

FINAL REPORT OF DELPHI STUDY

E3M PROJECT - EUROPEAN INDICATORS AND RANKING METHODOLOGY FOR UNIVERSITY THIRD MISSION

Project No: 143352-LLP-1-2008-1-ES-KA1-KA1SCR

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2. Introduction

The Universidad Politécnica de Valencia (Valencia University of Technology) is coordinating a three years research project (2008-2011) funded by the European Commission's Lifelong Learning Programme, entitled *European Indicators and Ranking Methodology for University's Third Mission*. The main objective of the project, involving partners from eight European Higher Education Institutions, is to generate a comprehensive instrument to identify, measure and compare Third Mission activities of HEIs, in part through the use of an array of indicators of Third Mission activity and performance.

In order to reach the objective mentioned above, the E3M project has developed a Delphi study as one of the main tasks in the project Work Package 6, named Survey Implementation and Testing.

Delphi is a survey method used for obtaining the opinion of experts in a number of consecutive rounds. The information obtained in a round is used as a basis for the questionnaire of the next round. In this study three rounds were developed in a way that allowed the experts to look at individual dimensions separately during the first and second rounds, and to develop a more global view of the whole set of indicators for the three dimensions in the third round. These dimensions that were identified in previous phases of the E3M project are considered to be representative of the third mission and were named accordingly: Continuing Education (CE), Technology Transfer & Innovation (TTI) and Social Engagement (SE).

This document presents the methodological approach applied in the study and the main results of the Delphi process obtained therein.

3. Objectives of the Delphi study

In the E3M project Delphi methodology was applied to achieve a consensus about a set of indicators to describe the Third Mission of HEIs and to analyse each indicator in detail. Through an organized discussion indicators were analysed individually and as a set.

The characteristics of the E3M project set multiple objectives for the Delphi study:

1. Incorporate experts opinion about the indicator's definitions and characteristics
2. Feedback on the processes identified in each dimension
3. Agreement about a set of indicators that describe the Third Mission of HEIs
4. Analysis of the properties of these indicators, mainly relevance and feasibility but also validity, reliability and comparability

By creating this set of relevant indicators, at the end of the project we will be able to offer a new approach on the concept of the ranking methodologies to evaluate Third Mission activities of HEIs.

4. Methodology

General Background

The Delphi technique is an established method for obtaining consensus. It consists of a series of questionnaires that are developed and refined in sequential stages until consensus is achieved. In this project it was considered beneficial to take advantage of one of the strengths of the method which is the ability to gather opinions from experts from different backgrounds and use it to get a selected set of indicators from a broad collection that can measure the third mission activities of HEIs.

A Delphi survey is a structured group interaction process directed in rounds of opinion collection and feedback. Opinion collection is achieved by conducting a series of surveys using questionnaires. During the three rounds of our study a total of seven questionnaires were launched. Three were elaborated for the first round in accordance to the three dimensions that involved the third mission, another three questionnaires for the second round and finally a unique general questionnaire for the last and third round where all dimensions were included.

Selection of experts

The expert panellists that participated in the Delphi study were proposed by different project partners. They were required to propose a number of experts that believed to be specialists in the areas of CE, SE and TTI. Once the project coordination received all the proposals, a selection of these experts was made and a final list of experts was defined. Two criteria were mainly considered: the expert's profile and the Delphi needs.

The proposals received included the following data for each panellist: name, institution, field of expertise and contact data. The considered experts should have met the following requirements:

- They should have technical knowledge and professional experience in at least one of the three areas/dimensions of the project.
- In addition to expertise, they should have the willingness and ability to participate from October 2010 till March 2011.
- They should be objective in their assessment and maintain confidentiality.
- They should agree to participate in such procedure.

The deadline for the presentation of the proposal of experts was the 20th of May 2010 and the final list of experts was sent to partners on 15th of June 2010.

The expert panel was recruited by sending out email invitations (see Annexes) at the end of September 2010, and it was finally composed of twenty panelists from different geographical regions, Europe and USA. In the invitation email, they received general information about the E3M project as a context of the work they had to do. More information was available for them in the project website www.e3mproject.eu. They also received a detailed schedule of the three rounds.

The Delphi study started in October 2010 and was coordinated by Valencia University of Technology with the support of University of León.

As mentioned before, the role of the experts was to answer a series of questionnaires. Through every questionnaire the properties of the proposed indicators were evaluated. The experts provided their opinions on the description of indicators as well as they gave a general overview on the whole set of indicators in order to achieve a consensus on the best indicators which measure the third mission activities. Depending on their field of expertise, the experts contributed to one, two or three dimensions, which were developed in three different questionnaires. In the first round, experts also had an opportunity to suggest additional indicators to cover possible gaps in the original proposal. The strategy was to select a set of indicators from a broad initial number and give the experts the possibility to create a more relevant group of them.

Table 1 shows the template used for the description of the indicators and the information provided with them.

Code of the indicator	Name of the indicator
Purpose	The reason why the indicator is selected
Definition	Brief description of the indicator nature
Interpretation	The meaning and result of the direction of the indicator
Measurement	Who is the indicator for
Formula (if applies)	If it is needed, how to calculate the indicator
Units (if applies)	The unit of the numeric result
Level of data collection	Institution, Faculty/Department, Programme
Type of data source	Institutional data, survey data
Time reference	Last year, x year's average...
Relevance Validity Reliability Feasibility Comparability	Importance for the measurement of third mission activities Ability of the indicator to measure what really has to be measured A measure of the absence of random error associated with the indicator Expected facility of obtaining the information Possibility of making adequate comparisons between different HEIs + (high/good) – (low/poor)

Table 1

Every questionnaire was sent by e-mail for processing. Then, the results obtained and a new questionnaire was sent again to the expert. During every round of the Delphi process we constantly monitored the number and the quality of the answers and sent out several reminders in order to promote participation (see Annexes).

Delphi procedure

The Delphi procedure was carried out in the seven following stages:

1. Implementation of the first round questionnaire.
2. Analysis of 1st round responses.
3. Implementation of the second round questionnaire.

4. Analysis of the 2nd round responses.
5. Implementation of the 3rd round questionnaire.
6. Analysis of the 3rd round responses.
7. Final report.

There were three rounds of questionnaires in our Delphi survey. The first round started in October 2010 and took about three weeks to complete, the second round started in December 2010 and took approximately one month, while the third and last round began in February 2011 and took three weeks to be concluded.

Figure 1 shows the planning and schedule of the Delphi process.

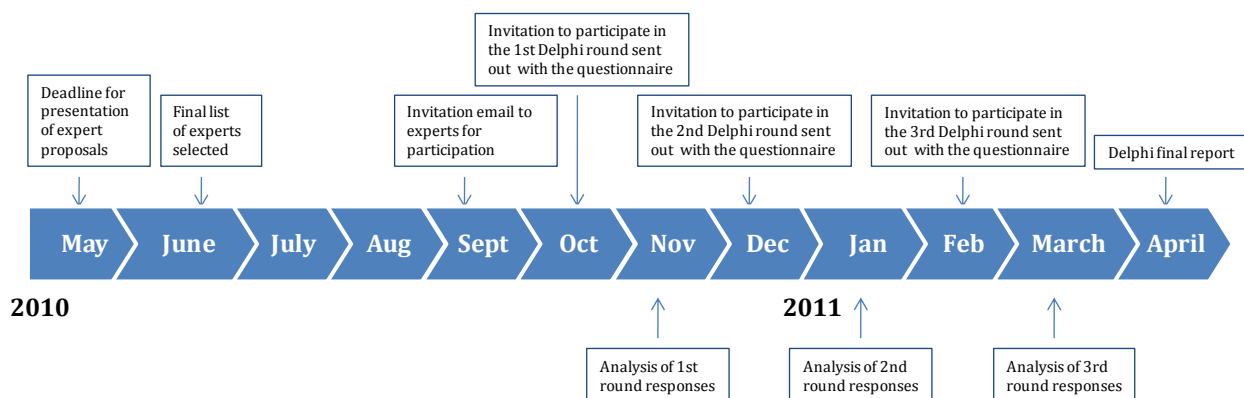


Figure 1

4.1 Methodology used for the 1st and 2nd Delphi rounds

The first and second rounds were carried out using the email as the communication channel and a web application for the survey. The web application used was LimeSurvey. Each panelist was asked through this online survey to evaluate the set of indicators proposed for the different dimensions. LimeSurvey facilitated the input and collection of the responses from all panelists.

First Delphi round

The aim of the first round was to determine the level of consensus about the indicators under the dimensions of CE, TTI and SE and grouped into processes. One of our priorities was to achieve a strong consensus about the selection and definition of the indicators. The idea was to identify the most relevant indicators from a group of more than one hundred. Three questionnaires were elaborated for the first round, according to the three dimensions or areas of study that the project had identified inside the Third Mission activities. Experts were also asked to propose additional indicators where they considered it to be of benefit.

During the analysis of the first round the coordinator team decided to take into account the following considerations:

a. Treatment of missing values

Some of the questions proposed in the survey were not answered by several experts. Given that the rate of partial non-responses was minimal and not focused on a specific item, it was decided not to make any correction action and then calculate the descriptive statistic and the dispersion excluding the missing values.

b. Criteria for the indicators selection: organizing the indicators in five categories

The indicators were classified into five groups or categories on the basis of the evaluation carried out by the experts. All observations were considered, specially the answers to the attribute "Relevance". This attribute, as well as "Validity", "Reliability", "Feasibility" and "Comparability" were described in a Likert Scale of four points, from "Unimportant" to "Very important". The Likert Scale is an ordered, one-dimensional scale from which respondents choose the option that best aligns with their view.

In order to classify the indicators, the percentage in which the attribute was marked as "Important" and "Very important" was calculated. With these values the following decision criteria was established:

- 1) The indicator was initially maintained if at least 66% of the experts have answered in the attribute of "Relevance" that it is "Important" and "Very important". Otherwise, the rest of the attributes (validity, reliability, feasibility and comparability) and all comments made by the experts were considered and revised carefully in order to decide if the indicator was finally maintained or not.
- 2) In the case that the indicator was clearly maintained, all its attributes were again revised so that the indicator could be kept with or without modifications.

With these criteria, the following categories were proposed:

- Category 1 - Unchanged: The indicator is maintained without changes
- Category 2 - Modified: The indicator is maintained with some changes
- Category 3 - Doubtful: The indicator is still undecided
- Category 4 - Deleted: The indicator has been removed
- Category 5 - Added: A new indicator is proposed

Those indicators classified in category 4 were removed and not evaluated in the next round. The attributes of the category 3 were reevaluated since a consensus had not been reached yet among the experts. The indicators from the category 5 were those new indicators that have been proposed by some of the experts. As a consequence, the opportunity for further evaluations was given in order to know if these indicators will be finally introduced or not in the whole set of indicators.

c. Corrections in the formulation of the indicators

All the suggestions and comments made by the experts related to the improvement of the formulation as well as the terminology used in the indicators were taken into consideration. The appropriate corrections were made in those indicators which were not excluded permanently. The new changes comparing to the first round results were marked in light blue colour .

Table 2 shows the initial and final number of indicators considered per dimension during the first round.

