APPENDICE 1

COMPETENZE EUCIP PER I PROFILI AMMINISTRATIVI

A1.01 **Business activity and business process modeling**

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).

A1.03 **Organisational strategies and related IT system selection**

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 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.

A1.04 **Accounting standards and processes**

Discuss how to set up a complete accounting and reporting system (chart of accounts, cost centres etc.) in compliance with International Accounting Standards (IAS) and International Financial Reporting Standards (IFRS)

Appreciate the impact on business processes of different jurisdictions, accounting principles, social security and tax systems

Describe typical business processes and procedures in the following areas:
- accounts receivable: sales, invoicing, credit

Perform cash flow analysis and describe treasury management practices

Customize the parameters of a specific ERP system and show how it can be used to support the required processes and procedures

A1.05 **Marketing and sales administration processes**

Analyse marketing and sales strategies in different market sectors, including:
- primary sector and mineral industry
- construction industry
- manufacturing (e.g. industrial equipment, consumer packaged goods,..)
- wholesale and retail trade,
- transporta

Appreciate the impact on business processes of different sales models, like:
- customer self-service purchase (e.g. supermarket)
- simple sales cycle (few steps from quotations to order)
- complex sales cycles (e.g. tenders with technical annexes)

Describe typical business processes and procedures in the following areas:
- corporate image, public relation and communication
- market researches and product marketing
- management of a customer database
- customer value management, personalization, fid

Customize the parameters of specific ERP / CRM systems and show how they can be used to support the required processes and procedures

A1.06 **Product/process engineering and costing**

Use basic engineering concepts and terminology; e.g. sourcing (make/buy), product structure, product costs.

Able to manage Engineering revision concepts and procedures

Understand purpose for product data and specific concepts (Lead Time, phantom, yield).

Identify different types of product structure (Engineering BOM, Production BOM, Planning BOM, ...)

Understand logical relation of Product Structure and Product Routing with production process mapping.

Understand purpose for production data and specific concepts (Work Centers, set-up and operation time, shifts and labour time, production scrap, overlapping).

Appreciate differing types of cost and methods of product costing.

Discuss how to set up Engineering Cost data and their link with Accounting Management (chart of accounts, cost centres etc.)

Discuss how to establish procedure to adjust costing values.

Customize the parameters of a specific ERP/PLM (CAD) system and show how it can be used to obtain the results close to reality.

A1. 07 **Planning and inventory control**

Discuss how to set up planning and scheduling system in order to be able to manage planning issues at different levels of detail (both for operations and costing)

Understand MTS, ATO, MTO, BTO, JIT concepts and their impact on planning configuration and inventory management.

Understand specific production planning concepts (Forecast, On Hand, Available, Hold, Available To Promise)

Describe warehouse management procedures (receiving, control, storage, picking, delivery).

Discuss impact of Repairs and Returns on Productions and Inventory procedures.

Discuss different Inventory Counting methods.

Analyse Distribution Planning logic.

Customize the parameters of a specific ERP/SCM system and show how it can be used to support the required processes and procedures.

A1. 08 **Purchasing and production processes**

Appreciate the impact on business processes of different sourcing models, like:

- Scheduling receiving
- Call Off on planned quantities
- Order receiving
- Consignment stock

Analyse production strategies in different market sectors, including:

- primary sector and mineral industry
- construction industry
- industrial equipment and machining
- manufacturing (e.g. consumer packaged goods, …)

Discuss quality management processes and procedures in the following areas:

- Product control and Quality assurance
- Production control
- Returns management

Evaluate Subcontracting processes and procedures and different components sourcing strategies

Describe typical business processes and procedures for Purchasing and Production Performance evaluation.

Customize the parameters of specific ERP / SCM systems and show how they can be used to support the required processes and procedures.

A1. 10 **Marketing of IT products and services**

Apply business-to-business marketing and sales strategies for IT products and services to different market sectors, including:

- primary sector and mineral industry
- construction industry
- manufacturing (e.g. industrial equipment, consumer packaged goods,..)
- wholesale and retail trade,
- transportation / communications / utilities
- financial services

- entertainment / other services
- public administration

Appreciate the impact on sales processes of different jurisdictions and tax systems, including specific laws on contracts, IT suppliers and labour regulations wherever applicable.

Promote the employing organisation, its IT products and services through a proactive collaboration with the marketing department in the following areas:

- corporate image, public relation and communication,
- market researches and product marketing,
- identification of business drivers;
- competitive positioning
- development of long term objectives.

