

The ProInterNet Certification Process for e-Jobs profiles and training programmes

Achilles Kameas¹, Ed Mahood², Michael Negri³

¹ Hellenic Open University, Greece (kameas@eap.gr)

² DEKRA Akademie GmbH, Germany (ed.mahood@dekra.com)

³ FOM Hochschule, Germany (michael.negri@bcw-gruppe.de)

Abstract. Recent reports have shown that, in the ICT sector, training programmes are mainly organized by or for large companies despite the fact that approximately 80% of all non-public employment is generated by companies with fewer than 20 employees (that is, very small and micro-enterprises). The aim of the ProInterNet (PIN) network is to set up a holistic approach of assessing and validating internet-related, employment-functional qualifications and profiles in SMEs. Part of this effort involves developing an approach toward labellisation, certification (validation) and normalisation of these qualifications by addressing the knowledge, skills, and competences requirements, on the one hand, and education and training development and provision, on the other. This includes a dynamic evaluation mechanism for internet-related functional-role profiles, training development and implementation guidelines corresponding to the agreed profiles, a prototype Label of Excellence (LoE) and a Seal of Market Compliance (SMC), with accompanying Certificate (as recognized quality standard).

Keywords: jobs observatory, job profiling, profile description, profile maintenance, profile certification, training certification, competence, eskills, eCF, EQF

1. Introduction

The Information and Communication Technology (ICT) sector is one of the economically most promising and significant business sectors in the European Union (EU). It makes an important contribution to the objectives of the Lisbon Agenda.

According to the most recent OECD outlook report (2010), the prospects for the ICT sector are improving in the wake of the financial crisis of 2008. The ICT sector accounts for 8% of business value added and countries with significant ICT manufacturing have comparative advantages in trade. Pressures on employment in the ICT sector within the OECD countries that began during the recession are beginning to ease and the numbers of available ICT vacancies are growing. As access to broadband internet is steadily increasing and the central role that networking plays in the commercial and non-profit sectors, the potential for employment growth in internet-related areas is increasing as well.

Though vacancies are becoming more plentiful, they are often difficult to fill as qualifications do not always match the requirements of the companies in this sector. In recent years, most projects aiming at the promotion of vocational and education (VET) standards in the ICT sector were initiated and driven by large companies. However, it should be recognized that approximately 80% of all non-public employment is generated by companies with fewer than 20 employees (that is, very small and micro-enterprises), and that the knowledge, skills and competences required by these smaller enterprises (SMEs) differ significantly from those required by larger organizations.

The ProInterNet (PIN) thematic network contributes to the main objectives of the Leonardo da Vinci programme as laid down in policy documents, starting with the Copenhagen process. It has created a network of key players in the area of ICT and Multimedia skills in SMEs aiming to improve the

transparency, information and guidance systems with regard to competence and qualifications at European level for internet professions. The key stakeholders involve industry organisations that have in-depth experience of e-Jobs, Internet-related jobs and direct access to SMEs (technology suppliers and users); VET institutions with a focus on e-Jobs and Internet-related jobs; relevant public authorities and intermediary organisations.

Through its activities, PIN intends to contribute so as to improve the employability of job seekers, reduce the e-skills shortages on the EU labor market, improve the quality of Vocational Education & Training (VET) in the field of Internet related jobs and last but not least to make VET more transparent and comparable at European level. The network brings together complementary players such as VET, HE, certification organizations, jobs and enterprise associations for a proactive and continuous knowledge exchange in the area of Internet jobs.

The network's aim is to set up a holistic approach of assessing and validating internet-related, employment-functional qualifications and profiles in SMEs. Part of this effort involves developing an approach toward labelling, certification (validation) and normalisation of these qualifications by addressing the knowledge, skills, and competences requirements, on the one hand, and education and training development and provision, on the other. The idea is to agree on an EU competence system for internet-related jobs. This includes, of course, a dynamic evaluation mechanism for internet-related functional-role profiles, training development and implementation guidelines corresponding to the agreed profiles, a prototype Label of Excellence (LoE) and a Seal of Market Compliance (SMC), with accompanying Certificate (as recognized quality standard).

