisation’s approach to digital forensics.
Sets policies, standards and guidelines for how the organisation conducts digital forensic investigations.
Leads and manages high risk, large or wide-ranging digital forensics investigations engaging additional specialists if required.
Authorises the release of formal forensics reports.

# Penetration testing PENT

Testing the effectiveness of security controls by emulating the tools and techniques of likely attackers.

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| **Guidance Notes:**Penetration testing may be a stand-alone activity or an aspect of acceptance testing prior to an approval to operate.Activities include, but are not limited to:* ethical hacking (using the same tools and techniques as an adversary to safely exploit security weaknesses)
* demonstrating how an adversary can subvert security goals or achieve specific adversarial objectives
* evaluating the effectiveness of current/planned defences or mitigation controls
* assuring the security of networks, systems, and applications
* assessing the strength and effectiveness of cryptographic implementations
* identifying insights into the business risks of various vulnerabilities
* testing network, infrastructure, web and mobile applications for weaknesses
* checking patch levels and configurations
* social engineering.
 |

## Level 2

Assists with penetration testing tasks under routine supervision.
Supports the execution of standard penetration tests on systems, networks, and applications.
Helps document and report on test results, findings, and potential security risks.

## Level 3

Follows standard approaches to design and execute penetration testing activities.
Researches and investigates attack techniques and recommends ways to defend against them.
Analyses and reports on penetration testing activities, results, issues and risks.

## Level 4

Selects appropriate testing approach using in-depth technical analysis of risks and typical vulnerabilities.
Produces test scripts, materials and test packs and tests new and existing networks, systems or applications. Provides advice on penetration testing to support others.
Records and analyses actions and results and modifies tests if necessary.
Provides reports on progress, anomalies, risks and issues associated with the overall project.

## Level 5

Plans and drives penetration testing within a defined area of business activity.
Delivers objective insights into the existence of vulnerabilities, the effectiveness of defences and mitigating controls.
Takes responsibility for the integrity of testing activities and coordinates the execution of these activities. Provides authoritative advice and guidance on all aspects of penetration testing.
Identifies needs and implements new approaches for penetration testing. Contributes to security testing standards.

## Level 6

Determines penetration testing policy, and owns the supporting processes.
Manages all penetration testing activities within the organisation. Assesses and advises on the practicality of testing process alternatives.
Establishes capability for continual improvement and invention in penetration testing and leads the implementation of new approaches.
Assesses suppliers' development and testing capabilities. Manages client relationships with respect to penetration testing.

# Performance management PEMT

Improving organisational performance by developing the performance of individuals and workgroups to meet agreed objectives with measurable results.

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| **Guidance Notes:**The term workgroup is used to be inclusive of different organisational structures. A workgroup is a collection of people working together on interdependent tasks to achieve shared objectives. This includes, but is not limited to, permanent/business-as-usual teams, cross-functional teams, squads or workgroups formed to deliver a specific outcome.Activities may include, but are not limited to:* setting workgroup objectives aligned to organisational drivers
* supporting individual growth to achieve objectives
* forming effective teams
* developing effective working relations within the workgroup
* developing effective working relations with other workgroups, partners and individuals who they collaborate with to achieve workgroup objectives.
 |

## Level 4

Provides operational direction, support and guidance to assigned colleagues.
Allocates routine tasks or project work, in line with team objectives and individual capabilities. Monitors quality and performance against agreed criteria to make learning recommendations or to escalate concerns.
Coaches colleagues in developing target skills and capabilities in line with team and personal goals.
Facilitates effective working relationships between team members.

## Level 5

Forms, maintains and leads workgroups and individuals to achieve organisational objectives.
Determines and delegates objectives and task responsibilities to individuals or teams, including people management responsibilities as appropriate. Sets the quality, performance and capability targets in line with organisational goals. Monitors performance and working relationships and provides effective feedback to address individual issues.
Encourages individual development of skills and capabilities in line with team and personal goals. Facilitates the development of individuals by adjusting workload, targets, and team capacity.
Plays an active role in formal organisational processes such as recruitment, reward, promotion and disciplinary procedures.

## Level 6

Determines and delegates people management and functional management objectives and responsibilities.
Creates and sets the direction for multiple workgroups to achieve strategic organisational objectives. Sets strategy for quality and performance measurement in line with organisational goals.
Provides a work environment and resources that allow individuals and workgroups to perform their tasks efficiently.
Leads the implementation of formal organisational processes such as recruitment, reward, promotion and disciplinary procedures.

# Employee experience EEXP

Enhancing employee engagement and ways of working, empowering employees and supporting their health and wellbeing.

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| **Guidance Notes:**Activities may include, but are not limited to:* providing opportunities for personal growth and learning
* providing sufficient personal freedom to decide how to achieve work objectives, with support available when needed
* supporting different views, working styles and behaviours within the work environment
* providing a safe and secure working environment with the resources needed to do the job
* providing transparent communications and building trust in leadership
* providing a holistic approach in support of mental and physical well being.

Note that the term employee is not limited to specific terms of employment. Depending on the employer it may include temporary and contract staff as well as salaried employees. |

## Level 4

Supports assigned co-workers in areas of uncertainty, such as, organisational contacts, communication channels, processes, job expectations and manager relations.

## Level 5

Implements working practices that motivate employees and support their health and wellbeing.
Provides guidance to individuals on long-term development goals and career opportunities, considering an individual's strengths and preferences.
Communicates business direction, policy and purpose where these may drive or affect employee engagement. Ensures clear communication of delegated tasks and provides sufficient autonomy to motivate and empower individuals.
Maintains awareness of the physical and emotional welfare of employees, and provides counselling when required.

## Level 6

Leads on the implementation of organisational strategies for employee engagement.
Ensures that managers provide a productive working environment that motivates employees and supports their health and wellbeing.
Initiates productive working practices for remote, virtual and onsite working and ensures the availability of support for employees.
Communicates and promotes policies for employee health and wellbeing.

# Organisational facilitation OFCL

Supporting workgroups to implement principles and practices for effective teamwork across organisational boundaries and professional specialisms.

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| **Guidance Notes:**Activities may include, but are not limited to:* developing and implementing team principles and practices for decision-making, prioritisation, problem-solving
* helping teams adopt new/contemporary working practices and behaviours including, but not limited to, specific agile methodologies, processes, tools and ceremonies
* helping teams plan and prioritise their workload based on their capacity and track record of working
* removing barriers or impediments to teams achieving their mission and objectives
* providing guidance and suggestions to support team members in adopting self-management and cross-functional working
* reviewing team effectiveness, identifying what went well, what could be improved, and what might be added or removed from their working practices.

Workgroups may be focused on project, product or process management or may be focused on specific problems or deliverables.Workshop facilitation tools and techniques form part of applying this skill, but are not sufficient. This skill describes a broader set of responsibilities. |

## Level 4

Facilitates a series of group activities or workshops in situations of complexity and ambiguity and competing stakeholder needs.
Designs a structured sequence of meetings, events or workshops to solve complex problems.
Understands required outcomes and outputs from teams and facilitates the team to deliver these.
Helps to improve team processes and performance in meetings, events or workshops.

## Level 5

Facilitates workgroups to deliver defined goals and outcomes.
Provides support, guidance and suggestions to workgroups and teams to learn collaborative problem solving and improve their team performance. Creates shared responsibilities and sustainable agreements with the team.
Implements and improves agreed team principles, practices, processes & ceremonies.
Recognises and works with the strengths and constraints of team dynamics.

## Level 6

Facilitates cross-functional leadership teams to deliver organisational goals and outcomes.
Designs repeatable, systematic or ad hoc team processes for decision-making, prioritisation, and problem-solving at the highest level. Guides leadership teams in developing shared responsibilities and making decisions that enable sustainable agreements.
Asks questions and raises awareness of leadership team performance. Provides suggestions to encourage teams to learn and improve how they work together.
Champions the development of self-organising workgroups across the organisation.

# Professional development PDSV

Facilitating the professional development of individuals in line with their career goals and organisational requirements.

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| **Guidance Notes:**Activities may include, but are not limited to:* negotiating, reviewing, monitoring and validating each individual's professional development plans
* providing professional development advice and support for individuals
* identifying appropriate learning and development or career-enhancing activities
* liaising with internal and external providers of learning and development
* adopting a suitable framework for skills, knowledge and competencies such as SFIA
* adopting or defining professional career pathways
* creating accreditation and qualification approaches or adopting industry frameworks
* evaluating the benefits of continual professional development activities.
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## Level 4

Assists practitioners with creating personal development plans.
Advises on suitable development activities such as specific learning or experience to be gained.
Monitors practitioners’ continuing professional development records.
Ensures achievements and enhanced capabilities are recorded and referenced to personal and organisational objectives.

## Level 5

Determines development needs for a professional practice area.
Aligns development activities with organisational priorities, learning and development strategies and career pathways.
Assists practitioners with the creation of development plans. Advises and supports assigned practitioners, ensuring alignment with professional development plans and career opportunities.
Ensures that practitioners record evidence of continuing professional development. May contribute to practitioners' performance appraisals.

## Level 6

Develops and defines a professional development framework for one or more professional disciplines.
Determines and maintains organisational development needs in line with business needs and strategic direction. Generates development strategies to achieve required change.
Develops and leads communities of practice, including defining career pathways.
Defines the approach to identifying suitable individuals to provide career advice and support. Monitors progress and evaluates business benefits achieved from continual professional development.

# Workforce planning WFPL

Strategically projecting the demand for people and skills and proactively planning the workforce supply to meet organisational needs.

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| **Guidance Notes:**Workforce planning typically takes an enterprise-wide view, assessing capabilities across the organisation rather than just a single team. The scope is more strategic than tactical resource allocation to projects or operational work schedules.Activities may include, but are not limited to:* assessing the current state of the workforce
* assessing organisation-wide data over extended time periods to discover multi-year trends
* identifying critical capabilities needed to compete and meet strategic goals, not just immediate resource allocation gaps
* identifying the workforce required for current and future activities
* adopting or developing a skills and capabilities framework
* developing plans to close gaps between current state and future state using actions such as, but not limited to, external recruitment, internal development, re-skilling, sourcing external partners, organisational design, outplacement
* influencing organisational policies and practices to align recruitment, learning, promotion and recognition and reward to support the development of an inclusive and diverse workforce
* ensuring compliance with relevant regulations and ethical codes around employment practices and organisational policies. (e.g. requirements for layoffs/restructuring).
 |

## Level 4

Gathers, maintains and analyses organisation-wide workforce capability data.
Performs gap analysis to identify workforce strengths and shortfalls with reference to business strategy and specific future needs.
Contributes to the development of organisation-wide workforce plans to meet current and future demand.
Coordinates and schedules ongoing workforce planning activities. Assists in maintaining a skills and capability inventory.

## Level 5

Leads the development of workforce plans to ensure the availability of appropriately skilled resources to meet organisational objectives and commitments.
Contributes to the development of the strategic workforce planning approach. Oversees and reviews the implementation of workforce plans.
Develops current-state assessment of workforce skills, capabilities and potential. Forecasts future workforce demand for skills based on broad organisation-wide plans and external factors.
Maintains a skills and capability inventory and identifies options for closing gaps.

## Level 6

Defines an integrated strategic workforce planning approach connecting organisational business goals to future skill needs.
Communicates the workforce planning approach and obtains organisational commitment. Selects frameworks to be used for the organisation's skills and capability inventory.
Interprets business strategy to direct workforce demand forecasting (skills and numbers) for the organisation. Monitors the external environment in relation to supply and emerging trends.
Influences people management policies and practices to align with workforce plans. Integrates with resourcing strategies and plans. Monitors execution of workforce plans.

# Resourcing RESC

Acquiring, deploying and onboarding resources.

