INTRAPRISE – Infusing Entrepreneurial skills in the corporate ICT environment
Proj.no: 2014-1-CY01-KA202-000274

REPORT ON THE NEEDS OF INTRAPRENEURIAL TRAINING IN THE ICT SECTOR
(In project countries Cyprus, Belgium, Greece, Italy, Romania, and Spain)

CYPRUS UNIVERSITY OF TECHNOLOGY 2004 · **militos** · **FOUND.ATION** · MTC Media Transnational Technologies · CIO The European CIO Association

R+B · MELIUS · **SingularLogic** · RAMBLA abogados & asesores

This report has been produced by the consortium of the Erasmus+ funded project Intraprise. You can use the information contained, by acknowledging the Intraprise consortium and project (www.intraprise-project.eu)

Contents

EXECUTIVE SUMMARY

On the basis of the data collected within this both qualitative and quantitative survey it appears that intrapreneurship is not - according to all evidence - a very well known or understood concept in the business community.

But as soon as the concept is clearly explained intrapreneurship triggers a real interest among the people that are asked to provide their views on the subject. **There is indeed a strong expectation as regards the potential of intrapreneurial practices**.

A powerful finding of this survey is that many ICT professionals consider that **intrapreneurship is a key element in the business strategy that European ICT companies should implement if they intend to stay in the international business race**. This finding perfectly fits with the overall project rationale.

The survey succeeded in identifying in a clear manner a series of outstanding elements to be implemented in the roll-up of the Intraprise project. Besides an **identification of obstacles** facing the development of intrapreneurial practices, we have identified:

- the **expected skills that should be enhanced** when it comes to increase European IT companies' competitiveness; a taxonomy of skills is proposed in the present report;

- the preferred training methods: from that respect, **Intraprise's e-learning options/solutions are fully in line with the views expressed** by all respondents.

*****

1. INTRODUCTION

This **Report on the needs of intrapreneurial training in the ICT sector** is an Intellectual output (O2) of the Project *"Infusing entrepreneurial skills in the corporate ICT environment – INTRAPRISE"* funded under the Erasmus Plus Programme, Key Action 2: Strategic Partnerships under agreement number: 2014-1-CY01-KA202-000274.

The Intraprise project scope and objectives

The Intraprise project has been conceived along the lines of the need to encourage innovative and creative behaviour within organizational structures, focusing on the corporate environment of the rapidly evolving ICT sector.

INTRAPRISE is a European Partnership which gathers 9 Partners in 6 countries:

Country	Partners
Cyprus	CUT, R&Do
Belgium	MTC, EuroCIO
Greece	MILITOS, Found.ation
Spain	RAMBLA ASESORES
Italy	MELIUS
Romania	SINLO

The project promotes the concepts of 'intrapreneurship' and 'intrapreneur', as the intra-corporate counterparts of 'entrepreneurship' and 'entrepreneur' respectively. Thus, as such, **an intrapreneur should be considered as a person within a large organization who takes direct responsibility for turning an idea (or innovation) into a profitable finished offering through assertive risk-taking and effective stakeholder collaboration**, while entrepreneurship, as any entrepreneurial activity performed within an organization.

The main objective of the project is to foster an intrapreneurial culture within companies and organisations, by developing and offering specialized intrapreneurial training for both managers and employees in the ICT sector.

In the long term, the project aims to alter traditional organisational structures and practices, through the creation of intra-corporate entrepreneurial settings, supported by innovative training material and tested training methodologies.

To this end, INTRAPRISE will develop:

- An analysis report of management practices, organizational cultures, and existing intrapreneurial training practices;
- An Intrapreneurship training program framework;
- An Intrapreneurship training course curriculum;
- On-line training material based on the intrapreneurial training course curriculum;
- An e-Platform to deliver the training;
- An integrated handbook with recommendations for the adoption and effective implementation of the training program for managers, employers and employees;

The main expected result of the project is a substantial increase of innovation, productivity, and performance within ICT organizations and companies by:
- Providing practical intrapreneurial competences and skills training to the beneficiaries (employers, managers, and employees in ICT companies and organizations);
- Assisting beneficiaries in applying intrapreneurial competencies and skills on the job in a flexible way, by designing an innovative, ICT based blended learning methodology supported by action learning pedagogies, fitting the work- and time-schedules of employers, managers, and employees;
- Enhancing work place learning by carrying out follow up, feedback sessions with intrapreneurs.

Fostering intrapreneurship in the ICT sector

As exposed in the project proposal, the identification of the target groups and beneficiaries will ensure the efficiency and efficacy of all planned dissemination activities, in terms of reaching the right audiences by the way of the right communication medium.

With respect to the Intraprise dissemination objectives, **the target audiences of the project can be sorted out in terms of their nature as direct and indirect target groups**:

Direct target groups:

a) Employers / owners / managers in ICT companies and organizations

Employers, owners, and managers in the ICT industry will be directly involved in intrapreneurial training activities.

b) Employees in ICT companies and organisations

Employees in the ICT industry form the second group of beneficiaries, directly involved in and benefitting from intrapreneurial training activities.

c) VET[1] trainers and organisations interested in offering intrapreneurship training

VET trainers and VET organisations in all participating countries, especially in the fields of business and entrepreneurship support, will be equally addressed, in order to appreciate, value, and eventually consider intrapreneurship training as an important dimension of intra-corporate efficacy, creativity, and productivity, calling for targeted training methodologies and tools.

Indirect target groups:

Indirect target groups of the Intraprise project, consist of actors and stakeholders in the private and public sector directly or indirectly involved in economic, entrepreneurial and business development in partner countries at local, regional and national level, e.g.:

- Chambers of Commerce and Industry
- Business development agencies
- Business, labour market associations
- Banks and other institutional actors
- Policy makers
- Social partners

Identify and understand the specific target group's (ICT) training needs

- **Output 2 is described in the project proposal as a study/analysis:**

The overall objective of this output is **to prepare the ground for the development of the innovative training course through research and analysis, building on the initial needs analysis during proposal development**.

The central activity of creating O2 is to carry out an indepth interactive needs analysis in all the target countries, in order to **identify and understand the specific target group's (ICT) training needs**.

This will be accomplished through two, distinct but complementary research and analysis initiatives: a quantitative and a qualitative questionnaire.

---

[1] Vocational and Educational Training.

Output 2 is made up of three Activities

Activity 1 concerns the preparation of qualitative and quantitative research for the needs analysis: MTC is the Leading Organisation on that field.

Description of O2-A1:

CUT will define guidelines, methodological design and data collection instruments to be used for the survey and qualitative interviews at the enterprise, local, regional, national and European level.

The questionnaires and the content of the structured or semistructured interviews will be developed, elaborated and translated with the input of all participating members under the supervision of the activity leader.

The technical expertise of the involved Consortium partners will be fully exploited, in order to design and develop a research agenda taking under consideration age, gender, culture and educational background issues of the target group community. Special provisions will be taken, in order to detect preferred learning activities and formats among ICT related companies, rendering learning processes a stimulating and effective character.

Translation/adaptation of quantitative research questionnaires / interview guides to Consortium languages.

Activity 2 is related with the implementation of a (quantitative) survey and (qualitative) expert interviews: MTC is the Leading Organisation on that field.

Description of O2-A2:

The research will be carried out by the participating Consortium partners in each target country respectively. While online based research tools will be predominantly used, there will also be special provisions made for traditional research technology and methods adapted to the skills level of the target group and possible lack thereof.

The quantitative research will aim at collecting approx. 50 responses in each country. The quantitative research questionnaires will be made available online deploying an online survey platform allowing for the extraction, filtering, and graphic presentation of personal and summary findings to be analysed.

A comprehensive introductory text will help participants get acquainted with the project objectives, nature and properties as an EU co-funded initiative, as well as the importance of their participation in developing suitable content and supporting material.

The qualitative research will involve approx. 10 in-depth interviews in each country addressing the issue of intrapreneurship and competences of ICT managers and employees, and their training needs.

Activity 3 is dedicated to the drafting of needs analysis report: MTC is the Leading Organisation on that field.

Description of O2-A3:

Drafting, compiling and editing of finalized and consolidated report (EN) with the analysis of all the data collected incl. chapters on countries, user needs, and proposed topics and modules for adaptation and content development.

The report will document the main findings of the quantitative and qualitative research undertaken in the Consortium countries. The aim of the report is to highlight the nature and dispersion of training needs across the array of the target groups with respect to their involvement in intrapreneurship. Quantitative findings will be cross-fertilised and analysed vis-à-vis the qualitative findings acquired by the respective research activities.

Translation of main findings in Consortium languages will be integrated in the Report (O2).

---

2. METHODOLOGICAL APPROACH

This report is not an exhaustive study about intrapreneurship in the Information and Communication Technology (ICT) sector across Europe. The report represents a summary of all information and findings collected by the project partners, in particular regarding the countries of this Consortium: Belgium, Cyprus, Greece, Italy, Romania and Spain. Therefore this report does not pretend to provide an in-depth analysis on the ins and outs of intrapreneurship in European ICT companies... It rather suggests a series of reflections and recommendations based on a methodology which was agreed among the Partnership.

The User needs analysis report follows a mix-method comprising quantitiative and qualitative methodologies.

Complementarity of research tools

To define the actual training needs of ICT managers and employees, intrapreneurship has been explored through an interactive needs analysis through:

1- **A quantitative questionnaire[2]: an ICT survey to gain insight into the demand side of competences and skills,** with a focus on intrapreneurship, and into obstacles the target group faces while accessing training.