2. e-Jobs Observatory

In order to foster the interaction between industry intermediary organisations and VET institutions, the e-Jobs Observatory (<http://e-jobs-observatory.eu>) was set up as part of PIN. It is intended as an information and guidance platform for the parties involved, bringing together international experts on the field of internet-related jobs. More concretely, the e-Jobs Observatory is a Web 2.0 platform that offers industry intermediary organisations the opportunity to express their needs in terms of training and qualification of employees and exchange thoughts with VET institutions, which, in return can adopt their trainings according to market requirements and attain the label of excellence and an official certification from the network (Figure 1). The direct benefits from participating in the e-Jobs Observatory include free access to all information and results of studies conducted by the Observatory and its related projects, and reinforcement of interaction between key participants. Every person or partner that participates in this interactive system has the ability to influence the ongoing development, multiplies its reach out and formulates a better picture of future trends and developments in the field. Moreover, one becomes part of a rapidly growing network of like-minded companies and associations interested in furthering the quality of professional qualifications in Europe.

3. Roles profiles

The functional (or job-description) profiles are the centrepiece of the e-Jobs Observatory approach. It is on the basis of these profiles, which are driven and verified by actual market needs, that training can and should be developed.

The identification of a given profile should be related in a clear, consistent way to a development within the industry itself or in an internet-related field. This should be made clear in the relevant part of the profile description.

Each internet-related function must be given a meaningful and wide-understood title (such as Webmaster, Online Community Manager, etc.). In addition, the profile description will be divided into two sections:

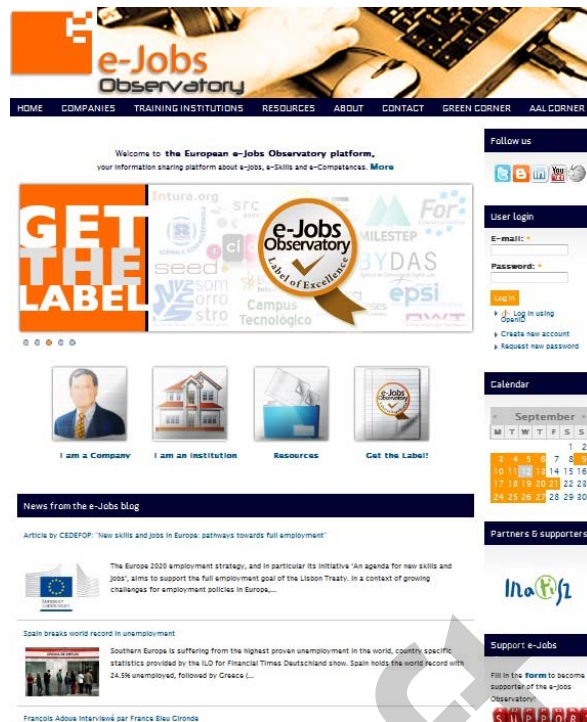


Figure 1. The e-Jobs Observatory home page

1. Function Description

This will consist of a table as follows (all entries in *italics* are explanations for the items listed in the left-hand column):

Profile title	<Title>	
Summary statement	<One-sentence description of the function.>	
Mission	<The reason the function is necessary.>	
Responsibility	<Brief overview of the primary responsibilities.>	
Deliverables	Accountable	Contributor
	<Deliverables for which the function is responsible.>	<Deliverables to which the function provides inputs.>
Main task/s	<Listing of the main tasks to be performed by the function.>	
Environment	<Brief description the function's working environment.>	
KPIs	<Listing of key performance indicators (KPI) for the function.>	

This table must be fully completed by the organisation that requires such a profile and wishes to have it included in the list of authorized profiles.

2. Function Profile

This section consists of two subsections, each comprising a different table.

2.1 Profile summary

This table contains the Areas, Numbers, and Competences, which are based on the European eCompetence Framework (eCF) (2011) (Figure 2).

