EUCIP
IT Systems Architect

Professional Profile Specification

Version 3.0, April 2011

Short Description

A EUCIP IT Systems Architect is expected to play a key role in designing performing and secure IT systems - with a special focus on software architectures - integrating and upgrading them; besides a thorough competence in ICT (all domains: software, hardware and networks), this requires specific design techniques and the ability to describe a system in terms of components and logical flows.

This profile requires a minimum work experience of **60** months in a compatible job role; if this requirement is not fulfilled, the candidate might be certified as an **Associate** IT System Architect.

Tasks Overview

The IT Systems Architect works within organisations (either as an employee or as an external provider), operating within the scope of the tasks assigned by the management, to identify solutions to business requirements via reasoned application of IT. These solutions are presented in the form of IT architectures and include processes, services and systems.

Based on the organization's business requirements and goals, participates to the definition of business processes in terms of activities and functions, and develops them into fully operational IT architectures, selecting and applying suitable frameworks and methodologies.

Manages the IT architecture's entire lifecycle, understanding changing business requirements and incrementally defining a detailed technical solution.

Reviews the IT architecture in terms of balance between benefits, costs and risks, including security threats. Provides the management with detailed funding and cost justification and return on Investment (ROI) evaluations.

Ensures that individual IT solutions and applications fit within the organization business strategy, comply with the organization's IT standards and fully support the enterprise-wide IT architecture.

Monitors the IT architecture's overall effectiveness, the efficiency of individual IT solutions (in terms of ICT equipment, processing and communication capacity, data structures, objects, algorithms, business logic, etc.) and the technical feasibility of proposed new solutions, assessing their risks, costs and potential benefits.

Identifies legacy systems integration and migration problems and provides suitable answers in terms of models and practical implementation solutions.

Ensures that individual IT solutions satisfy the organization's non-functional requirements, including quality, security, performance, usability and scalability.

Provides technical leadership and guidance to the architecture construction and maintenance team in all phases of development, deployment and maintenance of IT architectures.

Advises the organisation on emerging trends and innovations regarding IT architectures, and highlights best practices in similar/relevant industries.

Leads the evaluation and comparison of IT technologies, reporting to the management, reporting on alternative scenarios and assessing opportunities related to new and emerging technologies.

Contributes to innovation by participating in programmes and projects for the enhancement of IT architecture design and deployment methodologies.

Produces high quality design documents and written reports, describing IT architectural solutions in a clear and terse style.

Plans and manages effective communication (i.e. various types of formal and informal meetings, training, presentations, demonstrations, brainstorming etc.) showing good relational skills, goal-orientation, a problem-solving attitude, business sensitivity and a full mastery of communication techniques.

Essential Behavioural Skills [4][1]

The IT System Analyst role requires a sound technical basis, a strong will to learn, excellent oral and written expression, and a wide range of more specific behavioural skills.

A keen interest in technology innovation, the ability to collect and understand new information, plus organisational and business sensitivity are required to successfully design, deploy and maintain IT architectures.

Strategic vision, analytical and synthetic intelligence, imagination and proactivity are required to formulate and validate solutions.

A persistent goal-driven approach, flexibility, determination, planning and control aptitude, teambuilding are also required to achieve actual results.

[1] numbers in brackets represent EUCIP points

Detailed Skills Required

Deep competence level [9,5]

A1.02 Requirements engineering [2]

- Distinguish between Functional and Non Functional requirements.
- Use What, Why, How questioning to elicit requirements.
- Differentiate between requirements and project constraints.
- Identify the Actors in the Requirements Management process: Domain Expert, End User, Requirements Engineer, and Developer.
- Perform requirements elicitation.
- Perform Problem and Business understanding activities.
- Understand the needs and constraints of stakeholders.
- Use Creative thinking and related techniques (e.g. interviews and scenarios, observation, prototyping, workshops, generic requirements for industry sector).
- Prioritise Requirements (e.g. 80/20, MoSCoW, Needs and Musts).
- Resolve overlapping requirements.
- Judge whether a problem is a cause or symptom.
- Resolve conflicting requirements.
- Reduce ambiguity of requirements .
- Ensure Testability of requirements.
- Support requirements validation via reviews and prototyping.
- Achieve Requirement Refinement.
- Manage the requirements definition process.
- Differentiate between stable and volatile requirements.
- Apply versioning principles to requirements documents.
- Establish traceability and ownership of requirements.
- Use CASE Tools for requirements management.
- Act as an effective member of a team involved in eliciting and recording user requirements for an Information System.
- Apply a range of elicitation techniques effectively.

