e-Jobs Observatory presents

Guidelines for the development of trainings in internet-related professions

Contents

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 is improving in the wake of the financial crisis of 2008. Growth is expected to be robust in the coming years. The ICT sector accounts for 8% of business value added and countries with significant ICT manufacturing have comparative advantages in trade (p2). In 2008, ICT services were growing at a 6% annual rate, while services in general were growing at slightly under 5% (p3). 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 (p4). As access to broadband internet is steadily increasing (p5), 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. In the wake of the recession, ICT policies have been the number one means taken to foster recovery (p9).

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 requirements of these smaller enterprises (SMEs) differ significantly from those required by larger organizations.

The PIN network has been designed to tackle these issues by creating a network of key players interested in the area of Internet-related skills in SMEs involving

1. industry intermediary organisations and

2. VET institutions and organisations.

The network's aim is to set up an holistic approach of assessing and validating Internet-related, employment-functional qualifications and profiles in SMEs. Part of this effort – as represented by Work Package 3 (WP3) – involves developing an approach toward labelisation, 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), and the development of a corresponding potential draft European norm or standard that may be submitted to the CEN Working Group.

This deliverable, *D3.2 Compendium of Guidelines of Industry Compliance (GIC) Training Guidelines* serves as the basis for the assessment for new functional-role profiles, the Label of Excellence and the Seal of Market Compliance/Certificate, as well as the ICT Training Excellence Award, and is the starting point for the initial draft of the planned European standard to be submitted to CEN.

This document is divided into seven sections. First, it provides some instructions in its use. Both roles profiles and training are addressed, and while related, they each have their own approaches and processes that must be described. Next, there is a list of definitions, that is, a glossary of VET-related terms which are relevant for the development of training in this area. These are taken primarily from the Cedefop (2008) *Terminology of European Education and Training Policy*. The two sections thereafter describe the labelisation process and the procedure for receiving the e-Jobs Observatory Label of Excellence (LoE). The specified training development guidelines, as well as the evaluation and assessment process for being awarded the Seal of Market Compliance/Certificate (SMC/Cert) are described in the two sections thereafter. The document ends with a list of references used herein, plus a series of appendices addressing information that is relevant to but not an integral part of these guidelines, such as a list of approved roles profiles, a detailed description of the LoE, SMC/Cert, a brief overview of the European Qualifications Framework (EQF), and an overview of the European eCompetence Framework (eCF).

2 How to use this document

This document is a handbook and as such it is designed for ease of use. It is not necessary to read this document from cover to cover to find out what needs to be done in a particular situation. The handbook covers a number of standard activities and describes clearly what must be done in order to complete the given process.

First, here's a brief overview of each chapter of the handbook.

Ch	Title	Purpose
2	How to use this document	A description of each chapter and pointers to which chapters should be consulted for different purposes
3	Definitions	A listing of definitions taken primarily from the CEDEFOP training glossary, but with the addition of a few project-relevant terms
4	Labelisation	A complete description of the e-Jobs Observatory Statement of Compliance and Label of Excellence, as well as how to obtain them
5	Training development guidelines	A functional description of guidelines for developing training units, modules, courses, or programmes
6	Training submittal and approval process	The detailed description of the process involved in submitting a training unit or programme to the e-Jobs Observatory for approval
7	References	A list of external documents referenced in this handbook
	Appendices	Listings and descriptions of pre-defined profiles, the Label of Excellence, Certification, and overviews of the EQF and eCF.

Chapters 2, 3, 7 and the Appendices are for purely informational purposes.

Chapters 4 through 6, however, are the how-to chapters. The following scenario overview shows you where you need to go in the handbook to deal with the relevant situation:

If you want to …	Go to …
→ apply for the e-Jobs Observatory Label of Excellence and join the network	Chapter 4, Labelisation
→ develop a training unit based on an Internet-related roles profile	Chapter 5, Training development guidelines
→ submit a training unit which you have developed for approval	Chapter 6, Training submittal and approval process

We hope you find this handbook useful in moving forward toward improved qualification and training in the Internet-related sector. Good luck.

3 Definitions

Unless otherwise noted, all definitions are taken from Cedefop (2008).

Term	Definition
Accreditation (of an education or training provider)	A process of quality assurance through which accredited status is granted to an education or training provider, showing it has been approved by the relevant legislative or professional authorities by having met predetermined standards. (p21)
Accreditation (of an education or training programme)	A process of quality assurance through which accredited status is granted to a programme of education or training, showing it has been approved by the relevant legislative or professional authorities by having met predetermined standards. (p20)
Adult education	See *Education, vocational*
Assessment of learning outcomes	See *Learning outcomes, assessment of*
Awarding body	A body issuing qualifications (certificates, diplomas or titles) formally recognising the learning outcomes (knowledge, skills and/or competences) of an individual, following an assessment and validation procedure. (p33)
Basic skills	See *Skills, basic*
Certificate / diploma / title	An official document, issued by an awarding body, which records the achievements of an individual following an assessment and validation against a predefined standard. (p39)
Certification of learning outcomes	See *Learning outcomes, certification of*
Competence	The ability to apply learning outcomes adequately in a defined context (education, work, personal or professional development). (p47)
Comptences, key	See *Skills, key / key competences*

Term	Definition
Continuing education and training	See *Education, continuing and training*
Curriculum	The inventory of activities implemented to design, organise and plan an education or training action, including the definition of learning objectives, content, methods (including assessment) and material, as well as arrangements for training teachers and trainers. (p56)
Diploma	See *Certificate / diploma / title*
Distance education and training	See *Education, distance and training*
Distance training	See *Education, distance and training*
Education or training provider	See *Provider, education or training*
Education programme	See *Programme of education or training*
Education, adult	General or vocational education provided for adults after initial education and training for professional and/or personal purposes, and which aims to:
	• provide general education for adults in topics of particular interest to them (e.g. in open universities);
	• provide compensatory learning in basic skills which individuals may not have acquired earlier in their initial education or training (such as literacy, numeracy) and thus to;
	• give access to qualifications not gained, for various reasons, in the initial education and training system;
	• acquire, improve or update knowledge, skills or competences in a specific field: this is continuing education and training. (p24)
Education, continuing and training	Education or training after initial education and training – or after entry into working life aimed at helping individuals to:
	• improve or update their knowledge and/or skills;
	• acquire new skills for a career move or retraining;
	• continue their personal or professional development. (p50)

Term	Definition
Education, distance and training	Education and training imparted at a distance through communication media: books, radio, TV, telephone, correspondence, computer or video. (p60)
Employability	The combination of factors which enable individuals to progress towards or get into employment, to stay in employment and to progress during career. (p70)
Formal learning	See *Learning, formal*
Informal learning	See *Learning, informal*
Key skills / key competences	See *Skills, key / key competences*
Know-how	Practical knowledge or expertise. (p104)
Knowledge	The outcome of the assimilation of information through learning. Knowledge is the body of facts, principles, theories and practices that is related to a filed of study or work. (p105)
Learning	A process by which an individual assimilates information, ideas and values and thus acquires knowledge, know-ho, skills and/or competences. (p111)
Learning by doing	Learning acquired by repeated practice of a task, with or without prior instruction. (p113)
Learning by using	Learning acquired by repeated use of tools or facilities, with or without prior instruction. (p114)
Learning content	The topics and activities which make up what is learned by an individual or group of learners during a learning process. (p116)
Learning facilitator	Anyone who promotes the acquisition of knowledge and skills by establishing a favourable learning environment, including anyone exercising a teaching, training, supervision or guidance function. The facilitator helps the learner develop knowledge, and skills by providing guidelines, feedback and advice throughout the learning process. (p117)

Term	Definition
Learning outcomes	The set of knowledge, skills and/or competences an individual has acquired and/or is able to demonstrate after completion of a learning process, either formal, non-formal or informal. (p120)
Learning outcomes, assessment of	The process of appraising knowledge, know-how, skills and/or competences of an individual against predefined criteria (learning expectations, measurement of learning outcomes). Assessment is typically followed by validation and certification. (p31)
Learning outcomes, certification of	The process of issuing a certificate, diploma or title formally attesting that a set of learning outcomes (knowledge, know-how, skills and/or competences) acquired by an individual have been assessed and validated by a competent body against a predefined standard. (p40)
Learning outcomes, recognition of	1. Formal recognition: the process of granting official status to skills and competences either through the - award of qualifications (certificates, diploma or titles - grant of equivalence, credit units or waivers, validation of gained skills and/or competences; and/or 2. Social recognition: the acknowledgement of the value of skills and/or competences by economic and social stakeholders. (p152)
Learning outcomes, transferability of	The degree to which knowledge, skills and competences can be used in a new occupational or educational environment, and/or to be validated or certified. (p167)
Learning outcomes, validation of	Confirmation by a competent body that learning outcomes (knowledge, skills and/or competences) acquired by an individual in a formal, non-formal or informal setting have been assessed against predefined criteria and are compliant with the requirements of a validation standard. Validation typically leads to certification. (p199)
Learning, formal	Learning that occurs in an organised and structured environment (e.g. in an education or training institution or on the job), is explicitly designated as learning (in terms of objectives, time or resources), is intentional from the learner's point of view, and that leads to validation and certification. (p85)

Term	Definition
Learning, informal	Learning resulting from daily activities related to work, family or leisure and as such is not organised or structured in terms of objectives time or learning support. It is generally unintentional from the learner's perspective and outcomes do not usually lead to certification even though they may be validated and certified in the framework of recognition of prior learning schemes; it is also referred to as experiential or incidental/random learning. (p93)
Learning, lifelong	All learning activity undertaken throughout life, which results in improving knowledge, know-how, skills, competences and/or qualifications for personal, social and/or professional reasons. (p123)
Learning, non-formal	Learning which is embedded in planned activities not explicitly designated as learning (in terms of learning objectives, learning time or learning support), is intentional from the learner's point of view and whose outcomes may be validated and lead to certification; it is sometimes described as semi-structured learning. (p133)
Learning, open	Learning which gives to the learner a degree of flexibility in the chioce of topics, pace and/or method. (p137)
Lifelong learning	See *Learning, lifelong*
Non-formal learning	See *Learning, non-formal*
On-the-job training	See *Training, on-the-job*
Open learning	See *Learning, open*
Programme of education or training	An inventory of activities, content and/or methods implemented to achieve education or training objectives (acquiring knowledge, skills and/or competences), organised in a logical sequence of a specified period of time. (p142)
Provider, education or training	An organisation or individual providing education or training services. (p67)

Term	Definition
Qualification	The term qualification covers different aspects: formal qualification: the formal outcome (certificate, diploma or title() of an assessment and validation process which is obtained when a competent body determines that an individual has achieved learning outcomes to given standards and/or possesses the necessary competence to do a job in a specific area of work. A qualification confers official recognition of the value of learning outcomes in the labour market and in education and training. A qualification can be a legal entitlement to practice a trade (OECD); job requirements: the knowledge aptitudes and skills required to perform specific tasks attached to a particular work position (ILO). (p144)
Qualification, transparency of	The degree of visibility and legibility of qualifications and their content and value on the (sectoral, regional, national or international) labour market an din the education and training systems. (p190)
Recognition of learning outcomes	See *Learning outcomes, recognition of*
Retraining	Training enabling individuals to acquire new skills giving access either to a new occupation or to new professional activities. (p155)
Skill	The ability to perform tasks and solve problems. (p164)
Skills, basic	The skills needed to live in contemporary society, e.g. listening, speaking, reading, writing and mathematics. (p37)

Term	Definition
Skills, key / key competences	The sum of skills (basic and new basic skills) needed to live in contemporary knowledge society. (p101) **Note:** in its Recommendation on key competences for lifelong learning, the European Commission sets out the eight key competences: - communication in the mother tongue; - communication in foreign languages; - competences in maths, science and technology; - digital competence; - learning to learn; - interpersonal, intercultural, social and civic competences; - entrepreneurship; - cultural expression.
Standard	A series of elements whose content is defined by concerned actors. (p173)
Teacher	A person whose function is to impart knowledge, know-how or skills to learners in an education or training institution. (p176)
Title	See *Certificate / diploma / title*
Trainer	Anyone who fulfils one or more activities linked to the (theoretical or practical) training function, either in an institution for education or training, or at the workplace. (p178)
Training	See *Vocational education and training*
Training programme	See *Programme of education or training*
Training provider	See *Provider, education or training*
Training, on-the-job	Vocational training given in the normal work situation. It may constitute the whole training or be combined with off-the-job training. (p136)
Transferability of learning outcomes	See *Learning outcomes, transferability of*
Transparency of qualifications	See *Qualifications, transparency of*

Term	Definition
Tutoring	Any activity offering a learner guidance, counselling or supervision by an experienced and competent professional. The tutor supports the learner throughout the learning process (at school, in training centres or on the job). (p191)
Upskilling	Short-term targeted training typically provided following initial education or training, and aimed at supplementing, improving, or updating knowledge, skills and/or competences acquired during previous training. (p196)
Validation of learning outcomes	See *Learning outcomes, validation of*
Vocational education	See *Education, vocational*
Vocational education and training (VET)	Education and training which aims to equip people with knowledge, know-how, skills and/or competences required in particular occupations or more broadly on the labour market. (p202)

In addition to these specific terms, there are five other concepts that should be clarified, as they are often used more loosely than is desirable in a development context. These terms are *education*, *training*, *professional*, *vocational*, and *occupational*.

