

Newsletter N.1



A reference scheme for ICT related vocational qualifications

28 June 2016

The ICT market is quickly evolving and ICT competences are increasingly less confined to ICT profiles only. In a recent survey conducted among almost 2000 Management Engineers, graduated in the last ten years at Politecnico di Milano, asking them in which domain of work are they working now, Information Systems comes first followed by three other domains strongly bound to ICT skills. At the same time, they perceive a lack of these skills training during their academic path.

There are a lot of initiatives in Europe and around the world trying to improve the qualification path and to set standards for both competences, training with their validation. A decade-long work has been done in Europe by VET, research and standardization institutions supported by EU Commission. Today the advanced eCF 3.0 framework is a reality and day by day the necessity to work in more effective multi-stakeholder partnerships grows.

The eCF Council, a SSA EU funded project, aims to build, around the implementation of a VET qualification pilot programme, an enlarged and stable partnership, the eCF Alliance, within European organizations, companies and professionals. The fundamental idea is to include within the eCF Alliance not only ICT related organizations but also other skills alliances, by means of sharing the eCF Council's pilot training experience with university and higher education, the market's job matching and careers mobility.

In June 2016, a New Skills Agenda for Europe calls on stakeholders to anticipate the labour market's needs to increase skill levels. The Commission will launch soon ten actions to improve the skill recognition at local, national and EU levels.

In the Sofia Meeting at the end of June 2016, the 16 partners from the eCF Council will present and discuss the first six working months' outputs, the result of the ICT professional Transnational Frame and a Reference Scheme for ICT related VET. With the presence of guest speaker Niels der Linden from Capgemini, who will present his company's state-of-play of the European framework for ICT profession, and also with the presence of Pavol Krempasky, project officer at EACEA, attendees will work to strengthen the partnership and start the actions toward the eCF Alliance.

Building the “eCF Alliance”, to drive ICT professional up-skilling and pick up of employability

22 June 2016



A European consortium composed of industry associations, social partners, Small-Medium sized Enterprises, public authorities, research centres, training institutions and certification bodies has joined forces to launch the “eCF Alliance”, the first EU Skills Alliance on ICT professionalism.

Funded by the European Commission, the eCF Council project aims to create a transnational partnership between the major players responsible for IT professionals' enhancement, namely employers, professional associations, social partners, VET providers, higher education, research centres, regulatory bodies, and SMEs, across Europe. This, in response to the critical mismatch between ICT skills demand and offer that Europe is suffering both in terms of trainings and geographical distribution of the required competences against the positions available.

During three years, the eCF Council partnership will build the “eCF Alliance”, a stable network of reference stakeholders in the ICT sector whose goal is to foster ICT professionalism at the European and international level. It will be built upon concrete joint goals, tools and services for e-competence and IT occupation enhancement, and based on a common reference scheme for vocational qualifications and certification, compliant with the European e-Competence Framework (e-CF) and the ESCO IT occupations, ensuring transparency and comparability.

The work of the eCF Council is organised in several work packages (WPs), each responsible for specific tasks and run by partners highly knowledgeable in the field.

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e-CF Multistakeholder partnership driving ICT professional up-skilling and pick up of employability

15 December 2015



eCF Council: The EU alliance for ICT professionalism, kicks off in Milan

On December 14 and 15 in Milan (IT), a European consortium composed of industry associations, social partners, representation of Small-Medium sized Enterprises (SMEs), public authorities, training institutions and certification bodies, launched the "eCF Council", the first EU Skills Alliance on ICT professionalism.

Members of the consortium, which will be financially supported by the European Commission until 2018, are organizations that represent ICT professionalism stakeholders in four EU Member States: Italy, Spain, Bulgaria and The Netherlands. Additionally, the eCF Council features recognised EU umbrella associations such as PIN-SME, representative of European digital SMEs, and DIGITALEUROPE, the trade federation of the ICT sector.

The coordination of the eCF Council consortium has been assigned to Fondazione Politecnico di Milano. An accredited employment service agency and vocational training centre, Fondazione is an operational structure of the university Polytechnic of Milan, which acts as a bridge between the academia and the industry.

The e-CF Council is a platform to foster ICT professionalism at European and international level. It aims at increasing employability in order to reduce the e-skills gap in Europe. With the financial support of the EC, under the Erasmus+ program, during the next three years, the e-CF Council will work at developing unified ICT VET programmes and certifications.