First round		
Questionnaires	Initial number of indicators	Final number of indicators
Continuing Education	28	21
Technology Transfer & Innovation	31	23
Social Engagement	36	19

Table 2

Second Delphi round

The second round was also composed of three different questionnaires for CE, SE and TT&I. After the first Delphi round, the goal of the second round was to further examine the indicators obtained during the first round. Here a decision was achieved regarding those indicators where a consensus was not reached during the first round. This means that the indicators that were doubtful or modified were again assessed. In addition, the new indicators proposed in the first round were asked to be evaluated. The objective was to achieve an agreement, especially on those indicators that should be maintained considering their relevance, validity, reliability, feasibility and comparability.

The responses obtained in the second round were analyzed and summarized in order to be circulated later again among the experts.

A very high degree of consensus was achieved. The majority of the comments made by the panelists were related to the terminology and the interpretation of some of the indicators.

Table 3 shows the initial and final number of indicators considered per dimension during the second round.

Second round		
Questionnaires	Initial number of indicators	Final number of indicators
Continuing Education	21	18
Technology Transfer & Innovation	23	20
Social Engagement	19	16

Table 3

4.2 Methodology used for the 3rd Delphi round

The third round of the Delphi was structured differently in comparison to the first and second rounds. In previous rounds the expert panelists evaluated independently the indicators for each

dimension through an online survey. In contrast, in this round they were requested to give us a global view and opinion about the whole set of indicators for all three dimensions: CE, SE and TTI. A Word document was in this case used so that experts assess the importance and feasibility of every indicator using a rating scale of 1 to 7, from the least to the most important and feasible. The *importance* was used as the base to identify the relative significance of each indicator, and the *feasibility* provided a contrast element for further phases of the study. The third Delphi round was developed based on the results of the second and first Delphi rounds.

Similarly to the preceding rounds, a total of 19 questionnaires were received and evaluated. Now all experts were asked to rate all 54 indicators. The third round questionnaire was divided in three parts according to the three dimensions.

The results achieved from the third Delphi round were further processed for evaluation. The criteria applied for analyzing the results of this round implied computing the mean of the values obtained by the experts for each indicator. These means could be interpreted easily for every indicator, considering the same scale of 1 to 7 of the questionnaire, from the least to the most important and feasible.

Table 4 shows the initial and final number of indicators considered per dimension during the third round.

Third round		
Questionnaires	Initial number of indicators	Final number of indicators
Continuing Education	18	18
Technology Transfer & Innovation	20	20
Social Engagement	16	16

Table 4

Figure 2 shows a diagram presenting the evolution of the number of indicators in the three rounds of the Delphi study.

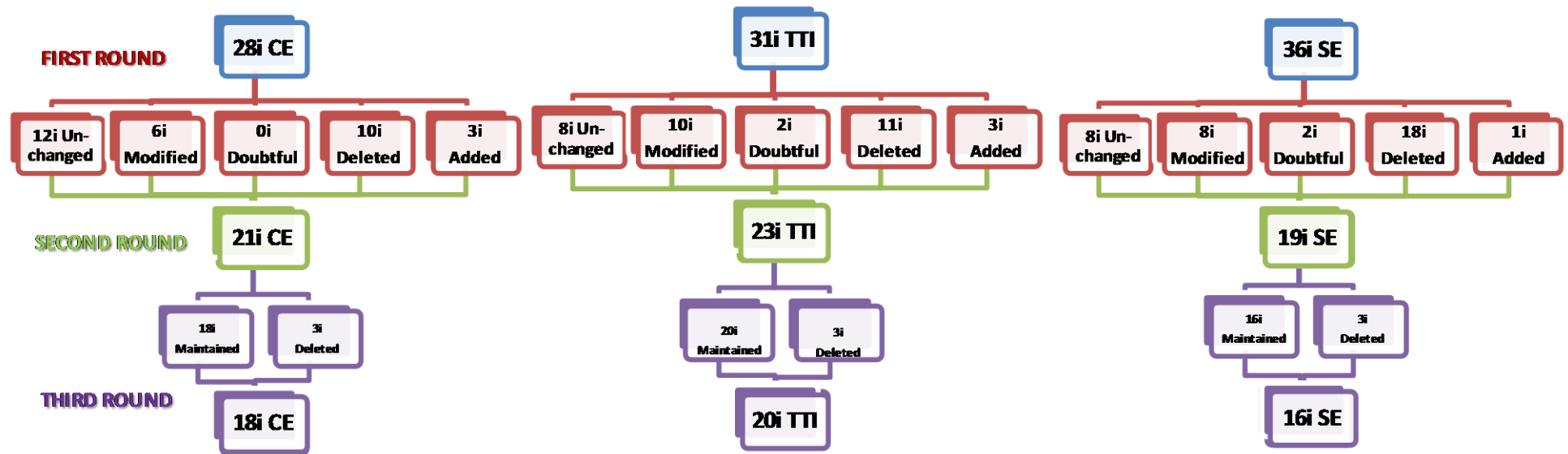


Figure 2

5. Results obtained with the Delphi technique

5.1 Framework of CE, SE and TTI processes

Dimension 1: Continuing Education (CE)

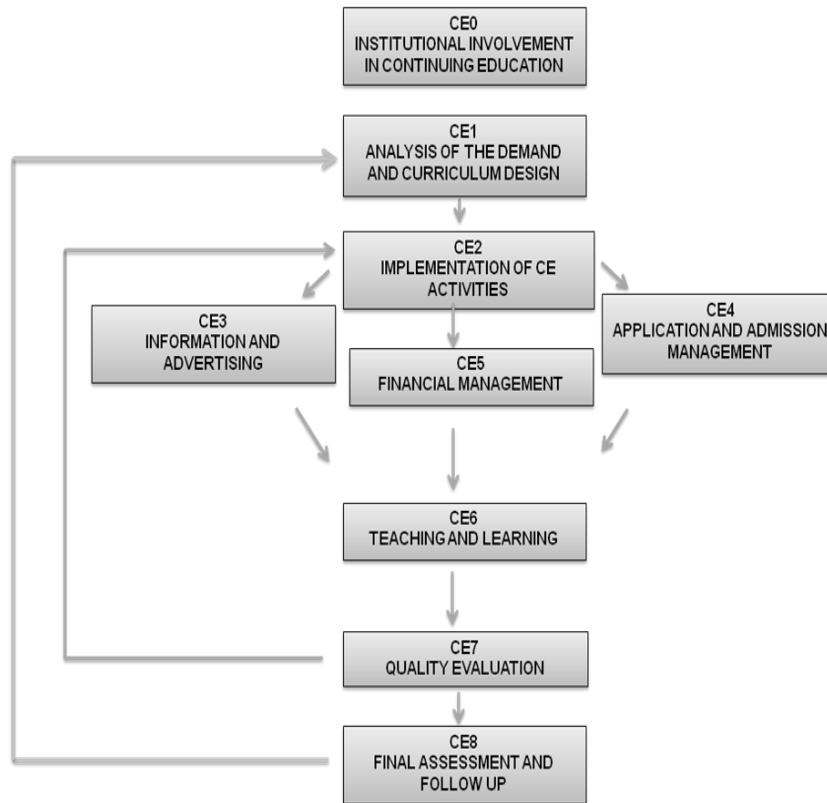


Figure 3

Dimension 2: Technology Transfer & Innovation (TTI)

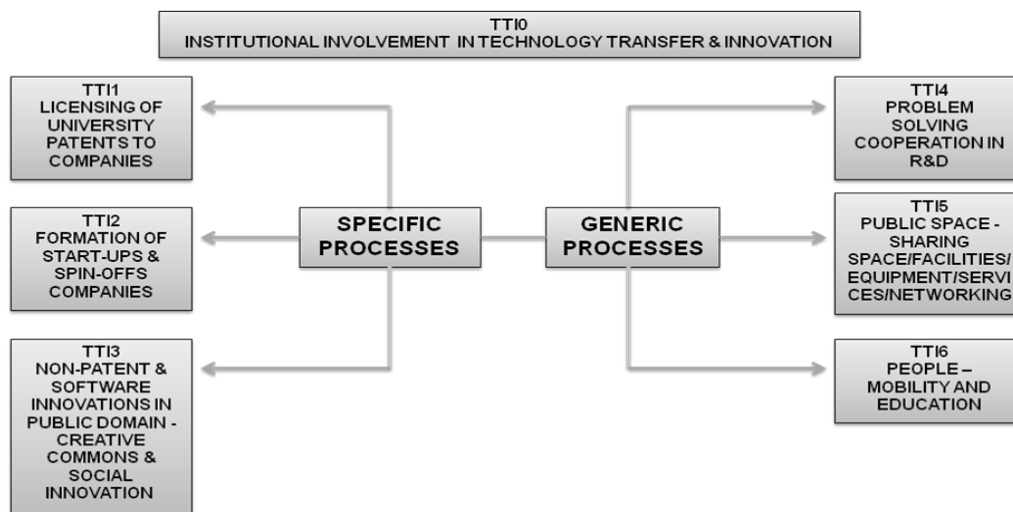


Figure 4

Dimension 3: Social Engagement (SE)

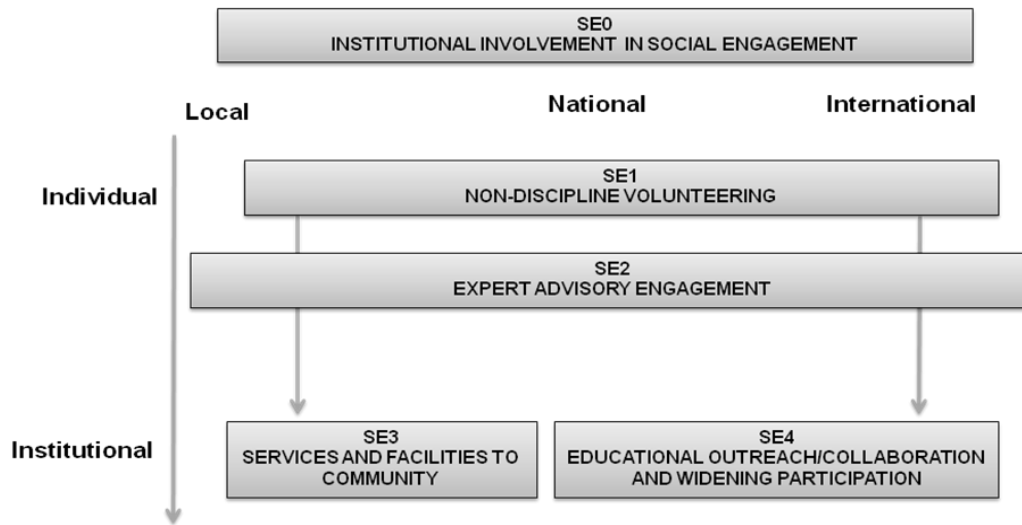


Figure 5

5.2 Indicators selected along the Delphi study

Continuing Education

The following list of indicators was selected for the CE dimension:

CE Indicators
CE0-11: CE IS INCLUDED IN THE MISSION OF THE HEI
CE0-12: CE IS INCLUDED IN THE POLICY AND/OR THE STRATEGY OF THE HEI
CE0-13: EXISTENCE OF AN INSTITUTIONAL PLAN FOR CE IN THE HEI
CE0-14: EXISTENCE OF QUALITY ASSURANCE PROCEDURE FOR CE ACTIVITIES
CE1-11: TOTAL NUMBER OF CE PROGRAMMES ACTIVE IN THAT YEAR FOR IMPLEMENTATION
CE1-12: NUMBER OF CE PROGRAMMES DELIVERED WHICH HAVE A MAJOR AWARD UNDER HIGHER EDUCATION SYSTEM
CE1-13: NUMBER OF PARTNERSHIP WITH PUBLIC AND PRIVATE BUSINESS CE PROGRAMMES DELIVERED IN THAT YEAR
CE1-14: PERCENTAGE OF INTERNATIONAL CE PROGRAMMES DELIVERED IN THAT YEAR
CE1-15: PERCENTAGE OF FUNDED CE TRAINING PROJECTS DELIVERED IN THAT YEAR
CE1-16: TOTAL NUMBER OF THE ECTS CREDITS OF THE DELIVERED CE PROGRAMMES
CE4-11: NUMBER OF ECTS CREDITS ENROLLED
CE4-12: NUMBER OF REGISTRATIONS IN CE PROGRAMMES IN THAT YEAR
CE4-14: PERCENTAGE OF CE ECTS ENROLLED REFERRED TO THE TOTAL ECTS ENROLLED
CE6-11: PERCENTAGE OF QUALIFICATIONS ISSUED REFERRED TO TOTAL CE REGISTRATIONS
CE7-11: STUDENTS SATISFACTION
CE7-12: KEY STAKEHOLDER SATISFACTION
CE7-13: COMPLETION RATE FOR ALL PROGRAMMES (IN AVERAGE)
CE8-11: PERCENTAGE OF CE PROGRAMMES WITH EXTERNAL ACCREDITATIONS

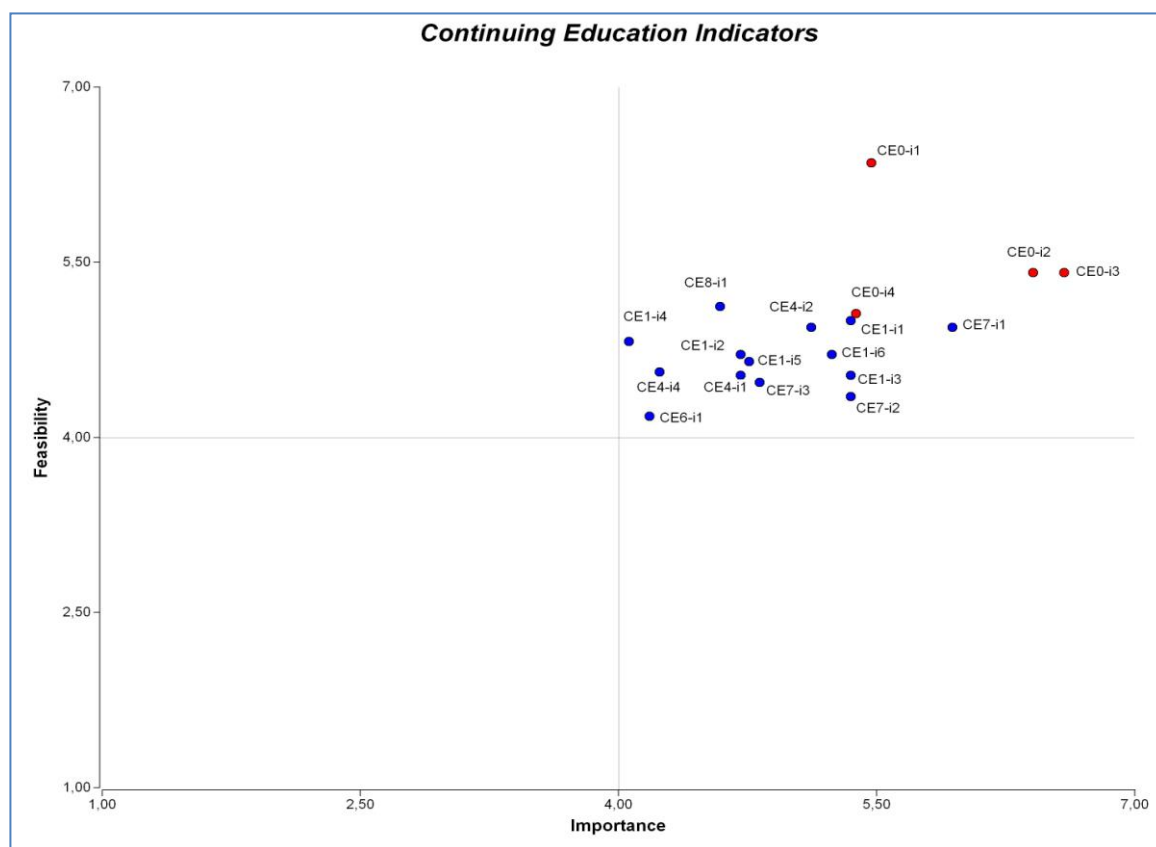


Figure 6

Figure 6 shows that all the CE indicators are considered to be significantly important and feasible. Every expert rated the importance and the feasibility of all these indicators above the median. The CE indicators, which belong to the CE0 process, were considered to be the most feasible and/or most important indicators from the entire set of the CE indicators examined in the third Delphi round.

The tables below show the descriptions of the CE indicators selected:

CE0-i1: CE IS INCLUDED IN THE MISSION OF THE HEI			
Purpose	To measure the status of CE within the HEI as well as the commitment of the HEI towards CE		
Definition	Inclusion of CE in the definition of the mission of the HEI		
Interpretation	This indicator measures the extent of the HEI's institutional commitment towards CE on a long term basis		
Measurement	Binary	Level of data collection	Institution
Formula (if applies)	--	Type of data source	Institutional data
Units (if applies)	--	Time reference	Last year

CE0-i2: CE IS INCLUDED IN THE POLICY AND/OR THE STRATEGY OF THE HEI	
Purpose	To measure the status of CE within the HEI as well as the commitment of the HEI towards CE
Definition	Inclusion of CE in the policy and/or strategy of the HEI
Interpretation	This indicator measures the extent of the HEI's institutional commitment towards CE on a long term basis. A policy/strategy plan dedicated to CE with indicators



	reflects the fact that CE is taken into account on the HEI's managerial level and financial plans as well		
Measurement	Binary	Level of data collection	Institution
Formula (if applies)	--	Type of data source	Institutional data
Units (if applies)	--	Time reference	Last year

CE0-i3: EXISTENCE OF AN INSTITUTIONAL PLAN FOR CE IN THE HEI			
Purpose	To measure the practical implementation- organisation, goals and measures – of CE activities in the HEI. Measures the HEI's involvement in CE in practice		
Definition	Existence of an institutional action plan for CE in the HEI		
Interpretation	This indicator measures the extent of the actual implementation of CE in the HEI. An action plan would reveal organisational and administrative arrangements as well as financial and intellectual resources allocated for CE		
Measurement	Binary	Level of data collection	Institution
Formula (if applies)	--	Type of data source	Institutional data
Units (if applies)	--	Time reference	Last year

CE0-i4: EXISTENCE OF QUALITY ASSURANCE PROCEDURE FOR CE ACTIVITIES			
Purpose	To measure the quality assurance effort of the institution		
Definition	Existence of a set of quality assurance procedures		
Interpretation	If CE activities have a quality assurance system, the importance given to CE by the institution is high, and the performance and consistency of CE activities tend to be higher		
Measurement	Binary	Level of data collection	Institution
Formula (if applies)	--	Type of data source	Institutional data
Units (if applies)	--	Time reference	Last year

CE1-i1: TOTAL NUMBER OF CE PROGRAMMES ACTIVE IN THAT YEAR FOR IMPLEMENTATION			
Purpose	To measure the level of activity in CE		
Definition	Total number of CE programmes active in the year of reference		
Interpretation	This indicator describes the overall CE activity		
Measurement	Numerical	Level of data collection	Institution
Formula (if applies)	N_CE programmes	Type of data source	Institutional data
Units (if applies)	CE programmes	Time reference	Last year

CE1-i2: NUMBER OF CE PROGRAMMES DELIVERED WHICH HAVE A MAJOR AWARD UNDER HIGHER EDUCATION SYSTEM			
Purpose	To measure the academic level of the CE activity		
Definition	Total number of CE programmes delivered which have a major award under European Higher Education system		
Interpretation	This indicator measures the academic level of the CE activity		
Measurement	Numerical	Level of data collection	Institution
Formula (if applies)	N_Degree programmes	Type of data source	Institutional data
Units (if applies)	Degree programmes	Time reference	Last year

**CE1-i3: NUMBER OF PARTNERSHIP WITH PUBLIC AND PRIVATE BUSINESS CE PROGRAMMES DELIVERED IN THAT YEAR**

Purpose	To measure the quantitative outputs and the amount of partnership in CE activity		
Definition	Total number of partnership CE programmes with public and private business designed and approved for implementation with any external partner		
Interpretation	This indicator assesses the activity level, having the focus on partnership programmes with public and private business		
Measurement	Numerical	Level of data collection	Institution
Formula (if applies)	N_Partnership programmes	Type of data source	Institutional data
Units (if applies)	Partnership programmes	Time reference	Last year

CE1-i4: PERCENTAGE OF INTERNATIONAL CE PROGRAMMES DELIVERED IN THAT YEAR

Purpose	To measure the quantitative outputs and the internationalization of CE activity		
Definition	Percentage of international CE programmes designed and approved for implementation		
Interpretation	This indicator assesses the CE activity having the focus on programmes targeted for international markets and students		
Measurement	Percentage	Level of data collection	Institution
Formula (if applies)	(N_International CE programmes / Total Programmes) *100	Type of data source	Institutional data
Units (if applies)	Percentage	Time reference	Last year

CE1-i5: PERCENTAGE OF FUNDED CE TRAINING PROJECTS DELIVERED IN THAT YEAR

Purpose	To measure the quantitative outputs and the access to external funding by CE activity		
Definition	Number of funded CE training projects delivered in that year		
Interpretation	This indicator assesses the effectiveness of the CE activities, having the focus on training projects which receive project funding through application or tender procedures		
Measurement	Percentage	Level of data collection	Institution
Formula (if applies)	(N_funded CE training projects / Total Programmes)*100	Type of data source	Institutional data
Units (if applies)	Percentage	Time reference	Last year

CE1-i6: TOTAL NUMBER OF THE ECTS CREDITS OF THE DELIVERED CE PROGRAMMES

Purpose	To measure the extent of the CE programmes active in the year of reference, via the total ECTS delivered in these programmes		
Definition	Total number of the ECTS credits of the active CE programmes		
Interpretation	This indicator assesses the activity having the focus on the total workload of students (ECTS credits) in CE programmes		
Measurement	Numerical	Level of data collection	Institution
Formula (if applies)	N_ECTS	Type of data source	Institutional data
Units (if applies)	ECTS	Time reference	Last year

**CE4-i1: NUMBER OF ECTS CREDITS ENROLLED**

Purpose	To measure the total volume of CE activities in a HEI		
Definition	Total number of ECTS credits of the enrolled students		
Interpretation	This indicator measures the quantity of CE activities only considering the total number of ECTS credits		
Measurement	Numerical	Level of data collection	Institution
Formula (if applies)	N_ECTS credits of the enrolled students	Type of data source	Institutional data
Units (if applies)	ECTS	Time reference	Last year