Play an active role in defining and deploying:

- marketing campaigns;
- definition of prices and discounts, preparation of standard quotations.
- classification and m,anagement of business opportunities
- sales analysis, forecasting and resource planning

Analyse target markets, also using Business Intelligence tools to classify, segment and evaluate potential targets.

Analyse competitors, their offering and market presence.

Use SWOT Analysis to position IT products and services offered to the market.

Appreciate the importance of an integrated view of customers and trading partners through Data Warehouse and Data Marts.

Manage customers databases and qualify specific potential clients, opportunities and required actions in the ideal sales process.

A2. 05 **Business Continuity Planning**

Understand the dependence of business continuity on the IT infrastructure

Define the main causes of downtimes

Analyze the cost of downtime:

- Tangible costs
- Intangible costs

Understand business continuity management planning:

- Analyze the company's business
- Perform a business impact analysis

Explain risk management phases:

- Risk analysis
- Risk mitigation
- Risk transfer

Understand fundamentals of backup, recovery and continuous data protection:

- Basic technology for backup and recovery
- Alternate sites strategy
- Trade-offs in the off-site location choice
- Disaster recovery procedures and costs

Understand backup and recovery for web-based hosting services.

Explain storage technologies for data backup and recovery:

- Well-established technologies
- Remote mirroring

- Disk-to-disk backup
- Storage area networking (SAN)
- SAN security issues
- Internet SCSI

Understand the importance of training and testing:

- Implementation of business continuity training process
- Testing processes and procedures for day-to-day operations
- Testing processes and procedures for disaster recovery

Keep up-to-date information on fundamentals of business continuity laws and regulations.
Analyze fundamentals of investment decisions in business continuity.

A2. 06 **Key IT Process Control**

Conduct IT acquisition and implementation audit:

- Audit of software acquisition procedures
- Audit of systems implementation

Conduct change and configuration management audit:

- Verify vulnerabilities in software development
- Explain software configuration management
- Understand impact assessment
- Explain revisions to documentation and procedures
- Define software release and distribution policies
- Explain organizational change management.

A2. 07 **Allocation of Resources**

Define processes and activities as detailed as necessary for dimensioning resources.
Estimate the resources and the duration of the defined activities.
Plan the necessary human resources and define roles.
Contribute to the hiring process and ensure adequate competences.
Develop and manage a work schedule and assign specific tasks.
Control the schedule and measure performances in terms of effectiveness and efficiency.
Calculate the requirements in terms of key resources, duration and distribution over time.
Calculate the necessary cost budgets.
Control costs and budgets.
Develop and keep a powerful and motivated staff.
Manage and keep track of the needs of the staff.

A2. 08 **IT Governance**

Apply standards and practices for IT Governance in the audit context (e.g COBIT)
Highlight and review practices and procedures for the IT Governance process
Master IT strategic alignment and Value delivery practices
Master IT resource management practices
Execute performance management analysis
Master legal compliance and control system evaluation
Master Service Management techniques for operations management (e.g. ITIL)

A3.01 **Accounting and financial management**

Use basic accounting concepts and terminology; e.g. capital, accounts, cash flow, financial cycle, profit/loss, balance sheet.
Understand the need for management accounting, reporting and financial management
Appreciate differing types of cost and methods of costing.
Understand the principles of budgeting and management control
Calculate the requirements in terms of key resources, duration and distribution over time for a given business case
Calculate the necessary cost budgets in respect of a business plan
Understand the basics of cost allocation and variance analysis
Measure Business Performance using well known approaches; e.g. turnover/profit, investment appraisal, key financial performance ratios (e.g. ROCE, liquidity).

A3.02 **IT organisational structure and measuring business benefits**

Evaluate organisational structures for developing and maintaining Information Systems.
Propose new IT professional skills to meet emerging business or technological requirements
Identify responsibilities to comply to emerging needs (e.g. Governance, Security, Media Convergence, Knowledge Management, etc.)
Evaluate the “End User Computing” model of development.
Evaluate the success of Human Resouce policies in terms of retention, professional development and recruitment of IS staff.
Evaluate the effectiveness of Total Quality Management within an IT organisation.
Propose risk management approaches to risk reduction in the area of quality of IT solutions.
Implement standard approaches to monitoring and evaluation of IT investments.
Use TCO as a mechanism for evaluating business benefits.
Produce outline project plans and business cases (with costs).
Apply stakeholder analysis to an organisational scenario.
Produce an Economic Feasibility study for a business project.
Validate (from the business perspective) a technical feasibility study for a project.
Produce an Organisational Feasibility study for a business scenario.
Produce a cost benefit analysis for a business scenario.
Evaluate an approach used to judge the business value of information and IT.
Produce a budget for a business scenario, showing typical operational and capital costs.
Distinguish between tangible and intangible benefits from an IT system, giving examples of each type.
Use ROI analysis to judge the effectiveness of an IT solution to a business problem.
Compare and contrast the major methods for evaluation of IT investment.
Apply standard approaches to benefits management.