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| **Guidance Notes:**Resources include, but are not limited to, salaried employees, temporary staff, consultants and contractors. Resourcing may be undertaken for departments, teams, projects, or individual roles. Resourcing should be attributed to those whose role is the specialised practice of acquiring and integrating resources into the organisation.Activities may include, but are not limited to:* recruiting, selecting, deploying, onboarding and transitioning resources
* assessing candidates using methods such as, but not limited to, interviews, assessment centres, CV/resume review, tests, exercises
* ensuring compliance with relevant statutory or external regulations and codes of good practice
* enhancing recruitment using workforce and process analytics
* proactively building talent pipelines aligned to future strategic skills
* adapting sourcing approaches to attract candidates for hard-to-fill needs
* measuring the effectiveness of resourcing approaches using methods such as, but not limited to, retention analysis, media and supplier assessment, customer satisfaction and validation of selection methods.
 |

## Level 2

Assists with resourcing tasks under routine supervision.
Helps with recruiting and onboarding new employees.
Supports the documentation and tracking of resourcing activities.

## Level 3

Supports managers and teams in resourcing and recruitment activities.
Uses recommended tools for planning, scheduling and tracking resourcing activity.
Provides guidance on resource management and recruitment software, procedures, processes, tools and techniques.

## Level 4

Facilitates and supports the execution of resourcing activities in collaboration with managers and teams.
Analyses resource requests to determine tasks, skills and effort required. Creates and communicates open positions internally and externally. Conducts interviews and assessments using a planned format and structure.
Implements internal resource allocation matching skills to tasks. Contributes to transitioning of resources, complying with relevant statutory or external regulations and codes of practice.

## Level 5

Plans and manages the acquisition and deployment of resources to meet specific needs and ongoing demand.
Defines and manages the implementation of resourcing processes and tools. Advises on available options and customises resourcing approach to meet requirements. Adheres to standards, statutory or external regulations and codes of practice and ensures compliance.
Engages with external parties in support of resourcing plans.
Measures effectiveness of resourcing processes and implements improvements.

## Level 6

Defines the resourcing approach for a significant part of the organisation in line with workforce plans and strategic business goals.
Communicates the resourcing approach and obtains organisational commitment. Advises on standards, statutory or external regulations and codes of practice and ensures compliance.
Maintains a strong external network and supplier framework to support sourcing and acquiring resources.
Leads the development of plans and budget to ensure that the organisation has appropriately skilled resources to meet organisational objectives and commitments. Reviews the ongoing success and effectiveness of resource management processes.

# Learning and development management ETMG

Delivering management, advisory and administrative services to support the development of knowledge, skills and competencies.

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| **Guidance Notes:**Activities may include, but are not limited to:* developing the full range of professional, business or technical capabilities required by the organisation
* developing learning and development strategies and policies
* identifying appropriate learning and development solutions, accreditations and qualifications
* selecting, tailoring and adopting skills and competency frameworks
* selecting and operating learning management systems
* administering, documenting, tracking, reporting on learning and development activities.
 |

## Level 2

Supports learning and development activities under routine supervision.
Assists in maintaining training records and documenting learning and development activities.
Helps organise learning events and track attendance.

## Level 3

Contributes to the maintenance of training records and the catalogue of learning and development resources.

## Level 4

Contributes to the development and maintenance of a catalogue of learning and development resources.
Uses data to analyse and evaluate the effectiveness of learning/educational activities.
Books and organises learning events.
Updates and controls training records, including attainment of certificates and accreditations.

## Level 5

Manages the provision of learning and development, ensuring optimum use of resources.
Maintains, publicises and promotes a catalogue of learning and development activities. Ensures that courses are up to date and accredited (when required).
Arranges facilities and schedules with learning and development providers as appropriate.
Uses data to assess and improve the effectiveness of learning or educational activities.

## Level 6

Determines the learning and development programme and delivery mechanisms needed to grow staff skills in line with business needs.
Identifies appropriate accreditation and qualification paths applicable to individuals within the organisation.
Evaluates learning outcomes.
Manages the development and provision of all learning, taking account of the strategic aims of the employing organisation.

## Level 7

Directs the development and implementation of a learning and development strategy for the organisation aligned to business needs.
Leads the provision of learning and development expertise, guidance and systems needed to execute strategic and operational plans.
Secures organisational resources to execute the learning and development strategy.
Identifies opportunities for strategic relationships with suppliers and partners.

# Learning design and development TMCR

Designing and developing resources to transfer knowledge, develop skills and change behaviours.

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| **Guidance Notes:**Includes instructional design, content development, configuration and testing of learning environments, and use of appropriate current technologies such as audio, video, simulation and assessment.Scope includes learning and development activities for the workplace, for all levels of education and blended models such as apprenticeships and work placements.Activities may include, but are not limited to:* specifying, designing, creating, packaging and maintaining materials and resources
* assimilating information from existing sources
* selecting and presenting material in a form suitable to the intended purpose and audience
* securing third-party accreditation
* creating simulated data, replicating external systems, interfaces and assessment systems for simulated learning environments.
 |

## Level 2

Assists with learning design and development tasks under routine supervision.
Supports the creation and maintenance of learning materials and resources.
Helps document and organise learning content and environments.

## Level 3

Designs, creates, customises and maintains learning materials and resources to deliver agreed outcomes, and meet accreditation requirements when appropriate.
Contributes to the design, configuration and testing of learning environments.

## Level 4

Specifies the content and structure of learning and development materials.
Takes responsibility for design, creation, packaging and maintenance and manages development to deliver agreed outcomes.
Where required, designs, configures and tests learning environments.
Secures external accreditations as appropriate.

## Level 5

Specifies solutions for use in learning and development programs in the workplace or in compulsory, further or higher education.
Commissions the development of learning materials, allocates resources to learning teams, defines learning outcomes.
Leads learning programs, recommends and specifies learning interventions for design, development and deployment according to agreed learning outcomes.

# Learning delivery ETDL

Transferring knowledge, developing skills and changing behaviours using a range of techniques, resources and media.

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| **Guidance Notes:**Learning delivery uses a range of techniques, resources and media including, but not limited to, face-to-face learning, e-learning, on-line virtual environments, field-work and projects, self-assessment, peer-assisted learning, simulation. Typically a blend of techniques will be used which can incorporate both formal and informal learning activities.Learning delivery includes promoting professional attitudes in order to facilitate learning and development. |

## Level 2

Performs a range of learning activities under direction to support the delivery of learning objectives.
Assists in the preparation of learning environments.
Observes learners performing practical activities and work, providing assistance within routine enquiries and escalating where needed.

## Level 3

Delivers learning activities to a variety of audiences using prepared materials to meet established learning objectives.
Uses established guidelines for the preparation of the environment. Assists with the development and maintenance of examples and case study materials.
Appropriately uses a range of learning delivery techniques to enable learners to develop skills, capability, techniques and required knowledge.
Observes learners performing practical activities and work. Advises and assists where necessary. Provides detailed instruction where necessary and responds to questions, seeking advice in exceptional conditions beyond own experience.

## Level 4

Prepares and delivers learning activities for a variety of audiences to meet learning objectives.
Contributes to the design and selection of appropriate environments. Effectively uses a broad range of learning delivery techniques to enable learners to develop skills, capability, techniques and required knowledge. Develops and updates examples and case study materials.
Observes and evaluates learners performing practical activities and work. Advises and assists learners to enable the delivery of learning objectives. Tailors the approach to learning delivery to enhance the experience of learners.
Provides detailed instruction as necessary and responds to detailed questions in own area of specialisation. Adapts materials to meet the needs of learners.

## Level 5

Manages the delivery of programmes of learning to ensure learning objectives are met.
Plans and schedules the delivery of learning activities. Leads the design and selection of appropriate environments to support and enhance the learning experience. Customises learning activities incorporating relevant scenarios and case studies.
Delivers learning activities to specialist audiences requiring the application of advanced technical and professional principles to unpredictable situations. Advises others in learning delivery techniques and options.
Evaluates and monitors the performance of learning delivery activities.

# Competency assessment LEDA

Assessing knowledge, skills, competency and behaviours by any means, whether formal or informal, against frameworks such as SFIA.

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| **Guidance Notes:**Competency assessment is a specialised practice for evaluating skills and competencies, distinct from performance appraisals and general capability understanding. Unlike performance reviews which focus on job performance and contributions, competency assessment objectively measures technical and professional capabilities.Assessments may be performed in many contexts such as, but not limited to, recruitment, career progression, professional development planning or accreditation/certification. Activities may include, but are not limited to:* evaluating and selecting assessment options
* adopting or adapting assessment methods, tools, and techniques
* taking into account the context of the assessment and how the results of the assessment will be used
* aligning assessments with ethical, legal and regulatory requirements.

Ethical, legal and regulatory requirements are necessary to ensure the integrity of assessments and when handling personal data. |

## Level 2

Assists in the administration of competency assessments using standard tools and procedures under routine supervision.
Supports the collection and organisation of assessment data and results using specified methods and tools.
Helps create and maintain documentation.

## Level 3

Performs routine assessments of knowledge, skill, competency or behaviour using specified methods.

## Level 4

Performs routine and non-routine assessments of knowledge, skill, competency or behaviour using specified methods.
Provides advice and guidance to support the adoption of assessment methods and tools.
Moderates assessments conducted by other assessors.
Reviews and improves usage and application of assessment methods and tools.

## Level 5

Provides advice and guidance on the selecting, adopting and adapting assessment methods, tools and techniques.
Plans assessments based on the context of the assessment and how assessment results will be used.
Manages execution of assessments to ensure they deliver the required outcomes with acceptable quality. Monitors and moderates reviews performed by other assessors.
Manages reviews of the benefits and value of assessment methods and tools. Identifies and recommends improvements to assessment methods and tools.

## Level 6

Champions the importance and value of assessment and appropriate assessment methods, tools and techniques.
Develops organisational policies, standards, and guidelines for assessments.
Leads in the introduction and use of assessment methodologies and tools. Establishes an assessment practice and pool of assessors within the organisation.
Establishes quality assurance to ensure internal and/or external consistency and reliability of assessment outcomes. Ensures the quality of assessments across different user groups.

# Certification scheme operation CSOP

Designing, developing and operating certification schemes, accreditations and credentials, including digital credentials or badges.

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| **Guidance Notes:**The overall purpose of certification of persons is to recognise an individual's competence to perform a task or job or determine whether they have met some knowledge criteria.Knowledge and competence are different and the two terms should not be confused. A certification body has the responsibility to ensure that only people who demonstrate competence are awarded competence certification. Certification of people provides value through public confidence and trust. Public confidence relies on a valid assessment of competence by a third party, reconfirmed at defined intervals. The certification body should act responsibly to provide confidence to interested parties in its competence, impartiality and integrity.Activities may include, but are not limited to:* verifying on request whether an individual holds a currently valid certificate and the scope of that certification, except where the law prevents the information from being disclosed
* documenting security policies and procedures, including non-disclosure or other agreements not to release confidential examination materials or participate in fraudulent practices
* implementing arrangements for certified persons to inform the certification body of anything affecting capability to continue meeting certification requirements.
 |

## Level 2

Processes applications for certification.
Logs complaints.
Assists with the preparation and organisation of credential materials.
Supports the creation and maintenance of credentials or certificates and helps resolve routine problems during the certification lifecycle.

## Level 3

Issues certifications or credentials and maintains and retains certification records.
Maintains information on the certification scheme and a general description of the certification process.
Designs, creates, develops, customises and maintains credentials or certificates.
Responds to public information requests. Analyses and takes action on complaints or issues.

## Level 4

Documents instructions for all personnel involved in certification, including legally enforceable agreements with any third parties involved in the process.
Identifies threats to impartiality by analysing, mitigating or eliminating potential conflict of interests arising from certification activities.
Implements the procedures for certification of individuals for the delivery of training.
Determines the merits of complaints and any remedial actions required.

## Level 5

Defines a certification or accreditation scheme, including organisation structure, duties, responsibilities and authorities.
Determines necessary competence to perform certification functions. Designs and implements the examiner or assessor selection and approval process.
Monitors performance and judgements, and agrees corrective actions. Plans and provides adequate premises, equipment and resources.
Documents policies and procedures for maintenance and release of information, including consideration of any legal agreements for confidentiality.

