Leonardo da Vinci - Transfer of Innovation

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SME 2.0 – Proactive Networking in Business Management of European SMEs

SME 2.0 COMPETENCE FRAMEWORK

"Under the influence of numerous factors (globalization, financierisation, client and supplier relations within businesses, generalization of ICT and direct logistics flows, the use of training in new work organizations has been modified to make it an element of the act of production. Its function is not so much to acquire formal new knowledge as to provide a new type of co-operative or reflective time within a business and to apply the exercising of initiative or the appropriation of collective standards and routines useful for horizontal co-ordination".

"What is ongoing training for?" Jean-Louis Dayan and Jenny Eksl Strategic Analysis Centre, June 2007

Education and Culture DG
Lifelong Learning Programme

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Introduction 3
From SMELearning Methodology to SME 2.0 Competency Framework 4
Recommendations based on the conclusions of SMELearning Methodology 4
SME 2.0 web service for learning 7
Conclusions of the SME 2.0 needs-analysis 10
Recommendations based on the survey 12
Integrating SMELearning methodology into SME 2.0 course 16
SME 2.0 Competence Framework 19
Curriculums 19
Information and Knowledge Management 20
Project Management 22
Online Marketing 24
Human Resource Management 26
Medium related skills in Business Management of SMEs 28
Course Components related to the competence framework 29
Annexes 31
Annex 1 Glossary 31
Annex 2 Initiatives of the European Union 35
Annex 2. Bibliography 36

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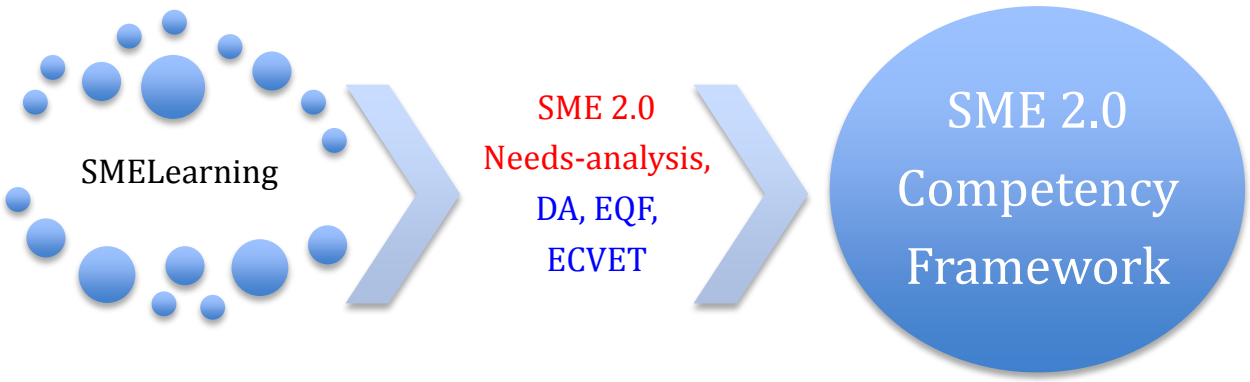
Introduction

The aim of this document is to map the competences of managers and employees of the SMEs we want to develop through the SME 2.0 courses. There are a huge amount of courses for SMEs on the Internet, dealing with business management, but we hope to elaborate a novel solution in terms of methodology and learning content, and through techniques used in the delivery too. The innovation will be established:

- **by adopting the outcome of earlier LdV project (SMELearning);**
- by analysing the results of the SME 2.0 (non-representative) survey carried out in Hungary and Italy in 2012 – involving 92 employees and managers from Hungarian, and 32 from Italian SMEs;
- By integrating the European initiatives for SMEs formulated in the Europe 2020 strategy, Digital Agenda (DA);
- By building in the recommendations of the European Parliament on LLL key competences and on the establishment of European Qualification Framework (EQF, ECVET).

In the first part of the document we review the main ideas derived from the recourses listed above, and in the second part we described the SME 2.0 Competence Framework based on these resources.



The principal concepts of SME2 are: SME 2.0 courses are intended to develop competences in the area of ICT in business, utilizing the offerings of new networking technologies in the daily work of Small and Medium Enterprises. The courses will demonstrate how SMEs can manage

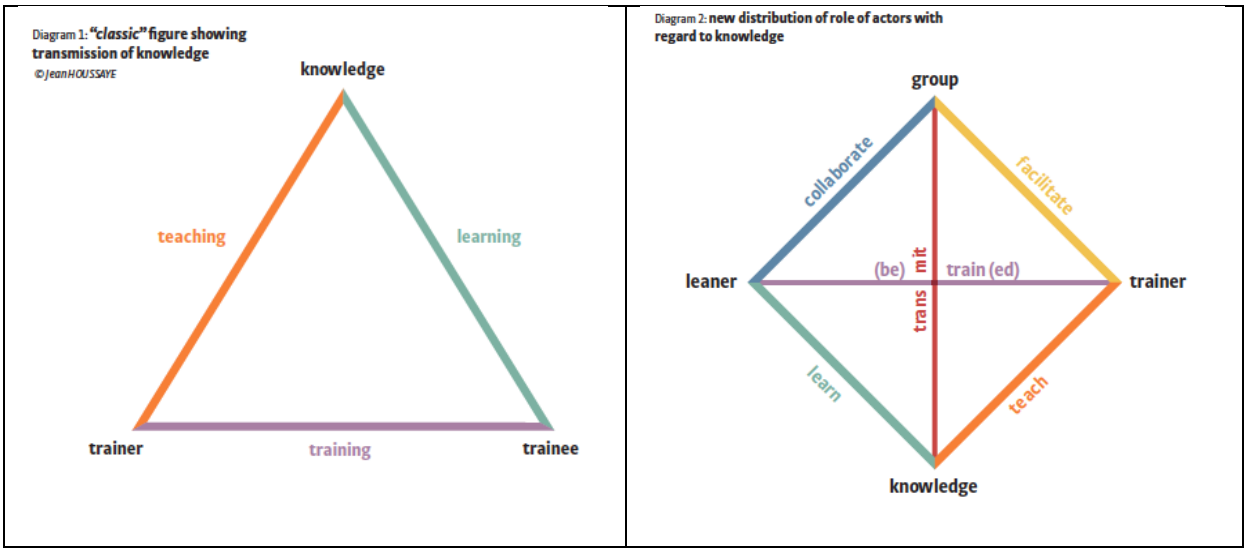
business processes much more effectively by using ICT, and how they can reduce costs at the same time through the use of appropriate free tools.

From SMELearning Methodology to SME 2.0 Competency Framework

Recommendations based on the conclusions of SMELearning Methodology

In the SME 2.0 Competence Framework we adopt the methodology elaborated in the SMELearning LdV project (2005-2007), as detailed in the document "*Strategic Recommendation: How to make information technology work for the training in your SME*", by Michel Lisowsky as an output of the SMELearning project[1] in 2007. Here, the main ideas of this research work are presented.

"With access to multiple sources of information and the possibility of organizing, exchanging them with others or adding to them through viewing conferences of specialists, and with access to powerful networks that allow the limits of space and time to be overcome, **the 21st -century student is no longer a tributary of a single source of knowledge, and is being exposed to an ever-increasing risk of feeling boxed inside the old educational triangle.** If we want to speak of true innovation, of breaking down the barriers in the knowledge transmission space, of diversifying one's methods, **we need to alter the rigid geometry complete and introduce other agents and vectors**, as we propose in the following diagram."



[1]http://smelearning.romit.info/

Recommendation 1.

In SME 2.0 courses the new networking tools should help employees of SME's to improve the effectiveness of the processes displayed in the four quarters of the figure, for both individual activities and collective works.