CE4-i2: NUMBER OF REGISTRATIONS IN CE PROGRAMMES IN THAT YEAR

Purpose	To measure the total number of people registered in CE activities		
Definition	Total number of registrations of students in the CE activities (not just the number of students)		
Interpretation	This indicator measures the total number of people registered in CE programmes. This indicator can be interpreted together with CE4-i1 in order to describe the quantity and intensity of CE activities in a HEI		
Measurement	Numerical	Level of data collection	Institution
Formula (if applies)	N_registrations in CE programmes in that year	Type of data source	Institutional data
Units (if applies)	Registrations	Time reference	Last year

CE4-i4: PERCENTAGE OF CE ECTS ENROLLED REFERRED TO THE TOTAL ECTS ENROLLED

Purpose	To measure the relative importance of CE activities		
Definition	Percentage of CE ECTS enrolled referred to the total ECTS enrolled		
Interpretation	The percentage of the total ECTS from CE activities indicates the relative importance of CE for the HEI activities		
Measurement	Percentage	Level of data collection	Institution
Formula (if applies)	(CE ECTS enrolled / total ECTS enrolled) *100	Type of data source	Institutional data
Units (if applies)	Percentage	Time reference	Last year

CE6-i1: PERCENTAGE OF QUALIFICATIONS ISSUED REFERRED TO TOTAL CE REGISTRATIONS

Purpose	To measure the results of the CE programmes		
Definition	Percentage of qualifications issued referred to total CE registrations		
Interpretation	This indicator measures the relative amount of the qualifications in CE, providing information about the results of the CE programmes		
Measurement	Percentage	Level of data collection	Institution
Formula (if applies)	N_qualifications issued / N_CE registration	Type of data source	Institutional data
Units (if applies)	Percentage	Time reference	Last year

CE7-i1: STUDENTS SATISFACTION			
Purpose	To measure the global students perception about the institution		
Definition	Satisfaction level of students		
Interpretation	As part of the objectives of the institution, the satisfaction of the students makes, for the third mission, a role as important as customer satisfaction for a manufacturing company. This satisfaction must be measured by directly asking the different students about it, using a survey methodology		
Measurement	Percentage	Level of data collection	Institution
Formula (if applies)	% of 3-4 answers in a 4 point scale degree of satisfaction question	Type of data source	Survey data
Units (if applies)	Percentage satisfaction level (0% = completely dissatisfied, 100% = completely satisfied)	Time reference	Last year

CE7-i2: KEY STAKEHOLDER SATISFACTION			
Purpose	To measure the key stakeholders perception about the institution		
Definition	Satisfaction level of key stakeholders		
Interpretation	The key stakeholders satisfaction must be measured by directly asking the different students about it, using a survey methodology		
Measurement	Percentage	Level of data collection	Institution
Formula (if applies)	--	Type of data source	Survey data
Units (if applies)	Percentage satisfaction level (0% = completely dissatisfied, 100% = completely satisfied)	Time reference	Last year

CE7-i3: COMPLETION RATE FOR ALL PROGRAMMES (IN AVERAGE)			
Purpose	To measure the efficiency of the programmes for attendants		
Definition	Average completion rate for all programmes		
Interpretation	There can be many causes for attendants failing in completing a programme, and there will be always a certain non-completing rate. Among this causes, the lack of correspondence between attendant interests and programme characteristics is one of the most important. In any case, completion rate can be considered also as an evaluation of the interest level of the programme		
Measurement	Percentage	Level of data collection	Institution
Formula (if applies)	--	Type of data source	Institutional data
Units (if applies)	Percentage	Time reference	Last year

CE8-i1: PERCENTAGE OF CE PROGRAMMES WITH EXTERNAL ACCREDITATIONS	
Purpose	To measure the quality of the CE programmes
Definition	Percentage of accredited programmes by national or international agencies and official bodies
Interpretation	Accreditation needs a big effort of the HEI. If the HEI has a large proportion of

	accredited programmes so the importance of CE for the HEI must be also high		
Measurement	Percentage	Level of data collection	Faculty/Department/CE centre
Formula (if applies)	(Accredited programmes with external accreditations / N Total programmes offered) * 100	Type of data source	Survey data, programme lists, programme folder and websites
Units (if applies)	Percentage	Time reference	Last year

Technology Transfer & Innovation

The following list of indicators was selected for the TTI dimension:

TTI Indicators
TT10-i1: TTI IS INCLUDED IN THE MISSION OF THE HEI
TT10-i2: TTI IS INCLUDED IN THE POLICY AND/OR STRATEGY OF THE HEI
TT10-i3: EXISTENCE OF AN INSTITUTIONAL ACTION PLAN FOR TTI IN THE HEI
TT11-i1: NUMBER OF LICENCES, OPTIONS AND ASSIGNMENTS (ACTIVE AND EXECUTED, EXCLUSIVE AND NON-EXCLUSIVE) TO START-UPS OR SPIN-OFFS AND EXISTING COMPANIES
TT11-i2: TOTAL BUDGET COMING FROM REVENUES FROM COMMERCIALISATION OF HEI KNOWLEDGE
TT12-i1: NUMBER OF START-UPS AND SPIN-OFFS ESTABLISHED
TT13-i1: NUMBER OF CREATIVE COMMONS AND SOCIAL INNOVATION PROJECTS THAT HEI EMPLOYEES ARE INVOLVED IN
TT14-i2: NUMBER OF R&D SPONSORED AGREEMENTS, CONTRACTS AND COLLABORATIVE PROJECTS WITH NON-ACADEMIC PARTNERS
TT14-i3: PERCENTAGE OF HEI BUDGET COMING FROM INCOME OF R&D SPONSORED CONTRACTS AND COLLABORATIVE PROJECTS WITH NON-ACADEMIC PARTNERS
TT14-i4: NUMBER OF CONSULTANCY CONTRACTS
TT14-i5: PERCENTAGE OF POSTGRADUATE STUDENTS AND POSTDOCTORAL RESEARCHERS DIRECTLY FUNDED OR CO-FUNDED BY PUBLIC AND PRIVATE BUSINESSES
TT15-i1: NUMBER OF CREATED (CO-FUNDED) OR SHARED LABORATORIES AND BUILDINGS
TT16-i2: NUMBER OF COMPANIES PARTICIPATING IN CONTINUOUS PROFESSIONAL DEVELOPMENT COURSES (CPD)
TT16-i3: NUMBER OF HEI EMPLOYEES WITH TEMPORARY POSITIONS OUTSIDE OF ACADEMIA
TT16-i4: NUMBER OF NON-ACADEMIC EMPLOYEES WITH TEMPORARY POSITIONS AT HEIS
TT16-i5: NUMBER OF POSTGRADUATE THESES OR PROJECTS WITH NON-ACADEMIC CO-SUPERVISORS
TT16-i7: NUMBER OF JOINT PUBLICATIONS WITH NON-ACADEMIC AUTHORS
TT16-i8: NUMBER OF ACADEMIC STAFF PARTICIPATING IN PROFESSIONAL BODIES, NETWORKS, ORGANIZATIONS AND BOARDS
TT16-i9: NUMBER OF EXTERNAL ORGANIZATIONS OR INDIVIDUALS PARTICIPATING AT ADVISORY, STEERING, VALIDATION, REVIEW BOARDS TO HEIS, INSTITUTES, CENTRES OR TAUGHT PROGRAMMES
TT16-i10: NUMBER OF PRESTIGIOUS INNOVATION PRIZES AWARDED BY BUSINESS AND PUBLIC SECTOR ASSOCIATIONS OR FUNDING AGENCIES (NATIONAL AND INTERNATIONAL)

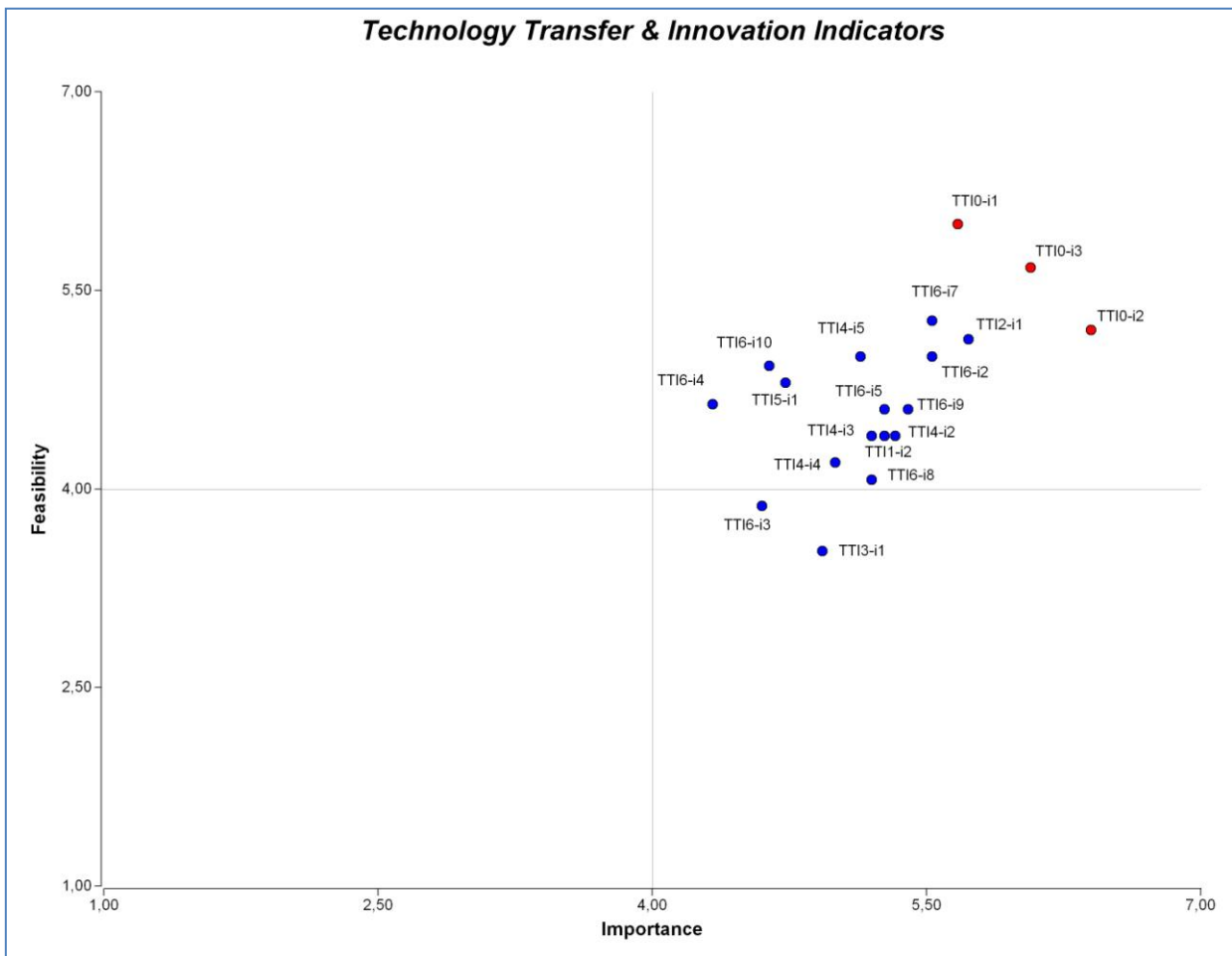


Figure 7

Figure 7 shows that TTI indicators examined in the third Delphi round were rated highly above the median regarding the importance. In general, all the indicators are above 4 in the feasibility, except the indicators TT16-i3 and TT3-i1 that the experts rated below the median.