The first two are relatively straightforward (even if they are too often used interchangeably, therefore incorrectly), and have to do primarily with learning or types of instruction:

- **Training**

  Those activities that are undertaken to enable a person to perform known tasks well.

  These skills (that is, the performance of known tasks) are generally concrete and practical, such as turning a lathe, making a diagnosis, researching effectively, conducting an interview, or administering a database.

- **Education**

  Those activities whose purpose is to prepare individuals to live in an uncertain and unpredictable world.

  Here we are dealing quite often with forms of knowledge, and whose focus is more theoretical than practical, such as understanding what a database is,

knowing when an interview might be effective, formulating a research question, prescribing a medical course of action, or designing a piece of furniture.

The next three terms are a bit more complex, as these have to do primarily with levels of capabilities, let us say, in the pursuit of one's livelihood.

- **Professional**

  Those activities that are associated with what has traditionally been understood as professions, i.e. law, medicine, theology, teaching, or for which one must generally be licensed or chartered, e.g. accounting, marketing, psychology, etc.

  One generally becomes a professional through a long process of academic study, practical professional training and apprenticeship/experience, and perhaps additionally passing a standardized examination set by the profession itself or the state. One could also become a professional through long years of practical experience and further certification, for example obtaining a *Meisterbrief* [Master Certificate] in Germany (or its equivalent), e.g. Master Cabinet Maker, Master Clockmaker, Master Electrician, or the like, that is, someone capable of and entitled to setting up his own craft or trade business.

- **Vocational**

  This term describes all activities, especially learning activities, aimed at preparing an individual for making a living, that is, performing on-the-job.

  In a more particular sense, however, this term reflects the notion of learning a craft or trade, rather than the learning provided by institutions of higher education, even if that is where some of this preparation takes place (e.g. UK foundation degrees, practical bachelor degrees, such as travel & tourism, nutrition, etc.). Upon completion of the practical training one obtains journeyman status (or equivalent). This is the level of skilled labour, be it in a workshop, factory, or office.

- **Occupational**

  Those activities that are directly related to the making of a living or performing a job.

  These activities may be skilled or unskilled, but they are specifically related to performing specific tasks in an employment situation.

Some of these terms, it can be seen, do have overlapping meanings. The differences are subtle, but it is important that these be kept in mind when developing VET documentation. Sometimes the focus, is on how individuals should be qualified and at other times emphasis is on differing levels of qualifications. These distinctions are particularly important, however, when it comes to describing occupational or roles profile requirements.

4 Labelisation

4.1 Overview

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 the ProInternet Synthesis Report (PIN, 2010) has shown, 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.

Labelisation is the first step along the certification path envisioned by the e-Jobs Observatory. 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. In the following sections, the label, its rights and obligations and the process for acquiring it will be described.

4.2 *The e-Jobs Observatory* Label of Excellence

A dialogue with industry has led the e-Jobs Observatory to establish a set of principles which provide a framework within which training and personnel development in the field of Internet-related jobs can be promoted. Any organization, from professional association to global player, from public-sector institution to private-sector training and education provider should be able to subscribe to these basic principles, as they form the basis of the e-Jobs Observatory Label of Excellence (LoE), which is depicted in Figure **1**.

Figure 1: *The e-Jobs Observatory Label of Excellence*

All institutions who receive the label will be registered in the growing e-Jobs Observatory network of training organizations, educational institutions, private-sector corporations

and public agencies and professional associations who are working together to provide transparent needs assessment and relevant quality training towards qualifications that meet the requirements of the marketplace.

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.

The LoE is targeted primarily at training organizations and educational institutions. By subscribing to these principles and applying for the LoE, such an organization or institution asserts that they are willing to support these principles by attempting to incorporate them into their training offerings. Industry organizations or public institutions who agree with them and wish to signal that they would welcome training offerings in compliance with them are also encouraged to apply for this label. When granted the use of this label, the organization or institution may place the label on their website as an immediate and apparent signal of their support or on their correspondence to indicate to potential customers their efforts in improving the quality of their training in accordance

with those standards that are becoming recognized all across the European Union, and beyond.

4.3 The Labelisation process

The primary purpose of granting the use of the e-Jobs Observatory Label of Excellence is to promote the development of European-wide, agreed standards for internet-jobs related training. The process for obtaining the label is very straightfoward, as is depicted graphically in Figure **2** (p. 20):

1. Go to the e-Jobs Observatory website. (www.e-jobs-observatory.eu)

2. Click on the Label of Excellence link, and you will be taken to a page describing the purpose and function of the label.

3. Locate the link to the Statement of Compliance and download the Statement to your local computer.

4. Print out the Statement, date it, and have it signed and stamped by the organization's legal representative.

5. Mail the completed, dated, signed and stamped form back to the e-Jobs Observatory at the address provided.

Upon receipt, the e-Jobs Observatory will review the form for correctness and then place your organization's name and contact information in the network database. A link to your organization's website will also be incorporated on the relevant page of the e-Jobs Observatory site.

You will receive email confirmation of your acceptance and be provided with a link from which you can download the label for display on your website and may be incorporated into relevant printed training and marketing documentation from your organization. In addition, you will be sent a Letter of Authorization confirming your organisation's participation in the e-Jobs Observatory network and permission to use the LoE.
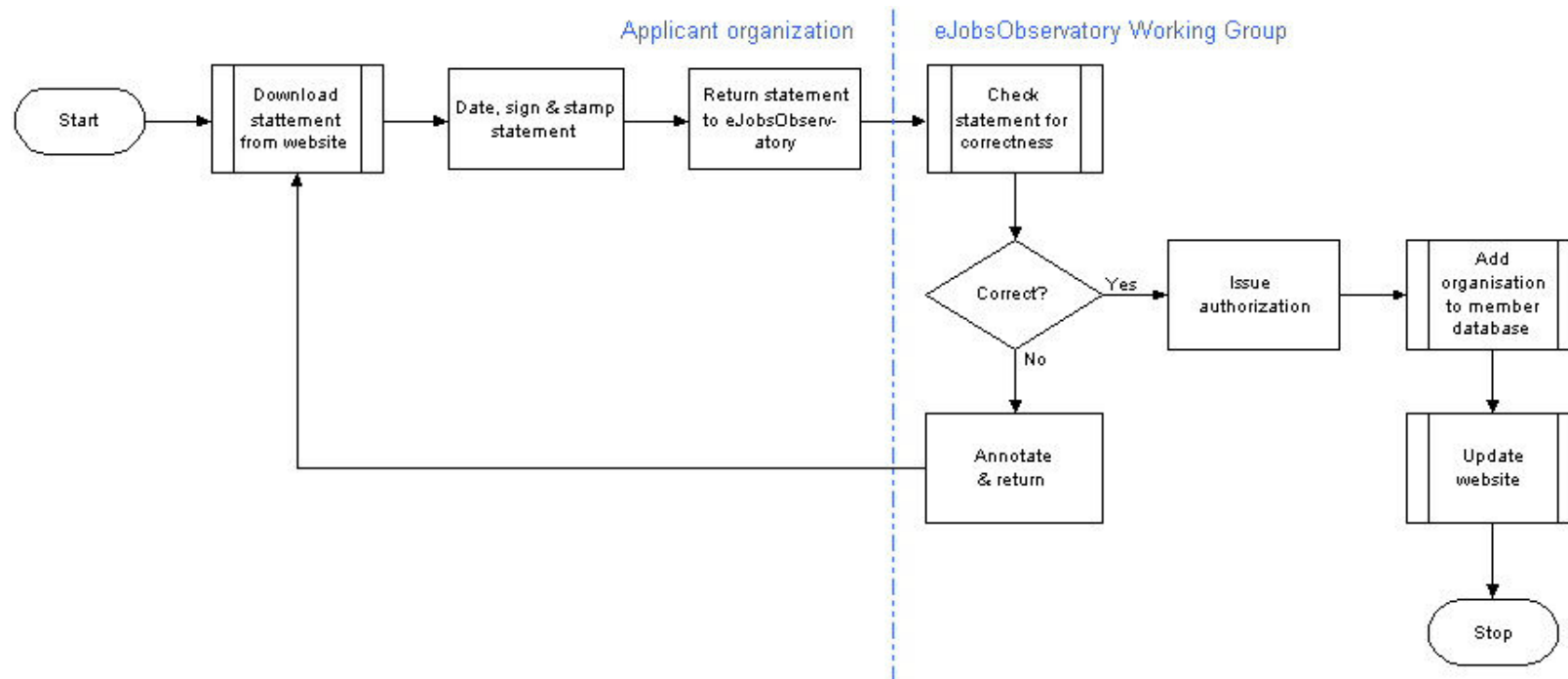
Figure 2: *Labelisation process*

4.4 The De-labelisation process

The awarding and use of the e-Jobs Observatory Label of Excellence is based upon mutual trust, as is the case in all professional relationships. By applying for and receiving the label, an organization declares its willingness to work towards the common goal of standardized, high-quality, transparent and comprehensive training in the Internet-related sector. The benefit to the awardees is, of course, the opportunity to market to an expanding customer segment which is interested in obtaining quality training.

Consequently, customers who feel that they have not been provided training in accordance with the agreed principles outlined in the Statement of Compliance should have the opportunity to have their concerns reviewed. As part of our terms of usage agreement, repeated complaints can and will be reviewed by the e-Jobs Observatory working group. If necessary, contact will be made to follow-up on such complaints. If it is determined that the Statement of Compliance is not being followed or is being violated or misused in any way, the e-Jobs Observatory reserves the right to rescind the Label and its associated rights and privileges at its discretion.

Further details on the Label of Excellence and Statement of Compliance may be found on the e-Jobs Observatory website and in Appendix B.

5 Training Development Guidelines

5.1 Overview

This section aims at introducing the training development guidelines which are an important tool for training companies in order to develop, offer, and conduct training that is consistent with the current needs and requirements in the internet and Internet-related industries. It explains how training requirements are identified and transferred into profiles in order to create a training framework which allows for a standardised training of Internet-related role profiles. The guidelines will be elaborated based on the specific learning outcomes which the e-Jobs Observatory expects for every role profile. This is to ensure that the training results are in compliance with the needs of the market. In doing so, an up-to-date training shall be guaranteed.