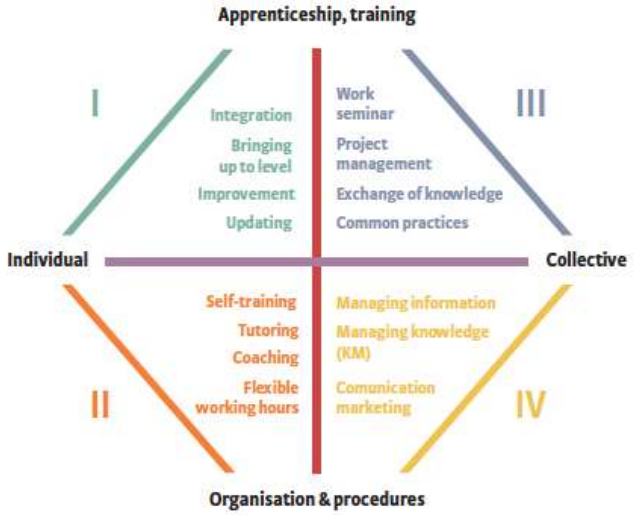
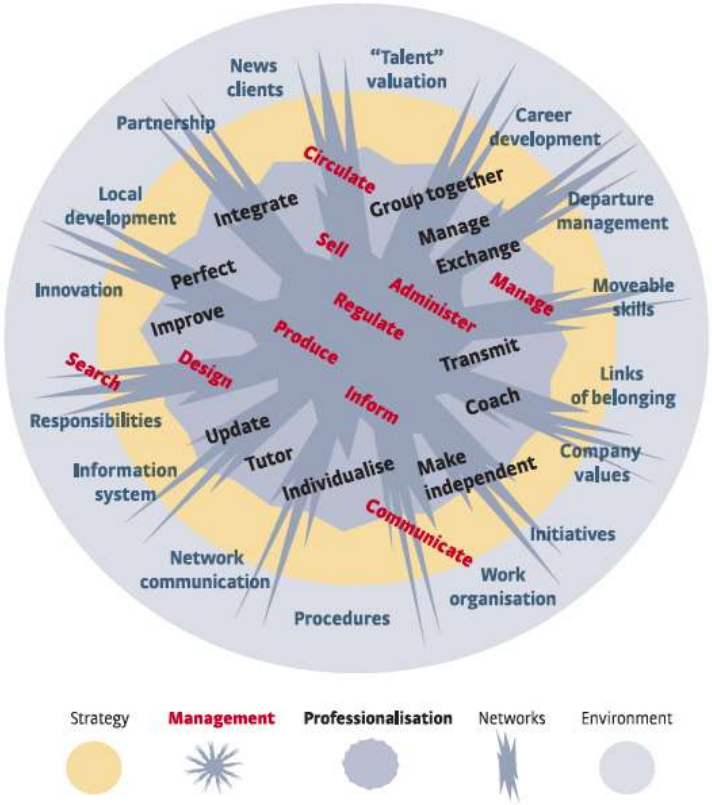


Diagram 4: ***"space/time"*** **of training in business**



"**The approach to training based on work situations will lead to processes that allow the various types of individual and collective know-how to interact with each other and develop new skills, which in their turn contribute to innovation.** These new types of knowledge will become the visible and invisible intellectual capital of the business, which must be

capable of being circulated as new information."

Recommendation 2.

An SME 2.0 course has to be related strongly to the work situation and has to develop competences in: project management, managing information, managing knowledge, exchange of knowledge, common practices, communication marketing. A course also has to support individual learning and facilitate tutoring and coaching during training.

Requirements of eLearning courses for SMEs

Information
A huge amount of information is already available within the company.
The challenge: how can this knowledge be channelled and utilized.
Communication
Information must be communicated and circulated within the company**.**
The challenge: how can communication tools make this circulation much more effective.
Performance level
Almost every SME integrates ICT in its business at a certain level.
The challenge: how can performance levels are increased by appropriate use of tools.
Infrastructure development
The simple equipping of workstations is not enough.
The challenge: how to start a company level project facilitating teamwork and exchanges of skills.
Visible skills
The challenge: how to use ICT to make existing skills and knowledge within the employees of the company more visible.
Learning-by-doing
The challenge: how to ensure that systems and support should be the same for both work and training.
"Emerging" knowledge in the business
The challenge: how can the deployment of ICT in marketing and communication be anticipated and organized so that they can be quickly and effectively integrated into new work configurations.
New organizations and new knowledge
The challenge: how can ICT be used to encourage and add value to the business communication network.

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The transformation of the web with the emergence of the Web 2.0 phenomenon offers the potential to modernize many business processes. The so-called "pre-ICT" innovations (like robot-technology) impacted on production by undertaking many unskilled, repetitive tasks. "But the networking tools of the (so called) "post-ICT" innovations have impact first of all on organizations themselves. *SMEs are becoming forced to input and output a regular flow of information and communications…. Management of information and communication can no longer be concentrated in just a few hands…* ***there is undoubtedly a direct link between ICT and new training methods in the way in which the SME treats these two "foreign bodies" that it finds so difficult to introduce into its "finished world", even if, as has been said recently, business managers do not see the relation.***"

Distribution of ICT tools according to activity type	
• Electronic diary database • HTML page publication • Publication • "Versioning" → Search → Design → Provide	• Organising contents • Agendas, timetable • Task management • Workflow → Regulat → Administer → Manage
→ Circulate → Sell • Library, peer-to-peer etc • Other Web 2.0 tools • On-line shops	→ Inform → Communicate • E-mail • Site, web portal, Intranet • Video conferencing

The main concepts formulated in the study give the basis for building up the SME 2.0 Competence Framework.

Recommendations 3.

The same ICT tools should be used in the learning environment as in the daily work of the company. Competences to be developed: use of IT tools for revealing and circulating information inside the company (1); use of IT tools for marketing and communication; use of IT tools to capture the knowledge and skills of the employees (2); use of IT tools to facilitate projects for utilizing the power of teamwork.

SME 2.0 web service for learning

"By a kind of semantic logic, we have now coined the expression "web services", that is, services that **for the simplest products allow the users themselves to design "training units" and for the more complex products allow complete courses to be generated.**"

One of the most important conclusions of the SMELearning survey was that the "increased productivity" of training offered for SMEs could be ensured through the **flexibility and modularization of training content, and the diversity of training situations.** The main points to remember when planning an eLearning course for SMEs are as follows:

Practice oriented
It should involve content of concrete and specific relevance to the work-situation, and to the person using them.
Integrated
It should be designed in such a way that it can be integrated into the work-process and be accessed at any time within this process
Modularised
It should be structured in terms of brief modules, which can also be accessed individually.
Interactive
It should make available to their users facilities and tools (such as checklists) with the possibility of accessing other modules, elements and levels from the module/programme in question.
Make broader communication possible
It should integrate forums, and access to internal and external tutors
Open and flexible
It should involve links to other matters related to the user's specific line of business, incl. handbooks and manuals.

The learning environment has to be structured so that employees may**:**

- train themselves;
- participate in working groups;
- receive information freely;
- follow on-line conferences;
- download documents according to their needs and availability at a particular time.

The training modules should no longer simply constitute a complete cycle that has to be followed in total, and subscribed to according to a rigid timetable. Instead, they should be structured to offer training units "stored", modelled and reproduced whenever needed. The advantages offered by ICT are in the structuring information and the monitoring of activities, thereby impacting on the "return on investment" cycle by the continuous assessment of skill levels optimized for increased competitiveness.

Recommendation 4.

(1) support the elaboration of a "knowledge strategy" for companies based on new information and communication tools.

(2) enable SMEs to "transform its specific nature into an asset in order to maintain and develop itself, ***the general strategy being to open itself to local environment in order to draw from that environment the resources that will help it remain competitive, to strengthen itself through association, and to find new clients.*** *This cannot be done without distinguishing oneself from the others and especially without doing what the others are (still) doing, i.e. without a minimum of change and innovation."*

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*(3) support better management of the business's resources that innovation depends on (**according to the study, 80% of what a business needs is already within its walls!)***

(4) understand local skills and expertise, and the level of competition.

(5) refer to the state of the art and good practice guides (benchmarking)

(6) find opportunities for working together within a territorial network, or territory, in order to share resources.

(7) design a communication plan ("I say what I do") and offer information ("I do what I say"), thus showing the level of commitment of the business internally and externally.

(8) make use of new employee skills to ensure better management of client relations (on-line assistance, information, demonstration, speed of marketing of new products, etc.).

(9) submit rights of ownership of "models" applied, and circulate them within business networks, to highlight opportunity for commercial exploitation.

An SME 2.0 course has to facilitate the organization of "just in time" and "just what is needed" training to meet the individual and collective needs defined, in order for the new experiences to be capitalized on.

The SME 2.0 Competency Framework (CF) should be based on the concept **'that any item or statement, be it spoken, written, sound or visual, can be an educational resource provided its use in the training process contributes to a learning activity'**. "Even today, the relative paucity of resources (especially for job-orientated resources) is one of the principal obstacles to ICT-based training. It still costs too much to design and produce multimedia digital resources, i.e. resources that offer a variety of support and training facilities that can reproduce the interactivity needed for all forms of learning. Only the largest businesses can afford the money necessary for producing such resources in large quantities and "depreciate" them over considerable numbers of staff members.

The SME 2.0 course has to enable SMEs to:

- make human resource management systems, computing and production resources consistent;
- reduce communication and marketing costs;
- optimize "client " relations through reduction of time and distance.

