



CWA

European e-Competence Framework version 1.0

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1. Introduction

The European e-Competence Framework (**e-CF**) is a reference framework of ICT competences that can be used and understood by ICT user and supply companies, ICT practitioners, managers and HR departments, the public sector, educational and social partners across Europe.

The framework has been developed by a large number of European ICT and HR experts in the context of the **CEN / ISSS Workshop on ICT Skills**. The workshop provides a discussion and working platform for both national and international representatives from the ICT industry, public and private vocational training organisations, social partners and other institutions. It aims to create long-term human resources (HR) and competence development strategies for the European Information and Communication Technology (ICT) community.

In 2005 the ICT Skills workshop members concluded that national ICT framework stakeholders, as well as European ICT industry representatives - both HR and ICT managers - should develop a **European e-Competence Reference Framework**.

Early 2006, ICT framework stakeholders, representatives from several European larger companies and an applied research foundation met for a kick-off in order to put the workshop recommendations into practice. During an intensive follow-up, they projected a programme for the work towards a European e-Competence Framework under the umbrella of the CEN/ISSS workshop on ICT Skills.

In order to achieve a European agreement and beneficial results at an international and national level, the Europe-wide further involvement of ICT sector players and stakeholders from business, politics and education has been crucial for the framework development philosophy and strategy. Whilst at the political level it was important to get the larger multistakeholder public of the European ICT sector on board, at the expert working level focus had been placed upon HR and IT management know-how from the European ICT industry.

The European e-Competence Framework presented in this CWA is the **outcome of two-years e-Skills multistakeholder, ICT and human resources experts' work** from multiple organisation levels.



2. European e-Competence Framework structure and look

The European e-Competence Framework is structured from four dimensions. These dimensions reflect different levels of business and human resource planning requirements in addition to job/ work proficiency guidelines and are specified as follows:

- Dimension 1: **5 e-Competence areas**, derived from the ICT business processes PLAN – BUILD – RUN – ENABLE – MANAGE
- Dimension 2: A set of **reference e-Competences for each area**, with a generic description for each competence.
32 competences identified in total provide the European generic reference definitions of the framework.
- Dimension 3: **Proficiency levels of each e-Competence** provide European reference level specifications on **e-Competence levels e-1 to e-5**, which are related to the EQF levels 3 to 8.
- Dimension 4: **Knowledge and skills related to the e-Competences** are indicated as optional framework components for inspiration. They are not intended to be exhaustive.

3. User guidelines for framework application by ICT sector players

To support understanding, adoption and use of the European e-Competence Framework (e-CF), a **complementary CWA incorporating user guidelines for the European e-Competence Framework** is also provided.



4. European e-Competence Framework overview

e-CF levels identified per competence

Dimension 1	Dimension 2	Dimension 3				
5 e-Comp. areas (A – E)	32 e-Competences identified	e-Competence proficiency levels e-1 to e-5, related to EQF levels 3-8				
		e-1	e-2	e-3	e-4	e-5
A. PLAN						
	<i>A.1. IS and Business Strategy Alignment</i>					
	<i>A.2. Service Level Management</i>					
	<i>A.3. Business Plan Development</i>					
	<i>A.4. Specification Creation</i>					
	<i>A.5. Systems Architecture</i>					
	<i>A.6. Application Design</i>					
	<i>A.7. Technology Watching</i>					
B. BUILD						
	<i>B.1. Design and Development</i>					
	<i>B.2. Systems Integration</i>					
	<i>B.3. Testing</i>					
	<i>B.4. Solution Deployment</i>					
	<i>B.5. Technical Publications Development</i>					
C. RUN						
	<i>C.1. User Support</i>					
	<i>C.2. Change Support</i>					
	<i>C.3. Service Delivery</i>					
	<i>C.4. Problem Management</i>					
D. ENABLE						
	<i>D.1. Information Security Strategy Development</i>					
	<i>D.2. ICT Quality Strategy Development</i>					
	<i>D.3. Education and Training Provision</i>					
	<i>D.4. Purchasing</i>					
	<i>D.5. Sales Proposal Development</i>					
	<i>D.6. Channel Management</i>					
	<i>D.7. Sales Management</i>					
	<i>D.8. Contract Management</i>					
E. MANAGE						
	<i>E.1. Forecast Development</i>					
	<i>E.2. Project and Portfolio Management</i>					
	<i>E.3. Risk Management</i>					
	<i>E.4. Relationship Management</i>					
	<i>E.5. Process Improvement</i>					
	<i>E.6. ICT Quality Management</i>					
	<i>E.7. Business Change Management</i>					
	<i>E.8. Information Security Management</i>					



