Framework reference SFIA version 4

Skill definitions in categories, subcategories and skills
Framework summary 4

The purpose of SFIA 6

The structure of SFIA 6
Skills in categories and subcategories 6
Levels in SFIA 6
Skills are described at several levels 7

How SFIA is used 7
Integration – the capability management cycle 7
The common language 7
Types of information needed 8
Diagnostic 8
Staying relevant 8

Levels of responsibility 9
Generic levels 9
Core competencies 9
Existing levels 9
Level 1: follow 9
Level 2: assist 9
Level 3: apply 9
Level 4: enable 10
Level 5: ensure, advise 10
Level 6: initiate, influence 10
Level 7: set strategy, inspire, mobilise 10

Skills 11
Categories and subcategories 11
Layout 11

Index of skill definitions 12

Skill definitions 13
## Framework summary

<table>
<thead>
<tr>
<th>Category</th>
<th>Subcategory</th>
<th>Skill</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategy and architecture</td>
<td>Information strategy</td>
<td>Corporate governance of IT</td>
<td>GOVN</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Information management</td>
<td>BRMG</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Information systems co-ordination</td>
<td>ISCD</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Information policy formation</td>
<td>DPRO</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Information security</td>
<td>SCTY</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Information assurance</td>
<td>INAS</td>
</tr>
<tr>
<td></td>
<td>Information analysis</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Information content publishing</td>
<td></td>
<td>ICPM</td>
</tr>
<tr>
<td>Advice and guidance</td>
<td>Consultancy</td>
<td></td>
<td>CHSL</td>
</tr>
<tr>
<td></td>
<td>Technical specialism</td>
<td></td>
<td>TECH</td>
</tr>
<tr>
<td>Business/IS strategy and planning</td>
<td>Business strategy and planning</td>
<td>Research</td>
<td>RSCH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Innovation</td>
<td>INOV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Business process improvement</td>
<td>BPRE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Enterprise architecture</td>
<td>STPL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Business risk management</td>
<td>BURM</td>
</tr>
<tr>
<td></td>
<td>Technical strategy and planning</td>
<td>Solution architecture</td>
<td>ARCH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Emerging technology monitoring</td>
<td>EMRG</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Continuity management</td>
<td>CDPL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Software development process improvement</td>
<td>SPIM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Network planning</td>
<td>NTPL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Methods and tools</td>
<td>METL</td>
</tr>
<tr>
<td></td>
<td>Business change</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Business change implementation</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Portfolio management</td>
<td>PDMG</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Programme management</td>
<td>PMG</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Project management</td>
<td>PMG</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Business analysis</td>
<td>BIAN</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Business process testing</td>
<td>BPTE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Change implementation planning and</td>
<td>CIMP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>management</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Organisation design and implementation</td>
<td>ORDI</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Benefits management</td>
<td>BENM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Business modelling</td>
<td>BSMD</td>
</tr>
<tr>
<td></td>
<td>Business change management</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Relationship management</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Systems development</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Systems development management</td>
<td></td>
<td>DLMG</td>
</tr>
<tr>
<td></td>
<td>Data analysis</td>
<td></td>
<td>DTMG</td>
</tr>
<tr>
<td></td>
<td>Requirements definition and management</td>
<td></td>
<td>REQM</td>
</tr>
<tr>
<td></td>
<td>Systems design</td>
<td></td>
<td>DESN</td>
</tr>
<tr>
<td></td>
<td>Network design</td>
<td></td>
<td>NTDS</td>
</tr>
<tr>
<td></td>
<td>Database/repository design</td>
<td></td>
<td>DIBS</td>
</tr>
<tr>
<td></td>
<td>Programming/software development</td>
<td></td>
<td>PROG</td>
</tr>
<tr>
<td></td>
<td>Safety engineering</td>
<td></td>
<td>SFEN</td>
</tr>
<tr>
<td></td>
<td>Information content authoring</td>
<td></td>
<td>INCA</td>
</tr>
<tr>
<td></td>
<td>Testing</td>
<td></td>
<td>TEST</td>
</tr>
<tr>
<td></td>
<td>Systems ergonomics</td>
<td></td>
<td>HCEV</td>
</tr>
<tr>
<td></td>
<td>Usability requirements analysis</td>
<td></td>
<td>UAN</td>
</tr>
<tr>
<td></td>
<td>Usability evaluation</td>
<td></td>
<td>USEV</td>
</tr>
<tr>
<td></td>
<td>Human factors integration</td>
<td></td>
<td>HFIN</td>
</tr>
<tr>
<td></td>
<td>Installation and integration</td>
<td>Systems integration</td>
<td>SINT</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Porting/software integration</td>
<td>PORT</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Systems installation/decommissioning</td>
<td>HISN</td>
</tr>
</tbody>
</table>
### Service management

<table>
<thead>
<tr>
<th>Category</th>
<th>Subcategory</th>
<th>Skill</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Service strategy</strong></td>
<td>IT management</td>
<td>ITMG</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Financial management for IT</td>
<td>FMIT</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Capacity management</td>
<td>CPROM</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Availability management</td>
<td>AVMT</td>
<td></td>
</tr>
<tr>
<td><strong>Service transition</strong></td>
<td>Configuration management</td>
<td>CPROM</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Change management</td>
<td>CHMG</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Release management</td>
<td>RELM</td>
<td></td>
</tr>
<tr>
<td><strong>Service operation</strong></td>
<td>System software</td>
<td>SYSP</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Security administration</td>
<td>SCAD</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Radio frequency engineering</td>
<td>RFEN</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Applications support</td>
<td>ASUP</td>
<td></td>
</tr>
<tr>
<td></td>
<td>IT operations</td>
<td>ITOP</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Network control and operation</td>
<td>NTOP</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Database administration</td>
<td>DBAD</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Network support</td>
<td>NTAS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Problem management</td>
<td>PBMG</td>
<td></td>
</tr>
<tr>
<td><strong>Procurement and management support</strong></td>
<td>Procurement</td>
<td>PROC</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supplier relationship management</td>
<td>SURE</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Quality management</td>
<td>QUMG</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Quality assurance</td>
<td>QUAUS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Quality standards</td>
<td>QUST</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Compliance review</td>
<td>CORE</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Safety assessment</td>
<td>SARS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Technology audit</td>
<td>TAUD</td>
<td></td>
</tr>
<tr>
<td><strong>Resource management</strong></td>
<td>Programme and project support office</td>
<td>PPKP</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Asset management</td>
<td>ASMG</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Client services management</td>
<td>CSMG</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Professional development</td>
<td>PDASV</td>
<td></td>
</tr>
<tr>
<td><strong>Learning and development</strong></td>
<td>Learning and development management</td>
<td>ETMG</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Learning resources creation and maintenance</td>
<td>TMCR</td>
<td></td>
</tr>
<tr>
<td><strong>Client interface</strong></td>
<td>Sales and marketing</td>
<td>MKTG</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Selling</td>
<td>SALE</td>
<td></td>
</tr>
<tr>
<td><strong>Client support</strong></td>
<td>Account management</td>
<td>ACMG</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sales support</td>
<td>SSUP</td>
<td></td>
</tr>
</tbody>
</table>
The purpose of SFIA

Right people, Right skills, Right place, Right time

The overall purpose of SFIA is to assist organisations employing IT professionals to...

- reduce IT project risk
- retain staff
- make recruitment effective
- enhance the professionalism and effectiveness of the IT function.

This is accomplished by developing the right skills, by deploying them to best effect and by providing appropriate development and career paths for IT professionals.

Its focus on professional skills rather than technological information means that the framework is readily understandable by a wide community, including

- IT professionals and their managers in industry and Government
- HR managers, professionals and training staff
- non-technical managers
- lecturers and curriculum planners in education and training organisations.

SFIA is suitable for use in any organisation that employs IT professionals, in any branch of industry or Government.

The structure of SFIA

The Skills Framework for the Information Age provides a clear model for describing IT practitioners’ skills. It is constructed as a two-dimensional matrix.

Skills in categories and subcategories

One axis presents the whole set of SFIA skills. These are defined in a way that makes them easily recognisable in the workplace: the practical nature of the descriptions means that they can be used to construct an organisation’s internal competency framework.

The skills are presented for convenience in categories which are further broken down into subcategories.

The categories and subcategories are purely for the convenience of the SFIA user: they form a navigation aid. For example, SFIA does not claim to be offering a standard definition of the term ‘Business change’, nor is it suggesting that this should be the title of a business role or job. It is simply a convenient heading under which to group certain related skills (Business analysis, Benefits management, etc).

Levels in SFIA

The other axis defines the different levels of competence or attainment exercised by IT practitioners. Each of seven levels – from new entrant to strategist level – has its own generic definition, cast in terms of autonomy, influence, complexity and business skills.

Full definitions of the levels of responsibility are given on page 9.
Skills are described at several levels

The resulting matrix shows the complete set of skills used by IT practitioners. SFIA provides an overall description for each skill, supported by a description of how the skill appears at each level of competency at which it is recognised. A skill does not normally appear at all seven levels.

How SFIA is used

Integration - the capability management cycle

The cycle of management of people’s skills and capability involves a number of processes:

- People are recruited into the organisation
- They may be assigned to specific jobs, or they may be in an assignment-based environment, working on a series of projects
- Their work is assessed against the job requirements and objectives
- The underlying reasons for their level of success are analysed, so that appropriate development plans can be agreed.
- Decisions about pay and promotion are made, based on factual data.
- The overall management of human resources involves planning for future demand, bearing in mind the different professional capability profiles that may be needed. In addition, general policy decisions are made about salary levels relating to grades and job types or professional profiles.

All of these activities require a factual information base, so that decisions can be made objectively.

The common language

One of the key pieces of information is a description of capability. This can be the capability required of a new recruit, or by a specific role on a project that is being staffed. Or it might be the actual capability of an individual. In order for the processes to work as an integrated capability management system, the definitions of capability must be consistent, they must be objective and they must be used as the reference base throughout these individual processes.

The fundamental determinant of professional capability in IT is the professional skill. SFIA provides the most widely used descriptions of professional IT skills, presented in objective terms at clearly defined levels of attainment.

This information may appear in a job description: while providing a description of the job itself, the job description should also describe the capability required by a job holder - a ‘person specification’ or a ‘professional profile’. Alternatively, in an assignment-based environment there
might be a set of free-standing documents containing professional profiles: these would give descriptions of what is expected of the various classes of IT professionals needed by the organisation, such as business analysts, software engineers or service managers.

Then, the same criteria used when recruiting can be used when deploying people on projects, assessing their competence or producing development plans. Also, the whole process of resource planning can be based on clear definitions of the types of IT professional that will be needed to carry out future work.

That set of profiles, based on the SFIA skills, becomes the common language of skills in the organisation.

Types of information needed

To give a complete picture of capability, several classes of information are usually included to support the SFIA skills. The job description or professional profile is likely to include:

- **Professional skills provided by SFIA**, such as programming/software development, availability management or network planning. Several skills would typically be included. These have an important dual effect: they emphasise the professional element so often missing from merely technical interpretations of ‘skill’; they also have a structural effect, thanks to SFIA’s seven levels of competency that can be related to the organisation’s grading system.

- **Behavioural skills**, such as team working, communication, creativity

- **Knowledge** of things such as specific technologies, products or programming languages, internal processes, application areas

- **Experience**, expressed in specific terms, such as successfully completed assignments

- **Qualifications**, such as a University degree, or certifications such as a Manager’s Certificate in ITIL Infrastructure Management, or an Intermediate Certificate in Software Testing.

It is important to note that a single SFIA skill does not define a job or a role. Rather than constrain the way you work, SFIA leaves you free to implement your own roles and practices.

Diagnostic

A SFIA skill is not intended as a complete definition of all the activities that could be carried out by someone with that skill. Rather, it is intended for diagnostic use: to help determine if a given individual has the skill, and if so, at what level.

Staying relevant

The SFIA Foundation maintains and updates SFIA on behalf of the community of users. The update exercises are based on a period of open consultation. Feedback from users forms the basis of the update exercise.

The policy is for SFIA to reflect current IT practice, rather than to dictate it.

By these means, SFIA stays relevant to the needs of the IT industry.
Levels of responsibility

Generic levels
This section describes the standard levels of responsibility and accountability used in the framework. The underlying structure of the framework ensures that the definitions of professional skills are defined in a way that makes their different levels recognisably distinct.

Core competencies
The nature of these generic definitions makes them suitable for use as the basis of core competencies. An organisation that already has a set of core competencies may wish to use them in combination with SFIA's professional skills. The organisation will still benefit from the sensible spacing of levels that the framework provides.

Existing levels
It may be required to map SFIA's professional skills on to an established structure of levels within an organisation. In that case, the generic levels can be used as a transition aid in order to establish the basis of the mapping.

Level 1: follow
Autonomy
Works under close supervision. Uses little discretion. Is expected to seek guidance in unexpected situations.
Influence
Interacts with immediate colleagues.
Complexity
Performs routine activities in a structured environment. Requires assistance in resolving unexpected problems.
Business skills
Uses basic information systems and technology functions, applications, and processes. Demonstrates an organised approach to work. Leans new skills and applies newly acquired knowledge. Has basic oral and written communication skills. Contributes to identifying own development opportunities.

Level 2: assist
Autonomy
Works under routine supervision. Uses minor discretion in resolving problems or enquiries. Works without frequent reference to others.
Influence
Interacts with and may influence immediate colleagues. May have some external contact with customers and suppliers. May have more influence in own domain.
Complexity
Performs a range of varied work activities in a variety of structured environments.
Business skills
Understands and uses appropriate methods, tools and applications. Demonstrates a rational and organised approach to work. Is aware of health and safety issues. Identifies and negotiates own development opportunities. Has sufficient communication skills for effective dialogue with colleagues. Is able to work in a team. Is able to plan, schedule and monitor own work within short time horizons. Absorbs technical information when it is presented systemically and applies it effectively.

Level 3: apply
Autonomy
Works under general supervision. Uses discretion in identifying and resolving complex problems and assignments. Usually receives specific instructions and has work reviewed at frequent milestones. Determines when issues should be escalated to a higher level.
Influence
Interacts with and influences department/project team members. May have working level contact with customers and suppliers. In predictable and structured areas may supervise others. Makes decisions which may impact on the work assigned to individuals or phases of projects.
Complexity
Performs a broad range of work, sometimes complex and non-routine, in a variety of environments.
Business skills
Understands and uses appropriate methods, tools and applications. Demonstrates an analytical and systematic approach to problem solving. Takes the initiative in identifying and negotiating appropriate development opportunities. Demonstrates effective communication skills. Contributes fully to the work of teams. Plans, schedules and monitors own work (and that of others where applicable) competently within limited deadlines and according to relevant legislation and procedures. Absorbs technical information. Works to required standards. Understands and uses appropriate methods, tools and applications. Appreciates the wider field of information systems, and how own role relates to other roles and to the business of the employer or client.
Level 4: enable

Autonomy
Works under general direction within a clear framework of accountability. Exercises substantial personal responsibility and autonomy. Plans own work to meet given objectives and processes.