5.2 Identifying training requirements

The first step consists in obtaining both the profile for which training is to be developed and this standard. The most current versions of each may be found on the e-Jobs Observatory website (www.e-jobs-observatory.eu). These should be thoroughly analysed in order to identify all relevant requirements pertaining to the training programme or unit to be developed and the submittal process itself.

The identified requirements *must* be formulated in terms of learning outcomes. Learning outcomes have gradually become the cornerstone of well-planned and structured education. From our experience, we'd suggest starting from writing the learning outcomes whenever one designs a new course or learning activity. The application of proven techniques when writing learning outcomes can significantly improve their quality and accuracy, thus improving the overall quality and efficiency of education.

The specific considerations to be kept in mind when developing these are outlined in the following sections.

5.3 Writing learning outcomes

The adoption of learning outcomes in the educational process marks a shift from the traditional "teacher centred" approach to a "student centred" approach. In the former model, only teachers were responsible for the content to be taught and the instructional strategy to be used. Course descriptions consisted of the content that would be covered in lectures, while assessment focused on how well the students absorbed this content. The "student centred" model adopts an "outcome-based" approach, focusing on what the students will learn, master and be able to do as they progress through the course.

Various definitions of a learning outcome appear in the literature. The common ground

among them is that learning outcomes describe:

- what the learner has achieved rather than the intentions of the teacher;

- what the learner can demonstrate at the end of a learning activity

In this section, we shall adopt the following specific definitions (EQF, 2008):

- A "**learning outcome**" is a statement of what a learner knows, understands and is able to do on completion of a learning process, which is defined in terms of knowledge, skills and competence;

- "**Knowledge**" means the outcome of the assimilation of information through learning. Knowledge is the body of facts, principles, theories and practices that is related to a field of work or study. In the context of the European Qualifications Framework, knowledge is described as theoretical and/or factual;

- "**Skills**" means the ability to apply knowledge and use know-how to complete tasks and solve problems. In the context of the European Qualifications Framework, skills are described as cognitive (involving the use of logical, intuitive and creative thinking) or practical (involving manual dexterity and the use of methods, materials, tools and instruments);

- "**Competence**" means the proven ability to use knowledge, skills and personal, social and/ or methodological abilities, in work or study situations and in professional and personal development. In the context of the European Qualifications Framework, competence is described in terms of responsibility and autonomy.

- "**Qualification**" means a formal outcome of an assessment and validation process which is obtained when a competent body determines that an individual has achieved learning outcomes to given standards;

The learning outcome approach requires, first of all, a change in perspective and a new way of approaching teaching goals, in order to develop valid courses. Then, the actual process of writing the learning outcomes is a consequence of these changes.

The following general guidelines may be of assistance when writing learning outcomes:

- Use the ABCD / SMART approaches in writing the learning outcomes

- Each learning outcome should refer to one and only level in Benjamin Bloom's

taxonomy

- Avoid complicated sentences. If necessary use more one than one sentence to ensure clarity

- Each learning outcome should contain one and only one action verb; use the list of verbs associated with each level in the taxonomy

- Avoid vague terms like know, understand, learn, be familiar with, be exposed to, be acquainted with, and be aware of. These terms are associated with teaching objectives rather than learning outcomes

- The learning outcomes must be observable, measurable and capable of being assessed

- Bear in mind the timescale within which the outcomes are to be achieved. There is always the danger that one can be over-ambitious when writing learning outcomes. Ask yourself if it is realistic to achieve the learning outcomes within the time and resources available.

- Before finalizing the learning outcomes, ask your colleagues and possibly former students if the learning outcomes make sense to them

5.3.1 Approaches for writing learning outcomes

The learning outcome approach requires, first of all, a change in perspective and a new way of approaching teaching goals, in order to develop valid courses. Then, the actual process of writing the learning outcomes is a consequence of these changes. In order to ensure correctness of learning outcomes and improve their quality, one can use a few techniques proposed in the literature; here we present the ABCD and SMART approaches. Then we present the taxonomy of learning domains proposed by Benjamin Bloom and suggest using the verbs that correspond to each domain and level when writing learning outcomes.

The ABCD approach

In order to write useful learning outcomes, we suggest adopting the ABCD approach (Mager, 1984):

- Audience: determines who will master the outcome. A very common way to begin a learning outcome is: "The student will be able to…"

- Behavior: says what a learner is expected to be able to perform as a result of

achieving the learning outcome, or, in other words, how will the student demonstrate achievement of the outcome

- Condition: describes the important conditions (if any) under which student's performance is to occur

- Degree: wherever possible, describes the criterion of acceptable performance by describing how well the learner must perform in order to be considered acceptable.

Note that

- the verb used to describe a desirable behavior in a learning outcome must come from the Bloom's taxonomy

- this verb must describe a behaviour that is observable. However, take into account a performance can be overt or covert.

  - an overt behaviour refers to any kind of performance that can be observed directly, whether that performance be visible or audible

  - a covert performance is one that cannot be observed directly, performance that is mental, invisible, cognitive, or internal. A performance can be covert as long as there is a direct way determining whether it satisfies the outcome. "A direct way" means a single behavior that will indicate the covert skill.

- When specifying the condition, one should be detailed enough to be sure the desired performance would be recognized by another competent person. Here are some questions to ask:

  - What will the learner be allowed to use?

  - What will the learner be denied?

  - Under what conditions the desired performance is expected to occur?

  - Are there any skills that the student specifically should not develop?

Examples of degrees: time limits, accuracy, quality. By specifying the acceptable level of performance for each outcome, one has the means for determining whether instruction is successful. Both the teacher and the student would know the quality of performance

necessary to work for or exceed.

Examples of well written outcomes are (whereby the color-coding is explained in the key below):

- "Given a sentence written in the past or present tense, the student will be able to re-write the sentence in future tense with no errors in tense or tense contradiction."

- "Given the opportunity to work in a team with several people of different races, the student will demonstrate a positive increase in attitude towards non-discrimination of race, as measured by a checklist utilized/completed by non-team members."

- "Given 3 minutes of class time, the student will solve 9 out of 10 multiplication problems of the type: 5 X 4 = _____."

- "Given a map of Europe, the student will be able to list 8 capital cities in 5 minutes."

Legend:
Audience - Green
Behavior - Red
Condition - Yellow
Degree - Blue

The SMART approach

The ABCD approach can be combined with the SMART approach for better results:

- Specific means that the learning outcome describes the knowledge, skills and competences that a learner should be able to demonstrate following exposure to a learning activity.

- Measurable means that achievement of learning objectives can be measured by specific evaluation methods during or after the session.

- Action-oriented means that the objective includes an action verb that demonstrates change or acquisition of knowledge, skills or competences.

- Reasonable means that the objective reflects realistic expectations of knowledge, skills and competences acquisition/change given the conditions for instruction.

- Time-bound means that the objective specifies a time frame in which learners are expected to achieve the learning objective(s)—usually by the end of the session.

Examples of SMART outcomes (with color-coding legend below):

- "Following this session, participants will describe four factors that increase the risk of HIV transmission in women."

- "After attending the lecture and studying the assigned handouts, participants will list three types of tests."

Legend:
Specific - Magenta
Measurable - Blue
Action oriented - Red
Reasonable - Green
Time bound - Yellow

5.3.2 Bloom's Taxonomy

Contemporary approaches to writing learning outcomes are based on the work of Benjamin Bloom (1913 – 1999), who studied in Pennsylvania State University, USA and graduated with bachelor and master degrees from that institution. He then worked with Ralph Tyler at the University of Chicago and graduated with a PhD in Education in 1942. Bloom identified three domains of learning – cognitive, affective and psycho-motor – each of which is organized as a series of levels or pre-requisites. It is suggested that one cannot effectively — or ought not try to — address higher levels until those below them have been covered (it is thus effectively serial in structure). The three domains can be defined as follows (Atherton, 2011):

- **Cognitive:** it is the most widely used of the three domains. It refers mostly to knowledge structures and contains a classification (or taxonomy) of thinking behaviors from the simple recall of facts up to the process of analysis and evaluation (Bloom *et al.*, 1956). A revised taxonomy of levels has been proposed by Anderson and Krathwohl (2001)

- **Affective:** it is concerned with values, or more precisely perhaps with perception of value issues, and ranges from mere awareness (Receiving), through to being able to distinguish implicit values through analysis (Bloom, Krathwohl and Masia, 1964).

- **Psycho-Motor:** it mainly emphasizes physical skills involving co-ordination of the brain and muscular activity and is commonly used in areas like laboratory science subjects, health sciences, art, music, engineering, drama and physical education.

Bloom never completed work on this domain, and there have been several attempts to complete it. One of the simplest versions has been suggested by Dave (1970); a more detailed one by Simpson (1972).

As well as providing a basic sequential model for dealing with topics in the curriculum, Bloom's taxonomy also suggests a way of categorizing levels of learning, in terms of the expected ceiling for a given course.

Cognitive domain

Bloom's work is most advanced in the cognitive domain and provides a framework in which one can build upon prior learning to develop more complex levels of understanding. It is frequently used for writing learning outcomes, since it provides a ready-made structure and list of verbs. The use of the correct verbs is the key to the successful writing of learning outcomes.

Bloom's taxonomy of cognitive domain consists of the following six levels (Bloom *et al.*, 1956, Kennedy *et al.*, 2006):

1. **Knowledge:** may be defined as the ability to recall or remember facts without necessarily understanding them. Some of the action verbs used to assess knowledge are:

   arrange, collect, define, describe, duplicate, enumerate, examine, find, identify, label, list, memorise, name, order, outline, present, quote, recall, recognise, recollect, record, recount, relate, repeat, reproduce, show, state, tabulate, tell.

2. **Comprehension:** may be defined as the ability to understand and interpret learned information. Some of the action verbs used to assess comprehension are:

   associate, change, clarify, classify, construct, contrast, convert, decode, defend, describe, differentiate, discriminate, discuss, distinguish, estimate, explain, express, extend, generalise, identify, illustrate, indicate, infer, interpret, locate, paraphrase, predict, recognise, report, restate, rewrite, review, select, solve, translate.

3. **Application:** may be defined as the ability to use learned material in new situations, e.g. put ideas and concepts to work in solving problems. Some of the action verbs used to assess application are:

   apply, assess, calculate, change, choose, complete, compute, construct, demonstrate, develop, discover, dramatise, employ, examine, experiment, find, illustrate, interpret, manipulate, modify, operate, organise, practice, predict,

prepare, produce, relate, schedule, select, show, sketch, solve, transfer, use.

4. **Analysis:** may be defined as the ability to break down information into its components, e.g. look for inter-relationships and ideas (understanding of organisational structure). Some of the action verbs used to assess analysis are:

    analyse, appraise, arrange, break down, calculate, categorise, classify, compare, connect, contrast, criticise, debate, deduce, determine, differentiate, discriminate, distinguish, divide, examine, experiment, identify, illustrate, infer, inspect, investigate.

5. **Synthesis:** may be defined as the ability to put parts together. Some of the action verbs used to assess synthesis are:

    argue, arrange, assemble, categorise, collect, combine, compile, compose, construct, create, design, develop, devise, establish, explain, formulate, generalise, generate, integrate, invent, make, manage, modify, organise, originate, plan, prepare, propose, rearrange, reconstruct, relate, reorganise, revise, rewrite, set up, summarise.

6. **Evaluation:** may be defined as the ability to judge the value of material for a given purpose. Some of the action verbs used to assess evaluation are:

    appraise, ascertain, argue, assess, attach, choose, compare, conclude, contrast, convince, criticise, decide, defend, discriminate, explain, evaluate, grade, interpret, judge, justify, measure, predict, rate, recommend, relate, resolve.