5. European e-Competence Framework full version

Dimension 1 e-Comp area	Dimension 2 e-Competences: Title + generic description	Dimension 3 e-Competence proficiency levels (on e-CF levels e-1 to e-5, related to EQF levels 3 to 8)	Dimension 4 Knowledge (k) and skills (s) examples
A. PLAN			
	<p>A.1. IS and Business Strategy Alignment</p> <p>Anticipates long term business requirements and determines the Information System model in line with organisation policy. Makes strategic ICT policy decisions for the enterprise (ERP, CRM, Groupware, Network etc.).</p>	<p>Levels 1,2,3,4 – Not applicable</p> <p>Level 5 – Provides strategic leadership to reach consensus and commitment from the leadership management team for the construction and implementation of long term innovative solutions.</p>	<p>A.1.s1. analyses business processes and architectures</p> <p>A.1.s2. determines requirements for processes related to ICT Services</p> <p>A.1.s3. identifies, analyses and defines user/customer needs</p> <p>A.1.s4.</p> <p>A.1.k1. knows ERP system potential and opportunities</p> <p>A.1.k2. ...</p>
	<p>A.2. Service Level Management</p> <p>Defines, validates and makes applicable service level agreements and underpinning contracts for services offered. Negotiates service performance levels taking into account the needs and capacity of customers and business.</p>	<p>Levels 1,2 – Not applicable</p> <p>Level 3 – Influences and prepares the final service level agreement (SLA) and accounts for the final content.</p> <p>Level 4 – Provides leadership to amend the enterprise strategy with respect to Service Level Agreements in order to achieve forecasted results.</p> <p>Level 5 – Not applicable</p>	



<u>Dimension 1</u> e-Comp area	<u>Dimension 2</u> e-Competences: Title + generic description	<u>Dimension 3</u> e-Competence proficiency levels (on e-CF levels e-1 to e-5, related to EQF levels 3 to 8)	<u>Dimension 4</u> Knowledge (k) and skills (s) examples
A. PLAN			
	<p>A.3. Business Plan Development</p> <p>Addresses the design and structure of a business or product plan through the identification of alternative approaches; includes return on investment propositions. Presents cost benefit analysis and reasoned arguments in support of the selected strategy. This activity may include the development of enterprise-wide information architectures and processes to ensure strategic application of technology for business benefit. Ensures compliance of business and technology strategies. Communicates and sells business plan to relevant stakeholders and addresses political, financial, and organisational interests, including SWOT analysis. For product plans this will incorporate the marketing and sales strategy and potential use of Value Added Resellers. (VARs).</p>	<p>Levels 1, 2 – Not applicable</p> <p>Level 3 – Exploits specialist knowledge to provide analysis of market environment etc.</p> <p>Level 4 – Provides leadership for the creation of an information systems strategy which meets the requirements of the business.</p> <p>Level 5 – Applies strategic judgement and organisational leadership to exploit the capability of Information Technology to transform the business.</p>	<p>A.3.s1. designs solutions</p> <p>A.3.s2. defines budget</p> <p>A.3.s3. defines KPIs and procedures for measurement</p> <p>A.3.s4. ...</p> <p>A.3.k1. knows Business Plan methods and tools</p> <p>A.3.k2.</p>
	<p>A.4. Specification Creation</p> <p>Analyses and defines current and target status. Estimates cost effectiveness and designs decision templates. Develops structure plans, timescales and milestone descriptions. Maintains a project diary and manages status reporting and change requests. Documents system acceptance and completion reports. Defines delivery quantity and provides an overview of additional documentation requirements. Specifies correct handling of products and identifies adverse consequences of poor handling and treatment.</p>	<p>Level 1 – Not applicable</p> <p>Level 2 – Acts systematically to document standard and simple elements of product or project.</p> <p>Level 3 – Exploits specialist knowledge in specification development to create and maintain complex documents of the project or product.</p> <p>Level 4 – Acts with wide ranging accountability to take responsibility for complete project or product specification.</p> <p>Level 5 – Not applicable</p>	