Influence
Influences team and specialist peers internally. Influences customers at account level and suppliers. Has some responsibility for the work of others and for the allocation of resources. Participates in external activities related to own specialism. Makes decisions which influence the success of projects and team objectives.

Complexity
Performs a broad range of complex technical or professional work activities, in a variety of contexts.

Business skills
Selects appropriately from applicable standards, methods, tools and applications. Demonstrates an analytical and systematic approach to problem solving. Communicates fluently orally and in writing, and can present complex technical information to both technical and non-technical audiences. Facilitates collaboration between stakeholders who share common objectives. Plans, schedules and monitors work to meet time and quality targets and in accordance with relevant legislation and procedures. Rapidly absorbs new technical information and applies it effectively. Has a good appreciation of the wider field of information systems, their use in relevant employment areas and how they relate to the business activities of the employer or client. Maintains an awareness of developing technologies and their application and takes some responsibility for personal development.

Level 5: ensure, advise

Autonomy
Works under broad direction. Is fully accountable for own technical work and/or project/supervisory responsibilities. Receives assignments in the form of objectives. Establishes own milestones and team objectives, and delegates responsibilities. Work is often self-initiated.

Influence
Influences organisation, customers, supply and peers within industry on the contribution of own specialism. Has significant responsibility for the work of others and for the allocation of resources. Makes decisions which impact on the success of assigned projects i.e. results, deadlines and budget. Develops business relationships with customers.

Complexity
Performs a challenging range and variety of complex technical or professional work activities. Undertakes work which requires the application of fundamental principles in a wide and often unpredictable range of contexts. Understands the relationship between own specialism and wider customer/organisational requirements.

Business skills
Advise on the available standards, methods, tools and applications relevant to own specialism and can make correct choices from alternatives. Analyses, diagnoses, designs, plans, executes and evaluates work to time, cost and quality targets. Communicates effectively, formally and informally, with colleagues, subordinates and customers. Demonstrates leadership. Performs complex work activities, designs, plans, executes and evaluates work to time, cost and quality targets. Communicates effectively, formally and informally, with colleagues, subordinates and customers. Demonstrates leadership. Performs complex work activities, designs, plans, executes and evaluates work to time, cost and quality targets. Communicates effectively, formally and informally, with colleagues, subordinates and customers. Demonstrates leadership.

Level 6: initiate, influence

Autonomy
Has defined authority and responsibility for a significant area of work, including technical, financial and quality aspects. Establishes organisational objectives and delegates responsibilities. Is accountable for actions and decisions taken by self and subordinates.

Influence
Influences policy formation on the contribution of own specialism to business objectives. Influences a significant part of own organisation and influences customers/suppliers and industry at senior management level. Makes decisions which impact the work of employing organisations, achievement of organisational objectives and financial performance. Develops high-level relationships with customers, suppliers and industry leaders.

Complexity
Performs highly complex work activities covering technical, financial and quality aspects. Contributes to the formulation of IT strategy. Creatively applies a wide range of technical and/or management principles.

Business skills
Advises complex technical information and communicates effectively at all levels to both technical and non-technical audiences. Assesses and evaluates risk. Understands the implications of new technologies. Demonstrates clear leadership and the ability to influence and persuade. Has a broad understanding of all aspects of IT and deep understanding of own specialism(s). Understands and communicates the role and impact of IT in the employing organisation and promotes compliance with relevant legislation. Takes the initiative to keep both own and subordinates' skills up to date and to maintain an awareness of developments in the IT industry.

Level 7: set strategy, inspire, mobilise

Autonomy
Has authority and responsibility for all aspects of a significant area of work, including policy formulation and application. Is fully accountable for actions taken and decisions made, both by self and subordinates.

Influence
Makes decisions critical to organisational success. Influences developments within the IT industry at the highest levels. Advances the knowledge and/or exploitation of IT within one or more organisations. Develops long-term strategic relationships with customers and industry leaders.

Complexity
Leads on the formulation and application of strategy. Applies the highest level of management and leadership skills. Has a deep understanding of the IT industry and the implications of emerging technologies for the wider business environment.

Business skills
Has a full range of strategic management and leadership skills. Understands, explains and presents complex technical ideas to both technical and non-technical audiences at all levels up to the highest in a persuasive and convincing manner. Has a broad and deep IT knowledge coupled with equivalent knowledge of the activities of those businesses and other organisations that use and exploit IT. Communicates the potential impact of emerging technologies on organisations and individuals and analyses the risks of using or not using such technologies. Assesses the impact of legislation, and actively promotes compliance. Takes the initiative to keep both own and subordinates’ skills up to date and to maintain an awareness of developments in IT in one area(s) of expertise.
Skills

Categories and subcategories
The skills in SFIA are grouped into categories and subcategories for the convenience of users.

It is not proposed that these equate to jobs or areas of personal responsibility. The grouping is intended to assist people who are incorporating SFIA skills in role profiles or job descriptions, or who are building an organisation’s IT competency framework.

Layout
The skill definitions are presented within their categories and subcategories.

Each skill definition consists of the following:

Skill code
An abbreviated reference code. Example: AVMT

Skill name
The name used for normal reference purposes. Example: Availability management

Overall description
A broad definition of this skill, without any reference to the levels at which it might be practised. Example:
The definition, analysis, planning, measurement and improvement of all aspects of the availability of IT services. The overall control and management of service availability to ensure that the level of service delivered in all services is matched to or exceeds the current and future agreed needs of the business, in a cost effective manner.

Level descriptions
Definitions of the skill for each of the levels at which it is practised. However their phrasing facilitates their use as professional competencies. Example:

Level 6 - Sets strategy and develops plans, policies and processes for the design, monitoring, measurement, reporting and continuous improvement of service and component availability, including the development and implementation of new availability techniques and methods.
Index of skill definitions

Strategy & architecture 13
Information strategy 13
Corporate governance of IT (GOVN) 13
Information management (BMAG) 13
Information systems coordination (ISCO) 14
Information policy formation (IPRO) 14
Information security (SCTY) 14
Information assurance (INAS) 14
Information analysis (INAN) 14
Information content publishing (ICPM) 15

Advice and guidance 15
Consultancy (CNSL) 15
Technical specialism (TECH) 15

Business/IT strategy and planning 15
Research (RSCH) 15
Innovation (INOV) 16
Business process improvement (BPRE) 16
Enterprise architecture (STPL) 16
Business risk management (BURN) 16

Technical strategy and planning 17
Solution architecture (ARCH) 17
Emerging technology monitoring (EMRG) 17
Continuity management (COPL) 17
Software development process improvement (SPIM) 17
Network planning (NTP) 18
Methods & tools (METL) 18

Business change 19
Business change implementation 19
Portfolio management (PGMG) 19
Programme management (PRMG) 19
Project management (PRMG) 20

Business change management 20
Business analysis (BUAN) 20
Business process testing (BPT) 20
Change implementation planning and management (CPM) 21
Organisation design and implementation (ODR) 21
Benefits management (BENM) 21
Business modelling (BDMG) 22

Relationship management 22
Stakeholder relationship management (RSMG) 22

Solution development and implementation 23
Systems development 23
Systems development management (DXM) 23
Data analysis (DATA) 23
Requirements definition and management (RDMG) 23
Systems design (DSGN) 24
Network design (NDSN) 24
Database/repository design (DBDES) 24
Programming/software development (PRDG) 24
Safety engineering (SFEN) 25
Information content authoring (INCA) 25
Testing (TEST) 25

Human factors 26
Systems ergonomics (HCEV) 26
Usability requirements analysis (UNAN) 26
Usability evaluation (USEV) 26
Human factors integration (HFIN) 26

Installation and integration 27
Systems integration (SINT) 27
Porting/software integration (PORT) 27
Systems installation/decommissioning (SIDC) 27

Service management 28
Service strategy 28
IT management (ITMG) 28
Financial management for IT (FIMT) 28

Service design 29
Capacity management (CPMG) 29
Availability management (AVMT) 29
Service level management (SLME) 29

Service transition 30
Configuration management (CMG) 30
Change management (CMG) 30
Release management (RELG) 30

Service operation 31
System software (SYSW) 31
Security administration (SCAD) 31
Radio frequency engineering (RFEN) 31
Application support (ASUP) 31
IT Operations (ITOP) 31
Network control and operation (NTO) 32
Database administration (DBAD) 32
Network support (NRAS) 32
Problem management (PRMG) 32
Service desk and incident management (USUP) 32

Procurement & management support 33
Supply management 33
Procurement (PRDC) 33
Supplier relationship management (SURE) 33
Quality management 34

Quality management 34
Quality assurance (QUAS) 34
Quality standards (QSTD) 34
Compliance review (CORE) 34
Safety assessment (SASS) 34

Technology audit (TAUD) 35
Resource management 35
Programme and project support office (PRD) 35
Asset management (ASMG) 36
Client services management (CSMG) 36
Professional development (PDSM) 36
Recruiting (RSC) 36

Learning and development 37
Learning and development management (ITLM) 37
Learning resources creation and maintenance (LMCR) 37
Education and training delivery (ETDL) 37

Client interface 38
Sales and marketing 38
Marketing (MKTG) 38
Selling (SALE) 38

Client support 39
Account management (ACMG) 39
Sales support (SSUP) 39
Information strategy

Corporate governance of IT (GOVN)

The planning and implementation of initiatives and procedures to ensure that the IT services used by an organisation, and the technology which supports them, deliver value, are efficient in use of resources, and are compliant with all relevant legislation and regulations. The implementation of systems and IT controls to measure performance, manage risk and ensure that IT and the business work together to support the business purpose.

Level 7 Takes overall responsibility for development and communication of the organisation’s strategy for corporate governance of IT. Coordinates IT and Business resources to meet specific business objectives and create value for the stakeholders by improving the performance of the organisation, whilst maintaining the principles of professional standards, accountability, openness, equality and diversity and clarity of purpose. Ensures that the organisation’s business processes are compliant with relevant legislation, and that the organisation operates according to the principles embedded in ISO/IEC38500:2008.

Level 6 Coordinates IT and business resources to meet specific business objectives whilst maintaining the principles of professional standards, accountability, openness, equality and diversity and clarity of purpose. Takes responsibility for review of management processes (and decisions) to ensure that they are compliant with the organisation’s strategy for corporate governance of IT. Is familiar with ISO/IEC38500:2008 and the principles embedded within it. Ensures that effective controls are in place for internal delegation, audit and control and that the board receives timely reports and advice that will inform their decisions. Ensures that effective staffing and committee structures are in place to support the work of the board and that proper relationships exist between the organisation and the external auditors.

Information management (IRMG)

The overall management of the control and exploitation of all kinds of information, structured and unstructured, to meet the needs of an organisation. Control encompasses development and promotion of the strategy and policies covering the design of information structures and taxonomies, the setting of policies for the sourcing and maintenance of the data content, the management and storage of information in all its forms, and the analysis of information structure (including logical analysis of taxonomies, data and metadata). Includes the overall responsibility for compliance with regulations, standards and codes of good practice relating to information and documentation, records management, information assurance and data protection. Exploitation encompasses the use of information, whether produced internally or externally, to support decision-making and business processes. It includes management and decision making structures to ensure consistency throughout the organisation, information retrieval, combination, analysis, pattern recognition and interpretation.

Level 7 Establishes and communicates the organisation’s information management strategy, developing it as an integrated part of the business strategy. Ensures that the organisation’s business processes are correctly modelled and that the standards, processes and data architectures to support these are put in place, taking into account any relevant statutory, internal or external regulations.

Level 6 Maintains and communicates the organisation’s strategy for managing information, ensuring that uniformly recognised and accepted data definitions are developed and applied throughout the organisation. Models the processes and information required to support the organisation and devises corresponding standards, processes, data structures and architectures. Identifies the impact of any relevant statutory, internal or external regulations on the organisation’s use of information.

Level 5 Takes responsibility for planning effective information storage, sharing and publishing within the organisation. Maintains and communicates the organisation’s information management strategy. Designs and implements document and record systems, including classification, retrieval and retention processes. Maintains an inventory of information subject to data protection and other appropriate legislation. Reviews new business proposals and provides specialist advice on information management, including advice on and promotion of collaborative working and assessment and management of risk. Responsible for ensuring compliance with organisational policies and procedures and overall information management strategy.

Level 4 Takes responsibility for the accessibility, retrievability and protection of information. Provides advice on the transformation of information from one format/medium to another, where appropriate. Maintains and implements information handling procedures. Ensures the availability, integrity and searchability of information through the application of formal data structures and protection measures. Identifies and complies with relevant organisational policies and procedures, taking responsibility for assessing and managing risks around the use of information. Ensures that information is presented effectively.
Information systems coordination (ISCO)

Typically within a large organisation in which the information strategy function is devolved to autonomous units, or within a collaborative enterprise of otherwise independent organisations, the coordination of information strategy matters where the adoption of a common approach (such as shared services) would benefit the organisation.

Level 5 Establishes, maintains and communicates the organisation’s strategy for managing information and the policies, standards, processes and methods necessary to implement the strategy. Co-ordinates the promotion, development, acquisition and implementation of information systems, and represents information strategy issues on behalf of the entire organisation, with general management and external bodies.

Level 6 Maintains an awareness of the global needs of the organisation, and promotes the benefits that a common approach to IT deployment will bring to the business as a whole, among information systems and business management. Coordinates the promotion, development, acquisition and implementation of information systems and services in close liaison with those responsible for management and strategy.

Information policy formation (DPRO)

The development of policies, procedures, working practices and training to promote compliance with legislation regulating the holding, use and disclosure of personal data.

Level 6 Develops strategies for compliance with data protection legislation. Ensures that the policy and standards for compliance with data protection legislation are fit for purpose, current and correctly implemented. Reviews new business proposals and provides specialist advice on compliance issues. Acts as the organisation’s contact for the data protection authorities.