Other important recommendations referred to in SMELearning applied in SME 2.0 are:

"*The learning material can be compiled by the learners themselves, as a result of their involvement in the activities of the business. The primary role of the computer-learning platform does not involve creating equipment, but facilitating the transformation and communication of ideas as knowledge. The learning environment, either computerized or TIC-based, consists first and foremost of a professing tool that allows the creation and transformation of knowledge to be facilitated. The great advantage of this approach is that it allows the learning material to reflect and facilitate the various contexts in which learning is organized within SMEs".(Graham Attwell)*

"*If the work of organizing knowledge and know-how into memory takes the form of self-construction of the subject and therefore its opportunities of exercising independence, it can only be expressed completely through interaction with others, especially in order to make the difficult transition from a pragmatic context to a normative context****". "****Categorizing and memorizing know-how: which educational device?****" (****Gérard Becousse)***

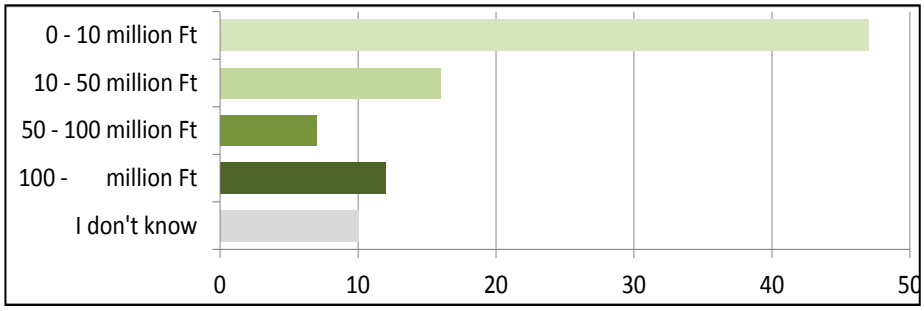
Conclusions of the SME 2.0 needs-analysis

The SME 2.0 online (non-representative) survey was carried out in March of 2012 by involving the managers and employees from 92 Hungarian and 32 Italian SMEs.

As the target country is Hungary the SME 2.0 CF will be based on the result of the Hungarian survey.

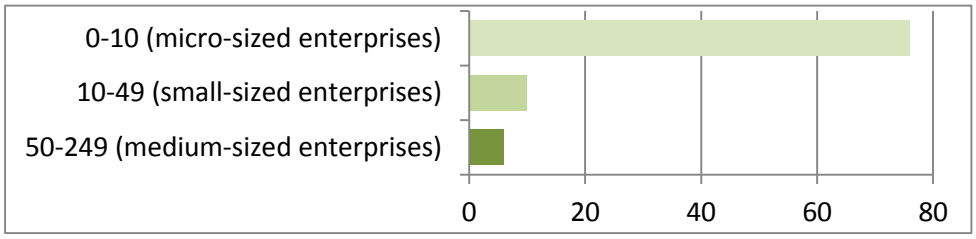
The next diagrams provide with a general overview on the distribution of the respondents companies.

Turnover last financial year



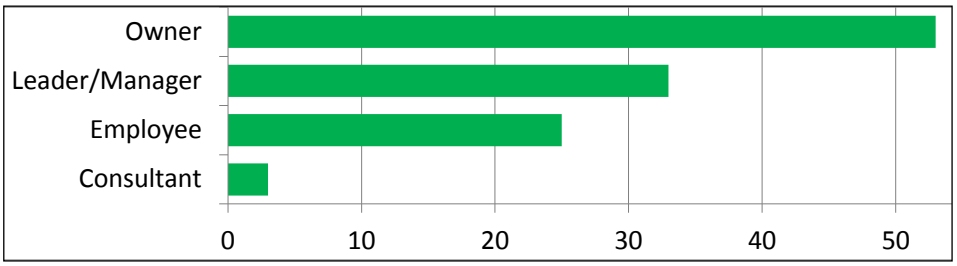
Evaluation: 92 answers were given, 82 knew and among them 51% have turnover no more than 10 million FT.

Number of full time employees



Evaluation: 92 answers were given, and among them 83% are micro-sized enterprises.

Position:

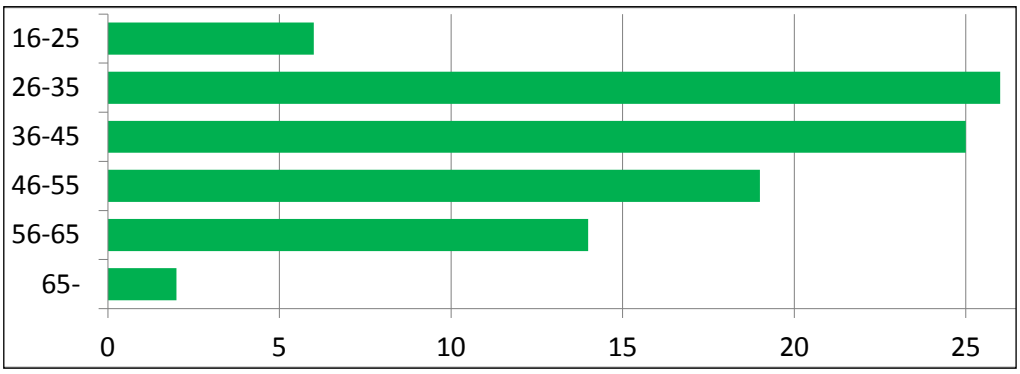


Evaluation: among the 92 respondents 58% are owners, 36% are leaders/managers and only 27% are employees (there are overlaps because these positions are not mutually exclusive).**Other field:**

accountancy; administration; advisor; agricultural mechanical engineering design; architecture; assistant; audit; banking sector; beauty / manicure and pedicure; billing; building industry; business consulting; business owner; cashier; chief executive officer; chiropractor; coach, organizational development, HR specialist; coordinator, appraisers; development; development teacher; e-commerce coordinator; education; education manager; entrepreneur; environment; event management; finance; Financial consultant; financial manager; fitness owner; foreign language teacher; foreign trade; higher education; individual entrepreneurs; insurance; IT; IT engineer; leader; logistics, personnel consulting; manager; managing; managing director; marketing; masseuse, security consulting; network marketing; office manager; online marketing manager; operational management; planning, technical supervision and consultancy; portfolio management; program development and graphologist; programmer; project manager; proposal writing; research leader, macroeconomic; sale; sales; shopkeeper; small business advisor; teacher; telephone service; textile industry; trade; translator

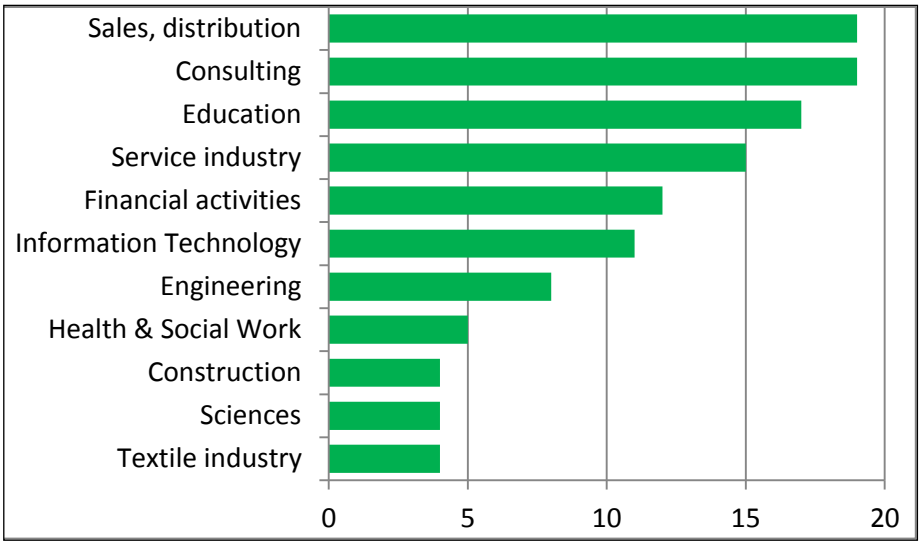
Evaluation: Since this question was answered freely, the result has large variation and cannot be evaluated statistically.

Age



Evaluation: 92 answers were given, and among them 55% are between 26 and 45, 21% are between 46 and 55 years old.

