



Overcoming skill gaps in the ICT and Green Economy sectors

Chapter 4: Structural Challenges in Developing Competencies



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TABLE OF CONTENTS

CHAPTER 4: Structural Challenges in Developing Competencies	2
4.1 Overview	2
4.2 Skill needs analysis and skills matching: main challenges	2
4.3 Experiences and best practices in identifying skills needs and skills matching	4
4.3.1 Germany	4
4.3.2 Slovakia	5
4.3.3 Italy	6
4.4 Lesson learned: recommendations for SMEs	7
4.5 Bibliography	8





CHAPTER 4: STRUCTURAL CHALLENGES IN DEVELOPING COMPETENCIES

This chapter focuses on defining the role of different sectors and organisations in identification of skills needs and skill matching.

4.1 Overview

On the basis of demographic development, many businesses in Europe are faced with the challenge of recruiting and retaining suitable professionals. The European Union expects for the year 2015 a demand for professionals in information and communication technology (IKT) and in the digital field of around 700 000 people.

At the same time, unemployment in Europe will reach historic highs. In particular small and medium-sized businesses (SMEs), which are crucial in these branches and the guarantee for the economic stability of Europe will be affected by a shortage of professionals. The situation is similar in the Green Economy, according to the Euro barometer there are approximately 6.6 million people employed in SMEs. Especially due to the lack of Human Resource (HR) departments, the search for appropriate professionals has become very difficult. However the demand for professionals in the Green Economy in Germany is much lower than in other European countries.

Expert interviews in which the participants from the Information and Communication Technology and the Green Economy were asked about their experiences in attracting specialists, revealed that SMEs in the Green Economy face different challenges and difficulties to SMEs in the ICT sector.

The specialist debate has very low priority in this branch of the industry. These and other challenges of SMEs will be discussed in more detail in the next chapters.

4.2 Skill needs analysis and skills matching: main challenges

European companies are facing an increasing challenge when looking for the right skills. Businesses agree that it will become even more challenging in the coming years, as pointed out in different surveys. Globally, competence development is rated top priority for





businesses but smes, especially smaller ones, don't have HR departments or the experience and expertise to manage the process of recruiting and competence development.

In addition to these already large challenges, there are even more factors which make the recruitment of professionals difficult:

- In some countries the vocational education is not oriented for the professional practice while in parallel a further differentiation of the occupational profiles took place,
- The shortage of skilled workers leads to increasing personnel costs due to high demand and small offer. Thus in both sectors the competition for qualified personnel or competition for talents has started,
- The segregation of the economical branches, which is not corresponding with the school education has also led to challenges for the matching process between employers and employees. For instance there are more than 700 official occupational profiles. At the same time, this segregation causes deficits of competences. The specialization does not allow to switch the different sectors because the required competences are missing,
- Those specific competences require special further training and skill enhancement. Both branches have a high demand for further education which currently is not satisfied
- These challenges concern SMEs to a higher degree, especially in rural areas. While "Global Players" and bigger SMEs can rely on well working HR-Departments, these are missing for small SMEs.

In the expert interviews and during research (desk research) it showed that in both branches in Germany additional specific factors play a large role in the search for professionals:

- A shortage of professionals in ICT means that companies should change to the candidates of second choice. Also, the strong academisation contributes to an increased shortage of apprentices in skilled trades. However in addition to the need for professionals, their loyalty to the company is becoming increasingly more important.
- Larger SMEs have to constantly modernise their IT infrastructure to secure their competitiveness, therefore there is a permanent need for investment. As a result, the importance of continuous training and development of staff increases. However, at





the moment there is no need for specific training in the Green Economy. Due to the renegotiation of the “Renewable Energy Legislation” (EEG) the SMEs are experiencing a drastic decline in their contracts and for reasons of cost cannot offer their employees further training.