The eCF council partnership includes 16 partners:

Partner	Country	VET provider	Sectoral organisation	Regulatory body
Fondazione Politecnico di Milano - FPM	IT			x
CEFRIEL	IT	x		
CNA	IT		x	
ADFOR	IT			x
FIOM Lombardia	IT		x	
ESI CEE	BULG	x		
BASSCOM	BULG		x	
NAPOO	BULG			x
biTa Center	NDL	x		
CIONET	NDL		x	
EXIN	NDL			x
UAH	ES	x		
CCOO Servicios	ES		x	
DG de Formacion - Comunidad de Madrid	ES			x
PIN-SME	BELGIUM		x (UO)	
DIGITAL EUROPE	BELGIUM		x (UO)	

Should you require more information or would you require to take part, please contact:

Consortium leader:

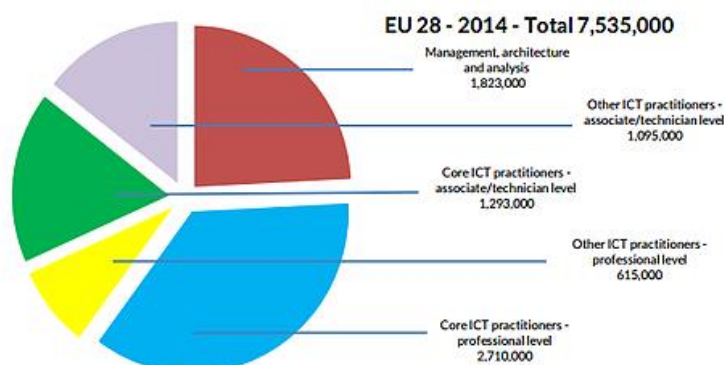
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Political background

22 June 2016

The e-CF COUNCIL aims to foster IT professionals' / workers' mobility across Europe and reduce the ICT Skills mismatch and shortage; contribute to a common frame of IT professionalism at European and international level; encourage dialogue between the social partners to facilitate transnational mobility and employment; and propose quality-based models for governance of the enlarged transnational partnerships.

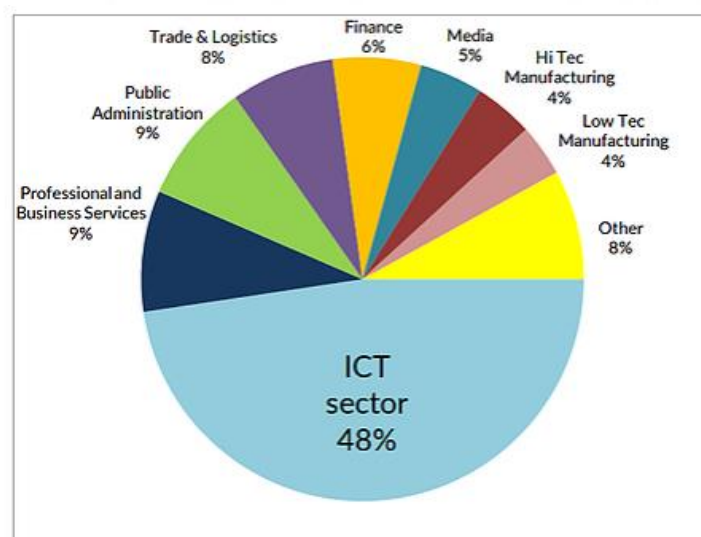
Figure 1: ICT professional workforce in Europe 2014 by ISCO-08 skills clusters



Source: empirica calculations based on LFS retrieval by Eurostat. Some further estimates apply.

European cooperation is fundamental to build a clear and shared picture of IT professionalism, in line with the needs also expressed in the e.g. latest EU directive on recognition of professional qualifications (Directive 2013/55/EU of the European Parliament and of the Council of 20 November 2013 amending Directive 2005/36/EC on the recognition of professional qualifications).

In recent studies on the ICT market, it clearly emerges that "The ICT workforce, according to our definition, in Europe in 2014, comprises 7.5 million workers, or 3.5% of the European workforce. Broadening up the definition further, including ICT mechanics and manual workers skills would add 1.4 million ICT workers, to a European Labour Force of 8.9 million ICT workers. [...] ICT practitioners are working in almost all industries of the economy and not just in the ICT industry sector".



Based on ISCO-08 minor groups 133, 251, 252 and 351									
	ICT sector	Professional and Business Services	Public Administration	Trade & Logistics	Finance	Media	Hi Tec Manufacturing	Low Tec Manufacturing	Other
NACE rev. 2	26-61-63	68-74;77;78;82	84;85	45-53	64-66	58-60	20;21;27-30	10-19;22-25;31-33	1-9;35-43;55;56;75;79-81;86-99

Source: empirica calculations based on LFS retrieval by Eurostat.

