



ProInterNet

“Synthesis Report on Internet-related Jobs”

- Assessment of the Needs in the Internet Industry and the
Offers in regard to Training and Education -

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Executive Summary

Within the 36-month network project ProInterNet (PIN), funded by the European Commission under the Leonardo Lifelong Learning Programme, the partners conducted a quantitative and qualitative analysis in regard to current and prospective needs of Small and medium enterprises (SMEs) in the internet industry with regard to competences and the training and education offer.

The results were integrated in this document, which at the same time represents the final outcome of the State-of-the-Art Analysis of the projects' first Work Package (Result R.1.1).

In Spain, the currently required competencies will not change significantly in future. The training and education strongly focuses on technical skills and needs to be taught in various languages in order to avoid the "brain drain" situation in the country. Generally, the major task in Spain will be to combine the technical skills with management competencies in order to make the people more open minded and flexible in regard to change.

The interviews conducted in Germany revealed that on-the-job experience is the most relevant factor to determine the employees' development in regard to competences. Thus, the approach of learning-by-doing is widely accepted. Additionally, project management skills are very important as most work is done in small teams. In order to be successful, employees have to be curious, creative and willing to learn. Besides those rather general competences, the specific competences depend on the respective company's situation and require the employees' motivation to be extended.

With regard to Belgium, it has to be admitted that there was only one filled out questionnaire which makes it difficult to describe the nationwide situation. However, it seems as if the status quo in Belgium is similar to the other European countries. This is, because there seem to be sufficient well-qualified workers who lack a general continuous improvement of skills.

Similarly to Belgium, the industry in the United Kingdom states that there are numerous well-qualified workers in the country. However, what is missing is a customized training offer (in-house, on demand) for the SMEs which contemplated the constant change in technology. This leads to the finding that the training and education offer in the UK needs to be optimized in order to meet the SME's requirements.

In Greece, the main task in regard to educational content will be to update the programs in regard to the technological advancements. However, the general opinion on the training and education situation is positive as the offer is appropriate concerning the number of programs and the contents.

Hungary faces a rather negative training and education situation. It is pointed out that the links between universities and the industry do not suffice to meet the market requirements in terms of qualification. The company representatives wish that programs are set up according to the constant technological change. Additionally, there seems to be a lack of the applicants' and employees' soft skills (mainly communication skills).

The situation in Poland is similar to the status quo in Hungary. The company representatives criticize the missing quality of training and education programs even though the number is sufficient. What the wish is a more detailed and tailored offer for the SMEs especially in regard to soft skills (e. g. communication). Moreover, the companies complain about the inappropriate training costs and the lack of time to participate in such a program.

France is in need on more training and education programs that include communication contents such as networking, but also consider the changes of competences and technologies in future. Thus, the current situation is not satisfactory. Additionally, the training offer is oriented towards the large organizations. The needs of SMEs consequently are not taken into account.

Consulting all national results, the situation of SMEs in regard to competences, trainings and education in the European internet-industry analysis allows for the following interpretation.

The major competences employees have to come along with are communication, teamwork and language skills. These requirements will not change significantly in the future. In terms of education and training offer, the companies consider the basic educational level as appropriate. However, employees need to be more adaptive to internal hard- and software. Most of the European companies already employ workers from abroad even though they consider the number of well-qualified workers in the respective country as sufficient.

Overall, it seems as if the basic technological and programming skills of internet-related jobs are fulfilled. The industry rather wishes to focus on soft skills and requires more flexible employees. In order to also convey the company's business philosophy and the internal hard- and software, many firms apply on-the-job-trainings in order to work time and cost efficiently.

The major task will be to adapt the training and education offer to the SMEs' needs and to find more tailored program which combine the relevant technical skills with the necessary soft skills.

1 Introduction

This report is part of the ProInterNet network project which is conducted in the framework of the Leonardo Da Vinci Lifelong Learning programme and funded by the European Commission. It aims at identifying the current and prospective needs of European small and medium-sized enterprises in regard to internet-related jobs. The ProInterNet (PIN) project aims at creating a network of key players in the area of internet-related jobs converging around a web 2.0 platform also created by the project partnership, the e-Jobs Observatory (www.e-jobs-observatory.eu). Through its activities, PIN hopes to contribute to improving the employability of job seekers, reducing the e-skills shortages on the EU labour market, improving the quality of Vocational Education & Training (VET) in the field of internet-related jobs and making VET more transparent and comparable at European level.

A first step towards those goals was made in several previous LLP projects, in which some of the project partners of PIN were involved as well, e.g. "EQF Code" (www.ubique.org/eqfcode), "CompTrain" (www.ubique.org/comptrain) and "Embedding Standards" (www.embedding-standards.com).

The current project team consists of various European partners in order to establish a cross-country network. Those partners are listed below.

- Asociación de Industrias de las Tecnologías Electrónicas y de la Información del País Vasco (GAIA, Spain)
- Euproma GmbH & Co KG. (EPM, Germany)
- DEKRA Akademie GmbH (DEKRA, Germany)
- European Multimedia Forum Ltd. (EMF, Belgium)
- FOM Hochschule für Oekonomie und Management (FOM, Germany)
- Maison de la Promotion Sociale (MPS, France)
- Hellenic Open University (HOU, Greece)
- Hungarian Association of Content Industry (MATISZ, Hungary)
- Wroclaw University of Economics (WUE, Poland)
- Foundation Territories of Tomorrow (FTT, France)

The starting point of the ProInterNet Project was a State-of-the-Art-Analysis regarding the internet industry. In a first step, a common understanding of the most important notions was created. Basing on these working definitions (as laid out in the second chapter of this report), the project partners carried out a desk research on project-related studies, reports and projects in their respective country. Moreover, the most relevant stakeholders in the PIN framework were identified and gathered in order to reach a Europe-wide audience and establish a strong and lasting network for the future.

The main focus of action is set on small and medium-sized enterprises in the internet industry. It is the major aim to learn more about their current situation and their challenges for the future. In order to integrate them in the project and the development of solution, a quantitative and qualitative analysis of their needs in regard to current and prospective employees' competences, but also in reference to education and training offer was conducted. The exact set-up of those means will be introduced in the further course of this report.

2 Internet-related Jobs – Classification for the PIN Framework

Common working definitions of "Internet-related Jobs" and the "Internet Industry" were set up by the partnership in order to create a joint understanding of which jobs shall be addressed within the project. "Internet-related Jobs" in the PIN context consist of two basic categories.

eContent:

- Web Designer
- Multimedia Developer/Web Content Developer
- Digital Animator/2D-/ 3D-Specialist
- Webmaster
- Web Content Manager / Web Editor
- Web/Multimedia Programmer
- Web/Multimedia Project Manager

eServices:

- Webmarketer (Webmarketing Expert/Online Campaign Expert/Online Marketing Manager/Search Engine Optimisation Specialist)
- Webseller (Cyber Seller/E-Commerce Specialist/Web Sales Manager)
- Online Community Manager
- Certified Ethical Hacker/Tester/Online Security Specialist
- Usability Specialist/Web Ergonomist
- Hotline Operator/Help Service Operator

The work will concentrate on these jobs in the further course of the project. This is, to guarantee a targeted approach and a thorough investigation of the SMEs' needs in regard to competences, but also training and education offers.

The Internet Industry therefore deals with the commercial and non-commercial production and distribution of its content and services through the internet infrastructure.

3 Status Quo – Studies, Reports, and Projects

More than 30 reports, studies, and projects on internet-related jobs were identified by the project partners. In fact, there surely may exist more than those found in the research phase. However, this number illustrates that the internet and its development has also awakened scientific interest and public awareness. The research focus and editors of the reports, studies, and projects are manifold.

The foci of these scientific papers widely differ. Individual studies examine the women's role in the ICT industry, its general significance for the national economy, and elaborate on political strategies to remain (or become) competitive. There are also some reports that are related to the needs of the internet industry in regard to training and education offers, but also in regard to required competences in companies. However, their focus is either on national level only or does not imply SMEs. It consequently becomes obvious that the PIN project aims at closing a scientific gap that has not (or only insufficiently) been treated in scientific research.

Examining the needs of SMEs relating to employees' competences and training/education therefore seems to be promising and fruitful.

4 PIN Stakeholders

The partners' research resulted in a list of more than 100 stakeholders which could easily be extended. For this reason, the numerous groups of stakeholders were categorised as follows:

- Employers' associations
- Trade Unions/Associations
- Chambers
- Private employment services
- IT-/Media associations
- Non-chamber certification bodies
- Research Institutes
- Political bodies
- Public employment services (e. g. Labour agencies)
- Educational Institutions
- Private ICT companies

It will therefore be the major aim of PIN to address especially these stakeholders to establish a persistent stable network. This means that relevant stakeholders of the PIN network must find themselves in one of those categories.