Level 5 Drafts and maintains the policy, standards and procedures for compliance with relevant legislation. Reviews information systems for compliance with legislation and specifies any required changes. Ensures that formal information access requests and complaints are dealt with according to approved procedures. Creates and maintains an inventory of data which is subject to data protection legislation. Prepares and reviews the periodic notification of registration details and submits it to the data protection authorities.

Information security (SCyT)

The management of, and provision of expert advice on, the selection, design, justification, implementation and operation of information security controls and management strategies to maintain the confidentiality, integrity, availability, accountability and relevant compliance of information systems

Level 6 Provides leadership and guidelines on information assurance security expertise for the organisation, working effectively with strategic organisational functions such as legal experts and technical support to provide authoritative advice and guidance on the requirements for security controls. Provides for restoration of information systems by ensuring that protection, detection, and reaction capabilities are incorporated.

Level 5 Conducts security risk assessments for business applications and computer installations; provides authoritative advice and guidance on security strategies to manage the identified risk. Investigates major breaches of security, and recommends appropriate control improvements. Interprets security policy and contributes to development of standards and guidelines that comply with this. Performs risk assessment, business impact analysis and accreditation for all major information systems within the organisation.

Level 4 Conducts security risk assessments for defined business applications or IT installations in defined areas, and provides advice and guidance on the application and operation of elementary physical, procedural and technical security controls (e.g. the key controls defined in ISO27001). Performs risk assessment, and business impact analysis for medium size information systems. Investigates suspected attacks and recommends remedial action.

Level 3 Applies and maintains specific security controls as required by organisational policy and local risk assessments to maintain confidentiality, integrity and availability of business information systems and to enhance resilience to unauthorised access. Recognises when an IT network/system has been attacked, and takes immediate action to limit damage. Determines when security issues should be escalated to a higher level. Demonstrates effective communication of security issues to business managers and others. Performs basic risk assessments for small information systems.

Information assurance (INAS)

The leadership and oversight of information assurance, setting high level strategy and policy, to ensure stakeholder confidence that risk to the integrity of information in storage and transit is managed pragmatically, appropriately and in a cost effective manner.

Level 7 Establishes and manages information assurance strategy and policies in accordance with the ISO/IEC 27000 series of standards. Plans and implements processes to take forward the strategy and policies. Provides leadership and guidelines for provision of Information assurance requirements across all of the organisation’s information and information systems.

Level 6 Develops corporate Information security policy, standards and guidelines. Prepares and maintains organisational strategies that address the evolving business risk and information control requirements. Operates as a focus for Information assurance governance expertise for the organisation, working effectively with strategic organisational functions such as legal experts and technical support to provide authoritative advice and guidance on the requirements for security controls.

Level 5 Provides authoritative advice and guidance on Information assurance strategies to manage the identified risk. Interprets security and assurance policies and contributes to development of standards and guidelines that comply with these.

Information analysis (INAN)

The ability to discover and quantify patterns in data of any kind, including numbers, symbols, text, sound and image. The relevant techniques include statistical and data mining or machine learning methods such as rule induction, artificial neural networks, genetic algorithms and automated machine learning.

Level 6 is responsible for the organisation’s commitment to efficient and effective analysis of textual/numerical/visual information.

Level 5 Specifies and applies appropriate analytical techniques and reports results to clients and management.

Level 4 Applies a variety of analytical and prescriptive techniques, in consultation with experts if appropriate, and with sensitivity to the limitations of the techniques.
Information content publishing (ICPM)

The management and tuning of the processes that collect, assemble and publish information, including in unstructured and semi-structured forms, for delivery to the user at the point at which it is needed.

Level 6 Develops strategies for the delivery of support information, including preferred media, rules for formatting content, and typographic strategy if relevant. Ensures that adequate procedures, standards, tools and resources are in place to ensure the appropriate quality of material developed by information publishers within the organisation. Takes responsibility for publishing strategy, including, for example, frameworks for the overall information structure and graphical style for substantial, complex or high-profile web sites. Directs the selection of appropriate tools, templates and standards for publication in various forms, appropriate to customer expectations.

Level 5 Develops standards and procedures to support content publishing. Designs overall support information structures. Takes responsibility for publishing assignments, including, for example, design of the overall structure and graphical style for substantial, complex or high-profile web sites. Selects appropriate tools, templates and standards for publication in various forms, appropriate to customer expectations (differentiating, for example, between needs such as optimisation and ease of modification). Sets design and coding standards, taking into account bandwidth and compatibility.

Level 4 Defines and manages content management processes to support content publishing. Designs overall support information structures. Takes responsibility for publishing assignments, including, for example, design of the overall structure and graphical style for substantial, complex or high-profile web sites. Selects appropriate tools, templates and standards for publication in various forms, appropriate to customer expectations. Specifies and creates content management processes to meet the needs of users. Uses agreed tools to make finished material available on appropriate platforms.

Level 3 Specifies and creates content management processes to meet the needs of users. Uses agreed tools to make finished material available on appropriate platforms.

Level 2 Develops an understanding of publication support activities such as drafting, illustrating, printing, etc. Develops a broad understanding of technical publication concepts, tools and methods and the way in which they are implemented. Obtains and analyses usage data and presents it effectively.

Advice and guidance

Consultancy (CNSL)

The provision of advice, assistance, and guidance in any area associated with the planning, procurement, provision, delivery, management, maintenance or effective use of information systems and their environments. Can deal with one specific aspect of IT and the business, or can be wide ranging and address strategic business issues.

Level 7 Takes responsibility for a significant consultancy business, including business development, sales to major clients, account management and managing the delivery of consultancy services over a wide range of topics, including the role of IT in the business.

Level 6 Manages provision of specialist knowledge over a range of topics including the role of IT in the business; in own areas of expertise provides advice and guidance influencing the effectiveness of the organisation’s business processes.

Level 5 Provides well-informed advice, typically on more than one topic, taking steps to ensure that it is properly understood and appropriately explained, to enhance the effectiveness of significant activities.

Technical specialism (TECH)

The management of, and provision of expert advice on a specific technical specialism. Examples of specialism can be any technology, technique, method, product or application area.

Level 7 Provides organisational leadership and guidelines to promote the development and exploitation of technical knowledge in the organisation.

Level 6 Maintains an in-depth knowledge of specific technical specialisms, and provides expert advice regarding their application. Can supervise specialist technical consultancy. The specialism can be any aspect of information or communication technology, technique, method, product or application area.

Level 5 Maintains knowledge of specific technical specialisms, provides detailed advice regarding their application and executes specialised tasks. The specialism can be any area of information or communication technology, technique, method, product or application area.

Business/IT strategy and planning

Research (RSCH)

The advancement of knowledge in one or more fields of IT by innovation, experimentation, evaluation and dissemination, carried out in pursuit of a predetermined set of research goals.

Level 6 Sets research goals, makes effective proposals for the investment of funds in research projects, plays a major role in the development of the employing organisation’s research policy, and supervises the work of a research function. Gains an appreciation of current research work over a substantial area of IT, and takes a leading part in professional activities outside own employing organisation.

Level 5 Agrees research goals and generates original and worthwhile ideas in a specialised IT field. Develops, revises and constructively criticises ideas, possibly leading a small research team, making necessary observations and tests and carrying them through to a full practical demonstration, wherever viable and feasible. Presents papers at conferences and writes journal papers of publication quality and/or presents reports, of an equivalent technical standard, to research clients.

Level 4 Contributes to research goals and builds on and refines appropriate outline ideas for the evaluation, development, demonstration and implementation of research. Uses available resources to gain an up-to-date knowledge of any relevant IT field. Reports on work carried out and may contribute significant sections of material of publication quality. Contributes to research plans and identifies appropriate opportunities for publication and dissemination of research findings.

Level 3 Within given research goals, builds on and refines appropriate outline ideas for research, i.e. evaluation, development, demonstration and implementation. Uses available resources to gain an up-to-date knowledge of any relevant IT field. Reports on work carried out and may contribute sections of material of publication quality.
Innovation (INOV)

The capability to recognise and exploit business opportunities provided by IT, (for example, the Internet), to ensure more efficient and effective performance of organisations, to explore possibilities for new ways of conducting business and organisational processes, and to establish new businesses.

Level 6 Recognises potential strategic application of IT, and initiates investigation and development of innovative methods of exploiting IT assets, to the benefit of organisations and the community. Plays an active role in improving the interface between the business and IT.

Business process improvement (BPRE)

The identification of new and alternative approaches to performing business activities. The analysis of business processes, including recognition of the potential for automation of the processes, assessment of the costs and potential benefits of the new approaches considered and, where appropriate, management of change, and assistance with implementation.

Level 7 Identifies, proposes, initiates and leads significant improvement programmes, taking responsibility for the quality and appropriateness of the work performed, and the realisation of measurable business benefits. Modifies existing process improvement approaches and/or develops new approaches to achieve improvement.

Level 6 Analyses business processes; identifies alternative solutions, assesses feasibility, and recommends new approaches, typically seeking to exploit technology components. Evaluates the financial, cultural, technological, organisational and environmental factors which must be addressed in the change programme. Establishes requirements for the implementation of significant changes in organisational mission, business functions and process, organisational roles and responsibilities, and scope or nature of service delivery.

Level 3 Analyses business processes; identifies alternative solutions, assesses feasibility, and recommends new approaches. Contributes to evaluating the factors which must be addressed in the change programme. Helps establish requirements for the implementation of changes in the business process.

Enterprise architecture (STPL)

The creation, communication and improvement of the key principles, methods and models that describe the enterprise’s future state and enable its evolution. The scope of the enterprise architecture process involves the interpretation of business goals, drivers and strategies, the assessment of the current capabilities of the people, processes, information and technology of the enterprise, and the determination of how these relate to one another and to the external environment. The process supports the formation of the constraints, standards and guiding principles required to define, assure and govern the required evolution and the transitional processes that facilitate predictable transition to the intended state through information-enabled change in the organisation’s structure, business processes, information systems and infrastructure.

Level 7 Directs the creation and review of an enterprise capability strategy to support the strategic requirements of the business. Identifies the business benefits of alternative strategies. Directs development of enterprise-wide architecture and processes which ensure that the strategic application of change is embedded in the management of the organisation. Ensures compliance between business strategies, enterprise transformation activities and technology directions, setting strategies, policies, standards and practices.

Level 6 Leads the creation and review of a systems capability strategy which meets the strategic requirements of the business. Identifies the business benefits of alternative strategies. Develops enterprise-wide architecture and processes which ensure that the strategic application of change is embedded in the management of the organisation. Establishes the contribution that technology can make to business objectives, conducting feasibility studies, producing high-level business models, preparing business cases, taking into account as necessary any implications of systems considered. Ensures compliance between business strategies, enterprise transformation activities and technology directions, setting strategies, policies, standards and practices.

Level 3 Contributes to the creation and review of a systems capability strategy which meets the strategic requirements of the business. Develops models and plans to drive forward the strategy, taking advantage of opportunities to improve business performance. Takes responsibility for investigative work to determine requirements and specify effective business processes, through improvements in information systems, data management, practices, procedures, organisation and equipment.

Business risk management (BURM)

The planning and implementation of organisation-wide processes and procedures for the management of operational risk.

Level 6 Plans and manages the implementation of organisation-wide processes and procedures, tools and techniques for the identification, assessment, and management of risk inherent in the operation of business processes and of potential risks arising from planned IT-enabled change.

Level 5 Carries out risk assessment within a defined functional or technical area of business. Uses consistent processes for identifying potential risk events, quantifying and documenting the probability of occurrence and the impact on the business. Refers to domain experts for guidance on specialised areas of risk, such as architecture and environment. Co-ordinates the development of countermeasures and contingency plans.
Technical strategy and planning

Solution architecture (ARCH)

The development and communication of structural frameworks (hardware, software and other components) which meet the present and future requirements of an organisation, and the interrelationships between these components. The design of solutions required to automate business processes and resolve business issues in a particular business or functional area. The provision of direction and guidance on all technical aspects of the development of, and modifications to, information systems to ensure that they take account of relevant architectures, strategies, policies, standards and practices and that existing and planned systems and IT infrastructure remain compatible.

Level 6 Leads the development of architectures for complex systems, ensuring consistency with specified requirements agreed with both external, and internal customers. Takes full responsibility for the balance between functional, service quality and systems management requirements within a significant area of the organisation. Establishes policy and strategy for the selection of systems architecture components, and co-ordinates design activities, promoting the discipline to ensure consistency. Ensures that appropriate standards (corporate, industry, national and international) are adhered to. Within a business change programme, manages the target design, policy and standards, working proactively to maintain a stable, viable architecture and ensure consistency of design across projects within the programme.

Level 5 Uses appropriate tools, including logical models of components and interfaces, to contribute to the development of systems architectures in specific business or functional areas. Produces detailed component specifications and translates these into detailed designs for implementation using selected products. Within a business change programme, assists in the preparation of technical plans and cooperates with business assurance and project staff to ensure that appropriate technical resources are made available. Provides advice on technical aspects of system development and integration (including requests for changes, deviations from specifications, etc.) and ensures that relevant technical strategies, policies, standards and practices are applied correctly.

Emerging technology monitoring (EMRG)

The identification of new and emerging hardware, software and communication technologies and products, services, methods and techniques and the assessment of their relevance and potential value to an organisation. The promotion of emerging technology awareness among staff and business management.

Level 6 Co-ordinates the identification and assessment of new and emerging hardware, software and communication technologies, products, methods and techniques. Evaluates likely relevance of these for the organisation. Provides regular briefings to staff and management.

Level 5 Monitors the market to gain knowledge and understanding of currently emerging technologies. Identifies new and emerging hardware and software technologies and products based on own area of expertise, assesses their relevance and potential value to the organisation, contributes to briefings of staff and management.

Continuity management (COPL)

The provision of service continuity planning and support. This includes the identification of information systems which support critical business processes, the assessment of risks to those systems’ availability, integrity and confidentiality and the co-ordination of planning, designing, testing and maintenance procedures and contingency plans to address exposures and maintain agreed levels of continuity. This function should be performed as part of, or in close cooperation with, the function which plans business continuity for the whole organisation.

Level 5 Owns the service continuity planning process and leads the implementation of resulting plans. Coordinates the identification by specialists across the organisation of information and communication systems which support the critical business processes, and the assessment of risks to the availability, integrity, and confidentiality of those systems. Evaluates the critical risks associated with these systems and identifies priority areas for improvement. Coordinates the planning, designing, testing of maintenance procedures and contingency plans to address exposure to risk and ensure that agreed levels of continuity are maintained.