A more detailed classification of verbs per level can be found in BCIT (1996) and online.

Bear in mind that, when writing learning outcomes, try to avoid overloading the list with outcomes which are drawn from the lower levels of Bloom's taxonomy, but also try to challenge the students to use what they have learned by including some learning outcomes drawn from the higher levels.

Affective domain

In order to describe the way in which we deal with things emotionally, Bloom and his colleagues developed five major categories (Bloom, Krathwohl and Masia, 1964):

1. **Receiving:** This refers to a willingness to receive information, e.g. the individual accepts the need for a commitment to service, listens to others with respect, shows sensitivity to social problems, etc.

2. **Responding:** This refers to the individual actively participating in his or her own learning, e.g. shows interest in the subject, is willing to give a presentation, participates in class discussions, enjoys helping others, etc.

3. **Valuing:** This ranges from simple acceptance of a value to one of commitment, e.g. the individual demonstrates belief in democratic processes, appreciates the role of science in our everyday lives, shows concern for the welfare of others, shows sensitivity towards individual and cultural differences, etc.

4. **Organisation:** This refers to the process that individuals go through as they bring together different values, resolve conflicts among them and start to internalise the values, e.g. recognises the need for balance between freedom and responsibility in a democracy, accepts responsibility for his or her own behaviour, accepts professional ethical standards, adapts behaviour to a value system, etc.

5. **Characterisation:** At this level the individual has a value system in terms of their beliefs, ideas and attitudes that control their behavior in a consistent and predictable manner, e.g. displays self reliance in working independently, displays a professional commitment to ethical practice, shows good personal, social and emotional adjustment, maintains good health habits, etc.

A set of verbs that can be used to express learning outcomes in the affective domain includes:

act, adhere, appreciate, ask, accept, answer, assist, attempt, challenge, combine, complete, conform, cooperate, defend, demonstrate (a belief in), differentiate, discuss, display, dispute, embrace, follow, hold, initiate, integrate, justify, listen, order, organise, participate, practice, join, share, judge, praise, question, relate, report, resolve, share, support, synthesise, value

A more detailed classification of verbs per level can be found in BCIT (1996) and online.

Psychomotor domain

Dave (1970) proposed a hierarchy consisting of five levels:

1. **Imitation:** Observing the behaviour of another person and copying this behaviour. This is the first stage in learning a complex skill.

2. **Manipulation:** Ability to perform certain actions by following instructions and practicing skills.

3. **Precision:** At this level, the student has the ability to carry out a task with few errors and become more precise without the presence of the original source. The

skill has been attained and proficiency is indicated by smooth and accurate performance.

4. **Articulation:** Ability to co-ordinate a series of actions by combining two or more skills. Patterns can be modified to fit special requirements or solve a problem.

5. **Naturalisation:** Displays a high level of performance naturally ("without thinking"). Skills are combined, sequenced and performed consistently with ease.

Subsequently, Simpson (1972) developed a more detailed hierarchy consisting of seven levels:

1. **Perception:** The ability to use observed cues to guide physical activity.

2. **Set (mindset):** The readiness to take a particular course of action. This can involve mental, physical and emotional disposition.

3. **Guided response:** The trial-and-error attempts at acquiring a physical skill. With practice, this leads to better performance.

4. **Mechanism:** The intermediate stage in learning a physical skill. Learned responses become more habitual and movements can be performed with some confidence and level of proficiency.

5. **Complex Overt Responses:** Physical activities involving complex movement patterns are possible. Responses are automatic and proficiency is indicated by accurate and highly coordinated performance with a minimum of wasted effort.

6. **Adaptation:** At this level, skills are well developed and the individual can modify movements to deal with problem situations or to fit special requirements.

7. **Origination:** The skills are so highly developed that creativity for special situations is possible.

A set of verbs that can be used to express learning outcomes in the affective domain includes:

adapt, adjust, administer, alter, arrange, assemble, balance, bend, build, calibrate, choreograph, combine, construct, copy, design, deliver, detect, demonstrate, differentiate (by touch), dismantle, display, dissect, drive, estimate, examine, execute, fix, grasp, grind, handle, heat, manipulate, identify, measure, mend, mime, mimic, mix, operate, organise, perform (skilfully), present, record,

refine, sketch, react, use.

A more detailed classification of verbs per level can be found in BCIT (1996) and online.

5.3.3 A practical methodology for writing learning outcomes

Given the above, we propose the following methodology for developing usable learning outcomes:

- **Step 1:** Collect data related to the topic of the course or the knowledge / skill / competence of the module and prepare a textual description

- **Step 2:** Analyze the meaning of every word given and define every unknown term

- **Step 3:** Differentiate between knowledge, skill and competence; these correspond to different levels in Bloom's taxonomy

- **Step 4:** Apply the ABCD approach to create one learning outcome for each knowledge, skill or competence

- **Step 5:** Evaluate the learning outcomes for clarity, coherence, completeness (with respect to the domain AND to Bloom's taxonomy levels) and ability to be assessed

- **Step 6:** Go to step 1 if any of the above conditions is not met and repeat the cycle

Note that steps 1 and 2 belong the Preparation phase, steps 3 and 4 belong to the Development phase and steps 5 and 6 belong to the Evaluation phase.

Here is an example of the application of the methodology to the definition of learning outcomes for the Webmaster, one job profile developed in project PIN. For the construction of learning outcomes specific data was used: the job profile of Webmaster, the competence B1, Design and development (e-Competence Framework), which belongs to competence area Build and a set of Technical skills, including:

- T01: Has knowledge of netiquette, interactive virtual environment, Social networks, etc.

- T02: Has knowledge of online usability requirements

- T04: Can create media elements

- T05: Can draft texts clearly, concisely, correctly

Preparation phase

- Step 1: Collect data for the Webmaster's job, research associated qualifications and get additional information from a professional Webmaster.

  For example, read the analytical description of this job profile from the text developed in the context of PIN.

- Step 2: Analyze the descriptions, especially those that refer to qualifications or competences. Link qualifications with a curriculum that develops Webmaster related degrees. Research the study guide, find related courses and study the content and purpose of these courses.

  For example, for the technical skill "T01: Has knowledge of netiquette, interactive virtual environment, Social networks, etc.", the word netiquette must be clarified and how it can be linked to studies leading to Webmaster related degrees

Development phase

- Step 3: Take under consideration the words used in description of outcomes. This will help classification of the learning outcomes in the taxonomy.

  o For example, for the technical skill "T04: Can create media elements", the verb can states capability, as a result there are expected learning outcomes mainly at the higher levels of Application and Synthesis and probably less at levels of Knowledge and Comprehension.

  o In contrast the technical skill "T01: Has knowledge of netiquette, interactive virtual environment, Social networks, etc.", the substantive knowledge refers more to the low levels of Knowledge and Comprehension.

- Step 4: After getting a direction for the levels, which will represent the expected action to be performed, follows the choice of the appropriate verb (from the verb-list which is included in each Bloom level). This verb supports conceptually the learning outcome.

  For example, for the technical skill "T01: Has knowledge of netiquette, interactive virtual environment, social networks, etc." after understanding the words netiquette and virtual environment and having comprehended Webmaster's responsibilities, follows the choice of verb that completes the learning outcome and relates it to the appropriate level. In this case, the verb is chosen for the Knowledge level and will be associated with the background that Webmaster has

in Network Theory. As a result, the following learning outcome is derived:

Knowledge: After completing this course, the student will be able to define in about 500 words how network theory views social relationships.

Evaluation phase

- Step 5: The learning outcomes are evaluated for clarity, coherence, completeness (with respect to the domain *and* to Bloom's taxonomy levels) and ability to be assessed.

For example, the above learning outcome adopts both ABCD and SMART approaches; it can be assessed by asking the student to write an essay using 500 words on how network theory views social relationships.

By looking closely at the learning outcomes to be achieved by the learning unit and by examining the methods, materials, and approaches to be employed to achieve and assess these outcomes, it will be possible to identify compliance with the requirements set out in this handbook.

5.4 The e-Jobs Observatory Seal of Market Compliance and Certificate

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 **3** (p. 34). 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. Any organization who has a training unit certified may use this seal in conjunction with the marketing and promotion of that unit to its clientele and to the general public. The use of the seal is permitted both in electronic and in printed form.

Figure 3: *The e-Jobs Observatory Seal of Market Compliance*

The organisation or institution submitting the training unit will also receive a Certificate

of Market Compliance (see Appendix C), which details the approval and sets the time limits for its applicability. At present, and in light of current developments in the field of Internet-related functional role profiles, this has been limited to three (3) years.

5.5 Assessment and validation criteria

The overall training development and approval process is depicted in Figure 4 (p. 36). 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.

- The results of the unit must be expressed in the terms of learning outcomes

- Methods must be clearly identified
    - o Training approach
    - o 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
    - o Ensure the training of various soft skills
    - o Apply appropriate methods

- Assessment of training success

Details of the specific items to be evaluated can be found in the Training Evaluation Checklist in Appendix C.
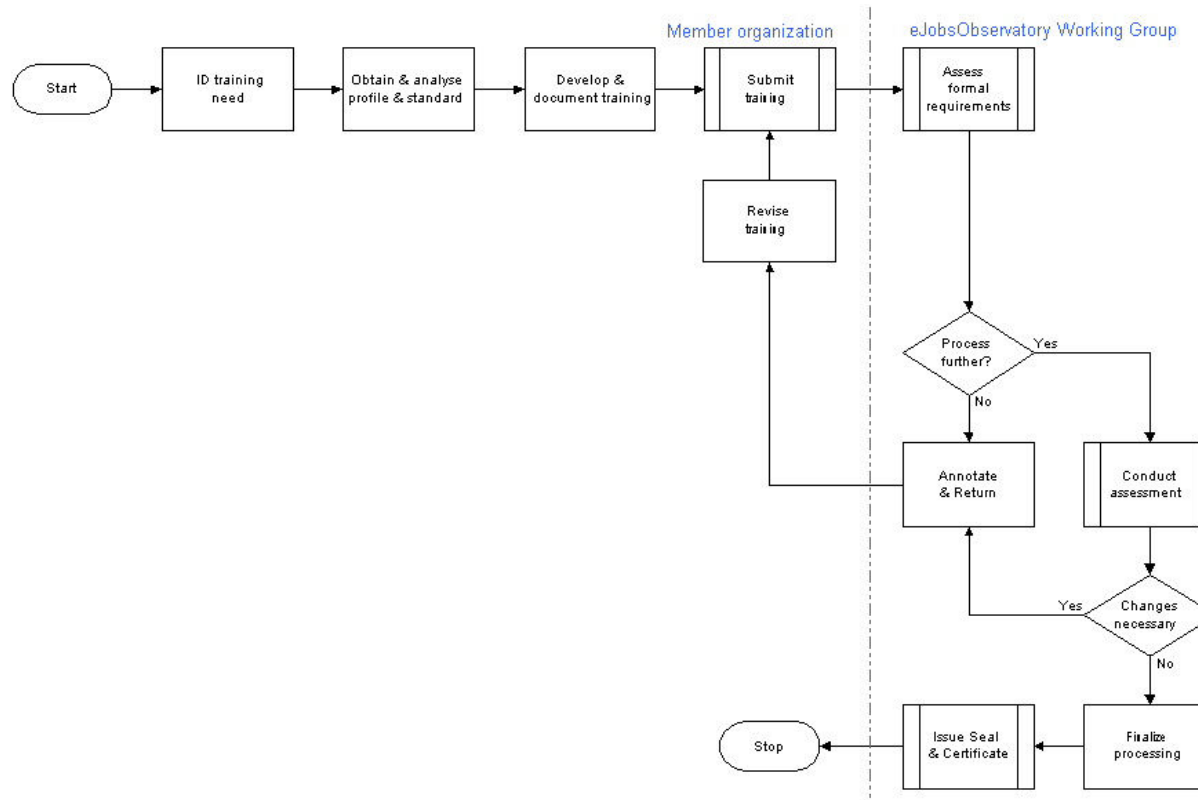
Figure 4: *Training development, submittal & approval process*

6 Training submittal and approval process

6.1 Overview

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. This section describes the process for doing so. In the following, the term "unit" is used to describe the training that has been submitted, irrespective of its complexity or duration. Figure 4 (p. 36) is a graphical representation of this process. Any training that is to be validated within the scope of these guidelines must be completed and submitted to e-Jobs Observatory for approval.