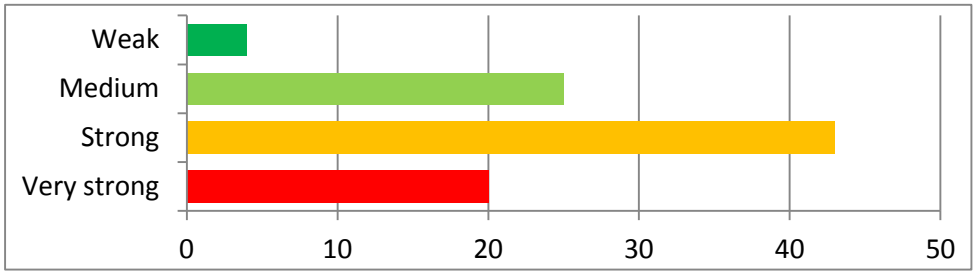
In which of the following sectors is your company active?



Other fields: Transport / Logistics; Environmental Technologies; Hospitality; Pharmaceuticals; Agriculture; Creative Arts; Mechanical/metallurgy; networking; fitness and health; translation service; economic research; spring production; sporting activities, livestock; organise and manage trainings ; mediator of the Polish and Hungarian markets; development projects, implementation, curriculum development; graphology - personnel selection, team development, self-knowledge, career, relationships.

Evaluation: 92 answers were given, and among them the most common are Sales, distribution; Consulting; Education; Service industry; Financial activities; Information Technology (of course, many more areas were indicated).

How is the level of competition in your main market(s)?



Evaluation: 92 answers were given, and among them 69% feel the level of competition strong.

We can conclude from the results of the first part of the questionnaire that SME 2.0 will focus on micro- and small-sized companies with a less than 10 employees. The most important thing we have to pay attention to regarding this target group is that the owner and his/her relatively few employees have to personally cover several competences (ICT, designer, developer, etc.) needed for the business.

Recommendations based on the survey

As regards the ICT infrastructure, the most important figure for us is the following:

I. Infrastructure

1. Among the 76 micro-sized enterprises 22% have no business mobile phones and **56% use 1 or 2 business mobile phones.** Among the 10 small-sized enterprises 3 have more than 10 business mobile phones. **A**mong the six medium-sized enterprises two have more than 50 business mobile phones.

2. Among the 76 micro-sized enterprises 64% have 1 or 2 business computers, among the 10 small-sized enterprises only two have less than 10 business computers, and among the six medium-sized enterprises two have more than 50 business computers.

3.**Most companies (89%) have Internet connection**.

- **66% use the Internet to find relevant business information.**
- **87% use the Internet to find information necessary for the work.**
- 93% have indicated that **all employees use the Internet for their work from those who work with computer.**

4. **Only 12% of SMEs use tablet PCs, and 46% use smart phones**.

Recommendation 1.

Most of the companies are equipped with a basic IT infrastructure to integrate ICT into the business, and they have Internet connection to take part in online trainings.

The usage of tablet PCs is very low; there is a need to develop competences here. The usage of smart phones is not extremely high, so there is a need for further development also.

II. Company website

1. 63% of the companies have a web site , but it's surprising that a third of them do not!

About half of them (52%) stated that updating functions normally, for the other half updating can take days. One in six respondents report that updating takes up to more than one week.

2. Two-thirds of the respondents indicated that the home page might be improved. Just over 10% report with a "perfect" answer, clearly indicating that there is much room for improvement.

3. 77% of the websites provide a knowledge base and 48% provide sales. Importantly services such as forums, blogs and online payment are available on less than 20%.

4. 32 (37%) companies have no website, and among them 44% have indicated that: No expertise to guide us! Interestingly, the second most common (22%) response if that it is not considered important to have Web pages.

Recommendation 2.

There is a need to develop competences for creating and managing company websites with free ICT tools. Most of the micro- and small-sized companies cannot effort to employ somebody who has an IT qualification.

III. IT qualification

Among the **74 micro-sized enterprises 36% have no employees who would have been IT qualifications,** among the 10 small-sized enterprises all have employees who have IT qualifications, and 4 have more than 10of these employee, among the 6 medium-sized enterprises no have more than 10 employees who have IT qualifications, and one of them no has these employees.

Recommendation 3.

In the most cases the SMEs cannot effort to employ highly qualified IT professionals. The digital literacy of the employees - qualified in other fields – has to be increased. Their tasks in the business often require them to obtain ICT competences at more and more increased levels. An SME 2.0 course has to offer small learning pieces at different levels: for beginners and for managers too. We will not solve all needs at once in the frame of SME 2.0 project, but what we can do is to create a platform with an initial set of learning content, which is then broadened continuously.

IV. Training, learning

1. Most of the 92 responses show that people prefer learning from the Internet, and do not favour organized courses.

2. In 23% of the surveyed companies, though employees use computer/internet is considered important for their work, no aid has been given to support learning. **Work-time support for learning is given in less than 30% of companies, but 60% of them do not financially support training.**

Recommendation 4.

These figures demonstrate the special nature of the SME: normally they cannot allow employees to take part in long face-to-face training courses, or even in long term online course. This supports the objective of SMELearning that there is a need for small, online learning materials, available all the time, to help the employees to build their own learning paths related to their work

V. ICT in the business

In this section contains diagrams crucial to the planning of SME 2.0 courses. SME 2.0 courses will be built up around four main topics:

- Human Resource Management (HR);
- Project Management (PM);
- Information and Knowledge Management (KM);
- Online Marketing (OM).

The courses do not intend to develop competences on the listed fields, but to develop competencies to use ICT tools in these fields. The next part of the questionnaire was interested in determining to what extent ICT tools are used in the companies' business at the present time. The figures show that **for HR only a quarter, and for PM only a third of the companies use IT tools. To follow up, specific** questions for activities related to each of the fields (HM, PM, KM, OM) were asked.

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Human Resource Management 1. Almost 80% of the companies do not use ICT to evaluate the efficiency/output of employees 2. Only 55% of the companies use ICT to support the communication between employees and management. 3. In less than 20% of the companies is ICT used for identifying training needs. 4. Only 22% of the companies use ICT to monitor and organize existing skills for harnessing in business.	**Knowledge Management** 1. For about 50% of the companies use ICT for facilitating collaboration among the staff. 2. Only 9% of the companies use ICT for identifying and storing core knowledge within the company 3. Only 20% of the company use ICT in order to re-use knowledge and prevent duplication of tasks 4. Only 27% of the companies use ICT to create central repository of
core knowledge, resources accessibly by staff **Project Management** 1. Only 35% of the companies use ICT to control the deadlines of the project 2. Only 18% of the companies use ICT to control the quality of the product of a project 3. Only 19% of the companies use ICT for creating re-usable standards for the projects 4. Only 11% of the companies use ICT to reveal the strength and weakness of the company	**Online marketing** 1. Only 24% of the companies are using ICT for gathering feedback/information from customers. 2. 38% of the companies use ICT for developing marketing strategy for product/service. 3. 26% of the companies use s ICT to increase the hits on the company's product/services

Recommendation 5.

There are strong needs to develop competences of SMEs' employees and managers to use ICT in all of the four fields (PM, HR, KM, OM). SME 2.0 courses have to offer training materials on IT tools in these areas.

VI. Applications, web 2.0 tools in business

- The e-mail (96%) and Skype/MSN (67%) lead as a communication tool; others (like forums, video conferences) still lag far behind.
- Word processor (93%) and spread sheets (89%) programs are very widely used, but further applications like graphical software, programming tools are not used at all.
- Document Management (57%), Invoicing Management (52%) and Finance/Accounting (37%) tools are largely known. The usage of HR support (11%), decision support (13%), time tracking (14%), data analysis tools (22%) is very low!
- ERP systems are used only by 10% of the companies

The diagrams represented the usage of Web 2.0 tools with the red lines showing the lack of competences. The questions were of the form: Does your company use tools for …

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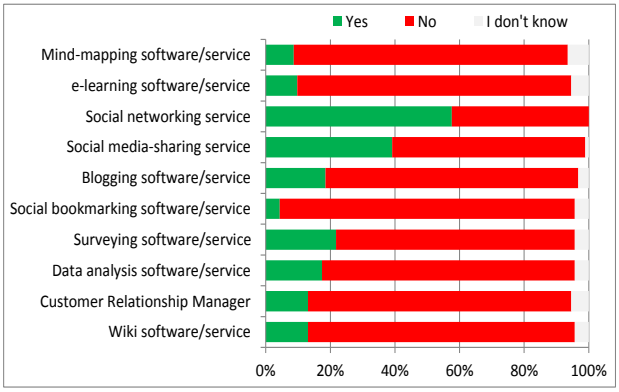