## Level 6

Sets policies and standards for the operation of a certification scheme, including segregation of duties and addressing impartiality.
Develops and maintains a description of the code of ethics and professional practices required.
Aligns certification schemes with relevant external standards, frameworks such as SFIA and best practices.
Obtains approval from accreditation scheme owners or governance bodies.

# Teaching TEAC

Delivering and assessing curricula in a structured and systematic education environment.

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| **Guidance Notes:**Teaching focuses on:* developing an understanding of the principles, approaches and practices that underpin a specified topic or knowledge area
* the methods, techniques and practice of teaching (pedagogy).

This skill is generic and can be applied to the teaching of any topic or knowledge area. In the context of the SFIA framework, this includes:* the topics and knowledge areas supporting any of the skills described in the SFIA framework
* and the application of these topics and knowledge areas to other disciplines and practices.

In the context of computing and IT curricula, the topics addressed are typically:* common digital skills needed to safely benefit from, participate in and contribute to the digital world for everyday life and work
* fundamental and more advanced aspects of specific topics and knowledge areas including emerging technologies and new applications for existing technologies
* the ideas of computational thinking and the application of computational concepts to everyday life and professional working practices.
 |

## Level 2

Contributes to the delivery of aspects of computing and IT curricula in a formal educational context.
Applies good practice in learning content design, development and delivery.
Assesses student performance in aspects of a curriculum area, providing support to enhance student understanding as needed.

## Level 3

Delivers the majority of a curriculum.
Applies good practice in learning content design, development and delivery. Maintains awareness of relevant pedagogical and domain research.
Assesses student performance across a curriculum. Provides feedback and support to help students improve their understanding.

## Level 4

Delivers a curriculum.
Applies good practice supported by pedagogical research to learning content design, development and delivery.
Assesses student performance and reviews cohort performance. Advises and assists students to enable the achievement of learning objectives.

## Level 5

Leads the teaching and assessment of a curriculum or learning pathway.
Implements enhancement strategies for teaching and assessment. Reviews pedagogical research and practices relevant to topics in the curricula. Applies good teaching practices in learning content design, development and delivery.
Contributes to the development and implementation of specialist teaching practices needed by the curriculum.
Evaluates and monitors student achievements and the effectiveness of teaching activities across the curriculum. Advises on the use of appropriate pedagogies and assessment approaches.

## Level 6

Leads the teaching, assessment and enhancement of a range of curricula or learning pathways.
Reviews and critically evaluates pedagogical research and practices relevant to the curricula. Develops and leads the introduction of advanced or specialist teaching practices.
Leads and supports others in the development of good practice in learning content design, development and delivery.
Monitors, evaluates and reports the performance of teaching and assessment activities within their areas of responsibility.

## Level 7

Authorises teaching, assessment and enhancement strategies for a broad range of curricula or learning pathways.
Directs the definition, implementation, and monitoring of teaching to satisfy relevant statutory and professional benchmarks and frameworks.
Secures resources to deliver the organisation's teaching commitments.
Monitors and evaluates relevant domain and pedagogical research to identify and implement improvements to the delivery of the curricula.

# Subject formation SUBF

Specifying, designing and developing curricula within a structured and systematic education environment.

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| **Guidance Notes:**Subject formation focuses on:* developing curricula to support the development of understanding of the principles, approaches and practices that underpin specific topics and knowledge areas
* incorporating significant emerging technologies and techniques for which current students need to be prepared.

The scope may include curricula for formal education or for independent examination bodies.This skill is generic and can be applied to curriculum design and development for any topic or knowledge area. In the context of the SFIA framework, this includes:* the topics and knowledge areas that support any skills described in the SFIA framework
* and the application of these topics and knowledge areas to other disciplines and practices.

In the context of computing and IT curricula, the topics addressed are typically:* common digital skills needed to safely benefit from, participate in and contribute to the digital world for everyday life and for work
* fundamental and more advanced aspects of specific topics and knowledge areas including emerging technologies and new applications for existing technologies
* the ideas of computational thinking and the application of computational concepts to everyday life and professional working practices.
 |

## Level 4

Contributes to curriculum development by selecting or specifying curriculum content or assessment approaches for one or more specialist areas.

## Level 5

Contributes to the specification and development of curricula and assessment in an educational context or for an independent examination body.

## Level 6

Leads the specification and development of curricula and assessment in an educational context or for an independent examination body.
Contributes to the development of a strategy for curriculum evolution.
Ensures that relevant current domain research is represented in the curricula.

## Level 7

Authorises the curriculum and assessment strategies for a broad range of curricula or learning pathways.
Directs the definition, implementation, and monitoring of curricula to satisfy relevant statutory and professional benchmarks and frameworks.
Develops strategies for the evolution of curricula over time. Incorporates emerging domain and pedagogical themes into plans for future curricula.

# Sourcing SORC

Managing, or providing advice on, the procurement or commissioning of products and services.

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| **Guidance Notes:**Activities may include, but are not limited to:* providing policies and standards for procurement
* commercial governance, compliance to legislation and assurance of information security
* implementing compliant procurement processes, taking full account of the issues and imperatives of both the commissioning and supplier sides
* clarifying requirements for products and services
* identifying, evaluating and selecting suppliers
* evaluating tenders
* developing "build or buy" criteria
* evaluating and purchasing cloud-based services
* benchmarking supplier performance
* placing, monitoring and terminating contracts.
 |

## Level 2

Assists in the preparation of pre-qualification questionnaires and tender invitations in response to business cases.
Assembles relevant information for tenders.
Produces detailed evaluation criteria for simple tender criteria.
Assists in the evaluation of tenders.

## Level 3

Prepares pre-qualification questionnaires and tender invitations in response to business cases.
Recognises the difference between open source and proprietary systems options.
Applies standard procedures and tools to produce detailed evaluation criteria for complex tenders and to evaluate tenders.

## Level 4

Reviews business cases (requirements, potential benefits and options) and determines appropriate procurement routes.
Using market knowledge to inform specifications, ensures detailed pre-qualification questionnaires and tender invitations are prepared.
Collects and collates data to support collaboration and negotiates terms and conditions to reflect the scale of requirements and encourage good performance.
Evaluates tenders based on specification and evaluation criteria, prepares acceptance documentation and advises on contracts and service level agreements.

## Level 5

Plans and manages procurement activities.
Manages tender, evaluation and acquisition processes. Researches suppliers and markets, and maintains a broad understanding of the commercial environment, to inform and develop commercial strategies and sourcing plans.
Advises on the business case for alternative sourcing models. Advises on policy and procedures covering tendering, the selection of suppliers and procurement.
Negotiates with potential partners and suppliers, developing acceptance criteria and procedures. Drafts and places contracts.

## Level 6

Develops policy and procedures for sourcing and procurement activities.
Establishes procurement strategies, standards, methods, processes and good practices that ensure compliance with legislation, regulation and third-party information security.
Leads the procurement process, from clarifying requirements through to placing, monitoring and terminating contracts. Conducts complex negotiations and sets parameters for routine negotiations, ensuring strategic alignment of terms and conditions.
Identifies external partners, engaging with professionals in related disciplines as appropriate. Ensures that terms and conditions are aligned with current legislation and policy.

## Level 7

Shapes and leads the organisation's overarching sourcing and procurement strategies, ensuring alignment with the global business vision and long-term objectives.
Assumes full accountability for all sourcing and procurement activities, guiding the organisation's sourcing vision and strategic procurement decisions.
Strategically develops, deploys, and continually assesses acquisition processes to align with dynamic market conditions and organisational goals.
Leads high-level negotiations for major, organisation-defining contracts, setting negotiation frameworks and strategies that significantly impact the organisation's market position and success.

# Supplier management SUPP

Aligning the organisation’s supplier performance objectives and activities with sourcing strategies and plans, balancing costs, efficiencies and service quality.

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| **Guidance Notes:** Activities may include, but are not limited to:* establishing working relationships based on collaboration, trust, and open communication
* encouraging co-innovation and service improvement with suppliers
* proactively engaging suppliers for mutual benefit to resolve operational incidents, problems, poor performance and other sources of conflict
* implementing supplier management practices to support cloud-based services
* implementing clear escalation paths for discussing and resolving issues
* managing performance and risks across multiple suppliers (internal and external) using a set of agreed metrics
* ensuring compliance to legislation
* commercial governance and supply chain management
* managing risks associated with security, continuity and integrity of supply
* implementing policies for selection of suppliers and bench-marking supplier performance.
 |

## Level 2

Assists in the collection and reporting of supplier performance data.
Assists with the routine day-to-day communication between the organisation and suppliers.

## Level 3

Acts as the routine contact point between the organisation and suppliers.
Supports resolution of supplier-related incidents, problems, or unsatisfactory performance.
Collects and reports on supplier performance data.

## Level 4

Collects supplier performance data and investigates problems.
Monitors and reports on supplier performance, customer satisfaction, adherence to security requirements and market intelligence. Validates that suppliers' performance is in accordance with contract terms.
Engages proactively and collaboratively with suppliers to resolve incidents, problems, or unsatisfactory performance.
Implements supplier management-related service improvement initiatives and programmes.

## Level 5

Manages suppliers to meet key performance indicators and agreed targets.
Manages the operational relationships between suppliers and ensures potential disputes or conflicts are raised and resolved.
Performs bench-marking and makes use of supplier performance data to ensure that performance is adequately monitored and regularly reviewed. Use suppliers' expertise to support and inform development roadmaps.
Manages implementation of supplier service improvement actions. Identifies constraints and opportunities when negotiating or renegotiating contracts.

## Level 6

Develops organisational policies, standards, and guidelines to ensure effective supplier management across the integrated supply chain.
Defines the approach for commercial communications and the management of relationships with suppliers. Establishes a positive and effective working environment with suppliers for mutual benefit.
Ensures that resources and tools are in place to conduct bench-marking. Reviews supplier analysis and assesses effectiveness across the supply chain.
Manages risks and assures the quality of the services delivered by suppliers.

## Level 7

Determines overall supplier management strategy, embracing effective management and operational relationships at all levels.
Leads collaborative supplier partnerships.
Aligns supplier performance objectives and relationship management activities with business and commercial objectives and sourcing strategies.
Establishes a framework for supplier governance and to monitor the service provided and deliver commercial value from contracts. Represents the organisation in commercially significant disputes involving suppliers.

# Contract management ITCM

Managing and operating formal contracts, addressing supplier and client needs in product and service provision.

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| **Guidance Notes:**Activities may include, but are not limited to:* overseeing contracts from initiation and negotiation to renewal or termination
* ensuring effective communication and collaboration with internal teams, suppliers, and clients
* maintaining alignment with laws, regulations, and organisational policies
* evaluating contract performance against agreed metrics and KPIs
* managing variations and adjustments to contract terms as business needs or market conditions evolve
* assessing and handling risks associated with contractual agreements
* integrating sustainability and ethical considerations into contract management
* using contract management software and tools for improved efficiency and accuracy
* managing contracts for cloud-based services, including service levels, data security, and compliance with cloud-specific regulations.
 |

## Level 2

Assists in collecting contract performance data and create/produces standard reports on contract performance under routine supervision.

## Level 3

Acts as a routine contact point between the organisation and counterparties concerning contract management.
Supports the collection of contract performance data. Creates standard reports on contract performance.

## Level 4

Sources and collects contract performance data (such as pricing and supply chain costs), and monitors performance against key performance indicators.
Monitors progress against business objectives specified in the business case. Proactively manages risk and reward mechanisms in the contract.
Identifies and reports under-performance and develops opportunities for improvement. Monitors compliance with terms and conditions and takes appropriate steps to address non-compliance.
Identifies where change is required, and plans for variations. Ensures, in consultation with stakeholders, that change management protocols are implemented.

## Level 5

Oversees and measures the fulfilment of contractual obligations.
Uses key performance indicators to monitor and challenge performance and identify opportunities for continual improvement. Develops strategies to address under-performance and compliance failures, including the application of contract terms.
Identifies where changes are required, evaluates the impact, and advises stakeholders about the implications and consequences. Negotiates variations and seeks appropriate authorisation.
Actively supports and engages with experts and stakeholders to ensure continual improvements are identified through review and benchmarking processes. Develops and implements change management protocols.