6.2 Submitting a training unit for approval

The training is to be developed in accordance with the requirements specified in Section 8 above. Templates for the completion of this documentation can be obtained from the e-Jobs Observatory website (www.e-jobs-observatory.eu). 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. 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 the criteria outlined in the Training Unit Approval Checklist (see Appendix C).If it is not satisfactory at this juncture, it will annotated accordingly and returned to the submitter for revision and resubmittal. If the submittal meets all requirements at this stage, relevant labelled industry partner organisations may be asked to provide feedback on the validity of the training as a whole. The reviewer(s) will provide such feedback in written form, from which the final assessment will be made. The resulting assessment will be communicated to the submitting organisation.

6.3 Approving a training unit

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.

7 References

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Appendices

A. Roles Profiles

Included here are the coversheets and short descriptions of all ten profiles addressed by the ProInterNet (PIN) project. The complete profiles in their latest revisions are available for download at the e-Jobs Observatory website (www.ejobs-observatory.eu).

1. Digital animator

2. Internet hotline operator

3. Online community manager

4. Usability specialist

5. Web content developer

6. Web content manager

7. Web designer

8. Web marketer

9. Web seller

10. Webmaster

1. Digital animator

Functional description

Profile title	Digital animator	
Also known as	**2D-3D specialist, computer animator, virtual animator, computer-generated imagery (CGI) specialist**	
Summary statement	A digital animator is the creator of moving pictures in a digital environment, using 2D or 3D techniques.	
Mission	To contribute to the success of an organisation, through presenting relevant data using 2D or 3D techniques.	
Responsibility	To collaborate with designers in the creation of 2D and 3D animations.	
Deliverables	**Accountable**	**Contributor**
	Creation of 2D and 3D animations	Design
Main task/s	• Develop 2D and 3D animations • Integrate the 2D and 3D animations into their overall design environment • Integrate the 2D and 3D animations into their overall technical environment • Test the animations from a technical point of view • Test the animations from a usability point of view (in the absence of usability specialist)	
Environment	Usually works with the design team. May also interact with technicians, such as programmers, webmasters, etc.	
KPIs	TBD	

Profile Summary

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 Business Strategy Alignment																							
	A.2	Service Level Management																							
	A.3	Business Plan Development																							
	A.4	Product or Project Planning									x	x													
	A.5	Architecture Design																							
	A.6	Application Design	x		x		x		x										x		x		x		
	A.7	Technology and Market Watching	x																				x		
	A.8	Sustainable Development																							
Build	B.1	Design and Development	x		x		x	x	x	x	x	x	x					x	x	x	x	x		x		
	B.2	Systems Integration									x														
	B.3	Testing	x		x						x									x					
	B.4	Solution Deployment	x		x		x	x																	
	B.5	Documentation Production						x			x					x									
Run	C.1	User Support																							
	C.2	Change Support																							
	C.3	Service Delivery																							
	C.4	Problem Management																							
Enable	D.1	Information Security Strat. Development																							
	D.2	ICT Quality Strategy Development																							
	D.3	Education and 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	Information and Knowledge Management																							
Manage	E.1	Forecast Development																							
	E.2	Project and Portfolio Management	x																	x		x			
	E.3	Risk Management											x												
	E.4	Relationship Management	x														x	x							
	E.5	Process Improvement																							
	E.6	ICT Quality Management																							
	E.7	Business Change Management																							
	E.8	Information Security Management																							
	E.9	IT Governance																							

Technical
- T01: Has knowledge of netiquette, interactive virtual environments and social networks usage
- T02: Has knowledge of online usability requirements
- T03: Can promote and sell products or services online
- T04: Can create media elements (audio, graphics, video)
- T05: Can draft texts, clearly and concisely, with due regard for orthography and grammar

Behavioural
- B01: Is creative, imaginative, artistic
- B02: Is ethical
- B03: Is precise and aware of details
- B04: Is customer oriented
- B05: Is committed to corporate strategy and aware of corporate culture
- B06: Has good interpersonal skills
- B07: Has presentation / moderation skills
- B08: Can communicate effectively (also in foreign languages)
- B09: Can work in a team
- B10: Can seek, organize and synthesize
- B11: Can analyse
- B12: Can explain

Business
- M01: Has knowledge of project management principles
- M02: Has knowledge of budgeting / estimating issues and practices
- M03: Has knowledge of legal, environmental, labour, standards issues
- M04: Has marketing knowledge
- M05: Can lead a team

2. Internet hotline operator

Functional description

Profile title	Internet Hotline Operator	
Also known as		
Summary statement	The Internet Hotline Operator provides user support. Hotline operators can also work on customer relationship (accounting, payments, etc.).	
Mission	To quickly and effectively receive, interpret, analyze and process requests and issues from customers or users of a product or system, by means of email, chat, telephone (including VOIP services such as Skype) or other forms of communication.	
Responsibility	The timely provision of constructive responses to client requests for support. Analysis of client issues, accurate interpretation for technical analysis, and providing solutions. Feed knowledge from the support tickets into knowledge databases to support community collaboration tools and internal knowledge sharing.	
Deliverables	**Accountable**	**Contributor**
	• Issue tickets. • First level support	• Resolved issues. • Knowledge databases.
Main task/s	• Responding to customer enquiries via telephone, chat or email. • Processing of resulting issue tickets. • Escalating issues to second line support.	
Environment	Usually works in a team of operators and reports to a team leader.	
KPIs	• Response rate. • Tickets closed. • Requests solved. • Requests solved first time. • Requests responded to without escalation to second level support.	

Profile Summary

Area	No.	Internet hotline operator — Competence	Importance	Technical					Behavioural												Business				
				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 and Market 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							x	x	x	x	x	x	x	x	x	x	x	x			x		
	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																							

Column legend (bottom labels):

- T01: Has knowledge of netiquette, interactive virtual environments and social networks u
- T02: Has knowledge of online usability requirements
- T03: Can promote and sell products or services online
- T04: Can create media elements (audio, graphics, video)
- T05: Can draft texts, clearly & concisely, with due regard for orthography and grammar
- B01: Is creative, imaginative, artistic
- B02: Is ethical
- B03: Is precise and aware of details
- B04: Is customer oriented
- B05: Is committed to corporate strategy and aware of corporate culture
- B06: Has good interpersonal skills
- B07: Has presentation / moderation skills
- B08: Can communicate effectively (also in foreign languages)
- B09: Can work in a team
- B10: Can seek, organize and synthesize
- B11: Can analyse
- B12: Can explain
- M01: Has knowledge of project management principles
- M02: Has knowledge of budgeting/estimating issues and practices
- M03: Has knowledge of legal, environmental, labour, standards issues
- M04: Has marketing knowledge
- M05: Can lead a team

3. Online community manager

Functional description

Profile title	Online Community Manager	
Also known as		
Summary statement	Provides an interactive environment in which users, customers and colleagues can collaborate together.	
Mission	Create and maintain such collaborative applications as wikis and forums in order to foster a sense of community surrounding the enterprise. Work in tandem with Customer Support and/or Hotline Operators to provide support and knowledge sharing for the issue ticketing system.	
Responsibility	The ability for customers and users to quickly and effectively resolve issues and questions, and to provide a feedback mechanism for the enterprise.	
Deliverables	**Accountable**	**Contributor**
	• Wiki. • Forum. • Internet Chat. • Ticketing System. • External email accounts (user support, questions, etc).	• Infrastructure planning. • Hotline Operator support
Main task/s	• Provide collaboration tools. • Respond to incoming requests and questions. • Follow-up customer and user requests. • Moderation of forums. • Management of ticketing system	
Environment	Usually works in tandem with infrastructure and internal development teams. Spends much of their time online, validating the effectiveness of the collaboration tools	
KPIs	• Customer satisfaction. • Number of outstanding emails / tickets. • Rate of email / ticket closure. • Forum activity.	

Profile Summary

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						x							x										
	A.4	Product/Project Planning						x				x													
	A.5	Design Architecture																							
	A.6	Application Design																							
	A.7	Technology Watching																x							
	A.8	Sustainable Development																							
Build	B.1	Design & Development						x	x			x			x	x	x	x		x					
	B.2	Systems Integration									x														
	B.3	Testing																	x						
	B.4	Solution Development																							
	B.5	Document Production																							
Run	C.1	User Support																							
	C.2	Change Support																							
	C.3	Service Delivery									x								x						
	C.4	Problem Management																	x						
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							x																
	D.7	Sales Management																					x		
	D.8	Contract Management																							
	D.9	Personnel Development																							
	D.10	Info. & Knowledge Mgmt																							
Manage	E.1	Forecast Development			x													x						x	
	E.2	Project & Portfolio Mgmt																	x		x	x			x
	E.3	Risk Management										x							x						
	E.4	Relationship Management										x		x			x								
	E.5	Process Improvement															x	x							
	E.6	ICT QM																							
	E.7	Business Change Mgmt										x													
	E.8	Info. Sec. Management																							
	E.9	IT Governance																							

ONLINE COMMUNITY MANAGER

Technical
- T01: Has knowledge of netiquette, interactive virtual environments and social networks us...
- T02: Has knowledge of online usability requirements
- T03: Can promote and sell products or services online
- T04: Can create media elements (audio, graphics, video)
- T05: Can draft texts, clearly and concisely, with due regard for orthography and grammar

Behavioural
- B01: Is creative, imaginative, artistic
- B02: Is ethical
- B03: Is precise and aware of details
- B04: Is customer oriented
- B05: Is committed to corporate strategy and aware of corporate culture
- B06: Has good interpersonal skills
- B07: Has presentation / moderation skills
- B08: Can communicate effectively (also in foreign languages)
- B09: Can work in a team
- B10: Can seek, organize and synthesize
- B11: Can analyse
- B12: Can explain

Business
- M01: Has knowledge of project management principles
- M02: Has knowledge of budgeting/estimating issues and practices
- M03: Has knowledge of legal, environmental, labour, standards issues
- M04: Has marketing knowledge
- M05: Can lead a team

4. Usability specialist

Functional description

Profile title	Usability specialist	
Also known as	**Usability and ergonomics specialist, User experience specialist, Web/Software ergonomics specialist, Interface designer, Usability manager**	
Summary statement	In general, usability specialists make sure that products/services are easy for consumers to use. In internet field, usability specialists help ensure that websites and web applications are easy and pleasurable to use.	
Mission	Ensuring that everyone (including handicapped and people with limited ICT knowledge) can use (access, understand and interact) a website or web application easily and according to the creator's original intentions. Developing ideas to improve the website / web application in order to maximize its (business) impact and also to improve competitiveness of the company.	
Responsibility	In charge of the ergonomics of a website or web application.	
Deliverables	**Accountable**	**Contributor**
	• Cost- and time requirements and schedule of usability tasks document including cost benefit analysis and reasoning • Web ergonomics suggestions document • Usability plan / guidance document • Study on user requirements • Study on designer / developer requirements • Concepts and prototypes • Ideas and suggestions for usability improvements • Review / study on usability testing (inc. report on eye tracking results)	• Business plan • Architecture design • Website or web application development / finalizing • Risk management • Process improvement

Main task/s	For each prototype /revision of the website or web application:
	
	• **Planning for usability**: provides guidance on what user-centred activities to conduct when during development to ensure good usability;
	• **Design requirements analysis**: captures and analyzes design requirements and specifications from designers / developers of the website or web application;
	• **User requirements analysis**:
	    • Gathers and analyzes user requirements – by observing and interviewing potential users and by reviewing logs and analytics of monitored user activities;
	    • Determines user needs and preferences;
	    • Understands and prioritizes content and functionality needed in the user interface;	

	- **Interaction design**:
	    - Designs concepts and prototypes to illustrate overall interface layout, functionality and usage flow to support designers / developers;
	    - Develops ideas and makes suggestions to designers and developers (in cases also to sales personnel or risk management team) for improving user friendliness;
	 - **Usability testing**:
	    - Independent usability evaluation: from short informal tests and expert reviews to large international user studies;
	    - Eye tracking: provides detailed insights into how users interact with an interface - what they focus on and what they don't.