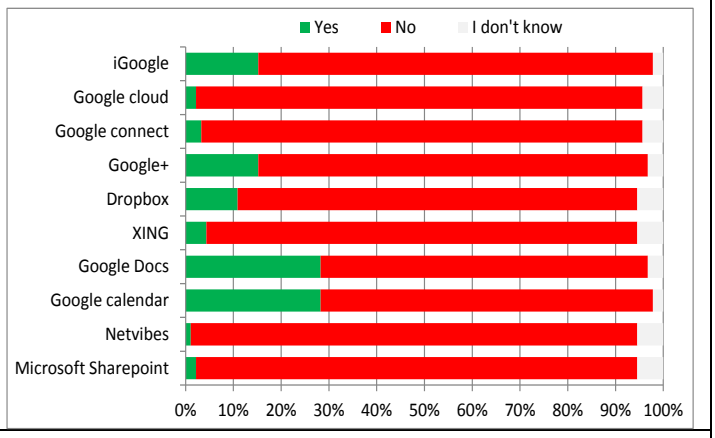

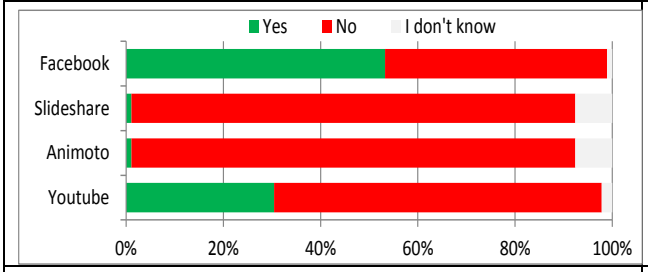

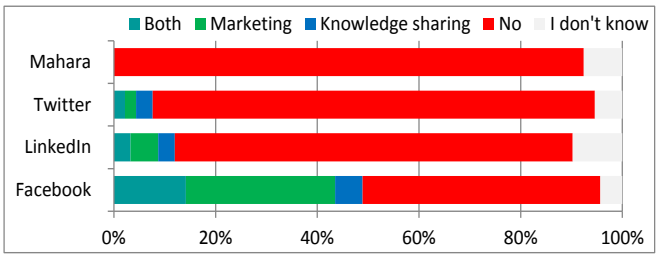

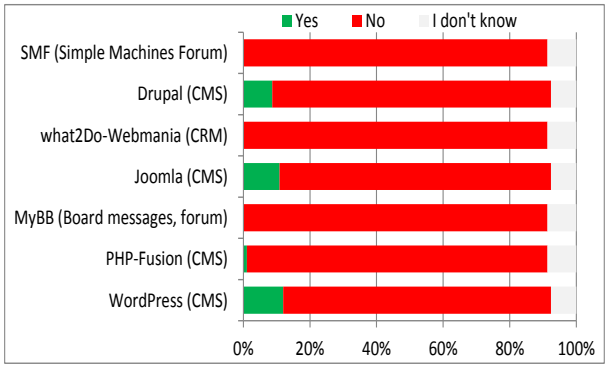

Recommendation 6.

The red bars show that the employees of SMEs are not really aware of the business potential of free web 2.0 tools, in spite of the fact that there are a lot of learning materials on the web. SME 2.0 courses, showing new methodologies and new ways of delivery, need to create improvement in this area.

Integrating SMELearning methodology into SME 2.0 course

Recommendation 1.	**Action**
In SME 2.0, courses the new networking tools should help employees of SME's to improve the effectiveness of the processes displayed in the four quarters of the figure, ensuring support for both individual activities and collective work.	Integrate the free web 2.0 tools into the learning content
Recommendation 2.	
SME 2.0 course have to be related strongly to the work situation and have to develop the competences of: project management, managing information, managing knowledge, exchange of knowledge, common practices, communication marketing. They also have to support individual learning, and support tutoring, coaching during the training.	- The SME 2.0 modules have to deliver practical, usable knowledge by using practice-oriented methods. - Focus on using eLearning methods and tools to support the individual learning in all modules but provide coaching if needed.
Recommendations 3.	
The learning environment should use the same ICT tools as in the daily work of the company. Competences to develop: use of IT tools for revealing and circulating the information inside the company (1); use of IT tools for marketing and communication; use of IT tools to make knowledge and skills of the employees (2); use of IT tools to utilize teamwork in a project.	- During the course the participants have to work with the same online tools which are offered for the business management (learning by doing), so that they should get usable experiences.
Recommendation 4.	
(1) support to elaborate "knowledge strategy" of the company based on new information and communication tools.	As the strategy depends on the sector, SME 2.0 course shave to involve the participant in online collaboration in order to develop a "knowledge strategy".
(2) enable an SME to "transform its specific nature into an asset in order to maintain and develop itself, the general strategy being to open itself to local environment in order to draw from that environment the resources that will help it remain competitive, to strengthen itself through association and find new clients. This cannot be done without distinguishing oneself from the others and especially without doing what the others are (still) doing, that is, without a minimum of change and innovation."	SME 2.0 courses have to identify ICT tools: - to store and organize knowledge databases, through which the employees and managers of the company will be able to utilize the professional assets gathered by others.
(3) support better management of the business's resources that innovation depends on (according the study 80% of what a business needs is already within its walls!)	- making visible the hidden knowledge of the employees.
(4) expose the local skills and expertise and the level of competition.	- making visible special skills and expertise

Integrating SMELearning methodology into SME 2.0 course	
(5) refer to the state of the art and good practice guides (benchmarking)	- making visible best practices
(6) find opportunities for working together within its territorial network, or within a territory, in order to share resources.	- supporting online collaboration
(7) design a communication plan ("I say what I do") and offer information ("I do what I say"), thus showing the level commitment of the business both internally and externally.	- supporting effective inside communication
(8) make use of new skills of employees to ensure better management of client relations (on-line assistance, information, demonstration, speed of marketing of new products, etc.).	- helping reveal the new skills of the employees in CRM
SURVEY	
Recommendation 1.	
Most of the companies are equipped with a basic IT infrastructure to integrate ICT into the business, and they have Internet connection to take part in online trainings.	Offer fully online training, and contact lessons only if required.
Recommendation 2.	
There is a need to develop competences for creating and managing company website with free ICT tools. Most of the micro- and small-sized companies cannot afford to employ someone with IT qualification.	Free tools for creating and managing websites should be a crucial part of the course
Recommendation 3.	
In the most cases the SMEs cannot afford to employ highly qualified IT professionals. The digital literacy of the employees has to increase, as their business activities often require them obtain competences in the use of ICT at increasing levels.	SME 2.0 course should focus on the tools, which can be used without high IT skills.
Recommendation 4.	
The findings demonstrate the special nature of the SMEs: normally they cannot allow for their employees to take part in long face-to-face training course or even in long term online courses. This result lends support to the statement of SMELearning: there is a need for small, online learning materials, available all the time, to help the employees to build their own learning paths related to their work	Offer small, work-oriented learning pieces instead of mainstream courses.
Recommendation 5.	
There is strong need to develop competences of SMEs' employees and managers to use	All the planned fields are needed according the results

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Integrating SMELearning methodology into SME 2.0 course	
ICT in all of the four fields (PM, HR, KM, OM). SME 2.0 courses have to offer training materials on IT tools in these areas.	of the survey.
Recommendation 6.	
The red bars show that the employees of SMEs are not really aware of the business potential of free web 2.0 tools, in spite of the fact that there are a lot of learning materials on the web. SME 2.0 course with new methodology, new way of delivery has to create a chance for improving this situation.	Put strong emphasis on the free web 2.0 tools in the learning content.
Recommendation 6.	
The usage of tablet PC is very low, so there is a need to develop competences here. The usage of smart phones is not extremely high, but there is an increasing need for further development here too.	According the trends the usage of tablets and smart phones is growing continuously. The courses have to include contents on the free tools used on these devices.

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SME 2.0 Competence Framework

Curriculums

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Information and Knowledge Management

Document and Workflow Management, Enterprise Content Management, Information Life Cycle Management, Knowledge Base Management

EQF: Level 4
SCQF: Level 5

Rationale

This module aims to provide an overview of fundamental ideas about knowledge and dig into the aspects of knowledge relevant to a small or medium enterprise. We will focus mainly on three topics: knowledge management in a new, web-enabled environment which integrates several new technologies (Living Lab), knowledge management in virtual communities, collaborative learning. In the chapter related to collaborative learning we will become acquainted with the main features of popular, free learning management software.

Learning objectives

The course helps the students

- to understand the basic aspects of knowledge management.
- to choose some relevant knowledge management techniques and tools.
- to manage a simple knowledge management project by using online IT tools

Your project task: your company wants to start a new product and you have the task to carry out a marketing research. You have to gather information on the web, systematize them and create a presentation of the results.