<u>Dimension 1</u> e-Comp area	<u>Dimension 2</u> e-Competences: Title + generic description	<u>Dimension 3</u> e-Competence proficiency levels (on e-CF levels e-1 to e-5, related to EQF levels 3 to 8)	<u>Dimension 4</u> Knowledge (k) and skills (s) examples
A. PLAN			
	<p>A.5. Systems Architecture</p> <p><i>Specifies, refines, updates and makes available a formal approach to implement ICT technology, necessary to develop and operate ICT systems in line with business requirements. Identifies the components required, hardware, software and technology platforms that need to be integrated to meet current and future business needs. Ensures that all technical aspects take account of interoperability, scalability and usability.</i></p> <p>A.6. Application Design</p> <p><i>Plans and specifies the conceptual design of an application in accordance with ICT policy and user or customer needs. Estimates development costs, installation and maintenance of application. Selects appropriate technical options for building the solution. Validates the models with representative users.</i></p> <p>A.7. Technology Watching</p> <p><i>Realises vision and radical thought to build on invention and embed it into new products, applications or services. Contributes added value by making step change improvements in efficiency, productivity, quality or competitiveness.</i></p>	<p><i>Level 1, 2 - Not applicable.</i></p> <p><i>Level 3 - Exploits specialist knowledge to define relevant ICT technology and specifications to be deployed in the construction of multiple IT projects, applications or infrastructure improvements.</i></p> <p><i>Level 4 - Acts with wide ranging accountability to define the strategy to implement ICT technology compliant with business need, and accounting for the current technology platform, obsolescent equipment and latest technological innovations.</i></p> <p><i>Level 5 - Not applicable.</i></p> <p><i>Level 1 – Contributes to the design and general functional specification and interfaces, with support from colleagues.</i></p> <p><i>Level 2 – Organises the overall planning of the design of the application.</i></p> <p><i>Level 3 – Accounts for own and others actions in ensuring that the application is correctly integrated within a complex environment.</i></p> <p><i>Level 4,5 – Not applicable</i></p> <p><i>Level 1,2,3 – Not applicable</i></p> <p><i>Level 4 – Exploits wide ranging specialist knowledge of new and emerging technologies, coupled with a deep understanding of the business, to envision and articulate the solutions of the future. Provides expert guidance and advice, to the leadership teams in business and in technology, about potential innovations to support strategic decision making.</i></p> <p><i>Level 5 – Provides strategic leadership. Envisions and articulates future solutions and directs the organisation to build and exploit them.</i></p>	



<u>Dimension 1</u> e-Comp area	<u>Dimension 2</u> e-Competences: Title + generic description	<u>Dimension 3</u> e-Competence proficiency levels (on e-CF levels e-1 to e-5, related to EQF levels 3 to 8)	<u>Dimension 4</u> Knowledge (k) and skills (s) examples
B. BUILD			
	<p>B.1. Design and Development</p> <p><i>Designs and engineers software programs/modules and/or hardware components to meet required specifications. Follows a systematic methodology to analyse and build the required components and interfaces. Performs unit and system testing to ensure functional and performance criteria are met.</i></p>	<p>Level 1 – Not applicable</p> <p>Level 2 – Systematically develops small components or modules.</p> <p>Level 3 – Acts creatively to develop and integrate components into a larger product.</p> <p>Level 4 – Handles complexity by developing standard procedures and architectures in support of cohesive product development.</p> <p>Level 5 – Has ultimate responsibility for strategic direction of product, technical architecture or technology development.</p>	
	<p>B.2. Systems Integration</p> <p><i>Installs additional hardware, software or sub system components into an existing or proposed system. Complies with established processes and procedures, taking into account the specification, capacity and compatibility of existing and new modules to ensure integrity and interoperability. Verifies system performance and ensures formal sign off and documentation of successful integration.</i></p>	<p>Level 1 – Not applicable</p> <p>Level 2 – Acts systematically to identify compatibility of software and hardware specifications. Documents all activities during installation and records deviations and remedial activities.</p> <p>Level 3 – Accounts for own and others actions in the integration process. Complies with appropriate standards and change control procedures to maintain integrity of the overall system functionality and reliability.</p> <p>Level 4 – Exploits wide ranging specialist knowledge to create a process for the entire integration cycle, including the establishment of internal standards of practice. Provides leadership to marshal and assign resources for programmes of integration.</p> <p>Level 5 – Not applicable</p>	<p>B.2.s1. integrates interfaces and modules into new / existing systems</p> <p>B.2.s2. writes technical documentation</p> <p>B.2.s3. ...</p> <p>B.2.k1. knows optimisation techniques and metric systems</p> <p>B.2.k2. ...</p>