A4.01 New technology opportunities and the matching of these To business needs [4]

- Analyse business processes and compare them against alternative solutions proposed by standard software packages ("best practice" approach).
- Evaluate various options for the "virtual organisation" within a business scenario.
- Establish a business case for moving from a "segregated" sales and marketing strategy to the "unique customer" approach in a given organisation.
- Produce a report on the effects of globalisation for an organisation.
- Evaluate the Internet as a tool for creating new opportunities for an organisation.
- Evaluate extranets as a tool for achieving efficiencies in customer/supplier interaction.
- Produce an impact analysis for an organisation related to the increased use of e-business mechanisms.

- Evaluate a project which used IT as the enabler for significant business change.
- Produce a report documenting the major features of Customer Relationship Management tools.
- Compare the features offered by two major Supply Chain Management packages.
- Evaluate the case for using Enterprise Resource Planning tools for a given business scenario.
- Compare the strengths and weaknesses (from a business viewpoint) of developments in IT technical architectures (e.g. web based vs. "2 tier" client server).
- Evaluate the case for using Document Management systems.
- Evaluate the benefits of Knowledge Management systems.
- Evaluate the benefits and potential of implementing social media for customers, suppliers or staff.
- Evaluate the potential of tools to exploit portable devices through functions like virtual shops, geolocation of physical points of sale.
- Evaluate the advantages, disadvantages of cloud computing.

C1.02 Distributed computing architecture [2]

- Evaluate and design the physical architecture of a data centre / server farm.
- Know how to integrate a mainframe with other infrastructures and associated integration issues.
- Evaluate the solution offered by Infrastructure as a Service (IaaS) providers.
- Define the appropriate hardware dimensioning for servers in a farm, considering actual and expected workload , and taking into account their role (web server, database server, application server, terminal server, monitoring server, …).
- Design an appropriate organisation of physical servers and evaluate the benefits of virtualisation and modular blade servers.
- Evaluate the environmental characteristics of a server farm (conditioning, cabling, physical access control, ...) and all components used, such as uninterrupted power supply systems, racks etc.
- Apply principles of green IT in the design, manufacture, use, and disposal of computers, servers, and associated subsystems, in order to minimize the impact on the environment.
- Know how to obtain high availability (clustering, load balancing, ...) and identify related hardware / software requirements.
- Manage the infrastructure portfolio and evaluate, based on required performance and allocated budget, the best shared storage solution, including number and capacity of disks, required redundancy, external communication bus capacity.
- Identify scalability options to align the sizing of a data centre / server farm to the expected requirements, and assess their economic feasibility.
- Define backup and recovery policies for data and applications, aligning them to the agreed service level.

A7.02 Business risk and IT security [1,5]

- Specify the business need for recovery and back-up of data and for protection against viruses.
- Evaluate the need for encryption of data (at rest/in transit) in the light of network "threats" to data integrity.
- Evaluate the risks to the business caused by security threats to IS/IT.
- Contribute to a Security policy for (part of) a business organisation.

Incisive competence level [18,5]

A2.01 Information Systems in the business environment [1]

- Explain the nature of Management Information in the planning and control of organisations.
- Define the strategic role of Information Systems (IS).
- Demonstrate a detailed understanding of common business functions.
- Describe why an IS Strategy is needed.
- Contribute to the development of an IS Strategy.
- Relate IS Strategy to Business Strategy.
- Recognise the role of a structured approach to IT service management like ITIL in improving the alignment between IT and the business needs.

A1.03 Organisational strategies and related IT system selection [1]

- Classify organisations based on their type, internal structure, legal status etc.
- Evaluate the role IT plays in different types of organisation.
- Evaluate the impact of different organisational structures on the management of IT.
- Evaluate Corporate Mission Statements and their IT implications.
- Build a business plan for a particular organisation.
- Evaluate the major techniques for building a business strategy.
- Involve functional managers and key users to identify the key business needs
- Propose new technical & organizational tools to improve office automation and productivity (e-mail, document/content management, cooperative workflow with external partners)
- Identify IT solutions for factory automation
- Outline the IT needed to deliver a given business plan.
- Select a portfolio of computer support tools for management of an organisation.
- Contribute to an overall strategy for leveraging of organisational knowledge, memory and learning.
- Use well-known decision making and problem solving techniques.
- Select suitable Management Information Systems (MIS) software for an organisation.
- Evaluate the usefulness of different IT-based workflow systems.
- Compare the effectiveness of virtual team working and physically co-located team working.
- Establish a collaborative structure, using relevant technology.
- Evaluate implementations of collaborative technologies.