In order to learn more about the SMEs' needs and requirements, an empirical analysis was conducted in addition to the State-of-the-Art-Analysis. As a first pillar, a questionnaire was integrated in the online platform to receive quantitative information on the described topic. In addition to this, every project partner conducted qualitative phone interviews with representatives of SMEs. As the interview consisted mainly of open questions, a more thorough and detailed impression of the industry was gained. The results of the analysis are shown below.

5 Needs Assessment (SMEs)

In the following, the results from the quantitative and qualitative analysis on the industry's competence needs will be introduced. The national findings will be presented first. An overall conclusion will be made subsequently. The questionnaires contained various categories of competences. Those are technical, content-related, management, and behavioural competences.¹ Besides the competences and skills, the questionnaires also referred to the current and future training and education offer in regard to internet-related jobs. In the following, only the most significant results of the analysis will be presented following a country-by-country approach.

5.1 Spain

5.1.1 Current Competences/Skills

When asked about the most important skills, the Spanish interviewees named the following competences:

Technical Skills

- Knowledge on online marketing
- Professional certifications in regard to the Internet Technology
- Environment 3.0
- Advertisement techniques to sell on-line
- Knowledge of PHP programs
- MySQL database
- Content management systems

Behavioural skills

- Trustworthy attitude

Others

¹ This classification is based on findings of the above mentioned "CompTrain" project, was also used in the preparation of the European Specialist Profiles in the "EQF Code" project and is coherently being used in the PIN approach.

- Oral and written communication skills for Internet environment
- Management competences for on-line based companies
- Customer orientation

5.1.2 Prospective Competences/Skills

According to the interviewees, the current needs will not change in future.

5.1.3 Current Training and Education Offer

The general point of view was that there will not be an important change of concepts in the medium-term, because some of the aforementioned competences have been recently detected and people are already trained based on them.

The current education and trainings in the Basque Country which are offered by Universities, VET institutions and business schools is of high level, with a strong focus on technical skills. However, it is still lacking the aspect of teaching in different languages. Even though there are sufficient qualified applicants, the region also suffers from "brain drain". Thus, companies also make use of the opportunity to hire staff from abroad by approaching universities, training institutes, business schools, and recruitment offices.

5.1.4 Prospective Training and Education Offer

Due to the highly dynamic internet industry, the major task will be to train people on how to cope with constant change. Furthermore, HR managers will be challenged to find a matching combination between technical skills and the management competences without neglecting the employees' commitment to the job. The basic problems for companies are the employees' missing strategic vision, the insufficient ability to work on a team, and lack of leadership skills.

Therefore, it will be essential to find a combination between technical skills and management competences. Furthermore, the companies consider the training in foreign languages as very important.

In order to meet future requirements in regard to training and education offers, the companies of the ICT Sector shall be involved in the development of training content. Additionally, the interests of the companies and training institutions will have to be aligned.

5.2 Germany

5.2.1 Basic Remarks

A total of 5 small-to-medium-sized businesses (SMEs), employing up to 20 employees, were interviewed. The smallest organization employed only 5 persons, the average number of employees was 8. All organizations were German-owned companies and the interviews were conducted in German. Two of the internet-job profiles formed the focus of the interviews. The job profiles that have been identified were present in only one purely-IT company. Most of the jobs in the companies otherwise are mixed forms of the profiles identified. Almost all employees of the interviewed companies deal with internet-based activities. There is, at present, no difficulty finding qualified personnel to fill these jobs.

All of the interviewed companies stated clearly that their job profiles are generally combinations of the ones identified by the project. The key words used to describe the activities to be performed, however, did match those activities that were being carried out by employees in the interviewed organizations, albeit in various degrees of realization. None of the companies interviewed employed anyone similar to the ones identified by the project as Security Specialist or Usability Specialist.

5.2.2 Technical Competences

The most typical scenario is that one person but perform activities described by various aspects of different profiles. Most often, a formal, entry-level occupational qualification is desired, but is not an absolute requirement. In most cases, positions are filled by persons who have developed their technical competences by gathering actual on-the-job experience over a number of years. The primary fundamental requirement is knowledge and skills in the areas of operating systems and internet

technologies. Depending on the actual job to be performed, additional technical qualifications may be required, such as advanced knowledge of internet technologies or in-depth knowledge of specific software, such as content-management systems.

5.2.3 Content-related Competences

In all of the organizations interviewed, content-related requirements play a significant role. In most instances, however, this knowledge and these skills had been acquired through experience over a number of years. It was noted, though, that the ability to actively question and find information, as well as sound general knowledge and knowledge of internet-communication standards, have proven to be very beneficial.

5.2.4 Management Competences

Project-management skills is the one general area in which knowledge and experience is necessary to perform well on the job. In the organizations interviewed, project management was rated much higher than the ability to manage teams, budgets or customer relationships. Of course, given the fact that all the organizations interviewed were small companies, it is not surprising that organizational hierarchies were quite flat and, for the most part, informal. Most work is done in small or micro-teams, whose composition changes on a regular basis. That is, the groups are formed based on immediate requirements and skill sets available.

5.2.5 Social Competences

The most-often named social competences were the ability to work independently, curiosity, creativity, willingness to learn and being open to new knowledge and ideas. The general consensus was that social competences are much more important than technical capabilities or content-related skills. The latter can be acquired through experience, what is not necessarily the case for social competences. In such cases, a certain value is placed upon training in these areas.

5.2.6 Conclusion

Overall, the impression was that the competences required are very much determined by the specific organizational situation. The owners were the driving force in all the organizations interviewed. For this reason, a high degree of personal responsibility is expected of all employees in these companies, and it is also expected that employees will take a certain degree of initiative in securing their own continuing qualification. Strong organizational, management, or team structures were not present. It is worth noting, however, that the larger the organization – even in this small sample – the more clearly defined the organizational structures became.

In all instances, though, the content, qualification, and choice of further education and training is the responsibility of the individual employee. For this reason, the companies interviewed did not place a high value upon any type of specific certification. It is possible that a change in this regard may only be expected after a change of generations, that is, when younger people starting taking over more specific leadership roles. The qualifications obtained by current employees have been through learning-by-doing. By new-hires there is a tendency to place some emphasis on a formal vocational/professional qualification.

It was noted, as well, that at present, there is no noticeable pressure from the customer side for specific technical innovation. The impulses are given by the organizations themselves, but they are sceptical about accumulating a stockpile of know-how. These organizations place a certain degree of value upon technical flexibility.

5.3 Belgium

5.3.1 Web-o-net sprl

Name of organization	Web-o-net sprl
Type of organization	Unipersonal company, ICT

Website	
Interviewee	
Name and Surname	Gregory Bronchart
Position of the interviewee	Co-Founder & CEO
Responsibility for HR recruiting/ management/ development (yes/no)	
Telephone	
Email	bronchart@web-o-net.com

5.3.1.1 Current Competences/Skills

Content-related competences

- Flash, FlashLite and/or C++

What are currently the main competences/job requirements, people have to bring with them in order to be employable in your company?

- Autonomous, effective and dedicated

Will these competences change in the future?

- Maybe

5.3.1.2 Training and Education Offer

What are the main problems of employees and applicants with regard to their education/training?

- Continuous improvement in competences is often missing

How could the education of employees and applicants be improved in order to be advantageous for your company?

- e-Learning

Are there sufficiently qualified workers in your country?

- Yes

Do you plan to increase/decrease the number of foreign workers in the future?

- Yes

What tools do you use to search for/recruit new staff?

- Web
- Friends
- Customers
- Suppliers

Will there be sufficiently qualified workers in your country?

- Yes

Will you have to employ workers from abroad?

- No

5.4 United Kingdom

5.4.1 Trainagain

Name of organization	Trainagain
Type of organization	On line publisher of courses
Website	
Interviewee	
Name and Surname	Andrew Wheeler
Position of the interviewee	Chief Executive
Responsibility for HR recruiting/ management/ development (yes/no)	
Telephone	00 44 1223 358836
Email	andrew@trainagain.co.uk

5.4.1.1 Current Competences/Skills

Content-related competences

Content updates especially relating to training providers profiles; key competences relate to copy writing skills.

Technical competences

Exploring XCRI format for course data input and MVC programming are necessary competences.

Management competences

General quality control of a website and marketing opportunities awareness is required.

Behavioural competences

Understanding of Chambers of Commerce needs - also exploring other business networks.

What are currently the main competences/job requirements, people have to bring with them in order to be employable in your company?

- Track record in programming
- Understanding of the 'skills economy'
- Market awareness

To what extent do the competences vary (e.g. between the above mentioned categories: content-related, technical, management, behavioural)?