Output Type:	Survey/analysis
Output Description:	Report on web-based survey results
Activity Description:	Web-based preliminary survey of employees and managers. Countries involved: Belgium, Cyprus, Greece, Italy, Romania, Spain. Expected number of respondents: approx. 50 responses in each country (300 responses expected).
Tasks and role of each organization	MTC: - Overall activity coordination - Conceptualization & coordination of qualitative and quantitative research for the needs analysis - Conceptualization of questionnaires (EN) - Translation of questionnaires to FR - Draft of guidelines for interviews (EN) All partners: - Feedback and support to the creation of guidelines

---

[2] Please refer to Annex I : Online quantitative research questionnaire.

and questionnaires
- Translation of questionnaires and interview to local languages (Melius IT, Rambla Consultores ES, SINLO RO)

The initial objective set in the proposal was to get 300 responses. An English version of the quantitative questionnaire was made available via an online survey; it was then translated in all the languages of the country partners. But it appeared in practical terms that the response rate varied a lot depending on the country. **Despite this discrepancy between the "300" objective and the "266" reached, we confirm that this sample[3] is highly representative of our unviverse[4]**.

2- **A qualitative questionnaire[5] aimed at verifying and enriching survey results with additional data from qualitative interviews with experts (i.e. VET, academia) and policy makers** in order to investigate the extent to which ICT's competences and skills needs are represented in VET systems, policies and practices at a national and European level**.**

Output Type:	Survey/analysis
Output Description:	Drafting of qualitative structured/semi-structured interview aimed at experts.
Activity Description:	Interviews of experts (i.e. academia, VET specialists). 10 in-depth interviews in each country addressing the issue of entrepreneurship and competences of ICT managers and employees, and their training needs. Countries involved: Belgium, Cyprus, Greece, Italy, Romania, Spain. (60 interviews expected).
Tasks and role of each organization	MTC: - Overall activity coordination - Conceptualization & coordination of qualitative and

---

[3] A sample is a group of units selected from a larger group (the population or universe). By studying the sample it is hoped to draw valid conclusions about the larger group. A sample is generally selected for study because the population is too large to study in its entirety. The sample should be representative of the general population. This is often best achieved by random sampling. Also, before collecting the sample, it is important that the researcher carefully and completely defines the population, including a description of the members to be included.

[4] The population or universe represents the entire group of units which is the focus of the survey.

[5] Please refer to Annex II : qualitative questionnaire for expert interviews.

quantitative research for the needs analysis
- Conceptualization of questionnaires (EN)
- Translation of questionnaires to FR
- Draft of guidelines for interviews (EN)

All partners:
- Feedback and support to the creation of guidelines and questionnaires
Translation of questionnaires and interview to local languages (Melius IT, Rambla Consultores ES, SINLO RO)

The initial objective set in the proposal was to get 60 expert interviews. An English version of the qualitative questionnaire was set up by MTC and discussed between Partners ; it was then translated in all the languages of the country partners. **54 responses were collected**, which is slightly less than what was expected. Intraprise Partners nonetheless managed to collect highly valuable responses from experts from all the country partners.

The present document represents user needs analysis report featuring a consolidation of research findings to propose the best possible match between user needs and the content, methods, tools and pedagogy to be developed as well as good practices at national and EU level by mapping the intrapreneurial tasks ICT organizations must undertake with specific competences and essential skills they must possess to effectively do so.

Implementation phases of Output 2:

- The quantitative and the qualitative questionnaires were drafted by MTC in the first months of 2015 after the completion of Output 1 (CUT).
- Once discussed and revised with the involvement of all Partners, these questionnaires were circulated among Partners' professional networks in the second quarter of 2015.
- MTC was provided with all the data collected in early June 2015.
- A first draft of "O2 User analysis report" was submitted by MTC on July 2nd, 2015.

Privacy Policy

As some respondents did not want their names to be published in the present report, further a discussion within the Partnership it was decided NOT to mention any name of any respondent to the questionnaires (either the quantitative or the qualitative one).

Of course all the collected data will be made available for any audit requested by the National Agency or the European Commission.

3.RESULTS FROM ONLINE SURVEY

266 responses[6] have been collected online according to the following breakdown:

Partners / Countries	Number of online respondents
CUT, R&Do / CY	45
MTC, EUROCIO / BE	75
MILITOS, Found.ation / EL	49
RAMBLA ASESORES / ES	49
MELIUS / IT	24
SINLO / RO	24

Breakdown of results per question

Results are first presented as **an average of responses provided in all country partners ("Consortium results")**. In a second phase, whenever this is relevant, a selection of results at national level will be presented.

---

[6] The initial objective set in the proposal was 300 responses. But it appeared in practical terms that the response rate varied a lot depending on the country. Despite this discrepancy between the "300" objective and the "266" reached, we confirm that this sample is highly representative of our unviverse (see definitions below):

A sample is a group of units selected from a larger group (the population or universe). By studying the sample it is hoped to draw valid conclusions about the larger group. A sample is generally selected for study because the population is too large to study in its entirety. The sample should be representative of the general population. This is often best achieved by random sampling. Also, before collecting the sample, it is important that the researcher carefully and completely defines the population, including a description of the members to be included.

The population or universe represents the entire group of units which is the focus of the survey.

Section I – Personal data

Q1 – Name of respondent

* Presentation of aggregate data (Consortium results)[7]:

As this question was optional, out of 266 respondents, **231 have accepted to fill in their name**. 35 have skipped the question.

87% of positive responses is quite a remarkable result in such a survey. This can be partly explained by the fact that some respondents are professional contacts of Intraprise Partners.

In the perspective of the promotion of the Intraprise project, and in full respect of the Consortium's privacy policy, these contacts will be used as a lever for communication action.

* Presentation of data at national level:

Q1: percentage of respondents who filled in their name					
Cyprus	Belgium	Greece	Spain	Italy	Romania
82%	91%	88%	92%	88%	71%

Q2 - E-mail

* Presentation of aggregate data (Consortium results):

As this question was optional too, **220 email addresses have been provided by respondents**.

83% of positive responses is once again a remarkable result in such a survey.

Furthermore on the basis of the last question of the survey, we know that two thirds of respondents have agreed to be kept informed on the progress of the Intraprise project.

---

[7] An important methodological precision: this aggregate data can in no way be presented as a European one… although it comes from the consolidation of data collected from different EU Member States.

* Presentation of data at national level:

| Q2: Percentage of email addresses provided by respondents					
Cyprus	**Belgium**	**Greece**	**Spain**	**Italy**	**Romania**
82%	92%	82%	79%	79%	67%

Q3 - Gender
Male | Female

* Presentation of aggregate data (Consortium results):

72% of respondents are males.

This imbalance reflects a general trend (not only in Europe): technology companies (and more broadly big companies) have few women on their boards. Thanks to many initiatives things are definitely progressing but most of IT companies struggle with gender equality.
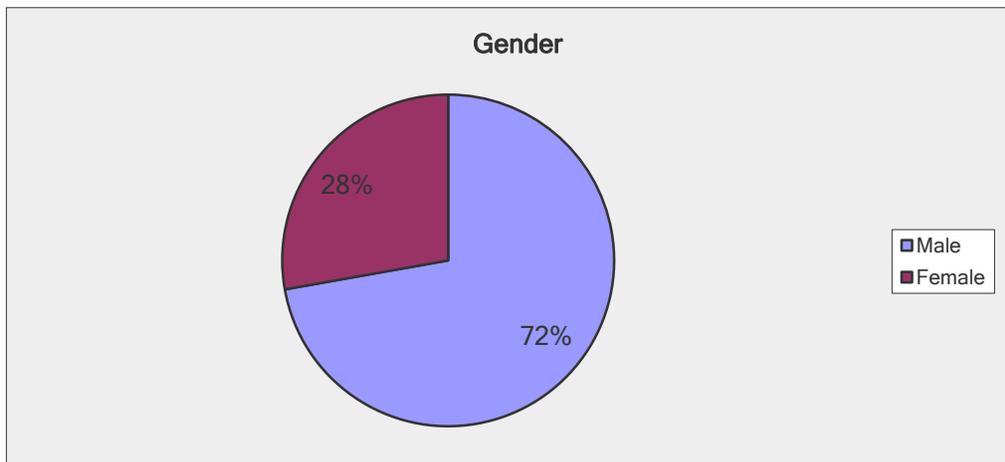
* Presentation of data at national level:

Q3: Percentage of female respondents					
Cyprus	Belgium	Greece	Spain	Italy	Romania
31%	21%	31%	22%	29%	46%

Q4 - Age

Under 20 | 20-29 | 30-39 | 40-49 | 50-59 | 60+

* Presentation of aggregate data (Consortium results):

As shown in the table below **nearly two thirds of respondents (64%) are aged between 30 and 49** and thus represent the main bulk of staff.

One striking observation comes from the relatively low representation of professionals aged 50 and more (16%).