## Level 6

Negotiates and resolves contractual issues, including failure to meet contractual obligations.
Promotes change control processes and leads variation negotiations when necessary. Champions continual improvement programmes, jointly developing strategies and incentives to enhance performance. Undertakes comprehensive financial evaluations.
Ensures due diligence and legal vetting underpin all procurement processes, affirming risk assessment and compliance in contractual engagements. Ensures that lessons learned from reviews are documented and promoted to all stakeholders.
Develops broad industry/category credentials as best practice champion.

## Level 7

Leads the strategic direction and governance of contract management processes across the organisation. Advises executive leadership on contract management risks and strategies.
Implements contract management strategies aligned with organisational goals and market dynamics, including oversight of significant contracts and associated legal risks. Acts as the escalation point for major disputes, aligning with strategic objectives.
Promotes best practices and operational excellence in contract management, driving supply chain contracting improvements.
Establishes strategic partnerships, aligning organisational and supplier goals. Represents the organisation in key negotiations, ensuring strategic, compliant outcomes.

# Stakeholder relationship management RLMT

Influencing stakeholder attitudes, decisions, and actions for mutual benefit.

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| **Guidance Notes:**Activities may include, but are not limited to:* identifying stakeholders and analysing the relationships
* agreeing on mutually beneficial outcomes
* managing, monitoring and improving stakeholder relationships
* determining the relationship management approach to take - including roles and responsibilities, governance, policies, processes, tools and support mechanisms
* getting commitment to action through consultation and consideration of impacts
* combining formal and informal communication channels to achieve the desired result
* operational management of stakeholder relationships and communications.

The focus of this skill is a systematic and planned approach. This skill is not intended for general communication and developing productive working relationships. Those factors are described in SFIA's generic attributes and levels of responsibility. |

## Level 4

Deals with problems and issues, managing resolutions, corrective actions, lessons learned, and the collection and dissemination of relevant information.
Implements stakeholder engagement/communications plan. Collects and uses feedback from customers and stakeholders to help measure the effectiveness of stakeholder management.
Helps develop and enhance customer and stakeholder relationships.

## Level 5

Identifies the communications and relationship needs of stakeholder groups. Translates communications/stakeholder engagement strategies into specific activities and deliverables.
Facilitates open communication and discussion between stakeholders.
Acts as a single point of contact by developing, maintaining and working to stakeholder engagement strategies and plans. Provides informed feedback to assess and promote understanding.
Facilitates business decision-making processes. Captures and disseminates technical and business information.

## Level 6

Leads the development of comprehensive stakeholder management strategies and plans.
Builds long-term, strategic relationships with senior stakeholders (internal and external). Facilitates the engagement of stakeholders in support of the delivery of services and change projects. Acts as a single point of contact for senior stakeholders, facilitating relationships between them.
Negotiates to ensure that stakeholders understand and agree on what will meet their needs, and that appropriate agreements are defined.
Oversees monitoring of relationships including lessons learned and appropriate feedback. Leads actions to improve relations and open communications with and between stakeholders.

## Level 7

Determines the strategic approach to understanding stakeholder objectives and requirements.
Works with all interested parties to identify stakeholders and establish effective relationships. Establishes and promotes the overall vision for how stakeholder objectives are met and determines organisational roles and alignment.
Actively manages relationships with the most senior stakeholders, and is the ultimate escalation point for issue resolution.

# Customer service support CSMG

Managing and operating customer service or service desk functions.

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| **Guidance Notes:**Customer service support can be managed and delivered through various channels including, but not limited to, teams of people in a single location, virtual teams of people in many locations, automated technology and service bots.Activities may include, but are not limited to:* managing customer service functions and teams
* acting as a point of contact for users and customers
* responding to reported issues
* handling requests for information
* handling requests for access to applications, systems, services
* responding to service requests.
 |

## Level 1

Receives and handles requests for service, following agreed procedures.
Promptly allocates calls as appropriate.
Logs incidents and service requests and maintains relevant records.

## Level 2

Responds to common requests for service by providing information to enable fulfilment.
Promptly allocates unresolved calls as appropriate.
Maintains records, informs users about the process and advises relevant persons of actions taken.

## Level 3

Acts as the routine contact point, receiving and handling requests for support.
Responds to a broad range of service requests for support by providing information to fulfil requests or enable resolution.
Provides first line investigation and diagnosis and promptly allocates unresolved issues as appropriate.
Assists with the development of standards, and applies these to track, monitor, report, resolve or escalate issues. Contributes to creation of support documentation.

## Level 4

Monitors service delivery channels and collects performance data.
Assists with the specification, development, research and evaluation of service standards.
Applies these standards to resolve or escalate issues and gives technical briefings to staff members.

## Level 5

Responsible for day-to-day management, resource planning and work allocation to meet agreed service levels.
Specifies, agrees and applies standards. Ensures that service delivery is tracked and monitored, metrics and reports are analysed, and issues are resolved.
Drafts and maintains policy, standards and procedures for the customer service or service desk functions.
Ensures that the catalogue of services that can be requested and that are supported is complete and up-to-date.

## Level 6

Influences the strategic direction and takes responsibility for the full range of customer service functions.
Defines service channels, service levels, standards and the monitoring process for customer service or service desk staff. Champions the service culture required to deliver organisational outcomes.
Leads the development and implementation of organisational frameworks for complaints, service standards and operational agreements.
Takes responsibility for business continuity and legal, regulatory and contractual compliance.

# Business administration ADMN

Managing and performing administrative services and tasks to enable individuals, teams and organisations to succeed in their objectives.

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| **Guidance Notes:**Business administration tasks may include, but are not limited to, communication management, information organisation, scheduling, and coordination with internal and external stakeholders using various digital tools and platforms.Management-level business administration tasks focus on planning, managing and coordinating the activities of individuals and teams to enable them to achieve their objectives efficiently and effectively. |

## Level 1

Performs routine administrative tasks in a structured environment.
Follows clear procedures and uses standard digital tools.
Organises and maintains information following agreed procedures.
Assists with basic coordination activities.

## Level 2

Assists with administrative tasks for a team.
Maintains systems for organising information and documents.
Coordinates team activities and acts as a point of contact for internal and external contacts.
Uses relevant digital tools and platforms.

## Level 3

Provides administrative support function to teams and meetings.
Takes an active part in team discussions.
Sets up and maintains systems for organising information and documents. Compiles and distributes reports.
Provides guidance on administrative software, procedures, processes, tools and techniques.

## Level 4

Assists the teams and managers in ensuring they have the information and resources needed to support ongoing processes.
Assists in planning for meetings. Liaises and organises across functions.
Sets up and provides detailed guidance on software, procedures, processes, tools and techniques for administration and workplace productivity.
Contributes to the development and maintenance of organisational policies, procedures, and documentation.

## Level 5

Manages the delivery of business administration services.
Manages and prioritises the schedules and communication of senior managers and leadership teams to ensure efficient use of time and resources.
Handles sensitive, confidential information.
Ensures managers have the information and resources needed to support ongoing processes and changes in processes.

## Level 6

Leads and coordinates strategic initiatives working across departmental or functional boundaries.
Designs, plans and coordinates high-level meetings and events, ensuring alignment with strategic objectives and desired outcomes.
Provides direction and receives progress updates from members of an executive team. Meets collectively or individually with members of a leadership management team to follow up on action points, issues and risks. Reports on progress and resolves issues.
Manages highly sensitive and confidential issues and information.

# Marketing management MKTG

Developing, implementing, and managing marketing strategies and plans to achieve organisational objectives and optimise marketing effectiveness.

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| **Guidance Notes:**Activities may include, but are not limited to:* defining marketing strategy and goals
* creating comprehensive marketing plans
* managing marketing budgets
* aligning marketing activities with business objectives
* measuring and analysing marketing effectiveness
* supporting business development and growth initiatives
* evaluating and optimising marketing activities
* collaborating with stakeholders to inform and execute strategies.
 |

## Level 5

Manages the development and execution of comprehensive marketing plans within specified budgets.
Aligns marketing plans with business objectives and coordinates with other teams.
Finds innovative solutions to marketing problems. Uses experience and data to make recommendations to senior management.
Reviews and reports on the effectiveness of marketing approaches and services and their impact on business outcomes.

## Level 6

Defines and oversees plans to execute the overall marketing strategy to achieve organisational goals.
Ensures the alignment of marketing plans with business objectives and market insights. Evaluates key factors for the successful execution and measurement of marketing strategies.
Identifies and addresses current and future marketing capability needs.
Collaborates with senior leadership to integrate marketing strategies with organisational vision.

## Level 7

Leads the creation of long-term marketing strategies aligned with organisational vision and objectives.
Directs the marketing function, ensuring the integration of marketing plans with business goals. Oversees the evaluation and optimisation of marketing activities, ensuring maximum impact and efficiency.
Provides strategic advice to senior leadership on marketing trends and opportunities.
Promotes a culture of continuous improvement within the marketing team. Ensures the marketing function adapts to changing market conditions and business needs.

# Selling SALE

Finding prospective customers and working with them to identify needs, influence purchase decisions and enhance future business opportunities.

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| **Guidance Notes:**Activities may include, but are not limited to:* identifying and qualifying sales prospects
* prospecting and outreach to potential customers using appropriate channels
* developing customer interest, building rapport and trust
* asking questions about goals and challenges and finding a solution
* preparing, executing and monitoring the sale of products or services into an external or internal market
* bid management, value analysis, negotiation, sales presentations, closing the sale, preparation of contracts.
 |

## Level 3

Identifies new leads and prospects and communicates them to the sales manager.
Responds to assigned sales leads.
Applies agreed standards and tools to perform simple sales tasks or support complex sales processes.
Monitors and reports on assigned sales quota, performance, customer satisfaction, market intelligence and competitors.

## Level 4

Identifies and qualifies new sales leads and prospects with a view to developing a pipeline of potential opportunities.
Manages existing sales leads.
Collects and uses information in order to achieve sales objectives.
Understands customers and their needs, and develops and enhances customer relationships before, during and after the conclusion of agreements/contracts.

## Level 5

Designs and implements sales strategies and works with senior management to implement sales plans.
Develops and maintains effective customer relationships at executive levels and qualifies new sales leads.
Leads the bid process within the organisation. Agrees and signs contracts. Maintains customer contact during and after the selling process to pre-empt any issues and identify further opportunities.
Plans, monitors and controls the work of sales teams. Contributes to the development and training of sales teams and product/service development.

## Level 6

Oversees the organisation's sales activities to ensure they are aligned with business objectives.
Approves sales proposals and targets. Develops and implements organisational sales policy and strategy, and contributes significantly to the development of marketing strategy.
Negotiates with customer representatives at the most senior level on both technical and contractual issues. Agrees and signs contracts.
Collaborates on the evolution of services, products systems, and standard contracts to support alignment with future customer needs.

# Sales support SSUP

Providing advice and support to the sales force, customers and sales partners.

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| **Guidance Notes:**Sales support can be delivered to a range of roles, such as but not limited to, the sales force, sales agents, reseller/distributor staff and existing or prospective customers.This skill includes the provision of technical advice and assistance either in support of customer development or sales activity or in fulfilment of sales obligations. |

## Level 1

Communicates effectively with customers to provide basic information about products and services.
Seeks assistance from colleagues for the resolution of more complex customer service queries and complaints.
Uses databases to retrieve and enter data.

## Level 2

Communicates effectively with customers by telephone and in person.
Assists in providing customer service, including technical advice and guidance on the successful use of products and services.
Assists in devising solutions to customer requirements and solves straightforward problems.

## Level 3

Helps customers to clarify their requirements and documents the conclusions reached.
Contributes to preparing and supporting bids and sales proposals.
Provides customer service, including technical advice and guidance on the successful use of complex products and services.