Level 4 Provides input to the service continuity planning process and implements resulting plans.

Software development process improvement (SPIM)

The provision of advice, assistance and leadership in improving the quality of software development, by focusing on process definition, management, repeatability and measurement. The facilitation of improvements by changing approaches and working practices, typically using recognised models such as the Capability Maturity Model Integration (CMMI), the Software Process Improvement and Capability Determination Model (SPICE), Test Process Improvement (TPI) and Test Maturity Model (TMM).

Level 7 Liaises with client functions to establish business requirements and identifies, proposes, initiates and leads significant improvement programmes. Manages the quality and appropriateness of work performed and delivers measurable business benefits. Modifies existing software process improvement approaches and/or develops new approaches to achieving improvement.

Level 6 Plans and manages the evaluation of software processes. Identifies, proposes, and initiates software process improvement activities within the organisation, devising solutions. Takes action to exploit opportunities that will have a measurable effect on operational effectiveness, with associated benefits to the business.

Level 5 Develops and maintains a detailed knowledge of software process improvement. Contributes effectively to identifying new areas of software process improvement within the organisation. Carries out software process improvement assignments, justified by measurable business benefits.
Network planning (NTPL)

The creation and maintenance of overall network plans, encompassing the communication of data, voice, text and image, in the support of an organisation’s business strategy. This includes participation in the creation of service level agreements and the planning of all aspects of infrastructure necessary to ensure provision of network services to meet such agreements. Physical implementation may include copper wire, fibre-optic, wireless, or any other technology.

**Level 6** Creates and maintains overall network plans to support the organisation’s business strategy, agrees service level agreements with customers and plans all aspects of the infrastructure necessary to ensure provision of network services to meet such agreements.

**Level 5** Creates and maintains network plans for own area of responsibility, contributes to setting service level agreements, and plans the infrastructure necessary to provide the network services to meet such agreements.

Methods & tools (METL)

Ensuring that appropriate methods and tools for the planning, development, testing, operation, management and maintenance of systems are adopted and used effectively throughout the organisation.

**Level 6** Sets direction and leads in the introduction and use of techniques, methodologies and tools, to match overall business requirements (both current and future), ensuring consistency across all user groups.

**Level 5** Promotes and ensures use of appropriate techniques, methodologies and tools.

**Level 4** Provides expertise and support on use of methods and tools.
Business change implementation

Portfolio management (POMG)

The systematic appraisal, evaluation and management of the IT portfolio of programmes and projects, in support of specific business strategies. The development and application of a portfolio management framework to ensure that all interdependencies are managed and that standards are maintained across the lifecycle of different programmes. The delivery and documentation of objective and independent investment appraisal and project review throughout the programme lifecycle. The consistent application of the project / programme delivery lifecycle, pre-approval check of business cases, putting projects/programmes into exception when they are unsafe and to escalate/influence senior management to take corrective action. Supporting the continuous improvement through the review of project/programme structure, resourcing, risks, funding, and dependencies.

**Level 7**

Sets and maintains the portfolio management approach across the IT function. Has an in-depth knowledge of both the business and IT strategies and what objectives and business benefit must be fulfilled. Ensures portfolio design is aligned with business strategy and is making the maximum possible contribution to the strategic goals and targets of the organisation. Plans and initiates portfolio definition and management activities across the full programme and project lifecycle. Leads the determination of business requirements and translates requirements into operational plans. Monitors and reviews the economics of all programme processes, and ensures there are effective governance arrangements, supported by comprehensive reporting. Evaluates changes to programme management practices and initiates improvement to the organisation’s practices. Ensures consistent application of standards for the project / programme delivery lifecycle, pre-approval check of business cases, and putting projects/programmes into exception when they are unsafe. Escalates/engages/influences senior management to take corrective action. Leads the review of project/programme structure, resourcing, risks, funding, and dependencies.

**Level 6**

Leads the development of the portfolio roadmap and ongoing portfolio management activity. Ensures that all projects deliver the desired objective or benefit, that each project contributes to the overall achievement of the portfolio and that portfolio management is informed by an awareness of current technical developments. Plans and coordinates a portfolio of programmes and portfolio management activities to ensure the effective implementation of interrelated programmes/projects from business case initiation to final operational stage. Plans, schedules, monitors and reports on activities related to the portfolio of programmes. Monitors progress to ensure each project is performing as expected. Determines, monitors and reviews all programme and inter-programme economics to ensure that the portfolio of programmes/projects is managed to realise business benefits. Provides general and specific advice. Presents key information at each level within the organisation as appropriate. Monitors the standards for the project / programme delivery lifecycle. Notifies projects/programmes of exceptions when they are unsafe and reports to senior management for corrective action. Identifies issues with project/programme structure, resourcing, risks, funding and dependencies.

**Level 5**

Ensures that programme and project teams adhere to the agreed portfolio management approach and timetable and that they provide the appropriate information to agreed targets of timelines and accuracy. Produces reports as appropriate for portfolio governance, including making recommendations for changes to the portfolio.

Programme management (PGMG)

The identification, planning and coordination of a set of related projects within a programme of business change, to manage their interdependencies in support of specific business strategies. The maintenance of a strategic view over the set of projects, providing the framework for implementing business initiatives or large-scale change, by conceiving, maintaining and communicating a vision of the outcome of the programme. The vision, and the means of achieving it, may change as the programme progresses.

**Level 7**

Aligns the objectives for information systems activities with business change objectives, and authorises the selection and planning of all related projects and activities. Plans, directs, and co-ordinates activities to manage and implement complex interrelated projects from concept/proposal initiation to final operational stage. Plans, schedules, monitors, and reports on activities related to the programme. Leads the programme teams in determining business requirements and translating requirements into operational plans. Determines, monitors, and reviews all programme economics, including programme costs, operational budgets, staffing requirements, programme resources, and programme risk, ensuring that there are appropriate and effective governance arrangements, supported by comprehensive reporting. Evaluates changes to programme management practices and initiates improvement to organisation practices.
**Level 6**  Plans, directs, and co-ordinates activities to manage and implement interrelated projects from contract/proposal initiation to final operational stage; plans, schedules, monitors, and reports on activities related to the programme. Leads the programme team(s) in determining business requirements and translating requirements into operational plans. Determines, monitors, and reviews all programme economics to include programme costs, operational budgets, staffing requirements, programme resources, and programme risk. Ensures that programme is managed to realise business benefits and that programme management is informed by an awareness of current technical developments.

**Project management (PRMG)**

The management of projects, typically (but not exclusively) involving the development and implementation of business processes to meet identified business needs, acquiring and utilising the necessary resources and skills, within agreed parameters of cost, timescales, and quality.

**Level 7**  Sets organisational strategy governing the direction and conduct of project management, including application of appropriate methodologies. Authorises the management of large scale projects. Leads project planning, scheduling, controlling and reporting activities for strategically high impact, high risk projects. Manages risk and ensures that solutions to problems are implemented in line with change control processes.

**Level 6**  Takes full responsibility for the definition, documentation and successful completion of complex projects (typically greater than 12 months, with significant business, political, or high profile impact, and high risk dependencies), ensuring that realistic project, quality, change control and risk management processes are maintained. Monitors and controls resources, revenue and capital costs against the project budget and manages expectations of all project stakeholders.

**Level 5**  Takes full responsibility for the definition, documentation and satisfactory completion of medium-scale projects (typically lasting 6–12 months, with direct business impact, teams of 3–5 and firm deadlines). Identifies, assesses and manages risks to the success of the project. Ensures that realistic project and quality plans are prepared and maintained and provides regular and accurate reports to stakeholders as appropriate. Ensures Quality reviews occur on schedule and according to procedure. Manages the change control procedure, and ensures that project deliverables are completed within planned cost, timescale and resource budgets, and are signed off. Provides effective leadership to the project team, and takes appropriate action where team performance deviates from agreed tolerances.

**Level 4**  Defines, documents and carries out small projects (typically less than six months, with a small team, limited budgets, no interdependency with other projects, and no significant strategic impact), actively participating in all phases. Identifies, assesses and manages risks to the success of the project. Prepares realistic project and quality plans and tracks activities against the plans, providing regular and accurate reports to stakeholders as appropriate. Monitors costs, timescales and resources used, and takes action where these deviate from agreed tolerances. Ensures that own projects are formally closed and, where appropriate, subsequently reviewed and that lessons learned are recorded.

**Business change management**

Business analysis (BUAN)

The methodical investigation, analysis, review and documentation of all or part of a business in terms of business functions and processes, the information used and the data on which the information is based. The definition of requirements for improving any aspect of the processes and systems and the quantification of potential business benefits. The creation of viable specifications and acceptance criteria in preparation for the construction of information and communication systems.

**Level 6**  Takes full responsibility for business analysis within a significant segment of an organisation where the advice given and decisions made will have a measurable impact on the profitability or effectiveness of the organisation. Establishes the contribution that technology can make to business objectives, defining strategies, validating and justifying business needs, conducting feasibility studies, producing high level and detailed business models, preparing business cases, overseeing development and implementation of solutions, taking into account the implications of change on the organisation and all stakeholders. Guides senior management towards accepting change brought about through process and organisational change.

**Level 5**  Takes responsibility for investigative work to determine business requirements and specify effective business processes, through improvements in information systems, information management, practices, procedures, and organisation change. Applies and monitors the use of required modelling and analysis tools, methods and standards, giving special consideration to business perspectives. Conducts investigations at a high level for strategy studies, business requirements specifications and feasibility studies. Prepares business cases which define potential benefits, options for achieving these benefits through development of new or changed processes, and associated business risks. Identifies stakeholders and their business needs.

**Level 4**  Investigates operational requirements, problems, and opportunities, seeking effective business solutions through improvements in automated and non-automated components of new or changed processes. Assists in the analysis of stakeholder objectives, and the underlying issues arising from investigations into business requirements and problems, and identifies options for consideration. Identifies potential benefits, and available options for consideration. Works with clients/users in defining acceptance tests.
**Level 3** Investigates operational needs and problems, and opportunities, contributing to the recommendation of improvements in automated and non-automated components of new or changed processes and organisation. Assists in defining acceptance tests for these recommendations.

**Business process testing (BPTS)**

The planning, design, management, execution and reporting of business process tests and usability evaluations. The application of evaluation skills to the assessment of the ergonomics, usability and fitness for purpose of defined processes. This includes the synthesis of test tasks to be performed (e.g. from statement of user needs and user interface specification), the design of an evaluation programme, the selection of user samples, the analysis of performance, and inputting results to the development team.

**Level 4** Specifies and develops test scenarios to test that new/updated processes deliver improved ways of working for the end user at the same time as delivering efficiencies and planned business benefits. Records and analyses test results, and reports any unexpected or unsatisfactory outcomes. Uses test plans and outcomes to specify user instructions.

**Change implementation planning and management (CIPM)**

The definition and management of the process for deploying and integrating IT capabilities into the business in a way that is sensitive to and fully compatible with business operations.

**Level 5** Ensures that there is a business perspective on how the new technical capabilities will be delivered to business processes, systems, and structures to the ‘to-be’ processes, systems, and structures. Identifies business improvement opportunities and plans to activate these mechanisms at the required level of commitment, prior to going live.

**Benefits management (BENM)**

Monitoring for the emergence of anticipated benefits (typically specified as part of the business case for a change programme or project). Action (typically by the programme management team) to optimise the business impact of individual and combined benefits.

**Level 6** Conducts business impact assessment to identify how the changes from the ‘as-is’ processes, systems, and structures to the ‘to-be’ processes, systems, and structures impact specific organisations and roles. Outlines how the organisation structure, jobs, teams and roles need to change to enable the future business processes. Aligns existing jobs/organisational structures to new processes.

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Organisation design and implementation (ORDI)

The design and implementation of an integrated organisation structure, role profiles, culture, performance measurements, competencies and skills, to facilitate strategies for change and for training to enable the change. The identification of key attributes of the culture and the key principles and factors for addressing location strategy.

**Level 6** Anticipates major changes affecting the organisation, and mobilises resources to implement changes. Advises business managers about the implications of planned IT-enabled change on the business, on processes and on customers. Initiates the definition of new organisation boundaries, and creates future organisation design, including location strategy and the number of locations required. Outlines performance measurement objectives and the high level implementation approach.
Business modelling (BSMO)

The production of abstract or distilled representations of real-world/business situations to aid the communication and understanding of existing, conceptual or proposed scenarios. Predominantly focused around the representation of processes, data, organisation and time. Models may be used to represent a subject at varying levels of detail/decomposition.

**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.

**Level 5** Produces models in support of business strategy. Has in-depth knowledge of a broad range of industry-wide modelling techniques. Advises on the choice of techniques and approach and influences customers accordingly. Capable of developing bespoke models for unusual contexts. Responsible for planning and co-ordinating team modelling activities and for ensuring the quality of their work.

**Level 4** Conducts advanced modelling activities for significant change programmes and across multiple business functions. Has an in-depth knowledge of organisation-standard 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 the modelling approach to be used. Obtains input from and communicates modelling results to senior managers for agreement.

**Level 3** Conversant with techniques covering 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 to models produced. Reviews resulting models with stakeholders and gains resolution to resultant issues.

**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 with input from subject matter experts and communicates the results back to them for review and confirmation.

Relationship management

**Stakeholder relationship management (RLMT)**

The coordination of relationships with and between key stakeholders, during the design, management and implementation of business change.

**Level 6** Initiates and influences relationships with and between key stakeholders. Acts as a single point of contact for senior stakeholders and influencers. Supports effective business change by building relationships with and between senior strategists, planners, designers and operational business partners. Initiates procedures to improve relations and open communications with and between stakeholders. Initiates and has management oversight of processes to manage and monitor relationships including lessons learned and the feedback loop to and from business change teams.

**Level 5** Develops and manages one or more defined communication channels and/or stakeholder groups. Initiates communications between stakeholders, acting as a single point of contact for defined groups. Facilitates open communication and discussion between stakeholders. Captures and disseminates technical and business information. Facilitates the business change decision-making processes, and the planning and implementation of change.
Solution development and implementation

Systems development

Systems development management (DLMG)

The management of resources in order to plan, estimate and carry out programmes of systems development work to time, budget and quality targets and in accordance with appropriate standards.

Level 7 Sets strategy for resource management within systems development, authorises the allocation of resources for programmes of system development projects, and maintains an overview of the contribution of the programme to organisational success.

Level 6 Identifies and manages the resources necessary for all stages (planning, estimation, execution) of individual systems development projects to ensure technical, financial and quality targets are met.