Dimension 1 e-Comp area	Dimension 2 e-Competences: Title + generic description	Dimension 3 e-Competence proficiency levels (on e-CF levels e-1 to e-5, related to EQF levels 3 to 8)	Dimension 4 Knowledge (k) and skills (s) examples
B. BUILD			
	<p>B.3. Testing</p> <p><i>Constructs and executes systematic test procedures for IT systems or customer usability requirements to establish compliance with design specifications. Ensures that new or revised components or systems perform to expectation. Ensures meeting internal, external, national and international standards including health and safety for either usability, performance, reliability or compatibility. Produces documents and reports to evidence certification requirements.</i></p>	<p><i>Level 1 – Performs simple tests in strict compliance with detailed instructions.</i></p> <p><i>Level 2 – Organises test programmes and builds scripts to stress test likely vulnerabilities. Records and reports outcomes providing analysis of results.</i></p> <p><i>Level 3 – Exploits specialist knowledge to supervise complex testing programmes. Ensures tests and results are documented to provide input to subsequent process owners such as designers, users or maintainers. Accountable for compliance with testing procedures including a documented audit trail.</i></p> <p><i>Level 4,5 – Not applicable</i></p>	<p><i>B.3.s1. selects appropriate test methods</i></p> <p><i>B.3.s2. writes technical documents</i></p> <p><i>B.3.s3. ...</i></p> <p><i>B.3.k1. knows test methods and techniques</i></p> <p><i>B.3.k2. ...</i></p>
	<p>B.4. Solution Deployment</p> <p><i>Following predefined general standards of practice carries out planned necessary interventions to implement solution, including installing, upgrading or decommissioning. Configures hardware, software or network to ensure interoperability of system components and debugs any resultant faults or incompatibilities. Engages additional specialist resources if required, such as third party network providers. Formally hands over fully operational solution to user and completes documentation recording all relevant information, including equipment addressees, configuration and performance data.</i></p>	<p><i>Level 1 – Performs under guidance and in accordance with detailed instructions, the removal or installation of individual components.</i></p> <p><i>Level 2 – Acts systematically to build or deconstruct system elements in a complex environment. Identifies non performing components and establishes root cause of failure within the overall solution. Provides support to less experienced colleagues.</i></p> <p><i>Level 3 – Accounts for own and others actions within solution provision activities including comprehensive communications with client. Exploits specialist knowledge to influence solution construction. Gives advice on aligning work processes and procedures with software upgrades.</i></p> <p><i>Levels 4,5 – Not applicable</i></p>	
	<p>B.5. Technical Publications Development</p> <p><i>Produces documents according to requirements of the product, service or application. Selects appropriate style and media for presentation materials. Describes function and features. Validates and updates existing documentation and creates templates for document-management systems.</i></p>	<p><i>Level 1 – Acts simply and under guidance to select appropriate media and write content.</i></p> <p><i>Level 2 – Organises the production of documents taking input from technical authors.</i></p> <p><i>Level 3 – Decides appropriate document format by analysing requirements and/or creating custom-made templates</i></p> <p><i>Levels 4,5 – Not applicable</i></p>	



Dimension 1 <i>e-Comp area</i>	Dimension 2 <i>e-Competences: Title + generic description</i>	Dimension 3 <i>e-Competence proficiency levels (on e-CF levels e-1 to e-5, related to EQF levels 3 to 8)</i>	Dimension 4 <i>Knowledge (k) and skills (s) examples</i>
C. RUN	<p>C.1. User Support</p> <p><i>Responds to user requests and issues; records relevant information. Resolves or escalates incidents and optimises system performance. Monitors solution outcome and resultant customer satisfaction.</i></p> <p>C.2. Change Support</p> <p><i>Implements and provides guidance for the evolution of an IT solution. Controls and schedules software or hardware modifications to prevent multiple upgrades creating unpredictable outcomes. Minimises service disruption as a consequence of changes and adheres to defined service level agreement.</i></p>	<p><i>Level 1 – Routinely interacts with users to apply ICT-product knowledge and skill to respond to user requests and issues. Solve straightforward incidents following prescribed procedures.</i></p> <p><i>Level 2 – Acts systematically to interpret user problems. Applies questioning techniques to clarify and understand the underlying user issue. Relates user symptoms to known solutions using experience of interrogating a solution database. Escalates complex or unresolved incidents to a more senior operative. Records and tracks issue from outset to conclusion.</i></p> <p><i>Level 3 – Manages others activities and is accountable for ensuring that agreed service levels are met. Plans resource allocation to ensure support is available within user business hours. Acts creatively, and seeks opportunities for continuous service improvement by analysing root causes. Manages costs to budget.</i></p> <p><i>Levels 4,5 – Not applicable</i></p> <p><i>Level 1– Not applicable</i></p> <p><i>Level 2 – Acts systematically to respond to day by day operational needs and reacts to them, avoiding service disruptions and maintaining coherence to service level agreement.</i></p> <p><i>Level 3 – Exploits skills to ensure integrity of the system by controlling the application of functional updates, software or hardware additions and maintenance activities. Scrupulously maintains records of system configuration and the schedule for proposed changes.</i></p> <p><i>Levels 4,5 – Not applicable</i></p>	<p><i>C.1.s1. listens to customers' requests and interprets their needs</i></p> <p><i>C.1.s2. answers customers' questions with appropriate solutions</i></p> <p><i>C.1.s3. ...</i></p> <p><i>C.1.k1. understands principles of ICT products and procedures</i></p> <p><i>C.1.k2.</i></p>