Age		
Answer Options	**Response Percent**	**Response Count**
Under 20	0,4%	1
20-29	19,2%	51
30-39	29,7%	79
40-49	34,6%	92
50-59	12,4%	33
60+	3,7%	10

* Presentation of data at national level:

Q4: age of respondents

Cyprus	Belgium	Greece	Spain	Italy	Romania
- 20: 0% 20-29: 24% 30-39: 38% 40-49: 31% 50-59: 4% 60+: 2%	- 20: 0% 20-29: 11% 30-39: 20% 40-49: 44% 50-59: 19% 60+: 7%	- 20: 0% 20-29: 37% 30-39: 39% 40-49: 20% 50-59: 2% 60+: 2%	- 20: 2% 20-29: 14% 30-39: 35% 40-49: 39% 50-59: 8% 60+: 2%	- 20: 0% 20-29: 17% 30-39: 13% 40-49: 50% 50-59: 17% 60+: 4%	- 20:0% 20-29: 13% 30-39: 33% 40-49: 17% 50-59: 33% 60+: 4%

Q5 - Country of residence

* Presentation of aggregate data (Consortium results):

The geographical distribution of respondents shows the following breakdown:

Country of residence		
Answer Options	**Response Percent**	**Response Count**
Belgium	19,5%	52
Cyprus	16,9%	45
Greece	18,4%	49
Italy	9,4%	25
Romania	8,6%	23
Spain	18,0%	48
Other	8,6%	23

It is important to mention the fact that **under the results of some Partner countries we find a variable number of respondents from other countries**. For instance if we take the results for Belgium, there are some 52 responses from Belgium, 7 from France, 2 from the UK, 2 from Luxembourg, 1 from Italy, 1 from Portugal, 1 from Finland, and 2 from outside EU Member States.

* Presentation of data at national level:

Q5: country of residence of respondents					
Cyprus	Belgium	Greece	Spain	Italy	Romania
100%	69%	100%	98%	100%	96%

Q6 - Status within your organisation

* Presentation of aggregate data (Consortium results):

The status distribution among the respondents is well balanced.

Status within your organisation

- Employee: 34%
- Manager: 23%
- CEO/Owner/Shareholder: 34%
- (Other): 09%
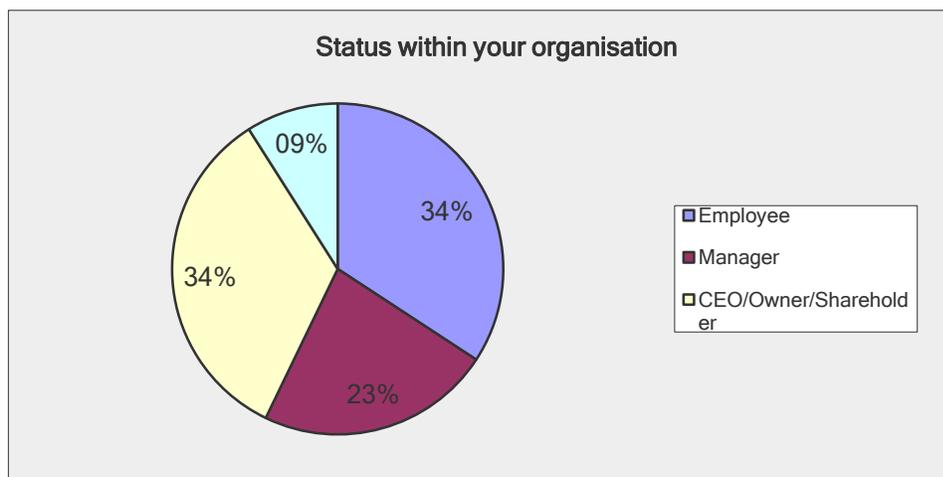
These figures reveal a very positive result in the sense that we collected sufficient and valid data as regards the professional status of our sample.

Besides the three main status categories proposed in the survey, **9% of respondents have declared "other"… meaning that they are neither employees, managers or CEOs-Owners-Shareholders in a company**.

The data collected shows indeed that academics, freelancers, students, civil servants, retired persons, etc. did show some interest in our survey.

* Presentation of data at national level:

Q6: status of respondents within their organisation

Cyprus	Belgium	Greece	Spain	Italy	Romania
Employee: 42% Manager: 13% CEO/owner/shareholder: 31% Other: 13%	Employee: 25% Manager: 33% CEO/owner/shareholder: 28% Other: 13%	Employee: 43% Manager: 24% CEO/owner/shareholder: 24% Other: 8%	Employee: 20% Manager: 20% CEO/owner/shareholder: 60% Other: 0%	Employee: 42% Manager: 25% CEO/owner/shareholder: 17% Other: 17%	Employee: 50% Manager: 8% CEO/owner/shareholder: 42% Other: 0%

Section II – Education and occupation

Q7 - Education level (highest completed level)

* Presentation of aggregate data (Consortium results):

80% of respondents have a higher education or a postgraduate level:

Education level		
Answer Options	**Response Percent**	**Response Count**
Secondary Education	2,3%	6
Higher Education	35,6%	94
Postgraduate	44,0%	117
PhD	1,5%	4

It means that most of the respondents did follow university or university-level curricula and this **an important indication as regards the rather elevated educational level of our sample**.

* Presentation of data at national level:

Q7: highest level education of respondents

Cyprus	Belgium	Greece	Spain	Italy	Romania
* Secondary education: 0% * Higher education: 22% * Postgraduate: 67% * PhD: 11%	* Secondary education: 3% * Higher education: 39% * Postgraduate: 53% * PhD: 5%	* Secondary education: 2% * Higher education: 37% * Postgraduate: 47% * PhD: 14%	* Secondary education: 2% * Higher education: 52% * Postgraduate: 40% * PhD: 6%	* Secondary education: 8% * Higher education: 50% * Postgraduate: 21% * PhD: 21%	* Secondary education: 0% * Higher education: 0% * Postgraduate: 4% * PhD: 96%

Q8 - Please indicate your main field of study

* Presentation of aggregate data (Consortium results):

Business & Management, Communication & information sciences, Engineering & Technology, and Mathematics & Informatics count for three quarters of responses.

Here are the top fields of study:

Please indicate your main field of study		
Answer Options	**Response Percent**	**Response Count**
Business & Management	23,1%	61
Engineering, Technology	22,7%	60
Mathematics, informatics	15,5%	41
Communication & information sciences	13,6%	36
Humanities	5,3%	14
Social Sciences	4,2%	11

In our sample focusing on ICT[8] companies there are as many "Business & Management" profiles as "Engineering & Technology" ones (23% … or 61 vs. 60 individual responses). Of course if we add up to the second category ("Engineering & Technology") the people trained in mathematics and informatics, then we can say that nearly 4 out of 10 respondents have been specifically trained in science and technology.

* Presentation of data at national level:

---

[8] ICT: Information & Communication Technology.

Q8: top 3 of main fields of studies					
Cyprus	Belgium	Greece	Spain	Italy	Romania
* Engineering & technology: 33% * Business & Management: 22% * Mathematics & informatics: 13%	* Business & Management: 26% * Comm. & Information sciences: 20% * Other:19%	* Mathematics & informatics: 33% * Engineering & technology: 24% * Business & Management: 16%	* Business & Management:33% * Engineering & technology: 25% * Mathematics & informatics: 15%	* Engineering & technology: 25% * Comm. & information sciences: 17% * Business & Management: 13%	* Engineering & technology:25 * Business & Management:21% * Other: 21%

Q9 - Professional Field

Given our statistical universe (ICT professionals in companies operating in the Consortium countries), the results extracted from the responses of our sample show in a very logical manner a strong representation of respondents working in the ICT sector.

Two elements be mentioned as regards the professional fields of respondents:

1- **There are two important and recurring fields that are present in each country**:
   - Business & Management (ex: 18% in Greece, 29% in Romania, 27% in Spain)
   - Engineering & Computer (ex. 39% in Greece, 21% in Romania, 31% in Spain)

2- **The distribution of the various fields is quite strong**: see two national examples below

Professional Field (Romania)

- Business & Management — 29%
- Economy&Finance — 17%
- Engineering & Computer — 21%
- Research — 00%
- Sciences (Life sciences, physics & mathematics) — 00%
- Agriculture — 00%
- Architecture, planning & design — 04%
- Art & Entertainment — 17%
- Communication — 08%

Professional Field (Spain)

- Business & Management — 27%
- Economy&Finance — 06%
- Engineering & Computer — 31%
- Research — 08%
- Sciences (Life sciences, physics & mathematics) — 02%
- Agriculture — 00%
- Architecture, planning & design — 06%
- Art & Entertainment — 06%
- Communication — 02%
- Education — 02%
- Environment — 00%
- Government — 02%
- Industry

Q10 - Job seniority

* Presentation of aggregate data (Consortium results):

More than 83% of respondents are senior professionals (more than 5 years of experience).
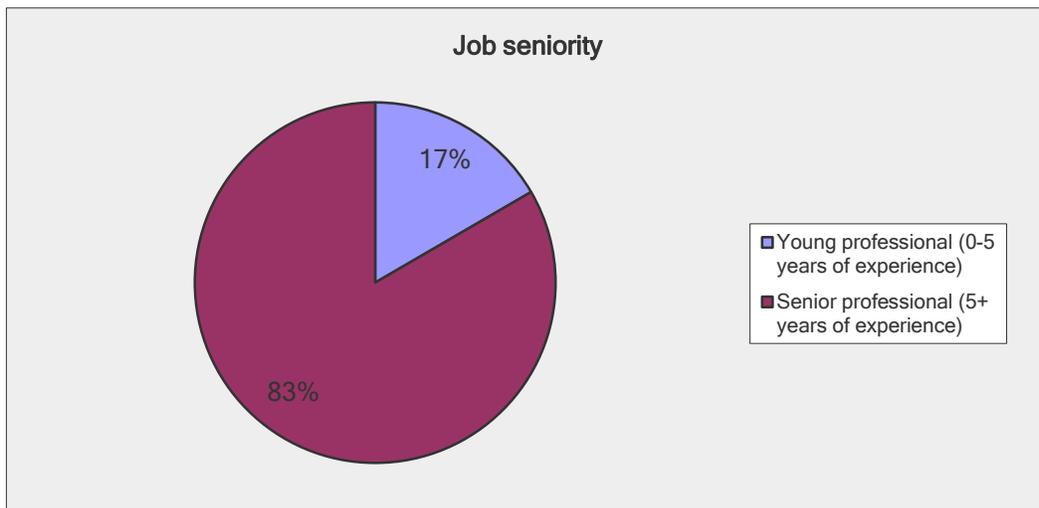
This result is of critical importance for us: it means that **more than 8 out of 10 of our sample provide responses on the basis of an at least 5-year work experience** which allows them to understand the ins and outs of entrepreneurship and intrapreneurship. This result is corroborated with the results given to the next question.