Learning outcomes – competences

Participants will be able

- to explain the main objectives of knowledge management within a web-enabled Living Lab
- to develop and understanding of the main elements of information management systems- such as: file management, network services, Internet tools, virtual communication
- to examine the possibilities provided by the Internet for information management
- to explore software, applications, tools used for information management
- to use free web 2.0 tools for gathering, managing and sharing online information for business processes, for defining new projects, for developing new concepts
- to manage knowledge-related support services to cooperate in virtual communities
- to use collaborative learning tools and learning management systems

Knowledge

- Definition of knowledge and knowledge management
- Knowledge management within a web-enabled Living Lab
- Knowledge management in virtual communities
- Collaborative learning

Medium related skills

1. Browser (Firefox, Chrome)
2. Mail (Gmail, Yahoo)
3. Search (Google search, Google Alert)

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4. RSS (Google Reader, RSS Feed Reader)
5. Office tools (MS Word, MS Excel or OpenOffice or FreeOffice equivalent)
6. Office online collaborative tools (Google Drive/GoogleDoc)
7. Dashboard (Netvibes, Widgami)
8. Blog (Wordpress, Blogger)
9. Knowledge base (Wikipedia)
10. Social bookmarking (Diigo)
11. Microblog (Twitter, Tumblr)
12. Social networking (FaceBook, Google Groups)
13. Time scheduling (Google Calendar)
14. Online notepad (Evernote)
15. CRM
16. Wiki (for example Wikispace)
17. eLearning environment (such as Moodle)

Soft skills

Personal Communication skills
Interviewing skills
Moderation skills
Ability to gather information
Ability to analyse information
Ability to classify information
Presentation skills
Analytical thinking
Ability to work in a team

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Project Management

Scope/time/cost/management, activities, objectives, artefacts, project management tools, systems and approaches. quality, human resource, risk, procurement management

EQF: Level 4
SCQF: Level 5

Rationale

This module aims to provide an overview of the features of a project and the initial and immediate issues that arise in managing a project. You will then gain an appreciation of the range of planning techniques available and the situations in which it is appropriate to use them. The module will introduce some of the key techniques that help managers to monitor and control projects, and consider what approaches work best in particular circumstances. Finally, the module will examine the particular issues that arise in bringing a project to a close, and ways of evaluating a project on its completion. The key components of project closure will be identified and discussed and their importance in ensuring that the aims and objectives of a project have been successfully attained will be explored.

Learning objectives

The course helps the students

- to understand the basic aspects of project management.
- to learn how to plan and manage a simple project.
- to use the IT tools of project management.

Your task
Elaborate a project/business plan, present/publish the project vision, create the documentation, for running the project.

Learning outcomes - competences

Participants will be able

- to identify the core features of a project and to identify project stakeholders,
- to present spectacular project plans and virtual presentation of implementation, progress and carried out activities,
- to make graphic representations of project tasks, context and time scheduling (Gantt diagram) by using spread sheet software or special software tools,
- to select and use online collaboration tools for managing project,
- to cooperate with partners online and co-ordinate the surface for that purpose,
- to prepare and share basic documents online used for project management,
- to support communication activities with online tools and choose the right tool for this purpose,
- to use network tools for project implementation and monitoring.

Knowledge

1. Project Planning
2. PM applications and software
3. Project Management
4. Communication
5. Context and time scheduling

Medium related skills

1. Browser (Firefox, Chrome)
2. Mail (GMail, Yahoo)

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3. Search (Google search, Google Alert)
4. RSS (Google Reader, RSS Feed Reader)
5. Office tools (MS Word, MS Excel or OpenOffice or FreeOffice equivalent)
6. Presentation (PowerPoint, Prezi, MindMap)
7. Project management software (MS Project, OpenProject)
8. Project management system (Redmine)
9. File and information sharing (Google Docs, Google Drive, DropBox, Google Groups)
10. Communication tools (Skype, VideoConferencing)

Soft skills

Personal Communication skills
Interviewing skills
Moderation skills
Ability to gather information
Ability to analyse information
Ability to classify information
Presentation skills
Analytical thinking
Ability to work in a team

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Online Marketing

Enterprise Marketing Automation, Market Research, Online Shops, Order Management, Customer Relationship Management (CRM). Call Centre Management, Help Desk Management, Online Customer Support, Service Organization Management

EQF: Level 3
SCQF: Level 5

Rationale

This module aims to provide an overview of fundamental ideas about online marketing relevant to a small or medium enterprise. We will focus mainly on the topics which are related to the daily marketing activities of an average SME, such as marketing newsletters, online adverts, search engines, social media marketing etc.

Learning objectives

The course helps the students

- to develop an understanding of the main elements of Online Marketing - such as: websites, content management system, learning management system, blog, and social networks
- to examine the possibilities provided by the Internet for Online Marketing
- to explore and to use and software, applications, web 2.0 tools for Online Marketing

Learning outcomes - competences

Participants will be able

- to know the possibilities of mobile tools
- to build simple personal websites
- to build simple company websites with the use of content management systems
- to build professional private or company blogs and publish content by using a well-known blogmotor
- to compile company newsletters and to carry out a simply e-mail marketing campaign.
- to create, publish and share promotion materials
- to share different types of public content on the Internet by using marketing orientated content sharing systems
- to create and publish personal or company e-portfolio
- to recognize and evaluate to marketing opportunity in the social media tools and social networks. They will be able to use these for marketing purposes

Your task:
Promotion of a new product/service: create marketing materials, publish them ont he web by using online tools. Planning and establishing a simple website for the company

Knowledge

1. Using email as marketing tool
2. Online adverts
3. Affiliate marketing
4. Search engine marketing and optimization
5. Marketing in social media
6. Other online marketing techniques

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Medium related skills

1. Browser (Firefox, Chrome)
2. Mail (GMail, Yahoo)
3. Search (Google search, Google Alert)
4. RSS (Google Reader, RSS Feed Reader)
5. Office tools (MS Word, MS Excel, or OpenOffice or FreeOffice equivalent)
6. Dashboard (Netvibes, Widgami)
7. Social networking (FaceBook, Google Groups, LinkedIn)
8. Presentation (PowerPoint, Prezi, MindMap)
9. Microblog (Twitter, Tumblr)
10. Media sharing (Youtube, Vimeo, Picasa, Flickr, Slideshare)
11. Movie creator (Windows Live Movie Maker, Animoto)
12. Content management system (Wordpress)
13. Optimization (SEO tools)
14. Online statistic (Google Analytics)
15. Online campaign (Google Adwords)

Soft skills

Personal Communication skills
Interviewing skills
Moderation skills
Ability to gather information
Ability to analyse information
Ability to classify information
Presentation skills, Ability to work in a team
Analytical thinking

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Human Resource Management

Recruitment, Skills Management, Resource Planning and Scheduling, Time Reporting, Employee Appraisal Solutions, Personnel Administration and Workforce Management

EQF: Level 3
SCQF: Level 5

Rationale

This module aims to provide an overview of the main tasks related to human resource management. The module will introduce the basic elements of human resource management – including developing policies, dealing with grievances and redundancies and worker protection. The module will also examine the processes for recruitment, interviewing and selection and the processes for preparing, creating, delivering and evaluating training. Finally, the module will examine the tools and techniques for communication and collaboration, including the use of these tools and techniques for gathering feedback and empowering employees.