Level 5 Agrees, with business management, systems development projects which support the organisation’s objectives and plans. Ensures that management is both aware of and able to provide the required resources, and that available resources are properly utilised and accounted for. Monitors and reports on the progress of systems development projects, using appropriate quality assurance processes to ensure that projects are carried out in accordance with agreed standards, methods and procedures.

Data analysis (DTAN)

The investigation, evaluation, interpretation and classification of data, in order to define and clarify information structures which describe the relationships between real world entities. Such structures facilitate the development of software systems, links between systems or retrieval activities.

Level 5 Sets standards for data analysis tools and techniques, advises on their application, and ensures compliance. Manages the investigation of corporate data requirements, and co-ordinates the application of data analysis and data modelling techniques, based upon a detailed understanding of business processes, to establish, modify or maintain data structures and quality assurance techniques, based upon a detailed understanding of business processes, to establish, modify or maintain data structures and associated components.

Level 4 Investigates corporate data requirements, and applies data analysis, data modelling and quality assurance techniques, to establish, modify or maintain data structures and their associated components (entity descriptions, relationship descriptions, attribute definitions). Provides advice and guidance to database designers and others using the data structures and associated components.

Level 3 Applies data analysis, data modelling, and quality assurance techniques, based upon a detailed understanding of business processes, to establish, modify or maintain data structures and associated components (entity descriptions, relationship descriptions, attribute definitions). Advises database designers and other application development team members on the details of data structures and associated components.

Level 2 Applies data analysis and data modelling techniques to establish, modify or maintain a data structure and its associated components (entity descriptions, relationship descriptions, attribute definitions).

Requirements definition and management (REQM)

The definition and management of the business goals and scope of change initiatives. The specification of business requirements to a level that enables effective delivery of agreed changes.

Level 6 Determines policy on discovery, analysis and documentation of requirements. Defines requirements standards and quality targets for an organisation in agreement with key stakeholders. Organises scoping and business priority setting for strategic business changes involving business policy-makers and direction setters.

Level 5 Facilitates scoping and business priority setting for large or complex changes, engaging senior stakeholders as required. Selects the most appropriate means of representing business requirements in the context of a specific change initiative. Drives the requirements elicitation process where necessary, identifying what stakeholder input is required. Obtains formal agreement from a large and diverse range of potential senior stakeholders and recipients to the scope and requirements, plus the establishment of a baseline on which delivery of a solution can commence. Takes responsibility for the investigation and application of changes to programme scope. Identifies the impact on business requirements of external inputs affecting a programme or project.

Level 4 Facilitates scoping and business priority setting for change initiatives of medium size and complexity. Contributes to selection of the most appropriate means of representing business requirements in the context of a specific change initiative, ensuring traceability back to source. Discovers and analyses requirements for fitness for purpose as well as adherence to business objectives and consistency, challenging positively as appropriate. Obtains formal agree-
System design balances functional, service quality, manages associated risks. Ensures that the on major design options and assesses and to policy for selection of architecture compo.

Systems design (DESIGN)
The specification and design of information systems and their components to meet defined business needs, retaining compatibility with enterprise and solution architectures.

Level 3 Defines scope and business priorities for small-scale changes and may assist in larger scale design, scoping exercises. Identifies and discovers requirements from operational management and other stakeholders. Selects appropriate techniques for the elicitation of detailed requirements taking into account the nature of the required changes, established practice and the characteristics and culture of those providing the requirements. Specifies and documents business requirements as directed, ensuring traceability back to source. Analyses them for adherence to business objectives and for consistency, challenging positively as appropriate. Works with stakeholders to prioritise requirements.

Level 2 Uses established techniques as directed to identify current problems and elicit, specify and document business functional, data and non-functional requirements for simple subject areas with clearly-defined boundaries. Assists in more complex requirements activities and with the processes for establishing agreed baselines for change and managing the assessment and application of requested changes to those requirements.

Level 4 Recommends/designs structures and tools for systems which meet business needs. Delivers technical visualisation of proposed applications for approval by customer and execution by system developers. Translates logical designs into physical designs, and produces detailed design documentation. Maps work to user specification and removes errors and deviations from specification to achieve user-friendly processes.

Level 1 Translates requirements into design and physical design documentation. Designs and implements the interfaces between major components. Provides reflective and objective evaluation of the methods and tools used, and identifies and implements improvements.

Network design (NTDS)
The production of network designs and design policies, strategies, architectures and documentation, covering voice, data, text, e-mail, facsimile and image, to support business requirements and strategy. This may incorporate all aspects of the communications infrastructure, internal and external, mobile, public and private, Internet, intranet and call centres.

Level 6 Takes responsibility for major aspects of network specification and design within the organisation. Produces network design policies, philosophies and criteria covering connectivity, capacity, interfacing, security, resilience, recovery, access and remote access.

Level 5 Produces outline system designs and specifications, and overall architectures, topologies, configuration databases and design documentation of networks and networking technology within the organisation. Specifies user/system interfaces, including validation and error correction procedures, processing rules, access, security and audit controls. Assesses associated risks, and specifies recovery routines and contingency procedures. Translates logical designs into physical designs.

Database/repository design (DBDS)
The specification, design and maintenance of mechanisms for storage and access to both structured and unstructured information, in support of business information needs.

Level 6 Sets strategies for effective use of data and database technology taking account of the complex interrelations between hardware/software. Provides specialist expertise in the development, use or operation of database management system tools and facilities. Provides expert knowledge in the selection, provision and use of database architectures, software and facilities, typically taking responsibility for a team of technical staff.

Level 5 Maintains and applies up to date, specialist knowledge of database concepts, object and data modelling techniques and design principles, and a detailed knowledge of the full range of database architectures, software and facilities available. Analyses data requirements, to establish, modify or maintain a data model. Takes account of specialist requirements (e.g. geographic information systems). Interprets the model into an appropriate database schema within set policies. Demonstrates, installs and commissions selected products.

Level 4 Develops and maintains specialist knowledge of database concepts, object and data modelling techniques and design principles and a detailed knowledge of database architectures, software and facilities. Analyses data requirements to establish, modify or maintain an object/data model. Evaluates potential solutions, demonstrating, installing and commissioning selected products.

Level 3 Develops specialist knowledge of database concepts, object and data modelling techniques and design principles. Translates object and data models into appropriate database schemas within design constraints, interprets installation standards to meet project needs and produces database components as required. Evaluates potential solutions, demonstrating, installing and commissioning selected products.

Level 2 Translates and implements simple development project requirements into physical database structures. Assesses proposed changes to object and data structures and implements these changes in physical databases. Assists in database management system support activities for operational database systems.

Level 1 Performs small-scale changes to defined design documentation and implements changes to physical databases. Assists in assessing, specifying and documenting changes to systems and their components.
Programming/software development (PROG)

The design, creation, testing and documenting of new and amended programs from supplied specifications in accordance with agreed standards.

Level 5
Sets standards for programming tools and techniques, advises on their application and ensures compliance. Takes technical responsibility for all stages in the software development process. Prepares project and quality plans and advises systems development teams. Assigns work to programming staff and monitors performance, providing advice, guidance and assistance to less experienced colleagues as required.

Level 4
Designs, codes, tests, corrects and documents large and/or complex programs and program modifications from supplied specifications using agreed standards and tools, to achieve a well engineered result. Takes part in reviews of own work and leads reviews of colleagues’ work.

Level 3
Designs, codes, tests, corrects, and documents moderately complex programs and program modifications from supplied specifications, using agreed standards and tools. Conducts reviews of supplied specifications, with others as appropriate.

Level 2
Designs, codes, tests, corrects, and documents simple programs, and assists in the implementation of software which forms part of a properly engineered information or communications system.

Safety engineering (SFEN)

The application of appropriate methods to assure safety during all lifecycle phases of safety-related systems developments, including maintenance and re-use. These include safety hazard and risk analysis, safety requirements specification, safety-related system architectural design, formal method design, safety validation and verification, and safety case preparation.

Level 6
Takes full responsibility for hazard analysis and risk assessment, safety-related system architectural design, safety assurance planning and compliance and safety case preparation on systems up to the highest safety integrity levels. Takes responsibility for the safety-related aspects of multiple complex or high safety integrity level projects, providing effective leadership to team members.

Level 5
Identifies and analyses hazards and contributes to the identification and evaluation of risk reduction measures, ensuring these are adequately documented. Specifies safety-related systems architectures up to the highest safety integrity levels. Develops and maintains project safety assurance plans, monitors compliance and ensures that safety assurance evidence is gathered for safety case preparation.

Level 4
Contributes to the identification, analysis and documentation of hazards, and to the capture, evaluation and specification of safety requirements. Analyses and documents safety validation results. Contributes to the development and maintenance of project safety assurance plans, and gathers safety assurance evidence for safety case preparation.

Level 3
Assists with the collection of safety assurance evidence, undertaking all work in accordance with agreed safety, technical and quality standards, using appropriate methods and tools. Documents the results of hazard and risk analysis activities.

Information content authoring (INCA)

The planning, design and creation of textual information, supported where necessary by graphical content. This material may be delivered electronically (for example, as collections of web pages) or otherwise. This skill includes managing the quality assurance and authoring processes for the material being produced.

Level 6
Manages documentation projects, ensuring that adequate procedures, standards, tools and resources are in place and implemented to ensure the appropriate quality of material developed by document content creators within the organisation. Manages relationships with stakeholders, ensuring that they receive the information that they need. Takes full responsibility for material development and controls.

Level 5
Designs overall support information package plans. Manages small teams of authors, ensuring that they are aware of and work to relevant standards. Advises on appropriate documentation formats and documentation systems to satisfy requirements. Organises reviews of draft material.

Level 4
Determines the documentation needs of clients. Designs individual documentation plans. Creates drafts for review of information format and content. Organises the production and distribution of approved documentation items. Designs the content and appearance of complex information deliverables (e.g. web pages) in collaboration with clients/users.

Level 3
Assists with clients/users to clarify details of requirements. Designs, creates and tests moderately complex, well-engineered information deliverables with specified content and layout. Manages the configuration of documentation items and files, within own area of responsibility.

Testing (TEST)

The concurrent lifecycle process of engineering, using and maintaining testware (test cases, test scripts, test reports, test plans, etc) to measure and improve the quality of the software being tested. Testing embraces the planning, design, management, execution and reporting of tests, using appropriate testing tools and techniques and conforming to agreed standards (such as ISO 29119), to ensure that new and amended systems, configurations, packages, or services, together with any interfaces, perform as specified.

Level 6
Determines testing policy, and owns the supporting processes. Takes responsibility for the management of all testing activities within a development or integration project or programme. Manages all risks associated with the testing and takes preventative action when any risks become unacceptable. Advises and advises on the practicality of testing process alternatives. Identifies improvements to the process and assists in their implementation.

Level 5
Coordinates and manages planning of the system and acceptance tests within a development or integration project or programme. Takes responsibility for integrity of testing and acceptance activities and coordinates the execution of these activities. Provides authoritative advice and guidance on any aspect of test planning and execution. Defines and communicates the test strategy for the project. Manages all phases of testing, including plans, resources, costs, timescales, test deliverables and auditability. Assesses suppliers’ development and testing capabilities. Selects project testing standards for all phases, influencing all parties to conform to these standards. Manages the client
relationship with respect to all testing matters. Identifies process improvements, contributes to corporate testing standards and definition of best practice.

**Level 4**
 Defines and creates test cases from analysis of both functional and non-functional specifications (such as reliability, efficiency, usability, maintainability and portability). Produces test scripts, materials and regression test packs to test new and amended software or services. Specifies requirements for environment, data, resources and tools. Interprets, executes, and documents complex test scripts using agreed methods and standards. Records and analyses actions and results, and maintains a defect register. Reviews test results and modifies tests if necessary. Provides reports on progress, anomalies, risks and issues. Produces reports on system quality and metrics on test cases.

**Level 3**
 Reviews requirements and specifications, and defines test requirements for smaller projects. Creates simple test cases and test packs. Interprets and executes moderately complex test scripts, mapping back to pre-determined criteria, recording and reporting outcomes. Provides specialist advice to support others. Analyses and reports test activities and results. Identifies and reports issues and risks.

**Level 2**
 Defines test requirements for smaller projects. Creates test scripts and supporting data, working to the specifications provided. Interprets, executes and records simple test cases in accordance with established plans. Analyses and reports test activities and results. Identifies and reports issues and risks.

**Human factors**

**Systems ergonomics (HCEV)**

The iterative development of the allocation of function (between the human, machine and organisational elements of systems), user interaction and job design. The optimisation of accessibility and usability, on user requirements, the context of use, relevant ergonomics knowledge and feedback from evaluations of prototypes.

**Level 6**
 Is responsible for organisational commitment to high standards in human factors. Specifies ergonomics standards and methods to meet organisational objectives.

**Level 5**
 Advises what ergonomics tools and methods to use in order to allocate functions, design user interaction and users' jobs.

**Level 4**
 Specifies how to use ergonomics tools and methods to allocate functions, design user interaction and users' jobs.

**Level 3**
 Applies ergonomics tools and methods to allocate functions, design user interaction and users' jobs.

**Usability requirements analysis (UNAN)**

The establishment, clarification and communication of non-functional requirements for usability (for example, screen design/layout/consistency, response times, capacity). The analysis of the characteristics of users and their tasks, and the technical, organisational and physical environment in which products or systems will operate.

**Level 5**
 Advises on tools and methods to be used and clarifies and communicates the non-functional requirements of system users, their characteristics and tasks, and the technical, organisational and physical environment in which products or systems will operate.

**Level 4**
 Selects and uses tools and methods to establish, clarify and communicate the non-functional requirements of system users, their characteristics and tasks, and identifies the technical, organisational and physical environment in which a complex product or system will operate.

**Level 3**
 Applies tools and methods to identify the non-functional requirements of users, their characteristics and tasks, and the technical, organisational and physical environment in which the product or system will operate.

**Usability evaluation (USEV)**

Formal assessment of the usability (including health and safety, and accessibility) of new or existing products or services (including prototypes). Methods include user trials, expert review, survey, and analysis.

**Level 5**
 Advises on what to evaluate and type of evaluation. Ensures that the results of evaluations are understood by system developers.

**Level 4**
 Plans and performs all types of evaluation. Interprets and presents the results of evaluations.

**Level 3**
 Performs, analyses and documents evaluations according to a plan, excluding expert reviews.

**Level 2**
 Assists in the preparations for evaluations and in the operation of the test environment. Maintains the test environment.