Profile <Title>			Technical					Behavioural												Business								
Area	No.	Competence	Importance	T01	T02	T03	T04	T05	B01	B02	B03	B04	B05	B06	B07	B08	B09	B10	B11	B12	M01	M02	M03	M04	M05			
Plan	A.1	IS and Bus. Strat. Alignment																										
	A.2	Service Level Management																										
	A.3	Business plan Development																										
	A.4	Product/Project Planning																										
	A.5	Design Architecture																										
	A.6	Application Design																										
	A.7	Technology Watching																										
	A.8	Sustainable Development																										
Build	B.1	Design & Development																										
	B.2	Systems Integration																										
	B.3	Testing																										
	B.4	Solution Development																										
	B.5	Document Production																										
Run	C.1	User Support																										
	C.2	Change Support																										
	C.3	Service Delivery																										
	C.4	Problem Management																										
Enable	D.1	Info Sec. Strat. Development																										
	D.2	ICT Qual. Strat. Development																										
	D.3	Educ. & Training Provision																										
	D.4	Purchasing																										
	D.5	Sales Proposal Development																										
	D.6	Channel Management																										
	D.7	Sales Management																										
	D.8	Contract Management																										
	D.9	Personnel Development																										
	D.10	Info. & Knowledge Mgmt																										
Manage	E.1	Forecast Development																										
	E.2	Project & Portfolio Mgmt																										
	E.3	Risk Management																										
	E.4	Relationship Management																										
	E.5	Process Improvement																										
	E.6	ICT QM																										
	E.7	Business Change Mgmt																										
	E.8	Info. Sec. Management																										
	E.9	IT Governance																										
				Has knowledge of red/green/yellow, interactive virtual env., social networks, e					Can draft texts, clearly, concisely, correctly					Is creative, imaginative, artistic					Is ethical					Can lead a team				
				Can create media elements					Is precise and aware of details					Has good interpersonal skills					Has presentation/moderation skills					Can communicate (including in foreign languages if useful)				
				Can promote and sell products or services online					Can work in a team					Can analyse (assess, evaluate, critique, test)					Can seek, organize and synthesize					Can explain (defend, argue, justify)				
				Has knowledge of online usability requirements					Can communicate (including in foreign languages if useful)					Can work in a team					Can analyse (assess, evaluate, critique, test)					Can seek, organize and synthesize				

Figure 2. The role description table used by the e-Jobs Observatory

2.2 Detailed profile

For each eCF competence identified in the summary profile (above), an expanded version detailing the specifics of each competence and sub-competence must be produced, for example (whereby the entries in italics are explanations for the data required):

A.1 IS and Business Strategy Alignment

Dimension 2: Title and generic description	<The title is as given; the description here should be modelled after the descriptions provided on the eCF website.>	
Dimension 3: eCompetence proficiency levels	Level 1	<These should be completed as
	Level 2	necessary for the profile, but modelled
	Level 3	after the descriptions provided on the
	Level 4	eCF website.>
	Level 5	

Dimension 4: Knowledge and skills	<i><There should be one entry for each of the master competences that have identified in the summary profile above.></i>
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3.1 Profile definition, change and approval process

Any organisation holding the e-Jobs Observatory Label of Excellence (see below), or which is a member of the e-Jobs Observatory network, can propose changes to an existing profile or suggest the development of a new internet-related roles profile (Figure 3). Any profile that is to be included within the scope of these guidelines must be completed and submitted to the e-Jobs Observatory working group for approval.

3.2 Submitting a new profile for approval

The profile itself is to be developed in accordance with the requirements specified in the previous section. The working group will review the profile for completeness, accuracy, consistency, coherency, and relevance. If the submitted profile conforms to the formally established criteria above, the profile will be made available in a restricted area of the website for member review and comment. Members will be notified that their comments are requested. The profile will be available for review for a period of three (3) months. At the end of this period, the working group, will review the comments and incorporate any necessary changes into the profile.