As in the CE dimension, the indicators under the TT10 process were the most relevant and feasible ones.

The descriptions of the TTI indicators selected are presented in the tables below:

TT10-i1: TTI IS INCLUDED IN THE MISSION OF THE HEI			
Purpose	To measure the status of TTI within the HEI as well as the commitment of the HEI towards TTI		
Definition	Inclusion of TTI in the definition of the mission of the HEI		
Interpretation	This indicator measures the extent of the HEI's institutional commitment towards TTI on a long term basis		
Measurement	Binary	Level of data collection	Institution
Formula (if applies)	--	Type of data source	Institutional data
Units (if applies)	--	Time reference	Last year



Education and Culture DG

Lifelong Learning Programme

European Indicators and
Ranking Methodology for
University Third Mission**TT10-i2: TTI IS INCLUDED IN THE POLICY AND/OR STRATEGY OF THE HEI**

Purpose	To measure the status of TTI within the HEI as well as the commitment of the HEI towards TTI		
Definition	Inclusion of TTI in the policy and/or strategy of the HEI		
Interpretation	This indicator measures the extent of the HEI's institutional commitment towards TTI on a long term basis. A policy/strategy plan dedicated to CE with indicators reflects the fact that TTI is taken into account on the HEI's managerial level and financial plans as well		
Measurement	Binary	Level of data collection	Institution
Formula (if applies)	--	Type of data source	Institutional data
Units (if applies)	--	Time reference	Last year

TT10-i3: EXISTENCE OF AN INSTITUTIONAL ACTION PLAN FOR TTI IN THE HEI

Purpose	To measure the practical implementation- organisation, goals and measures – of TTI activities in the HEI. Measures the HEI's involvement in TTI in practice		
Definition	Existence of an institutional action plan for TTI in the HEI		
Interpretation	This indicator measures the extent of the actual implementation of TTI in the HEI. An action plan would reveal organisational and administrative arrangements as well as financial and intellectual resources allocated for CE		
Measurement	Binary	Level of data collection	Institution
Formula (if applies)	--	Type of data source	Institutional data
Units (if applies)	--	Time reference	Last year

TT11-i1: NUMBER OF LICENCES, OPTIONS AND ASSIGNMENTS (ACTIVE AND EXECUTED, EXCLUSIVE AND NON-EXCLUSIVE) TO START-UPS OR SPIN-OFFS AND EXISTING COMPANIES

Purpose	To measure a specific mechanism of TT&I which is directly aimed at commercialising HEI knowledge		
Definition	Number of licenses, options and assignments (active & executed, exclusive & non-exclusive) to start-ups/spin-off & existing companies		
Interpretation	This indicator measures all kind of licenses, options and assignments to companies		
Measurement	Numerical	Level of data collection	Institution
Formula (if applies)	(N_licenses + N_options + N_assignments) to start-ups or spin-off and existing companies	Type of data source	Institutional data
Units (if applies)	Licenses, options and assignments	Time reference	Last year

TT11-i2: TOTAL BUDGET COMING FROM REVENUES FROM COMMERCIALISATION OF HEI KNOWLEDGE

Purpose	To measure a specific mechanism of TT&I which is directly aimed at commercialising HEI knowledge		
Definition	Percentage of total budget generated from commercialisation of HEI knowledge, e.g. licensing income, total earned royalty income (ERI)		
Interpretation	This indicator measures the percentage of the total budget coming from commercialisation of HEI knowledge		
Measurement	Percentage	Level of data collection	Institution
Formula (if applies)	(Total revenue from commercialisation of HEI	Type of data source	Institutional data

	knowledge / Total HEI budget) * 100		
Units (if applies)	Percentage	Time reference	Last year

TTI2-i1: NUMBER OF START-UPS AND SPIN-OFFS ESTABLISHED			
Purpose	To measure a specific mechanism of TT&I which is directly aimed at commercialising HEI knowledge		
Definition	Total number of start-ups and spin-offs established		
Interpretation	This indicator measures a total number of start-ups and spin-offs established		
Measurement	Numerical	Level of data collection	Institution
Formula (if applies)	(N_start-ups + N_spin-offs) established	Type of data source	Institutional data
Units (if applies)	Start-ups, spin-offs	Time reference	Last year

TTI3-i1: NUMBER OF CREATIVE COMMONS AND SOCIAL INNOVATION PROJECTS THAT HEI EMPLOYEES ARE INVOLVED			
Purpose	To measure the engagement of HEI staff in non-patent public domain entrepreneurial activities, including creative commons & social innovation		
Definition	Number of creative commons and social innovation projects		
Interpretation	This indicator measures a number of non-patent innovation projects of HEI staff		
Measurement	Numerical	Level of data collection	Institution
Formula (if applies)	(N_creative commons + N_social innovation projects) that HEI employees are involved	Type of data source	Institutional data
Units (if applies)	Creative Commons, Social Innovation Projects	Time reference	Last year

TTI4-i2: NUMBER OF R&D SPONSORED AGREEMENTS, CONTRACTS AND COLLABORATIVE PROJECTS WITH NON-ACADEMIC PARTNERS			
Purpose	To measure problem solving activities/cooperation in R&D with non-academic partners. This process could be viewed as the input to the technology development and/or improvement		
Definition	Number of R&D sponsored agreements, contracts and collaborative projects with non-academic partners		
Interpretation	This indicator measures a number of R&D sponsored agreements, contracts and collaborative projects with non-academic partners		
Measurement	Numerical	Level of data collection	Institution
Formula (if applies)	(N_R&D sponsored agreements + N_contracts + N_collaborative projects) with non-academic partners	Type of data source	Institutional data
Units (if applies)	R&D sponsored agreements, contracts and collaborative projects	Time reference	Last year



TTI4-i3:PERCENTAGE OF HEI BUDGET COMING FROM INCOME OF R&D SPONSORED CONTRACTS AND COLLABORATIVE PROJECTS WITH NON-ACADEMIC PARTNERS			
Purpose	To measure problem solving activities/cooperation in R&D with non-academic partners. This process could be viewed as the input to the technology development and/or improvement		
Definition	Percentage of HEI budget coming from R&D sponsored contracts and collaborative projects with non-academic partners		
Interpretation	This indicator measures the importance of income of R&D sponsored contracts and collaborative projects with non-academic partners for the HEI		
Measurement	Percentage	Level of data collection	Institution and/or faculty
Formula (if applies)	$100 * ((\text{Total income of R\&D sponsored contracts} + \text{Total income of collaborative projects with non-academic partners}) / \text{Total HEI budget})$	Type of data source	Institutional data
Units (if applies)	Percentage	Time reference	Last year

TTI4-i4:NUMER OF CONSULTANCY CONTRACTS			
Purpose	To measure problem solving activities/cooperation in R&D with non-academic partners. This process could be viewed as the input to the technology development and/or improvement		
Definition	Number of consultancy contracts with non-academic partners		
Interpretation	This indicator measures a number of consultancy contracts with non-academic partners		
Measurement	Numerical	Level of data collection	Institution
Formula (if applies)	N_consultancy contracts	Type of data source	Institutional data
Units (if applies)	Consultancy contracts	Time reference	Last year

TTI4-i5:PERCENTAGE OF POSTGRADUATE STUDENTS AND POSTDOCTORAL RESEARCHERS DIRECTLY FUNDED OR CO-FUNDED BY PUBLIC AND PRIVATE BUSINESSES			
Purpose	To measure problem solving activities/cooperation in R&D with non-academic partners. This process could be viewed as the input to the technology development and/or improvement		
Definition	Percentage of postgraduate students/postdoctoral researchers directly funded or co-funded by public and private businesses		
Interpretation	This indicator measures the degree of cooperation of public and private businesses with universities in the training of researchers		
Measurement	Percentage	Level of data collection	Institution
Formula (if applies)	$(\text{N_postgraduate students} + \text{N_postdoctoral researchers directly funded or co-funded by public and private businesses} / \text{Total number of postgraduate and postdoctoral students}) * 100$	Type of data source	Institutional data
Units (if applies)	Percentage	Time reference	Last year

TTI5-i1: NUMBER OF CREATED (CO-FUNDED) OR SHARED LABORATORIES AND BUILDINGS

Purpose	To measure joint access to R&D space/facilities/equipment/services. This process could be viewed as the input to the technology development and/or improvement		
Definition	Number of created (co-funded) and/or shared laboratories/buildings/ facilities		
Interpretation	This indicator measures the degree of cooperation of the public and private business with university in sharing facilities		
Measurement	Numerical	Level of data collection	Institution
Formula (if applies)	N_created (co-funded) or share laboratories +N_created (co-funded) or share buildings	Type of data source	Institutional data
Units (if applies)	Laboratories, buildings	Time reference	Over 5 years

TTI6-i2: NUMBER OF COMPANIES PARTICIPATING IN CONTINUOUS PROFESSIONAL DEVELOPMENT COURSES (CPD)

Purpose	To measure interactions with non-academic partners. This process could be viewed as the input to the technology development and/or improvement		
Definition	Number of companies participating in CPD courses		
Interpretation	This indicator measures the cooperation between public and private companies and the university in CPD courses		
Measurement	Numerical	Level of data collection	Institution
Formula (if applies)	N_companies participating in CPD courses	Type of data source	Institutional data and/or survey data
Units (if applies)	Companies	Time reference	Last year

TTI6-i3: NUMBER OF HEI EMPLOYEES WITH TEMPORARY POSITIONS OUTSIDE OF ACADEMIA

Purpose	To measure mobility of academic staff. This process could be viewed as the input to the technology development and/or improvement		
Definition	Number of HEI employees with temporary positions outside academia – sabbaticals		
Interpretation	This indicator measures the mobility of academic staff providing information about the relationship between academia and the external environment		
Measurement	Numerical	Level of data collection	Institution
Formula (if applies)	N_HEI employees with temporary positions outside of academia / Total HEI employees	Type of data source	Institutional data
Units (if applies)	Employees	Time reference	Last year

TTI6-i4: NUMBER OF NON-ACADEMIC EMPLOYEES WITH TEMPORARY POSITIONS AT HEIS

Purpose	To measure mobility of non-academic partners. This process could be viewed as the input to the technology development and/or improvement		
Definition	Number of non-academic employees with temporary positions at the HEI, e.g. part-time lecturer and/or doing their master or doctorate		
Interpretation	This indicator measures the mobility of non-academic employees providing information about the relationship between academia and the external environment		
Measurement	Numerical	Level of data collection	Institution

Formula (if applies)	N_non-academic employees with temporary positions at HEIs/Total HEI employees	Type of data source	Institutional data
Units (if applies)	Non-academic employees	Time reference	Last year