- This neglect of further education in turn prevents long-term strategic planning of personnel and endangers the securing of future professionals. For a long-term plan, clear political signals with regard to the EEG are necessary. At the same time the present crisis demands restructuring and 'reinvention' of business segments.
- Competition from the far east increases the pressure on German SMEs in Green Economy. This results in strong price wars, which makes it more difficult for SMEs to hire new staff or further educate existing staff.
- The location plays a decisive role in the finding and retaining of professionals: Metropolitan areas have a clear location advantage compared to rural areas in the recruitment of professionals (cultural activities, outdoor activities). A challenge which is not only faced by the company, but the whole region.
- The businesses have to therefore distinguish themselves even more, so that self-promotion for the company takes on a new dimension. However the creation of its own branding is not yet recognised by many.

The results showed that solution approaches to meet the demand for professionals requires a holistic approach. Not only businesses, but also political decisionmakers on a national and local level are required to create a good environment for the recruitment and retention of professionals.

4.3 Experiences and best practices in identifying skills needs and skills matching

In this view many activities have been carried out worldwide on the matter of „people retention“, as well as number of significant connections between enterprises and the educational and VET systems have been created.

4.3.1 Germany

Juwi AG works in the Green Economy, has undertaken many activities to even out their (rural) locational disadvantage. In this way it has been possible to create a successful





branding. Among the activities are: (i) an “attractive” wage/salary, (ii) a convenient location (in this case, near to a train station), (iii) various leisure and training activities, in addition to technical skills, also soft skills, (iv) the compatibility of family and job and the acquisition of female experts (including an in-house kindergarten), (v) an operational health management system (including a fitness studio) and (vi) the development of the company’s own image (Corporate Social Responsibility (CSR)).

A further example of Best Practice in the acquisition of professionals is the German TENAG GmbH. TENAG stands for “Total Energy Efficiency Network Agency”. TENAG GmbH today combines a team of specialist from differing disciplines for energy management services and energy management software: Engineers for the topics relating to the energy management system, the energy efficiency system, the energy efficiency analysis, IT specialists for energy data collection and monitoring applications. TENAG GmbH, through an intensive exchange, recorded the needs of SMEs regarding professionals and out of that developed the degree programme „Renewable Energy“, which will be offered at the University of Applied Sciences in Bingen and will meet the needs of SMEs in developing skills of professionals.

However politics is already going new ways. The Federal Ministry of Economics supports various projects in the Green Economy to strengthen the readiness to start-up and to secure the stock of Start-ups. For example, the “Energy-Start-up” project which is carried out by the RKW centre of excellence, will be funded. This project offers first-time entrepreneurs an online platform on which to present themselves and their company. Which on the one hand should strengthen the reputation of the company, trigger a network among each other and where potential further and continuing training courses are recognised.

4.3.2 Slovakia

An example of Best Practice of overcoming structural challenges which stand in the way of obtaining professionals, is Košice IT valley in Slovakia. The Košice region, situated in the west of the country near the Ukranian border is the second largest region in Slovakia and consists of 11 districts and 440 municipalities, of which 17 have city status. A third of the region lives in the town Kosice, which also is the cultural and economical centre of the region. The main industries are: Metallurgy, chemical and electrical industries, technical and engineering sciences, the food industry, trade and services. The Kosice IT vally was among other things from the following institutions and companies co-founded: Technical University of Košiciach, the Slovakian Telecom, Cico, Siemens, Ness and Microsoft. The Kosice IT Valley tries to awaken the interest for technical disciplines of new students. In





Slovakia there is a high demand for soft skills and new students often decide for social and cultural sciences.