The screenshot displays the e-Jobs Observatory website interface. At the top, there is a navigation bar with links: HOME, COMPANIES, TRAINING INSTITUTIONS, RESOURCES, ABOUT, CONTACT, GREEN CORNER, and AAL CORNER. The main content area features a profile titled 'Profile title: Digital animator / 2D-3D specialist'. Below the title, it lists 'Also known as: 2D-3D specialist, computer animator, virtual animator, computer-generated imagery (CGI) specialist'. The profile is structured into several sections: 'Summary statement', 'Mission', 'Responsibility', 'Deliverables', 'Main tasks', and 'Environment'. Each section contains specific details about the role. For example, the 'Main tasks' section lists tasks like 'Create story boards that explain the narration and script', 'Work with animation experts to create look, characters and objects and movement for the characters and objects in the animation', 'Design sketches and characters and build models', 'Create detailed frame by frame visuals', 'Ensure that the timing of object and character's movements match to the soundtrack', 'Prepare conceptual drafts', 'Consult with writers about the storylines and actions required to be taken on a particular plot', and 'Meet user's and client's requirements from their point of view'. The 'Environment' section states: 'Usually works with the design team. May also interact with technicians, such as programmers, webmasters, etc. May report to the animation director.' On the right side of the page, there is a 'User login' section with fields for 'E-mail' and 'Password', and buttons for 'Log in', 'Log in using OpenID', 'Create new account', and 'Request new password'. Below the login section, there is a 'Partner & supporters' section with a logo and a 'Support e-Jobs Observatory' section with a form to become a supporter. At the bottom, there is a 'comment!' button and a link to 'Add new comment'.

Figure 3. The profile submission page of the e-Jobs Observatory

3.3 Submitting suggestions for changing an existing profile

Any organisation which has been awarded the e-Jobs Observatory Label of Excellence or any other member of the e-Jobs Observatory network may comment upon existing profiles and make suggestions for change. At such time that the e-Jobs Observatory working group assesses that a revision of a commented upon profile is appropriate, a task group will be established to make the necessary revisions and to ensure the profile meetings all requirements for completeness, accuracy, consistency, coherency, and relevance. The working group will create a revised profile which will be made available in a restricted area of the website for member review and comment. Members will be notified that their comments are requested. The profile will be available for review for a period of three (3) months. At the end of this period, the working group, will review the comments and incorporate any necessary changes into the profile.

The revised version of the profile will be released for a vote by the network membership. The voting period will last one (1) month. As the submitting organization is a member of the network, it will have full access to the status of the submitted proposal. Two results are possible:

1. **Approved:** If a majority of the membership organizations vote positively on the proposed profile, it will be approved and included in the e-Jobs Observatory's list of approved profiles and published publicly on the website.
2. **Rejected:** If rejected, however, the working group will provide a written assessment to the submitting organization outlining the changes and amendments that would need to be made before the profile could be accepted. The submitting organization can resubmit the profile after having made said changes, at which time the approval process would begin again.

4. The e-Jobs Observatory Label of Excellence

Labelisation is the first step along the certification path envisioned by the e-Jobs Observatory (Figure 4). It is an independent, stand-alone process that enables the applicant organisation to become involved in and associated with the network of stakeholders striving to improve ICT further training in Europe.

The screenshot shows the 'e-Jobs Observatory Label of Excellence' submission form. The header includes the e-Jobs Observatory logo and navigation links: HOME, COMPANIES, TRAINING INSTITUTIONS, RESOURCES, ABOUT, CONTACT, GREEN CORNER, and AAL CORNER. The form itself is titled 'e-Jobs Observatory Label of Excellence' and contains the following sections:

- Instructions:** Fill in the form to get your e-Jobs Observatory Label of Excellence. Once the request is accepted by the e-Jobs Observatory network, your training will be promoted in the e-Jobs website and your organization's name and contact information will be added to the e-Jobs Observatory network. By applying for and receiving the label, an organization declares its willingness to work towards the common goal of standardised, high-quality, transparent and comprehensive training in the Internet-related sector. Please don't forget to attach the signed copy of the Statement of Compliance stamped and signed.
- Contact person:** Fields for E-mail, Organization name, Address, and Country.
- Brief description of the training:** A text area for description.
- Website:** A text field for the website URL.
- Upload the organizations logo:** A file upload button.
- Upload the signed Statement of Compliance:** A file upload button.
- CAPTCHA:** A section with a CAPTCHA image and a text input field for the code.
- Submit:** A large orange button at the bottom of the form.