## Level 4

Works closely with the sales team to help prospects to clarify their needs and requirements.
Devises solutions and assesses their feasibility and practicality.
Demonstrates technical feasibility using physical or simulation models. Resolves technical problems.
Produces estimates of cost and risk and initial project plans to inform sales proposals.

## Level 5

Works closely with the sales team to ensure that customers are assisted and advised appropriately.
Ensures that reliable cost, effort and risk estimates and project plans are produced.
Manages all sales support activities, taking full responsibility for the technical content of bids and sales proposals.
Establishes metrics to provide data on performance and support continual improvement of sales support activities.

## Level 6

Leads the organisation's customer service activities to ensure that they are aligned with corporate objectives and policy.
Approves proposals and initiates the implementation of development activity in customer services and systems.

# Job analysis and design [prototype] JADN

Planning, analysing, and designing job roles and structures to align with organisational goals and culture.

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| **Guidance Notes:**Activities may include, but are not limited to:* collating information and insights for current and future requirements e.g. surveys, interviews, workforce analytics, existing job descriptions and related documents
* conducting task analysis to break down jobs into component roles and responsibilities, skills and competencies
* analysing workflow processes to design jobs that maximize efficiency and job satisfaction
* creating or revising job architectures, job descriptions and specifications based on analysis
* designing or redesigning jobs to integrate new technologies, processes, or operational needs - including use of artificial intelligence
* creation of career pathways to enable the retention of staff as they progress through their professional development

The scope of job analysis and design can range from single roles to multi-layered organisational structures, and may also involve considerations for technology integration and flexible working arrangements. |

## Level 3

Collates data regarding job roles.
Contributes to task and competency mapping using skills-based frameworks.
Supports the development of preliminary job descriptions and performance metrics.
Works under direction to ensure alignment with broader organisational strategies and work practices.

## Level 4

Conducts detailed job analyses and designs job roles using data-driven insights.
Creates or revises job descriptions, considering key competencies, skills, and organisational culture.
Assesses impact of role changes on workflows, employee engagement and workplace practices.
Provides insights into aligning job roles with evolving organisational needs and technology integration.

## Level 5

Leads job architecture and design initiatives and aligns them with organisational strategies and workplace practices.
Develops comprehensive role definitions, including necessary skills and competencies.
Evaluates the effectiveness of current roles and suggests modifications.
Advises on how job architecture and job design can adapt to changes in organisational strategy, technology, workplace practices, and skills-based approaches.

# Bid/proposal management BIDM

Managing preparation and submission of bids and proposals for contracts, grants, projects, or services.

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| **Guidance Notes:**Activities may include, but are not limited to:* assessing requirements and conditions relevant to the proposal or bid
* leading multidisciplinary team efforts in crafting detailed proposals
* overseeing risk assessment and adherence to relevant guidelines or standards
* managing stakeholder engagement and communication throughout the proposal lifecycle
* advocating for effective practices and innovative approaches in proposal development
* managing bid and proposal teams and resources
* developing and implementing bid and proposal strategies and plans
* analysing customer requirements and competitive positioning
* ensuring compliance with customer specifications and organisational policies
* producing high-quality, persuasive and customer-focused bid and proposal documents
* coordinating and facilitating bid and proposal reviews and approvals
* managing bid and proposal risks and issues
* negotiating and closing deals with customers and stakeholders.

This skill is applicable in diverse contexts, such as commercial organisations bidding for contracts and public sector entities seeking funding. In commercial settings, it emphasizes competitive positioning and market strategies. In the public sector, it focuses on aligning with policy objectives and demonstrating public value. The core activities are consistent across different environments. |

## Level 3

Supports the development of proposals by engaging in document analysis and internal review.
Understands and analyses bid documents and requirements, preparing initial response drafts that align with the organisation's capabilities and stakeholder needs.
Communicates with internal stakeholders to gather necessary information and clarify proposal requirements.
Ensures proposal responses meet basic compliance standards and align with the specified requirements and organisational capabilities.

## Level 4

Leads the creation of small to medium proposals, integrating technical analysis and broader context.
Coordinates team efforts, shapes the proposal structure, and addresses financial aspects including budgeting and pricing strategies.
Identifies and manages proposal risks, ensuring timely compliance with stakeholder expectations.
Engages with stakeholders and shapes proposal structure and content based on in-depth discussions and feedback.

## Level 5

Leads the formulation and execution of significant proposals, managing the process from initial evaluation to final submission.
Oversees significant proposals, aligning them with organisational strategies and managing the process from inception to submission.
Collaborates with high-level stakeholders, negotiates with key stakeholders, and secures advantageous partnerships.
Refines and optimises the proposal development process for efficiency and effectiveness.

## Level 6

Directs major proposal initiatives, devising engagement strategies and promoting excellence in proposal practices throughout the organisation.
Influences organisational policies and strategies in proposal management, setting standards and expectations.

# Identity and access management IAMT

Manages identity verification and access permissions within organizational systems and environments.

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| **Guidance Notes:**Activities may include, but are not limited to:* implementing management (IAM) frameworks in line with organizational goals and compliance with regulations like GDPR, HIPAA, or SOX
* streamlining user authentication with single sign-on solutions and enhancing security with multi-factor authentication
* managing user access rights from onboarding to offboarding, including integration with cloud services, enterprise applications, and directory services like LDAP or Active Directory
* using role-based and attribute-based access controls to manage user privileges and access, aligning with organizational roles and attributes
* implementing privileged access management tools for secure monitoring and control of critical asset access
* handling incident responses related to access issues, like unauthorized access or identity theft, and regularly auditing access to maintain security and compliance
* conducting identity governance and administration to enforce policies, managing digital identities including user accounts, groups, and roles.
 |

## Level 1

Performs basic IAM tasks, including user account lifecycle management, under supervision.
Maintains accurate records and follows established IAM protocols.

## Level 2

Provides assistance for IAM operations, including automated role allocation and access control management.
Engages in user identity lifecycle management, including account creation and deletion.
Facilitates operation of IAM tools and self-service portals.

## Level 3

Administers standard IAM services, implementing policies and resolving related issues. Manages monitoring, audits, and logging for IAM systems.
Assists users in defining their access rights and privileges. Designs and implements simple IAM solutions, enhancing user access security.
Investigates minor security breaches in accordance with established procedures related to IAM.
Contributes to the enhancement and optimization of existing IAM processes and systems.

## Level 4

Designs and implements complex advanced IAM solutions, focusing on automated access control and role allocation.
Oversees the integration of IAM services with new technologies.
Provides specialised support for complex IAM operations and support implementation of policies and standards.
Collaborates with stakeholders to align IAM with business objectives and emerging security trends.

## Level 5

Offers authoritative advice on IAM, ensuring services align with and support evolving business needs and security protocols.
Manages large-scale IAM initiatives and oversees the integration of IAM services with new technologies, enhancing security and operational efficiency.
Leads operational planning for IAM, anticipating future trends and preparing the organization for scalable growth.
Ensures IAM systems' compliance and oversees advanced monitoring and audit processes.

## Level 6

Shapes and defines organisation-wide IAM policies, ensuring alignment with business strategies and security requirements.
Champions IAM best practices, advocating for robust and innovative IAM solutions across the organization.
Influences and guides organizational IAM governance, integrating emerging technologies and regulatory compliance into IAM strategies.
Reviews and advises on IAM aspects and implications of new business initiatives.

# Records management RMGT

Planning, implementing and managing the full life cycle of organisational records.

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| **Guidance Notes:**Specific laws and regulations may require organisations to maintain records of certain activities and transactions. Records are typically subject to specific life cycle management activities that include retention, disposal requirements and potentially other controls.Records are held in many forms including, but not limited to, digital documents, printed material, microform, e-mail, chats, and may be generated by internal or external sources.Activities may include, but are not limited to:* identifying, classifying, valuing, processing, storing, archiving, destroying information and records
* capturing and maintaining evidence of and information about business activities and transactions in the form of records
* implementing systems of cataloguing, metadata, indexing, and classification standards and methods used to identify and organise records
* ensuring compliance with legal obligations
* management of records management systems
* conducting searches for records to comply with internal or external requests
 |

## Level 1

Follows detailed guidance to acknowledge receipt of records, including the capture of essential metadata.
Delivers digital and physical records in line with agreed procedures.

## Level 2

Assists in the collection, delivery, and retention of records.
Identifies and applies correct metadata.
Uses established methods to transform records between formats or media, following organisational policies and procedures. Remains aware of potential issues when handling information.
Performs administrative tasks to ensure accessibility, retrievability, security, and protection of records.

## Level 3

Maintains key metadata for records, including ownership and category information.
Configures routine controls to ensure only approved actions are performed on records.
Conducts routine searches for records needed to support authorised requests. Supports users in finding and accessing records.
Uses ethical and reliable methods to transform data between formats or media, following organisational policies and being aware of potential issues when handling information.

## Level 4

Supports the implementation of records management policies and practices including the approved disposal of records.
Conducts complex or sensitive searches for records to address authorise requests.
Monitors and reports on the implementation of effective controls for records management including metadata and access controls.
Recommends remediation actions as required.
Provides advice and guidance to enable good records management practices to be adopted across the organisation.

## Level 5

Ensures implementation of records management policies covering all aspects of retention and disposal.
Authorises access to records and searches for records.
Approves the release of potentially sensitive records, seeking legal guidance where needed.
Reviews new change proposals and provides specialist advice on records management.
Assesses and manages records-related risks.
Contributes to the development of policy, standards and procedures for compliance with records-related legislation.

# Accessibility and inclusion [prototype] ACIN

Driving accessibility and inclusion in services and products.

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| **Guidance Notes:**Activities may include, but are not limited to:* providing expert advice and guidance on accessibility and inclusion
* defining policies, standards, and guidelines for accessible design, development, user research, auditing, and testing
* conducting accessibility impact assessments and audits to identify potential barriers and areas for improvement
* keeping up-to-date with the latest industry trends, regulatory developments, and best practices related to accessibility
* collaborating with subject matter experts in areas such as usability, user experience, content design, assistive technology, and disability rights
* advising teams on budgeting appropriately for accessibility activities throughout the service or product development lifecycle
* promoting a culture of shared responsibility for accessibility by embedding it into the roles and responsibilities of others, such, as designers, developers, researchers, and managers.
 |

## Level 2

Assists with basic accessibility testing and gathering information for accessibility reviews.
Supports team members in executing predefined accessibility tests.
Documents test results and contributes to accessibility audit reports.

## Level 3

Analyses accessibility requirements and technical information.
Designs and executes accessibility tests under direction. Reports findings in a structured way and makes initial recommendations for compliance.
Supports accessibility reviews and audits.
Escalates complex issues to senior colleagues.

## Level 4

Engages with stakeholders to explain accessibility factors. Influences designs to improve accessibility.
Provides detailed accessibility analysis to inform decisions throughout the product or service lifecycle.
Plans and manages accessibility testing to meet agreed standards.
Evaluates compliance with accessibility regulations. Assesses risks based on test outcomes.

## Level 5

Leads accessibility governance and assurance activities.
Interprets complex systems to identify opportunities for improved accessibility. Provides expert advice to drive accessibility compliance across products, services, and projects.
Defines organisational accessibility testing approaches, aligned with regulations and standards.
Promotes awareness of accessibility and inclusion principles.

## Level 6

Sets the organisation's strategic direction for accessibility and inclusion in products and services.
Defines and oversees governance processes to ensure compliance. Leads the development of accessibility policies, standards, and guidelines.
Engages with industry bodies and experts to drive best practices.
Drives a culture of proactive accessibility consideration in design and development. Ensures adequate resources and skills for accessibility assurance.

# Delivery management [prototype] DEMG

Ensuring successful delivery of new or updated products and services through effective leadership and collaboration within defined delivery cycles.

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| **Guidance Notes:**Activities may include, but are not limited to:* selecting and tailoring delivery approaches and guiding teams in their use
* establishing and managing collaborative delivery teams
* maintaining delivery momentum through effective processes
* conducting reviews and facilitating continuous improvement
* communicating with technical and non-technical stakeholders
* using visual techniques for tracking and reporting progress
* managing and prioritising work items
* planning deliveries, coordinating with stakeholders to align deliverables and milestones
* applying change control and risk management processes
* ensuring delivery teams have the resources and skills they need and empowering them to deliver
* monitoring and managing quality and performance
* ensuring closure and transition of delivered products/services.
 |

## Level 3

Contributes to delivery management tasks as part of a team.
Takes responsibility for specific delivery tasks, ensuring completion within deadlines. Participates in activities and processes to support the delivery of work items.
Communicates progress, issues, and risks to the delivery manager, offering potential solutions.
Collaborates with team members to ensure the quality and timeliness of deliverables. Assists in planning and prioritisation of work items and incremental deliveries.

## Level 4

Manages the delivery of products or services for small to medium-sized initiatives.
Applies appropriate delivery methodologies and tools. Establishes and leads delivery teams, creating a collaborative and productive working environment.
Prioritises and manages work items, facilitates iteration planning, and ensures incremental delivery of value. Communicates delivery progress, risks, and issues to stakeholders.
Ensures the quality of deliverables. Conducts reviews and drives continuous improvement of delivery processes.

## Level 5

Leads the delivery of products or services for large or complex initiatives.
Adapts delivery approaches based on the context and complexity of the initiative. Provides leadership and guidance to multiple delivery teams. Collaborates with stakeholders to align delivery objectives with business goals. Proactively manages risks, dependencies, and changes that impact delivery.
Ensures the optimal allocation of resources and skills across delivery teams. Monitors and reports on key delivery metrics, ensuring transparency and visibility.
Drives the continuous improvement of delivery processes and practices across the organisation.

## Level 6

Defines and oversees the delivery strategy for multiple products or services.
Aligns delivery strategy with organisational goals and customer needs. Ensures effective allocation of resources and budget.
Monitors and reports on performance of products and service delivery, ensuring alignment with objectives. Identifies and mitigates systemic risks and issues.
Sets the direction and standards for delivery management across the organisation. Leads the development of a culture focused on continuous improvement and customer-centricity.

# Budgeting and forecasting [prototype] BUDF

Developing and managing financial budgets and forecasts to enable effective decision-making and resource allocation.

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| **Guidance Notes:**Activities may include, but are not limited, to:* gathering and analysing financial data to prepare budgets and forecasts
* selecting and applying appropriate budgeting and forecasting methodologies and tools
* incorporating scenario planning, sensitivity analysis, and risk assessment into the budgeting and forecasting process
* presenting budget and forecast information to stakeholders and facilitating data-driven decision-making
* developing and implementing budgeting and forecasting strategies, policies, and processes aligned with organisational objectives
* driving the adoption of best practices
* providing strategic insights and recommendations based on budget and forecast analysis
* ensuring compliance with accounting standards, governance, legal, and regulatory requirements
* applying budgeting and forecasting to cloud-computing/FinOps contexts, such as consumption-based pricing, rapid scalability, and the need for real-time cost visibility and optimisation.
 |

## Level 2

Assists in gathering financial data and preparing basic budget templates under supervision.
Supports the budgeting and forecasting process by completing assigned tasks.

## Level 3

Performs varied tasks in the budgeting and forecasting process, including data analysis and report preparation, using standard methods.
Identifies and resolves routine budgeting and forecasting issues.
Communicates budget and forecast information to relevant stakeholders.

## Level 4

Contributes to the development of budgets and forecasts for specific areas of responsibility.
Gathers and analyses financial data and prepares budget templates and reports.
Supports stakeholder communication and collaboration in the budgeting and forecasting process.

## Level 5

Leads the development of budgets and forecasts for a department or function.
Selects and applies appropriate budgeting and forecasting methodologies and tools.
Incorporates scenario planning, sensitivity analysis, and risk assessment into the budgeting and forecasting process.
Provides expert advice and guidance on budgeting and forecasting best practices.
Collaborates with stakeholders to align budgets and forecasts with organisational objectives and business metrics.

## Level 6

Develops and implements budgeting and forecasting strategies, policies, and processes aligned with overall organisational objectives and business metrics.
Drives the adoption of best practices across the organisation.
Oversees the development of complex financial models and scenario analyses to support strategic decision-making. Provides insights and recommendations to optimise investments and resource allocation.
Collaborates with senior leaders to ensure budgets and forecasts support long-term organisational goals and drive value creation. Sets the vision and direction for budgeting and forecasting practices.

# Cost management [prototype] COMG

Planning, controlling and analysing costs to enable the effective use of financial resources.

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| **Guidance Notes:**Activities may include, but are not limited, to:* developing and implementing cost management strategies, policies, and procedures
* analysing costs, identifying trends, and recommending corrective actions
* conducting cost-benefit analyses and supporting stakeholder collaboration in the cost management process
* overseeing the development of complex cost models and reporting frameworks
* presenting cost management insights to stakeholders and facilitating data-driven decision-making
* promoting a culture of cost awareness and ongoing improvement throughout the organisation
* implementing cost management processes and tools to support cloud-computing/FinOps in areas as consumption-based pricing, rapid scalability, and the need for real-time cost visibility and optimisation.
 |

## Level 2

Assists in gathering cost data and preparing basic cost reports under supervision.
Supports the cost management process by completing assigned tasks and seeking guidance when needed.

## Level 3

Applies standard cost management techniques and processes to monitor and report on costs within a specific area of responsibility.
Identifies and escalates cost variances and supports the implementation of cost-saving initiatives. Collaborates with stakeholders to gather cost data and provide reports.

## Level 4

Develops and implements cost management processes and procedures for a department or function.
Monitors actual performance against budget and identifies variances.
Analyses costs, identifies trends, and recommends corrective actions.
Provides guidance and advice on cost management techniques and tools.

## Level 5

Leads the development and implementation of cost management strategies, policies, and procedures for a significant area of the organisation.
Provides expert advice and guidance on cost optimisation techniques and best practices. Oversees the development of complex cost models and reporting frameworks.
Presents cost management insights to senior stakeholders and facilitates data-driven decision-making. Promotes a culture of cost consciousness and continuous improvement.

## Level 6

Defines and leads the organisation's overall approach to cost management, aligning it with strategic objectives and financial goals.
Develops and implements enterprise-wide cost management policies, standards, and processes. Collaborates with senior leaders to identify and drive cost optimisation initiatives.
Provides strategic insights and recommendations to optimise cost performance and drive long-term value creation. Sets the vision and direction for cost management across the organisation.

# Financial analysis [prototype] FIAN

Conducting in-depth analysis of financial data to derive insights and support decision-making.

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| **Guidance Notes:**Activities may include, but are not limited, to:* preparing financial insights, dashboards, and visualisations to support decision-making
* developing and maintaining financial models for scenario planning and sensitivity analysis
* providing expert advice on financial analysis practices and techniques
* presenting findings to stakeholders
* defining the organisation's approach to financial analysis, aligning it with objectives
* implementing financial analysis policies, standards, and processes
* developing a culture of data-driven decision-making and continuous improvement
* providing strategic insights based on comprehensive financial analysis
* evaluating investments, projects, and services using financial analysis techniques
* applying financial analysis to cloud computing, such as consumption-based pricing and cost optimization
 |

## Level 2

Assists in collecting and organising financial data and preparing basic reports under supervision.
Supports the financial analysis process by completing assigned tasks and seeking guidance when needed.

## Level 3

Applies standard financial analysis techniques and processes to perform varied tasks in the financial analysis process, including data analysis and report preparation.
Communicates financial analysis findings to relevant stakeholders.

## Level 4

Performs financial analysis for specific areas, using standard techniques and tools.
Prepares reports and provides insights to support decision-making. Conducts cost-benefit analyses and supports stakeholder collaboration in the cost management process.
Collaborates with stakeholders to understand requirements and deliver relevant analysis.
Supports the development and maintenance of financial models.

## Level 5

Leads financial analysis activities for a department or function, applying advanced techniques and tools. Develops and maintains complex financial models.
Conducts scenario planning and sensitivity analysis to support decision-making. Provides expert advice and guidance on financial analysis best practices.
Presents findings and recommendations to senior stakeholders, linking financial performance to business outcomes. Collaborates with stakeholders to align analysis with organisational objectives.

## Level 6

Defines and leads the organisation's approach to financial analysis, aligning it with strategic objectives and business value creation.
Develops and implements enterprise-wide financial analysis policies, standards, and processes. Drives a culture of data-driven decision-making and continuous improvement in financial management.
Provides strategic insights and recommendations based on comprehensive financial analysis, linking performance to business strategy.

# Data analytics DAAN

Enabling data-driven decision making by extracting, analysing and communicating insights from structured and unstructured data.

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| **Guidance Notes:**Data analytics focuses on delivering actionable insights from data to drive better decision making. Activities may include, but are not limited to:* collecting, processing, and analysing data from various sources
* identifying trends, patterns, and insights using a range of analytical and statistical techniques
* developing and validating predictive models
* communicating findings to stakeholders
* ensuring data quality, integrity, and governance
* collaborating with teams to align analytics initiatives with business objectives
* designing and implementing data analytics solutions and processes
* providing actionable recommendations based on domain expertise
* staying current with emerging trends and techniques in data analytics
* strategic leadership for data analytics and related disciplines such as data science
* contributing to data governance policies, standards, and best practices

Data analytics has diverse applications across industries, including customer segmentation, sales forecasting, fraud detection, supply chain optimisation, predictive maintenance, healthcare analytics, financial risk management, HR analytics, social media analytics, and public sector analytics. |

## Level 2

Assists in data preparation and analysis activities under direction.
Processes and validates data to support analytics.
Generates standard reports and insights using established tools and methods.

## Level 3

Supports data analytics by gathering and preparing data from multiple sources.
Applies analytical and statistical methods and software tools to analyse data and develop reports.
Assists in identifying trends and patterns that inform business decisions.
Collaborates with team members to refine analysis techniques and ensure data quality.

## Level 4

Conducts end-to-end data analysis, defining data requirements and ensuring data integrity.
Applies advanced analytical and statistical techniques to extract meaningful insights and develop predictive models.
Communicates complex findings to stakeholders in an understandable manner.
Contributes to the development of data analytics processes and standards. Identifies opportunities for improving data analytics practices.

## Level 5

Manages data analytics activities, establishing frameworks and methodologies aligned with business objectives and data governance policies.
Translates business needs into analytics requirements and identifies data-driven solutions.
Guides the selection and application of advanced analytical techniques.
Communicates insights and recommendations to senior stakeholders, influencing strategic decisions.
Leads the implementation of data analytics solutions.

## Level 6

Develops organisational strategies and roadmaps for data analytics.
Sets policies, standards, and best practices for the use of data and data analytical techniques. Leads initiatives to build data analytics capabilities and develop a data-driven culture.
Oversees the delivery of analytics projects and programmes. Promotes the ethical use of data and data analytics.

## Level 7

Directs the creation and review of a cross-functional, enterprise-wide approach and culture for generating value from data analytics and data science.
Drives the identification, evaluation and adoption of data analytics and data science capabilities to transform organisational performance. Leads the provision of the organisation’s data analytics and data science capabilities.
Ensures that the strategic application of data analytics and data science is embedded in the governance and leadership of the organisation.
Aligns business strategies, enterprise transformation and data analytics and data science strategies.

# Deployment DEPL

Transitioning software from development to live usage, managing risks and ensuring it works as intended.

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| **Guidance Notes:**Activities may include, but are not limited to:* moving new or changed components to testing, staging, and live environments
* managing deployments using appropriate approaches (e.g., phased, continuous delivery)
* maintaining secure locations for components awaiting deployment
* using deployment tools and techniques to ensure consistent and repeatable deployments, supporting governance, audit and change management
* monitoring and troubleshooting deployment processes
* rolling back deployments in case of issues or failures
* ensuring the availability, performance, and security of deployed components
* collaborating with release management and other teams
* considering supplier-controlled deployments and their impact on the organisation's environment
 |

## Level 2

Assists in deploying software releases and updates under guidance and supervision.
Follows defined deployment processes and procedures and uses deployment tools and techniques.
Monitors deployed applications and reports issues. Assists in rolling back deployments when necessary,

## Level 3

Deploys software releases and updates to production environments.
Uses deployment tools and techniques to ensure consistent deployments. Monitors and troubleshoots deployment processes.
Performs rollbacks of deployments in case of issues or failures.
Collaborates with release management and operations teams.

## Level 4

Plans and executes deployments of complex software releases and updates.
Manages continuous deployment using automation tools and techniques. Develops and maintains deployment processes, procedures, and scripts.
Monitors and optimises deployment processes for efficiency and reliability. Ensures the availability, performance, and security of deployed applications.
Collaborates with cross-functional teams.

## Level 5

Designs and implements deployment approaches, processes and automation tools for the organisation.
Oversees the deployment of critical and large-scale software. Ensures deployment processes align with organisational standards and best practices.
Continuously improves deployment processes and automation capabilities.
Defines monitoring and alert strategies for deployed applications.

## Level 6

Defines organisational deployment strategies, policies, and standards.
Aligns deployment practices with overall operations and service delivery goals.
Ensures the availability of resources and tools for effective deployment.
Drives the adoption of new deployment techniques and technologies. Collaborates with senior stakeholders to ensure deployments meet business strategies and objectives.

# Non-functional testing NFTS

Investigating products, systems and services to assess behaviour and whether this meets specified or unspecified non-functional requirements and characteristics

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| **Guidance Notes:**Non-functional testing assesses the behaviour of technology, system components, configurations, and packages, ensuring they work together to support the system’s operation. It considers various risks, leverages distinct tools, and requires specific contextual knowledge.Activities may include, but are not limited to:* testing qualities like performance, security, backup and recovery, availability, scalability, reliability, and maintainability
* planning, designing, managing, executing, and reporting non-functional tests
* performing static testing and analysis
* managing risks and taking preventative actions
* adopting and adapting testing methods (e.g. waterfall, incremental, agile)
* ensuring compliance with standards, regulations, and data protection laws
* developing and maintaining testware to improve software quality
* promoting test automation, tools, and best practices
* developing scalable and reliable automated tests and frameworks.

Examples of the risks addressed by Non-functional testing:* inability to back up and restore the system during failure
* ineffective monitoring and control by operators
* failure to meet user response time expectations
* system failure under high concurrent usage
* excessive resource consumption impacting other systems or causing unnecessary costs
* non-compliance with technical standards, such as auditability.
 |

## Level 1

Executes given manual non-functional test scripts under supervision.
Uses basic testing tools.
Records results and reports issues.
Develops an understanding of the role of non-functional testing as a tool for design improvement and a validation process.

## Level 2

Designs test cases, creates test scripts and test data, and implements test tools where appropriate to the non-functional requirements or specifications provided.
Defines test conditions for given non-functional requirements.
Executes and records manual and automated non-functional testing in accordance with test plans.
Analyses and reports on test activities, results, issues and risks.

## Level 3

Designs non-functional test cases and test scripts under own direction, mapping back to pre-determined criteria, recording and reporting test outcomes.
Participates in requirement, design and specification reviews, and uses this information to design non-functional test plans and test conditions.
Applies agreed standards to specify and perform manual and tools-based non-functional testing. Undertakes tools-based testing tasks and builds test coverage through existing or new infrastructure.
Analyses and reports on test activities, results, issues and risks.

## Level 4

Selects appropriate non-functional testing approach, including manual and tools-based testing.
Develops and executes non-functional test plans and test cases. Implements scalable and reliable tools-based non-functional tests and frameworks.
Collaborates across parties involved in product, systems or service design and development to enable comprehensive functional test coverage. Identifies improvements in requirements, and related design or specification processes, to increase the effectiveness and efficiency of non-functional testing.
Analyses and reports on test activities, results, issues and risks, including the work of others.

## Level 5

Plans and drives non-functional testing activities across all stages and iterations of product, systems and service development.
Provides authoritative advice and guidance on any aspect of non-functional test planning and execution. Adopts and adapts appropriate testing methods, tools and techniques to solve problems in tools and testing approaches.
Measures and monitors applications of standards for testing. Assesses risks and takes preventative action.
Identifies improvements and contributes to the development of organisational policies, standards, and guidelines for non-functional testing.

## Level 6

Develops organisational policies, standards, and guidelines for non-functional testing.
Plans and leads strategic, large and complex non-functional testing activities. Leads activities to manage risks and opportunities associated with non-functional testing and in coordination with other types of testing.
Adapts or develops organisational non-functional testing capabilities and methods to solve complex business and engineering problems in tools and testing.
Promotes a culture of quality throughout the organisation and drives adoption of and adherence to testing policies and standards, with special focus on non-functional testing.

# AI and data ethics [prototype] AIDE

Implementing and promoting ethical practices in the design, development, deployment, and use of AI and data technologies.

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| **Guidance Notes:**Includes principles such as fairness, accountability, transparency, and privacy. Ethical considerations encompass issues like bias in algorithms, data privacy, the impact of automation on employment, and the societal implications of emerging technologies.Activities may include, but are not limited to:* providing expert advice on ethical policies, procedures, and governance
* designing AI and data systems that embed ethical considerations
* conducting ethical impact assessments to identify risks and ensure responsible use of technology
* responding to ethical dilemmas and incidents
* keeping up to date with ethical standards, regulations, and best practices
* creating ethical risk models and frameworks
* collaborating with experts in fields such as legal, public relations, data science and AI
* promoting a culture of ethical awareness and responsibility within the organisation
 |

## Level 3

Supports ethical reviews and conducts basic impact assessments under direction.
Gathers and analyses information for assessments. Reports on ethical issues and compliance with guidance from others. Documents findings from audits and reviews.
Assists with documentation and communication of ethical policies.
Supports others in responding to incidents.

## Level 4

Engages stakeholders to communicate ethical considerations and influence design decisions.
Conducts detailed impact assessments and makes recommendations. Manages ethical reviews to ensure compliance with standards.
Evaluates risks and proposes measures to address ethical concerns. Leads discussions with stakeholders on ethical issues.
Designs and executes ethical impact assessments. Prepares reports based on audit findings.

## Level 5

Provides expert advice to integrate ethics into AI and data projects and programmes.
Oversees governance and assurance activities. Reviews and approves impact assessments and audits.
Promotes awareness of ethical principles and their application across the organisation.
Contributes to the development of policy, standards and guidelines related to AI and date ethics.

## Level 6

Sets direction for ethics in AI and data initiatives. Defines governance processes to ensure compliance with ethical standards.
Engages with industry bodies and experts to drive best practices.
Develops and implements strategic ethical frameworks. Leads high-level reviews and decision-making processes.
Allocates resources to support the organisation’s commitment to ethical practices. Ensures the organisation has resources and skills for ethical assurance.

# Market research MRCH

Gathering, analysing, and interpreting data about markets, customers, and competitors to inform business decisions and strategies.

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| **Guidance Notes:**Market research involves collecting and analysing data from various sources to understand market trends, customer needs and preferences, and competitive landscapes. This skill applies to both qualitative and quantitative research methods.Activities may include, but are not limited to:* designing and conducting market research studies using surveys, focus groups, interviews, and other methods
* analysing market data to identify trends, opportunities, and challenges
* segmenting markets and identifying target customers based on research findings
* monitoring competitor activities and analysing their strategies and performance
* communicating research findings and recommendations to stakeholders to inform decision-making and strategy development
 |

## Level 3

Assists in the design and execution of market research studies.
Collects and analyses data using standard methods and tools.
Contributes to the preparation of research reports and presentations.

## Level 4

Designs and conducts market research studies independently.
Analyses market data to identify trends, opportunities, and challenges.
Segments markets and identifies target customers based on research findings.
Prepares research reports and presentations to communicate findings and recommendations.

## Level 5

Leads the design and execution of complex market research studies.
Analyses and synthesises market data from multiple sources to generate insights and recommendations.
Advises stakeholders on the implications of research findings for business strategy and decision-making.
Contributes to the development of organisational market research methods and standards.

## Level 6

Sets the overall direction and strategy for market research in the organisation.
Develops organisational policies, standards, and guidelines for market research.
Ensures that market research capabilities and resources are aligned with business needs and objectives.
Collaborates with internal and external partners to drive the effective use of market research in decision-making and strategy development.

# Marketing campaign management MKCM

Executing, monitoring, and optimising marketing campaigns across various channels to engage target audiences and achieve desired outcomes.

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| **Guidance Notes:**Activities may include, but are not limited to:* implementing and monitoring multi-channel marketing campaigns
* selecting appropriate tools and channels to reach target audiences
* developing and distributing marketing content and materials
* organising and participating in marketing events and initiatives
* analysing campaign performance and optimising for better results
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## Level 3

Assists in the execution of marketing campaigns.
Uses selected tools and channels to engage target audiences.
Monitors campaign performance and collects data for analysis.
Participates in marketing events and initiatives.

## Level 4

Plans and executes marketing campaigns across multiple channels.
Selects appropriate tools and platforms to reach desired audiences.
Creates and distributes engaging marketing content and materials.
Analyses campaign performance and makes recommendations for optimisation.

## Level 5

Manages and oversees the execution of complex, multi-channel marketing campaigns.
Develops campaign strategies and selects optimal channels and tools.
Monitors campaign performance and adjusts tactics as needed.
Analyses campaign results and reports on key metrics and outcomes.

# Brand management BRMG

Developing and managing a brand strategy to establish, enhance, and sustain brand identity, positioning, and value aligned with organisational goals.

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| **Guidance Notes:**Activities may include, but are not limited to:* conducting brand research and analysis to inform brand strategy development
* defining brand positioning, values, personality, and value proposition
* creating and managing brand identity elements, such as logos, colour palettes, and typography
* developing brand guidelines and ensuring consistent application across all touchpoints
* managing brand portfolios, architecture, and extensions
* monitoring and analysing brand performance metrics and consumer perceptions
* collaborating with internal stakeholders to align brand strategy with overall business objectives
* partnering with external agencies and vendors to execute brand initiatives and campaigns
* continuously refining and adapting brand strategy based on market trends and insights.
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## Level 4

Contributes to the development and implementation of brand identity elements and guidelines. Assists in conducting brand research and analysis. Ensures consistent application of brand standards across assigned projects. Monitors brand performance metrics and reports on key findings.

## Level 5

Leads the development and execution of brand strategies and plans. Defines brand positioning, values, and value proposition. Manages brand identity, portfolio, and architecture. Conducts in-depth brand performance analysis and provides strategic recommendations. Collaborates with internal and external stakeholders to align brand initiatives with business objectives.

## Level 6

Establishes the overall brand vision, strategy, and governance for the organization. Oversees brand research, analysis, and strategic planning. Evaluates brand performance and equity, making strategic decisions to enhance brand value. Ensures alignment of brand strategy with organisational goals and market dynamics.

# Customer Experience CEXP

Ensuring the delivery of high-quality interactions and experiences that meet customer expectations across all touchpoints and channels.

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| **Guidance Notes:**Activities may include, but are not limited to:* engaging with customers to understand their needs, preferences, and expectations through various research methods
* creating and optimising customer journeys to enhance satisfaction, loyalty, and overall experience
* developing and implementing customer experience strategies that align with business goals and improve customer interactions
* continuously monitoring and measuring customer experiences using appropriate metrics and feedback systems
* leading initiatives to improve customer experience based on data-driven insights and customer feedback
* working with cross-functional teams to ensure a consistent and integrated customer experience across multiple channels and touchpoints
* using technology and tools to support and enhance customer experience efforts
* ensuring that customer experience practices comply with relevant standards, regulations, and policies.
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## Level 2

Engages with customers to understand their basic needs and preferences.
Uses standard techniques to gather feedback.
Assists in the creation of customer journey maps and identifies key touchpoints for improvement.
Follows established procedures to document customer feedback and support the implementation of minor improvements.

## Level 3

Analyses research to gather detailed insights into customer needs and preferences.
Uses appropriate tools and methods for data collection. Participates in the design and optimisation of customer journeys.
Collaborates with team members to implement customer experience improvements.
Documents findings and supports the analysis process.

## Level 4

Leads customer research activities, ensuring a comprehensive understanding of customer needs and expectations.
Designs and refines customer journeys, working with cross-functional teams to enhance touchpoints and interactions.
Develops and implements strategies to improve customer experience.
Monitors metrics and feedback to assess effectiveness and drive continuous improvement.

## Level 5

Plans and oversees customer experience initiatives.
Ensures alignment with business goals and customer expectations.
Establishes frameworks for monitoring and measuring customer experience. Uses data-driven insights to guide improvements.
Works with senior stakeholders to develop and implement customer experience strategies. Drives collaboration across teams to ensure a consistent experience.

## Level 6

Champions customer experience at an organisational level.
Leads strategic initiatives to enhance customer experience. Aligns efforts with business objectives and customer needs.
Monitors industry trends and innovations in customer experience.
Develops policies and standards to guide customer experience practices. Ensures adoption of good practices and continuous improvement within the organisation.

# Customer engagement and loyalty CELO

Developing and executing strategies to attract, engage, and retain customers through targeted communications, experiences, and loyalty initiatives.

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| **Guidance Notes:**Activities may include, but are not limited to:* developing customer engagement and loyalty strategies
* creating and managing customer loyalty programs and initiatives
* analysing customer data to inform personalised communications and experiences
* measuring and reporting on customer engagement and loyalty metrics
* collaborating with cross-functional teams to improve customer retention and satisfaction
 |

## Level 3

Assists in the implementation of customer engagement and loyalty initiatives.
Collects and analyses customer data to support personalised communications.
Monitors and reports on customer engagement metrics.

## Level 4

Develops and executes customer engagement and loyalty strategies.
Creates and manages loyalty programs and initiatives. Analyses customer data to inform targeted communications and experiences.
Measures and reports on the effectiveness of engagement and loyalty efforts.

## Level 5

Leads the development and implementation of comprehensive customer engagement and loyalty strategies.
Oversees the creation and management of loyalty programs and initiatives.
Leverages advanced analytics to optimise personalised customer experiences. Provides strategic recommendations based on customer engagement and loyalty insights.
Collaborates with cross-functional teams to improve customer retention and satisfaction.

# Analytical classification and coding ANCC

Interpreting information and assigning classifications or labels based on domain-specific knowledge, standards, and guidelines to enable data analysis and use.

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| **Guidance Notes:**This skill is applied in contexts where consistent categorisation of information is required to enable the data to be used reliably and effectively. This may include, but is not limited to, clinical coding, data labelling for machine learning, legal coding/indexing, and market research coding.Activities may include, but are not limited to:* analysing and interpreting information based on domain-specific knowledge
* assigning codes, labels, or categories based on specific standards, guidelines, or frameworks
* ensuring accuracy and consistency of coding/labelling through quality assurance activities
* collaborating with subject matter experts to clarify ambiguous cases and improve coding/labelling guidelines
* providing guidance and training to others on coding/labelling practices
* contributing to the development and improvement of coding/labelling systems, guidelines, and processes.
 |

## Level 2

Accurately assigns classifications/labels to low complexity information under supervision.
Understands and applies relevant classification/labelling systems, standards, and guidelines.
Participates in quality assurance activities such as peer review or supervisor checks.

## Level 3

Independently assigns accurate classifications/labels to a broad range of information.
Interprets complex information and chooses appropriate classifications/labels.
Participates in team quality improvement initiatives.
Provides advice and guidance on classification/labelling to others.

## Level 4

Assigns classifications/labels to highly complex information.
Performs quality assurance checks on the work of others. Investigates and corrects complex classification/labelling errors.
Delivers training to team members.
Contributes to the development of classification/labelling processes and guidelines.

## Level 5

Leads team quality assurance and training for information classification/labelling.
Develops and implements audit methodologies.
Collaborates with subject matter experts to improve source information quality. Analyses and reports on classification/labelling quality.
Contributes to organisational information classification/labelling strategy.

## Level 6

Sets organisational information classification/labelling standards, policies, and procedures.
Designs and oversees quality audit programmes.
Leads strategic interventions to improve information classification/labelling.
Engages with industry bodies and collaborations to define and improve standards and working practices.

# Organisational change enablement [prototype] OCEN

Facilitates cultural and behavioural change by enabling individuals and teams to embed new ways of working and adapt to changes.

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| **Guidance Notes:**Activities may include, but are not limited to:* facilitating engagement sessions with leaders and managers to secure commitment to change initiatives
* defining and delivering comprehensive communication plans to keep stakeholders informed and engaged
* supporting individuals and teams in adopting and adapting to changes
* providing resources and support to help employees plan for and develop the necessary skills, knowledge, and behaviours for change
* implementing organisational change management practices to support iterative/agile working
* addressing and resolving issues during the implementation of change initiatives to ensure minimal disruption
* creating and managing networks of change agents to support and drive change
* advising leaders on monitoring and supporting behavioural change and addressing challenges
* establishing feedback processes to analyse the impact and effectiveness of change initiatives.
 |

## Level 4

Supports teams in adopting new ways of working and provides ongoing resources.
Encourages a safe environment for exploring challenges in adopting new practices. Guides teams to adapt new practices within agreed parameters.
Assists with facilitating engagement sessions with leaders and managers to secure commitment to change initiatives.
Addresses issues that arise during implementation, ensuring minimal disruption.

## Level 5

Develops and implements cultural change plans across teams.
Coordinates cross-functional teams to ensure cohesive implementation of change initiatives.
Communicates how change initiatives align with business goals and long-term success. Supports leaders and employees in exploring challenges associated with adopting new ways of working.
Enables employees to plan for and develop the necessary skills, knowledge, and behaviours for change.

## Level 6

Champions the value of new ways of working to address organisational opportunities and threats.
Aligns change initiatives with the business strategy and long-term goals. Influences and engages with senior executives to gain their support for change initiatives.
Guides the development of strategies and roadmaps to drive organisational change. Reviews progress, addresses issues, and makes strategic decisions on change initiatives.
 Ensures long-term sustainability and realisation of change benefits. Provides guidance to change leaders to demonstrate effective behaviours for organisational change.

# Infrastructure design [prototype] IFDN

Designing and planning IT infrastructure systems to meet business requirements, ensuring scalability, reliability, security, and alignment with strategic objectives.

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| **Guidance Notes:**Infrastructure design involves developing architectural frameworks for the technology environment including hardware, software, network components, and cloud services. This skill ensures that infrastructure solutions support current and future business needs. It includes creating design specifications, integrating systems, and aligning designs with organisational goals and standards. Infrastructure design supports the alignment of individual system designs to ensure compatibility, performance, and security across the IT environment.Activities may include, but are not limited to:* developing detailed infrastructure design specifications and diagrams
* ensuring compatibility and integration between different infrastructure components
* designing systems for scalability, performance, and reliability
* incorporating security measures into infrastructure design
* ensuring designs adhere to industry standards and regulatory requirements
* collaborating with stakeholders to align infrastructure design with business objectives
* maintaining comprehensive documentation of the design process and decisions
* integrating cloud services into the infrastructure design.
 |

## Level 2

Assists in developing preliminary infrastructure design specifications under routine supervision.
Uses standard design tools and methodologies to contribute to infrastructure design activities.
Helps draft design documents and diagrams. Documents design-related issues.

## Level 3

Performs varied infrastructure design tasks, including complex and non-routine assignments, using standard methods.
Develops design specifications and diagrams for infrastructure components. Ensures compatibility and integration of hardware, software, network elements, and cloud services.
Collaborates with others to align infrastructure design with organisational objectives and resolve design issues.
Suggests improvements to enhance infrastructure performance and reliability.

## Level 4

Leads the design of complex infrastructure systems to deliver comprehensive design solutions.
Develops detailed architectural frameworks and ensures integration of all infrastructure components, including cloud services.
Provides guidance on best practices and design standards. Reviews and validates design specifications and documentation.
Ensures that designs are scalable, reliable, and secure, aligning with business and technical requirements.

## Level 5

Manages the design of infrastructure from analysis to execution and evaluation.
Accountable for achieving design objectives and ensuring alignment with organisational goals and the effective integration of infrastructure components and systems. Provides authoritative guidance on design practices and methodologies.
Evaluates new technologies and their applicability to the organisation's needs. Develops and enforces design standards and best practices, ensuring consistent and high-quality design outcomes.

## Level 6

Develops and drives adoption of and adherence to organisational policies, standards, guidelines, and methods for infrastructure design.
Makes high-level infrastructure design decisions that solutions that drive business value.
Collaborates with senior stakeholders to align design projects with organisational objectives.
Provides strategic oversight and guidance, ensuring that infrastructure designs are forward-looking, scalable, and secure.
Accountable for the overall success of infrastructure design initiatives.

# Process testing PRTS

Investigating software and systems implementations to validate and verify that they meet business needs.

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| **Guidance Notes:**The scope of Process testing includes technology, system components, configurations, packages and their interfaces which are intended to deliver business value or outcomes. * planning, designing, managing, executing and reporting of process tests
* collaborating on the creation of specific and measurable acceptance criteria for business requirements
* testing of business value related capabilities or features
* static testing and static analysis
* managing risks associated with testing and taking preventative action when needed
* adopting and adapting testing methods including waterfall, incremental or agile approaches
* conforming to agreed process standards, industry-specific regulations and data protection legislation
* engineering, using and maintaining testware to measure and improve the quality of the software being tested
* promoting productivity through test automation, tools and best practices
* developing scalable and reliable automated tests and frameworks.

Examples of the risks addressed by Process testing:* the system not supporting necessary processes
* the system implementing inefficient or error-prone processes
* the system not supporting required user roles
* the system restricting users from performing necessary tasks
* the system being too complex for intended users
* the system not matching the organisation's look-and-feel consistently.
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## Level 1

Executes given manual process test scripts under supervision.
Uses basic automated testing tools.
Records results and reports issues.
Develops an understanding of the role of process testing as a tool for design improvement and a validation process.

## Level 2

Designs test cases, creates test scripts and test data, and automates repeatable tasks working to the business requirements or specifications provided.
Defines test conditions for given business requirements.
Executes and records manual and automated process testing in accordance with test plans.
Analyses and reports on test activities, results, issues and risks.

## Level 3

Designs process test cases and test scripts under own direction, mapping back to pre-determined criteria, recording and reporting test outcomes.
Participates in requirement, design and specification reviews, and uses this information to design process test plans and test conditions.
Applies agreed standards to specify and perform manual and automated process testing. Automates testing tasks and builds test coverage through existing or new infrastructure.
Analyses and reports on test activities, results, issues and risks.

## Level 4

Selects appropriate process testing approach, including manual and automated testing.
Develops and executes process test plans and test cases. Implements scalable and reliable automated tests and frameworks in relation to process testing.
Collaborates across parties involved in product, systems or service design and development to enable comprehensive process test coverage. Identifies improvements in requirements, and related design or specification processes, to increase the effectiveness and efficiency of process testing.
Analyses and reports on test activities, results, issues and risks, including the work of others."

## Level 5

Plans and drives process testing activities across all stages and iterations of product, systems and service development.
Provides authoritative advice and guidance on any aspect of process test planning and execution. Adopts and adapts appropriate testing methods, automated tools and techniques to solve problems in tools and testing approaches.
Measures and monitors applications of standards for testing. Assesses risks and takes preventative action.
Identifies improvements and contributes to the development of organisational policies, standards, and guidelines for process testing.

## Level 6

Develops organisational policies, standards, and guidelines for business process testing.
Plans and leads strategic, large and complex process testing activities. Leads activities to manage risks and opportunities associated with process testing and in coordination with other types of testing.
Adapts or develops organisational process testing capabilities and methods to solve complex business and engineering problems in tools and testing.
Promotes a culture of quality throughout the organisation and drives adoption of and adherence to testing policies and standards, with special focus on process testing.