Among the numerous activities that the IT Valley initiated, include:

- Support and development of initiatives resulting in the active region for the workforce in the ICT sector, for students and ICT industry
- Improve the quality of ICT training programs offered by universities, high schools and ICT companies
- Motivation children and youth to study and later to work in ICT
- Development of cooperation among members within the cluster and also outside the IT Valley
- Promoting innovation and implementation of joint scientific research projects
- Increasing social inclusion by ICT use and reducing regional disparities
- Lectures for students and competitions
- Educational activities for primary school pupils, secondary schools and university students
- Networking seminars and workshops for the members of Kosice IT Valley
- Engaging the Kosice IT Valley members to scientific research and innovation projects
- Implementation of new events in Eastern Slovakia

Through projects IT Valley seeks optimization of activities and possibilities for it's members to get in touch with interesting topics in areas such as innovation, education, ICT, business etc.

4.3.3 Italy

A further and the last example of Best Practice to gain and retain specialists is the Italian company "Loccioni".

The "People" project within the Loggioni Group is based on five main assets that are used to measure values and processed, the organization and the expectation of ist employees: Comradeship, pride, equity, credibility, respect. The Peope project includes several activities that foster attention to people and their families, give oppurtunities to grow inside the Company, provide continous training and foster the connection with the local community





and territory. The People project has result a high grade of retention of qualified personnel. The project has gained the Company to be awarded as a “Great Place to Work” in the global contest 2014.

Loccioni has also implemented several projects aimed at fostering commitment and sense of belonging and sense of community, therefore gaining a high grade of retention of its employees. The SME has awarded particular attention to activities for families, chances of professional growth, sustainable buildings, continuous training, activities for the local community and territory, such as:

- **Bluzone:** a number of initiatives carried out in collaboration with schools, aiming at training young people before entering the company
- **Redzone:** activities for employed people, in order to foster sense of belonging and commitment, including „Buddy System“ (a mentoring system for the newcomers aiming at confirming behaviors with the „house rules“), training, family events, group events, job innovation, performance evaluation
- **Silverzone:** activities aiming at capitalizing the company knowledge, such as experience and knowledge sharing with retired people, spin-offs and networking with other local enterprises
- **Leaf Community:** a project to gather clients, partners, researchers around the sustainability topic.

The outcomes of this Best Practice example are: the promotion of self-realization of the employees, also fostering new selection and retention processes, such as the research of high level of autonomy and innovation skills, as well as creativity and proactivity, in the newcomers. Also the creation of a new concept of workplace as a place in which people can realize their professional identity, fostering a sense of self-entrepreneurship in the employees.

4.4 Lesson learned: recommendations for SMEs

In innovative areas such as the Green Economy and Information and Communication Technology the cooperation of various stakeholders is important, in particular the collaboration from political decision-makers, businesses, science and NGO's.

The political level should support regional development with help from concerted measures, which cover the economic, educational policy and labour market law activities. A particular



significance is given to „clustering“, because within the active SME the synergy between scientific potency and entrepreneurial effectiveness can be exploited.

The construction and development of cluster structures is important from a regional and structurally political point of view: An attractive region facilitates SMEs development of skills of their employees, staff recruitment as well as the search for professionals. Clusters can encourage the export capacity of local SMEs and are an important support in increasing their own competitiveness. Supporting instruments could be knowledge and information platforms, which are freely accessible for all stakeholders and over which a communication can be established.

Participating SMEs enable these structures a fast and easy access to the latest research results and innovations. This exchange with research institutions is important in order to take into account the high technical requirements of these branches. Since only a few SMEs however include (strategically oriented) research institutions, the active use of cluster structures is often for them the most meaningful way to gain access to research results.

In addition, clusters often require the development of the regional infrastructure and transport logistics and give an impulse for cultural diversity, whereby the region becomes more attractive for (young) professionals.

With the integration of educational institutions, needs-based training and education can be developed which are accurately geared to the requirements of SMEs.

However the SME should not neglect its own work. As described above there are various activities and instruments which should allow them to make their company attractive to professionals. In addition to internal services they should also take advantage of government incentives and support for further education and training activities in order to meet the new challenges. The aim here is to find new ways to develop mainly workplace related training, offering new virtual teaching and learning methods for trainees and employees.

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