- Hugely - only the technical competences require programming skills

Will these competences change in the future?

- Yes - dependent on open source developments; also new web capabilities

5.4.1.2 Prospective Competences/Skills

Which competences/requirements will be most sought after in the near future?

- Ability to automate clicks analysis and display graphically on the web.

Are you satisfied with the quality/suitability/effectiveness/amount of available vocational training on Internet-related jobs?

- Not really - most specialist training is only available in London

What are the main problems of employees and applicants with regard to their education/training?

- No obvious problems

5.4.1.3 Training and Education Offer

How could the education of employees and applicants be improved in order to be advantageous for your company?

- It would be good to have 'quick access' short courses available specific applications but also for specific developments

What additional training do you consider useful for your company?

- Would be good to have a personal training programme (involving all four competences) customised for the needs of the company.

Are there sufficiently qualified workers in your country?

- Yes

Do you plan to increase/decrease the number of foreign workers in the future?

-

What tools do you use to search for/recruit new staff?

- Mostly through networks.

How could the recruitment of foreign collaborators be improved/facilitated (tools, changes in laws, less bureaucracy, new institutions, etc ...)?

- Common technology platforms might help; common purpose.

Will the quality/suitability/effectiveness/amount of available vocational training meet your future requirements?

- Yes - the supply of vocational training is not the problem. More it is about quick response courses when needed by staff.

What education/training problems do you anticipate for employees and applicants?

- Literacy is key!

What additional training will be useful for your company in the near future?

- We are already undertaking the new ITQ qualification as a company. This is quite good for basic IT skills.

Will there be sufficiently qualified workers in your country?

- Yes!

Will you have to employ workers from abroad?

- No!

What tools will you use to search for/recruit new staff?

- Networks.

5.4.2 Footsword Technologies

Name of organization	Footsword Technologies
Type of organization	Web Applications
Website	
Interviewee	
Name and Surname	Amanda Earlam
Position of the interviewee	Chief Executive
Responsibility for HR recruiting/management/ development (yes/no)	
Telephone	+0044 07999 870748
Email	amanda@footsword.com

5.4.2.1 Current Competences/Skills

Content-related competences

- Photography
- Content ideas

Technical competences

- html,

- CSS
- javascript/jquery
- C# ASP.NET MVC
- Webforms
- SQL

Management competences

- People skills
- Administration and planning skills

What are currently the main competencies/job requirements, people have to bring with them in order to be employable in your company?

On the technical side - need to be up to date with appropriate programming language; for generic skills - communication.

To what extent do the competencies vary (e.g. between the above mentioned categories: content-related, technical, management, behavioural)?

Hugely different skills set needed between techie and administrator.

Which competencies/requirements will be most sought after in the near future?

html, css, javascript/jquery, C#; ASP.NET MVC and webforms; SQL; also vector graphics tools.

5.4.2.2 Training and Education Offer

The offer is largely satisfying. The main challenge will be to be up to date to the newest technologies. It is stated that there are sufficient well-qualified workers in the country. Thus, there is no need to employ workers from abroad. Employers are exclusively recruited via local networks and word of mouth.

5.4.3 Pocket Places

Name of organization	Pocket Places
Type of organization	Content creation Management publishers
Website	

Interviewee	
Name and Surname	Mark
Position of the interviewee	Founder
Responsibility for HR recruiting/management/ development (yes/no)	
Telephone	+0044 01692 535568
Email	mark@pocketplaces.co.uk

5.4.3.1 Competences/Skills

Content-related competences

- Creative writers
- Voice artists
- Language skills and dialects

Technical competences

- Standard web apps
- CSS
- Java
- Mobile technologies

Management competences

- Organisation skills
- Planning
- Be 'doers'

Self-motivation is considered very important for all kinds of jobs. In future, the needs will shift towards content-related competences.

5.4.3.2 Training and Education Offer

The existing offer is not sufficient and new employees have trouble to adapt to the new working environment. Therefore, the skills have to be renewed over and over

again and the employees must be more self-motivated. However, there are enough well-qualified workers in England and the number of employees from abroad will increase.

5.4.4 The Forum

Name of organization	The Forum
Type of organization	Digital AV and online conferencing
Website	
Interviewee	
Name and Surname	John Smith
Position of the interviewee	Strategic Development Manager
Responsibility for HR recruiting/ management/ development (yes/no)	
Telephone	+0044 01603 727950
Email	john.smith@theforumnorwich.co.uk

5.4.4.1 Competences/Skills

Specialist software knowledge is important; but also all round technical skills which underpin adaptable and flexible approaches. Flexibility and adaptability will be very important in future.

5.4.4.2 Training and Education Offer

The offer is not entirely satisfying. However, there are sufficient well-qualified workers in the UK and the company plans to increase the number of foreign workers in future. This shall be reached by using agencies, the own website and advertising which shall lead to a cross-border collaboration. In future, the employees' competences will have to be updated repeatedly.

5.4.5 CSR

Name of organization	CSR
Type of organization	IT/Communications Technology
Website	
Interviewee	
Name and Surname	Mike Ellis
Position of the interviewee	Technical Training and Development Manager
Responsibility for HR recruiting/management/ development (yes/no)	
Telephone	+0044 01223 692563
Email	mike.ellis@csr.com

5.4.5.1 Competences/Skills

Content-related competences

- Editing and authoring skills

Technical competences

- Programming
- Design
- Electronic
- Cad
- Cam

Management competences

- Project management
- People management
- Presentations
- Communications

Behavioural competences

- Managing cross cultural relationships on a global scale

Currently, an engineering or IT degree is very important. Internally, the required competences differ drastically and have to be adapted as the technology changes. Adaptability is most important.

5.4.5.2 Training and Education Offer

Currently, there are no major problems in regard to education and training as most of it is work-based. Consequently, more in-house training offer is required. Even though the number of well-qualified workers is sufficient, employees from abroad are hired and the number will increase. In order to do so, the existing networks and the internet are used. The major problems in employing workers from abroad are related to visa and work permit issues. The only problem in this context is the unsatisfactory language skills of some applicants.

5.4.6 Cambridge Wireless Community

Name of organization	Cambridge Wireless Community
Type of organization	Wireless Technologies
Website	
Interviewee	
Name and Surname	Dr. Soraya Jones
Position of the interviewee	Chief Executive
Responsibility for HR recruiting/ management/ development (yes/no)	
Telephone	+0044 01223 422365
Email	soraya.jones@cambridgewireless.co.uk

5.4.6.1 Competences/Skills

Content-related competences

- Proof reading
- Writing, editing

Technical competences

- Programming languages
- Operating systems
- Technology platforms
- Testers

Management competences

- Strategic thinking
- Networking
- Planning skills

Currently, networking, flexibility, and adaptability are the most important skills needed. Combining skills will become more and more important.

5.4.6.2 Training and Education Offer

Providers do currently not respond to market demand, universities convey inappropriate skills. Therefore, time management and people skills are required. As the number of qualified workers in the UK is sufficient, the company plans to reduce the number of workers from abroad in future. Employees are recruited via networks, websites and online communities. In future, flexibility will be one major skill.

5.5 United States of America

(Serves as a comparison)

5.5.1 24/7 Real Media

Name of organization	24/7 Real Media
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Type of organization	Digital Marketing Firm.
Website	
Interviewee	
Name and Surname	Molly Mackey
Position of the interviewee	Director, Global Recruitment
Responsibility for HR recruiting/ management/ development (yes/no)	Yes
Telephone	+1-212-231-7277
Email	molly.mackey@247realmedia.com

5.5.1.1 Current Competences/Skills

Do you have (or will you have in the near future) openings for the following categories of competences and what would the job requirements be?

- Technical competences (e.g. 3D developer)/job requirements: Yes!
- Management competences (e.g. web content manager, production manager)/job requirements: Yes!
- Behavioral competences (e.g. community manager)/job requirements: Yes!

What are currently the main competences/job requirements, people have to bring with them in order to excel in an internet-related job?

- Internet experience

To what extent do the competences vary (e.g. between the above mentioned categories: content-related, technical, management, behavioral)?

- Sales to Technology hands on development

5.5.1.2 Prospective Competences/Skills

Will these competences change in the future?

- They will become more advanced

Which competences/requirements will be most sought after in internet-related jobs in the near future?

- Cutting edge development
- Agency side experience
- Real time bidding experience

5.5.1.3 Current Education and Training Offer

Are you satisfied with the quality/suitability/effectiveness/amount of available vocational trainings on internet-related jobs?

- Yes.

What are the main problems of employees and applicants in regard to their education/training?

- No work ethic and poor internships.

How could the education of employees and applicants be improved in order to be advantageous for your company?