Enormous changes in the structure of the workforce are happening right now. "There is a surge in "Management" and "Plan/Design" positions: IS management and governance, architecture, analysis. Europe has added 459,000 jobs in this category in only three years. There is also obviously a high demand for "core ICT jobs", such as Software and Application developers, Web and Multimedia experts, Database designers and administrators, system administrators and network and operations practitioners. The open vacancy data that is available from different sources for several countries shows that there is also a severe excess demand for these core jobs. In vacancy data the most sought after IT positions currently are software engineering and web development jobs, and application administrators. These jobs are in high demand with many unfilled vacancies reported." (Empirica, e-Skills in Europe, Nov 2015).

The New Skills Agenda for Europe adopted by the EC on 10 June sets, among its priorities, the re-launch of the "Digital Skills and Jobs Coalition" that brings together Member States and education, employment and industry stakeholders to tackle this digital skills gap by developing a large digital talent pool and ensure that individuals and the labour force in Europe are equipped with adequate digital skills.

The Empirica and Exin study for the EC, "Towards European e-Skills Quality Labels for ICT Industry Training and Certifications" (02/2013) highlights that "European industry insists on the need for an e-skills quality label and accompanying support to identify and select the most suitable certifications for staff. Employees and students urgently require appropriate guidance through the confusions of the IBTC [industry based training and certification] market to distinguish high-quality certifications from those of questionable value. ICT vendors offering certifications are interested in a label recognised as a warranty of their quality."

Based on this need, the e-CF Alliance will design of a common reference scheme (e-CF COUNCIL scheme) for vocational qualifications and certifications, including prior learning recognition (non-formal, informal learning); it will design a set of EQF (European Qualification Framework)-based Learning Units related to about 15 e-competences selected from the European e-Competence Framework version 3.0 (e-CF3.0) 40 e-competences; and it will design a pilot joint vocational qualification based on the e-CF COUNCIL scheme, identified within the ESCO IT Occupations.

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22 June 2016

e-Competence Qualification Profile													
Title	<Name of the Competence> e-CF <Code>												
Description	<The generic description of the competence according to the e-CF>												
Sample Roles	<Name of the role, e.g. from the CEN Profiles> ESCO <Code>												
Prerequisite Foundational Knowledge	<Title of the Foundational ICT Body of Knowledge>												
Main Subjects	<Subject> <Topic>												
Learning Outcomes	<table border="1"> <thead> <tr> <th></th> <th>Description</th> </tr> </thead> <tbody> <tr> <td rowspan="5">Level 1</td> <td><Level description from the e-CF></td> </tr> <tr> <td>Understanding</td> </tr> <tr> <td><Understanding/knowledge element></td> </tr> <tr> <td>Skills</td> </tr> <tr> <td><Skill></td> </tr> <tr> <td></td> <td>ECVET Points Indication</td> </tr> <tr> <td></td> <td><Number></td> </tr> </tbody> </table>		Description	Level 1	<Level description from the e-CF>	Understanding	<Understanding/knowledge element>	Skills	<Skill>		ECVET Points Indication		<Number>
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Literature Examples	<table border="1"> <thead> <tr> <th>Author</th> <th>Title</th> </tr> </thead> <tbody> <tr> <td><Author name(s)></td> <td><Book title></td> </tr> </tbody> </table>	Author	Title	<Author name(s)>	<Book title>								
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The e-Competence Qualification Profile structure

One of the main difficulties for organisations in finding professionals with the right ICT related skills is the lack of standardisation in the learning outcomes of vocational education. Managers and HR-staff struggle to conclude what professionals are able of, based on the diplomas and certificates mentioned on a resume.

The eCF Alliance aims at developing a standard for ICT related vocational education to enable a better insight of the obtained learning outcomes.

In the eCF Alliance project one of the work packages (WP3) defines a reference scheme for such a standard, making the learning outcomes explicit in terms of the European standard: the European e-Competence Framework (e-CF).

The main pillar of this reference scheme is a set of so called e-Competence Qualification Profiles. Each profile specifies the outcome of a Learning Unit to obtain a competence defined in the e-CF. It is a high level description of the learning outcomes: what people can do and what knowledge they can use in practice after completing the Learning Unit. Developers of training, modules or courses can use these Learning Units to ensure they are aiming for the right e-CF competences at the right level required for their target audience.

The partners involved in work package 3 are currently finalizing the first 6 of these e-Competence Profiles, based on the priorities resulting from the survey carried out by work package 2.

