



European Report – Final Results on
WP3 – European Business Case Study - Companies

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1. Objectives and general description of the activity

UC-CROWD/Universities-Companies Crowdsourcing is aimed at strengthening linkages between Companies and Higher Education Institutions (HEI) by mean of the reinforcement of an alternative way of dialogue focused on company's needs. Core aim of the project is to contribute to "new learning and teaching methods" by creating a Crowdsourcing platform to match company needs and academic innovative solutions. The platform developed will highlight the "challenges" (problems to solve) provided by companies specialized, in this pilot version, in the energy sector. University professors and students will further reply to the "challenges" suggesting their "solutions".

Crowdsourcing, thus, can be defined also as a Collective Intelligence which involves groups of individuals collaborating to create synergy, something greater than the individual part, which will allow enlarging the process of research innovation to think up new inventions in the next years. Crowdsourcing, in fact, applied to fundamental research and private sector, is described as a more effective research collaboration that radically enlarges the pool of scientific collaborators (Castelluccio 2006).

In UC CROWD project, the international "Crowd" is the real protagonist of this innovative project venture. In order to strengthen the knowledge triangle between education, research and business, European and International ground of enterprises and universities will contribute to the empowerment of the UC-CROWD Platform to create a unique network oriented towards energy efficiency and sustainable growth.

Rationale of UC CROWD Research is to investigate the actual knowledge, expectations and needs related to the Crowdsourcing platform. One of the main stakeholders' groups is represented by COMPANIES which are going to be the challenges' feeders in the Crowdsourcing Platform and one of the key actors of the success of the project. Through the research, partners have pointed out i.e. What kind services should the platform offer to be attractive to companies; What do companies expect to find at this



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type of network; What benefits companies have from being closer to the HEI's and vice versa; What could HEI's do to shorten the distance between them and the companies and vice versa; How much would be willing to contribute financially to be part of the platform; or finally How can students develop HEI's theses based on business' real problems.

Thanks to the results come from research phase it has been then possible to highlight the essential features of the platform, the main aims, the strengths and weaknesses of UC CROWD transnational project venture.

2. Introduction

Survey Background: UC CROWD survey has been designed and developed to identify and process data about Crowdsourcing competence, background motivations, obstacles, incentives or relevant functionalities witnessed by entrepreneurial target group.

The report furthermore highlights the emerging strengths or threats that could positively or negatively influence the project's success.

As previously mentioned, one of the most important project stakeholders' group is represented by the Companies which represents the key actors as challenges' feeders in the Crowdsourcing Platform. A suitable involvement in the project will influence the next success of the project. Through responses companies have pointed out actual competencies in the field, perceptions on how the platform should be to cope with their needs and expectations.

The Survey has been designed and developed by WP3/WP4/WP5 leader partners. In order to facilitate the management and the administration of the questionnaire a unique survey has been designed addressed to all 3 target groups: companies, university professors and university students.

Although there was a unique survey, specific questions were directed to investigate the specific needs of companies. In fact, a section focused to rate the PROJECTS AND CHALLENGES that companies believe suitable to solve by means of a Crowdsourcing platform was included in the questionnaire.

The action plan was addressed to reach clusters of:

P1 – 10 Portuguese and Spanish companies

P4 - 10 Polish and Deutsch companies

P5 - 10 Italian and French companies

P7 - 10 Slovenian and Osterreich companies

P8 - 10 Bulgarian and Romanian companies

P10 - 10 Belgian and Netherlands companies

P11- 10 UK and International companies



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Such survey has been translated into different languages: English, Italian, French, German, Portuguese, Spanish, Polish, Slovene, Bulgarian, Romanian and Dutch languages.

Surveys have been administered face to face, by fax, email and through online software.

Survey has been uploaded into online survey software in order to facilitate the collection and the elaboration of data.