Learning objectives

The course helps the students

- to understand the basic aspects of Human Resource Management and to map skills and competences in an organization.
- to understand the process for identifying the need for a particular employee/ set of skills/ knowledge in an organization
- to apply strategies for recruitment, selection, interviewing and testing processes in an organization.
- to identify the need for training and deliver the necessary training via the most effectual method.
- to gather employee and customer feedback and enhance the working environment using tools for communication, collaboration and time management. **Learning outcomes - competences**

Your task
1. Identify a position in the organization (real or imagined) and develop a recruitment strategy based on a set of skills/ competencies
2. Develop a recruitment advertisement and identify a number of methods through which to promote this
3. Develop an interview and conduct an interview /series of interviews via the appropriate method (this can be done using your own employees)
4. Develop a selection strategy and apply this to the interviews taken

Participants will be able

- to search select gather and classify information
- to identify existing workplace policies
- to modify workplace policies based on relevant information
- to map skills and competencies in the workplace

Knowledge

1. Human Resource Management Basics
2. Staffing and Workplace Policies
3. Retention of workers
4. Grievances and dealing with them
5. Redundancies
6. Worker Protection and laws affecting employment
7. Skill/ Competency Mapping

Medium related skills

1. Browser (Firefox, Chrome)
2. Mail (GMail, Yahoo)
3. Search (Google search, Google Alert)
4. RSS (Google Reader, RSS Feed Reader)

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5. Office tools (MS Word, MS Excel, or OpenOffice or FreeOffice equivalent)
6. File and information sharing (Google Docs, Google Drive, DropBox, Google Groups, Scribd, Issuu)
7. Media sharing (Youtube, Vimeo, Picasa, Flickr, Slideshare)
8. Online survey (Surveymonkey)
9. Social networking (FaceBook, Google Groups, LinkedIn)
10. Mindmapping (MindMeister)
11. Learning Management System (Moodle)
12. Communication (Skype)

Soft skills

Personal Communication skills (including sensitivity and tactfulness)
Interviewing skills
Moderation skills
Ability to gather information
Ability to analyse information
Ability to classify information
Presentation skills
Analytical thinking
Ability to work in a team

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Medium related skills in Business Management of SMEs

Information and Knowledge Management

- Browser (Firefox, Chrome)
- Mail (GMail, Yahoo)
- Search (Google search, Google Alert)
- RSS (Google Reader, RSS Feed Reader)
- Office tools (MS Word, MS Excel or OpenOffice or FreeOffice equivalent)
- Office online collaborative tools (Google Drive/GoogleDoc)
- Dashboard (Netvibes, Widgami)
- Blog (Wordpress, Blogger)
- Knowledge base (Wikipedia)
- Social bookmarking (Diigo)
- Microblog (Twitter, Tumblr)
- Social networking (FaceBook, Google Groups)
- Time scheduling (Google Calendar)
- Online notepad (Evernote)
- CRM
- Wiki (for example Wikispace)
- eLearning environment (such as Moodle)

Project Management

- Browser (Firefox, Chrome)
- Mail (GMail, Yahoo)
- Search (Google search, Google Alert)
- RSS (Google Reader, RSS Feed Reader)
- Office tools (MS Word, MS Excel or OpenOffice or FreeOffice equivalent)
- Presentation (PowerPoint, Prezi, MindMap)
- Project management software (MS Project, OpenProject)
- Project management system (Redmine)
- File and information sharing (Google Docs, Google Drive, DropBox, Google Groups)
- Communication tools (Skype, VideoConferencing)

Online Marketing

- Browser (Firefox, Chrome)
- Mail (GMail, Yahoo)
- Search (Google search, Google Alert)
- RSS (Google Reader, RSS Feed Reader)
- Office tools (MS Word, MS Excel, or OpenOffice or FreeOffice equivalent)
- Dashboard (Netvibes, Widgami)
- Social networking (FaceBook, Google Groups, LinkedIn)
- Presentation (PowerPoint, Prezi, MindMap)
- Microblog (Twitter, Tumblr)
- Media sharing (Youtube, Vimeo, Picasa, Flickr, Slideshare)
- Movie creator (Windows Live Movie Maker, Animoto)
- Content management system (Wordpress)
- Optimization (SEO tools)
- Online statistic (Google Analytics)
- Online campaign (Google Adwords)

Human Resource Management

- Browser (Firefox, Chrome)
- Mail (GMail, Yahoo)
- Search (Google search, Google Alert)
- RSS (Google Reader, RSS Feed Reader)
- Office tools (MS Word, MS Excel, or OpenOffice or FreeOffice equivalent)
- File and information sharing (Google Docs, Google Drive, DropBox, Google Groups, Scribd, Issuu)
- Media sharing (Youtube, Vimeo, Picasa, Flickr, Slideshare)
- Online survey (Surveymonkey)
- Social networking (FaceBook, Google Groups, LinkedIn)
- Mindmapping (MindMeister)
- Learning Management System (Moodle)
- Communication (Skype)

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Course Components related to the competence framework

The course will take place on the SME 2.0 Courses portal, which also contains all the topics, units and learning materials. The portal itself has a three level hierarchy, where the **topics** (modules) are at the top level, the **units** are the middle level, and **learning objects** the smallest third level. On the top of this both learning materials and units may contain documents, links, videos.

The course itself can be created by the teachers/web admins. Creating a course is basically selecting some of the already existing units and put them together to a course. A course must have a period and a small description and must contain at least one unit. Note that learning objects cannot be added to a course alone, only as a part of a unit. Whole topics or books can't be added neither.

After a course is created it will be visible on the courses page. After this is done every registered user may "request a group membership". By doing this the group administrator (tutor of course) will get a notification about the request. The requests have to be approved by the tutor.

There are two way to communicate with the group members. First off the teacher has the right to create a **forum** for the group, which is a regular forum where every group member has right to create forum topics of add comments. Note: when creating a course, a forum is not created automatically. The second option is to create pages, which are only visible for group members. These are called "**discussions**" which can be either used to inform group members about an event, deadline or task. This kind of content may also by created by all group members, so they have the opportunity to ask anything related to the course.

Notifications via e-mail are sent every time when a now forum topic, a discussion or a comment is created. Both forum topics and discussions may have comments.

When signed in to the courses portal a box visible in the right sidebar, which shows content of the group. There is a box for discussions and another for forum topics.

Course Components	Description
Module	Modules are the topics, which currently are: Information management, Project management, HR management and Online marketing. Every of the units are associated to a module. This is the highest level of the hierarchy.
Unit	Unit is the middle level of the hierarchy and its main function is to give a little preview of the lessons found inside.
Learning object/material	The learning objects/materials are the lowest level of the hierarchy, but these are the most important pages of the site, as these contain the learning materials.

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Course	Course is a selection of units. Every course has an own audience where the group members can communicate with each other.
Forum	Two types of forums can be found on the site. The regular forums visible for every registered user and the course forums which can only be used by the course members.
Discussion	Discussions can be made by group members in order to talk about a given topic. This content type may be commented.

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Annexes

Annex 1 Glossary

Learning Objective (LO)

Synonyms: aims, purposes, goals in general. The LOs express the intentions of the instructor, describe what he/she want to achieve within the module. They are clear concepts to express the direction of the module, they are descriptions of the most important competences the module will develop. LOs are broad statements that will include many subordinate competences. All the applied tools (learning elements, course components, methods, coaching) to deliver the module, should promote the participants to achieve the LOs. The teaching effectiveness of the instructors' will be evaluated against the objectives given here. (Tenegen)

Learning Outcome (OC)

Learning Outcome (OC) is the fixed, measurable result of one or more events of teaching/learning. Learning outcomes are the competences planned to develop by the learning activities within one or more units. The OCs will be demonstrated by the students' assignments. (OCs define "what we get back from the students" versus LOs which define "what the instructor intended").

Between the LOs and OCs there is a one-to-many relationship, which means that one objective belong more than one learning outcomes, connected to the units. (Tenegen)

Learning element

Synonym: learning object. One piece of knowledge/information created by the author for educational aim. Digital learning elements are delivered (stored) in standard digital formats (txt, jpg, html, xml, etc.). The medium of delivery could be picture, text, audio, video, animation.

To access and search learning objects they should be described with metadata, which are arbitrary (artificially defined) descriptors, essential attributes. (The number and type of metadata will be defined by Tenegen Consortium in the phase of developing the repository according SLOOP concept.). The metadata gives the possibility to create a searchable, accessible relational database (RDB) for storing learning elements. According their pedagogical aims, the learning elements may be categorized as: explanation, concept, tasks, tests, problems, etc. (Tenegen)

E-learning material: a coherent set of learning elements to deliver knowledge, to develop competences, to motivate, etc.

DEIS (Darragh Coakley)

Knowledge: knowledge of facts, principles, processes and general concepts, in a field of work or study

Skills: a range of cognitive and practical skills required to accomplish tasks and solve problems by selecting and applying basic methods, tools, materials and information

Competence: take responsibility for completion of tasks in work or study adapt own behaviour to circumstances in solving problems

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Definitions 1.[2]

"Digital competence involves the confident and critical use of Information Society Technology (IST) for work, leisure and communication. It is underpinned by basic skills in ICT: the use of computers to retrieve, assess, store, produce, present and exchange information, and to communicate and participate in collaborative networks via the Internet.

Essential knowledge, skills and attitudes related to this competence:

- Digital competence requires a sound understanding and knowledge of the nature, role and opportunities of IST in everyday contexts: in personal and social life as well as at work. This includes main computer applications such as word processing, spread sheets, databases, information storage and management,
- an understanding of the opportunities and potential risks of the Internet and communication via electronic media (e-mail, network tools) for work, leisure,
- information sharing and collaborative networking, learning and research.

Individuals should also understand how IST can support creativity and innovation, and be aware of issues around the validity and reliability of information available and of the legal and ethical principles involved in the interactive use of IST.