On the right side of the form, there is a 'Follow us' section with social media icons, a 'User login' section with fields for E-mail and Password, and a 'Partners & supporters' section with logos for 'som' and 'orro stro'. At the bottom right, there is a 'Support e-Jobs' section with a 'Support' button.

The footer contains the text: 'The e-Jobs Observatory is an initiative of the PII Project co-funded by the LLP Programme of the European Union.' It also features logos for 'Pro Internet' and 'e-Jobs Observatory' and a disclaimer: 'Disclaimer: The content of this website reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained herein.'

Figure 4. The Label of Excellence submission form

A dialogue with industry led the e-Jobs Observatory to establish a set of principles that provide a framework within which training and personnel development in the field of internet-related jobs can be promoted. Any organization should be able to subscribe to these basic principles, as they form the basis of the e-Jobs Observatory Label of Excellence (LoE), shown in Figure 5.



Figure 5. The e-Jobs Observatory Label of Excellence

These fundamental principles have been encapsulated in the e-Jobs Observatory Statement of Compliance, and are as follows:

1. The labour market in the internet-related sector is regularly and systematically analysed in order to identify valid and current market needs for crucial skills and competences.
2. Learning outcomes are more important than the learning path that a student takes to achieve them. Competence development in the broadest sense of the term is the top priority in training and learning. Training programmes should be expressed in terms of learning outcomes.
3. Learning outcomes should describe the knowledge, skills and competences the learner should have acquired or obtained by the end of a given unit of learning.
4. Training as a goal-directed activity aims at qualifying individuals in an organised, systematic and transparent way, hence the importance of identifying training requirements through relevant role profiles.
5. The so-called "soft skills" or key competences are recognized as an integral part of every training unit, module or programme.
6. Within the ICT sector, especially in regard to internet-related role profiles and training, the European eCompetence Framework (eCF) plays an important, central role in bridging the gap between market needs and training offerings.
7. The European Qualification Framework (EQF), as well as national and sectorial frameworks, provides a useful and helpful mechanism to increase the transparency of training programmes in regard to learning outcomes.

By subscribing to these principles and applying for the LoE, a training organization or institution asserts that they are willing to support these principles by attempting to incorporate them into their training offerings.

5. The e-Jobs Observatory Seal of Market Compliance and Certificate

Any organisation which has been awarded a e-Jobs Observatory Label of Excellence or any member of the network can submit a training programme, course, or unit for a given internet-related roles profile (Figure 6). In the following, the term "unit" is used to describe the training that has been submitted, irrespective of its complexity or duration.

Assessment and validation criteria

The following assessment criteria will be used in the approval and validation process of training units for internet-related jobs:

- Pre-Assessment of candidates: The institutions have to make sure that the candidates fulfil the basic requirements necessary to enter the program
- Detailed description of training contents

- Envisage and integrate changes of needs and requirements, ensuring up-to-date training.
- Expected training outcomes must be expressed in the terms of learning outcomes
- Methods must be clearly identified for training approach and tools, materials and media to be used
- Linkages between methods and outcomes must be clear, in order to ensure that targeted outcomes are achieved
- Integration of training on soft skills, which ensure the training of various soft skills by applying appropriate methods
- Assessment of training success

e-Jobs Observatory

HOME COMPANIES TRAINING INSTITUTIONS RESOURCES ABOUT CONTACT GREEN CORNER AAL CORNER

Seal of Market Compliance and Certificate

Fill in the form to process the Seal of Market Compliance and Certificate. Once the request is accepted by the Certification company your training will be promoted in the e-Jobs website and your organization's name and contact information will be added to the e-Jobs Observatory network. Please don't forget to attach the profile for the training and the explanatory material.

Contact person: *

E-mail: *

Organization name: *

Country: *

Website: *

Upload the organizations logo:

Upload your training profile:

Upload the explanatory material for the trainees:

CAPTCHA
This question is for testing whether you are a human visitor and to prevent automated spam submissions.

What code is in the image? *

Enter the characters shown in the image.