As concerns Italian questionnaire the survey was uploaded in SurveyMonkey, see the link as follows:

For Italian Companies <https://www.surveymonkey.com/s/azienda>

For French Companies <https://www.surveymonkey.com/s/frenchcompanies>

Survey Completed <https://www.surveymonkey.com/s/UCCROWDFULL>

The other partners' surveys were available through the link:

French Questionnaire (Coord.) https://iscteul.co1.qualtrics.com/SE/?SID=SV_dmrzR6SqQVPFOxn

English Questionnaire (Coord.) https://iscteul.co1.qualtrics.com/SE/?SID=SV_8vjWdcodDhyVvKt

As concerns the statistic research strategy, the questions with rank responses (1-7) have been analysed providing:

- the visual representation of **row data** related to each option which allows you to understand the amount of responses for each option;
- the visual representation of **means** related to each option which allows to point out immediately the most important options chosen by participants;
- finally, the visual representation of the **confidence intervals** related to each option, a type of interval used to indicate the reliability of an estimate.

Beside that, a grid for each matrix question provides all the aforementioned values including the **standard deviations** which show how much variation or dispersion from the average exists.

Analysis

After approximately one month March 2014, we have reached a cluster of 198 companies coming from European and Third Countries:

European Countries Questionnaires

Austria	6
Belgium	25
Bulgaria	18
France	4
Germany	13
Italy	10
Netherlands	10
Poland	10



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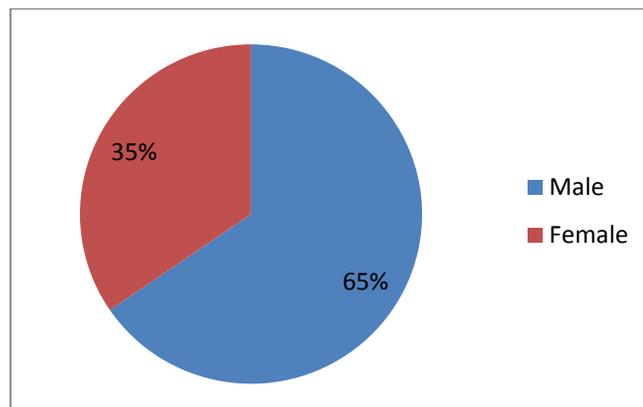
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Portugal	50
Romania	6
Slovenia	12
Spain	12
United Kingdom	10