- Evaluate the potential of internal social networks for strengthening staff relationships, particularly in distributed organisations.
- Contribute to the implementation and communication of effective policies regarding corporate responsibility (as defined by standards like ISO 14001), including social and environmental sustainability and some specific actions such as design for all, green IT, stakeholder involvement through social networks.
- Evaluate the link between an IT strategy and the business strategy.
- Design appropriate matches between organisational need and IT provision.
- Identify the strengths and weaknesses of MIS, On-line Transaction Processing (OLTP) and related system types.
- Contribute to the specification of a Data Warehousing system to support Business Intelligence (analytics) users.

A1.01 Business activity and business process modelling [1,5]

- Understand the Rationale for Business Activity Modelling.
- Perform Internal Environment Analysis (e.g. MOST).
- Perform External Environment Analysis (e.g. PESTLE).
- Use SWOT Analysis.
- Perform Business Viewpoint Analysis.
- Define Business Activities for an organisation.
- Define CSFs and KPIs for a business change.
- Formalise Business Rules within an organisational unit.
- Define Information Support needed for the defined activities.
- Perform conflict resolution between perspectives.
- Create Rich Pictures to describe a business scenario.
- Utilise the Soft Systems Approach to developing an Information System.
- Evaluate alternative ways of modelling business processes; e.g. Data Flow Diagrams, PHD, Process Dependency, Event Models.
- Conform to the syntax of business process modelling.
- Document Information flows (sources, destinations).

A6.01 Managing business change [1]

- Develop a communication plan to facilitate organizational changes
- Foster innovation by an appropriate evaluation system for IT staff
- Promote training to facilitate the change
- Identify organizational and technological drivers of resistance to change
- Understand human behaviour and its impact on business change
- Create a plan to overcome resistance to change from the business, including “selling” the benefits of new technology
- Make effective use of Audio-Visual tools in making the case for change within an organisation
- Explain to non-IT staff the role of IT in achieving corporate aims, and its place within the organisation
- Ensure that the case for change is presented effectively, using modern delivery techniques
- Evaluate the Impact of an IT solution on the Business, its Customers/Suppliers, Staff, Internal processes etc

- Select between Programmes and Projects for Business Change
- Organise the delivery of user training for both new business processes and the use of any underpinning ICT services
- Control the interfaces between Business Change projects and enabling IT projects
- Identify cultural, organisational and business constraints affecting options for change
- Establish an understanding of business aims and develop alternative processes to achieve them
- Assess the risks, costs and potential benefits of alternative business process designs.

C3.01 Network principles and standards [1,5]

- Evaluate the basic components of a network, such as server, client, NIC, protocols, Network Operating System (NOS), shared resources.
- Evaluate a Server, its requirements, and function. Also evaluate the basic server components.
- Build or order a server, dimensioning it to cover the network needs.
- Evaluate a client, its requirements, and function. Also evaluate the basic client components.
- Build or order a client, dimensioning it to covers both user's and applications' needs.
- Configure computers and mobile devices for data synchronization.
- Evaluate the function of a Network Interface Card (NIC). Also be able to choose the appropriate card for a network.
- Differentiate between the basic network topologies:
  - Busnet
  - Ringnet
  - Starnet
  - their function, capabilities and limitations
- Differentiate between a Local Area Network (LAN) and a Wide Area Network (WAN).
- Recognise "de facto" and "de jure" standards in data transmission:
  - the TCP/IP suite
  - the OSI model
  - purpose of the layered reference model (principle of encapsulation and service access points in layer models)
  - main standard organisations, such as CCITT, ITU-TS, IEEE, ISO and IAB and domains they are focusing on
  - aim of the different layers (physical, data link, network, transport, session, presentation, and application.