TTI6-i5: NUMBER OF POSTGRADUATE THESES OR PROJECTS WITH NON-ACADEMIC CO-SUPERVISORS			
Purpose	To measure collaboration with non-academic partners. This process could be viewed as the input to the technology development and/or improvement		
Definition	Number of postgraduates thesis or projects with non-academic co-supervisors		
Interpretation	This indicator measures the degree of collaboration of non-academic partners in research activities		
Measurement	Numerical	Level of data collection	Institution
Formula (if applies)	$\frac{N_{\text{postgraduate theses}} + N_{\text{postgraduate projects with non-academic co-supervisors}}}{N_{\text{postgraduate theses or projects}}}$	Type of data source	Institutional data
Units (if applies)	Postgraduate thesis or projects	Time reference	Last year

TTI6-i7: NUMBER OF JOINT PUBLICATIONS WITH NON-ACADEMIC AUTHORS			
Purpose	To measure collaboration with non-academic partners. This process could be viewed as the input to the technology development and/or improvement		
Definition	Number of joint publications with non-academic authors		
Interpretation	All kind of publications in peer-reviewed journals, professional magazines and conference proceedings		
Measurement	Numerical	Level of data collection	Institution and/or public data sets
Formula (if applies)	$\frac{N_{\text{joint publications with non-academic authors}}}{\text{Total number of publications}}$	Type of data source	Institutional data and/or bibliometric data
Units (if applies)	Joint publications	Time reference	Last year

TTI6-i8: NUMBER OF ACADEMIC STAFF PARTICIPATING IN PROFESSIONAL BODIES, NETWORKS, ORGANIZATIONS AND BOARDS			
Purpose	To measure collaboration/mobility with non-academic partners. This process could be viewed as the input to the technology development and/or improvement		
Definition	Percentage of academic staff participating in professional bodies, networks, organizations and boards		
Interpretation	This indicator measures the involvement of academic staff in external, professional and scientific organizations		
Measurement	Percentage	Level of data collection	Institution
Formula (if applies)	$\left(\frac{N_{\text{academic staff participating in professional bodies, networks, organizations and boards}}}{\text{Total academic staff}} \right) * 100$	Type of data source	Institutional data, public data sets and/or survey data
Units (if applies)	Percentage	Time reference	Last year

TTI6-i9: NUMBER OF EXTERNAL ORGANIZATIONS OR INDIVIDUALS PARTICIPATING AT ADVISORY, STEERING, VALIDATION, REVIEW BOARDS TO HEIS, INSTITUTES, CENTRES OR TAUGHT PROGRAMMES			
Purpose	To measure collaboration/mobility with non-academic partners. This process could be viewed as the input to the technology development and/or improvement		
Definition	Number of external organizations/individuals participating at advisory/steering/validation/review boards to HEIs/institutes/centres/ taught programmes		
Interpretation	This indicator measures the involvement of external organizations in HE organizational structures		
Measurement	Numerical	Level of data collection	Institution
Formula (if applies)	(N_external organizations+N_individuals) participating at advisory, steering, validation, review boards to HEIs, institutes, centres or taught programmes	Type of data source	Institutional data or survey data
Units (if applies)	Participations	Time reference	Last year

TTI6-i10: NUMBER OF PRESTIGIOUS INNOVATION PRIZES AWARDED BY BUSINESS AND PUBLIC SECTOR ASSOCIATIONS OR FUNDING AGENCIES (NATIONAL AND INTERNATIONAL)			
Purpose	To measure collaboration with non-academic partners. This process could be viewed as the input to the technology development and/or improvement		
Definition	Number of prestigious innovation prizes awarded by business & public sector associations/funding agencies (national/international)		
Interpretation	Recognition of outstanding TT&I contributions		
Measurement	Numerical	Level of data collection	Institution
Formula (if applies)	N_ prestigious innovation prizes awarded by business and public sector associations or funding agencies (national and international)	Type of data source	Institutional data and/or Public data sets
Units (if applies)	Awards	Time reference	Last year

Social Engagement

The following list of indicators was the selected for the SE dimension:

SE Indicators
SE0-i1: SE IS INCLUDED IN THE MISSION OF THE HEI
SE0-i2: SE IS INCLUDED IN THE POLICY AND/OR STRATEGY OF THE HEI
SE0-i3: EXISTENCE OF AN INSTITUTIONAL ACTION PLAN FOR SE IN THE HEI
SE0-i4: BUDGETARY ASSIGNMENT TO SE
SE2-i1: PERCENTAGE OF ACADEMICS INVOLVED IN VOLUNTEERING ADVISORY
SE3-i1: NUMBER OF EVENTS OPEN TO COMMUNITY/PUBLIC
SE3-i2: NUMBER OF RESEARCH INITIATIVES WITH DIRECT IMPACT ON THE COMMUNITY
SE3-i4: NUMBER/COST OF STAFF/STUDENT HOURS MADE AVAILABLE TO DELIVER SERVICES AND FACILITIES TO COMMUNITY
SE3-i5: NUMBER OF PEOPLE ATTENDING/USING FACILITIES
SE4-i1: NUMBER OF PROJECTS RELATED TO EDUCATIONAL OUTREACH
SE4-i2: NUMBER OF FACULTY STAFF AND STUDENTS INVOLVED IN EDUCATIONAL OUTREACH ACTIVITY
SE4-i4: PERCENTAGE OF HEI BUDGET USED FOR EDUCATIONAL OUTREACH

SE4-i5: NUMBER OF COMMUNITY PARTICIPANTS IN EDUCATIONAL OUTREACH ACTIVITY
SE4-i7: NUMBER OF ACTIVITIES SPECIFICALLY TARGETING DISADVANTAGED STUDENTS /COMMUNITY GROUPS
SE4-i9: NUMBER OF COMMUNITY REPRESENTATIVE ON HE BOARDS OR COMMITTEES
SE4-i11: AMOUNT OF GRANTS/DONATIONS/CONTRACTS ARISING FROM ENGAGED PARTNERSHIPS

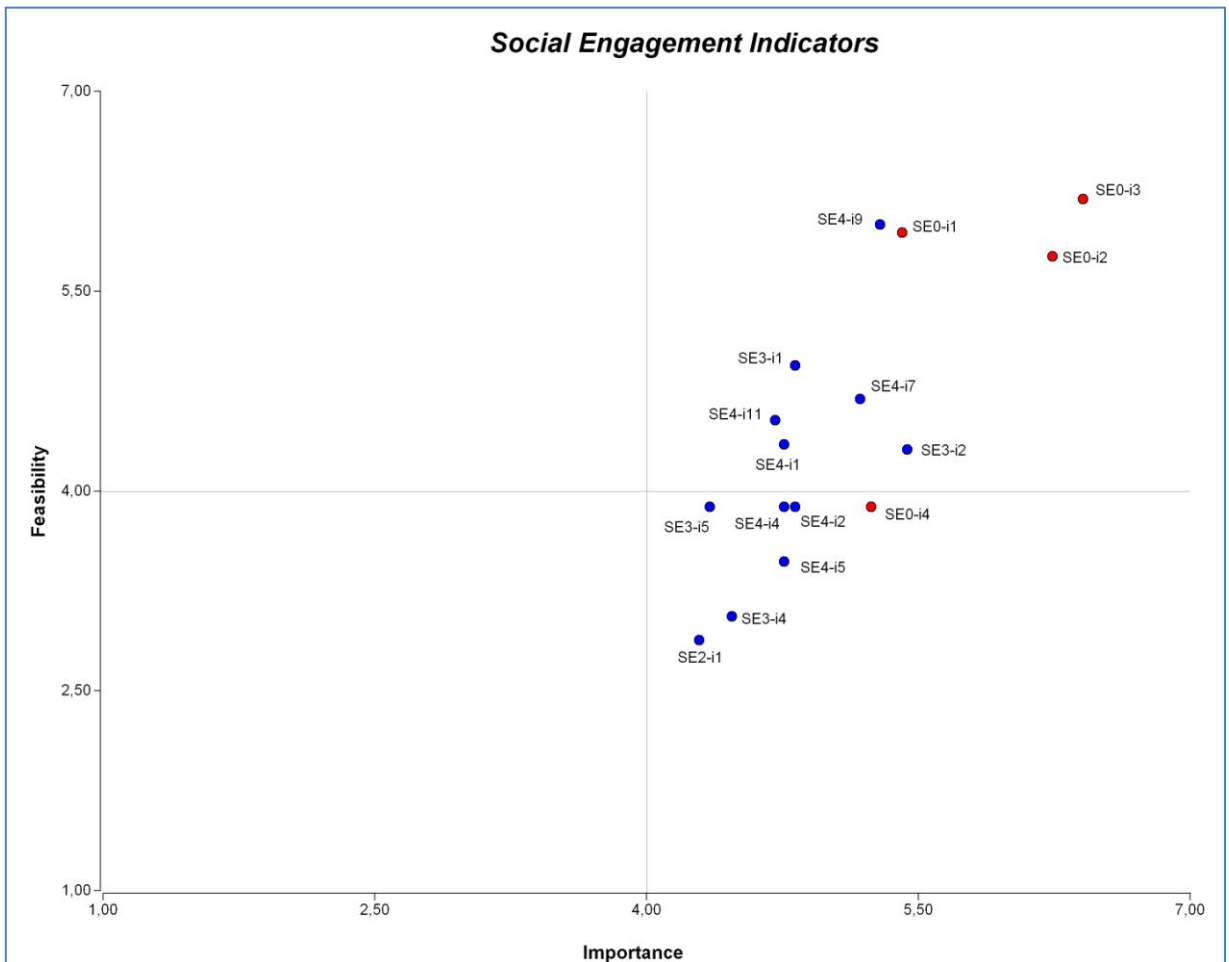


Figure 8

Figure 8 shows that the set of SE indicators had an acceptable level of importance (more than 4 in a 1-7 rating scale), but in comparison to CE and TTI indicators, SE indicators were less feasible. In this case the indicators which belong to process SE0 were the most important and at the same time most feasible indicators, with the exception of SE0-i4.