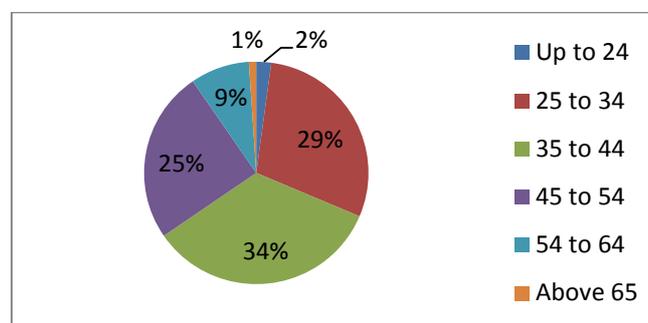
Other Countries Questionnaires

Argentina	2
Bolivia	1
Honduras	4
Nicaragua	2
Peru	3

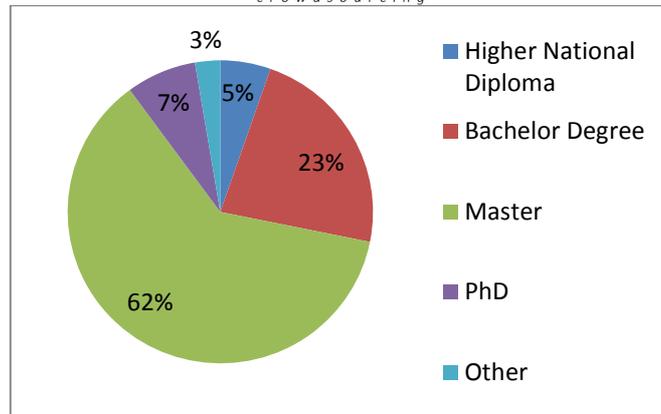
Graphic Results



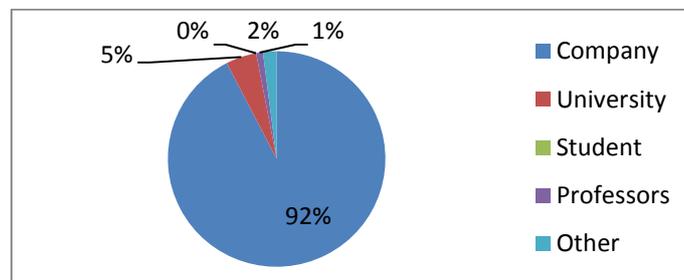
Graphic 1 – The majority of companies’ representatives are composed by **male**.



Graphic 2 – The majority of companies’ representatives to a range age of **35 to 44 years old**.



Graphic 3 – As concern the educational level, majority has a **master/bachelor qualification**.



Graphic 4 – As concerns the **type of Institution** they belong, the great part come from the **entrepreneurial sector**.

3. Motivations

Purpose: Matrix Question was addressed to understand the factors that could mostly motivate the companies to actively participate to a Crowdsourcing platform.

Analysis: as concerns motivation factors the most relevant motivations engines are represented by

1. “Creating contacts with stakeholders”;
2. “Transfer Knowledge into Practice”;
3. “Opportunity to access to the knowledge of other countries”;
4. “Opportunity to explore the last technologies”.

The responses provided witness that the **companies representatives** have very clear priorities. The first is to create new contacts and maintain relationships with relevant stakeholders. The second is focused on knowledge, innovation, in other words, to exploit the “crowd” of international professionals to grow up. We can suppose that they will be interested in UC-CROWD project only if they will really “earn” in terms of knowledge and income from this experience.



According to these important lessons acquired it is necessary for the UCCROWD project that its CS Platform will be highly disseminate and benefit from many participants. Academic and business Professionals need to join the platform in order to enrich the level of scientific exchange.

The second important lesson relevant for the project is that the level of qualification of participants needs to be high. The students need to be coached by academic staff (professors or researchers) in order to increase the level (and quality) of solutions provided.

In general, all the participants have chosen high rates witnessing that, on average all the responses have been considered relevant. Very few have chosen from 1-3 of the rank.

Confidence intervals related to each option indicate the reliability of the estimate.

Source: Question 7 Motivations

4. Obstacles

Purpose: Matrix Question was addressed to point out the factors that could damage and negatively influence the development of a crowdsourcing platform.

Analysis: as concerns obstacles the most relevant threats were represented by

- 1. "Companies could have to display internal information",*
- 2. "Lack of participation from companies",*
- 3. "Intellectual Property Issues",*
- 4. "Lack of support from Professors and Students".*

The responses provided witness that the companies' representatives have a main concern related to the privacy Issues. According to this information UCCROWD platform needs to protect such information in order to allow the companies to feel confident of Platform and be available to share information.

Beside that, responses witness that there is distrust on behalf of academic and business actors' participations. The probably have previous experiences that demonstrate existing difficulties in collaboration between academic and business worlds.



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Academic and business worlds are often in competition and have separate interests; such ancestral issues need to be considered as possible threats for project success. Professors' workshops could be a profitable ground to establish linkages and contrast the aforementioned perspective. Face to face communication during such events could change the past experiences.

Connected to this last consideration, it has been mentioned in the obstacles the Intellectual Property issue, in fact companies are worried that, once the academic staff has developed a prototype and provided a solution, conflicts related to the Intellectual Property and ownership could then emerge.

Aware of this issue, it is very important that, once the collaboration on the development of a solution will start, all the participant in to the Platform will have to sign a binding statement in which the property rights issue will be clarified in advance.

Finally it is interesting underline that the less relevant obstacles were that the platform was in English and the exchange ground was through an online platform. The basic knowledge related to English language and familiarity with platform represents positive aspects for the widespread use of such environment.

Confidence intervals related to each option indicate the reliability of the estimate.