* Presentation of data at national level:

		Q10: percentage of senior professionals			
Cyprus	Belgium	Greece	Spain	Italy	Romania
87%	88%	67%	85%	83%	92%

Section III – Are you an intrapreneur in an intrapreneurial organisation?

Q11 - Have you already set up or participated in the creation of a business (founder or associate)?

* Presentation of aggregate data (Consortium results):

Nearly 6 out of 10 (59%) of respondents have already set up or participated in the creation of a business. Baiscally this figure underlines the fact that a respectful number of respondents of this quantitative survey understand the issues linked to the transformation of an idea into a business. Therefore they represent a core target of our survey and as such they can provide deep reflections on the difficulties of intrapreneurship.

Have you already set up or participated in the creation of a business (founder or associate)?

41%   59%   Yes No
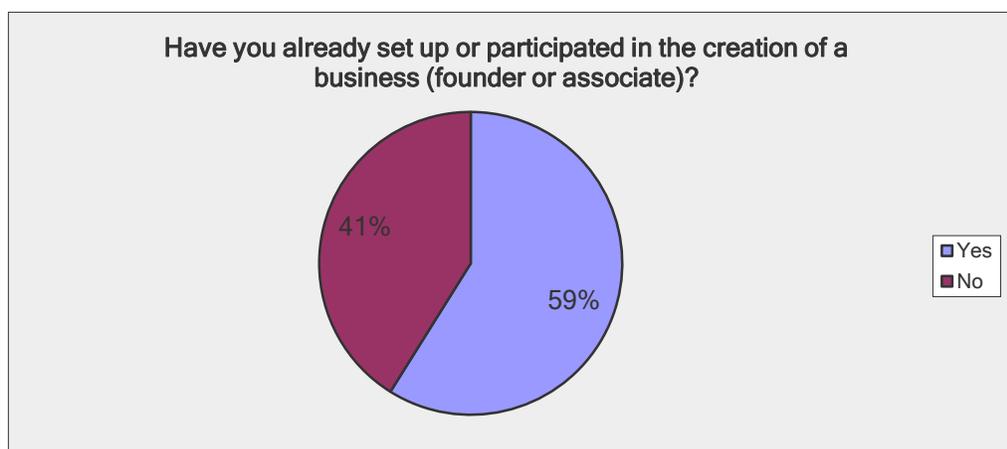
* Presentation of data at national level:

Q11: Have you already set up or participated in the creation of a business (founder or associate)?					
Cyprus 🇨🇾	**Belgium** 🇧🇪	**Greece** 🇬🇷	**Spain** 🇪🇸	**Italy** 🇮🇹	**Romania** 🇷🇴
Yes: 49%	**Yes: 62%**	**Yes: 55%**	**Yes: 81%**	**Yes: 33%**	**Yes: 58%**

Q12 - Would you say your company is supportive of an intrapreneurial approach to business?

* Presentation of aggregate data (Consortium results):

73% of respondents say their company supports an intrapreneurial approach to business.

This results gives strength to the idea that European companies, conversely to what is often said, is struggling hard to succeed in the international competition. IT companies are fighting to increase their competitiveness… including via the promotion of intrapreneurial approach to business.
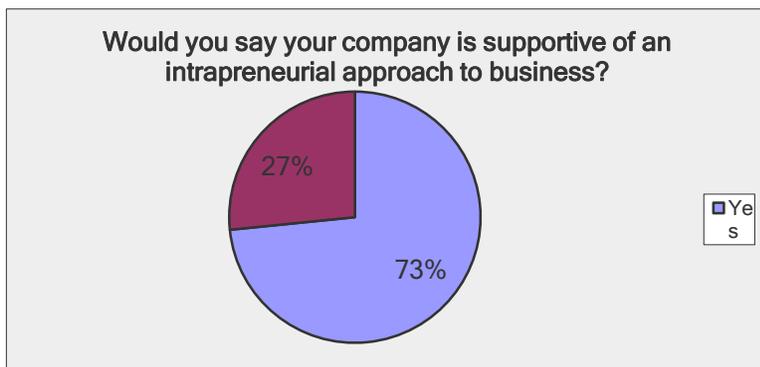
* Presentation of data at national level:

Q12: respondents declare their company is supportive of intrapreneurship					
Cyprus	Belgium	Greece	Spain	Italy	Romania
Yes: 79%	Yes: 58%	Yes: 72%	Yes: 89%	Yes: 79%	Yes: 71%

Q13 - Please indicate how you feel about the statements below:

* Presentation of aggregate data (Consortium results):

- **98% of respondents either agree or strongly agree with the following statement** :
  Risk-taking and failure are necessary components of progress that need to be accepted, understood and embraced by an organisation

- **83% of respondents either agree or strongly agree with the following statement**:
  In my company I can easily express new ideas, projects and concepts without the fear of persecution or ridicule if they fail

- **96% of respondents either agree or strongly agree with the following statement**:
  My company should promote autonomy and the creation of teams

- **97% of respondents either agree or strongly agree with the following statement**: *Innovation must be a strategic goal within the organization to foster long term growth*

- **90% of respondents either agree or strongly agree with the following statement; 8% disagree with it**:
  My company should create new reward structures – reflecting the energy and passion I invest in the development of new products or services

These results show in a very strong way that survey respondents believe in:

- **risk-taking and failure** in an environment that promotes innovation
- **autonomy, team work and creativity** to foster growth
- **rewarding elements** linked to personal efforts and involvement in the dynamization of a company

* Presentation of data at national level:

Q13-a: respondents strongly agree or agree with the statement below: Risk-taking and failure are necessary components of progress that need to be accepted, understood and embraced by an organisation.

Cyprus	Belgium	Greece	Spain	Italy	Romania
100%	99%	100%	93%	100%	95%

Q13-b: respondents strongly agree or agree with the statement below: In my company I can easily express new ideas, projects and concepts without the fear of persecution or ridicule if they fail.

Cyprus	Belgium	Greece	Spain	Italy	Romania
80%	72%	89%	95%	87%	82%

Q13-c: respondents strongly agree or agree with the statement below: My company should promote autonomy and the creation of teams.

Cyprus	Belgium	Greece	Spain	Italy	Romania
98%	97%	98%	95%	96%	86%

Q13-d: respondents strongly agree or agree with the statement below: Innovation must be a strategic goal within the organization to foster long term growth.

Cyprus	Belgium	Greece	Spain	Italy	Romania
98%	99%	100%	99%	100%	82%

Q13-e: respondents strongly agree or agree with the statement below: My company should create new reward structures – reflecting the energy and passion I invest in the development of new products or services.

Cyprus	Belgium	Greece	Spain	Italy	Romania
95%	87%	89%	95%	96%	82%

Q14 - Does your company provide any intrapreneurial training courses/programs to its employees?

* Presentation of aggregate data (Consortium results):

We know from Q12 that 73% of respondents say their company supports an intrapreneurial approach to business**.** But thanks to Q14, we learn that **71% of respondents say their company does NOT provide any intrapreneurial training courses/programs to its employees**.

This issue is of outstanding importance for our survey: it means that although some companies support an intrapreneurial approach to business they do not propose <u>yet</u> specific courses/programs "infusing entrepreneurial skills in the corporate ICT environment".
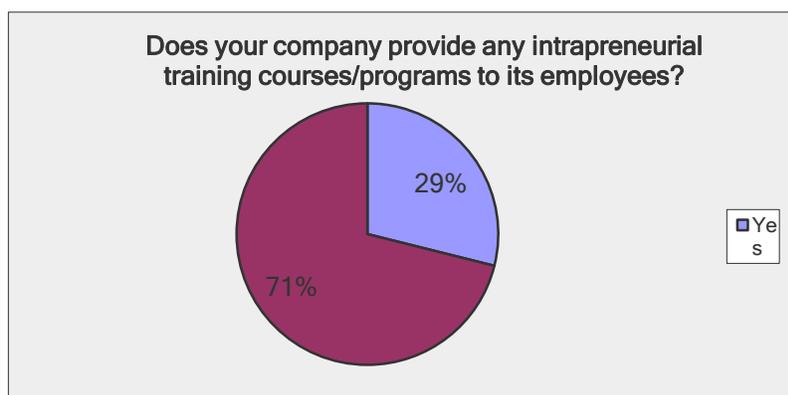
* Presentation of data at national level:
Those who responded "Yes" to the previous question were asked to specify the training method provided by their company:

Please indicate the training method your company provides.		
Answer Options	**Response Percent**	**Response Count**
Face-to-face:	40,2%	39
e-learning:	29,9%	29
Combination - face-to-face and e-learning	29,9%	29

It appears that if there is a slight preference for face-t-face training solutions (40% of responses), both e-learning and blended learning (a combination of the two worlds: face-to-face + e-learning) get the same level of preference (30%).