- Better work ethic and more experience in digital media/html coding

Which additional trainings do you consider useful for your company?

- Classroom type information gathering on new technologies

Are there sufficiently qualified workers in your country? Do you have to employ workers from abroad?

- Sometimes

What tools do you use to search for/recruit new staff?

- LinkedIn Recruiter
- IAB.net
- Indeed.com
- Monster.com

5.5.1.4 Prospective Education and Training Offer

Will the quality/suitability/effectiveness/amount of available vocational trainings meet your future requirements?

- Yes

What will be the main problems of employees and applicants in regard to their education/training?

- No passion for digital media

How should the education of employees and applicants be improved in order to meet the changing requirements in the future?

- More knowledge of digital marketing

Which additional trainings will be useful for your company in the near future?

- Hands on manager training

5.6 Greece

5.6.1 Intracom IT Services

5.6.1.1 Designer/Developer

Current Competences/Skills

- Degree in Informatics (HE, T.E.),
- Technical knowledge,
- Know the programming languages
- Knowledge of the platforms that the company uses (eg. dotnet, java, JTWI)
- Flexibility, innovation, creativity, customer orientation, teamwork ability

Prospective Competences/Skills

The aforementioned competences will remain the same in the future. The technical competences may change due to the technological advances.

Current Training and Education Offer

Intracom IT Services offers two training programs in order to train all staff. The programs are conducted by the company itself, but also external training institutions. The programs of the first category focus on training personal competences (conflict management, negotiation, sales education, presentation, interviewing), whereas the programs of the second category focus on training technical skills.

Intracom also offers job orientation seminars in which the employees are informed about the company's policies and functions. They focus on-the-job training, the duration of which depends on the nature of their job. The seminars offered are very specialized and the employees have the opportunity to evaluate those.

Intracom states that there are many qualified workers in Greece and that the company employs foreign workers. If there is a need in recruiting foreign new staff, there should be less bureaucracy and a modification of laws regarding the salaries, etc.

In order to search for new staff, the company uses several job platforms (such as <http://www.kariera.gr/>), cooperates with Career Service Offices of Universities, participates in Career Days, selects new staff from a database with past applicants (CV information systems). Just recently, Intracom also uses "Linkedin".

Prospective Training and Education Offers

The available vocational trainings meet the company's future requirements, but the designers should always be informed about the new technologies. It is attempted to follow and adapt to market fluctuations. Additional training is not needed. Furthermore, Intracom states that there will be sufficiently qualified workers in Greece in future.

5.6.1.2 Project Manager

Current Competences/Skills

- Degree in Business Administration (HE, T.E.)
- Postgraduate, at least 5-6 years of working experience in managing a team
- team spirit, organization skills, time management, leadership qualities

Prospective Competences/Skills

There may be changes in the competences of the project manager which cannot be specified at this stage.

Current Training and Education Offer

Intracom is very satisfied with the highly specialized seminars it offers to project managers. They receive certification through their vocational training (from the Project Manager Institute) and the Company covers all expenditures. The largest percentage of the Project Managers has been certificated. There is no need for improving the education of the employees. They have no problems as they are offered more than they expect. Intracom values the training on management skills as well as the training on conflict management very essential.

Prospective Training and Education Offer

Due to the fact that project managers receive certification and they have to sustain their certification, the company offers them lifelong learning sessions. Another motive is to participate in conferences so as to add points to their certification. Some of the project managers will need to improve their personal skills.

5.6.1.3 Testers

Current Competences/Skills

- Degree (HE, T.E.)
- Basic knowledge of informatics
- Focus on the detail, be observant
- 5 years experience in testing

Prospective Competences/Skills

In the future the requirements will be more demanding.

Current Training and Education Offer

The training offer is very limited. The tester participates only in the programs provided by the company itself. They could be trained in how to use a specific tool (methodology of testing). There are many qualified testers in Greece because it is a simple job. The tools for recruiting new staff are the same as above.

Prospective Training and Education Offer

Even though the offer is limited, the available training is sufficient for all employees.

5.6.2 Greek Research and Technology Network

Name of organization	Greek Research and Technology Network
Type of organization	It is an SA, supervised by the General Secretariat for Research and Technology (GSRT) of the Ministry of Development
Website	http://www.grnet.gr/default.asp?pid=167&la=2
Interviewee	
Name and Surname	Ms. Dimitra Kotsokali
Position of the interviewee	Responsible for the Human Resources
Responsibility for HR recruiting/management/development (yes/no)	Yes
Telephone	+302107474253
Email	dkotso@grnet.gr

5.6.2.1 Developer

Current Competences/Skills

- Technical background
- Observation
- Software knowledge
- Creativity
- Content capacities (interviewee considered these identical with the technical skills)

Prospective Competences/Skills

- Technical skills/knowledge

Current Training and Education Offers:

The quality of education provided is very good, but it needs to be more systematic in order to identify the needs. Until now there have been no problems in terms of

workers and employees proposing themselves to be trained in a program that will be more useful to them, and if trained they use the knowledge they have. Essentially, the education is more like an ad hoc procedure. In addition, administration specific seminars are useful through training platforms which are direct and include large quantity of information. The training could be more frequent. The workers participate in workshops, European task forces which organize training courses and involve people from across Europe. Each worker participates in the Task Force he/she is interested in.

It is problematic that people with different qualifications are placed in wrong positions and there are people who have qualifications which are not exploited. There are several workers with qualifications in Greece and as regards the employment of foreign workers is not something which has concerned the company as no application has come from a foreign person (as the announcement is published in the Greek press). The process of seeking staff is either internal to the organization for filling specific positions, the publication of the announcement in the press/website, the CV collection, creating short list qualifications, and interviews.

Prospective Training and Education Offer

It is necessary to continue the seminars in regard to state of the art technologies as the company finds itself in a dynamically and technologically evolving community.

5.6.2.2 Webmaster

Current Competences/Skills

- Programming expert
- Observation skills
- Technical skills,
- Cooperation

Prospective Competences/Skills

The future needs will be the same as the current ones

Current Training and Education Offers

See the aforementioned job.

5.6.3 Research Academic Computer Technology Institute / ru3

Name of organization	Research Academic Computer Technology Institute / ru3
Type of organization	Non Profit Private Legal Entity ("NPID" under Greek Law), supervised by Ministry of Education and Religious Affairs
Website	www.cti.gr
Interviewee	
Name and Surname	John Zaharakis
Position of the interviewee	Managing Director of RU3
Responsibility for HR recruiting/ management/ development (yes/no)	Yes
Telephone	+302610 960472
Email	jzaharak@cti.gr

5.6.3.1 Online Community Manager

Current Competences/Skills

- Absorbed knowledge on the area of study
- Language skills
- Creativity
- Innovation
- Teamwork ability

Prospective Competences/Skills

Prospective Competences and skills will be the same as the current ones.

Current Training and Education Offer

The company is satisfied with the quality of the vocational trainings, finding no problems in this process. There are also sufficient qualified workers in Greece. The company does not employ workers from abroad. New staff is recruited through public announcements.

Prospective Training and Education Offer

According to the company, there will be satisfactory training in the future. Training sessions involving security matters could be very useful. Recruitment and employment issues are the same as above.

5.6.3.2 Designer

Current Competences/Skills

- Project related work
- Teamwork
- Designing tool knowledge
- Language skills

Prospective Competences/Skills

Prospective Competences and skills will be the same as the current ones.

Current Training and Education Offers

The suitability of vocational trainings is moderate. The major problem of employees of this job is the medium level educational background. This problem perhaps could be bypassed through explicit seminars specialized for designers. There are sufficient well-qualified workers in Greece. Thus, there is no need to employ workers from abroad. New staff is recruited through public announcements.

Prospective Training and Education Offer

The employees' major problem is that they will have little specialized knowledge on the subject matter. The situation can be improved through explicit training seminars (as above). About recruitment and employing in the future, the answer is the same as above.

5.6.3.3 Project Manager

- Current Competences/Skills
- Administrative skills
- General management skills
- Hardware and software areas
- Travel willingness
- Foreign language
- Teamwork ability

Prospective Competences/Skills

Prospective skills will be the same as the current ones.

Current Training and Education Offers

Vocational training is at moderate level. A standard problem is that there is no specialized knowledge in real life applications. Training could be improved through training seminars. There are sufficient well-qualified workers in Greece. Thus, there is no need to employ workers from abroad. New staff is recruited from inside the institute.

Prospective Education and Training Offer

Explicit training seminars will be useful for the organization in the future. The requirements in regard to recruitment and employment are the same as above.