**Human factors integration (HFIN)**

Achievement of optimum levels of product or service usability, by ensuring that project and enterprise activities take account of the user experience.

**Level 7**
 Acts to influence the perception of the organisation, in relation to ergonomics, and the user experience of deployed IT products and systems, and to ensure that this is addressed in future design.

**Level 6**
 Is responsible for organisational commitment to high standards in all aspects of the interaction between users and deployed technology - the user experience.

**Level 5**
 Advises on achievement of usability (including health and safety and accessibility) for IT products and services.
Installation and integration

Systems integration (SINT)
The incremental and logical integration and testing of components and/or subsystems and their interfaces in order to create operational services.

Level 6 Sets standards, strategies and procedures across the IT service lifecycle (including the development lifecycle) in the areas of systems integration and testing and ensures that practitioners adhere to them. Manages resources to ensure that the systems integration function operates effectively.

Level 5 Designs and builds integration components and interfaces. Leads practical integration work under the technical direction of the system /service designer. May contribute to the overall design of the service. May define the technical criteria for product/component selection. Contributes to decisions about tools, methods and approaches.

Level 4 Defines the integration build, accepts software modules from software developers, and produces software builds for loading onto the target environment. Configures the hardware environment, produces integration test specifications, and conducts tests, recording details of any failures and carrying out fault diagnosis.

Level 3 Defines the integration build and produces a build definition for generation of the software. Accepts software modules from software developers, and produces software builds for loading onto the target hardware from software source code. Configures the hardware environment, produces integration test specifications, conducts tests and records the details of any failures. Carries out and reports fault diagnosis relating to moderately complex problems.

Level 2 Produces software builds from software source code. Conducts tests as defined in an integration test specification, records the details of any failures, and carries out fault diagnosis relating to simple failures, reporting the results of the diagnosis in a clear and concise manner.

Porting/software integration (PORT)
The integration of software products into existing software environments to produce new platform-specific versions of the software products.

Level 6 Ensures the availability of hardware, software, and resources for the systems testing of platform-specific versions of one or more software products. Defines configurations required for testing with reference to agreed testing standards. Evaluates new developments in the organisation and the industry and advises senior management on potential growth, problem areas and resourcing needs. Ensures adherence to agreed standards and good practice.

Level 5 Leads a team, providing expert technical knowledge in the systems testing of platform-specific versions of the software products, on varying platforms. Provides specialist guidance information to support, systems testing and quality assurance functions to assist in improving procedures.

Level 4 Configures software and equipment and tests platform-specific versions of one or more software products. Reports the outcome of testing and identifies potential improvements to the process and to the software products according to agreed designs and standards.

Level 3 Assists in the configuration of software and equipment and the systems testing of platform-specific versions of one or more software products. Documents faults, implements resolutions and retests to agreed standards.

Systems installation/decommissioning (HSIN)
The installation, testing, implementation or decommissioning and removal of cabling, wiring, equipment, hardware and appropriate software, following plans and instructions and in accordance with agreed standards. The testing of hardware and software components, resolving malfunctions found and recording the results. The reporting of details of hardware and software installed so that configuration management records can be updated.

Level 5 Takes responsibility for installation projects, providing 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.

Level 4 Undertakes routine installations and de-installations of items of hardware and/or software. Takes action to ensure targets are met within established safety and quality procedures, including, where appropriate, handover to the client. Conducts tests of hardware and/or software using supplied test procedures and diagnostic tools. Corrects malfunctions, calling on other experienced colleagues and external resources if required. Documents details of all hardware/software items that have been installed and removed so that configuration management records can be updated. Develops installation procedures and standards, and schedules installation work. Provides specialist guidance and advice to less experienced colleagues to ensure best use is made of available assets and to maintain or improve the installation service.

Level 3 Installs or removes hardware and/or software, using supplied installation instructions and tools including, where appropriate, handover to the client. Conducts tests, corrects malfunctions, and documents results in accordance with agreed procedures. Reports details of all hardware/software items that have been installed and removed so that configuration management records can be updated. Provides assistance to users in a professional manner following agreed procedures for further help or escalation. Maintains accurate records of user requests, contact details and outcomes. Contributes to the development of installation procedures and standards.

Level 2 Installs or removes hardware and/or software, and associated connections, using supplied installation instructions and tools. Conducts tests and corrects malfunctions, calling on help from more experienced colleagues if required. Documents results in accordance with agreed procedures. Assists with the evaluation of change requests. Contributes, as required, to investigations of problems and faults concerning the installation of hardware and/or software and confirms the correct working of installations.

Level 1 Following agreed procedures, performs simple installations, replaces consumable items, checks correct working of installations, and documents and reports on work done.
Service strategy

IT management (ITMG)

The management of the IT infrastructure and resources required to plan for, develop, deliver and support properly-engineered IT services and products to meet the needs of a business. The preparation for new or changed services, management of the change process and the maintenance of regulatory, legal and professional standards. The management of performance of systems and services in relation to their contribution to business performance. The management of bought-in services including, for example, public network, virtual private network and outsourced services. The development of continual service improvement plans to ensure the IT infrastructure adequately supports business needs.

Level 7 Sets strategy for management of resources, including corporate telecommunication functions, and promotes the opportunities that technology present to the employing organisation, including the feasibility of change and its likely impact upon the business. Authorises allocation of resources for the planning, development and delivery of all information systems and services. Responsible for IT governance (the rules and regulations under which an IT department functions and the mechanisms put in place to ensure compliance with those rules and regulations). Authorises organisational policies governing the conduct of management of change initiatives and standards of professional conduct. Maintains an overview of the contribution of programmes to organisational success. Inspires creativity and flexibility in the management and application of IT. Sets strategy for monitoring and managing the performance of IT-related systems and services, in respect of their contribution to business performance and benefits to the business.

Level 6 Identifies and manages resources needed for the planning, development and delivery of specified information and communications systems services and products. Influences senior level customers and project teams through change management initiatives, ensuring that professional standards are maintained. Takes full responsibility for budgeting, estimating, planning and objective setting. Plans and manages implementation of processes and procedures, tools and techniques for monitoring and managing the performance of automated systems and services, in respect of their contribution to business performance and benefits to the business; where the measure of success depends on achieving clearly stated business/financial goals and performance targets. Monitors performance and takes corrective action where necessary.

Level 5 Takes responsibility for the design, procurement, installation, upgrading, operation, control, maintenance and effective use of IT components and monitors their performance. Provides technical management of an IT operation, ensuring that agreed service levels are met and all relevant procedures are adhered to. Schedules and supervises all maintenance and installation work. Ensures that operational problems are identified and resolved. Provides appropriate status and other reports to specialists, users and managers. Ensures that operational procedures and working practices are fit for purpose and current.

Financial management for IT (FMIT)

The overall financial management, control and stewardship of the IT assets and resources used in the provision of IT services, ensuring compliance with all governance, legal and regulatory requirements.

Level 6 Sets strategy and develops plans, policies and processes for the accounting, budgeting and, where applicable, charging of IT resources and services, including the definition of cost models and charging models. Sets, negotiates, agrees and manages all financial budgets and targets, ensuring that there is adequate funding for all IT targets and plans, especially to meet development and capacity needs.

Level 5 Monitors and manages IT expenditure, ensuring that all financial targets are met, and examining any areas where budgets and expenditure exceed their agreed tolerances. Assists with the definition and operation of effective financial control and decision making, especially in the areas of service, projects and component cost models and the allocation and apportionment of all incurred IT costs.

Level 4 Monitors and maintains all required financial records for compliance and audit to all agreed requirements. Assists all other areas of IT with their financial tasks, especially in the areas of identification of process, service, project and component costs and the calculation and subsequent reduction of all IT service, project, component and process failures.
Service design

Capacity management (CPMG)
The management of the capability and functionality of service components (including hardware, software and network) to meet current and forecast needs in a cost effective manner. This includes dealing with both long-term changes and short-term variations in the level of demand.

Level 6 Develops strategies to ensure all the performance measures of all IT services meet the needs of the business and of any service requirements or service level agreements which may be in place. Ensures that the policy and standards for capacity management are fit for purpose, current and are correctly implemented. Reviews new business proposals and provides specialist advice on capacity issues.

Level 5 Drafts and maintains policy, standards and procedures for service component capacity management. Ensures the correct implementation of standards and procedures. Reviews information in conjunction with service level agreements to identify any capacity issues and specifies any required changes.

Level 4 Monitors service component capacity and initiates actions to resolve any shortfalls according to agreed procedures.

Availability management (AVMT)
The definition, analysis, planning, measurement and improvement of all aspects of the availability of IT services. The overall control and management of service availability to ensure that the level of service delivered in all services is matched to or exceeds the current and future agreed needs of the business, in a cost effective manner.

Level 6 Sets strategy and develops plans, policies and processes for the design, monitoring, measurement, reporting and continuous improvement of service and component availability, including the development and implementation of new availability techniques and methods.

Level 5 Provides advice, assistance and leadership associated with the planning, design and improvement of service and component availability, including the investigation of all breaches of availability targets and service non-availability, with the instigation of remedial activities. Plans arrangements for disaster recovery together with supporting processes and manages the testing of such plans.

Level 4 Contributes to the availability management process and its operation and performs defined availability management tasks. Analyses service and component availability, reliability, maintainability and serviceability. 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.

Service level management (SLMO)
The planning, implementation, control, review and audit of service provision, to meet customer business requirements. This includes negotiation, implementation and monitoring of service level agreements, and the ongoing management of operational facilities to provide the agreed levels of service, seeking continually and proactively to improve service delivery.

Level 7 Sets strategies for service delivery that support the strategic needs of the client organisation. Champions allocation of resources for monitoring service delivery arrangements. Provides leadership within the industry on the identification of future trends (e.g. technical, market, industrial, socioeconomic, legislative). 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.

Level 6 Ensures that a catalogue of available services is created and maintained and that service level agreements are complete and cost effective. Ensures that service delivery is monitored effectively and that identified actions to maintain or improve levels of service are implemented. Ensures that operational methods, procedures, facilities and tools are established, reviewed and maintained. Negotiates with relevant parties in respect of disruptions and major amendments to the provision of services. Reviews service delivery to ensure that agreed targets are met and prepares proposals to meet forecast changes in the level or type of service.

Level 5 Ensures that service delivery meets agreed service levels. Creates and maintains a catalogue of available services. In consultation with the customer negotiates service level requirements and agrees service levels. Diagnoses service delivery problems and initiates actions to maintain or improve levels of service. Establishes and maintains operational methods, procedures and facilities in assigned area of responsibility and reviews them regularly for effectiveness and efficiency.
**Service transition**

**Configuration management (CFMG)**

The lifecycle planning, control and management of the documentation, software, hardware and firmware assets of an organisation, system and/or service(s), including information relating to those assets and their dependences and relationships. This involves identification, classification and appropriate specification of all configuration items (CIs) and the interfaces to other processes and data through techniques such as federation. Required information relates to storage, access, service relationships, versions, problem reporting and change control of CIs. The application of status accounting and auditing, often in line with acknowledged external criteria such as ISO 90000 and ISO 20000, throughout all stages of the CI lifecycle, including (importantly) the early stages of system development.

**Level 6** Manages the organisation’s configuration management system and champions the business value and company policies for this configuration management system. Ensures that processes are in place for consistent classification and management of CIs, and for verification and audit of configuration records. Contributes strongly to the business service knowledge management system. Manages the research and development of tools, processes and techniques.

**Level 5** Manages configuration items (CIs) and related information. Investigates and implements tools, techniques and processes for managing CIs and verifies that related information is complete, current and accurate.

**Level 4** Manages configuration items (CIs) and related information. Applies and maintains tools, techniques and processes for identification, classification and control of CIs and ensuring related information is complete, current and accurate.

**Level 3** Administers configuration items (CIs) and related information. Applies tools, techniques and processes for administering CIs and verifies that related information is complete, current and accurate.

**Level 2** Applies tools, techniques and processes for administering information (such as the tracking and logging of components and changes) related to configuration items.

**Release management (RELM)**

The management of the processes, systems and functions to package, build, test and deploy changes and updates which are bounded as ‘releases’ into the ‘production’ environment establishing or continuing the specified service, to enable controlled and effective handover to operations and the user community.

**Level 6** Sets the release policy for the organisation in the context of both development and production/operations. Ensures that management processes, tools, techniques and personnel are in place to ensure that the transition of services, service components and packages are planned and compliant and that test and validation and configuration management are partnered in all release and deployment activities. Provides authorisation for critical release activity and point of escalation.

**Level 5** Leads the assessment, analysis, planning and design of release packages, including assessment of risk, liaises with business and IT partners on release scheduling and communication of progress. Conducts post release reviews. Ensures release processes and procedures are applied.

**Level 4** Assesses and analyses release components. Provides input to scheduling. Carries out the builds and tests in coordination with testers and component specialists maintaining and administering the tools and methods – manual or automatic – and ensuring, where possible, information exchange with configuration management. Ensures release processes and procedures are maintained.

**Level 3** Uses the tools and techniques for specific areas of release and deployment activities. Administers the recording of activities, logging of results and documents technical activity undertaken. May carry out early life support activities such as providing support advice to initial users.

**Level 2** Applies tools, techniques and processes related to configuration items (CIFGMG).

The management of change to the service infrastructure including service assets, configuration items and associated documentation, be it via request for change (RFC), emergency changes, incidents and problems, so providing effective control and mitigation of risk to the availability, performance, security and compliance of the business services impacted.

**Level 6** Sets the organisation’s policy for the management of change in live services and test environments, and ensures that the policy is reflected in practice.

**Level 5** Develops implementation plans for dealing with more complex requests for change, evaluates risks to integrity of infrastructure inherent in proposed implementations, seeks authority for those activities, reviews the effectiveness of change implementation, suggests improvement to organisational procedures governing change management. Leads the assessment, analysis, development, documentation and implementation of changes based on requests for change.

**Level 4** Assesses, analyses, develops, documents and implements changes based on requests for change.

**Level 3** Develops, documents and implements changes based on requests for change. Applies change control procedures.
Service operation

System software (SYSP)
The provision of specialist expertise to facilitate and execute the installation and maintenance of system software such as operating systems, data management products, office automation products and other utility software.

Level 5 Evaluates new system software, reviews system software updates and identifies those that merit action. Ensures that system software is tailored to facilitate the achievement of service objectives. Plans the installation and testing of new versions of system software. Investigates and coordinates the resolution of potential and actual service problems. Ensures that operational documentation for system software is fit for purpose and current. Advises on the correct and effective use of system software.