Once again **this indication is of fundamental importance for the development of the near to come Intraprise educational platform**.

Q14: percentage of respondents indicating their company provides e-learning *(Only those who responded "Yes" to the previous question)*					
Cyprus	Belgium	Greece	Spain	Italy	Romania
43%	42%	0%	62%	50%	67%

Section IV - Development of intrapreneurial skills

Q16 - Please indicate how you feel about the statement below:

- Intrapreneurial training addressed at the ICT sector can help foster and promote growth, employability and sustainability

* Presentation of aggregate data (Consortium results):

There is an ABSOLUTE support (96%) when considering the potential of intrapreneurial training:

Please indicate how you feel about the statement below: Intrapreneurial training addressed at the ICT sector can help foster and promote growth, employability and sustainability		
Answer Options	**Response Percent**	**Response Count**
Strongly agree	45,1%	106
Agree	51,1%	120
Disagree	2,5%	6
Strongly disagree	1,8%	3

This has to be considered by the Intraprise Consortium as **a powerful encouragement to the development and implementation of the Intraprise e-training platform**.

* Presentation of data at national level:

Q16: respondents strongly agree or agree with the statement below: Intrapreneurial training addressed at the ICT sector can help foster and promote growth, employability and sustainability.					
Cyprus 🇨🇾	**Belgium** 🇧🇪	**Greece** 🇬🇷	**Spain** 🇪🇸	**Italy** 🇮🇹	**Romania** 🇷🇴
91%	98%	95%	97%	100%	100%

Q17 - Have you ever participated in an e-learning course in the following areas?

* Presentation of aggregate data (Consortium results):

e-learning is not a fully fledged practice yet …

Have you ever participated in an e-learning course in the following areas?			
Answer Options	**Yes**	**No**	**Response Count**
Soft skills (flexibility, team working, reliability, resilience, leadership, adaptability, ethics, communication and writing, interpersonal skills, motivation, etc)	45%	55%	208
Foreign languages	38%	62%	205
Management	40%	60%	208
IT	53%	47%	209
Technical/professional skills	56%	44%	201

Other (please specify)	0
answered question	**215**
skipped question	**51**

… but things are clearly evolving, especially as regards the following areas: **53% of respondents have already followed an e-learning course focused on IT, and it goes up to 56% when it comes to technical and professional skills**.

* Presentation of data at national level:

Q17: Have you ever participated in an e-learning course in the following areas?

Cyprus	Belgium	Greece	Spain	Italy	Romania
Soft skills:64% Foreign languages:32% Management: 64% IT:72% Technical/prof essional skills:62%	Soft skills:45% Foreign languages:31% Management: 25% IT:41% Technical/prof essional skills:56%	Soft skills:44% Foreign languages:37% Management: 41% IT:55% Technical/prof essional skills:39%	Soft skills:42% Foreign languages:61% Management: 51% IT:69% Technical/prof essional skills:78%	Soft skills:35% Foreign languages: 40% Management: 20% IT:45% Technical/prof essional skills:53%	Soft skills:35% Foreign languages: 24% Management: 42% IT:33% Technical/prof essional skills:37%

Q18 - Please list three skills that you think ICT professionals should be taught to enhance their entrapreneurial skills[9].

Q19 - Would you be interested in taking part in an e-learning course focusing on intrapreneurial skills (e.g. innovation processes, R&D cycles, etc.)?

* Presentation of aggregate data (Consortium results):

Three quarters of respondents say they are INTERESTED in taking part in an e-learning course on intrapreneurship.

The rationale of the present document is to understand how we can best provide them with tools and solutions that will meet their expectations.

Would you be interested in taking part in an e-learning course focusing on intrapreneurial skills (e.g. innovation processes, R&D cycles, etc.)?

26%

74%

☐ Yes
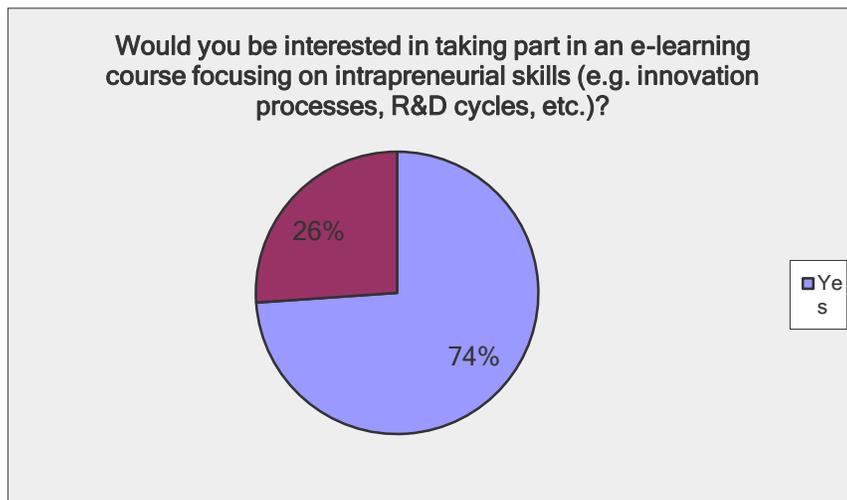
* Presentation of data at national level:

---

[9] This question is dealt with in a global way in Chapter 6.

Q19: Would you be interested in taking part in an e-learning course focusing on intrapreneurial skills (e.g. innovation processes, R&D cycles, etc.)?					
Cyprus 🇨🇾	**Belgium** 🇧🇪	**Greece** 🇬🇷	**Spain** 🇪🇸	**Italy** 🇮🇹	**Romania** 🇷🇴
Yes: 91%	**Yes: 64%**	**Yes: 80%**	**Yes: 74%**	**Yes: 75%**	**Yes: 62%**

Q20 - How do you like to learn? Please rate the following training methods: (rate your preference on a scale ranging from 1 to 5)

* Presentation of aggregate data (Consortium results):

Altough traditional teaching methods (i.e. face-to-face) are very well perceived by respondents, e-learning, and above all "b-learning" (blended learning) are more and more voted for by modern professionals.

How do you like to learn? Please rate the following training methods: (rate your preference on a scale ranging from 1=worst to 5=excellent)						
Answer Options	**1**	**2**	**3**	**4**	**5**	**Response Count**
Face-to-face:	15	11	41	56	88	211
e-learning:	8	22	72	65	41	208
b-learning (combination of face-to-face and e-learning):	8	9	38	59	97	211

Q21 - If you are an active member in social networks, do you believe these latter can help improve your skills?

* Presentation of aggregate data (Consortium results):

61% of social networks users believe these latter can help improve their skills.

This figure is certainly an important element of reflection that Intraprise Partners could build on when it comes to the implementation, the development and the promotion of the Intraprise education platform.

If you are an active member in social networks, do you believe these latter can help improve your skills?

- 17%
- 22%
- 61%
- Yes
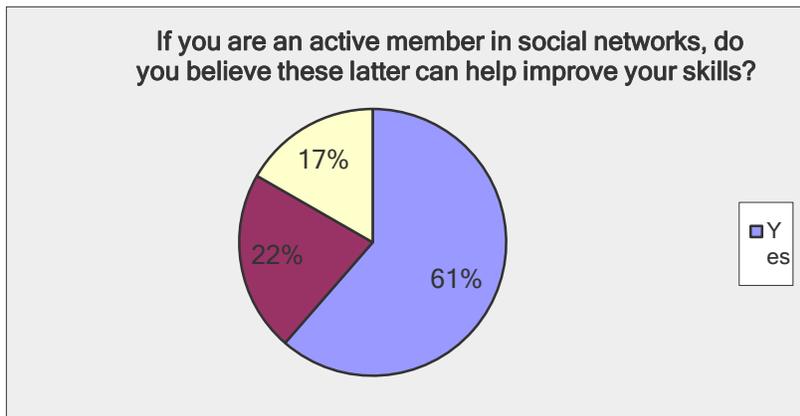
If "yes" to 12 Please list three specific actions/practices in line with intrapreneurship *(implemented within your company):*

* Presentation of data at national level:

Q21: If you are an active member in social networks, do you believe these latter can help improve your skills?					
Cyprus	Belgium	Greece	Spain	Italy	Romania
Yes: 65%	Yes: 59%	Yes: 63%	Yes: 69%	Yes: 60%	Yes: 48%

4.RESULTS FROM EXPERT INTERVIEWS

Breakdown of results

54 expert interviews have been conducted by INTRAPRISE Partners :

Partners	Number of expert interviews
CUT, R&Do	5
MTC	9
MILITOS, Found.ation	9
RAMBLA ASESORES	9
MELIUS	5
SINLO	9
EuroCIO	8

Intrapreneur Survey Analysis

Profile of respondents

Respondents to the questionnaires were resident in eight countries:
- Belgium
- Cyprus
- France
- Greece
- Italy
- Romania
- Spain
- United Kingdom

Among the people who responded were seven who described themselves as **academics and four more who had additional research duties**. Three others described their work as **purely research**. Eleven were **managers** and seven were **consultants**, while one was a **specialist head-hunter and start-up trainer**.

There was **one director of communications**, **an engineer/teacher, a marketing professional, an IT specialist and a policy maker, while eight respondents from the Greek and Spanish respondents described themselves as VET specialist-experts**.

Professional status
- 7 academic
- 4 academics-researchers
- 3 researchers
- 1 headhunter, consultant start-up trainer
- 11 managers
- 8 VET specialists
- 7 consultants
- 1 Dir com
- 1 engineer/teacher
- 1 marketing professional
- 1 IT Specialist
- 1 policy maker

What is Intrapreneurship?