Source: Question 9 Obstacles

5. Incentives

Purpose: Matrix Question was addressed to point out the incentives (in particular academic) that could be used to encourage people to participate with the crowdsourcing platform.

Analysis: as concerns incentives the most relevant opportunities are represented by

- 1. "Internship opportunities",*
- 2. "Start Cooperation with firms and invite them to make university lessons",*
- 3. "Enhance the future opportunities to study and/or work abroad",*
- 4. "Ability for students to attract future employment".*



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Responses witness that companies feel a profitable ground coming from cooperation with university professors and students. They could have the possibility to host internships firstly, and then the possibility to make university lessons contributing to the raise of the quality of didactics and modernisation of academic curricula.

The responses provided witness that the companies' representatives believe that Crowdsourcing it is also a chance to increase the internalisation of labour market and increase the employment rate. .

Confidence intervals related to each option indicate the reliability of the estimate.

Source: Question 11 Inventives

6. Challenges

Purpose: matrix question was addressed to display the findings about the possible Crowdsourcing projects and Challenges that could be hosted in the platform.

Analysis:

1. *"To develop creative ideas and new products/services",*
2. *"Opportunity to figure out the latest developments",*
3. *"To display the whole problem",*
4. *"Breaking the whole problem into small pieces".*

Companies' responses witness that the most important priority is foster innovation to be firstly competitive in the labour market. In fact, develop creative ideas, new products and figure out latest developments are the most important benefit that the platform should guarantee to companies otherwise it will be ignored.

As aforementioned stated is therefore essential that the level of challenges and solutions provided need to be high and not just and "academic exercise" for students. The collaboration of professors is strictly important to raise the qualification of participants.

The other benefits come from responses related to the CS Platform have been set as the possibility to display the whole problem and to break this into small pieces. The online platform, in fact, allows to create a unique virtual ground were professionals can share the problem, divide it into small pieces and allocate



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the solution of each piece to the most qualified person. The online platform allows exploiting a huge numbers of professional profiles available at the same time enlarging the possibility to choose the best for that task.

Confidence intervals related to each option indicate the reliability of the estimate.

Source: Question 13

The Crowdsourcing platform

7. Basic information of users

Purpose: To understand the proposed functions that were suggested and preferred by the respondents so that we can incorporate it into the platform.

Analysis

Most of the information mentioned in the questionnaire related to the Student, Professor and University profiles has been assessed as relevant; they only recommended not including were i.e. the title, the address. .

The same, in general, was for the company profile where they only recommend not i.e. including the title, the amount of transactions.

We suggest including in the registration some “compulsory” information, the other as optional.

The other suggestion is to exploit the university page of the department/professor for the academic staff.

7.2 Functionality

Purpose: To understand which are the most important functions suggested and preferred by the respondents so that we can incorporate it into the platform.

Analysis: as concerns the platform functions, in general, all the functions have been considered relevant and necessary. In particular the first places underlined as the most important have been the following:

- 1. “Option to view stakeholders with the same area of interest”;*
- 2. “Discussion Board about challenges”;*



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3. "Option to invite other stakeholders";
4. "Profile search options".

Responses of companies' representatives witness that they have a priority in order to optimise the virtual ground of sharing; they ask the possibility to filter the database of stakeholders according to the area of interest.

Later on they ask for a virtual agora to discuss about the challenge, the whole problem, find out solution, etc.

Other option asked, in order to maximise the use of the platform, is represented by the option to invite other stakeholders. They ask having not just the voluntary application replying to a challenge, but also a formal invitation to join and contribute to the solution.

Finally, companies' representatives ask to have also a profile search option in order to easily detect the best qualified professional for that challenge.

Confidence intervals related to each option indicate the reliability of the estimate.

Source: Question 21

7.3. Discussion

Purpose: to tailor all of the findings from the previous sections to the research aims and objectives.

Summary of all focus areas in table format.