Environment	Usually works independently, but interacts regularly with users to collect their feedback and with designers/developers to provide suggestions to them.
KPIs	- Improved user satisfaction (based on user feedback) - Increased business / sales revenue - in case of commercial websites or web services - Comparison of usability testing results (before / after improvement)

Profile Summary

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
PROFILE Usability Specialist				**Technical**					**Behavioural**												**Business**				
Plan	A.1	IS and Business Strategy Alignment																							
	A.2	Service Level Management																							
	A.3	Business Plan Development	low		x	x					x		x						x	x	x	x	x	x	
	A.4	Product or Project Planning																							
	A.5	Architecture Design	low		x				x		x	x	x						x				x		
	A.6	Application Design	normal		x	x	x		x		x	x	x				x	x	x				x		
	A.7	Technology and Market Watching	normal	x	x	x												x	x				x	x	
	A.8	Sustainable Development																							
Build	B.1	Design and Development	high	x	x		x	x	x		x	x			x		x	x	x	x	x	x	x		
	B.2	Systems Integration																							
	B.3	Testing	high	x	x		x			x	x	x	x	x	x			x	x	x	x		x		
	B.4	Solution Deployment																							
	B.5	Documentation Production	normal				x	x			x							x	x	x	x	x	x	x	
Run	C.1	User Support	high		x					x	x	x		x	x	x		x		x					
	C.2	Change Support																							
	C.3	Service Delivery																							
	C.4	Problem Management	normal		x				x		x						x	x	x	x					
Enable	D.1	Information Security Strat. Development																							
	D.2	ICT Quality Strategy Development																							
	D.3	Education and Training Provision																							
	D.4	Purchasing																							
	D.5	Sales Proposal Development	normal	x	x	x				x	x	x	x					x	x			x	x	x	
	D.6	Channel Management																							
	D.7	Sales Management																							
	D.8	Contract Management																							
	D.9	Personnel Development																							
	D.10	Information and Knowledge Management																							
Manage	E.1	Forecast Development																							
	E.2	Project and Portfolio Management																							
	E.3	Risk Management	low		x													x	x		x		x	x	
	E.4	Relationship Management																							
	E.5	Process Improvement	normal		x				x									x	x		x		x	x	
	E.6	ICT Quality Management																							
	E.7	Business Change Management																							
	E.8	Information Security Management																							
	E.9	IT Governance																							

Column legend (descriptions):

- T01: Has knowledge of netiquette, interactive virtual environments & social networks
- T02: Has knowledge of online usability requirements
- T03: Can promote and sell products or services online
- T04: Can create media elements (audio, graphics, video)
- T05: Can draft texts, clearly and concisely, with due regard for orthography and grammar
- B01: Is creative, imaginative, artistic
- B02: Is ethical
- B03: Is precise and aware of details
- B04: Is customer oriented
- B05: Is committed to corporate strategy and aware of corporate culture
- B06: Has good interpersonal skills
- B07: Has presentation / moderation skills
- B08: Can communicate effectively (also in foreign languages)
- B09: Can work in a team
- B10: Can seek, organize and synthesize
- B11: Can analyse
- B12: Can explain
- M01: Has knowledge of project management principles
- M02: Has knowledge of budgeting / estimating issues and practices
- M03: Has knowledge of legal, environmental, labour, standards issues
- M04: Has marketing knowledge
- M05: Can lead a team

5. Web content developer

Functional description

Profile title	Web content developer	
Also known as	**Web developer, Developer**	
Summary statement	A web developer is a software specialist who develops specifically for the web. He uses specific softwares and languages.	
Mission	His mission is to research options, and decides on the optimal choice and formulates them for visualization for the website.	
Responsibility	To collaborate with the content manager or webmaster in order to deliver the optimal content	
Deliverables	**Accountable**	**Contributor**
	• Creation of content (text, graphics, pictures audiovisual files)	• Integration of content
Main task/s	For each prototype /revision of the website or web application: • Analyse of needs • Choice of technical solution • Collect information	
Environment	Usually works with the project manager. May also interact with technicians, such as programmers, webmasters, etc.	
KPIs	• Number of bugs • Difference between planed and used time	

Profile Summary

Area	N°	Competence	Importance	T01	T02	T03	T04	T05	B01	B02	B03	B04	B05	B06	B07	B08	B09	B10	B11	B12
Plan	A.1.	I.S. and Business Strategy Alignment											X							
	A.2.	Service Level Management																		
	A.3.	Business Plan Development																		
	A.4.	Product or Project Planning			X						X	X								
	A.5.	Architecture Design			X													X		
	A.6.	Application Design					X		X								X			
	A.7.	Technology and Market Watching																		
	A.8.	Sustainable Development																		
Build	B.1.	Design and Development			X		X	X	X	X	X	X	X					X	X	
	B.2.	System Integration			X						X				X					
	B.3.	Testing									X								X	
	B.4.	Solution Deployment			X		X	X	X		X									
	B.5.	Documentation Production									X		X							X
Run	C.1.	User Support			X					X	X			X		X	X		X	X
	C.2.	Change Support												X		X				X
	C.3.	Service Delivery									X					X		X	X	
	C.4.	Problem Management			X				X		X							X	X	X
Enable	D.1.	Information Security Strat Development																		
	D.2.	ICT Quality Strategy Development																		
	D.3.	Education and Training Provision																		
	D.4.	Purchasing																		
	D.5.	Sales Proposal Development																		
	D.6.	Channel Management																		
	D.7.	Sales Management																		
	D.8.	Contract Management																		
	D.9.	Personnal Development																		
	D.10	Information and Knowledge Management																		
Manage	E.1.	Forecast Development											X					X		
	E.2.	Project and Portfolio Management																		
	E.3.	Risk Management											X							
	E.4.	Relationship Management											X			X	X			
	E.5.	Process Improvement																		
	E.6.	ICT Quality Management																		
	E.7.	Business Change Management																		
	E.8.	Information Security Management																		
	E.9.	IT Governance																		

Technical (T01–T05):
- T01: Has Knowledge of Netiquette, interactive virtual environments and social networks usages.
- T02: Has knowledge of online usability requirements
- T03: Can promote and sell products or services online
- T04: Can create media elements (audio, graphics, video)
- T05: Can draft texts, clearly &concisely, with due regards for orthography and grammar

Behavioural (B01–B12):
- B01: Is creative, imaginative, artistic
- B02: Is ethical
- B03: Is precise and aware of details
- B04: Is custommer orientated
- B05: Is commited to corporate strategy and aware of corporate culture
- B06: Has good interpersonal skills
- B07: Has presentation / moderation skills
- B08: Can communicate effectively (also in foreign language)
- B09: Can work in a team
- B10: Can seek, organize and synthetize
- B11: Can analyse
- B12: Can explain

6. Web content manager

Functional description

Profile title	Web content manager	
Also known as	**Content manager**	
Summary statement	A content manager takes care of the business perspectives of the website in planning, defining, organising structuring and controlling the web content.	
Mission	Managing the web content, advertising, marketing in accordance with (if needed) cultural approach in order to increase, visits, orders and so on.	
Responsibility	To collaborate with all content providers in the organisation or outside in order to deliver the optimal content	
Deliverables	**Accountable**	**Contributor**
	• Management of content (text, graphics, pictures audiovisual files)	• Integration of content
Main task/s	For each prototype /revision of the website or web application: • Analysis of needs • Choice of editorial solution • Edit information	
Environment	Usually works with the project manager. May also interact with technicians, such as programmers, webmasters, etc.	
KPIs	• Transformation rate visits, orders/subscriptions • Search engine optimization • Revisit rate	

Profile Summary

Area	N°	Competence	Importance	T01	T02	T03	T04	T05	B01	B02	B03	B04	B05	B06	B07	B08	B09	B10	B11	B12
				Technical					Behavioural											
Plan	A.1.	I.S. and Business Strategy Alignment											X							
	A.2.	Service Level Management			X						X	X								
	A.3.	Business Plan Development																X		
	A.4.	Product or Project Planning				X												X		
	A.5.	Architecture Design			X											X				
	A.6.	Application Design							X									X		
	A.7.	Technology and Market Watching		X									X							
	A.8.	Sustainable Development																		
Build	B.1.	Design and Development			X			X	X	X	X	X	X				X	X		X
	B.2.	System Integration									X									
	B.3.	Testing									X	X							X	
	B.4.	Solution Deployment																		
	B.5.	Documentation Production									X									
Run	C.1.	User Support								X					X				X	X
	C.2.	Change Support										X							X	X
	C.3.	Service Delivery									X	X							X	
	C.4.	Problem Management																X	X	X
Enable	D.1.	Information Security Strat Development																		
	D.2.	ICT Quality Strategy Development																		
	D.3.	Education and Training Provision										X			X		X			
	D.4.	Purchasing																		
	D.5.	Sales Proposal Development																X		
	D.6.	Channel Management																		
	D.7.	Sales Management																		
	D.8.	Contract Management																		
	D.9.	Personnal Development																		
	D.10	Information and Knowledge Management													X					
Manage	E.1.	Forecast Development										X							X	
	E.2.	Project and Portfolio Management										X						X		
	E.3.	Risk Management										X								
	E.4.	Relationship Management					X					X			X	X	X			
	E.5.	Process Improvement					X					X						X		
	E.6.	ICT Quality Management																		
	E.7.	Business Change Management										X								
	E.8.	Information Security Management																		
	E.9.	IT Governance																		

Column legend (Technical):
- T01: Has Knowledge of Netiquette, interactive virtual environments and social networks usages.
- T02: Has knowledge of online usability requirements
- T03: Can promote and sell products or services online
- T04: Can create media elements (audio, graphics, video)
- T05: Can draft texts, clearly &concisely, with due regards for orthography and grammar

Column legend (Behavioural):
- B01: Is creative, imaginative, artistic
- B02: Is ethical
- B03: Is precise and aware of details
- B04: Is custommer orientated
- B05: Is commited to corporate strategy and aware of corporate culture
- B06: Has good interpersonal skills
- B07: Has presentation / moderation skills
- B08: Can communicate effectivly (also in foreign language)
- B09: Can work in a team
- B10: Can seek, organize and synthetize
- B11: Can analyse
- B12: Can explain

7. Web designer

Functional description

Profile title	Web designer	
Also known as	**Designer**	
Summary statement	A web designer creates and updates websites from a design and content layout point of view.	
Mission	To contribute to the success of an organisation, through presenting relevant information on a website in a way that is both accessible and memorable.	
Responsibility	Plays a pivotal role in the web development team by providing attractive ways of implementing websites from a design and content layout point of view.	
Deliverables	**Accountable**	**Contributor**
	• Cost- and time requirements and schedule of web design • Website design specification • Concepts and prototypes • Web site design implementation • Search engine optimisation	• Website or web application development / finalizing • Usability and ergonomics • Web marketing
Main task/s	• Develop design specifications in accordance with technical specifications • Search engine optimisation • Develop, adapt, maintain style sheets • Develop and implement graphical user interface (GUI) • Test the website from a usability point of view (in the absence of usability specialist)	
Environment	Usually works with the web development team alongside technicians, such as web programmers, webmasters, web content managers, in which the web designer, in many instances, represents the marketing and communications point of view. Works also with the web marketer.	
KPIs	• Page ranking • Search engine ranking • Number of new visitors • Page views / visitor • Visitor return rate • Average order value • Bounce rate • Transformation rate of visits into orders	