Dimension 1 <i>e-Comp area</i>	Dimension 2 <i>e-Competences: Title + generic description</i>	Dimension 3 <i>e-Competence proficiency levels (on e-CF levels e-1 to e-5, related to EQF levels 3 to 8)</i>	Dimension 4 <i>Knowledge (k) and skills (s) examples</i>
C. RUN	<p>C.3. Service Delivery</p> <p><i>Takes proactive steps to ensure a stable and secure application and ICT infrastructure. Updates operational document library and logs all operational events. Maintains monitoring and management tools (i.e. Scripts, Procedures...)</i></p> <p>C.4. Problem Management</p> <p><i>Identifies and resolves the root cause of incidents within the Information System to minimise impact on business. Documents problems for future analysis and service enhancement. Prevents recurrence of known errors.</i></p>	<p><i>Level 1 – Acts under guidance to record and track performance data against service level agreements.</i></p> <p><i>Level 2 – Acts systematically to analyse performance data and communicate findings to senior colleagues. Escalates potential service level failures and recommends actions to improve service performance.</i></p> <p><i>Levels 3,4,5 – Not applicable</i></p> <p><i>Level 1,2 – Not applicable</i></p> <p><i>Level 3 – Exploits specialist knowledge and in-depth understanding of the IT infrastructure and problem management process to identify failures and resolve with minimum outage. Makes sound decisions in emotionally charged environments on appropriate action required to minimise business impact. Rapidly identifies failing component, selects alternatives such as repair, replace or reconfigure.</i></p> <p><i>Level 4 – Provides leadership and is accountable for the entire problem management process. Schedules and ensures well trained human resources, tools, and diagnostic equipment are available to meet emergency incidents. Has depth of expertise to anticipate critical component failure and make provision for recovery with minimum downtime. Constructs escalation processes to ensure that appropriate resources can be applied to each incident.</i></p> <p><i>Level 5 – Not applicable.</i></p>	<p><i>C.4.s1. identifies errors and fixes them through correction or work around solution</i></p> <p><i>C.4.s2. writes technical documentation</i></p> <p><i>C.4.s3. ...</i></p> <p><i>C.4.k1. understands principles of process or technology and applies analysis techniques</i></p> <p><i>C.4.k2. ...</i></p>



Dimension 1 e-Comp area	Dimension 2 e-Competences: Title + generic description	Dimension 3 e-Competence proficiency levels (on e-CF levels e-1 to e-5, related to EQF levels 3 to 8)	Dimension 4 Knowledge (k) and skills (s) examples
D. ENABLE	<p>D.1. Information Security Strategy Development</p> <p><i>Defines and makes applicable a formal organisational strategy, scope and culture to maintain safety and security of information. Provides the foundation for Information Security Management, including role identification and accountability (ref D.2). Uses defined standards to create objectives for information integrity, availability, and data privacy.</i></p> <p>D.2. ICT Quality Strategy Development</p> <p><i>Defines, improves and refines a formal strategy to satisfy customer expectations and improve business performance. Identifies critical processes influencing service delivery and product performance for definition in the ICT quality management system (ref D.4). Uses defined standards to formulate objectives for service management, product and process quality and identifies ICT quality management accountability.</i></p> <p>D.3. Education and Training Provision</p> <p><i>Defines and implements ICT training policy to address organisational skill needs and gaps. Structures, organises and schedules training programmes and evaluates training quality through a feedback process and implements continuous improvement. Adapts training plans to address changing demand.</i></p>	<p><i>Levels 1,2,3 – Not applicable</i></p> <p><i>Level 4 – Exploits depth of expertise and leverages external standards and best practices</i></p> <p><i>Level 5 – Provides strategic leadership to embed information security into the culture of the organisation</i></p> <p><i>Levels 1,2,3 – Not applicable</i></p> <p><i>Level 4 – Exploits wide ranging specialist knowledge to leverage and authorise the application of external standards and best practices</i></p> <p><i>Level 5 – Provides strategic leadership to embed ICT quality (i.e. metrics and continuous improvement) into the culture of the organisation</i></p> <p><i>Levels 1– Not applicable</i></p> <p><i>Level 2 – Organises the identification of training needs; collates organisation requirements, identifies, selects and prepares schedule of training interventions</i></p> <p><i>Level 3 – Acts creatively to analyse skills gaps; elaborates specific requirements and identifies potential sources for training provision. Has specialist knowledge of the training market and establishes a feedback mechanism to assess the added value of alternative training programmes</i></p> <p><i>Levels 4, 5 – Not applicable.</i></p>	<p><i>D.3.s1. applies appropriate tools for competences gap analysis</i></p> <p><i>D.3.s2. listens to and understands internal/external customers' needs</i></p> <p><i>D.3.s3. ...</i></p> <p><i>D.3.k1. knows training market and training programme development techniques</i></p> <p><i>D.3.k2. ...</i></p>