5.6.3.4 Developer

Current Competences/Skills

- Innovation
- Creativity
- Software development knowledge
- Cooperation
- Communication skills
- Willingness to travel

Prospective Competences/Skills

Prospective skills will be the same as the current ones

Current Training and Education Offer

Vocational training is at moderate level. The employees' major problem in this job is the medium level educational background. Still, great improvement is achieved through team collaboration for transferring knowledge. There are sufficient well-qualified workers in Greece. There is no need to employ workers from abroad. New staff is recruited through public announcements.

Prospective education and Training Offer

The major challenge of the future employees will be the lack of experience. No educational session is applicable to deal with this issue. The requirements in regard to recruitment and employment are the same as above.

5.6.4 Electronic Marketing Advertising Services

Name of organization	Electronic Marketing Advertising Services (Emads)
Type of organization	Unlimited Company
Website	http://emads.gr/
Interviewee	
Name and Surname	Mr. Skourlis Dimitris
Position of the interviewee	Project Manager, company Leader
Responsibility for HR recruiting/ management/ development (yes/no)	yes
Telephone	+30 2109324310
Email	skourlisdimitris@emads.gr

5.6.4.1 Designer

Current Competences/Skills

- Curiosity

- Customer relationship
- Precision
- Cooperative skills

Prospective Competences/Skills

There will be additional requirements because of increasing competence

Current Training and Education Offer

Many new seminars exist which are supposed to introduce new models and standards. Seminars should be organized on every new Internet technology or demand specification standards. The company also collaborates with external organizations. New staff is recruited through advertisement on several Career Service Offices of Greek Universities.

Prospective Education and Training Offer

The future offer will be the same as the current one.

5.6.4.2 Webmaster

Current Competences/Skills

- Knowledge of standards
- Inspiration,
- Creativity/Consulting
- Timely work
- Content management
- Positive attitude towards work
- Ability to oneself into users' role

Prospective Competences/Skills

The competences will be less demanding.

Current Training and Education Offers

Correspond to the aforementioned job. Training is not always applicable.

Prospective Education and Training Offer

See above.

5.6.4.3 Project Manager

Current Competences/Skills

- Team spirit
- Communication skills
- Language skills
- Management ability
- Customer orientation

Prospective Competences/Skills

Seeking better communication paths, projects, better time scheduling.

Current Training and Education Offer

Most seminars are on human resources management. New staff is recruited through social contacts as the company is small.

Prospective education and Training Offer

No answer!

5.6.5 CD Creation

Name of organization	CD Creation
Type of organization	Audio and visual multimedia production company
Website	http://www.cdcreations.gr
Interviewee	
Name and Surname	Ms. Dionusia Karoki
Position of the interviewee	Company Leader
Responsibility for HR recruiting/ management/ development (yes/no)	yes
Telephone	+30 2610 362579

Email	info@cdcreations.gr
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5.6.5.1 Designer

Current Competences/Skills

- Specific degree
- Basic programming know how
- Software knowledge
- Language skills
- Precision
- Flexibility
- Reliability

Prospective Competences/Skills

Due to the fact that things may change in the future, designers should be more informed about the market situation, show more customer orientation, be adaptive, and know about trends.

Current Training and Education Offers

No resources available to provide training programs. There are only empirical trainings. New staff is being recruited through a certain procedure: announcement in the press/website, CV collection, interviews. There are not so many qualified designers in the city of Patras.

Prospective Training and education Offer

There is the need to provide low budget training programs (e.g. on the job training)

5.6.5.2 Graphist

Current Competences/Skills

- Creativity
- Innovation
- Adaption

Prospective Competences/Skills

- Expert knowledge of 3D
- Knowledge of new programs

Current Training and Education Offers

See above.

Prospective Training and education Offer

See above.

5.6.5.3 Webmaster

Current Competences/Skills

- Technical knowledge
- Current programming languages and platforms (eg. joomla, php-new),
- Awareness of trends in creating sites
- Adaption
- Flexibility

Prospective Competences/Skills

No answer!

Current Training and Education Offer

The offer corresponds to the needs

Prospective Training and Education Offer

No answer!

5.6.5.4 Project Manager

Current Competences/Skills

- Promotion
- Identification of the product's usability and efficiency
- Innovation
- Intelligent
- Pioneer thinking

- Innovation

Prospective Competences/Skills

The current skills will not change in future.

Current Training and Education Offer

The offer corresponds to the aforementioned competences.

Prospective Education and Training Offer

-

5.6.6 Federation of Hellenic Information Technology & Communications Enterprises

Name of organization	Federation of Hellenic Information Technology & Communications Enterprises (SEPE)
Type of organization	Non-profit organisation
Website	http://www.sepe.gr/
Interviewee	
Name and Surname	Ms. Myriam Vasileiadou
Position of the interviewee	Administration & Advertising Executive
Responsibility for HR recruiting/ management/ development (yes/no)	Yes (involved in the procedure)
Telephone	+30 210 9249270
Email	info@sepe.gr

5.6.6.1 Content Manager

Current Competences/Skills

- Specific degree
- Experience program operator
- Language skills

- Precision
- Flexibility
- Content evaluation

Prospective Competences/Skills

There will not be a change in competences.

Current Training and Education Offer

The federation does not provide training programs. It is considered that there are many qualified workers in Greece and in the company. New staff is recruited through a certain procedure: announcement in the press/website, CV collection, interviews.

Prospective Training and Education Offer

It is questionable if the company will provide training programs in the future.

5.6.7 Systema Technologies AE

Name of organization	Systema Technologies AE
Type of organization	ICT
Website	
Interviewee	
Name and Surname	Costas Davarakis
Position of the interviewee	CEO
Responsibility for HR recruiting/management/ development (yes/no)	
Telephone	+302106743243
Email	costas@systema.gr

5.6.7.1 Competences/Skills

Content-related competences

- Author and manage learning content

Technical competences

- Flash
- Dot Net
- PhP

Management competences

- Promotion

Generally, the main competences in this company are marketing-related.

5.6.7.2 Education and Training Offer

There are sufficient worker in Greece. However, this will change in future. The competences in marketing will have to be fostered.

5.7 Hungary

5.7.1 Chrome Creative Works Ltd.

Name of organization	Chrome Creative Works Ltd.
Type of organization	Logo design, corporate identity, other print designs; web design, web development; marketing consultation
Website	www.chromestudio.com/?lng=2
Interviewee	
Name and Surname	Mr. Sándor Semsei
Position of the interviewee	Managing Director
Responsibility for HR recruiting/ management/ development (yes/no)	Yes
Telephone	+36-30-2885050
Email	sandor.semsei@chromestudio.com

5.7.1.1 Web Designer

Current Competences/Skills

- Graphics skills
- Computer knowledge
- Software user-level knowledge
- Adobe Illustrator
- Adobe Photoshop
- Basic HTML & CSS knowledge
- Portal/website-ergonomics (usability) knowledge
- Typography knowledge
- Creativity
- Conflict-handling
- Tolerance
- Innovation
- Independence
- Teamwork ability
- Problem-solving ability

Prospective Competences/Skills

The competences will continuously change due to a high-level field-specific specialization: The knowledge in some fields (areas) will become more important and may become an independent job. (eg: conversion of a graphics such as a website layout file into HTML-code). Some fields will split up. Within design, ergonomics (usability) will become more articulated. The most important skills in future will be independency, conflict-tolerance and teamwork. Language skills are also important due to the company's expansion to the EU market.

Current Training and Education Offer

The company lacks knowledge of the educational system and vocational training. It buys "ready" people from the job-market, who will participate in trainings (train themselves) next to their work. Training costs are high and hard to find time for that

besides working. Usability/web-ergonomics/user-friendliness + cognitive-(perception-) psychology could become more articulated. Software knowledge is usually sufficient. The company does not have to employ workers from abroad. When hiring new staff, the company uses internet job-advertisement portals. It is also planned to visit a job-bourse (e.g.: www.allasborze.bme.hu – the largest one in Hungary), but this cannot be done due to a lack of time.

Prospective Education and Training Offer

The prospective education and education offer will not change significantly in future.

5.7.2 REDMARK Ltd.

Name of organization	REDMARK Ltd.
Type of organization	Online business applications development
Website	www.redmark.hu , www.projektmappa.hu , www.profigszerezodes.hu , www.samax.hu
Interviewee	
Name and Surname	Mr. Gábor Kocsis
Position of the interviewee	Managing Director
Responsibility for HR recruiting/ management/ development (yes/no)	Yes
Telephone	+36-30-252-1515
Email	gabor.kocsis@redmark.hu

5.7.2.1 Web Content Manager / Web Editor

Current Competences/Skills

- Responsible for content - professional legal knowledge: attorney-apprentices were sought for without much practical experience
- World of internet, content knowledge
- Minimal technical competence, know a bit more than an average internet user
- Able to handle a CMS

- Able to formulate legal terms understandably to user (eg. what to do in case of a stolen car)
- Able to answer user questions
- English language usage is needed to be able to adapt foreign content and examples
- Need to keep contact mainly with web developer
- Able to telework

Prospective Competences/Skills

The company cannot see those so far. The video-like appearance will be exciting. Additionally, communication will be very important in future.