C1.01 Computer hardware selection and management [1]

- Recognise CPU architectures and functioning, and evaluate how their characteristics affect performances.
- Evaluate caching policies and the respective hardware configurations.
- Differentiate between CPU architectures (CISC, RISC, 32/64 bit, and extensions on specific functions e.g. SSE), their main

manufacturers and the application context where they are most suitable.
- Differentiate between RAM types (DRAM, SRAM, DDR-X, and extensions on specific functions e.g. ECC), the meaning of characteristic parameters (CAS, Command Rate, tRP, tRAS, ...), their main manufacturers and the application context where they are most suitable.
- Differentiate between hard disk types (IDE, various kinds of SCSI, S-ATA), the meaning of characteristic parameters (RPM, on-board cache) and the application context where they are most suitable.
- Evaluate hardware requirements for a server during the procurement phase, define its configuration and choose the appropriate components.
- Differentiate between disk controller types (SCSI, Fiber Channel, ATA) and their functions (read/write caching, supported RAID levels, hot-plug support, spare disks support, ...).
- Tune all low level configuration parameters for the main components, maximizing performances.
- Supervise the proper working conditions of hardware components and identify upgrades that can improve performances.

B2.01 Information modelling techniques and tools [1]

- Investigate existing systems and define elements of logical data design for required systems.
- Contribute to schema definition for a given business scenario.
- Use both top down and bottom up modelling of data.
- Use entity relationship modelling or class modelling to outline the information requirements of a new business system.
- Use recognised entity modelling techniques to construct a data model reflecting the business needs of the organisation.
- Contribute to data key identification and design.
- Assist in the creation of a Data Catalogue.
- Understand the concepts of RDA.
- Validate data models from a business processing perspective.
- Specify the requirements for security and integrity of data in a business scenario; requirements should cover integrity, loss of data consistency, logical errors, system errors, hardware failures, human error.

B1.01 System development lifecycles [1,5]

- Understand the differences between Business Analysis, Systems Analysis and Systems Design.
- Investigate and document an existing system.
- Produce a requirements definition for a business system.
- Create Business System Options and present them to the business.
- Identify tasks/disciplines involved in management of systems development.
- Justify the use of a specific systems methodology.
- Use relevant (to Business and Systems Analysis) development techniques.
- Explain the lifecycle of a project to business users.

- Use formal approaches for ensuring best practice in the System Development process.
- Understand the rationale for a particular Systems Development (SD) method and where it is used.
- Appreciate the scope and limitations of SD method in the project lifecycle.
- Understand and work within a standard development framework (e.g. SSADM).
- Appreciate the need for specific techniques in the SD process.
- Evaluate the suitability of differing system development approaches for a particular project scenario.
- Harmonise roles and responsibilities of the various specialists in each of the main lifecycles for system development.
- Use well known approaches to providing detailed SD Lifecycle products, e.g. textual, diagrams, prototypes.
- Create different modelling views of a business system (e.g. static data, behaviour, user centred, process).

A4.02 Package selection and implementation lifecycle [1]

- Define a framework for effective package selection.
- Identify, investigate and assess potential package suppliers.
- Evaluate a software package against defined requirements.
- Present recommendations concerning the "fit" of the software package to agreed functional and non functional requirements.
- Evaluate the advantages and disadvantages of the package approach.
- Evaluate the human, technical and financial implications of a decision to outsource development/buy a package solution.
- Apply a checklist of factors to a decision on in house development vs. package procurement.
- Work within a framework for package selection.
- Understand the impact on package selection of Prototyping approaches.
- Acquire an understanding of the software package market in a particular business context.
- Produce a High Level Functional Model for a system.
- Contribute to identifying potential package suppliers.
- Contribute to the production of Invitations to Tender (ITTs) and questionnaires.
- Investigate suppliers.
- Assist in the creation of Supply Contracts and Support Agreements.
- Perform cost comparisons - purchase and support.
- Document the functional match of a package solution.
- Contribute to gap analysis for a package selection.
- Use a weighted scorecard approach to evaluation.
- Present the recommendation for a specific package solution.
- Assist in the implementation of packages.
- Liaise with procurement staff for package purchase.
- Define the modified business processes required in a package solution.
- Appreciate the issues with tailoring the package software.
- Contribute to long term supplier management.

- Appreciate the advantages/disadvantages of packages.

B1.02 User centred analysis and development [1]

- Analyse and contribute to the design of Information Systems which reflect the way users wish to work to support their business.
- Perform user analysis and establish usability criteria, which can be used to measure the success of new systems.
- Model business tasks and use these models as a basis for prototyping and user interface design.
- Use User Analysis, Work Practice Models, Task Modelling, Job Design, or equivalent techniques.
- Appreciate the role of User Centred techniques in System Development.
- Perform Work Practice Modelling using concepts such as actor, task, business event, task scenario, user role, user class, user object, common subtask.
- Map Business Activities onto the organisational structure.
- Create required task models, plans and scenarios.
- Contribute to identifying and specifying task supporting IT software functions.