The descriptions of the SE indicators selected in the study are shown in the tables below:

SE0-i1: SE IS INCLUDED IN THE MISSION OF THE HEI			
Purpose	To measure the commitment of the HEI towards SE		
Definition	Inclusion of SE in the definition of the mission of the HEI		
Interpretation	This indicator evaluates the commitment of the HEI at the administration level and on a long term basis		
Measurement	Binary	Level of data collection	Institution
Formula (if applies)	--	Type of data source	Institutional data
Units (if applies)	--	Time reference	Last year

SE0-i2: SE IS INCLUDED IN THE POLICY AND/OR STRATEGY OF THE HEI			
Purpose	To measure the status of SE within the HEI as well as the commitment of the HEI towards SE		
Definition	Inclusion of SE in the policy and/or strategy of the HEI		
Interpretation	This indicator measures the extent of the HEI's institutional commitment towards SE on a long term basis. A policy/strategy plan dedicated to SE with indicators reflects the fact that SE is taken into account on the HEI's administrative level and financial plans as well		
Measurement	Binary	Level of data collection	Institution
Formula (if applies)	--	Type of data source	Institutional data
Units (if applies)	--	Time reference	Last year

SE0-i3: EXISTENCE OF AN INSTITUTIONAL ACTION PLAN FOR SE IN THE HEI			
Purpose	To measure the practical implementation - organisation, goals and measures - of SE activities in the HEI. Measures the HEI's involvement in SE in practice		
Definition	Existence of an institutional action plan for SE in the HEI		
Interpretation	This indicator measures the extent of the actual implementation of SE in the HEI. An action plan would reveal organisational and administrative arrangements as well as financial and intellectual resources allocated for CE		
Measurement	Binary	Level of data collection	Institution
Formula (if applies)	--	Type of data source	Institutional data
Units (if applies)	--	Time reference	Last year

SE0-i4: BUDGETARY ASSIGNMENT TO SE			
Purpose	To measure the actual SE compromise of the HEI		
Definition	Percentage of the total HEI budget assigned to budgetary assignment to SE		
Interpretation	This indicator evaluates the actual and specific level of involvement of the HEI in SE		
Measurement	Percentage	Level of data collection	Institution
Formula (if applies)	(Budgetary assignment to SE / Total HEI budget) * 100	Type of data source	Institutional data
Units (if applies)	Percentage	Time reference	Last year

SE2-i1: PERCENTAGE OF ACADEMICS INVOLVED IN VOLUNTEERING ADVISORY			
Purpose	To measure the involvement of academics in volunteering advisory activities towards the community		
Definition	Percentage of academics (in terms of FTE) involved in volunteering advisory		
Interpretation	This indicator evaluates the extent and engagement of the academics in volunteering advisory towards the community		
Measurement	Percentage	Level of data collection	Institution
Formula (if applies)	(N_academics involved in volunteering advisory / Total n_academics) * 100	Type of data source	Institutional data/Survey data



Units (if applies)	Percentage	Time reference	Last year
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SE3-i1: NUMBER OF EVENTS OPEN TO COMMUNITY/PUBLIC			
Purpose	To measure the numbers of events held by the HEI open to the general public (excluding invitation-only events)		
Definition	Numbers of events held by the HEI open to the general public (excluding invitation-only events)		
Interpretation	Events organised or delivered by the HEI, free or charged, which are open to the general public without needing an invitation to attend (e.g. concert; art exhibition; lectures; open days)		
Measurement	Numerical	Level of data collection	Institution
Formula (if applies)	N_events per year	Type of data source	Institutional data
Units (if applies)	Events	Time reference	Last year

SE3-i2: NUMBER OF RESEARCH INITIATIVES WITH DIRECT IMPACT ON THE COMMUNITY			
Purpose	To measure the level of community-based research and research with a policy implication and/or benefit for the community		
Definition	The level of community-based research and research with an explicit policy implication and/or explicit benefit for the community		
Interpretation	Research must be carried out with a stated benefit for the broader community, whether it is collaborative research or HEI-driven research		
Measurement	Numerical	Level of data collection	Institution
Formula (if applies)	N_research projects	Type of data source	Institutional data
Units (if applies)	Research projects	Time reference	Last year

SE3-i4: NUMBER/COST OF STAFF/STUDENT HOURS MADE AVAILABLE TO DELIVER SERVICES AND FACILITIES TO COMMUNITY			
Purpose	To measure the number/cost of staff/student hours made available to deliver services and facilities to community		
Definition	The number/cost of staff/student hours made available to deliver services and facilities to community		
Interpretation	The human cost of facilities being made available to the public (e.g. cost of lifeguard and admin staff at HEI swimming pool when open to public; cost of optometry staff and students offering free eye tests; admin support/buildings maintenance staff for room hire)		
Measurement	Numerical	Level of data collection	Institution
Formula (if applies)	N_staff x hours x hourly cost, plus: N_students x hours x ¼ of equivalent staff hourly cost	Type of data source	Institutional data
Units (if applies)	Euros	Time reference	Last year

SE3-i5: NUMBER OF PEOPLE ATTENDING/USING FACILITIES	
Purpose	To measure the extent of provision of services by the HEI and their relevance to the public by quantifying attendance
Definition	Number of people attending/using low-cost/free facilities offered by HEI

Interpretation	The extent of provision of services by the HEI and their relevance to the community by quantifying attendance		
Measurement	Numerical	Level of data collection	Institution
Formula (if applies)	N_people attending/using facilities	Type of data source	Institutional data
Units (if applies)	People attending/using facilities	Time reference	Last year

SE4-i1: NUMBER OF PROJECTS RELATED TO EDUCATIONAL OUTREACH

Purpose	To measure the activity of Educational Outreach projects on non-student population		
Definition	Number of Educational Outreach project targeting non-institutional beneficiaries outside the HE organization		
Interpretation	An Educational Outreach project could have also a component targeted to HE institutional beneficiaries but most of the activity is supposed to have external targets		
Measurement	Numerical	Level of data collection	Institution
Formula (if applies)	N_projects related to Educational Outreach	Type of data source	Institutional data
Units (if applies)	Projects related to Educational Outreach	Time reference	Last year

SE4-i2: NUMBER OF FACULTY STAFF AND STUDENTS INVOLVED IN EDUCATIONAL OUTREACH ACTIVITY

Purpose	To measure the effort of faculty staff and students in Educational Outreach activities		
Definition	The number of faculty staff and students that declare to have undertaken an Educational Outreach activity in the past twelve months		
Interpretation	"Faculty staff and students" refers to all the HEI personnel and the enrolled students involved in an activity such as Educational Outreach project could have also a component targeted to HE institutional beneficiaries but most of the activity is supposed to have external targets		
Measurement	Numerical	Level of data collection	Institution
Formula (if applies)	N_faculty staff and students	Type of data source	Institutional data/Survey data
Units (if applies)	Individuals	Time reference	Last year

SE4-i4: PERCENTAGE OF HEI BUDGET USED FOR EDUCATIONAL OUTREACH

Purpose	To measure the effort of HEI in supporting Educational Outreach activities through internal resources		
Definition	Percentage of HEI budget used for educational Outreach		
Interpretation	In case of project with a Educational Outreach component it refers to the amount of budget specifically dedicated to it		
Measurement	Percentage	Level of data collection	Institution
Formula (if applies)	(Internal amount	Type of data source	Institutional data

	of funding allocated by HEI to Educational Outreach / Total HEI Budget) * 100		
Units (if applies)	Percentage	Time reference	Last year

SE4-i5: NUMBER OF COMMUNITY PARTICIPANTS IN EDUCATIONAL OUTREACH ACTIVITY			
Purpose	To measure the ability of HEI in attracting and mobilizing external citizens in Educational Outreach activities. It quantifies the number of people outside HEIs involved in Educational Outreach activity		
Definition	The number of people outside HEIs that take advantage of Educational Outreach activity in the reference year		
Interpretation	If a person participates in several activities it will count as many times as the person participates in such activities		
Measurement	Numerical	Level of data collection	Institution
Formula (if applies)	N_community participants	Type of data source	Institutional data
Units (if applies)	Individuals	Time reference	Last year

SE4-i7: NUMBER OF ACTIVITIES SPECIFICALLY TARGETING DISADVANTAGED STUDENTS /COMMUNITY GROUPS			
Purpose	To measure the effort of HEIs in developing activities specifically designed for disabled or socially disadvantaged communities		
Definition	Number of activities specifically designed for disabled or socially disadvantaged communities in order to enable better access to knowledge, economical means or educational opportunities		
Interpretation	A measure of the involvement with community		
Measurement	Numerical	Level of data collection	Institution
Formula (if applies)	N_activities specifically targeting disadvantaged students/community groups	Type of data source	Institutional data
Units (if applies)	Activities specifically targeting disadvantaged students/community groups	Time reference	Last year

SE4-i9: NUMBER OF COMMUNITY REPRESENTATIVE ON HE BOARDS OR COMMITTEES			
Purpose	To measure the extent of involvement of local institutions in the HE activities in general		
Definition	Number of community representative in HE boards or committees		
Interpretation	If a community representative sits in more than one committee counts the number of committees covered		
Measurement	Numerical	Level of data collection	Institution
Formula (if applies)	N_community representative on HE boards and	Type of data source	Institutional data



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	committees		
Units (if applies)	Individuals	Time reference	Last year

SE4-i11: AMOUNT OF GRANTS/DONATIONS/CONTRACTS ARISING FROM ENGAGED PARTNERSHIPS			
Purpose	To measure the commitment to, and success in, getting funding for SE Partnerships		
Definition	Value per year of funding from partnerships in SE actions		
Interpretation	It is the value per year of financing from partners in SE actions. It reflects the degree of motivation created by each HEI in the partners of SE actions. It is somehow an index of the capacity to engage partners in SE actions promoted by HEIs		
Measurement	Numerical	Level of data collection	Institution
Formula (if applies)	Funds gained for SE actions coming from external sources (not community partners) / overall external funds	Type of data source	Institutional data
Units (if applies)	Euros	Time reference	Last year

6. Conclusions and final comments

As a result of the implementation of the Delphi technique a set of relevant indicators that describe the third mission activities of HEIs has been obtained. Moreover, it was observed that the Delphi methodology has served to:

- Prove the usefulness of the method for the refinement of the initial collection of indicators.
- Demonstrate the value of the experts opinion in the process of selecting a set of relevant information for the evaluation for the Third Mission activity
- Show that all final indicators have been rated above the median in relation to the importance. This has been expected considering the three round process used and the nature of the Delphi method. This contributes to achieving robustness of the results from the Delphi process used for the selection of indicators.
- Demonstrate that for the CE indicators there is a general agreement on the fact that they are the most feasible. On the other hand, there are some doubts about the feasibility of some of the SE indicators.
- Identify that the indicators of process 0 (related to institutional commitment to Third Mission) are the most significant in the three dimensions.
- Notice that although all indicators are considered very important for the study not all are in the same way easy to measure and quantify.
- Show that different properties of the indicators, like relevance and feasibility, have demonstrated to be useful for rating different aspects of the value of the information handled.

7. Annexes

Annex 1. Invitation letter

September, 2010

Dear Mr. / Ms. ,

The purpose of this letter is to ask you for participation in the Delphi process of the project “European indicators and ranking methodology for university Third Mission” which is coordinated by the Centre for Quality and Change Management of the Valencia University of Technology. The objective of this project is to create a ranking methodology for measuring third mission activities of universities.

The Delphi technique will be used in this project to obtain a selected set of indicators which will determine the basis of the ranking methodology criteria. Your opinion about a list of indicators proposed will be solicited through different surveys. They will be focused on the three main dimensions of the third mission: Continuing Education, Technology Transfer & Innovation and Social Engagement.

The Delphi process will consist of three rounds over the next three months. You will have approximately two weeks to send your responses of the questionnaires and the survey will be sent to you and the rest of the expert panelists by e-mail.

We hope that you agree to participate and look forward to receiving your answer. In case you do not wish to collaborate with us please indicate so.

Thank you in advance for your interest and cooperation.

Yours sincerely,

José-Miguel Carot Sierra
Coordinator

Annex 2. Contract

Contract for external expert of the project “European indicators and ranking methodology for university third mission” (E3M), Proposal number: 143352-LLP-1-2008-1-ES-KA1-KA1SCR / Agreement number: 2008 - 3599 / 001 - 001.

BETWEEN:

The institution:

Hereinafter referred to as “**the Contractor**”,

And

The institution:

VAT number: [complete]

Hereinafter to as “**the Subcontracted**”

The parties hereby agree as follows:

Planning and duration:

The role of the expert subcontracted will be to work on the development of the Delphi Process of the project co-funded by the European Commission above mentioned. This work will be done by the expert [complete].