Current Training and Education Offer

Professional trainings are OK, but basic communications training is needed. People are not able to communicate adequately. E.g.: Only 2 worthwhile interview candidates occurred out of 60 CVs. Practice-oriented trainings are needed. It would be advantageous if a candidate already published content on any website or has his/her own blogsite. They need to be able to take some time for article preparations (time management). However, there are sufficient well-qualified workers in Hungary. The company furthermore plans to expand its activities and thus foreign workers, language skills and location-knowledge are needed. The company only uses legal-specific internet job-advertisement locations, e.g. legal forums. General job-advertisement portals like Jobpilot - www.jobpilot.hu are not used.

Prospective Training and Education Offer

People should learn how to select and focus among important tasks, because they are currently not able to speak and write shortly and up-to-the-point (communication skills). Behaving, leadership and collaboration is missing from education's point of view.

5.7.3 Index Communications Ltd.

Name of organization	Index Communications Ltd.
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Type of organization	Leader in the Hungarian B2B directory publishing market: Online business directories; web-design; company information services; direct marketing services; Call Center
Website	www.kozuleti.com/eng/
Interviewee	
Name and Surname	Mr. Ferenc Tárczy
Position of the interviewee	Managing Director
Responsibility for HR recruiting/ management/ development (yes/no)	Yes
Telephone	+36-23-801-400
Email	ferenc.tarczy@kozuleti.com

5.7.3.1 Web Developer/ Programmer

Current Competences/Skills

- High level PHP + MySQL knowledge
- Smaller web-applications
- Knowledge of Adobe Dreamweaver and CMSs, like WordPress
- Soft skills
- Language competences
- Hardware knowledge

There is a big difference between the conventional and the web-programmers. Programming paradigms can be learned, but to produce foreseeing, innovative websites that employ new solutions, tremendous amount of development is needed and also following the net-trends/solutions (can be collected from foreign websites) and to follow SEO optimizations (monitoring, reworking) as well.

Prospective Competences/Skills

The latest technologies and software-development tools will help support the profession, but will make it even more complex on the other hand. User habits and demands will influence changing. Up-to-date knowledge and quick learning/applying of new ones is needed. However, the company also has solutions which cannot be found elsewhere. Marketing skills are needed and project-thinking, teamwork and independent working (for distributed partial tasks).

Current Education and Training Offer

The offer could be improved via innovative solutions: Online video-trainings + forums and blogs. The central research institutes could participate more in publishing and training of new developments.

Prospective Training and Education Offer

More practice-oriented solutions, as well as more detailed training of application-development modules are needed. However, there are sufficient well-qualified workers. The company therefore does not have to hire staff from abroad. Many training programs are hard to find. Training-offers of institutes should be better communicated. Online training should be strengthened.

Others

Only professional online web2 channels, like Twitter, social media, SEO forums and blogs are used to recruit staff. The company does not use internet job-advertisement portals or traditional job-advertisement tools.

5.7.4 Klikkmánia Ltd.

Name of organization	Klikkmánia Ltd.
Type of organization	Pay-Per-Click campaign management services: Outsourcing services including campaign planning, copy writing, monitoring and reporting; Search Engine Optimization (SEO) consultancy; Web analytics consultancy

Website	www.clickmania.hu
Interviewee	
Name and Surname	Mr. Gábor Hernádi
Position of the interviewee	Managing Director
Responsibility for HR recruiting/ management/ development (yes/no)	Yes
Telephone	+36-20-366-4861
Email	hernadi.gabor@gmail.com

5.7.4.1 Search Engine Marketing Specialist

Current Competences/Skills

- Web knowledge
- Online marketing knowledge
- Basic-level programming knowledge
- English language knowledge (other languages are advantageous)

Prospective Competences/Skills

The skills will not change significantly in future. Communication skills and customer service will be the most important ones in future.

Current Training and Education Offer

The current offer is not satisfactory. The job is in rapid change (some things change monthly). Education is outdated, only enough for basic theoretical level (enough for junior level), but not enough to be able to join the work. It could be improved by self-training (diligence, resoluteness needed for self-training), by educating more field-work professionals, field-training locations (summer student work) – but: Neither their company (they have not enough time), nor schools force the field-training.

Prospective Education and Training Offer

If the current offer remains stable, it will not meet the future needs of the company. It is necessary to provide more field-work trainings.

Others

The company does not employ workers from abroad as it made bad experience in the past. Staff is mainly recruited via personal contacts and recommendations of acquaintance.

5.7.5 M.I.T. Systems Ltd.

Name of organization	M.I.T. Systems Ltd.
Type of organization	Lead developer of mobile informatics and communication systems for industry, commerce and for private purposes
Website	www.mitsystems.hu
Interviewee	
Name and Surname	Mr. Tamás Dés
Position of the interviewee	Managing Director
Responsibility for HR recruiting/ management/ development (yes/no)	Yes
Telephone	+36-1-209-9288
Email	tamas.des@mitsystems.hu

5.7.5.1 Help Desk Operator / (Operative) Support Staff Member

Current Competences/Skills

- ICT knowledge that serves their own application: web, database, GSM & WLAN communication
- Basic data reconstruction knowhow (related to inner business data processing)
- Basic computer knowledge

- Able to handle company developed software
- Testing final version of developed software
- Writing the User Guide for developed software
- Need to know the local-company infrastructure, operation situation (network, server, client, mobile-client) and integration background
- Empathy & courtesy, trustworthiness
- Communication skills

Prospective Competences/Skills

Support will be more important. Development of supporting: first only on-the-spot help, later also at introduction-phase, now continuous support happens (trustworthiness). Lifelong Learning skill needed to be able to keep pace with technology development. Continuous development is needed to keep up the high standards. Security of web technologies needs to be known on high level, security techniques important not to lose data.

Current Education and Training Offer

There are well-qualified workers who need a lot of company-training is needed to get to know 15-25 own applications. The company stands in contact with university: Students do NOT wish to become software developers. They have only learned the language and wish for an easy job. But: humbleness and diligence is needed for work. According to the trend, client companies (except the large ones) do not wish to employ computer experts, rather clients wish to get a basic operational training, and then require background support from them (outsourcing). There is a lack of honor of work and practical knowledge (field-training) at universities. There is the need to improve university-company relations and more field-training (3 university-students participating now at their company on field-training). Applicants need to know methodologies, need to be innovative. The lack of motivation is the main problem on a large scale.

Prospective Education and Training Offer

The employees' motivation needs to be increased. Additionally, vocational training centers and companies should co-operate much more and practical training should be fostered much earlier.

Others

There is no need to employ workers from abroad, but co-operation with them is possible (via internet). Exchange of professionals on university-level has lots of advantages. Hungarian students need to work abroad and students from abroad need to come to learn in Hungary – a healthy EU fluctuation is needed. As well internet job-advertisement portals (e.g: Jobline - <http://jobline.hu/other/english.aspx>) are used to recruit new staff as via professional acquaintanceship.

In the past the company also visited job-bourse, but the multinational companies collect most candidates, the rest does not wish to acquire for "hard work". However, fluctuation is small in the company as specific knowledge is needed and respected as well. Regardless, University student-exchanges should be improved (more summer work, bursary program).

5.8 Poland

The Wroclaw University of Economics (WUE) conducted numerous interviews and consequently came up with a detailed view on the qualitative analysis. The most relevant job profiles will be introduced in the following.

