

## BRIEF

### Executive Summary

The challenges of overcoming skill gaps has been variously addressed at a global and – particularly – European level. Exploitation of EU funds has widened the range of initiatives aiming at solving the issue of skill shortage and skill matching; though, rare example of practices of this possibility have been mentioned as a concrete answer to the main question.

Skill shortages in the ICT and Green Economy sectors are becoming a hard test for the enterprises of these two sectors, which is mostly made up of Small and Medium Sized companies that, in most cases, do not include HR departments.

Where there are, these HR departments manage payroll and – in better cases – personnel training, principally related to technical issues regarding within the company business; nonetheless, this means HR staff in SMEs is often unaware of the financial and non-financial possibilities enterprises may exploit to address skill matching issues.

### Introduction

Making skill management become a real and effective task in the SMEs of the ICT and Green Economy sector is a “tricky venture” to be faced.

As a first matter, the two sectors constantly undergo fast and significant changes, both in technologies and working processes, this making urgent to find people with the right skills to be employed at the right moment.

Also, while ICT has fast accepted changes and creating newer (and often codified) professionalisms, Green Economy is still far to create a comprehensive portfolio of all professional profiles and skills that could be employed in the sector.

Moreover, both sectors show a high turnover rate, due to a strong competition for qualified personnel that has put enterprises in the sectors in the condition of facing high personnel costs to hire skilled professionals.

A main topic is related to the exploitation by enterprises in the two sectors of financial and non-financial means that the EU, as well as other national bodies, may have implemented to improve skills needs identification and skills matching.

While financial means are almost clear and widely spread, though sometimes it is difficult for these enterprises segment to manage the process of applying for funding, non-financial means may consist of different kind of initiatives both carried out by enterprises themselves and by the main national or local institutional bodies, creating a

framework of circumstances like help desks, networks involving both public and private sectors, direct involvement of enterprises in the education and training sectors.

Non-financial means are hard to individuate, since they are mostly related to local activities, specific issues, small market niches. This meaning that in the ICT and Green Economy sectors it is hard to find good practices in finding and using the above mentioned means, as well as practices in creating a newer way of tackling the concern.

## **Approaches and Results**

As stated before, while the ICT sector is managing to keep the pace with innovation and skills development, though still suffering shortages and competition, the Green Economy sector is a step back.

Initiatives may be found of local networks among public and private sector, including the education and training system as well as large enterprises, trying to boost information and qualification of well-skilled personnel for the ICT sector.

Though it may be reasonably stated that large enterprise merely provide help for their own interests and have the capabilities to “make change”, it is also true that creating new professionalisms (therefore laying the foundations for newer or higher skill profiles), their initiatives may come out in a improvement for the whole supply chain.

The “*WALQA technological park*” is a model to improve skill matching that has been created in Huesca, in the northern region of Aragon, Spain, including around 50 companies for a total of 800 job positions, around 600 of which are related to the ICT sector.

The park is under the responsibility of INAEM, the local Public Employment Service at regional level and aims at recruiting ICT engineers for companies located in the park. A specialised training combined with traineeship has proved to be the best way to improve skills matching.

Since the Walqa park itself has strived to find qualified professionals, it has imported the CTA (Advanced Technology Center) model to attract qualified workers, re-train Walqa employees and to achieve business excellence, all of this with the financial support of the INAEM. The CTA model is a specialised training homologated by main ITC large companies and multinationals: Microsoft, Oracle, Cisco, Linux, SAP, Sun Microsystems, Google, etc.. In most cases, employment is directly related to training activities, which are based to very high quality standards.

This is a good practice on how a financial effort may also come out in a non-financial initiative since it fosters training and re-qualifying of personnel in the ICT sector, thus creating suitable professionalisms for the whole supply chain.

While CTA reported a percentage of labour insertion of 73,8% in 2014 for people exiting training programmes of the ICT sector in the Zaragoza province, notwithstanding the economic crisis, Walqa is expected a percentage of labour insertion near 70% in 2015.

Initiatives focusing on the creation of frameworks of financial and non-financial means to improve skills matching can also be found at a transnational level.

The project “*Vocational Education and Preparation for Labour Market*”, supported by the Program of Swiss – Slovak Cooperation within the enlarged European Union, is an example of how international bodies, education and training systems may exchange models and tools to face the issue of skills providing for SMEs.

The project, implemented in 2012, will be active until 2016 and is coordinated by the Slovak ŠIOV (State Institute for Vocational Training) in cooperation with the Slovak Republic Government Office, and the Embassy of Switzerland.

The swiss project partner is the EHB - Governmental Center of competence for the provision of tertiary-level basic and continuing training to VET actors, for the development of professions and for VET research.

Project target group consist of pupils and students (10 secondary vocational schools have been selected for pilot activities in the project), VET teachers, professional organizations, other VET providers and employers.

The project mostly addresses the VET system in order to improve its effectiveness in terms of developing development among particular VET stakeholders- employers, updating curricula in line with labour market requirements, promote VET.