Skills needed include the ability **to search, collect and process information** and use it in a critical and systematic way, assessing relevance and distinguishing the real from the virtual while recognising the links. Individuals should have skills to use tools **to produce, present and understand complex information and the ability to access search and use internet-based services.** Individuals should also be able use IST to support critical thinking, creativity, and innovation. Use of IST requires a critical and reflective attitude towards available information and a responsible use of the interactive media. **An interest in engaging in communities and networks for cultural, social and/or professional purposes also supports this competence."**

Definition 2.[3]

"We define e-competences as an integrated set of technical and managerial capabilities that organizations need to achieve their objectives. They consist of the skills, competences and talents that the pervasiveness of information technologies have made critical in all sectors of activity. " Competence areas:

Information management: needed to identify, locate, access, retrieve, store and organise information.

Collaboration: linking with other users, participate in networks and online communities, and interact with others constructively and with a sense of responsibility.

Communication: communicating through online tools, taking into account privacy, safety and netiquette.

Creation of content and knowledge: expression of creativity and the construction of new knowledge through technology and media, and also to the integration and re-elaboration of previous knowledge and content and its dissemination through online means.

Ethics and responsibility: knowledge, attitudes and skills needed to behave in an ethical and responsible way, aware of legal frames.

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[2] Hüsing T.:.Korte, W.B.: E-skills for the 21st century (Evaluation of the Implementation of the Communication of the European Commission on "e-Skills for the 21st Century"), Empirica, 2010

[3] Fonstad, N., Lanivyn, B.European e-Competence Curricula development guidelines, Final Reports, European Commission, European e-Skills Forum, 2010

Evaluation and Problem-solving: the identification of the right technology and/or media to solve the identified problem or to complete a task and also as the assessment of information retrieved or the media product consulted.

Technical operation: effective, efficient, safe and correct use of technology and media.

Living lab

A living lab is a research concept. A living lab is a user-centred, open-innovation ecosystem,[1][2] often operating in a territorial context (e.g. city, agglomeration, region), integrating concurrent research and innovation processes[3] within a public-private-people partnership.[4]

The concept is **based on a systematic user co-creation approach** integrating research and innovation processes. These are integrated through the co-creation, exploration, experimentation and evaluation of innovative ideas, scenarios, concepts and related technological artefacts in real life use cases. Such use cases involve user communities, not only as observed subjects but also as a source of creation. This approach allows all involved stakeholders to concurrently consider both the global performance of a product or service and its potential adoption by users. This consideration may be made at the earlier stage of research and development and through all elements of the product life-cycle, from design up to recycling.[5] See also: Concurrent engineering

User centred research methods,[6] such as action research, community informatics, contextual design[7], user-cantered design, participatory design[8], empathic design, emotional design[9][10][11], and other usability methods, already exist but fail to sufficiently empower users for co-creating into open development environments. More recently, the Web 2.0 has demonstrated the positive impact of involving user communities in new product development (NPD) such as mass collaboration projects (e.g. Wikipedia, crowdsourcing, Wisdom of Crowds) in collectively creating new contents and applications.

A living lab is not similar to a tested as its philosophy is to turn users, from being traditionally considered as observed subjects for testing modules against requirements, into value creation in contributing to the co-creation and exploration of emerging ideas, breakthrough scenarios, innovative concepts and related artefacts. Hence, a Living lab rather constitutes an experiential environment, which could be compared to the concept of experiential learning, where users are immersed in a creative social space for designing and experiencing their own future. (Wikipedia)

EQF glossary

For the purposes of the Recommendation[4], the definitions which apply are the following:

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

(b) **'national qualifications system'** means all aspects of a Member State's activity related to the recognition of learning and other mechanisms that link education and training to the labour market and civil society. This includes the development and implementation of institutional arrangements and processes relating to quality assurance, assessment and the award of qualifications. A national qualifications system may be composed of several subsystems and may include national qualifications framework;

[4] RECOMMENDATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 23 April 2008 on the establishment of the European Qualifications Framework for lifelong learning (Text with EEA relevance) (2008/C 111/01)

(c) **'national qualifications framework'** means an instrument for the classification of qualifications according to a set of criteria for specified levels of learning achieved, which aims to integrate and coordinate national qualifications subsystems and improve the transparency, access, progression and quality of qualifications in relation to the labour market and civil society;

(d) 'sector' means a grouping of professional activities on the basis of their main economic function, product, service or technology;

(e) 'international sectorial organisation' means an association of national organisations, including, for example, employers and professional bodies, which represents the interests of national sectors;

(f) **'learning outcomes'** means statements of what a learner knows, understands and is able to do on completion of a learning process, which are defined in terms of knowledge, skills and competence;

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

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

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

Curricula and training programmes

Curricula are statements of intentions: learning outcomes in curricula can define overall goals, specific outcomes of a learning programme or specific outcomes of a module. They can be written by and for teachers and institution managers and use the language of pedagogic experts and subject disciplines or the language of the learner. **Learning outcomes tend to be associated with the latter and they explain to a potential learner what they are expected to know, understand and be able to do at the end of the programme (or module).**

There is a clear difference in the level of detail included in learning outcomes when they are applied to whole programmes of learning (when learning outcomes are broad) and modules (when learning outcomes are

specific). Programme level learning outcomes are statements of what learners are expected to know and be able to do at the end of the whole programme and are therefore written in a broad overarching way that takes account of all of the learning outcomes that are associated with elements or modules within the programme. These broad programme level descriptions are sometimes called qualification profiles (see

It is possible to go deeper to another layer of detail and learning outcomes can be written for part of a module, possibly a part that is assessed in which case they might be called assessment criteria

Learning outcomes in curricula usually begin with the phrase:

…The learner is (or will be) able to… This phrase is followed by an action verb so that students are able to demonstrate what they have learned. Words such as 'know' or 'understand' do not help with this demonstration of learning and are therefore usually avoided because it is not clear to the learner the level of understanding or amount of knowledge required.

Different verbs can be used to demonstrate different levels of learning (for example, regarding demand, complexity, depth of study or autonomy).

At a basic level the learning outcomes may require learners to be able to define, recall, list, describe, explain or discuss. For a more advanced programme the learners may be expected to be able to formulate, appraise, evaluate, estimate or construct. The verb will usually be followed by words indicating on what or with what the learner is acting and the nature or context of the performance required as evidence that the learning was achieved. These additional words also indicate the level of learning achieved.

At the end of the course the learner is (or will be) able to

Explain the role of accounting information in organisations.

• Identify effective on-line marketing strategies and incorporate them into marketing plan.

• Identify and critically evaluate the strategic options available to enterprises.

• Design an interactive website for use by undergraduates.

• Analyse key managerial issues in a particular industry or company and propose appropriate managerial solutions to the situation.

Annex 2 Initiatives of the European Union

According to the Digital Agenda for Europe (one of the seven flagship initiatives of the Europe 2020 Strategy) use of Information and Communication Technologies (ICT) will have to play if Europe wants to

succeed in its ambitions for 2020[5]. "*The objective of this Agenda* ***is to chart a course to maximise the social and economic potential of ICT, most notably the internet, a vital medium of economic and societal activity: for doing business, working, playing, communicating and expressing ourselves freely.*** *"*

On behalf of the European Commission the European e-Skills Steering Committee and Empirica (http://www.empirica.com/) a study was published in 2010 under the title "Evaluating the Evaluation of the Implementation of the Communication of the European Commission on "e-Skills for the 21st Century". Here we find the definition

e-Business skills (also called e-Leadership skills)[6]

Capabilities needed to exploit opportunities provided by ICT, notably the Internet, to ensure more efficient and effective performance of different types of organisations; to explore possibilities for new ways of conducting business/administrative and organisational processes and/or to establish new businesses.

Lifelong acquisition of e-Skills

Ensuring that workers can regularly update their e-Skills and encouraging better and more user-centric ICT-enhanced learning and training approaches (e-learning). Government should promote good practices for the training of employees using e-learning, with a particular emphasis on SMEs, and should publicize successful solutions and business models.

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[5] The Digital Agenda is built upon wide consultations, in particular on inputs from the Digital Competitiveness Report 2009 - COM(2009) 390; the Commission's 2009 public consultation on future ICT priorities; the Conclusions of the TTE Council of December 2009, the Europe 2020 consultation and strategy; and the ICT Industry Partnership Contribution to the Spanish Presidency Digital Europe Strategy:, the own-initiative report of the European Parliament on 2015.eu and the Declaration agreed at the informal Ministerial meeting in Granada in April 2010. All these are available at:
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