Profile Summary

Area	No.	Web Designer — Competence	Importance	Technical					Behavioural												Business				
				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 Business Strategy Alignment																							
	A.2	Service Level Management																							
	A.3	Business Plan Development																							
	A.4	Product or Project Planning	x			x		x				x	x									x	x		
	A.5	Architecture Design																							
	A.6	Application Design	x		x		x		x										x		x				
	A.7	Technology and Market Watching	x	x																			x	x	
	A.8	Sustainable Development																							
Build	B.1	Design and Development	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x					
	B.2	Systems Integration									x														
	B.3	Testing	x		x						x									x					
	B.4	Solution Deployment	x	x	x	x	x	x																	
	B.5	Documentation Production						x			x						x								
Run	C.1	User Support																							
	C.2	Change Support																	x						
	C.3	Service Delivery																							
	C.4	Problem Management																							
Enable	D.1	Information Security Strat. Development																							
	D.2	ICT Quality Strategy Development																							
	D.3	Education and 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	Information and Knowledge Management																							
Manage	E.1	Forecast Development																							
	E.2	Project and Portfolio Management	x																x		x	x			
	E.3	Risk Management											x								x				
	E.4	Relationship Management	x	x	x					x			x			x	x	x							
	E.5	Process Improvement																							
	E.6	ICT Quality Management																							
	E.7	Business Change Management																							
	E.8	Information Security Management																							
	E.9	IT Governance																							

Column legend:

- T01: Has knowledge of netiquette, interactive virtual environments and social networks usage
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- T03: Can promote and sell products or services online
- T04: Can create media elements (audio, graphics, video)
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- B01: Is creative, imaginative, artistic
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- B07: Has presentation / moderation skills
- B08: Can communicate effectively (also in foreign languages)
- B09: Can work in a team
- B10: Can seek, organize and synthesize
- B11: Can analyse
- B12: Can explain
- M01: Has knowledge of project management principles
- M02: Has knowledge of budgeting / estimating issues and practices
- M03: Has knowledge of legal, environmental, labour, standards issues
- M04: Has marketing knowledge
- M05: Can lead a team

8. Web marketer

Functional description

Profile title	Web Marketer	
Also known as		
Summary statement	The web marketer is in charge of interactive marketing	
Mission	To contribute to the success of the enterprise, i.e. visibility, traffic and/or sales, through the website, web application or web campaign.	
Responsibility	Defines and takes charge of the promotion of a website, web application or manages a web campaign in view of making it successful, whether measured in commercial, social or other terms.	
Deliverables	**Accountable**	**Contributor**
	• Marketing campaigns. • Marketing analysis and reports.	Marketing strategy / plan.
Main task/s	• Web Campaign Management - planning and executing online marketing campaigns. • Conversion Strategies - such as converting page-views to revenue. • Search Engine Optimisation - achieving optimal search engine results. • Web Analytics - providing detailed reports on the relative success of said campaigns. • Marketing data analysis.	
Environment	Usually works in a team alongside other marketing specialists and reports to a Marketing Coordinator.	
KPIs	• Number of new visitors. • Page views / visitor. • Old visitor return rate. • Average order value. • Bounce rate. • Cancellation rate. • Number of orders per customer per year.	

Profile Summary

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
		Web Marketer		___Technical___					___Behavioural___												___Business___				
Plan	A.1	IS and Business Strategy Alignment											x												
	A.2	Service Level Management																							
	A.3	Business Plan Development																			x	x			
	A.4	Product or Project Planning	x			x						x	x												x	
	A.5	Architecture Design																							
	A.6	Application Design	x		x	x				x											x				
	A.7	Technology and Market Watching	x									x							x	x				x	x	
	A.8	Sustainable Development																							
Build	B.1	Design and Development	x	x	x	x		x	x		x	x		x		x	x	x		x				x	
	B.2	Systems Integration																					x		
	B.3	Testing																x							
	B.4	Solution Deployment		x	x	x																		x	
	B.5	Documentation Production									x														
Run	C.1	User Support																							
	C.2	Change Support																							
	C.3	Service Delivery	x								x		x					x							
	C.4	Problem Management									x							x							
Enable	D.1	Information Security Strat. Development																							
	D.2	ICT Quality Strategy Development																							
	D.3	Education and Training Provision																							
	D.4	Purchasing				x																			
	D.5	Sales Proposal Development				x																			
	D.6	Channel Management	x	x	x	x		x	x	x	x	x	x			x					x	x	x	x	
	D.7	Sales Management				x																			
	D.8	Contract Management																					x		
	D.9	Personnel Development																							
	D.10	Information and Knowledge Management																							
Manage	E.1	Forecast Development	x			x												x						x	
	E.2	Project and Portfolio Management	x																		x	x			x
	E.3	Risk Management										x									x				
	E.4	Relationship Management	x			x				x		x	x	x		x									
	E.5	Process Improvement									x	x						x							
	E.6	ICT Quality Management																							
	E.7	Business Change Management																							
	E.8	Information Security Management																							
	E.9	IT Governance																							

Column descriptions:

- T01: Has knowledge of netiquette, interactive virtual environments and social networks usage rules
- T02: Has knowledge of online usability requirements
- T03: Can promote and sell products or services online
- T04: Can create media elements (audio, graphics, video)
- T05: Can draft texts, clearly and concisely, with due regard for orthography and grammar
- B01: Is creative, imaginative, artistic
- B02: Is ethical
- B03: Is precise and aware of details
- B04: Is customer oriented
- B05: Is committed to corporate strategy and aware of corporate culture
- B06: Has good interpersonal skills
- B07: Has presentation / moderation skills
- B08: Can communicate effectively (also in foreign languages)
- B09: Can work in a team
- B10: Can seek, organize and synthesize
- B11: Can analyse
- B12: Can explain
- M01: Has knowledge of project management principles
- M02: Has knowledge of budgeting / estimating issues and practices
- M03: Has knowledge of legal, environmental, labour, standards issues
- M04: Has marketing knowledge
- M05: Can lead a team

9. Web seller

Functional description

Profile title	Web Seller	
Also known as		
Summary statement	The web seller is in charge of online sales	
Mission	To contribute to the success of the enterprise, i.e. sales through the website, web application or web campaign.	
Responsibility	Use the features of a website, web application or web campaign geared at selling goods or services over the internet.	
Deliverables	**Accountable**	**Contributor**
	• Sales campaigns. • Sales analysis and reports.	Sales strategy / plan
Main task/s	• Web Sales Campaign Management - planning and executing online sales campaigns. • Conversion Strategies - such as converting page-views to revenue. • Web Analytics - providing detailed reports on the relative success of web sales campaigns.	
Environment	Usually works in a team alongside other sales people and reports to a Sales Director or Sales Team Leader.	
KPIs	• Sales rate. • Response rate. • New customers gained. • Repeat customers.	

Profile Summary

Area	No.	Web seller — 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 Business Strategy Alignment																							
	A.2	Service Level Management																							
	A.3	Business Plan Development																							
	A.4	Product or Project Planning																							
	A.5	Architecture Design																							
	A.6	Application Design																							
	A.7	Technology and Market Watching											x												
	A.8	Sustainable Development																							
Build	B.1	Design and Development																							
	B.2	Systems Integration																							
	B.3	Testing																							
	B.4	Solution Deployment																							
	B.5	Documentation Production																							
Run	C.1	User Support																							
	C.2	Change Support																							
	C.3	Service Delivery																							
	C.4	Problem Management																							
Enable	D.1	Information Security Strat. Development																							
	D.2	ICT Quality Strategy Development																							
	D.3	Education and Training Provision																							
	D.4	Purchasing																							
	D.5	Sales Proposal Development	x	x	x	x			x	x		x		x			x				x	x			
	D.6	Channel Management															x								
	D.7	Sales Management	x	x	x	x			x	x		x		x	x	x									
	D.8	Contract Management																					x		
	D.9	Personnel Development																							
	D.10	Information and Knowledge Management																							
Manage	E.1	Forecast Development																x							
	E.2	Project and Portfolio Management	x																			x	x			
	E.3	Risk Management									x														
	E.4	Relationship Management	x												x	x									
	E.5	Process Improvement	x										x	x					x						
	E.6	ICT Quality Management																							
	E.7	Business Change Management																							
	E.8	Information Security Management																							
	E.9	IT Governance																							

Column legend:

Technical:
- T01: Has knowledge of netiquette, interactive virtual environments and social networks usage rules
- T02: Has knowledge of online usability requirements
- T03: Can promote and sell products or services online
- T04: Can create media elements (audio, graphics, video)
- T05: Can draft texts, clearly and concisely, with due regard for orthography and grammar

Behavioural:
- B01: Is creative, imaginative, artistic
- B02: Is ethical
- B03: Is precise and aware of details
- B04: Is customer oriented
- B05: Is committed to corporate strategy and aware of corporate culture
- B06: Has good interpersonal skills
- B07: Has presentation / moderation skills
- B08: Can communicate effectively (also in foreign languages)
- B09: Can work in a team
- B10: Can seek, organize and synthesize
- B11: Can analyse
- B12: Can explain

Business:
- M01: Has knowledge of project management principles
- M02: Has knowledge of budgeting / estimating issues and practices
- M03: Has knowledge of legal, environmental, labour, standards issues
- M04: Has marketing knowledge
- M05: Can lead a team

10. Webmaster

Functional description

Profile title	Webmaster	
Also known as	**Web architect, web developer, site author, website administrator, or webmistress for females**	
Summary statement	A webmaster is responsible for the setup and operation of one or more websites.	
Mission	To contribute to the success of the enterprise by providing and maintaining an online presence for marketing and customer interaction	
Responsibility	Webmaster is the most common and most ancient job in the internet world. Master of the Website, the webmaster is etymologically in charge of most of the tasks concerning the website: defining the objective, specifications, technical approach, technical implementation, content development, defining and producing the information, analysing and promoting the audience. In small SMEs (which represent the majority of the market), the webmaster is often the only web-related collaborator. In larger companies, the webmaster can be part of a team gathering other technical and content specialist functions (such as web designer, 2D-3D specialist, web developer). He is also the interface between the public and the company and the contact point with the company, answering questions from the public or transferring them to the relevant department of the company.	
Deliverables	**Accountable**	**Contributor**
	• Website availability • Website security • Website operation and maintenance • Collection of analytics data	• Website design specification • Website development plan • Security plan • Data-protection plan
Main task/s	• Ensuring that the web servers, hardware and software are operating accurately • Contributing to the design of the website(s) • Generating and revising web pages • Replying to user comments • Ensuring technical stability and security of the website(s) • Perform maintenance, updates, and implementing technical revisions, when necessary • Examining traffic through the site	
Environment	Usually works in, and is often head of, a team alongside other technicians, such as web designers, database administrators, reporting, in many instances to the Chief Technical Officer (CTO).	
KPIs	• Run-time duration • Level of security • Website availability • Website reliability • Website accessibility • Technical response times • Load management levels	