The respondents are mostly familiar with a concept of "intrapreneurship" but their understanding and interpretations vary a great deal in the detail and the emphasis to be placed upon particular elements.

In broad terms intrapreneurship is seen either as a top-down process where it is the responsibility of a company to promote and encourage innovation and creativity within its staff, while some see the emphasis more on the individual being properly equipped to be creative within a company. Some see it as a democratising process with employees partnering and teaming-up with colleagues in order to conceive and implement innovative projects for the benefit of the company. Others talk in more traditional terms of intrapreneurship occurring within traditional hierarchies, through reward schemes and the "idea" box.

All agree that intrapreneurship is a kind of internal entrepreneurship, but with some important differences. Patterns of risk and reward are different, and the decision-making processes and financial arrangements can be quite different.

One dissenting (Belgian) voice regards true intrapreneurship in a company as impossible: "A real utopia! Because in a big institution you will always (have) the Board of Directors that will manage everything. Otherwise everything becomes possible when you are an independant."

Definitions of intrapreneurism

Here is a selection of relevant definitions:

- "(…) the ability to see themselves as a means and an end in their own corporate and not only as a spectator" – *e-Learning Specialist, Italy*

- "The term 'intrapreneurship' or also known as 'corporate enterpreneurship' refers to the entrepreneurial behaviour of persons within a large company, as well as the opportunities offered from the company, in order to undertake action towards the development of innovative products or services." – *VET Expert, Greece*

- "A pattern allowing for the healthy development of the sense of ownership and commitment. Intrapreneurship fosters initiative and creativity within an entrepreneurial context with the objective to develop both an organisation as well as the personality of the person itself." – *Policy Maker, Greece*

- "Creating an appropriate framework (institutional, culture etc.) for the development of business initiatives within an organization / company." – *VET Specialist, Greece*

- "Intrapreneurship is the act of behaving like an entrepreneur while working within a large organization." – *Manager, Romania*

- "Management technique that encourages employees' innovation, creativity and "out of the box" thinking in order to generate value that is aligned to the organization's needs and goals." – *IT Consultant, Romania*

- "Intrapreneurship is when employees undertake risks within an organization they do not own. It is a sort of entrepreneurship, which deals with taking risks (to start, grow and expand businesses)." – *Manager, Romania*

- "People within a company (…) behaving in a pro-active way and take initiatives to achieve the best results for that company as if that company would be their own (…) and that also have the freedom to act this independently. They think as an entrepreneur but don't have the same risks (but also not the benefits if an idea works out very well for the company)." – *Management Consultant, Belgium*

- "Promoting innovation within the organisation by promoting, encouraging and rewarding 'entrepreneural' behaviours amongst the staff." – *IT Consultant, United Kingdom*

- "Your employer enabling you and providing you with the resources to develop your idea into a startup." – *Academic, Cyprus*

- "Direct the business structure towards the aim of being capable of generating innovation." – *VET Specialist, Spain*

- "It is a necessity in the business world today, understood as the application of entrepreneurial activity within the organisation by developing new innovative projects. The intrapreneur promotes the change in his/her organisation. He/she is a person who cares and is involved in his/her organisation, initiating, implementing and innovating to create new processes. He/she takes risks, seeking collaboration and accelerating the creative and innovative potential of his/her organisation or company." – *Vet Specialist, Spain*

Examples of intrapreneurial cases

We reproduce here a selection of valuable cases:

- A number of respondents cite the practice at Google Inc. of allocating up to 20% of an employee's time to projects they think will be of benefit to Google, though this is in one case misunderstood as time free for employees to spend on projects not linked to work (software expert form Cyprus). The self-driving car, Google Glass and Gmail were products said to have derived from this approach. In general Silicon Valley companies are seen as promoting intrapreneurship.

- Other global companies getting a positive mention for enabling intrapreneurial spirit are 3M, Lockheed Martin, Linkedin, Sony (Playstation), Dreamworks, Apple, Lego and Microsoft.

- Other respondents state that products such as Post-It notes and Java programming were the outcome of internal encouragement for intrapreneurship activities.

- An Italian respondent working as a manger in the e-learning software business said that he knew of a number of ICT businesses who had taken on a legal status, such as cooperatives, that he felt oriented them necessarily towards intrapreneurship, and others were composed exclusively of worker partners.

- Positive and extreme examples of intrapreneurship were felt by another Italian respondent to be typically spin-offs from research and spin-out from other companies. "Cases such as Arca Technologies, OPTIT, the Formath project, Fa.Mo.sa etc. are examples of new innovative companies generated by the economic valorisation of intrapreneurial research and work by consultants. Spin-out companies are created to outsource business processes or new products and services."

- Negative cases of intra-organisational entrepreneurship are related to projects that bring detriment to the original business without giving back an adequate value or are not sustainable, because of, according to this respondent, "misallocation of resources, reward systems and (…) controls".

- Some local respondents refer to CYTA, the national telecommunications company in Cyprus, currently developing and putting into action an intrapreneurial program to be followed by company employees, supporting them through incentives to form their own start-ups.

- The company of a Romanian respondent launched a development project for a mobile digital publishing application, allocated funds and assigned a working group. They co-ordinate the project as an external company. The project was successful and is now being implemented.

- Another Romanian correspondent talks of Dreamworks Animations, who "encourage creativity from all its employees by actively soliciting ideas and regularly receiving hundreds from staff across the business. Regardless of their defined roles, Dreamworks employees are specifically trained on how to pitch their ideas successfully."

- A respondent from Belgium talks about the contrast that is apparent when comparing the actions of two different managers in relation to intrapreneurship. His previous boss let him create an innovative website about writing for the web. It brought in a lot of clients including UNESCO. A new Manager then imposed a top-down solution for a website which proved inadequate and ineffective, causing a loss of confidence within the organisation.

- Another respondent, a manager of a small business, said his company positively encourages staff to come up with ideas and then get them to present them to the management team. If the idea seems likely to improve performance or profitability within the organisation, they provide funding for a proof of concept project to see if the idea is commercially viable. After a further review they decide if it is worthy of implementation. The employee who had the idea is considered for a bonus payment.

- A Spanish correspondent gives the example of two large Spanish utilities who take internal entrepreneurship seriously. Gas Natural Fenosa has designed awards that recognise projects involving a change in the activities and businesses of the group, or a process of continuous improvement in them. Telefónica Spain also has various initiatives to promote entrepreneurship within the ranks: Emprendedores, Idealab (to improve customer experience) and Optima (to promote efficiency). Early signs are that at least 10% of staff in the divisions concerned are becoming involved in such projects.
- A respondent from Cyprus tells of his experience in a software company:

"We strongly encouraged all individuals to take initiatives and try new things. (…) we allowed software engineers to own pet projects which they could pursue during office hours and would present once every 3 months to the rest of the team for feedback and comments. Those projects did not necessarily have anything to do with what the company produced, it could be any new idea the individual took an interest in."

"During the annual company conference, by means of universal vote, one project was selected for incubation if it was a new product or inclusion in the company's existing product as a new feature or module. (…) Sales staff were encouraged to take ownership of any new markets they were able to develop through their own initiatives."

"Of course we had rules of engagement but the idea was that if you make the effort to identify and qualify a new market, you should be allowed to pursue it. This approach created a healthy competition among the team, which had a positive impact on sales."

- Another Spanish respondent talks of the value of events or initiatives organized by a company, such as "The morning of the White Robes" at the Spanish healthcare company, Lacer Laboratories, or "The Open Day" at Kh Lloreda SA. The "Innovation Diamond" is a well-established framework at multi-national Procter & Gamble which highlights "innovation strategy, a solid idea-to-launch process, portfolio management, and the right climate and leadership".

- Finnish company Nokia is mentioned by a Spanish correspondent, because in the 1980s they re-emerged to change completely their product line, becoming for 20 years the leader in mobile phones, a further example of a positive intrapreneurial case".

Obstacles to entrepreneurism

There are a wide range of perceived stumbling-blocks preventing the broader adoption of a culture of intrapreneurism:

- One Belgian respondent cautions against companies doing lip-service to the concept, misusing it for their own narrow ends, while at the same time failing to make the proper investment. Some are pessimistic about the cultural and managerial seismic shift required to fully come over to a system which encourages and rewards intrapreneurs.

- A Greek respondent bemoans a cultural component which he sees as hindering good practice:
"A general problem in Greece - probably caused from our culture, which surely has to change - especially given the current situation, is the fact that firms follow an antiquated operating and development model that does not involve management and staff in a common goal to regenerate the existing products through innovative ideas and solutions and / or create new ones. Definitely, in the same logical context, in our country, investing in the education of Managers and staff regarding these practices is unfortunately almost negligible."
"A general negative example, especially in Greece, is the corporations' low level of investment on intrapreneurial training. This is evident from the small number of new enterprises created and from the low volume of innovative products / services resulting from these practices."

- In general terms, some respondents complain that employees are more likely to be kept in the dark than encouraged to get involved. "Centralized decision making, organizational stiffness, vertical hierarchies and fragmentation" are the main culprits for many of the respndents right across international boundaries.

- Managerial inertia is cited, where "managers/owners don't want to get involved in changing the corporate culture". Bureaucracy, hierarchical top-down structures, jealousies and trust issues are mentioned by almost everybody, while some talk of risk aversion, and fear of failure as a determinant for companies. One respondent remarked that "business elites do not link workers with innovation and often do not value their contributions." Conflicts and criticism can be generated within an organization that is seen to give precedence creativity and innovation over experience and seniority.