Level 4 Reviews system software updates and identifies those that merit action. Talors system software to maximise hardware functionality. Installs and tests new versions of system software. Investigates and coordinates the resolution of potential and actual service problems. Prepares and maintains operational documentation for system software. Advises on the correct and effective use of system software.

Level 3 Uses system management software and tools to collect agreed performance statistics. Carries out agreed system software maintenance tasks.

Security administration (SCAD)
The authorisation and monitoring of access to IT facilities or infrastructure in accordance with established organisational policy. Includes investigation of unauthorised access, compliance with relevant legislation and the performance of other administrative duties relating to security management.

Level 6 Develops strategies for ensuring the security of automated systems. Ensures that the policy and standards for security are fit for purpose, current and are correctly implemented. Reviews new business proposals and provides specialist advice on security issues and implications.

Level 5 Drafts and maintains the policy, standards, procedures and documentation for security. Reviews new information systems for actual or potential breaches in security. Ensures that all identified breaches in security are promptly and thoroughly investigated. Ensures that any system changes required to maintain security are implemented. Ensures that security records are accurate and complete.

Level 4 Investigates identified security breaches in accordance with established procedures and recommends any required actions. Assists users in defining their access rights and privileges, and administers logical access controls and security systems. Maintains security records and documentation.

Level 3 Investigates minor security breaches in accordance with established procedures. Assists users in defining their access rights and privileges, and operates agreed logical access controls and security systems. Maintains agreed security records and documentation.

Radio frequency engineering (RFEN)
The deployment, integration, calibration, tuning and maintenance of radio frequency (RF) and analogue elements of IT systems.

Level 6 Specifies radio frequency equipment performance requirements and sets maintenance policy.

Level 5 Develops maintenance schedules and procedures. Approves equipment upgrades and modifications. Monitors system performance, recommends equipment modifications and changes to operating procedures, servicing methods and schedules.

Level 4 Investigates and resolves system-wide fault conditions using a wide range of diagnostic tools and techniques. Reconfigures equipment to circumvent temporary outages.

Level 3 Deploys, sets up, tunes and calibrates radio frequency/anlogue elements 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 escapes according to given procedures.

Level 2 Assists with setting up, tuning and functional checks of radio frequency/anlogue elements. Resolves faults down to line replaceable unit (LRU) level or escapes according to given procedures. Carries out user confidence checks and escalates faults according to given procedures.

Application support (ASUP)
The provision of application maintenance and support services. Support may be provided both to users of the systems and to service delivery functions. Support typically takes the form of investigating and resolving issues and providing information about the systems. It may also include monitoring their performance. Issues may be resolved by providing advice or training to users about an application’s functionality, correct operation or constraints, by devising work-arounds, correcting faults, making general or site-specific modifications, updating system documentation, manipulating data, or defining enhancements – often in close collaboration with the system’s developers and/or with colleagues specialising in different areas, such as Database administration or Network support.

Level 5 Drafts and maintains procedures and documentation for applications support. Manages application enhancements to improve business performance. Ensures 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 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 3 Identifies and resolves issues with applications, following agreed procedures. Uses application management software and tools to collect and analyse performance statistics. Carries out agreed applications maintenance tasks.

Level 2 Assists in the investigation and resolution of issues relating to applications. Assists with specified maintenance procedures.

IT Operations (ITOP)
The operation of the IT infrastructure (typically hardware, software, information stored on various media, and communications) required to deliver and support properly-engineered IT services, and products to meet the needs of a business. Includes preparation for new or changed services, operation of the change process, the maintenance of regulatory, legal and professional standards, and the monitoring of performance of systems and services in relation to their contribution to business performance.

Level 4 Provides technical expertise to enable the correct application of operational procedures. Contributes to the planning and implementation of maintenance and installation work. Identifies operational problems and contributes to their resolution. Provides appropriate information to specialists, users and managers.

Level 3 Carries out agreed operational procedures. Contributes to the implementation of maintenance and installation work. Identifies operational problems and contributes to their resolution.
Network control and operation (NTOP)

The day-to-day operation and control of all equipment within wide and local area network infrastructure. Includes production of network performance statistics, provision of network diagnostic information and site surveys.

Level 6 Takes overall responsibility for the installation, upgrading, and control of local and wide area networks for the communication of data, voice, text or images. Ensures that the network is managed to provide agreed levels of service and data integrity. Ensures that network performance and traffic is monitored and reviewed. Ensures that network problems are resolved.

Level 5 Takes responsibility for significant aspects of the installing, upgrading, operation, control and effective use of local and wide area networks for the communication of data, voice, text or images. Manages the network to provide agreed levels of service and data integrity. Ensures that network performance and traffic is monitored and reviewed.

Level 4 Uses network management tools to determine network load and performance statistics. Identifies and resolves network problems. Checks that problems are managed in accordance with agreed standards and procedures. Implements agreed network changes and maintenance routines.

Level 3 Carries out agreed network configuration, installation and maintenance. Uses standard procedures and tools to carry out defined system backups, restoring data where necessary. Uses network management tools to collect and report on network load and performance statistics.

Database administration (DBAD)

The installation, configuration, upgrade, administration, monitoring and maintenance of physical databases.

Level 5 Drafts and maintains procedures and documentation for databases. Manages database configuration including installing and upgrading software and maintaining relevant documentation. Contributes to the setting of standards for database objects and ensures conformance to these standards. Monitors database activity and resource usage. Optimises database performance and plans for forecast resource needs.

Level 4 Uses database management system software and tools to investigate problems and collect performance statistics and create reports. Carries out routine configuration/installation and reconfiguration of database and related products. Monitors database activity and plans for forecast resource needs.

Level 3 Uses database management system software and tools to collect agreed performance statistics. Carries out agreed database maintenance and administration tasks.

Level 2 Assists in database support activities.

Network support (NTAS)

The provision of network maintenance and support services. Support may be provided both to users of the systems and to service delivery functions. Support typically takes the form of investigating and resolving problems and providing information about the systems. It may also include monitoring their performance. Problems may be resolved by providing advice or training to users about the network’s functionality, correct operation or constraints, by devising workarounds, correcting faults, or making general or site-specific modifications.

Level 5 Drafts and maintains procedures and documentation for network support. Makes a significant contribution to the investigation, diagnosis and resolution of network problems. Ensures that all requests for support are dealt with according to agreed procedures.

Level 4 Maintains the network support process and checks that all requests for support are dealt with according to agreed procedures. Uses network management software and tools to investigate and diagnose network problems, collect performance statistics and create reports, working with users, other staff and suppliers as appropriate.

Level 3 Identifies and resolves network problems following agreed procedures. Uses network management software and tools to collect agreed performance statistics. Carries out agreed network maintenance tasks.

Level 2 Assists in investigation and resolution of network problems. Assists with specified maintenance procedures.

Problem management (PBMG)

The resolution of incidents and problems throughout the information system lifecycle, including classification, prioritisation and initiation of action, documentation of root causes and implementation of remedies.

Level 5 Ensures that appropriate action is taken to investigate and resolve incidents and problems in systems and services. Ensures that such incidents and problems are fully documented within the relevant reporting system(s). Coordinates the implementation of agreed remedies and preventative measures.

Level 4 Monitors actions to investigate and resolve incidents and problems in systems and services. Assists with the implementation of agreed remedies and preventative measures.

Service desk and incident management (USUP)

The processing and coordination of appropriate and timely responses to incident reports, including channeling requests for help to appropriate functions for resolution, monitoring resolution activity, and keeping clients appraised of progress.

Level 5 Ensures that the inventory of components to be supported is complete and current. Drafts and maintains policy, standards and procedures for the service desk. Schedules the work of service desk staff to meet agreed service levels.

Level 4 Ensures that incidents and requests are handled according to agreed procedures. Ensures that documentation of the supported components is available and in an appropriate form for those providing support. Creates and maintains support documentation.

Level 3 Receives and handles requests for support following agreed procedures. Responds to requests for support by providing information to enable problem resolution and promptly allocates unresolved calls as appropriate. Maintains records and advises relevant persons of actions taken.

Level 2 Receives and handles requests for support following agreed procedures. Responds to common requests for support by providing information to enable problem resolution and promptly allocates requests to support following agreed procedures. Responds to requests for support by providing information to enable problem resolution and promptly allocates unresolved calls as appropriate. Maintains records and advises relevant persons of actions taken.

Level 1 Receives and handles requests for support following agreed procedures. Promptly allocates calls as appropriate. Maintains relevant records.
Supply management

Procurement (PROC)
The management of, or provision of advice on, the procurement of goods and services.

**Level 6** Leads the procurement process, from clarifying a specification to placing contracts, including identifying opportunities for business improvement. Ensures that the implementation of procurement strategies and evaluation criteria are in line with procurement legislation. Where no corporate policy exists, establishes procurement strategy, policy, standards, methods and processes. Agrees and meets budgets for the procurement of products and services.

**Level 5** Clarifies specifications for key products and services. Investigates the technical and commercial options for fulfilling the requirements, including possible sources of supply, and agrees the preferred options and potential suppliers with the business. Ensures that suppliers are approved in accordance with company procedures. Manages the tender, evaluation and acquisition process with expert assistance as required. Typically as part of a wider commercial and legal team, assists with negotiations with preferred suppliers, drafting contracts and technical schedules, and developing acceptance procedures and criteria. Places contracts. Implements, maintains and disseminates procurement strategy, policy, standards, methods and processes.

Supplier relationship management (SURE)

On behalf of a client organisation, the identification and management of external suppliers to ensure successful delivery of products and services to achieve outcomes.

**Level 7** Determines procurement policies for the organisation, including ‘build or buy’ criteria. Develops and deploys mechanisms that lead to positive relationships between the business and suppliers, including overall management and development of the commercial relationships with the senior levels of management in supplier organisations. Is the ultimate point of escalation for issues or problems. Determines organisation’s policy and procedures covering the selection of suppliers, tendering and procurement. Is responsible for deployment and review of acquisition processes and for negotiating major contracts.

**Level 6** Influences policy and procedures covering the selection of suppliers, tendering and procurement. Deploys highly developed commercial skills to identify and manage external partners, engaging with professionals in other related disciplines (e.g. procurement specialists, lawyers) as appropriate. Is responsible for the management and maintenance of the relationship between the organisation and the supplier. Is well acquainted with the key performance indicators and contractual obligations, and publishes performance and service improvement results. Leads review meetings for major contracts and suppliers. Contributes to, or is responsible for negotiation of major contracts.

**Level 5** Maintains a broad understanding of the commercial IT environment, how the organisation sources, deploys and manages external partners and when it is appropriate to use in-house resources. Develops and manages contracts with suppliers to meet key performance indicators and agreed targets. Is responsible for the liaison between the organisation and designated supplier(s). Ensures that supplier performance is properly monitored and regularly reviewed. Advises on policy and procedures covering the selection of suppliers, tendering and procurement. Is responsible for the management and implementation of supplier service improvement actions and programmes.

**Level 4** Monitors supplier performance, collects performance data and investigates problems. Resolves or escalates problems. Implements supplier service improvement actions and programmes.

**Level 3** Acts as the routine contact point between organisation and supplier. Collects and reports on supplier performance data.
Quality management

Quality management (QUMG)

The application of techniques for monitoring and improvement of quality to any aspect of a function or process. The achievement of and maintenance of compliance to, national and international standards, as appropriate.

Level 7 Sets the quality strategy for approval and adoption by business management. Measures the extent to which the quality policy meets the organisation’s needs and objectives and reviews it as necessary. Plans, resources (either directly or indirectly) and monitors the internal quality audit schedule. Defines and reviews quality and environmental systems. Ensures that adequate technology, procedures and resources are in place to support the quality system.

Level 6 Prioritises areas for quality and/or environmental improvement in light of the strategy, wider business objectives, results from internal and external audits, and advice from colleagues. 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. Achieves and maintains compliance against national and international standards, as appropriate. Identifies and plans systematic corrective action to reduce errors and improve the quality of the systems and services, by examination of the root causes of problems.

Level 5 Advises on the application of appropriate quality and/or environmental management techniques. Facilitates improvements to processes by changing approaches and working practices, typically using recognised models.

Quality assurance (QUAS)

The process of ensuring that the agreed quality standards within an organisation are adhered to and that best practice is promulgated throughout the organisation.

Level 6 Develops organisational commitment to ongoing quality and environmental improvement by ensuring that the quality assurance process is robust and is based on the best industry practice. Considers implications of emerging technological developments, economic and social trends, etc. Plans and resources periodic quality assurance audits. Conducts and/or manages audits and analyses audit results. Prepares and delivers formal audit reports.

Level 5 Uses quality standards to review past performance and plan future activities. Conducts audits and produces audit reports. Monitors and reports on the outputs from the quality assurance and audit processes.

Level 4 Investigates and documents the internal control of specified aspects of automated or partly automated processes, and assesses compliance with the relevant standard.

Level 3 Uses appropriate methods and tools in the development, maintenance, control and distribution of quality and environmental standards. Makes technical changes to quality and environmental standards according to documented procedures. Distributes new and revised standards.

Quality standards (QUST)

The development, maintenance, control and distribution of quality standards.

Level 5 Takes responsibility for the control, update and distribution of quality standards, and advice on their use.

Level 4 Controls, updates and distributes new and revised quality standards, including technical changes.

Level 3 Controls, updates and distributes new and revised quality standards.

Level 2 Distributes new and revised quality standards and maintains department and quality group documentation.

Compliance review (CORE)

The independent assessment of the conformity of any activity, process, deliverable, product or service to the criteria of specified standards, such as ISO 27001, local standards, best practice, or other documented requirements. May relate to, for example, asset management, network security tools, firewalls and internet security, real-time systems and application design.

Level 6 Specifies organisational procedures for the internal and third-party assessment of an activity, process, product or service, against recognised criteria, such as BS EN ISO 9000/1/4000. Develops plans for review of technology systems, including the review of implementation and use of standards and the effectiveness of operational and process controls. May manage the review, conduct the review, or manage third party reviewers. Identifies areas of risk and specifies interrogation programs. Recommends improvements in processes and control procedures.

Provides advice and guidance. Authorises the issue of formal reports to management on the extent of compliance of systems with standards, regulations and/or legislation.

Level 5 Evaluates and independently appraises the internal control of automated business processes, based on investigative evidence and assessments undertaken by self or team. Ensures that independent appraisals follow agreed procedure and advises others on the review process. Provides advice to management on ways of improving the effectiveness and efficiency of their control mechanisms. Identifies and evaluates associated risks and how they can be reduced.