B1.03 RAD approaches to the system development lifecycle [1]

- Understand key features of Rapid Application Development (prototyping, iteration, incremental development/delivery, user involvement, empowerment, timeboxing, and prioritisation).
- Apply key principles and Critical Success Factors for RAD projects.
- Define the actors in a RAD project.
- Understand the SD Lifecycle for a RAD approach.
- Work within a standard RAD framework like Dynamic Systems Development Method or other agile methodologies.
- Evaluate Prototyping Approaches and Opportunities.
- Appreciate the different types/purposes of Prototyping.
- Perform business and IS Modelling in RAD projects.
- Use Facilitation skills and obtain consensus.
- Contribute to testing in RAD projects.
- Assist the Project Manager in managing RAD risks.
- Contribute to Estimating and Timeboxing Management in RAD.
- Define the principles, advantages and disadvantages of the RAD approach.
- Describe different approaches to prototyping and explain where each approach might be applied.
- Identify key factors in the success of a Facilitated Workshop.
- Describe a framework for managing a RAD team, using a chosen methodology like SCRUM..
- Contribute effectively to a RAD team.
- Identify appropriate applications for the RAD approach within an organisation.

B3.05 Principles of testing [1,5]

- Explain the principles of Testing.
- Maintain the importance of Testing in the Lifecycle.
- Understand Dynamic Test Techniques.
- Apply Test Management Standards.

- Use Static Testing Techniques.
- Understand core testing terminology (e.g. Expected Results, Expected Information).
- Appreciate the economics of Testing.
- Perform High Level Test Planning.
- Organise User Acceptance Testing (UAT).
- Ensure Functional and Non-Functional UAT is completed.
- Contribute to Dynamic Testing (Black Box).
- Contribute to Test Management (e.g. organisation, estimating, resourcing).

A5.02 Estimating for system development [1]

- Use a variety of estimating approaches and apply them to a practical project.
- Understand the importance of estimating and measurement.
- Distinguish between top-down and bottom-up estimating.
- Contribute to "estimating by analogy".
- Contribute to Delphi estimating.
- Contribute to estimating by the analysis percentage effort method.
- Appreciate the principles of Function Point Analysis (FPA).
- Appreciate the benefits of using the COSMIC software sizing method.
- Contribute to FPA estimates by using formal counting rules.
- Assist in defining effort estimates and elapsed duration estimates.
- Appreciate the use of Line Count Cost Models.
- Contribute to building Work Breakdown structures and hence estimating for software development projects.
- Appreciate the impact of timeboxing and RAD on estimating.
- Appreciate the principles of the Story Points method for estimating effort when applying agile software development approach.
- Evaluate the factors affecting productivity in IS development.
- Contribute to collecting and analysing project statistics/metrics.
- Contribute to the use of metrics to improve project estimation.

C7.01 IT service delivery [1]

- Contribute to the creation, via cost-based negotiation, of Service Level Agreements by stating business quality requirements for the specified service.
- Contribute to the organisational Capacity Plan by eliciting predictions of service usage (both existing and planned).
- Contribute to the Business Continuity Plan for an organisation, by specifying threats to and the recovery needs of each service offered by the organisation to its customers.
- Evaluate risk reduction and contingency options prepared by Service Management staff within an organisation.
- Contribute to Continuous Service Improvement plans on behalf of the business.
- Evaluate the various options for Service Desk support suggested by IT Service Management.
- Ensure full support for new services is in place before system implementation is completed.
- Liaise with Service Management staff over the technical impact of requested business changes to existing services.

- Contribute to business impact analysis of all requests for change to a service.
- Assist the business in specifying requests for change to existing services using ITIL© - ISO20000 standards or equivalent..

B1.04 Tools and techniques for development, testing and implementation of IT systems [1]

- Use system development tools for business modelling, requirements management and acceptance testing.
- Use relevant tools for automated testing (e.g. CAST).
- Use tools to support systems implementation and testing (e.g. rollout tools).
- Use relevant tools to perform security code review.
- Take responsibility for "end user" training and support documentation.
- Collaborate with Service Management to establish a user support structure (e.g. IT Service Desk).