Dimension 1 e-Comp area	Dimension 2 e-Competences: Title + generic description	Dimension 3 e-Competence proficiency levels (on e-CF levels e-1 to e-5, related to EQF levels 3 to 8)	Dimension 4 Knowledge (k) and skills (s) examples
D. ENABLE	<p>D.4. Purchasing</p> <p><i>Applies a consistent procurement procedure, including deployment of the following sub processes: specification requirements, supplier identification, proposal analysis, contract negotiation, supplier selection, contract placement. Ensures that the entire purchasing process is fit for purpose and adds business value to the organisation.</i></p> <p>D.5. Sales Proposal Development</p> <p><i>Develops technical proposals to meet customer solution requirements and provide sales personnel with a competitive bid. Collaborates with colleagues to align the service or product solution with the organisations capacity to deliver.</i></p>	<p><i>Level 1 – Not applicable</i></p> <p><i>Level 2 – Understands and applies the principles of the procurement process; places orders based on existing supplier contracts. Ensures the correct execution of orders, including validation of deliverables and correlation with subsequent payments</i></p> <p><i>Level 3 – Exploits specialist knowledge to deploy the purchasing process, ensuring positive commercial relationships with suppliers. Selects suppliers, products and services by evaluating performance, cost, timeliness and quality. Decides contract placement and complies with organisational policies.</i></p> <p><i>Level 4 – Provides leadership for the application of the organisations procurement policies and makes recommendations for process enhancement. Applies experience and procurement practice expertise to make ultimate purchasing decisions.</i></p> <p><i>Level 5 – Not applicable.</i></p> <p><i>Level 1 - Not applicable</i></p> <p><i>Level 2 - Organises collaboration between relevant internal departments, for example, technical, sales and legal. Facilitates comparison between customer requirement and available 'off the shelf' solutions.</i></p> <p><i>Level 3 - Acts creatively to develop proposal incorporating a complex solution. Customises solution in a complex technical environment and ensures feasibility and technical validity of customer offer.</i></p> <p><i>Level 4 - Interprets and influences customer needs and the reference business contexts, proposes consultancy projects, in order to provide the ideal customer solutions, i.e. behaves as a "consultative seller"</i></p> <p><i>Level 5 – Not applicable</i></p>	