- From the point of view of the employees in an organization, one Romanian respondent noted a tendency to individualism and a rejection of teamwork, while another spoke of a lack of employee motivation, and rigid divisions of duties. "With time or resources not forthcoming staff are under pressure, and are less inclined to come up with ideas that they think might increase their workload."

EuroCIO Interviews

EuroCIO is the only European, independent, not-for-profit representative for the large IT-users (demand side of IT), both private and public. With far over 600 organizations as members, represented by their highest IT-manager or CIO and representing over 500.000 IT workers, EuroCIO is "the" largest organization in its kind also at global level, with links to other CIO communities around the world.

The European CIO Association (EuroCIO) is a Partner in the Intraprise project.

It asked its members to respond to the survey on intrapreneurship:

A selection of eight ICT companies were identified and a series of meetings arranged to conduct one on one sessions to explore their experience with 'intrapreneurship' and to elicit their thoughts and views on this topic. The companies that were selected all have a significant European presence.

The discussions were free-format, although the questions were phrased in 3 specific areas, a framework to draw out their experiences and opinions.

1. What do you understand by the term 'intrapreneur'? Would you see a benefit of promoting this in your own organisation?
2. How do you promote and encourage innovation in your organisation?
3. What training have you found useful to develop these skills?

What do you understand by the term 'intrapreneur'? Would you see a benefit of promoting this in your own organisation?

All of the respondents could see the benefits of promoting intrapreneurship within their organisations; some had not come across the term before, but all the companies had systems in place which they felt corresponded in some part to the principles of intrapreneurship.

Phrases used include:

"We (…) would like to have our staff coming up with new business ideas."
Managing Director, cashless payments system company (1)

"… we definitely see the value to our business. Innovation is key to success in our industry."
Managing Director, digital web-based point of sale solutions company (2)

"We need the 'tone from the top' to be one that fosters this type of behaviour."
Governance Director EMEA, global bank (3)

"I would like to see more of that type of individual in my organisation."

Managing Director, insurance product solutions company (4)

"… encouraging 'intrapreneurial' behaviour in our staff (…) is definitely something we want to promote."

Environmental Director, print solutions company (5)

"We do want to encourage innovation, but it tends to still be through organised teams and meetings."

Chief Operating Officer, technical division of international insurance group (6)

"We don't specifically develop this skill in our staff but we do see the value."

CEO, secure mobile IT services company (7)

"We certainly want this type of individual in our organisation. (…) it's best to let professional managers in to take over the running of the company and to leave the creative people to do what they are good at."

Chairman, industrial control systems company (8)

Subsequent references to each respondent will be referred to by the numbers listed above.

How do you promote and encourage innovation in your organisation?

Promotion and encouragement of innovation takes a variety of forms:

One company (1) has a monthly meeting which "can be attended by all staff (…) we brainstorm ways to improve our value chain."

Another attempts to create a physical environment conducive to creativity:

"We (…) try and create an environment that makes people think creatively. We have a very colourful working environment without a standard desk layout. Staff are encouraged to have breakout sessions and discuss new ideas." (2)

Any idea with a positive impact are rewarded with bonuses. A global bank (3) has a more traditional approach, but nevertheless itself has "a discretionary local budget for small projects, which sit outside of the normal programme management reporting."

"We use this money to fund pilot projects, forming small teams with the express goal of proving if an idea is worth pursuing."

The insurance products company (4) also sets aside a budget for innovation:

"Members of staff who come up with an idea are given a small budget to develop a proof of concept. They can put a team together."

One company (5) encourages the free flow of ideas: "Individual objectives include an 'out of the box' business idea to be raised, even if it is wildly outlandish. We want to encourage staff to think without limits."

"We want all our staff to think of themselves as potential 'intrapreneurs'."

The same company tasks its managers specifically with encouraging innovative projects:

"… each member of the leadership team was given an innovation objective this year."

At the print solutions company (6) "IT took the lead by convening Heads of IT meetings where the global technology leads all come together to discuss innovation and how to promote it. (…) The discussions often yield new ideas."

The mobile services company (7) brings staff together to talk about strategy and direction: "Twice a year we have a strategy forum. (…) We want staff to feel that they have a say in the direction of the company, so everyone is invited to suggest ways of making our business better."

The respondent from the industrial control system company (8) is open to the idea of intrapreneurship but feels constrained by confidentiality requirements if they were to have such a level of openness: "We would like to encourage 'intrapreneurs' but at this time the only candidates would be our close knit R&D engineering team."

Some companies valued very much their relationships with partners and suppliers, whom they felt contributed very much to creativity within their own companies:

"We like to work with a network of like-minded companies." (1)

"We (…) work with innovative suppliers with a reputation for bringing leading edge products to market." (2)

"We tend to be an industry of followers, quickly adopting new technologies that we see used by our competitors. In this area, we also rely heavily on our strategic technology partners." (3)

"We (…) always look at the 'rising stars' and see if they would be of benefit as a technology supplier. (4)

What training have you found useful to develop these skills?

All but one of the respondents used some training they felt related to intrapreneurship, but some were not really satisfied that there was already in place effective relevant training for their companies. Most of the companies who expressed a need said they would be open to training proposals which could bring together disparate elements under the heading of "intrapreneurship".

"We rely on standard training course developing core skills (finance, marketing) but would be interested in a course promoting 'intrapreneurialism)'." (1)

"We would be very keen to find courses that developed 'intrapreneural' behaviours and abilities in our staff. I have not come across anything that meets this requirement." (2)

"Communication skills are critical in developing innovation capabilities. We offer communication skills development courses in our standard portfolio of training courses. We look at the skills we need to be innovative and the ability to logically articulate an argument and to 'sell and idea' is essential." (3)

"We use a third-party decision making course, but it's a little general and we would like to find something better." (4)

"We develop business analysis skills as part of our standard project life cycle training programme. This develops the skills needed to be 'intrapreneurs' – our business analysts bridge the gap between the business and IT and look at innovative ways to deliver business value. Our training programme uses a variety of models and frameworks to elicit business requirements and to think of novel approaches." (6)

"We have not found anything generally available in the market, but would be very interested if a good offering was available." (7)

"Courses around outsourcing would be useful. (…) We would certainly encourage creativity and innovation in downstream parts of the value chain, elements that we could use third-parties to provide." (8)

5.TAKING STOCK OF DESKTOP RESEARCH (OUTPUT 1)

O2 Report on user needs analysis both capitalizes on and takes stock of Output 1.

The methodological approach (O1-A1) was based on a **desktop research and a thorough exploration of papers, documents, interviews, websites and social media** with a focus on the concept of intrapreneurship, in the ICT sector particular.

Here is a recap of some important findings collected in O1-A1:

Main user needs

- *Awareness rising on intrapreneurship*. Need to better understand the concept in general and the benefits that could derive on economic and social level

- *Cross cultural management*. For example, in Belgium the work seems to be more effective when it is clear among colleagues that Belgians generally like working in teams and collaborate well across hierarchical lines. Role allocation within the team is generally quite clearly defined and people will take greater responsibility for their specific task than for the group as a whole.

A summary of Main identified obstacles for intrapreneurship in the existing management/organizational structure in ICT sector

INTRAPRISE Countries	Main identified obstacles
Belgium	• Regulated labour market: in Belgium employees "enjoy a high level of employment protection and social security. People with a safe job seek their challenges within their position instead of taking the risk of becoming self-employed entrepreneurs."; • Hierarchical management (especially Wallonia) which make it less likely that those in non-managerial positions feel able to take risks and innovate in a way associated with entrepreneurial behaviour; • Time flexibility: While respecting schedules and deadlines, Belgian workers can tend to be less time-flexible than their counterparts in other countries.
Cyprus	• No reference found specifically on ICT sector. However, some generally encountered barriers that could be taken into account are (Kwintessential): Paternalistic management practices; Labour-intensive nature; Reliance on public sector; Necessity driven entrepreneurship; Bureaucratic structures hindering development; Lack of targeted education and training (intracompany or else).

Greece	• Paternalistic management practices; Labour-intensive nature; Reliance on public sector; Necessity driven entrepreneurship; Bureaucratic structures hindering development; Lack of targeted education and training (intracompany or else).
Italy	• The main barrier seems to be the size of the company (small) . However, to some extent this weakness is also an opportunity, as particularly micro-companies are based on strong team-groups, where each of the members is implicitly an intrapreneur.
Romania	• 1/3 of companies do not allow the freedom of judgment → limits employees to come up with innovative ideas at their workplace; • Low number of companies with R&D policy; • Only 1/3 of the companies familiar with and make use of R&D grant programmes • Employee attachment to a corporation is low. Managers seem not to involve the employees in the strategic and tactical planning of processes of the company.
Spain	• Current economic crisis: he national ICT sector seems to be very permeable in terms of new management/organizational structures/cultures to promote intrapreneurship. However, the current economic situation will increasingly complicate the retention and attraction of talent.
Europe	• No specific distinction between entrepreneurship and Intrapreneurship in the official documents; • No mention of social intrapreneurship or corporate intrapreneurship instead; • There is a need for better awareness rising on this concept.