Project outcomes mainly consist in the description of the requirements of an employer in particular sectors of a particular region for an expertise, skills and abilities required for a specific job position.

This fosters updating of education programs for the targeted matter as well as state education programs for the particular group of specializations; moreover, employers are directly involved in providing requirements in the training design phase, in directly implementing practical education, and participating in final examinations of trainees.

The whole VET systems benefits of the project activities since teachers themselves are involved in training to enhance their competences, mostly with the focus on actual trends within the respective sector, non-traditional methods and forms of education.

Though not specifically addressing the ICT or Green Economy sector, the project is strictly related with the NeMESI project objectives since it fosters upscaling, upgrading and development of the whole educational system, in order to provide enterprises with the right skills by directly involving them since the earliest steps of education and training.

The private sector is also finding solutions for solving skills gaps through enterprises. Though the following initiative is not specifically related to the ICT and Green Economy sectors, it offers a wide range of possibilities to enterprises – mostly SMEs – that need to enhance skills and competences of their employees.

The RKW “Rationalization and Innovation Centre” is an initiative of the German Economy Association that both includes financial and non-financial support and assistance to enterprises. Among the RKW objectives, securing of qualified employees and founding of SMEs are the most important concerning the NeMESI project topics.

The networking instance is again fulfilled, since the RKW competence centre cooperates with SMEs, social partners, associations, politics and the world of science, this meaning that concepts and tools developed by the competence centre are strongly oriented to practice and may be quickly implemented and exploited.

Several projects held by the RKW have been – and still are being – carried out to address skilled workers shortages. It also has to be mentioned that the RKW is fully supported by institutions, both at a local and national level, especially by the Federal Department of Economy and Energy.

In Italy, another networking and cooperation example has been found particularly addressing the ICT sector and focusing on a gender issue.

The Donne@Work initiative (Women@Work desk) is an example of how the public and private sectors, as well as ONGs, may collaborate to promote occupation with a gender issue in a particular economic sector.

The desk acts similarly to a job agency, by providing free of charge pre-selection services of female ICT professional profiles to companies, mainly in the territory of the province of Milan, for their staff research.

The desk addresses companies of any size, sector and market, with a particular focus on SMEs. The desk experts can identify the best expertise to meet the needs of the targeted companies but also give guidance both to women seeking a job in the ICT sector and to companies.

Activities of the desk mainly consist in launching recruitment campaigns, matching professional profiles demand and supply, meet and perform selection of candidates in line with the companies requirements.

As a cooperation among the public and private sectors, the desk is driven by several institutions like the Municipality of Milan, the “Women Entrepreneurs” workgroup of ASSINTEL (Italian Association of ICT Enterprises), the “Manager Women” workgroup inside Manageritalia (Association of managers and high level professional of the tertiary sector) and PrimaDonna, an Italian NGO promoting the presence of women in the

workforce and the sponsorship of the Chamber of Commerce of Milan.

Its activities make the Donne@Work desk an example of how non-financial means can be implemented to support SMEs (either transversally or from a specific sector) in finding the right skills for the right job, also addressing a particular gender issue, what cannot be found in other similar activities.

It has to be stated that, when specific to a gender issue, any initiative may be considered somehow discriminatory on the other side. Though, the Donne@Work initiative has been implemented on researches carried out in the ICT sector showing that women are less considered as skilled workers in the ICT market.

## **Implications and Recommendations**

Different solutions focusing on the creation of frameworks of financial and non-financial means to improve skills matching have been tested and could be recommended:

- Increasing Private – Public partnerships. These alliances are trying to find solutions to the lack of qualified workers in the considered sectors, overcoming the problem of lack of public financial means.  
A specialised training combined with traineeship has proved to be the best way to improve skills matching in the technological park Walqa (Aragon, Spain), finding new ways to recruit qualified human resources for the companies located in the park.
- It is of vital importance to encourage dialogue and cooperation between universities and employers on the design of innovative curricular strategies and tools in university postgraduate programmes that respond to labour market needs, as the traditional VET and high education systems appear unable to adapt to the rapid changes in technological innovation of the ICT and green economy sectors.
- Gender issue could represent an added value for those non financial means which tend to overcome the skills mismatch, offering specialised services (see “Donne@Work” initiative).. In fact women are often underrepresented in the so called “technological sectors” which traditionally employ men, at least in the EU southern countries
- All initiatives – at a local, national and European level – have to be widely accessed by SMEs; while institutions have to boost communication and dissemination activities, SMEs have to act proactively in order to find and collect information about existing means to solve their skill shortage issues.

## **Conclusion**

ICT and the green sectors are two of the most changing and demanding sectors nowadays due the very fast and continuous technology innovation, provoking a skill shortage and skills mismatch in the labour market. Besides, the traditional VET and high education systems appear unable to adapt to these rapid changes. For this reason all stakeholders need to adapt themselves to different market trends and to strictly cooperate. In fact, during a period of economic crisis on one hand the lack of qualified workers appears even more unreasonable and on the other hand the even more rare public funds should be invested in few examples of real “Best Practices”.