A3. 05 **IT Security Economics and Business Strategies**

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.
Explain the principal concepts of the laws in force in the own country and compare them with European recommendations and different jurisdictions.
Analyse issues related to data protection, personal rights regarding privacy and free access to information held by public authorities.

Determine which rights, restrictions and obligations apply in a given real case, and what they mean to the organisation.

Define a robust organisational approach to cope with such regulations and business priorities.

A3. 07 **Risk Management**

Master risk management process and Risk management standards

Perform Risk Assessment tasks:

- Perform information Resource Valuation
- Perform information Asset Classification
- Scope threaths
- Find vulnerabilities
- Define risks
- Evaluate impacts

Perform Risk Management tasks

- Highlight controls and countermeasures
- Design and evaluate methods to transfer risks
- Define recovery time objectives
- Define control baselines

Perform Risk Monitoring

- Define monitoring metrics
- Collect monitoring evidence
- Prepare and communicate management monitoring reports

Prepare Risk Documentation

- Prepare and communicate executive-level reports
- Prepare remediation plans
- Define risk documentation repository for compliance

A4. 04 **Technology opportunities and package selection**

Analyse service processes and compare them against alternative solutions proposed by standard software packages (“best practice” approach).

Evaluate the Internet as a tool for creating new opportunities for service offering.

Produce a report documenting the major features of a specific package (e.g. a CRM tool).

Define a framework for effective package selection.

Evaluate a software package against defined requirements.

Work within a framework for package selection.

Document the functional match of a package solution.

Contribute to gap analysis for a package selection.

Present the recommendation for a specific package solution.

A4. 06 **Web Marketing**

Understand the main concepts like effective web presence and web audience.

Define website goals.

Achieve higher visibility to the search engines.

Master the techniques for making a website more effective in attracting traffic.

Write a strategic internet communication plan.

Define a business model for selling on the web.
Contribute to plan and run a web advertising campaign.

A4. 07 **Preparing an IT product demonstration**

- Analyse client organisation needs that can be addressed through the IT product.
- Identify appropriate presales interaction methods for the client.
- Evaluate the specific client context, typical issues, examples of items and terms used.
- Develop a programme for one or more demo sessions, taking into account the respective audience.

Selecting appropriate arguments and tools for the presentations.
Develop specific resources for the product demo, possibly including:

- Personalized presentations,
- Custom-tailored descriptions of the supplying organisation and of the product,
- Context-related examples,
- Some sample cases based on plausible data sets (meaningful to the audience).

Select an appropriate mix of high level messages about the solution (addressing the inner needs) and technical features/details characterising the product.
Prepare hardware, software and data sets for the demo sessions.

A5.01 **Project Management essentials**

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.

A5.02 **Estimating for System Development**

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).
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.

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.

A5.03 **Project coordination**

Coordinate a software development project: planning, control, organisation, configuration management, version control, quality assurance, metrics.

Establish standards applying to development documentation, coding, code review, UI, and testing.

Establish processes: processes include reviewing development documentation, reviewing code, creating builds, tracking issues, managing source code, managing change, managing release, and establishing maintenance tasks.

Contribute to establishing quality and performance metrics to evaluate project control and organisational performance.

Report actual progress of activities against an agreed plan.

A5.06 **Time Management**

Define the activities as detailed as necessary for estimation
Bring all the defined activities in a feasible sequence
Estimate the resources and the duration of the defined activities
Develop an optimal and/or possible schedule; think about best case and worst case scheduling
Control the schedule and measure progress while the project is running

A5.07 **Cost Management**

Calculate the project requirements in terms of key resources, duration and distribution over time
Calculate the necessary cost budgets
Control costs and budgets while the project is running

A5.09 **Human Resource Management**

Plan the necessary human resources and define the project organisational structure
Acquire a sufficiently qualified project team and assign each member a role and specific tasks
Develop and keep a powerful and motivated project team
Manage and keep track of the needs of the project team