Profile Summary

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
Profile		**Webmaster**				**Technical**									**Behavioural**									**Business**		
Plan	A.1	IS and Bus. Strat. Alignment											X													
	A.2	Service Level Management																								
	A.3	Business plan Development																					X			
	A.4	Product/Project Planning						X				X												X			
	A.5	Design Architecture			X		X																				
	A.6	Application Design			X		X		X											X		X					
	A.7	Technology Watching		X																							
	A.8	Sustainable Development																									
Build	B.1	Design & Development		X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
	B.2	Systems Integration		X								X															
	B.3	Testing			X							X															
	B.4	Solution Development		X	X		X	X																			
	B.5	Document Production						X								X											
Run	C.1	User Support		X	X							X															
	C.2	Change Support																	X							
	C.3	Service Delivery									X		X							X							
	C.4	Problem Management																	X	X						
Enable	D.1	Info Sec. Strat. Development		X																					X		
	D.2	ICT Qual. Strat. Development																							X		
	D.3	Educ. & Training Provision																									
	D.4	Purchasing												X		X			X							
	D.5	Sales Proposal Development												X		X			X							
	D.6	Channel Management																									
	D.7	Sales Management																									
	D.8	Contract Management												X		X			X					X		
	D.9	Personnel Development																									
	D.10	Info. & Knowledge Mgmt																									
Manage	E.1	Forecast Development												X		X			X							
	E.2	Project & Portfolio Mgmt																	X		X	X			X
	E.3	Risk Management										X						X	X						
	E.4	Relationship Management		X	X									X	X	X	X	X	X						
	E.5	Process Improvement		X	X														X						
	E.6	ICT QM		X	X														X				X		
	E.7	Business Change Mgmt										X													
	E.8	Info. Sec. Management																						X		
	E.9	IT Governance																									

Column legend (Technical):
- T01 Has knowledge of netiquette, interactive virtual env., social networks, e
- T02 Has knowledge of online usability requirements
- T03 Can promote and sell products or services online
- T04 Can create media elements
- T05 Can draft texts, clearly, concisely, correctly

Column legend (Behavioural):
- B01 Is creative, imaginative, artistic
- B02 Is ethical
- B03 Is precise and aware of details
- B04 Is customer oriented
- B05 Is committed to corporate strategy and aware of corporate culture
- B06 Has good interpersonal skills
- B07 Has presentation/moderation skills
- B08 Can communicate (including in foreign languages if useful)
- B09 Can work in a team
- B10 Can seek, organize and synthesize
- B11 Can analyse (assess, evaluate, critique, test)
- B12 Can explain (defend, argue, justify)

Column legend (Business):
- M01 Has knowledge of project management principles
- M02 Has knowledge of budgeting/estimating issues and practices
- M03 Has knowledge of legal, environmental, labour, standards issues
- M04 Has marketing knowledge
- M05 Can lead a team

B. e-Jobs Observatory Label of Excellence and Statement of Compliance

See Section 4 for details.

A sample Statement of Compliance:

STATEMENT OF COMPLIANCE

In order to improve the quality of professional training and qualification in the area of internet-related positions and to support the efforts of the eJobsObservatory in attaining its quality goals, I, the undersigned, declare that my organizations complies with the principles and practices stated herein, namely

- 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.

- 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.

- 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.

- 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.

- The so-called "soft skills" or key competences are recognized as an integral part of every training unit, module or programme.

- Within the ITC sector, especially in regard to internet-related role profiles and training the European eCompetence Framework (eCF) plays an important, central role in relating market and training needs.

- The European Qualification Framework (EQF) and both national and sectoral frameworks provide a useful and helpful mechanism to increase the transparency of training programmes and learning outcomes.

We strive to realize these principles in all our product and service offerings.

Name of organisation: <NAME OF ORGANISATION>
Name of legal representative: <NAME OF LEGAL REPRESENTATIVE>
Position: <POSITION WITHIN THE ORGANISATIO>
City and date: <CITY>, <DATE>

Signature and stamp   _____

Once signed, submitted and approved, the recipient organisation will receive a Letter of Authorization as depicted below:

C. e-Jobs Observatory Seal of Market Compliance and Certificate

The Seal of Market Compliance is an attestation to the quality of the training unit and its conformance to actual needs of the Internet-related jobs market. It certifies that the unit meets all the formal requirements set forth in these guidelines. It may be used by the receiving organisation to market and promote this particular training product.

In addition and in conjunction with the issuance of the seal, a Certificate of Market Compliance will be issued to document the validity and duration of the seal. A sample is shown above. The following checklist will be used to evaluate the training units.

Training Unit Approval Checklist

0 Status

Log number: _____   Approval number: _____

Item	Date	Initials	Remarks
Received	YYYY-MM-DD		
Reviewed			
Reviewed			
Discussed			
Returned			
Re-received			
Reviewed			
Reviewed			
Discussed			
Approved			
Comments			

1 Administrative section

Item	Information	
Name of organisation		
Address	<Department>	
	<Street & no.>	
	<P.O. Box, if applicable>	
	<Postal code> <City>	
	<Country>	
Communication information	<Telephone>	
	<Mobile>	
	<Fax>	
	<Email>	
Legal representative	<Name>	
	<Position>	
Statement of compliance	☐ Yes ☐ No	
If yes, register number		

2 Technical section

Item	Info		
Title of unit			
Duration (in training hours)			
Target group(s)			
Type of training	☐ HE	☐ Vocational	☐ Professional
Credits assigned?	☐ ECTS	☐ ECVET	☐ Other
How many?			
Assigned by whom?			
Based on a specific profile?	☐ Yes	☐ No	
If yes, which one			
Is profile approved?	☐ Yes	☐ No	
If yes, by whom			
Partial or complete qualification?	☐ Partial	☐ Complete	
End/Goal qualification			
Type documentation for student			

3 Educational section

1. Must pre-requisites be met before starting the unit? ☐ Yes ☐ No

   Comments _____

2. Is there a pre-assessment procedure? ☐ Yes ☐ No

   Comments _____

3. Does the procedure ensure pre-requisites are met? ☐ Yes ☐ No

   Comments _____

4. Are exceptions allowed? ☐ Yes ☐ No

   Comments _____

5. Can the exceptions jeopardize success of training? ☐ Yes ☐ No

   Comments _____

6. Does the organization have a change procedure in place? ☐ Yes ☐ No

   Comments _____

7. Is procedure adequate to ensure up-to-date training? ☐ Yes ☐ No

   Comments _____

8. Can changes negatively impact value of training? ☐ Yes ☐ No

   Comments _____

9. Are results expressed in terms of learning outcomes? ☐ Yes ☐ No

   Comments _____

10. Are LOs formulated in accordance with the guidelines? ☐ Yes ☐ No

    Comments _____

11. Are LOs adequate to ensure required competences? ☐ Yes ☐ No

    Comments _____

12. Are LOs adequate to ensure required competences? ☐ Yes ☐ No

    Comments _____

13. Is training content adequately described? ☐ Yes ☐ No

    Comments _____

14. Is training content relevant to qualification? ☐ Yes ☐ No

    Comments _____

15. Is training content sufficient to meet required LOs? ☐ Yes ☐ No

Comments _____

16. Are training methods clearly identified? ☐ Yes ☐ No

Comments _____

17. Are training methods relevant to the training approach? ☐ Yes ☐ No

Comments _____

18. Are training methods adequate meet required LOs? ☐ Yes ☐ No

Comments _____

19. Are training materials clearly identified and described? ☐ Yes ☐ No

Comments _____

20. Are training materials relevant to the training approach? ☐ Yes ☐ No

Comments _____

21. Are training materials adequate meet required LOs? ☐ Yes ☐ No

Comments _____

22. Is training of soft skills included? ☐ Yes ☐ No

If yes, describe. _____

Comments _____

23. Are the methods relevant to the identified soft skills? ☐ Yes ☐ No

Comments _____

24. Are the methods adequate to develop identified soft skills? ☐ Yes ☐ No

Comments _____

25. Is the linkage between methods and outcomes clear? ☐ Yes ☐ No

  Comments _____

26. Is the linkage between materials and outcomes clear? ☐ Yes ☐ No

  Comments _____

27. Does the training include assessment? ☐ Yes ☐ No

  If yes, who conducts it? _____

  Comments _____

28. Is the assessment relevant to the LOs? ☐ Yes ☐ No

  Comments _____

29. Is the assessment adequate to ensure achievement of LOs? ☐ Yes ☐ No

  Comments _____

30. Does the training adequately contribute to target qualification? ☐ Yes ☐ No

  Comments _____

Write a brief overall assessment of the evaluated training unit.

D. *European Qualifications Framework Overview*

The European Qualifications Framework (EQF) acts as a translation device to make national qualifications more readable across Europe, promoting workers' and learners' mobility between countries and facilitating their lifelong learning.

The EQF aims to relate different countries' national qualifications systems to a common European reference framework. Individuals and employers will be able to use the EQF to better understand and compare the qualifications levels of different countries and different education and training systems.

Agreed upon by the European institutions in 2008, the EQF is being put in practice across Europe. It encourages countries to relate their national qualifications systems to the EQF so that all new qualifications issued from 2012 carry a reference to an appropriate EQF level. An EQF national coordination point has been designated for this purpose in each country.

The core of the EQF concerns eight reference levels describing what a learner knows, understands and is able to do – 'learning outcomes'. Levels of national qualifications will be placed at one of the central reference levels, ranging from basic (Level 1) to advanced (Level 8). This will enable a much easier comparison between national qualifications and should also mean that people do not have to repeat their learning if they move to another country.

The EQF applies to all types of education, training and qualifications, from school education to academic, professional and vocational. This approach shifts the focus from the traditional system which emphasises 'learning inputs', such as the length of a learning experience, or type of institution. It also encourages lifelong learning by promoting the validation of non-formal and informal learning.

This reflects a wider shift within which the EQF is acting as a catalyst for reforms: most Member States are now developing their own National Qualifications Frameworks (NQFs) based on learning outcomes. Several countries (IE, MT, UK, FR and BE-Flanders) already have one in force.

At present, an enterprise in France may hesitate to recruit a job applicant from, say, Sweden, because it does not understand the level of the qualifications presented by the Swedish candidate. But once the EQF is fully implemented, a Swedish person's certificates will bear a reference to an EQF reference level. The French authorities will

have already decided where their own national certificates in the field concerned lie, so the French enterprise would use the EQF reference to get a better idea of how the Swedish qualification compares to French qualifications.

An EQF advisory group brings together representatives from national authorities and other stakeholders to help with the implementation of the framework. Its work is complemented by the EU-wide Learning Outcomes Group which supports debate and peer learning on relevant issues, focusing on the development of national qualifications frameworks and the validation of non-formal and informal learning.

The EQF initiative is closely related to the qualifications framework for the European Higher Education Area : the two frameworks are compatible and their implementation is coordinated.

Complete information can be found on the EQF website, located at

http://ec.europa.eu/education/lifelong-learning-policy/doc44_en.htm

E. eCompetence Framework Overview

The European e-Competence Framework (e-CF) 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. The framework provides an international tool for:

- ICT practitioners and managers, with clear guidelines for their competence development

- Human resources managers, enabling the anticipation and planning of competence requirements

- Education and training, enabling effective planning and design of ICT curricula

- Policy makers and market researchers, providing a clear and Europe-wide agreed reference for ICT skills and competences in a long-term perspective

- Procurement managers, providing a common language for effective technical terms of reference in national and international bids.

The European e-Competence Framework has been developed in the context of the CEN workshop on ICT Skills.

The framework facilitates the link between national structures; additionally it provides a set of Europe-wide jointly defined ICT practitioner and manager competences as needed and applied on the workplace.

The 36 competences are classified according to main ICT business areas and link directly to the European Qualifications Framework (EQF). This provides a European basis for internationally efficient personnel planning and development.

The European e-Competence Framework is a component of the long term e-skills agenda (e-skills for the 21st Century) of the European Union supported by the European Commission and The Council of Ministers.

Complete information can be found on the EQF website, located at

http://www.ecompetences.eu/