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Monograph: "EUCIP: A Model for Definition and Measurement of ICT Skills" (published jointly with Novática*)

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EUCIP Services for Organizations

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This article gives an overview of the tools and methodologies being used to assess and tune ICT competencies. The article makes particular reference to the use of these tools in ICT demand side and ICT supply side companies, and explores how the EUCIP service model supports four main resource management functions.

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1 Introduction

It is reasonable to think that stakeholders interested in an accreditation standard are more likely to choose and adopt the standard operationally as a reference scheme if it also provides a series of useful services.

In order to clarify the type of services which could be useful to apply for various objectives of the EUCIP Standard, AICA set out to analyse some problem areas which could be of interest for large and very large organizations in both the private and public sectors.

2 Problem Areas

In particular, the problems of the development and management of Human Resource specialists who work in two types of organizations were considered:

- ICT demand side organizations.
- ICT supply side companies.

In the first case, for non-ICT companies (and in particular manufacturing, services, finance, and trade companies) and Public Administration Organizations, specialist resources represent between approximately 1% and 8% of the total employees, and the most precious resources are those with a very technical specialization. Besides a request for even more specialized resources, ICT demand side organizations often apply more to resources provided by companies of the second type, with an important increase of the outsourcing phenomenon.

For these types of organizations the most important problems in the management of specialist resources are:

- The definition of strategic competence needs in relation to the development of company strategy, in particular if progression will involve digital services.
- Professional standards and the improvement of staff competencies, the career development of the most significant talents, the definition of salary policies related to real competencies, etc.
- The design and implementation of training and experience paths suitable for developing the competence level of the most critical resources.

- The selection and qualification of the personnel to be incorporated in the various highly professionalized project groups, using both internal and external resources.
- In the case of mergers and acquisitions, the optimization of specialist resources coming from acquired or merged business units.
- In particular, in public administration organizations, the need to reformulate the contract of internal specialists on the basis not only of their profile but also of their competencies.

In principles these types of organizations consider certifications as a critical factor only for the selection and incorporation of new resources, because certifications reduce the risk of incompetence.

In the second type of company, those on the supply side, including hardware, software and ICT services companies, specialist resources make up approximately 80% of the employees. They have similar management problems to those described for the demand side, but with the additional stress in regard to staff in direct contact with business

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customers, both in the project acquisition phase and in the project delivery phase. In this case the certification of human resources offered on the market could be very important as a way to strengthen the value of staff offered to the most important customers, in particular those working at a multinational level.

3 Types of Services

Based on these considerations, AICA decided to develop and promote two types of EUCIP Services:

- Individual oriented services, aimed at professionals and managers who are already working, to develop and update their competencies throughout their working life.
- Company/organization oriented services, in which the subject of the analysis is still the individual worker (of the organization or of a third party) but the analysis itself and the results are configured to provide useful indications to solve problems at an organizational level (private or public) rather than at an individual level.

With regard to services for organizations, AICA has developed a service portfolio based on the following criteria:

- The service portfolio is structured and supported by tools.

- Services are structured following the indication of a model based on the EUCIP standard.
- Services are supported by the specific tools of the e-Competences and Certifications Observatory (ECCO) EUCIP family, that allow for every profile to deploy such online services as:
  - Competence assessment and gap analysis between existing competencies and competencies required by the framework.
  - Design of training and certification paths and monitoring of training results.
  - Support resource recruitment and project work structure.
- The service portfolio includes glossaries, dictionaries, handbooks, informative documents and everything that might help the customer organization use the services themselves.

4 The EUCIP Services Architecture

The EUCIP Service Model described below is a result of the aforementioned analysis and has been submitted for limited but important trials with some large organizations.

From an organizational point of view, four resource
management cycles have been identified:

- The first cycle is that of strategic competencies management, and describes the steps to design and plan internal and external digital services with suitable performance for business needs. The methodology helps ICT Managers check the competencies map of ICT specialized resources available for their organization and thus adopt the best action to achieve their objectives.

- The second cycle is that of ICT project competency management which is seen as the critical step in which projects based on innovative digital technologies will become operative. In this context the methodology can help organizations obtain a better definition of processes, by assigning roles on the basis of actual competencies.

- The third cycle is that of specialized human resources management, that starts by defining the new professional standards needed to develop the digitalization strategy at an organizational level and ends with a better definition of training paths for updating human resources.

- The fourth and final cycle is that of ICT Supplier management, to be considered only if the company decides to use external suppliers for the development of projects and/or for the acquisition of digital services. The share of certified professional profiles between the customer and the supplier is already considered an important element for the enhancement of cooperation in the supply value chain.

The EUCIP Service Model has been designed to support the four management cycles described above and will allow the organization to:

1. Analyse and understand the structure of the available competencies
2. Evaluate to what extent the target competencies for each profile of the EUCIP Standard are uncovered
3. Recognize, on the basis of the competence gap analysis, the type of interventions to carry out in order to fill the gap, by using one or more of the following options:
   a) Internal and/or external turnover management.
   b) Design of training paths focused on the reference standard and the sector benchmark.
   c) Correctly assign roles to the personnel by using their pattern of competencies.
4. Select and encourage specialists and managers critical for the evolution of the IT infrastructure and application development plans and for the management of new digital based services to work towards European certification.
5. Evaluate and optimize the salary level of professionals by using the sector benchmark.
6. In some cases, and in particular for Public Administration Information Systems, redefine the supply contracts of IT specialists by using as a reference not only roles but also competencies.

Therefore, the main scope of the services model is to promote the use of the EUCIP Standard along with the specific rules to be respected.

Clearly the main service component is competency assessment, which is a fundamental knowledge function for all the other types of interventions for the improvement of a company’s functions because it gives an objective vision of the competencies present in the organization.

The flow of the EUCIP Service Model is presented in Figure 1 and provides useful indications for the definition of the roles present in the processes to be activated for the performance of ICT projects. The diagram shows the functional dependencies between the various components for a more effective application. Nevertheless, each component is characterized by its own autonomy and may be applied independently of the others.

The subjects involved in the deployment of the Service Model are as follows:

- ECDL Foundation / CEPIS through updates of the EUCIP Standard Syllabus;
- In each country, i.e. in Italy, AICA promotes the dissemination and application of the Services Model to business clients and in particular:
  a) Supports the Service Model through its own competence centres.
  b) Manages the examinations and provides the certification of the professional profiles.
  c) Guarantees the quality monitoring of the services delivered to customers.

The target of the services are always IT Specialists who work in the various business units in supply side companies or in the information systems units of demand side organizations.