5.8.1 Web Content Manager

5.8.1.1 Current Technical Competences

- Creation of graphic documents, layouts and web design
- Maintaining/updating an application, a site, a software, a computer, a network...
- Testing/validating an application, a software and submit a report
- Knowing how to make use of search engines on the Internet
- Knowing how to optimize a site according to the requirement of search engines

5.8.1.2 Current Content-related Competences

- Drafting of texts, clearness, concision, orthography, grammar in the native language
- Drafting of texts, clearness, concision, orthography, grammar in English
- Knowledge of the codes of communication Internet (writing, visual, sounds... native country)
- Knowledge of the codes of communication Internet (writing, visual, sounds... foreign)
- Basics of law (in the field of activity, authoring rights, intellectual property rights...)
- Applies content standards
- Analyses different sources of information (Statistics, Polls, ...)
- Understands theoretical background and development of media

5.8.1.3 Current Management Competences

- Schedule working processes and prioritise tasks independently (time management)

5.8.1.4 Current Behavioural Competences

- Creativity and imagination
- Knowing to seek and classify information on Internet or elsewhere
- Customer orientation: Being able to imagine the user perspective and to adapt decisions accordingly
- Communicating with customers or within the company
- Communication in English or other foreign languages
- Sensitivity and tactfulness in interpersonal interactions, cross-cultural sensitivity
- Presentation and moderation skills
- Being aware of the importance of details and precision (accurateness)
- Obeys ethic principles

5.8.2 Webmaster

5.8.2.1 Current Technical Competences

- Programming skills for the (further) development of multimedia-applications, software, websites, etc.
- Maintaining/updating an application, a site, a software, a computer, a network...
- Documenting a text, an application, the functions of a software
- Management of the station data-processing (maintenance, updates, antivirus...
- Knowing how to optimize a site according to the requirement of search engines
- User skills for successful handling of multi-media-software, applications, hardware, etc.
- Knows how to handle security aspects of a website / database / network
- Knows how to integrate various components of an application / website

5.8.2.2 Current Content-related Competences

- Knowledge of the codes of communication Internet (writing, visual, sounds... native country)
- Knowledge of the codes of communication Internet (writing, visual, sounds... foreign)
- Analyses different sources of information (Statistics, Polls, ...)

5.8.2.3 Current Management Competences

- Writing requirements specifications, technical specifications and reports/ratio (clearly, precisely and detailed)
- Develop/find solutions and validate their relevance and their consequences

5.8.2.4 Current Behavioural Competences

- Creativity and imagination
- Analytical thinking and ability to develop synthesis/ ability to analyse and solve problems
- Knowing to seek and classify information on Internet or elsewhere

- Customer orientation: Being able to imagine the user perspective and to adapt decisions accordingly
- Communicating with customers or within the company
- Communication in English or other foreign languages
- Ability to work in a team
- Presentation and moderation skills
- Being aware of the importance of details and precision (accurateness)
- Obeys ethic principles

5.8.3 Project Manager

5.8.3.1 Current Technical Competences

- Knowing how to make use of search engines on the Internet
- Knowing how to optimize a site according to the requirement of search engines
- Knows how to integrate various components of an application / website

5.8.3.2 Current Content-related Competences

- Basics of law (in the field of activity, authoring rights, intellectual property rights...)
- Understands theoretical background and development of media

5.8.3.3 Current Management Competences

- Conduct feasibility studies (technical, financial...)
- Schedule working processes and prioritise tasks independently (time management)
- Writing requirements specifications, technical specifications and reports/ratio (clearly, precisely and detailed)
- Manage, negotiate, direct, control subcontractors
- Develops and applies quality assurance strategy, rules and methods
- Has knowledge of usability research
- Has good knowledge of the principles of marketing / online marketing

5.8.3.4 Current Behavioural Competences

- Analytical thinking and ability to develop synthesis/ ability to analyse and solve problems
- Customer orientation: Being able to imagine the user perspective and to adapt decisions accordingly
- Winning new customers and customer retention
- Communicating with customers or within the company
- Communication in English or other foreign languages
- Sensitivity and tactfulness in interpersonal interactions, cross-cultural sensitivity
- Ability to work in a team
- Presentation and moderation skills
- Being aware of the importance of details and precision (accurateness)

5.8.4 Graphist

5.8.4.1 Current Technical Competences

- Creation of graphic documents, layouts and web design
- Programming skills for the (further) development of multimedia-applications, software, websites, etc.
- Knowing how to optimize a site according to the requirement of search engines
- User skills for successful handling of multi-media-software, applications, hardware, etc.

5.8.4.2 Current Content-related Competences

- Knowledge of the codes of communication Internet (writing, visual, sounds... native country)
- Knowledge of the codes of communication Internet (writing, visual, sounds... foreign)

5.8.4.3 Current Management Competences

- Has good knowledge of the principles of marketing / online marketing

5.8.4.4 Current Behavioural Competences

- Creativity and imagination
- Knowing to seek and classify information on Internet or elsewhere
- Customer orientation: Being able to imagine the user perspective and to adapt decisions accordingly
- Communicating with customers or within the company
- Communication in English or other foreign languages
- Sensitivity and tactfulness in interpersonal interactions, cross-cultural sensitivity
- Ability to work in a team
- Presentation and moderation skills
- Being aware of the importance of details and precision (accurateness)

5.8.5 Developer

5.8.5.1 Current Technical Competences

- Programming skills for the (further) development of multimedia-applications, software, websites, etc.
- Documenting a text, an application, the functions of a software
- Development and management of data bases (= > language(s) of competence)
- Knowing how to optimize a site according to the requirement of search engines
- Knows how to integrate various components of an application / website

5.8.5.2 Current Content-related Competences

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5.8.5.3 Current Management Competences

- Schedule working processes and prioritise tasks independently (time management)

5.8.5.4 Current Behavioural Competences

- Creativity and imagination

- Analytical thinking and ability to develop synthesis/ ability to analyse and solve problems
- Knowing to seek and classify information on Internet or elsewhere
- Customer orientation: Being able to imagine the user perspective and to adapt decisions accordingly
- Ability to work in a team

5.8.6 General Remarks on the Training and Education Offer

General Remarks

- Most interviewees state that there are sufficient well-qualified workers in Poland
- The amount of available trainings is really excessive – but very few good trainings available
- Many interviewees plan to/will increase the number of foreign workers

What are the main problems of employees and applicants in regard to their education/training?

- No problem solving trainings available
- Mainly general trainings offered on the market, more detailed and specialized needed
- Trainings not interesting at all, useless
- Low availability of training courses in my location. Traveling is time consuming delays work to be done and creates costs
- Low quality of trainings offered
- Low availability of SEO trainings
- Not enough time to participate in trainings
- Time spend for training is a loss from the company's point of view
- High cost of trainings
- Lack of funds for training – financial problems
- Cost does not match the price of trainings

How could the education of employees and applicants be improved in order to be advantageous for your company?

- More detailed training courses
- More attention paid to practical issues and problems that occur in work
- More attention paid to analysis and individual decision making
- Better foreign language education (communication skills), time management education, more attention paid to soft skills

Which additional trainings do the interviewees consider useful for their company?

- Improvement of programming quality
- Taking care of SEO at programming stage
- Customer Service
- Time management
- Soft skills trainings
- CAD related
- Team communication and teamwork trainings
- Analysis and self decision making
- Creativity workshops

What tools does the company use to search for/recruit new staff?

- Online recruitment advertising portals
- International student exchange programs
- Discussion boards and blogs
- Personal contacts
- Contacts database
- Online communities announcements
- High school, college and university announcements

5.8.7 General Remarks on the Prospective Training and Education Offer

What will be the main problems of employees and applicants in regard to their education/training?

- Poor quality of training courses offered
- Lack of training courses needed (SEO)
- More time given to participants so they can go deeper into the problem

- Getting time for trainings course, no time left
- The cost of specialized trainings offered
- The higher education does not meet the market needs
- Low level of collaboration between higher education and industry (market)

How should the education of employees and applicants be improved in order to meet the changing requirements in the future?

- More detailed training courses even if they should last longer
- Increase the interest and pay more attention to e-learning techniques
- Participation in soft skills training
- More attention paid to customers' needs (graduates have little experience in this field of interest)

Which additional trainings will be useful for your company in the near future?

- Improvement of programming quality (code optimization)
- Time-management
- Customer services (identifying and meeting customers' needs)
- Product and technology oriented trainings
- Soft skills
- Usability trainings

What tools will you use to search for/recruit new staff?

- Outsourcing of recruitment process
- Internet, discussion boards and blogs
- HR agencies
- Online communities

5.9 France

5.9.1 Challengey

Name of organization	Challengey
Type of organization	Management Consulting & Training

Website	
Interviewee	
Name and Surname	André Dan
Position of the interviewee	Consultant
Responsibility for HR recruiting/ management/ development (yes/no)	
Telephone	+336-8038-5710
Email	Andre.dan@challengy.com
Internet-related jobs	Online Community Manager, Project Manager

5.9.1.1 Current and prospective Competencies/Skills

What are currently the main competencies/job requirements, people have to bring with them in order to excel their internet-related job?

Social networking skills, which mean ability to interconnect and to build relationships. These are the roots for new project management successes.

Will these aforementioned competencies change in future? (Less or more important?)

More important change will come from social networking techniques. The tools will evolve a lot with the ability to be connected more and more to the existing information system.

Which competences/requirements will be the most important ones to excel in the job(s) in the near future?

Social networking competencies will allow people to be connected and advance together.

5.9.1.2 Current and prospective Training and Education Offer

Are you satisfied with the quality/suitability/effectiveness/amount of available vocational trainings?