A5.01 Project Management essentials [1,5]

- Define the role of the various specialists in a typical project organisation structure (e.g. Rational Unified Process, PRINCE2, etc.).
- Contribute to the IS project plan for a given business scenario.
- Contribute to risk analysis of a project proposal, concentrating on business risk.
- Use standard approaches to evaluate a project plan from the business viewpoint.
- Assist in defining the phases within a project and the role of the business analyst in those phases.
- Assist in the creation of constraints and the definition of milestones, checkpoints and reviews for a project.
- Define Corporate Standards for the documentation of business analysis deliverables in a project.
- Contribute to quality assurance processes within a project, from a business perspective.
- Be aware of IS Agile Project Management (APM) principles and techniques like SCRUM and XP.

Annex: External references to Frameworks and Schemes

European e-Competence Framework (e-CF) version 2.0 by CEN

This is a reference framework of 36 ICT competences that can be used and understood by ICT user and supply companies, the public sector, educational, and social partners across Europe. One of the strategic objectives of EUCIP is to provide a detailed competence scheme that sits under and references the competences set out in the e-CF in order to provide a range of certifications and services to IT professionals and industry in Europe.

A.1: IS and Business Strategy Alignment

"Anticipates long term business requirements and determines the IS model in line with organisation policy. Makes strategic IS policy decisions for the enterprise, including sourcing strategies."

A.4: Product or Project Planning

"Analyses and defines current and target status. Estimates cost effectiveness, points of risk, opportunities, strengths and weaknesses, with a critical approach. Creates structure plans; establishes time scales and milestones. Manages change requests. Defines delivery quantity and provides an overview of additional documentation requirements. Specifies correct handling of products."

A.5: Architecture Design

"Specifies, refines, updates and makes available a formal approach to implement solutions, necessary to develop and operate the IS architecture. Manages the relationship with the business stakeholders to ensure that the architecture is in line with business requirements. Identifies the need for change and the components involved; hardware, software, applications, processes, information and technology platform. Ensures that all aspects take account of interoperability, scalability, usability and security."

A.7: Technology Watching

"Explores latest ICT technological developments to establish understanding of evolving technologies. Devises innovative solutions for integration of new technology into existing products, applications or services or for the creation of new solutions."

A.8: Sustainable Development

"Estimates the impact of ICT solutions in terms of eco responsibilities including energy consumption. Advises business and ICT stakeholders on sustainable alternatives that are consistent with the business strategy. Applies an ICT purchasing and sales policy which fulfils eco-responsibilities."

SFIA© version 4G by the SFIA Foundation

The Skills Framework for the Information Age (SFIA) provides a common reference model for the identification of the skills needed to develop effective Information Systems (IS) making use of Information Communications Technologies (ICT). It is a simple and logical two-dimensional framework consisting of areas of work on one axis and levels of responsibility on the other.

Skill 9: Consultancy

"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. "

Skill 10: Technical Specialism

"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. "

Skill 11: Research

"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."

Skill 17: Solution architecture

"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. "

Skill 18: Emerging Technology Monitoring

"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 as business enablers, improvements in cost/performance or sustainability. The promotion of emerging technology awareness among staff and business management. "

Skill 37: Requirements definition and management

"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. "

Skill 38: Systems Design

"The specification and design of information systems and the design or selection of components to meet defined business needs, retaining compatibility with enterprise and solution architectures, conforming to corporate standards, within constraints of cost, security and sustainability. "

Italian “Borsa Lavoro” scheme

Denominazione Figura Professionale	Analista sistemista
Finalità	*E’ responsabile della gestione, manutenzione ed esercizio dei sistemi informativi dell’organizzazione all’interno della quale opera. Identifica esigenze organizzative e di gestione delle informazioni, pianifica e controlla progetti di miglioramento dei sistemi ICT, garantisce una buona operatività del sistema informativo nel rispetto dei requisiti di legge e di qualità validi nel contesto in oggetto.*

AITTS by the German Government – *Arbeitsprozessorientierten Weiterbildung in der IT-Branche*

Profil 1.2: IT Systems Developer *(IT-Systemplaner/in)*

“ IT Systems Developer entwerfen IT Systeme, definieren Anforderungen an die Systemkomponenten, begleiten deren Konstruktion und Prüfung, planen und verantworten die Integration der Systemkomponenten zum System sowie die Prüfung der Integrationsprodukte.”

Nomenclature 2010 by CIGREF *(club informatique des grandes entreprises françaises)*

Métier 1.2: Urbaniste des systèmes d’information

“Il garantit l’évolution cohérente de l’ensemble du système d’information dans le respect des objectifs de l’enterprise, du domaine fonctionnel et des contraintes externes et internes (de risques, de coûts, de délais...) et en exploitant au mieux les possibilités de l’état de l’art en relation avec l’architecture technique.”