The e-Competence Qualification Profiles will also enable to link the defined content and learning outcomes of course and trainings to other European standardisation initiatives, such as the Professional Profiles of the CEN Workshop on ICT Skills and ESCO, the European classification of Skills, Competences, Qualifications and Occupations.

The Learning Units that will be developed in more detail by other work packages of the project can be combined and/or integrated in new or existing curricula to enable managers and HR-staff, in the near future, to make a better estimate of the value of diplomas and certificates of ICT related vocational education.

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Elements and acknowledgement of *ICT Professionalism Transnational Framework*

22 June 2016

The rapid progress in the technology domain and massive proliferation of digital solutions in everyday life led to some of the heaviest socio-economic challenges today: environmental pollution, privacy, data security, media objectivity, consumer rights and quality of consumer products, moral and immoral attitudes in the business world, population aging, youth unemployment, criminality etc. Independent behavior and designed usability of complex information and communication systems affect our security, our economies, our environment and even our personal health. By all means, among the greatest ideas behind any technological and scientific advance is for its product, tools and mechanisms to serve as a bridge between a problem and its possible solutions. Consequently, this leads to the somewhat widespread statement that the ethical use of ICT tools primarily depends on their design, strict maintenance and, of course, the professionalism of their creators.

The rapid progress in the technology domain and massive proliferation of digital solutions in everyday life led to some of the heaviest socio-economic challenges today: environmental pollution, privacy, data security, media objectivity, consumer rights and quality of consumer products, moral and immoral attitudes in the business world, population aging, youth unemployment, criminality etc. Independent behavior and designed usability of complex information and communication systems affect our security, our economies, our environment and even our personal health. By all means, among the greatest ideas behind any technological and scientific advance is for its product, tools and mechanisms to serve as a bridge between a problem and its possible solutions. Consequently, this leads to the somewhat widespread statement that the ethical use of ICT tools primarily depends on their design, strict maintenance and, of course, the professionalism of their creators.

Accordingly, feeding the ecosystem with enough trusted and qualified professionals, has become a global challenge of key importance. International organisations, governments and industry unions have been in constant search of a way to fight skills gap since the beginning of new century. The stakeholders have started from consensus on the roadmap, passed through definition of ICT roles, profiles, competences, certifications, standardization of curricula, and reached the current state of work towards filling the competence gap with T-shape competences or e-Leadership skills, and standardization of general ICT profession elements:

- (I) competences,
- (II) common generic Body of Knowledge,
- (III) education and training services and
- (IV) code of professional ethics.

Important part of the efforts for enhancing the trust and maturity of ICT profession by building above mentioned essential elements is the e-CF Council project.

The substantial work of the project starts with a research of stakeholders' attitudes towards recognition of the common reference framework of ICT profession, based on the results of EU initiatives and digital agenda (e-Competence Framework, on-going work on ESCO - classification of the professions in Europe). The research under work package 2 is implemented through an online study of awareness on the current EU standards, priority domains and demanded skills in today ICT profession. In many EU countries still there is lack of matching of national and corporate skills policies with common EU frameworks and achievements. The private companies are focused more on the productivity aspects (SMEs pay very little attention to standards like e-CF - they focus on their short term needs and problems) and less on the other critical factors for the successful business, such as people's skills, generic ethical standards, quality of gained qualification or certification. According majority of the respondents, priority # 1 in filling the gap between demand and supply of e-skills is to align the educational programs with industry needs, and quality teaching and training programs embedding technical & multidisciplinary approach. The responses provided us with a picture of primary domains and 15 competencies that could be included in a joint vocational qualification program as a mean for enhancing transparency and trust in ICT profession.

Thus building further awareness on ICT professionalism framework through establishment and consensus on the framework, piloting and demonstration of benefits for stakeholders, and interrelations between the existing frameworks, standards and models constitutes the backbone of e-CF Council project.

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Project partners

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The eCF Council consortium is composed of industry associations, social partners, Small-Medium sized Enterprises, public authorities, research centres, training institutions and certification bodies who joined forces and expertise to launch the “eCF Alliance”.

Below is an overview of the project partners.

FPM: FPM is the operational structure of the “Politecnico di Milano” and several relevant private and public founder companies. It is the bridge between the academia and the market, managing large projects and programmes on applied research and innovation. It facilitates the establishment of social local and transnational partnerships, supports the development of new organisations and laboratories, and fosters new competences.

CEFRIEL: ICT Center of Excellence for Research, Innovation, Education and industrial Labs partnerships. CEFRIEL is a not-for-profit organization founded in Milan in 1988. The primary objective of the centre is to strengthen existing ties between the academic and business worlds in the innovative ICT sector at national and international levels through leading research activities, development projects of innovative products and services, post-graduate master programs, and advanced educational programs for companies and professionals.