Dimension 1 <i>e-Comp area</i>	Dimension 2 <i>e-Competences: Title + generic description</i>	Dimension 3 <i>e-Competence proficiency levels (on e-CF levels e-1 to e-5, related to EQF levels 3 to 8)</i>	Dimension 4 <i>Knowledge (k) and skills (s) examples</i>
D. ENABLE	<p>D.6. Channel Management</p> <p><i>Develops the strategy for managing third party sales outlets. Ensures optimum commercial performance of the value-added resellers channel through the provision of a coherent business and marketing strategy. Defines the targets for volume, geographic coverage and the industry sector for VARs engagements and structures incentive programmes to achieve complimentary sales results .</i></p>	<p><i>Levels 1,2 – Not applicable</i></p> <p><i>Level 3 – Acts creatively to influence the establishment of a VAR network. Manages the identification and assessment of potential VAR members and sets up support procedures. VARs managed to maximise business performance.</i></p> <p><i>Level 4 – Exploits wide ranging skills in marketing and sales to create the organisations VAR strategy. Establishes the processes by which VARs will be managed to maximise business performance</i></p> <p><i>Level 5 – Not applicable</i></p>	
	<p>D.7. Sales Management</p> <p><i>Drives the achievement of sales results through the establishment of a sales strategy. Demonstrates the added value of the organisations products and services to new or existing customers and prospects. Establishes a sales support procedure providing efficient response to sales enquiries, consistent with company strategy and policy. Establishes a systematic approach to the entire sales process, including understanding client needs, forecasting, prospect evaluation, negotiation tactics and sales closure.</i></p>	<p><i>Level 1, 2, 3 - Not applicable</i></p> <p><i>Level 4 – Assesses and estimates appropriate sales strategies to deliver company results. Decides and allocates annual sales targets and adjusts incentives to meet market conditions.</i></p> <p><i>Level 5 – Assumes ultimate responsibility for the sales performance of the organisation. Authorises resource allocation, prioritises product and service promotions, advises board directors of sales performance.</i></p>	
	<p>D.8. Contract Management</p> <p><i>Provides and negotiates contract in accordance with organisational processes. Ensures that supplier deliverables are provided on time, meet quality standards and comply with agreed service levels. Addresses non compliance, escalates significant issues, drives recovery plans and if necessary amends contracts. Maintains budget integrity. Assesses and addresses supplier compliance to legal and health and safety standards. Actively pursues regular supplier communication.</i></p>	<p><i>Level 1 – Not applicable.</i></p> <p><i>Level 2 – Acts systematically to monitor contract compliance and promptly escalates defaults.</i></p> <p><i>Level 3 – Evaluates supplier contract performance by monitoring performance indicators. Assures performance of the complete supply chain. Influences the terms of contract renewal.</i></p> <p><i>Level 4 – Provides Leadership for supplier contract compliance and is the final escalation point for issue resolution.</i></p> <p><i>Level 5 – Not applicable</i></p>	



Dimension 1 e-Comp area	Dimension 2 e-Competences: Title + generic description	Dimension 3 e-Competence proficiency levels (on e-CF levels e-1 to e-5, related to EQF levels 3 to 8)	Dimension 4 Knowledge (k) and skills (s) examples
E. MANAGE	<p>E.1. Forecast Development</p> <p><i>Interprets market needs and evaluates market acceptance of products or services. Assesses the organisations potential to meet future production and quality requirements. Applies relevant metrics to enable accurate decision making in support of production, marketing, sales and distribution functions.</i></p>	<p>Levels 1, 2 – Not applicable</p> <p>Level 3 – Exploits skills to provide short-term forecast using market inputs and assessing the organisations production and selling capabilities</p> <p>Level 4 – Acts with wide ranging accountability for the production of a long-term forecast. Understands the global marketplace, identifying and evaluating relevant inputs from the broader business, political and social context</p> <p>Level 5 – Not applicable</p>	<p>E.1.s1. chooses appropriate forecasting models</p> <p>E.1.s2. applies market analysis methods</p> <p>E.1.s3. ...</p> <p>E.1.k1. knows global marketplace rules and mechanisms</p> <p>E.1.k2. ...</p>
	<p>E.2. Project and Portfolio Management</p> <p><i>Implements plans for a programme of change. Plans and directs a single or portfolio of ICT projects to ensure coordination and management of interdependencies. Orchestrates projects to develop or implement new, internal or externally defined processes to meet identified business needs. Defines activities, responsibilities, critical milestones, resources, skills needs, interfaces and budget. Develops contingency plans to address potential implementation issues. Delivers project on time, on budget and in accordance with original requirements. Creates and maintains documents to facilitate monitoring of project progress.</i></p>	<p>Level 1 – Not applicable</p> <p>Level 2 – Understands and applies the principles of project management and applies methodologies, tools and processes to manage simple projects</p> <p>Level 3 – Accounts for own and others activities, working within the project boundary, making choices and giving instructions; manages and supervises relationships within the team; plans and establishes team objectives and outputs and documents results</p> <p>Level 4 – Exploits wide ranging skills in project management to work beyond project boundary; manages complex projects or programmes, including interaction with others; influences project strategy by proposing new or alternatives solutions; takes overall responsibility for project outcomes, including finance and resource management; is empowered to revise rules and choose standards</p> <p>Level 5 – Provides strategic leadership for extensive interrelated programmes of work to ensure that Information Technology is a change enabling agent and delivers benefit in line with overall business strategic aims. Applies extensive business and technological mastery to conceive and bring innovative ideas to fruition</p>	<p>E.2.s1. schedules activities</p> <p>E.2.s2. builds teams</p> <p>E.2.s3. ...</p> <p>E.2.k1. knows Gantt and Pert techniques</p> <p>E.2.k2. ...</p>