Variables	Explanation (summary of result)
MOTIVATIONS	<ol style="list-style-type: none"> 1. "Creating contacts with stakeholders", 2. "Transfer Knowledge into Practice", 3. "Opportunity to access to the knowledge of other countries", 4. "Opportunity to explore the last technologies".
OBSTACLES	<ol style="list-style-type: none"> 1. "Companies could have to display internal information", 2. "Lack of participation from companies", 3. "Intellectual Property Issues", 4. "Lack of support from Professors and Students".
CHALLENGES	<ol style="list-style-type: none"> 1. "To develop creative ideas and new products/services", 2. "Opportunity to figure out the latest developments",



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	3. "To display the whole problem",
	4. "Breaking the whole problem into small pieces".
INCENTIVISATION	1. "Internship opportunities",
	2. "Start Cooperation with firms and invite them to make university lessons",
	3. "Enhance the future opportunities to study and/or work abroad",
	4. "Ability for students to attract future employment".
PLATFORM	1. "Option to view stakeholders with the same area of interest",
FUNCTIONALITY	2. "Discussion Board about challenges",
	3. "Option to invite other stakeholders",
	4. "Profile search options".

8. Recommendations

According to the companies' responses, as concerns **MOTIVATIONS**, Companies will be motivated if they will be able to create new contacts and maintain relationships with relevant stakeholders and if the CS Platform will be focused on knowledge, innovation. Companies will have to be able to exploit the "crowd" of international professionals to grow up. We can suppose that they will be interested in UC CROWD project only if they will really "earn" in terms of knowledge and income from this experience.

According to these important lessons acquired it is necessary for the UCCROWD project that its CS Platform will be highly diffused and benefit from many participants. Academic and business Professionals need to join the platform in order to enrich the level of scientific exchange.

The second important lesson relevant for the project is that the level of qualification of participants needs to be high. The students need to be coached by academic staff (professors or researchers) in order to increase the level (and quality) of solutions provided.

According to the companies' responses, as concerns **OBSTACLES**, Companies will have difficulties to actively join the CS Platform, if they will have no protection of personal and business privacy. According to this information UCCROWD platform needs to protect such information in order to allow the companies to feel confident of Platform and be available to share information.

Moreover, companies are worried that, once the academic staff has developed a prototype and provided a solution, conflicts related to the Intellectual Property and ownership could then emerge.



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Aware of this issue, it is very important that, once the collaboration on the development of a solution will start, all the participant in to the Platform will have to sign a binding statement in which the property rights issue will be clarified in advance.

As concerns INCENTIVES, Responses witness that companies feel a profitable ground coming from cooperation with university professors and students. They could have the possibility to host internships firstly, and then the possibility to make university lessons contributing to the raise of the quality of didactics and modernisation of academic curricula.

The responses provided witness that the companies' representatives believe that Crowdsourcing it is also a chance to increase the internalisation of labour market and increase the employment rate.

As concerns CHALLENGES, Companies' responses witness that the most important priority is foster innovation to be firstly competitive in the labour market. In fact, develop creative ideas, new products and figure out latest developments are the most important benefit that the platform should guarantee to companies otherwise it will be ignored.

As aforementioned stated is therefore essential that the level of challenges and solutions provided need to be high and not just and "academic exercise" for students. The collaboration of professors is strictly important to raise the qualification of participants.

The other benefits come from responses related to the CS Platform have been set as the possibility to display the whole problem and to break this into small pieces. The online platform, in fact, allows to create a unique virtual ground where professionals can share the problem, divide it into small pieces and allocate the solution of each piece to the most qualified person. The online platform allows exploiting a huge numbers of professional profiles available at the same time enlarging the possibility to choose the best for that task.

As concerns FUNCTIONS, Companies ask the possibility to filter the database of stakeholders according to the area of interest. Later on they ask for a virtual agora to discuss about the challenge, the whole problem, find out solution, etc.

Other option asked, in order to maximise the use of the platform, is represented by the option to invite other stakeholders. They ask having not just the voluntary application replying to a challenge, but also a formal invitation to join and contribute to the solution.

Finally, companies' representatives ask to have also a profile search option in order to easily detect the best qualified professional for that challenge.



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