No, a lot of efforts need to be done.

What are the main problems of employees and applicants in regard to their education/training?

Adaptability and willing to learn new techniques. Intergenerational connections are a must.

How could the education of employees and applicants be improved in order to be advantageous for your company?

I believe a lot in the blended learning, associating in person training and online.

Which additional trainings do you consider useful for your company?

Remote project management with teams in different countries.

Are there sufficiently qualified workers in your country? Do you have to employ workers from abroad?

No. we need abroad workers, like those from India to have real improvements in the projects.

Do you plan to increase/decrease the number of foreign workers in future?

No. the trend seems to go on with India and to add China.

What tools do you use to search for/recruit new staff?

Social networks and existing business networks. Less jobboards.

Prospective Situation of Vocational Education and Training: Open Questions

Will the quality/suitability/effectiveness/amount of available vocational trainings meet your future requirements?

No. a strong effort has to be done to meet the future requirements.

What will be the main problems of employees and applicants in regard to their education/training?

Continuous training to new methods and tools.

How should the education of employees and applicants be improved in order to meet the changing requirements in the future?

Market communication aimed to the juniors and the seniors open to new opportunities.

Which additional trainings will be useful for your company in the near future?

Enterprise social networking to make new tools for project management and real collaboration between projects' members.

Will there be sufficiently qualified workers in your country? Will you have to employ workers from abroad?

No. Yes, especially from the BRIC countries.

5.9.2 Bnity

Name of organization	Bnity
Type of organization	
Website	
Interviewee	
Name and Surname	Hafid Ramdani
Position of the interviewee	CEO
Responsibility for HR recruiting/ management/ development (yes/no)	Yes
Telephone	+0033667287070
Email	hramdani@bnity.com
Internet-related jobs	Content Manager, Tester

5.9.2.1 Current and prospective Competences/Skills

What are currently the main competencies/job requirements, people have to bring with them in order to excel their internet-related job?

Technical Skills

- Competence in programming languages (php, javascript, J2EE, dotnet, ...)
- Competence in database and SQL
- Operating System (Linux, Windows, UNIX)
- Web server (Apache, TOMCAT ...)

- Application Server (Websphere, weblogic ...)
- Framework J2EE (Strutz, Hebernet ...)
- Technical Architecture
- Safeties
- Performance (Stress test ...)
- High Availability (Clustering ...)
- Project culture (Unit testing, recipe, pre-production, Production)

Skills designers

- Flash
- Adobe CS

Functional Skills

- Process Modeling
- Functional Specification
- Content Management
- User guide
- Training
- Animation (Forum)

Recipe

- Project Management
- Management and Organization
- Change Management
- Referencing
- Using tools (CMS, E-Learning, CRM ...)

Will these aforementioned competencies change in future? (Less or more important?)

The commoditization of Internet developments will ensure that the skills will focus on the following three areas:

- Safety
- Performance
- High availability

- Content Management
- Innovation
- Architecture and urban information systems

Classic function:

The generalization of CMS, ECM, E-Learning, and E-Marketing tools will ensure that those responsible for marketing, communications, and commercial buyer will be obliged to know the functioning of these tools and have a dual responsibility:

- A business competence
- A technical competence on the tool they will use to improve the effectiveness of their functions

Which competences/requirements will be the most important ones to excel in the job(s) in the near future?

More than technical expertise on the tools of the market we must have:

- Analysis
- Creativity
- Autonomy
- Curiosity
- Pro-activity

5.9.2.2 Current and prospective Training and Education Offer

Are you satisfied with the quality/suitability/effectiveness/amount of available vocational trainings?

Yes, lack of advanced training on the web.

What are the main problems of employees and applicants in regard to their education/training?

No self-mode project

How could the education of employees and applicants be improved in order to be advantageous for your company?

Training adapted to the life cycle of a project in a company's specifications to the start of production.

Which additional trainings do you consider useful for your company?

Management of Web Project

Are there sufficiently qualified workers in your country? Do you have to employ workers from abroad?

On the internet business there are still shortages of skills suited to the needs of the following axes:

- The Safeties
- The Performance
- The High Availability
- The Content Management
- The Innovation
- Architecture and urban information systems

Do you plan to increase/decrease the number of foreign workers in future?

Increase the number of foreign workers

What tools do you use to search for/recruit new staff?

- The recruitment sites APEC, Monster Cadreemploi ...
- Professional networks
- Linkedin, Video ...

Will the quality/suitability/effectiveness/amount of available vocational trainings meet your future requirements?

In France yes, in Morocco no

What will be the main problems of employees and applicants in regard to their education/training?

Not independent out of training, lack of initiative

How should the education of employees and applicants be improved in order to meet the changing requirements in the future?

Emerge candidates in real business project during the training

Which additional trainings will be useful for your company in the near future?

No additional training in the near future!

Will there be sufficiently qualified workers in your country? Will you have to employ workers from abroad?

There is a shortage of workers on technologies and advanced web development.

5.9.3 Empreinte

Name of organization	Empreinte
Type of organization	
Website	
Interviewee	
Name and Surname	Francois Caron
Position of the interviewee	CEO
Responsibility for HR recruiting/ management/ development (yes/no)	Yes
Telephone	+33 (0) 1 58 700 700
Email	facaron@empreinte.com
Internet-related jobs	Project Manager, Tester, Developer, Usability Specialist

5.9.3.1 Current and prospective Competences/Skills

What are currently the main competencies/job requirements, people have to bring with them in order to excel their internet-related job?

The primary requirement is that the capacity for interactivity, collaboration and adaptability for the job.

Will these aforementioned competencies change in future? (Less or more important?)

There is more than a change: it is a major break and the genesis of a new ecosystem in economy and culture.

Which competences/requirements will be the most important ones to excel in the job(s) in the near future?

These skills require a real change in their perception of their company, its operations and their relationship to it.

5.9.4 Further results

In the course of six interviews with further companies, some strategic and personal information were given, and anonymity was asked by interviewees for different reasons such as competition with opponents and time saving for others. Those 6 companies were 2 very small companies (under 5 people), 2 small companies (between 6 and 30) and 2 companies over 30 employees.

5.9.4.1 Current Competences and Skills

Internet related jobs are a specific combination of technical skills, communication skills and behavioural skills. This is the result of the fact that the job is done by one person or by a small team where people have to interact and to cover the whole needs of the organisation.

The following competences are required as well:

- Adaptability
- Creativity
- Imagination
- Natural orthographic and grammatical skills in French
- Natural search engine optimisation knowledge
- Oral and written communication,
- Online marketing knowledge

The final decision to engage someone is done on credibility, personal trustworthiness, and appearance of personal engagement.

5.9.4.2 Prospective competencies skills

The requirements will not change in future. Of course, it will be essential to follow evolution on internet technology, but communication will stay the decisive

competence. Mobility and use of foreign languages is not needed unless there will be specific changes in the company business.

5.9.4.3 Current Training and Education Offer

An important gap is noticed by company managers in regard to communication and personal soft skills training (personal investment, team spirit).

5.9.4.4 Prospective Training and Education Offer

Trainings are designed for specialised jobs in large organisations. Needs for SMEs and very small organisations are not taken into account.

In those jobs, technical skills are needed in the recruitment process. However, decisions are made subjectively. As the qualification process requires mainly numeric evaluations and skills which are not easily measurable, company managers ask for a different way of training skills (including personal skills).

6 Conclusion

The quantitative and qualitative research resulted in a large number of data. Especially the telephone interviews helped to gain a thorough impression of the current and prospective industry needs in regard to employees' competences and the training and education offer. In the following, a conclusion of the most important and striking results will be made. This means that only answers which were given repeatedly are taken into consideration.

In regard to the competences and skills that are currently needed in the SMEs, it was shown that communication skills are currently very important and will not become less valuable in future. With communication abilities, the interviewees refer to everyday-requirements for the daily work. Communication in this context comprises argumentation, presentation, and persuasion.

Furthermore, teamwork abilities are and will be very important according to the interviewees. As many companies have to cope with project-related work, it is essential to show one's ability to work in teams. Lastly, language skills (especially English) are required in most of the SMEs. Generally, the interviewees think that the currently required competences will not change significantly in future. The only major impact on the competences is seen in the changing technologies which the employees will have to adapt to in future.

What becomes obvious in regard to the training and education offer is the need for training-on-the-job. It was figured out that many applicants meet the basic educational requirements, but need further internal training to learn more about company-specific hard- and software. According to the companies, there are sufficient well-qualified workers in the respective country. However, most of the companies also employ workers from abroad. In order to facilitate better employment procedure, many companies uttered the need for a less bureaucratic procedure in regard to work permits and further legal issues.