The general tasks have been defined as follows:

- To answer a series of on line questionnaires in three rounds
- To send on time the results of the questionnaires to the moderator, in this case, the Universidad Politécnica de Valencia (UPV)
- To contribute on the Delphi final report
- To act as consultants for any specific question or doubt needed to be covered along the Delphi process

This agreement is effective from October 2010 to the end of the Delphi process. The period of execution of the Delphi may be extended only in case of delay by all parts.

Estimated cost:

The estimated budget of the services carried out in the Delphi process of the E3m project will be: [complete]

All legal tax obligations are included in the value of this work.

Other special conditions:

The subcontracted will send an invoice for the work done in due time.

The subcontracted compromises to maintain confidentiality and commitment to this effect.

This agreement may be terminated by mutual agreement at any time. Payment will only be made for work that has been completed up to the date of completion.

Contractor	Sub-contracted	Project coordinator
	[signature]	
Juan Juliá Igual		
Rector	[Name & position]	José-Miguel Carot
Universidad Politécnica de Valencia	[Institution]	Universidad Politécnica de Valencia

Annex 3. Invitation to participate in the Delphi process

Dear _____,

From the Centre for Quality and Change Management we would like to invite you to participate in the Delphi process of the E3M project "EUROPEAN INDICATORS AND RANKING METHODOLOGY FOR UNIVERSITY THIRD MISSION".

Please find attached our letter of invitation, some information about the project and the Delphi technique, and a model of contract to be used in case you agree to collaborate with us.

Thank you very much for your consideration.

Sincerely,

Centre for Quality and Change Management
Universidad Politécnica de Valencia
Camino de Vera s/n Edif. 8k
46022 Valencia. Spain
Tel. (+34)963 87 90 94

Annex 4. Invitation email first round

Dear _____,

You have been invited to participate in the first round of the survey: _____

To access the survey please click on the following link:

Thank you very much for your collaboration,

Centre for Quality and Change Management
Universidad Politécnica de Valencia
cq@cq.upv.es

Annex 5. Invitation email second round

Dear _____,

Thank you for completing the First-Round Delphi Questionnaire for the research project European indicators and ranking methodology for university third mission-E3M. We really appreciate the valuable time you have given us.

Please complete now the Second-Round questionnaire and return it by _____ 2010. In order to access to the new survey E3M PROJECT: _____ INDICATORS please click on the following link:

Additional results from the first round are covered in an attachment to the Second-Round Delphi Questionnaire. You may refer to this information as you deem necessary to help you complete the Second-Round Delphi Questionnaire. However, reviewing this information is not required to complete the questionnaire.

The third questionnaire and the summary of responses will be provided approximately two weeks after the due date of the second survey.

Thank you for your collaboration. If you have any questions or comments please do not hesitate to contact us.
Yours sincerely,

José-Miguel Carot
Project coordinator

Annex 6. Invitation email third round

Dear _____,

Welcome to the third and final Delphi round of the project "European Indicators and Ranking Methodology for University Third Mission". The first two rounds of the Delphi survey have led us to reach a consensus on the most critical indicators, nevertheless we consider that your knowledge and experience is needed in a third round in order to achieve the final set of indicators representative of the Third Mission activities.

In the attached questionnaire please indicate the importance and feasibility of every indicator. Any other information you can provide us (comments and suggestions) will be extremely helpful. A summary of the results of the second Delphi round is also attached to this email.

Please complete the third round questionnaire and return it the latest by _____, 2011

Thank you again for your interest and cooperation. If you have any questions or comments please do not hesitate to contact: vegargu@upvnet.upv.es

Yours sincerely,

Jose-Miguel Carot. E3M project coordinator

Annex 7. Reminder to participate in the survey

Dear _____,

This e-mail is to remind you that you have received an invitation to participate in the survey:
_____ and it has not been completed yet.

The survey continues available until the next 12th of October at the following link:

We will be very pleased to receive your responses. Thank you very much for your interest.

Yours sincerely,

José Miguel Carot Sierra
E3M project coordinator
Centre for Quality and Change Management
Universidad Politécnica de Valencia

Annex 8. Model of first and second rounds surveys

E3M PROJECT: CONTINUING EDUCATION SURVEY



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Dear Expert,


The Centre for Quality and Change Management - Valencia University of Technology invites you to participate in the second Delphi round survey of the project "European indicators and Ranking Methodology for University Third Mission". The objective of the project is to create a ranking methodology for measuring Third mission activities of Higher Education Institutions.

Your opinion is very important for us. Your answers will be absolutely anonymous and confidential.


Thank you very much in advance for your participation.

Load unfinished survey
Next >>
Exit and clear survey

E3M PROJECT: SOCIAL ENGAGEMENT SURVEY



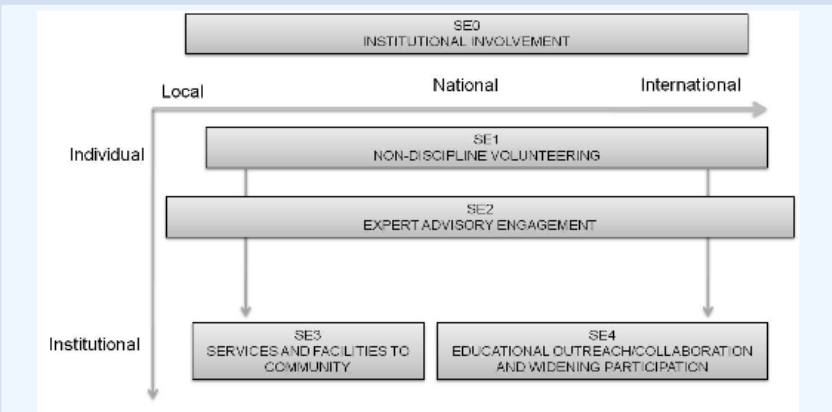
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SOCIAL ENGAGEMENT PROCESSES



The flowchart illustrates five social engagement processes (SE0-SE4) categorized by scope (Local, National, International) and level (Individual, Institutional). SE0 (Institutional Involvement) is at the top. SE1 (Non-discipline Volunteering) is at the Individual level. SE2 (Expert Advisory Engagement) is at the Institutional level. SE3 (Services and Facilities to Community) and SE4 (Educational Outreach/Collaboration and Widening Participation) are at the Institutional level. Arrows indicate relationships between these processes across levels and scopes.

The objective of this survey is to reassess the set of indicators proposed for the Social Engagement dimension after the analysis of the results of the Delphi first round (<http://encuestas.upv.es/upload/surveys/73975/Report%20results%201st%20Delphi%20round-E3M%20project.pdf>). These indicators are described in accordance to the 5 processes developed for this dimension.

Your answers can be saved at any time when you press the "Next" button so that, if necessary, you can return to complete the survey later.

Please add your comments (modifications/additions/deletions) on the content of the table below with respect to the above areas.

Purpose	
Definition	
Interpretation	
Measurement	
Formula	
Units	
Level of data collection	
Type of data source	
Time reference	

Please rate scale.

	unimportant	slightly important	important	very important	No answer
Relevance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Validity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Reliability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Feasibility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Comparability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>



Relevance: Importance for the measurement of Third Mission activities.
 Validity: Ability of the indicator to measure what really has to be measured.
 Reliability: A measure of the absence of random error associated with the indicator.
 Feasibility: Expected facility of obtaining the information.
 Comparability: Possibility of making adequate comparisons between different HEIs.

**PROCESS CE1: ANALYSIS OF THE DEMAND AND CURRICULUM DESIGN**

It has been established a categorization for all the collection of indicators:

- Category 1- Unchanged: The indicator is maintained without changes
- Category 2- Modified: The indicator is maintained but with some changes
- Category 3- Doubtful: The indicator is still undecided
- Category 4- Deleted: The indicator has been removed
- Category 5- Added: A new indicator is proposed

Note: 2 All kind of changes produced in the indicators are stressed in blue colour

4² Those indicators which belong to category 4 have been removed from the survey and its description is not shown in the following questionnaire.

INDICATOR	NAME	CATEGORY
CE1-i1	Total number of CE programmes active in that year (for implementation)	1 - Unchanged
CE1-i2	Number of CE programmes delivered which have a major award under European Higher Education system	1 - Unchanged
CE1-i3	Number of partnership with public and private business CE programmes delivered in that year	1 - Unchanged
CE1-i4	% of international CE programmes delivered in that year	2 - Modified
CE1-i5	% of funded CE training projects delivered in that year	2 - Modified
CE1-i6	Total number of the ECTS credits of the delivered CE programmes	1 - Unchanged
CE1-i7	Student volumen	5 - Added

CE8-i1: PERCENTAGE OF PROGRAMMES WITH EXTERNAL ACCREDITATIONS.

Category	2 - Modified	
Purpose	To measure the quality of the CE programmes	
Definition	Percentage of accredited programmes by national or international agencies and official bodies	
Interpretation	Accreditation needs a big effort of the HEI. If the HEI has a large proportion of accredited programmes so the importance of CE for the HEI must be also high	
Measurement	Percentage	
Formula (if applies)	$(\text{Accredited programmes with external accreditations} / \text{N Total programmes offered}) \cdot 100$	
Units (if applies)	Percentage	
Level of data collection	Faculty/Department/CE centre	
Type of data source	Survey data, programme lists, programme folder and websites	
Time reference	Last year	
Relevance	+	+ = high/good - = low/poor
Validity	+	
Reliability	+	
Feasibility	+	
Comparability	+	



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General comments about the indicator.

General comments about the process.

Resume later

<< Previous

Next >>

Exit and clear survey

Thank you very much for your participation.

Annex 9. Model of third round survey

You are invited to participate and contribute to the third and final round of the E3M project. Along this document you will have the opportunity to evaluate the global importance and feasibility of every indicator rating them on a scale of 1 to 7 (from the least to the most important and feasible). After every dimension you will be asked to write any comments about these indicators and at the end of the document you will be able to give a general opinion about the whole set. This questionnaire should be email back once completed before the 28th February 2011. Please indicate your surname at the end of this document before saving it.

- Example 1: Continuing Education Indicators

CEO-i1: CE IS INCLUDED IN THE MISSION OF THE HEI		
Purpose	To measure the status of CE within the HEI as well as the commitment of the HEI towards CE	
Definition	Inclusion of CE in the definition of the mission of the HEI	
Interpretation	This indicator measures the extent of the HEI's institutional commitment towards CE on a long term basis	
Please rate on a scale of 1 (-) to 7(+):	Importance:	Feasibility:

- Example 2: Technology Transfer & Innovation Indicators

TTIO-i1: TTI IS INCLUDED IN THE MISSION OF THE HEI		
Purpose	To measure the status of TTI within the HEI as well as the commitment of the HEI towards TTI	
Definition	Inclusion of TTI in the definition of the mission of the HEI	
Interpretation	This indicator measures the extent of the HEI's institutional commitment towards TTI on a long term basis	
Please rate on a scale of 1 (-) to 7(+):	Importance:	Feasibility:

- Example 3: Social Engagement Indicators

SEO-i1: SE IS INCLUDED IN THE MISSION OF THE HEI		
Purpose	To measure the commitment of the HEI towards SE	
Definition	Inclusion of SE in the definition of the mission of the HEI	
Interpretation	This indicator evaluates the commitment of the HEI at the administration level and on a long term basis	
Please rate on a scale of 1 (-) to 7(+):	Importance:	Feasibility: