Ministry of Defence

de&s

DE&S functional competence framework

Information Management & Information Technology

Defence Equipment & Support

Contents

Change & Transformation

Change and Transformation (C&T) supports the delivery of change. This is broadly through interventions implemented across the system development lifecycle to enable the successful adoption of change for the people, process and systems impacted. C&T requires a clear and detailed understanding of business requirements to determine potential process improvements, transformational change opportunities, and enabling technology that could be used. The delivery of C&T involves careful planning and project/programme management to effectively coordinate, scope and deliver agreed changes that are aligned to DE&S strategy.

Level	Descriptors
Authority	• Plans, directs and co-ordinates business change activities across complex programmes, from the initiation phase through to the integration of "business as usual" (ORDI, BENM, BSMO)
	• Monitors the impact of change on business activities and collaborates with operational managers to realise beneficial improvements from project deliverables (ORDI, BENM, BSMO)
	• Defines, validates and justifies business cases for change and the implementation of technology solutions
	• Informs the approach to change through feasibility studies, shapes the business case for change and builds an understanding of change impacts across broad stakeholder groups
	• Aligns change initiatives to the business strategy, whilst applying knowledge of emergent IT and digital trends to optimise opportunities (OCDV)
	• Leverages partnerships with business leadership and professional bodies, integrating their expertise into options for improvements in DE&S
	• Plans and leads scoping, requirements definition and priority setting for complex, strategic programmes, across organisational functions (REQM, OCDV)
	• Identifies, proposes, initiates and leads significant organisational capability improvement programmes (REQM, OCDV)
	• Secures business and IT commitment for resources to drive organisational and cultural change by removing obstacles, as well as advocating and lobbying for change at senior leadership level (REQM, OCDV)
	• Develops organisational policies, standards, commitment and guidelines for requirements definition and management
	• Endorses continuous improvement in requirements management techniques and methods; and selects effectively between plan-driven/predictive and adaptive (iterative and agile) approaches in response (BUAN)
	• Acts as role model for desired behaviours, setting consistent standards and expectations as an agent for change
	• Shapes and organises complex concepts to resonate with a broad organisational audience and broader DE&S strategy and objectives (CIPM)

Expert	• Maintains an overview of the business environment, ensures projects/programmes are aligned to corporate objectives and manages potential risks (BSMO, OCDV)
	• Identifies, proposes and proactively initiates capability improvements to enhance performance, to make the most of new opportunities or to respond to external drivers and risks (BSMO, OCDV)
	• Determines appropriate methods, tools, approaches (e.g. plan-driven or iterative/agile), techniques and frameworks according to the context of the change
	• Plans and drives scoping, requirements definition and prioritises activities for large, complex initiatives (REQM, CIPM)
	• Ensures requirements are delivered to cost, timescales and resource budgets agreed by establishing the requirements baseline and reconciling changes via the change control process (REQM, CIPM)
	• Leads substantial improvement programmes, working closely with project management to manage and optimise team performance
	• Outlines performance measurement objectives and embeds these in the high-level implementation approach to change initiatives (BUAN, REQM)
	• Gains input and agreement of requirements from a diverse range of stakeholders, and is adept at managing and reconciling competing or conflicting priorities (BUAN, REQM)
	• Manages business engagement and communications throughout the programme/project
	• Ensures business readiness plans consider IT deployment, data migration, capability (training and engagement activities), requirements to integrate new digital processes or jobs into the "business as usual" environment
	• Applies expertise in benefit management and realisation by negotiating agreements to ensure benefits are maximised (BENM)
	• Monitors and reports progress on key indicators and milestones for the change e.g. business readiness targets, business engagement activity, training design, deployment activities, key operational metrics and productivity measures (BENM)
	• Advises colleagues in the benefits and importance of user acceptance testing when considering change
	• Champions the value of new ways of working to address internal and external opportunities and threats arising from changes in technology, society and business models (OCDV)

Practitioner	• Provides key contributions in identifying new areas of capability improvement within DE&S, such as enhancements to skills, technology or processes (OCDV)
	• Defines, sets the approach, facilitates and completes medium-scale projects to deliver direct business impacts within agreed deadlines
	• Identifies risks that jeopardise project success and contributes proactively towards their mitigation
	• Provides aligned, accurate communications to stakeholder throughout change initiatives (OCDV)
	• Applies appropriate methods and tools to suit the context of the change, such as predictive (plan-driven) approaches or adaptive (iterative/agile) approaches
	• Prepares business cases, including associated benefits, options for benefits realisation, details of new or improved performance, and potential business risks (BUAN, BENM)
	• Defines and manages scoping, requirements definition and prioritisation activities for initiatives of moderate size and levels of complexity (REQM, BENM)
	• Identifies options for business process optimisation, including associated information systems, information management, practices, procedures, and organisation change
	• Facilitates input from stakeholders, provides constructive challenge and enables effective requirements prioritisation (BUAN, REQM)
	• Establishes requirements, gains formal approval for them, and ensures traceability from test cases (BUAN, REQM)
	• Manages change control procedures, ensuring approved project deliverables are completed to agreed cost, timescale and resource budgets (BUAN, REQM)
	• Investigates, manages, and applies authorised requests for changes in accordance with agreed change management policies (BUAN, REQM)
	• Forges partnerships with stakeholders to determine suitable criteria by which benefits will be tracked from the business cases through to realisation (BENM)
	• Supports and encourages commitment to drive continuous improvement in the new operational business environment following implementation of change (BENM)
	• Supports operational managers in ensuring predicted benefits are realised through each stage of the change programme (BENM, REQM)
	• Assists the user community in the provision of transition support and change planning and liaises with the project team (BENM, REQM)

Supervised Practitioner	• Defines, documents and carries out small projects or sub-projects (e.g. typically less than six months, with limited budget, interdependencies with other projects, and strategic impact), alone or with a small team, actively participating in all phases (PRMG) • Identifies, assesses and manages risks to the success of the project and change (PRMG) • Applies appropriate methods and tools, either predictive (plan-driven) approaches or adaptive (iterative/agile) approaches, with guidance from experienced practitioners (BUAN) • Follows agreed standards, applying appropriate techniques to elicit and document detailed requirements (BUAN) • Investigates operational requirements, problems, and opportunities to seek effective solutions through improvements to automated/non-automated components of new/existing processes (BUAN) • Assists in the analysis of stakeholder objectives, including root cause analysis of business challenges and insights gained from determining business requirements • Defines and manages requirements scope, definition and prioritisation for small-scale changes and assists with more complex change initiatives (BUAN, REQM) • Provides constructive challenge to stakeholders, to reconcile conflicting or competing priorities • Prioritises requirements, documents a traceable record of their sources and manages records to address any errors or omissions • Investigates, manages and applies authorised requests for changes to base-lined requirements and ensures these are aligned to change management policies (BUAN, REQM) • Assists the user community in the provision of transition support and change planning • Supports project teams in running Lessons Learned workshops to build continuous improvements to benefits realisation approaches (BENM, REQM) • Ensures that own projects are formally closed and, where appropriate, subsequently reviewed, and that lessons learned are recorded
Awareness	• Investigates operational business needs, challenges and improvement opportunities, contributing to recommendations for changes to automated and non-automated components of new or changed processes (BUAN) • Assists in determining and managing requirements through recommended approaches in simple subject areas, with clearly-defined boundaries, and guidance from more experienced colleagues (BUAN, REQM) • Supports in defining acceptance criteria and tests for recommendations (BUAN, REQM) • Carries out activities to investigate and apply authorised requests for changes to baselined requirements, in line with change management policy (BUAN) • Participates in facilitated workshops, to gain increasing exposure of business analysis disciplines and activities in a supported learning environment

Strategy, Architecture & solution design

Enterprise architecture (EA) is the practice of conducting enterprise analysis, design, planning, and implementation for the successful development and execution of a strategy. This involves translating Organisational and Information System strategies into blueprints and roadmaps (covering approximately 18 months), within an architecture focus area (either Technical or Business Focused), to ensure that business opportunities are identified and realised. The process of doing this involves working closely with stakeholders across DE&S to contribute to the definition of an enterprise-wide architecture that meets the strategic needs of the business and aligns with other processes. This requires the ability to understand solutions needed, different types of architectures that need to be considered (e.g. data/information), how to increase the impact of a solution and successfully conducting rollout and testing. Equally important is ensuring architectures are service focused (not just technology or solutions orientated) and that agile, design-led techniques and cloud based digital technologies are increasingly adopted.

Level	Descriptors
Authority	- Directs the creation and ongoing development of DE&S Enterprise and Business Architecture Strategy, championing agile thinking and embracing digital services - Informs the development of enterprise-wide architecture and processes, ensuring that the Change Strategy is integrated and that business and technology strategies comply with enterprise transformation activities - Sets, establishes, maintains and communicates DE&S strategy and architecture for managing and governing information - Manages all aspects of the Life Cycle of Information Systems and sets standards, procedures and methods necessary to implement the Information Systems strategy - Leads the development of Enterprise Architectures for complex systems, ensuring consistency with specified requirements agreed with both external, and internal customers - Sets the performance targets, policies and standards within a business change programme, working proactively to maintain a stable, viable architecture to ensure consistency of design across the programme and that appropriate standards are adhered to - Establishes methodologies for design and testing and ensures consistency in their use across the business - Provides thought leadership across industry, using various channels to educate and shape industry practice, including specialist events, workshops, programmes and online platforms - Influences and collaborates with industry leaders to set strategic direction and standards for Solution Design, both at DE&S and across industry - Uses global insights into the performance of external organisations to improve Solution Design strategy at DE&S - Applies a high level view of the broader market technology landscape to enable robust Digital technologies to be identified and integrated, including automation and AI driven processes

Expert	• Develops strategies, policies, standards and practices, whilst building relationships with key stakeholders, to ensure that change agendas are embedded in management and that business and technology strategies comply with enterprise transformation activities
	• Draws on expertise to develop and present business cases for high-level initiatives, ensuring approval, funding and prioritisation to drive enterprise led initiatives and enhance the Function's impact
	• Maintains a robust understanding of the strategic needs of the organisation, influencing leadership to effectively promote the benefits that a common approach to information and communications technology deployment will bring to the organisation as a whole
	• Directs the promotion, acquisition, development, and implementation of information systems, services, data and applications in close partnership with those responsible for management and strategy
	• Leads, with an agile approach, and draws on expertise to utilise appropriate tools, including logical models of components, in the development of systems architectures
	• Provides subject matter expertise on technical aspects of system development and integration, ensuring that relevant technical strategies, policies, regulations standards and practices are applied correctly
	• Directs the development, implementation, delivery and support of a solution design strategy that complies with the requirements of the business and accounts for the compatibility of existing architecture
	• Takes responsibility for all elements of solution design and ensures alignment with strategy, policy and procedures
	• Creates an innovative testing regime with metrics to demonstrate success and engages with subject matter experts to verify thinking
	• Works with the enterprise architecture framework to ensure consistency and innovation in the design and implementation of solutions and the successful adoption of new techniques
	• Partners with project managers, business analysts, and solution engineers to create solutions that are aligned to DE&S architecture standards and principles, leveraging common solutions and services, and meeting financial targets (cost and benefits)
	• Leads the implementation of technical and functional solutions to business needs, from assessing the feasibility of a solution and evaluating products through to designing solutions and providing technical assurance for third party solutions

Practitioner	• Develops strategies, policies, standards and practices, whilst building relationships with key stakeholders, to ensure that change agendas are embedded in management and that business and technology strategies comply with enterprise transformation activities
	• Draws on expertise to develop and present business cases for high-level initiatives, ensuring approval, funding and prioritisation to drive enterprise led initiatives and enhance the Function's impact
	• Maintains a robust understanding of the strategic needs of the organisation, influencing leadership to effectively promote the benefits that a common approach to information and communications technology deployment will bring to the organisation as a whole
	• Directs the promotion, acquisition, development, and implementation of information systems, services, data and applications in close partnership with those responsible for management and strategy
	• Leads, with an agile approach, and draws on expertise to utilise appropriate tools, including logical models of components, in the development of systems architectures
	• Provides subject matter expertise on technical aspects of system development and integration, ensuring that relevant technical strategies, policies, regulations standards and practices are applied correctly
	• Directs the development, implementation, delivery and support of a solution design strategy that complies with the requirements of the business and accounts for the compatibility of existing architecture
	• Takes responsibility for all elements of solution design and ensures alignment with strategy, policy and procedures
	• Creates an innovative testing regime with metrics to demonstrate success and engages with subject matter experts to verify thinking
	• Works with the enterprise architecture framework to ensure consistency and innovation in the design and implementation of solutions and the successful adoption of new techniques
	• Partners with project managers, business analysts, and solution engineers to create solutions that are aligned to DE&S architecture standards and principles, leveraging common solutions and services, and meeting financial targets (cost and benefits)
	• Leads the implementation of technical and functional solutions to business needs, from assessing the feasibility of a solution and evaluating products through to designing solutions and providing technical assurance for third party solutions

Supervised Practitioner	• Contributes to the creation and review of a systems capability strategy, under supervision, to determine whether it meets the strategic requirements of the business and required regulations
	• Assists managers to develop models and plans to drive the strategy forward, with a focus on emphasising opportunities to improve organisational performance
	• Develops a broad understanding of the needs of the organisation and works with managers to promote the benefits that a common approach for information and communications systems will bring to the business
	• Adopts an agile approach and contributes to the development of systems architectures in specific business or functional areas, supporting the production of detailed component specifications and translates these into detailed designs for implementation
	• Assist managers on the implementation of solution design policy and procedures and supports the rollout of initiatives that improve solution capabilities
	• Designs less complex solutions or elements of a broader solution to support wider DE&S programmes
	• Explores solution options, and makes recommendations for appropriate methodologies and tools
Awareness	• Demonstrates a detailed understanding of DE&S Business Organisations as well as the Enterprise and Business Architecture Strategy, policies and processes
	• Applies an understanding of the needs for the business to change in order to improve performance
	• Maintains knowledge of IT Systems and infrastructures and the support they provide to business processes
	• Works with managers and peers to contribute to the design of solutions
	• Maintains an awareness of the methods and tools being used to develop solutions

Development & Implementation

Designs software to meet requirements through the application of agreed design standards and constraints, including the components, interfaces, design models, testing, configuration and related characteristics of the solution.

Level	Descriptors
Authority	[As SWDN Level 6] • Leads the selection and development of appropriate software design methods, providers, solutions, tools, techniques; including whether predictive (plan-driven) approaches or more adaptive (iterative/agile) approaches are required • Develops forward-looking organisational policies, standards, and guidelines for the development and implementation of software design and software architectures • Ensures adherence to relevant Joint Forces Command technical strategies and industry leading practices in systems architectures (including security requirements, user testing, integration and considerations of systems lifecycles).
Expert	[As SWDN Level 5] • Selects, adopts and adapts appropriate software design methods, tools and techniques; selecting appropriately from predictive (plan-driven) approaches or adaptive (iterative/agile) approaches • Specifies requirements and manages the design of large or complex software components • Undertakes impact analysis on major design options, makes recommendations, and assesses and manages associated risks • Specifies prototypes/simulations to test solutions and to enable informed decision making • Evaluates the quality of systems designs to ensure adherence to required standards and identifies corrective action if needed • Ensures that system design appropriately balances functional, quality, security and systems management requirements • Advises on the development of organisational software design and architecture policies and standards • Delivers and assists others in completing products to agreed time, cost and quality standards
Practitioner	[As SWDN Level 4] • Designs software components and modules using appropriate modelling techniques and by following agreed software design standards, patterns, user testing cycles and methodologies • Creates and communicates design specifications to identify and balance the concerns of all stakeholders and to allow for both functional and non-functional requirements • Identifies and evaluates alternative design options and trade-offs through managing appropriate rounds of user testing and configuration and/or change requests • Recommends designs which take into account target environment, performance security requirements and existing systems • Reviews, verifies and improves own designs against specifications and leads the reviews of the designs of others • Models, simulates or prototypes proposed software before submitting for approval to stakeholders • Delivers products to the agreed time, cost and quality standards

Supervised Practitioner	[As SWDN Level 3]
	• Undertakes and completes the design of moderately complex software applications or components, applying agreed standards, patterns and tools
	• Assists, as part of a team, in the design, testing and integrating of components of larger software systems
	• Specifies and refines user and/or system interface requirements
	• Refines and creates multiple design views to address stakeholder concerns relating to design of software as well as functional and non-functional requirements
	• Assists in the evaluation of options, trade-offs (e.g. to security or functionality) and collaborates in reviews of work with others as appropriate
	• Supports delivery of the product, to the agreed time, cost and quality standards.
Awareness	[As SWDN Level 2]
	• Creates, understands and documents detailed designs for simple software applications or components, applying agreed modelling techniques, standards, testing and tools
	• Contributes to the design of components of larger software systems, applying understanding of the stages of the system development lifecycle and the DE&S IT architecture
	• Contributes to delivery of the product to the time, cost and quality standards

Service Delivery and Operations (1)

IM&IT Service Delivery & Operations (SD&O) provides the management and support to facilitate the end to end delivery of IT service (both in-house and cloud based). This involves setting management access, controls and managing the storage of data. Also, SD&O defines the long term strategy for the support model for services, is tailored to the application landscape, provides oversight of key performance targets/service line agreements and agrees these with input from internal stakeholders and external service providers.

Service Delivery

Delivers and oversees IT services (both in-house and cloud based) for DE&S. All of which are underpinned by robust management processes that hold both internal and external parties to account.

Level	Descriptors
Authority	• Understands the needs of and owns relationships with senior level DE&S stakeholders and supporting partners • Ensures a catalogue of available services is created/maintained and that cost effective service level agreements are in place and being met • Monitors service delivery effectively by identifying /implementing actions to maintain or improve service levels • Plans, reviews, implements and audits service delivery performance by ensuring agreed targets are met, setting out service performance reporting and preparing proposals to meet forecasted changes in levels/type of service • Sets DE&S policy for the management of change and configuration items in live services and test environments • Ensures effective control and treatment of risk to maintain the availability, performance, security and compliance of business services impacted • Provides authorisation for critical release activity and acts as point of escalation • Sets and continually improves (e.g. through automation) management processes, tools, techniques, testing and resources involved in the IT infrastructure
Expert	• Manages senior level relationships with the DE&S stakeholders and supporting partners • Develops and defines DE&S approaches to acceptance criteria for service transitions • Provides ongoing oversight from the acceptance of a project through to completion, against agreed criteria, to promote quality outputs that are operationally fit for service • Develops implementation plans and provides delivery authority for complex requests for change, evaluating risks to service environment integrity and the IT asset lifecycle • Leads the assessment, analysis, development, documentation and implementation of changes based on requests and continual improvement • Ensures appropriate action is taken to anticipate, investigate, resolve, and document system & service problems • Enables the resolution of issues and realisation of improvements to services through coordinating the implementation of agreed remedies and preventative measures, as well as analysing patterns and trends • Ensures incidents are handled to procedure, facilitating recovery and ensuring resolved incidents are properly documented to avoid re-occurrence

Practitioner	• Manages relationships with the DE&S stakeholders and supporting partners • Leads availability management processes and operations, performing broader availability management tasks • Ensures service and components meet all agreed performance targets and service levels • Monitors service against service level agreements, maintaining records of relevant information and to identify actions to maintain or improve levels of service received • Engages with technical design and project managers to ensure correct products are produced in a timely fashion • Evaluates the quality of project outputs against agreed service acceptance criteria • Maintains application support processes, ensuring all requests for support are dealt with in accordance to agreed procedures • Uses application management software and tools to investigate issues, collect performance statistics and create required reports • Initiates and monitors actions to investigate and resolve problems in systems, processes and services • Prioritises and diagnoses incidents, investigating causes, escalating unresolved incidents • Facilitates recovery, following resolution of incidents
Supervised Practitioner	• Manages relationships with DE&S stakeholders and supporting partners • Monitors performance, liaising with stakeholders to ensure Service line agreements (SLAs) are not breached and to assist with contingency planning • Monitors and logs actual service provided and reports on how this compares to SLAs • Engages with project management, confirming that developed products meet acceptance criteria and support the business objectives • Applies change control procedures to manage the scale and sustainability of required changes • Investigates system, process and service problems, assisting with implementation of agreed remedies and preventative measures • Follows procedures to identify incidents, as well as supporting, reporting and advising on their resolution
Awareness	• Supports the management of relationships with DE&S stakeholders and supporting partners • Documents changes based on requests, applying change control procedures as required • Monitors compliance against processes, investigating, assessing and resolving instances of non-compliance, escalating where necessary

Service Delivery and Operations (2)

IM&IT Service Delivery & Operations (SD&O) provides the management and support to facilitate the end to end delivery of IT service (both in-house and cloud based). This involves setting management access, controls and managing the storage of data. Also, SD&O defines the long term strategy for the support model for services, is tailored to the application landscape, provides oversight of key performance targets/service line agreements and agrees these with input from internal stakeholders and external service providers.

Operation

The management and delivery of applications & services (both in-house and cloud based) to agreed standards of availability and functionality. Provides effective incident & problem management recovery through oversight of third party partners as well as help-desk and user access support. Operations also involves the capability to manage, maintain and recover the IT infrastructure from issues, ranging from those that are minor to severe in impact.

Level	Descriptors
Authority	- Sets policies and develops strategies, plans and processes for the design, monitoring, measurement, maintenance, reporting and continuous improvement of IT service and component availability - Ensures operational methods, procedures, facilities and tools are established, reviewed and maintained - Negotiates with relevant parties to resolve disruptions and agree complex amendments to the provision of services - Sets release policies for DE&S including development, production/operations and organisational acceptance - Ensures service delivery is monitored effectively and implements identified actions to maintain or improve levels of service - Reviews performance metrics to ensure targets are met, informing necessary improvements and preparing proposals to meet forecasted changes to level/type of service - Ensures effective controls and treatments of risk to availability, performance, security and compliance of business services impacted
Expert	- Provides advice and leadership for the planning, design and improvement of service and component availability, investigating and remedying target breaches and service gaps - Manages disaster recovery testing and the delivery of resulting supporting processes - Agrees the scope of configuration management processes and manages the adoption of appropriate tools, techniques and processes (including automation) - Leads the effective provision of assets, ensuring all changes to assets and services are controlled and recorded - Evaluates new system software and system software updates to identify those that merit action, ensuring system software is tailored to facilitate the achievement of service objectives - Develops policy and strategies to ensure the performance measures of IT services meet the requirements of business, service users and service requirements - Drafts and maintains procedures and documentation to support with applications used - Advises on application security, licensing, upgrades, backups, and disaster recovery needs

	• Provides technical expertise to enable the application of operational standards and procedures in infrastructure management • Identifies, evaluates and manages the adoption of suitable database administration tools and processes • Leads the delivery of IT services to produce optimal utilisation of storage resources, ensuring data security, availability and integrity of data both at DE&S and for service providers • Develops standards and procedures for implementing data protection and disaster recovery functionality for business applications and data through the use of a range of online and offline storage devices • Owns procedures and documentation for network support, making a significant contribution to the investigation, diagnosis and resolution of network problems • Ensures appropriate action is taken to anticipate, investigate, document and resolve system & service problems
Practitioner	• Ensures operational processes are in place to maintain secure configuration, consistent classification, management, verification and audit of changes • Assesses, analyses, develops, documents and implements requests for change • Reviews system software updates, identifying those that merit action, tailoring system software to maximise hardware functionality, investigating and resolving service problems • Manages capacity modelling and forecasting activities to proactively identify and address required improvements • Maintains application support processes, ensuring all requests for support are dealt with to agreed procedures • Contributes to the implementation of maintenance and installation work, system backups and restoration of data • Uses knowledge of logical database schemata to investigate and resolve problems and collect performance statistics for reporting • Reviews capacity, performance, availability and operational metrics to encourage appropriate action to proactively maintain the storage and backup systems • Maintains the network support processes, using network management software and tools to investigate and diagnose network problems • Initiates and monitors actions to investigate and resolve problems in systems, processes and services • Prioritises and diagnoses incidents, investigating causes, escalating unresolved incidents and facilitating recovery post incident resolution • Produces standards, processes and documentation for data centres to optimise data centre efficiency, consistency and quality • Leads availability management processes and operations by analysing availability, reliability, maintainability of performance targets and serviceability

Supervised Practitioner	• Analyses service and component availability, reliability, maintainability and serviceability to ensure services and components meet agreed service line agreements and user needs
	• Implements arrangements for disaster recovery and documents recovery procedures
	• Conducts ongoing testing of recovery procedures and refines them accordingly
	• Applies tools, techniques and processes to track, log and correct configuration item data, verifying and approving changes
	• Ensures users comply with identification standards, performing audits to check the accuracy and undertaking necessary corrective actions under direction
	• Controls IT assets by applying tools, techniques and processes to create and maintain an accurate asset register, producing reports and analysis to support asset management activities across the asset management lifecycle
	• Monitors service component capacity and initiates actions to resolve any shortfalls to procedures
	• Uses tools and application management, system management software and database management system software to collect required performance statistics
	• Carries out agreed database and system software maintenance and administration tasks
	• Performs scalable backups, applies restores to schedules, tracks offsite storage and uses reporting tools to collect and produce required reports (including storage utilisation, performance and backups)
	• Identifies and resolves network problems by following procedure, carrying out sufficient testing, using network management software and tools to collect performance statistics and to carry out maintenance
	• Investigates system, process and service problems, assisting with implementation of agreed remedies and preventative measures
	• Applies procedures to appropriately identify incidents and risks, supports in their resolution, maintain records and advises on actions to be taken
	• Produces management information on power, cooling and space, ensuring adherence to policies, procedures and mandatory electrical safety testing
	• Develops, documents and implements changes based on requests for change and applies change control procedures
Awareness	• Maintains assets and registers, whilst adhering to agreed processes
	• Produces routine reports to assist asset management activities and decision making
	• Assists the ongoing maintenance, investigation, resolution of issues relating to applications
	• Understands and can contribute, under supervision, to IT infrastructure operations
	• Demonstrates the functions of databases and provides support for their maintenance as required
	• Assists the investigation and resolution of network problems and is familiar with potential risks that can occur
	• Follows agreed procedures to identify, register and categorise incidents
	• Gathers information to enable incident resolution, promptly allocating incidents
	• Monitors compliance against processes, investigating, assessing and resolving instances of non-compliance, escalating where necessary

Information Assurance

Information Assurance in DE&S refers to the protection of information & data integrity, availability, authenticity, validity and confidentiality. This includes information and data that is stored and that in transit.

Level	Descriptors
Authority	• Develops, revises and implements the organisation's Information Security Governance Process and strategy (A1) • Drives senior stakeholder support, investment and a culture that values the importance of information security (A3) (A5) • Identifies the need to change processes or working practices to comply with changes in legislation/regulation and persuades senior leadership to support and resource necessary changes (A6) • Leads complex negotiations with third parties, ensuring that the contracting authority's Information Security requirements can and will be met (A7) • Possesses great influence internally and in the wider industry in security testing, Cyber and information risk management as a leading figure (B3)(D3) • Informs, applies and improves secure development practices across multiple, projects systems and products (C3) • Develops new techniques and/or tools that significantly improve secure development capabilities (C3) • Demonstrates leading expertise on compliance monitoring and controls testing by informing the organisation's approach and reporting significant non-compliance issues through appropriate channels (D2) • Leads audits (instigated by Directors, Ministers or regulatory bodies) to identify root causes of security incidents, develops audit plans and oversees delivery against the plan (D1) • Applies deep knowledge of Information Security and business activities to identify risks or concern at an organisational and senior leadership level (A4) • Sets responses to major Information Security incidents by deciding on appropriate actions and organising resources accordingly (F2) • Advises on Business Continuity and Disaster Recovery Planning to senior leadership, with great influence on operations and reporting (H1)
Expert	• Informs the development, revision and implementation of Information Security Governance processes and standards (A1 & A2) • Applies deep knowledge of Information Security, business activities and threat levels to identify risks and improvements to management controls (A4) (E1) • Leads Information Security training and awareness programmes and/or behavioural management programmes (A5) • Analyses changes in legislation or regulation, assesses impacts and provides advice on the implications, seeking legal advice where necessary (A6) • Advises senior leadership and/or contracting authorities on the Information Security requirements for third party management (A7) • Leads the production of Information Security requirements for third parties and/or compliance processes (A7) • Develops and updates information risk management plans. (B3) • Applies secure development practices to complex security requirements and upskills development teams in this (C3) • Manages teams conducting internal or external audits and agrees resultant solutions and actions (D1)

	• Leads teams conducting compliance monitoring and/or controls testing; escalates issues as appropriate (D2)
	• Leads Security Evaluation or Functionality Testing teams (D3)
	• Informs and leads teams in designing through to executing Business Continuity, Crisis Management and/or Disaster Recovery Plans. (H1/H2)
	• Identifies the need for and implements new Security Operating Procedures and practices to meet changing requirements (E2)
	• Manages and investigates Information Security incidents, whilst ensuring responses are aligned with incident and business continuity processes (F2)
	• Establishes, manages and continually refines Emergency Operations teams that lead exercises to test Business Continuity and Disaster Recovery plans and reports outcomes
Practitioner	• Contributes to the development, maintenance and implementation of Information Security Governance processes (A1)
	• Incorporates recent advances in Information Security legislation and regulations into existing policies and standards; manages teams working on policies and standards, mentoring as appropriate (A2)
	• Leads teams implementing Information Security strategy at programme or project level (A3)
	• Conceives and delivers business improvement through the application of Information Security; persuades stakeholders to invest in and value Information Security (A4)
	• Designs, develops and presents Information Security training courses as part of a training and awareness programmes (A5)
	• Identifies gaps in organisational Information Security awareness, and proposes solutions
	• Recognises and reports non-compliances with applicable legislation and regulation (A6)
	• Undertakes the production of Information Security requirements for third parties and/or conducts compliance reviews (A7)
	• Contributes to the development of secure systems, information risk management plans, and proposes security requirements for new systems or changes to existing systems (C3) (B3)
	• Understands the importance of and conducts security audits (D1)
	• Conducts compliance monitoring and/or controls testing (D2)
	• Designs effective test programmes for systems, products applications or processes and is trusted to implement them (D3)
	• Develops, operates and maintains security management procedures and processes; monitors the application of Security Operating Procedures across multiple information systems (E1) (E2)
	• Contributes to Information Security incident policy and/or incident management and investigation procedures
	• Undertakes some Information Security investigation tasks or actions in responses to incidents (F2)
	• Assists with the design through to execution of Business Continuity, Crisis Management and/or Disaster Recovery Plans (H1/H2)
	• Tests business continuity and disaster recovery plans and can identify potential improvements (H2)

Supervised Practitioner	• Understands, applies, develops and maintains local Information Security Governance processes and undertakes Information Security Governance tasks (A2)
	• Recognises and addresses non-compliance with local Information Security Governance processes and makes recommendations for change (A1)
	• Drafts or reviews components of Information Security strategy at programme or project level and/or contributes to organisational IS strategy (A3)
	• Applies Information Security to achieve business objectives and provides Information Security advice on the design, implementation, configuration or operation of information systems to balance Information Security with business objectives (A4)
	• Contributes to improving Information Security awareness by developing and delivering training sessions, or as a member of a team undertaking behavioural analysis or delivering culture management programmes (A5)
	• Understands legislation and regulation applicable to own work, i.e. within own or client organisations
	• Refreshes knowledge to keep up with updates of Information Security policies, standards, legislation and regulation (A6)
	• Contributes to developing or maintaining compliance by third parties to the contracting authorities Information Security policies and standards (A7)
	• Develops basic information risk management plans and refines them with feedback from my experienced practitioners (B3)
	• Contributes to the development of secure systems by proposing security requirements for new systems or changes to existing systems (C3)
	• Contributes to security audits under supervision (D1)
	• Assists with compliance monitoring and/or controls testing exercises under supervision (D2)
	• Develops and/or implements test schedules, safety requirements and product/system test plans with help and supervision (D3)
	• Monitors the application of Security Operating Procedures, escalating risks and concerns (E1)
	• Applies routine security procedures such as patching, managing access rights, malware protection or vulnerability testing (E2)
	• Contributes to Information Security incident management policy and/or incident management and investigation processes and procedures (F2)
	• Assists with the design through to execution of Business Continuity, Crisis Management and/or Disaster Recovery Plans under supervision (H1/H2)
	• Assists with exercises to test business continuity and disaster recovery plans (H2)

Awareness	• Understands and can explain the basic principles of Information Security Governance, how it is applied and relevant policies and standards (A1)(A2)
	• Demonstrates understanding of the principals of Information Security strategy and how it is applied (A3)
	• Recognises how high quality Cyber and Information strategies and processes can benefit the business (A4)
	• Understands and can explain the principal requirements of major legislation and regulations relevant to Information Security, (e.g. Data Protection Act, General Data Protection Regulation (GDPR), privacy, healthcare, ISO/IEC 27000 family) legislation and regulation relevant to own work (A6)
	• Applies principles of information risk management and understands their value (B3)
	• Recognises the importance of addressing security during system development and describe some of the tools, products and practices that contribute to secure development (C3)
	• Understands and can support the main principles and processes involved in audits and compliance monitoring exercises (D1)(D2)
	• Understands and can explain the main processes for managing the security of information systems (E1)
	• Complies with and can explain the main principles of secure configuration of security components and devices, including firewalls and protective monitoring tools (e.g. SIEM) (E2)
	• Demonstrates and can describe effective incident management, the importance of recording evidence to support investigations, and how to coordinate responses (F2)
	• Recognises the importance of Business Continuity & Disaster Recovery management to Information Security (H2)

Knowledge Information Management

Develops, applies, promotes and provides professional advice to continuously improve standards and skills in collective knowledge and information management practices (KIM) across DE&S. This supports organisational activities by helping individuals to value and appropriately apply insights from DE&S information.

Level	Descriptors
Authority	• Influences organisational strategy, enterprise architecture, leadership and external bodies to ensure that Knowledge and Information Management (KIM) is part of organisational strategic thinking and is both internally and externally valued and resourced • Shapes organisational change programmes, ensuring that KIM remains part of the strategic planning for business and organisational change, e.g. ensures that consultation with KIM experts is built in as a milestone for project planning of organisational and business change • Leads on KIM capability improvement, liaising with senior leadership at DE&S and external bodies (to maintain alignment with KIM cross- Government priorities) to identify strategic requirements and to enable effective change management • Actively supports industry and cross-government knowledge and Information management activity, providing challenge and influence; driving innovation and developing professional standards • Influences and collaborates with industry leaders to set strategic direction and agenda, for Knowledge and Information management, standards and approach both at DE&S and across industry • Provides thought leadership across industry, utilising various channels to educate and shape industry practice, including specialist events, workshops, programmes and online platforms • Uses global insights into the performance of similar organisations to improve information and knowledge management strategy within DE&S
Expert	• Develops and drives an effective Knowledge Information Management (KIM) strategy, ensuring direction remains broadly aligned with wider IMIT, enterprise architecture and business requirements • Coordinates and facilitates KIM improvements for the benefit of the business, e.g. forms a link between practitioners and senior leaders in the organisation, to ensure that KIM good practice and guidance are rolled out throughout the organisation • Fosters opportunities for the organisation to drive maximum benefit from its information, e.g. facilitates paper and digital records sharing between business areas as well as with other organisations • Draws on subject expertise to define knowledge, information and records transfer policy and procedures, deciding how knowledge and information will be transferred among team members and between departments (including how to identify gaps, deploying digital archiving and provides communication plans for information being shared across channels to improve information capability) • Leads on KIM process and procedures, ensuring all captured knowledge and information is managed in line with organisational Information Management standards, including lifecycle and records management • Draws on influence to build robust stakeholder networks to ensure KIM is integral to strategic and management decision-making across the business, and the function remains suitably resourced • Leads by example and exhibits the values that are specific to KIM, proactively contributing to all forums for KIM, sharing own knowledge and reinforcing the value of KIM to the organisation

	• Draws on expertise and industry wide best practice examples to lead on how to best deploy information architecture in support of good KIM and archiving standards, e.g. by structuring knowledge bases or expertise directories, or deploying collaborative workplace software effectively • Directs and develops KIM risk policy, balancing and mitigating different KIM risks in accordance with departmental approaches • Directs internal Records Management governance and ensures policies are in place to support compliance with relevant regimes and key cross-Government KIM initiatives that ensure KIM is managed consistently, within the organisation, and following guidance issued from The National Archives
Practitioner	• Supports the implementation of the Knowledge Information Management (KIM) Strategy and works with stakeholders to identify KIM skills gaps and proactively develops relevant services, training, advice or guidance proactively to meet business needs • Manages and develops procedures for handling information and records that take into account the organisation's risk management approach, e.g. produces guidance on applying the information required to label records to ensure accurate identification • Monitors, promotes and continually improves the KIM compliance regime • Collaborates with Information Asset Owners and other stakeholders to ensure compliance with the appropriate Information Governance regime, e.g. ensures that teams can access appropriate records • Provides KIM advice and guidance to ensure that teams comply with legislative and organisational requirements on producing and handling records and information • Applies Records Management Information Governance, good practice and standards, e.g. keeping Information Asset Owners updated on the intention to destroy records as required and applying the appropriated records classification • Manages knowledge transfer policy and procedures, working with stakeholders to identify Knowledge Management skills gaps and develops relevant services, training, advice or guidance to proactively meet business needs • Develops and improves approaches for acquiring, maintaining and managing knowledge and information, e.g. data mining of knowledge bases • Implements key elements that drive the Service Knowledge Management System (SKMS), ensuring optimal use of tool Configuration Management Systems and Configuration Management Databases to enhance knowledge management delivery • Advises on how to best deploy information architecture and classification in support of good KIM, e.g. by structuring knowledge bases or expertise directories, or deploying collaborative workplace software

Supervised Practitioner	• Assists managers in the implementation of KIM, shaping plans, programmes and initiatives that drive the core elements of KIM
	• Contributes to KIM development and service delivery, including advising stakeholders
	• Maintains a broad understanding of how KIM flows across functions and in and out of the organisation, shaping and adapting KIM transfer plans and activities accordingly
	• Applies a detailed understanding of relevant KIM policies, legislative frameworks and provides advice on how to achieve effective handling of KIM in accordance with the relevant compliance regime
	• Understands the need to manage information and records throughout their lifecycle and applies agreed retention and disposal policies, e.g. uses organisation retention policies to apply destruction dates to the records
	• Demonstrates a good awareness of how to support the use and management of information and records by teams across the organisation, e.g. understands the impact of changing Records Management policy on the way teams need to produce and manage their own records
	• Applies Records Management good practice and standards, e.g. understands Records Management policy on retention and disposal, applies this competently and conveys this to business teams
	• Maintains a broad understanding of knowledge capture and learning from experience (LFE) techniques and processes
	• Understands the limitations of knowledge capture and applies effective knowledge capture techniques, following organisational processes to index and store captured knowledge, e.g. handovers, exit interviews, knowledge cafe outputs, etc.
Awareness	• Participates with other members of the team to share knowledge and positively supports others in sharing knowledge and information
	• Demonstrates an understanding of personal responsibility to manage knowledge and information
	• Develops expertise in where relevant processes, standards and guidelines can be found, advices on KIM policy and knows when to seek more specialist support
	• Applies a recognition of KIM techniques and processes that ensures the effective use of information and employs them in everyday use, e.g. knows how to generate, manage and exploit records effectively in the organisation
	• Utilises a basic understanding of the range of business requirements for protecting records and information and applies the appropriate standards and policies for handling, storing, disseminating and preserving them, e.g. is aware of retention policies and can direct colleagues to their location
	• Develops a general expertise of relevant Information Governance legislation, policy and standards, e.g. understands principles from the Public Records Act and how this applies to their area of work
	• Promotes the importance of managing records throughout their lifecycle and applies retention and disposal principles to own information

MI and Analytics

MI and Data Analytics within DE&S focuses on the identification and management of data sources, the application of sound analytical methodologies to data, and the clear communication of insights in ways that are specific to the needs of the target audience. The application of clearly presented and appropriate analysis and insights enables policy formulation, decision making, the effective measurement of policies developed, and enables customers in the Front Line Commands and MOD Head Office to have clear view of metrics to gauge performance.

Level	Descriptors
Authority	• Sets an overall strategy for data management, with considerations of the established information architecture, to support the development and secure operation of information and digital services (SFIA, DATM, L6) • Instils a culture of helping others to understand the value of a strong evidence base and appropriate data sources by being highly knowledgeable in the breadth, strengths and limitations of data sources available (Government Statistical Group, L3) • Leads initiatives to improve the insights that can be gained from data sources and the design of new sources of recording and analysing data (Government Statistical Group, L3) • Manages the development of DE&S-wide approaches and culture for the use of analytics by encouraging the efficient and effective analysis of data (textual, numerical, visual, audio) (SFIA, INAN, L7) • Inspires colleagues to build capability in data analysis and supports the adoption and embedding of improvements to data approaches across the Organisation (Government Statistical Group, L3) • Applies expertise in leading data analysis techniques being used across industry to advance the capability of DE&S (Government Statistical Group, L3) • Leads the development and exploration of new data visualisation approaches to raise standards and impacts of data presentation (SFIA, VISL, L5) • Influences and champions the use of presentation and dissemination tools, introducing innovation, at the departmental level and wider (Government Statistical Group, L3) • Develops communication strategies to accompany data insights and delivers key analytical messages with integrity, whilst taking account of the ministerial/policy standing (Government Statistical Group, L3)
Expert	• Shapes and implements data management processes, including classification, security, quality, ethical principles, retrieval and retention processes (SFIA, DATM, L5) • Instils a culture that values a strong evidence base and the use of appropriate data sources (Government Statistical Group, L3) • Leads initiatives to improve the insights that can be gained existing data sources and the design of new sources by applying expertise in the breadth, strengths and limitations of data sources available (Government Statistical Group, L3) • Leads the introduction and use of improved analytical techniques to help teams to consistently meet business requirements (SFIA, INAN, L6) • Supports the benefits of applying external sources of data which are relevant to DE&S' needs to drive improvements and performance (SFIA, INAN, L6) • Advocates for the use of analysis and evidence to support decisions, with any contextual factors, assumptions and limitations clearly accounted for (Government Statistical Group, L3) • Evaluates options, develops plans and communicates results that are tailored appropriately to the audience (SFIA, VISL, L5)

	• Leads and informs the implementation of new data visualisation approaches to raise standards and impacts of data presentation and that of key messages (SFIA, VISL, L5) • Applies and sets standards for the use of data presentation and dissemination tools, supporting the introduction of improvements, at the departmental level or wider • Develops communication strategies and delivers key analytical messages with integrity, whilst taking account of the ministerial/policy standing (Government Statistical Group, L3)
Practitioner	• Supports the accessibility, retrievability, security, quality, retention and ethical handling of specific subsets of data across multiple sources (SFIA, DATM, L4) • Uses knowledge of stakeholder needs and in depth knowledge of local data sources to plan for anticipated future changes to analytical and reporting requirements (Government Statistical Group, L2) • Influences design to ensure robust data collection is facilitated, recognising where external data sources can be easily be integrated to enhance own datasets (Government Statistical Group, L2) • Evaluates the need for analytics by assessing the problems to be solved using data and what data sources to use/acquire (specifying appropriate mathematical, statistical, predictive modelling or machine-learning techniques to use) (SFIA, INAN, L5) • Undertakes analysis to strengthen customer trust in evidence bases, maintaining professional standards (e.g. in the methodology used and interpretation of findings) and supporting stakeholders in the decision making process • Determines appropriate types of analysis to use and develops capability in others to make these decisions (Government Statistical Group, L2) • Evaluates options using analysis, develops plans and communicates results that are tailored appropriately to the audience (SFIA, VISL, L5) • Manages the exploration and implementation of data visualisation approaches to raise standards and impacts of data presentation (SFIA, VISL, L5) • Draws out the key/headline messages for stakeholders and provides insights to inform debate and influence decision making using appropriate methods (Government Statistical Group, L2)
Supervised Practitioner	• Applies ethical and robust techniques in the transformation of data from one format/medium to another, in line with DE&S policies and procedures and being sensitive to risks around the use of information (SFIA, DATM, L3) • Readily shares knowledge of data analysis with colleagues and other stakeholders, working efficiently and building trust through professionalism (Government Statistical Group, L1) • Understands the strengths and limitations of data sources (internal and external), relevant technologies and analytical techniques (Government Statistical Group, L1) • Applies a range of mathematical, statistical, predictive modelling or machine-learning techniques and seeks support where appropriate (SFIA, INAN, L4) • Translates business questions into hypotheses and undertakes analysis using appropriate technical skills to deliver a quality assured solution that meets stakeholder needs (Government Statistical Group, L1) • Seeks opportunities to improve the use of statistical data by being critical of existing methodologies and recognising where processes may be inefficient (Government Statistical Group, L1) • Applies a variety of data visualisation techniques, selecting the most appropriate approach from range of options to best suit stakeholder needs and the purposes of the data insights (SFIA, VISL, L4) • Draws out the key statistical messages to "tell the story", implementing leading data visualisation methods to boost the engagement of audiences and required business outcomes (Government Statistical Group, L1)

Awareness	• Understands the importance and develops the ability to judge the quality of data, information and analysis
	• Assists in accessing and transforming data in a secure ethical manner (SFIA, DATM, L2)
	• Undertakes analytical activities and delivers analysis outputs, in accordance with customer needs and conforming to agreed standards (SFIA, INAN, L3)
	• Builds awareness of data visualisation techniques and interpreting the results of data analysis (SFIA, VISL, L4)

Data Literacy

A secure flow of reliable data and the capability in appropriately using it are essential in driving performance, modernisation and the digital infrastructure of the organisation. A data literate worker is one who understands the value of data to the organisation, is able to interpret data to provide insights, talks about data in a common language, can judge the trustworthiness of data sources, as well as taking personal responsibility for the quality and security of the data they work with. Data in this context refers to the information that individuals use in their role to make decisions and is increasingly being represented, shared and stored in digital devices.

Level	Descriptors
Authority	- Shapes DE&S strategy in shaping the management of data and how to improve organisational capabilities in its use - Informs and approves data management policies and processes - Drives implementation of data governance within the organisation and provides input on this for wider government policy decisions - Develops appropriate data sharing relationships with external partners to drive collaboration and performance - Draws on expertise of industry trends in how data can be used to encourage organisational improvements, growth and efficiency - Leads development of DE&S wide approach and culture for data literacy and data quality - Champions the use of data management and analytics across the organisation - Fosters a culture where data is handled securely and ethically
Expert	- Implements data management processes within the organisation to ensure that data users have the correct data accesses, quality and governance - Promotes data literacy amongst the organisation and leads on addressing training needs - Leads data governance and quality improvement initiatives and conducts regular reviews of this for delegated areas - Instils a culture that values reliable evidence and appropriately high data quality - Applies expertise to interpret reports, dashboards and other visualisations to make informed business decisions - Influences and champions the use of dashboards and other visualisation techniques at departmental level or wider - Communicates to colleagues about data and analytics with clarity and consistency - Encourages colleagues to make data driven decisions and to experiment with data analysis and visualisation techniques - Informs policies and strategies to improve the use of emerging data analysis, security and management tools - Delivers initiatives to improve understanding of the limitations and uses of organisational data - Participates in developing pan-DES and external data glossaries and taxonomies - Ensures that data they are accountable for is being handled securely and ethically

Practitioner	• Deals with issues, risks and provides advice to colleagues about data management best practices • Actively participates in data management working groups • Contributes to the development of data management processes including classification, security, quality, ethical principles, retrieval and retention processes • Understands how reports and dashboards are used in their domain; contributes to dashboard development and creation requirements • Applies expertise to capably navigate data presented in reports and to perform their own analysis • Seeks opportunities to analyse and visualise data more efficiently and with greater impact • Works with IMIT data providers to improve data quality and data reporting within their domain • Uses data and insight to share knowledge, inform debate and influence decision making • Demonstrates an in depth knowledge of local data sources and commonly accepted data definitions • Understands the strengths and limitations of data sources, with consideration to why and how the data has been collected • Identifies external data sets that could be used alongside local data • Participates in the development of functional data taxonomies • Promotes secure and ethical handling of data
Supervised Practitioner	• Applies knowledge of and is trained in data management best practices, but seeks guidance when issues are encountered • Identifies and raises issues with data to enable them to be rectified • Demonstrates a familiarity with the standard reports, the key data assets and dashboards used in their area • Understands the sources, lifecycle and limitations of data • Understands how local data taxonomies are implemented in key systems • Handles data ethically and securely, in line with organisational policies and procedures
Awareness	• Understands the value of data to the organisation and the implications of data that is not fit for purpose • Develops an ability to judge the quality of data that they use regularly • Accepts responsibility for quality of data quality input • Builds awareness of how reporting and analytics are used in the organisation • Develops understanding of data visualisation techniques and good practice • Demonstrates recognition of others that use data sources and adheres to agreed standards required as a result • Recognises relevant local data definitions and taxonomies ("dialects") • Understands and follows policies and standards for the secure and ethical use of data