Level 4 Plans programmes to review activities, processes, products or services. Collects, collates and examines evidence as part of specified testing strategies for evidence of compliance with management directives, or the identification of abnormal occurrences. Analyses evidence collated and drafts part or all of formal reports commenting on the conformance found to exist in the reviewed part of an information systems environment.

Level 3 Collects and collates evidence as part of a formally conducted and planned review of activities, processes, products or services. Examines records as part of specified testing strategies for evidence of compliance with management directives, or the identification of abnormal occurrences.

Safety assessment (SFAS)

The assessment of safety-related software systems to determine compliance with standards and required levels of safety integrity. This involves making professional judgements on software engineering approaches, including the suitability of design, testing, and validation and verification methods, as well as the identification and evaluation of risks and the means by which they can be reduced. The establishment, maintenance and management of an assessment framework and practices.

Level 6 Leads assessments up to IEC 61508 Safety Integrity level 4 or participates in any level of assessment. Determines assessment methods, techniques and tools that are to be used as appropriate to the integrity levels of the assessments undertaken.

Level 5 Participates in assessments up to IEC 61508 Safety Integrity level 3, and undertakes safety analyses on initial designs using HAZOPs, FMEA or similar methods.
Technology audit (TAUD)

The independent, risk-based assessment of the adequacy and integrity of controls in information processing systems, including hardware, software solutions, information management systems, security systems and tools, communications technologies – both web-based and physical. The structured analysis of the risks to achieve a high level of assurance that the organisation’s approach to IT risk control is adequate, and that the organisation fails to make effective use of new technology to improve delivery and internal effectiveness.

Level 7 Ensures that there is planned audit coverage across the organisation, and liaises with executives to ensure that this coverage is relevant and understood. Directs use of risk analysis to identify areas for in-depth review. Evaluates the effectiveness of corporate IT strategy and governance and makes recommendations for development. Agrees terms of reference for audits with clients. Plans audit cycle, and leads and manages audit function. Determines the need for and manages the effective use of additional IT experts. Reports at the most senior level on the findings, relevance and recommendations for improvement. Represents the audit function at the Audit Committee of the organisation.

Level 6 Specifies organisational procedures for the assessment of an activity, process, product or service, against recognised criteria, such as ISO 27001. Develops plans for risk-based audit coverage of technology systems for inclusion in audit planning and uses experience to ensure audit coverage is sufficient to provide the business with assurance of adequacy and integrity. Leads and manages complex technical audits, managing specialists contracted to contribute highly specialised technical knowledge and experience. Identifies areas of risk and specifies initiation programs. Recommends changes in processes and control procedures based on audit findings, including, where appropriate, the assessment of safety-related software systems to determine compliance with standards and required levels of safety integrity. Provides general and specific advice, and authorises the issue of formal reports to management on the effectiveness and efficiency of control mechanisms.

Level 5 Manages risk-based audit of existing and planned technology systems. Identifies areas of risk and evaluates adequacy and effectiveness of organisation’s approach to risk in use of IT. Assesses and communicates associated risks of a complex nature to middle and senior managers. Recommends changes in processes and control procedures based on audit findings. Provides general and specific advice. Collates conclusions and recommendations, and presents audit findings to management regarding the effectiveness and efficiency of control mechanisms in information systems. Engages with providers of other IT assurance such as compliance audits, quality assurance functions and other technical specialists.

Level 4 Contributes to risk-based audit of existing and planned technology systems. Identifies IT risk in detail, assesses and tests the effectiveness of control measures and prepares formal reports in order to provide independent assurance on an organisation’s information security, integrity and resilience.

Level 3 Uses recommended project control solutions for planning, scheduling and tracking projects. Sets up and provides detailed guidance on project management software, procedures, processes, tools and techniques. Supports programme or project control boards, project assurance teams and quality review meetings. Provides guidance on project management software, procedures, processes, tools and techniques.

Level 2 Assists with the compilation of project management reports. Maintains programme and project files from supplied actual and forecast data.
Asset management (ASMG)
The management of the lifecycle for service assets (hardware, software, knowledge, warranties etc) including inventory, compliance, usage and disposal, aiming to optimise the total cost of ownership by minimising operating costs, improving investment decisions and realising potential opportunities. Knowledge and use of international standards such as ISO/IEC 19770-1 for software asset management and close integration with change and configuration management are examples of enhanced asset management development.

Level 6 Promotes the continuing economic and effective provision of services, ensuring that all changes to assets and services are appropriately and accurately controlled and recorded. Provides information and advice on issues such as maintenance of hardware assets, licensing of software, and legal obligations such as compliance with the Data Protection Act. Promotes awareness of and commitment to asset control, ensuring that consequences of decisions to obtain, change or dispose of assets (including secure master copies of software) are appropriately understood.

Level 5 Manages and maintains the service compliance of all IT and service assets in line with business and regulatory requirements involving knowledge of financial and technical processes, tools and techniques thereby ensuring asset controllers, infrastructure teams and the business co-ordinate and maximise value, maintain control and ensure any necessary legal compliance.

Level 4 Controls IT assets in one or more significant areas, ensuring that administration of the acquisition, storage, distribution, movement and disposal of assets is carried out. Produces and analyses registers and histories of authorised assets (including secure master copies of software, documentation, data, licenses and agreements for supply, warranty and maintenance), and verifies that all these assets are in a known state and location. Ensures that there are no unauthorised assets such as unlicensed copies of software.

Client services management (CSMG)
The management and control of one or more client service functions, including strategy, support for business development, quality of service and operations.

Level 6 Sets the strategic direction and takes responsibility for the full range of client service functions, including organisational frameworks for complaints, service standards and operational agreements. Defines service levels, standards and the monitoring process for client service staff. Gains technical leadership to operational staff, and takes responsibility for business continuity and legal compliance.

Level 5 Carries out day-to-day management of the client services function. Defines service levels for client services staff and monitors performance. Takes responsibility for specification, agreement and application of client services standards and for the resolution of clients’ service problems.

Professional development (PDSV)
The facilitation of the professional development of IT practitioners, including initiation, monitoring, review and validation of individual training and development plans in line with organisational or business requirements. The counselling of participants in all relevant aspects of their professional development. The identification of appropriate training development resources. Liaison with external training providers. The evaluation of the benefits of professional development activities.

Level 6 Determines organisational development needs in line with business needs and strategic direction. Generates development strategies to achieve required change and monitors progress.

Level 5 Determines the required outcomes for training or development, from organisational development needs and the training strategy. Mentors assigned practitioners, ensuring alignment with a predetermined statement of required development outcomes. Assists each practitioner with the creation of development plans based on the outcome statements. Ensures that each practitioner records progress, and validates practitioners’ records at the end of each cycle of planned development, ensuring that achievements and enhanced capabilities are recorded and referenced to the outcome statements. May contribute to practitioners’ performance appraisals.

Resourcing (RESC)
The overall resource management of the IT workforce to enable effective service delivery. Provision of advice on any aspect of acquiring IT resources – employees, consultants or contractors.

Level 6 Takes responsibility for the overall workforce planning strategy across the IT service, ensuring that there is adequate skilled resource to meet planned service delivery. Ensures integration with strategic human resource plans. Takes responsibility for meeting the recruitment, re-skilling and demand forecasts for IT practitioners, aligning on the approach and relevant policies. Ensures that expert support is provided as and when required, including interviewing of applicants for senior posts. Audits and assesses the ongoing success and effectiveness of the process, including retention analysis, media and supplier assessment, customer satisfaction and selection methods validation.

Level 5 Conducts job analyses, prepares job descriptions and person specifications, and prepares selection and evaluation criteria for candidates. Manages recruitment campaigns. Locates and selects possible agencies and other suppliers, negotiating terms and conditions, and placing orders with them, ensuring that all obligations are met in accordance with the agreed terms and timescales. Reviews candidate details, manages selection processes, and ensures that account is taken of relevant statutory or external regulations, standards and codes of good practice. Ensures that all relevant parties are informed of the results of interviews and other decisions, and assists in the negotiation of terms and conditions of service.
Learning and development

Learning and development management (ETMG)

The management of professional development and provision of IT training and education in order to develop business and/or technical skills.

Level 6 Identifies the education programme and delivery mechanisms needed to grow staff skills in line with business needs and future strategy. Evaluates learning outcomes. Manages the development and provision of all learning, taking account of the strategic aims of the employing organisation.

Level 5 Manages the provision of education or training.

Learning resources creation and maintenance (TMCR)

The design, creation, packaging and maintenance of materials and resources for use in education and training. Typically involves the assimilation of information from existing sources, selection and re-presentation in a form suitable to the intended purpose and audience. May include design, configuration and testing of learning environments, including population of simulated databases, and replication of external systems and interfaces.

Level 5 Specifies the content and structure of training and education packages. Takes responsibility for design, creation, packaging and maintenance and manages development to deliver agreed outcomes. Where required, designs, configures and tests learning environments, including population of simulated databases, and replication of external systems and interfaces.

Level 4 Designs, creates, develops, customises and maintains training content and resources to deliver agreed outcomes. Assists with design, configuration and testing of learning environments, including population of simulated databases, and replication of external systems and interfaces.

Education and training delivery (ETDL)

The transfer of business and/or technical skills and knowledge and the inculcation of professional attitudes in order to facilitate learning and development.

Level 5 Customises and delivers specialist teaching or training to specialist audiences using a range of instructional techniques.

Level 4 Customises and delivers teaching or training to a variety of audiences using a range of instructional techniques.

Level 3 Delivers existing teaching or training materials to a variety of audiences using a range of instructional techniques.
Sales and marketing

Marketing (MKTG)

The research, analysis and stimulation of potential or existing markets for IT and related products and services, both to provide a sound basis for business development and to generate a satisfactory flow of sales enquiries.

Level 6 Makes strategic decisions regarding marketing plans and the planning process. Determines and oversees the overall marketing strategy for the organisation to meet its business objectives. This includes strategies for market segmentation and to attract and retain customers.

Level 5 Manages marketing campaigns within specified budgets to meet specified objectives. Develops and maintains successful internal and external business relationships. Manages and monitors market research, analysis and the marketing planning process. Takes overall responsibility for the production of marketing materials and staging of events. Finds innovative solutions to marketing problems. Uses experience to make informed recommendations to senior management. This includes focusing on market segmentation and work to attract and retain customers.

Level 4 Maintains effective internal and external business relationships. Plans and conducts market research. Investigates and analyses customer dynamics and uses research to inform marketing plans, including planning for customer loyalty. Creates unique selling points, and key messages for marketing material. Drafts marketing support materials such as brochures and mailshots. Organises and participates actively in marketing events.

Level 3 Works with technical and non-technical customer representatives or from reports, to identify industry trends, needs and sales opportunities. Selects from and uses marketing tools appropriate to a project. Maintains a database of marketing information. Conducts market research. Contributes to marketing plans. Creates unique selling points and key messages for marketing material. Presents and communicates at marketing events.

Selling (SALE)

The identification of sales prospects and their qualification, the development of customer interest and the preparation (including managing the bid process), execution and monitoring of the sale of any IT or related product or service into an external or internal market.

Level 6 Oversees the organisation’s sales activities to ensure they are aligned with corporate marketing objectives. Approves sales proposals and targets. Negotiates with customer representatives at the most senior level on both technical and commercial issues. Develops and implements organisational sales policy and strategy, and contributes significantly to the development of marketing strategy. Initiates development and change in services, products and systems.

Level 5 Designs and implements sales strategies and works with senior management to implement sales plans. Plans, monitors and controls the work of sales teams. Develops and maintains effective customer relationships at executive levels and qualifies new sales leads. Leads the bid process within organisation, maintaining customer contact during and after the selling process to ensure customer satisfaction. Contributes to the development and training of sales teams and product/service development.

Level 4 Collects and uses market information in order to achieve sales objectives. Responds to existing sales leads and identifies and qualifies new leads and prospects with a view to developing a pipeline of potential opportunities. Develops and enhances customer relationships, before, during and after the conclusion of sales agreements. Key tasks may also include bid management, negotiation and presentation. Monitors and reports on performance, customer satisfaction, market intelligence and competitors.
Client support

Account management (ACMG)

On behalf of an organisation supplying IT and related products and/or services, the coordination of marketing, selling and delivery activities to one or more customer organisations to achieve satisfaction for the customer and an acceptable business return for the supplier; assistance to the customer organisation to ensure that it gains maximum benefit from the products and services supplied and available.

**Level 6**  Builds relationships with key senior staff in the customer organisation in order to increase business opportunities. Advises them on the selection of systems, technology and related services to meet their business objectives. Manages colleagues in their dealings with customer organisations; initiates procedures to improve service to and relationships with customers. Oversees the management and planning of business opportunities.

**Level 5**  Oversees the organisation’s sales activities to ensure they are aligned with corporate marketing objectives. Approves sales proposals and targets. 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 help with the continuous improvement of sales support activities.

**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. Produces estimates of cost and risk and initial project plans to inform sales proposals. Resolves technical problems.

**Level 3**  Provides customer service, including technical advice and guidance on all matters bearing on the successful use of complex products and services. Helps customers to clarify their requirements; documents the conclusions reached.

**Level 2**  Communicates effectively with customers by telephone and in person. Assists in the provision of customer service, including technical advice and guidance on matters bearing on the successful use of products and services. Assists in devising solutions to customer requirements and solves straightforward problems.

**Level 1**  Able to communicate effectively with customers by telephone and provide information about products and services. Seeks assistance from colleagues for the resolution of more complex customer service queries and complaints. Can use databases to retrieve and enter data.

Sales support (SSUP)

The provision of technical advice and assistance to the sales force, sales agents, reseller/distributor staff and existing or prospective customers, either in support of customer development or sales activity or in fulfilment of sales obligations.

**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.

**Level 5**  Works closely with the sales team to ensure that customers are assisted and advised properly. 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 help with the continuous improvement of sales support activities.

**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. Produces estimates of cost and risk and initial project plans to inform sales proposals. Resolves technical problems.

**Level 3**  Provides customer service, including technical advice and guidance on all matters bearing on the successful use of complex products and services. Helps customers to clarify their requirements; documents the conclusions reached.

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**Level 1**  Able to communicate effectively with customers by telephone and provide information about products and services. Seeks assistance from colleagues for the resolution of more complex customer service queries and complaints. Can use databases to retrieve and enter data.
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This will serve the interests of employers of Information Technology professionals, the professionals themselves and many other groups, including training companies and other service providers, education and the government.

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