A tentative list of interesting inputs on contents for the course and modules

Both for employers and employees: ***better understanding and getting acquainted with the concept of "intrapreneurship".***

Company level:
- Awareness of the organisational culture of a company and comprehension of the 'big picture';
- Linking the business horizon of a company with personal entrepreneurial aspirations;
- The investment deduction creates the possibility for taxpayers to claim a tax deduction - in addition to the normal tax depreciations - when making qualifying R&D investments. **Belgian tax law provides the opportunity to benefit from a special investment deduction for investments in research and development of new products and forward-looking technologies that are environment friendly** (not harming the environment). This innovative law has encouraged the formation of R&D divisions. Awareness rising could be made on this and similar initiatives across EU/countries of the consortium;
- Focus on steering **complex projects within a business**, i.e., multi-faceted strategic projects, in various domains (finance, information systems, human resources, marketing, supply chain, etc.);
- Recognising the 'valuables' within a company;
- Rethinking the 'department philosophy', letting knowledge and ideas circulate;

- Bio-technology and telecommunications, among medium to large companies, have a greater focus on intrapreneurship than other sectors;
- **Outsourcing:** better insight of the phenomenon in general.

Individual level:
- 'I have an innovative idea': development of personal ideas and how to implement them, people to talk to within the institution, steps to follow;
- Risk taking within a company: way to evaluate the risk, what are the limits; way to treat/reward/promote such behaviour;
- Taking initiative: perceiving a bigger context around a single task;
- Awareness of own and others' strengths: identify the proper strengths and those of others; building teams with complementary strengths;
- Practical exercise: a successfully complete a concrete project, **acquiring competencies related to personal development (*soft skills*)**: taking initiative, teamwork, better self-knowledge (personal development).

Conclusions

The traditional management structure of most organizations simply focuses on performing old tasks more efficiently, instead of creating new tasks or new ideas to address new challenges. However, as suggested by Fig 4., the attitude towards entrepreneurship across EU countries is quite relevant. If organisations would realize the competitive advantage innovation provides, they could learn to stimulate, support, and protect their intrapreneurs as part of their corporate strategies. In this sense, companies and organisations should become more creative and responsive in recognizing and preserving the strengths and skills of employees to promote individual and overall growth in performance and efficiency. Top managers should combine reactiveness, risk-taking, innovativeness, competitive aggressiveness, and autonomy.

The literature strongly suggests that any foreseen training in this sense should target two directions: (1) *intrapreneurial mind-set* and (2) *knowledge of processes and factors for building this action plan*. Hence, the target communities of such trainings could be both **employees but also managers and employers**. In this manner the entire value chain of service providers would be covered and more exposed to awareness rising of intrapreneurship concept and it benefits, economic as well as cultural and social.
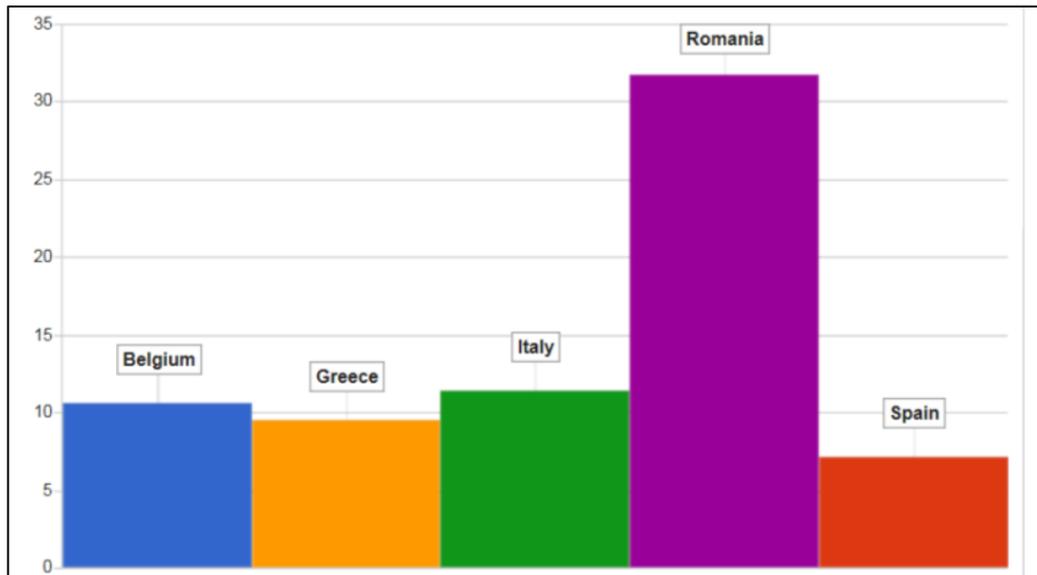
**Fig. 1 Entrepreneurial intention across INTRAPRISE partner countries in 2014
(data for Cyprus missing)**
Source: Global Entrepreneurship Monitor (GEM),

6. CONCLUSIONS & RECOMMENDATIONS

The present chapter focuses on Recommendations _on the basis of both the "qualitative" expert interviews and the "quantitative" online survey results_.

Intrapreneurship recommendations

The whole collected data reveals that the respondents understand that a number of things have to happen if intrapreneurialism is to thrive:

1. **Actions to promote intrapreneurialism.**
   This requires pro-active thinking, laying the groundwork for a culture of creativity and innovation in which employees feel able to come forward with ideas and initiatives, without fear of internal jealousies. This requires openness and transparency about the company's aims and values with everyone expected to take on responsibility for corporate objectives.

2. **Actions to invest in the tools of intrapreneurship.**
   Improved internal communication, perhaps via an intranet, along with events and incentive schemes such as:
   * Competitions for developing new products or services
   * Hackathons[10]
   * Pitching days
   * Corporate think tanks
   * Internal brainstorming
   * Appropriate time, resources and technology
   * The "idea box"

---

[10] A hackathon (also known as a hack day, hackfest or codefest) is an event in which computer programmers and others involved in software development, including graphic designers, interface designers and project managers, collaborate intensively on software projects.

3. **Actions to invest in people.**

Companies should take action to detect and promote the intrapreneurs within a company, as part of a "learning and innovation culture". In addition intrapreneurs should find support in the following areas:

- Training
- Reward schemes
- People-oriented way of working
- Managerial trust and support
- Team-working
- Willingness to take controlled risks

4. **Actions by the employee/intrapreneur**

The respondents in the study discuss a number of actions for the potential intrapreneur within an organisation, such as:

- a commitment to self-update and training
- to be a leader not a follower
- to lead the change
- to be focused on the future
- to own a problem
- a volunteering spirit
- a willingness to take controlled risks

Skills required to enhance entrepreneurial skills[11]

---

[11] Another way of introducing the skills could be:

- Actions by the organisation to promote intrapreneurship

- Actions by the organisation to support intrapreneurs

- Actions/Competences by the the intapreneur towards the organisation's management

This crucial point is open for discussion with the Partners.

Respondents[12] were asked to list three skills that ICT professionals should be taught to enhance their entrepreneurial skills. They came up with a wide range of ideas which can be summarised as follows:

Personal Skills:

Desire for learning:

- Self-learning (but also being able to limit it, as self-learning is endless)
- Self confidence
- Flexibility
- Self-efficacy
- Catalyst or leader
- to be more proactive
- Visionary/inventory
- Problem solving
- Change management
- Skills updating

Interpersonal Skills:

Communication:

- Listening
- Discussing ideas (collaborative attitude)
- Communication
- Fundraising

Leadership and motivation:

- team-building
- motivation and leadership
- Working in groups

Practical Skills:

Strategy:

- How to make a good plan that combines feasibility with the company's vision (a mini business plan)
- Market and competition analysis
- Decision-making
- Risk management: because an employee won't be personally affected if the initiative/idea fails, it is important to have an awareness of risks.

Project Management and Branding:

- Project management
- Business Planning
- New product development / product management

---

[12] Both experts and respondents of the online questionnaire.

- Marketing
- Management
- Tools and techniques to support product development and product marketing

Vision and Critical and Creative Skills:
- Discussing ideas (accepting good ideas to be criticized or faced with reality)
- Role models and successful case studies (Google and/or national case studies)
- Focus on strengths (developing what already works)
- Organising actions in an objectives / resources / measure pattern
- Sharing knowledge
- Focus on innovation: ability to evaluate different uses of technology, as well as the possibility of using other tools borrowed from other fields
- Presentation skills
- Ability of comparison: it is necessary to stimulate discussion and the exchange of information within the company for the generation and development of innovative ideas
- Constructive criticism
- Identifying new needs/opportunities

Pedagogical recommendations for an e-learning platform

Experts were invited to expose some of their pedagogical recommendations. Here is a summary of their reflections:

Case studies

Overwhelmingly the respondents call for a learning platform based on actual case studies. This should be "training based on practical cases, where real business situations are simulated and students/workers can work with them" (Spain). These should cover "real intrapreneurial skills (in an) actual work environment" (Greece). There should be cases where there is failure as well as success (Italy).

Theory and practical combined

A Belgian respondent recommends that the e-learning platform blend the theoretical with the practical, while another would like concepts to be "concrete". There should be clear learning objectives. A respondent from Cyprus, however, asks that the "theoretical approach should be limited".

People-focused

A strong theme among the respondents is that learning should focus on the needs of the users – "a system that enhance the traits and characteristics of the person", using the model of "communities of practices" (Italy).

Interactivity

E-learning platforms should be (…) simple, practical and interactive (Cyprus), and be "easy to use and (to be) adapted in the future and therefore not rigid" (Italy). "The e-learning platform should foster interaction between students and teachers as it promotes innovation," according to a Spanish respondent – a view echoed by a respondent in Greece.
Others call for mind-mapping to be used, or checklists, template and quick guides - not text description. Overall respondents agree that any platform should be simple and work on real life cases.

*****