CNA ICT: CNA ICT is the professional association on ICT of CAN, the largest Italian Association of micro, small and medium enterprises. CNA ICT is an autonomous association inside the system; it uses all the CNA infrastructures, it aims at promoting professionalism, providing political representation, supporting professional updating and certifications an ICT area.

ADFOR SpA: Adfor is an independent company of “Consulting, Technology Consulting, Education and Human Resources”. Adfor supports the Businesses in the projects implementation, at different complexity levels, with a wide range of services as both a consultancy and technology partner. Adfor is committed to the development of ICT skills and helping companies to discover and enhance existing skills, or to fulfill all gaps identified.

FIOM CGIL Lombardia: FIOM is a Trade union which organises and protects workers in the metallurgic and mechanical sector at a regional level. It is the first Trade Union for affiliated number (84475 affiliated workers) over every Lombardy province. It represents ICT sector as well, particularly settled in Milano and Brianza provinces.

ESI CEE: ESI Center Eastern Europe was established in 2003 as a public-private partnership. The mission of ESI CEE is to increase ICT professional skills and qualifications in Eastern European region. ESI CEE is specialized in providing trainings and certifications to ICT practitioners in the field of Quality Management, leading ICT projects & teams, information security, strategic ICT business planning and management.

BASSCOM: Bulgarian Association of Software Companies. BASSCOM is a non-profit industry association representing more than 60 leading companies developing software products and systems and over 100 associated members (universities, foundations, venture capital funds, etc). Its main objectives are to promote the Bulgarian software industry, develop professionalism and competitiveness, work for the improvement of the education system and the introduction of e-government, and participate in creating and implementing policies for effective IT investments.

NAPOO (NAVET): NAVET is a Council of Ministers’ body for provision, modelling and supporting vocational education, training and information system. NAVET establishes mechanisms for quality management of the institutions carrying out vocational education, training and guidance. The organisations’ basic activity directions are: Licensing and conducting follow-up control of the centres for vocational training and the centres for information and vocational guidance.

biTa Center: biTa Center acts as the focal point and knowledge hub that highlights IT-IT Alignment and Business IT Alignment as sets of relationships among strategies, frameworks and best practices. biTa Center provides a number of longstanding and top quality Masterclass series for its Masterclass Institute. Many of them - but not all - have a IT management content orientation.

CIONET: CIONET is a rapidly growing pan-European network of CIOs and their direct reports from large and medium sized organisations. CIONET offers its members practical insight through peer connections, enabling them to network more effectively and efficiently for business advantage, through a combination of online and offline activity, mixing international online networking with local events.

EXIN: EXIN is one of the world's leading providers of independent certification for professionals in the ICT domain and accreditation of ICT related training, ISO-certified (ISO 9001:2008). EXIN's head office is based in Utrecht. It cooperates with hundreds of accredited partners worldwide, who provide training, develop courseware and manage examination centres.

UAH - University of Alcalá. UAH is a public university of the Region of Madrid (Spain). Its activity covers traditional higher education including master and PhD level, research and other projects with three campuses and a scientific and technological park with tens of companies. UAH has around 20.000 undergraduate students, 5000 postgraduate students and circa 3000 students in CVET (continuing education and training).

CCOO Servicios - Federación de Servicios de CCOO. The Services Federation of CCOO is a trade union where members are single Trade Unions and Country or Region Federations. It is integrated under the larger Trade Union Confederation of Workers' Commissions (CCOO, one of the two main trade unions in Spain). Its scope is mostly companies in the services sector. The entity represents 4.500.000 people working in 1.500.000 companies.

DG Formacion – Comunidad de Madrid: The General Directorate of Vocational Training is the regional government agency responsible for Vocational Training for Employment in the Community of Madrid. The Training Centers are specialized on sectors and areas of vocational training, among which ICT, and they all manage training courses for unemployed, training more than 6.000 students per year.

European Digital SME Alliance: The European Digital SME Alliance is the first European association of the ICT sector exclusively focused of representing the interests of SMEs. Its members are fourteen national sectorial SME associations from different EU countries, representing more than 50.000 enterprises, which employ around 200.000 people across Europe.

DIGITALEUROPE: DIGITALEUROPE is the voice of the European digital technology industry. It is composed of major multinational companies and national associations from European countries. DE's mission is to implement and foster at EU and International level ground-breaking and far reaching initiatives in the field of e-skills and e-learning to fill the gap of ICT- related jobs as set by the EC in its priorities for the Digital Agenda for Europe.

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