Follow us

User login

E-mail: *

Password: *

[Log in using OpenID](#)

[Create new account](#)

[Request new password](#)

Partners & supporters

BYDAS
Agence de Commerce Digital Ltd.

Support e-Jobs

Fill in the **form** to become supporter of the e-Jobs Observatory!

SUPPORT

Figure 6. The Seal of Market Compliance submission form

5.1 Submitting a training unit for approval

The training is to be developed in accordance with the requirements specified above. Upon submittal, the e-Jobs Observatory working group will review the training unit for completeness, accuracy, consistency, coherency, and relevance and conformance to the formal documentation requirements. If the submittal does not meet these minimum requirements it will be returned with a written justification and suggestions for improvement to the submitting organization. If the submittal meets all preliminary requirements, it will be further analysed for content and completeness. The evaluation will be conducted by the authorized member of the e-Jobs Observatory working group, and will be in accordance with a set of criteria outlined in the Training Unit Approval Checklist. The resulting assessment will be communicated to the submitting organisation.

Three results to the process are possible:

1. **Approved:** The submitting organisation will be notified in writing and the training will be added to those being kept on the e-Jobs Observatory website. A "Seal of Market Compliance" and certificate will be issued.
2. **Accepted, pending changes:** The submitting organization will be notified in writing of the changes and amendments that need to be made before the training can be approved. The submitting organisation can resubmit the training after having made said changes.
3. **Not accepted:** The submitting will be notified in writing outlining the reasons for the rejection. A resubmittal of the training in its current form is not permitted.

5.2 Approving a training unit



Figure 7. The e-Jobs Observatory Seal of Market Compliance

Training units which are evaluated and found to be in conformance with the requirements set out in these guidelines will be awarded the e-Jobs Observatory Seal of Market Compliance, which is depicted in Figure 7. This seal attests to the fact that the training unit in question has been submitted to and approved by the e-Jobs Observatory working group, thereby fulfilling the standards set forth herein. The seal is a guarantee of quality for this reason.

The organisation or institution submitting the training unit will also receive a Certificate of Market Compliance, which details the approval and sets the time limits for its applicability.

6. Certified Profiles and Training

One of the key project outcomes has been the identification and development of internet-related job profiles which serve as a baseline for the development of training modules that can be certified as described in section 4 above. A total of ten such profiles have been compiled, five resulting from the PIN project and an additional five which were produced within the context of the EQF-iServe (2012) project. These are:

1. Digital Animator /2D-3D Specialist
2. Internet Hotline Operator
3. Online Community Manager
4. Usability Specialist
5. Web Content / Multimedia Developer
6. Web Content Manager
7. Web Designer
8. Web Marketer
9. Web Seller
10. Webmaster

All of these profiles, of course, are available for download on the e-Jobs Observatory website (www.e-jobs-observatory.eu).

While these can be considered the "standard" profiles, sanctioned by the e-Jobs Observatory, market-driven training modules may be addressed to a full profile or, depending upon local market needs, to skills and competence subsets of these profiles. The guidelines for training development are in place, and the development of guidelines-compliant training units is in progress. Within the auspices of the project, at least one training provider per participating country has submitted or signalled intention to submit training modules for certification. The process is on-going, thus no validation data are available to date.

7. Conclusions

In today's fast-changing, technological environment, keeping up-to-date technically is a necessity. In an increasingly competitive global business environment, it is essential that workers keep not only

their technical skills current, but also ensure that they are suited for the changing demands of work itself. As ProInterNet Synthesis Report (PIN, 2010) has shown, the so-called "soft-skills" (or key competences, that is, behavioural and managerial skills and competences) are very much in demand by industry, in addition to expected technical knowledge and skills. This set of skills has been confirmed by roundtable meetings with industry representatives that were conducted in all partner countries as well. These will need to be considered, of course, in any approach that claims to improve the quality of training available.

More information about the e-Jobs as well as templates for applying for new profiles, labelisation or certification can be obtained from the e-Jobs Observatory website. All submittals shall be in electronic form via the e-Jobs Observatory platform. Upon submittal, the e-Jobs Observatory working group will review the training unit for completeness, accuracy, consistency, coherency, and relevance and conformance to the formal documentation requirements.

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