Dimension 1 e-Comp area	Dimension 2 e-Competences: Title + generic description	Dimension 3 e-Competence proficiency levels (on e-CF levels e-1 to e-5, related to EQF levels 3 to 8)	Dimension 4 Knowledge (k) and skills (s) examples
E. MANAGE	<p>E.3. Risk Management</p> <p><i>Implements the management of risk across information systems through the application of the enterprise defined risk management policy and procedure. Assesses risk to the organisations business, and documents potential risk and containment plans.</i></p>	<p><i>Level 1 – Not applicable</i></p> <p><i>Level 2 – Understands and applies the principles of risk management and investigates ICT solutions to mitigate identified risks</i></p> <p><i>Level 3 – Decides on appropriate actions required to adapt security and address risk exposure. Evaluates, manages and ensures validation of exceptions; audits ICT processes and environment</i></p> <p><i>Level 4 – Provides leadership to define and make applicable a policy for risk management by considering all the possible constraints, including technical, economic and political issues. Delegates assignments</i></p> <p><i>Level 5 – Not applicable</i></p>	
	<p>E.4. Relationship Management</p> <p><i>Establishes and maintains positive business relationships between the client and provider (internal or external) deploying and complying with organisational processes. Maintains regular communication with client/partner/supplier, and addresses needs through empathy with their environment and managing supply chain communications. Ensures that client/partner/supplier needs, concerns or complaints are understood and addressed in accordance with organisational policy.</i></p> <p>E.5. Process Improvement</p> <p><i>Measures effectiveness of existing ICT processes. Researches and benchmarks ICT process design from a variety of sources. Follows a systematic methodology to evaluate, design and implement process or technology changes for measurable business benefit. Assesses potential adverse consequences of process change.</i></p>	<p><i>Levels 1,2 – Not applicable</i></p> <p><i>Level 3 – Accounts for own and others actions in managing a limited client base</i></p> <p><i>Level 4 – Provides leadership for large or many client relationships. Authorises investment in new and existing relationships. Leads the design of a workable procedure for maintaining positive business relationships</i></p> <p><i>Level 5 – Not applicable</i></p> <p><i>Levels 1, 2 – Not applicable</i></p> <p><i>Level 3 – Exploits specialist knowledge to research existing ICT processes and solutions in order to define possible innovations. Makes recommendations based on reasoned arguments</i></p> <p><i>Level 4 – Provides leadership and authorises implementation of innovations and improvements that will enhance competitiveness or efficiency. Demonstrates to senior management the business advantage of potential changes</i></p> <p><i>Level 5 – Not applicable</i></p>	



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E. MANAGE	<p>E.6. ICT Quality Management</p> <p><i>Implements ICT quality policy to maintain and enhance service and product provision. Plans and defines indicators to manage quality with respect to ICT strategy. Reviews quality performance indicators and recommends enhancements to influence continuous quality improvement.</i></p> <p>E.7. Business Change Management</p> <p><i>Assesses the implications of new IT solutions. Defines the requirements and quantifies the business benefits. Manages the deployment of change taking into account structural and cultural issues. Maintains business and process continuity throughout change, monitoring the impact, taking any required remedial action and refining approach.</i></p> <p>E.8. Information Security Management</p> <p><i>Implements information security policy. Monitors and takes action against intrusion, fraud and security breaches or leaks. Ensures that security risks are analysed and managed with respect to enterprise data and information. Reviews security incidents and makes recommendations for continuous security enhancement.</i></p>	<p><i>Level 1 – Not applicable</i></p> <p><i>Level 2 – Communicates and monitors application of the organisations quality policy</i></p> <p><i>Level 3 – Evaluates quality management indicators and processes based on ICT quality policy and proposes remedial action</i></p> <p><i>Level 4 – Assesses and estimates the degree to which quality requirements have been met and provides leadership for quality policy implementation. Provides cross functional leadership for setting and exceeding quality standards</i></p> <p><i>Level 5 – Not applicable</i></p> <p><i>Levels 1,2 – Not applicable</i></p> <p><i>Level 3 – Evaluates change requirements and exploits specialist skills to identify possible methods and standards that can be deployed</i></p> <p><i>Level 4 – Provides leadership to plan, manage and implement significant IT led business change</i></p> <p><i>Level 5 – Applies pervasive influence to imbed organisational change</i></p> <p><i>Level 1 – Not applicable</i></p> <p><i>Level 2 – Systematically scans the environment to identify and define vulnerabilities and threats. Records and escalates non-compliance</i></p> <p><i>Level 3 – Evaluates security management measures and indicators and decides if compliant to information security policy. Investigates and instigates remedial measures to address any security breaches</i></p> <p><i>Level 4 – Provides leadership for the integrity, security and availability of data stored on information systems</i></p> <p><i>Level 5 – Not applicable</i></p>	



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