



# Final Report of Delphi Study

## E3M Project - European Indicators and Ranking Methodology for University Third Mission



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## 1. Introduction

*The Valencia University of Technology (Universidad Politécnica de Valencia, UPV) coordinated the three years research project (2009-2012) European Indicators and Ranking Methodology for University's Third Mission (E3M) co-financed by the European Commission's Lifelong Learning Programme. The main objective of the project, involving partners from eight European Higher Education Institutions and seven countries, was to generate a comprehensive instrument to identify, to measure and to 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 its objective, the E3M project has developed a Delphi study. 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.*

## **2. Objectives of the Delphi study**

*The Delphi methodology was applied to achieve a consensus about a previous set of indicators that could accurately and economically describe the Third Mission of HEIs, analysing each indicator in detail. Through this methodology, working as an organized discussion, indicators were analysed individually and as a set.*

*The E3M project set several objectives for the Delphi study:*

- 1. Incorporate experts opinion about definitions and characteristics of the various indicators*
- 2. Feedback on the processes identified in each dimension*
- 3. Agreement about a set of indicators suitable to 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 methodologies to evaluate Third Mission activities of HEIs.*

### 3. Methodology

#### General Background

*The Delphi technique is a 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 we 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, in this case for measuring the Third Mission activities of HEIs.*

*A Delphi survey is a structured group interaction process organised in several 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 considered in the third mission, another three questionnaires for the second round and finally a unique general questionnaire for the last and third round where the three dimensions were included.*

#### Selection of experts

*The expert panellists who participated in the Delphi study were proposed by project partners. They proposed a number of 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:*

- *Technical knowledge and professional experience in at least one of the three dimensions of the project.*
- *Willingness and ability to participate during the time of the survey.*
- *To be neutral in their assessment and to maintain confidentiality.*
- *To agree in participating in such procedure.*

*The expert panel was finally composed of twenty panellists from different geographical regions, Europe and USA. In the invitation email, they received general information about the E3M project and some contextual information about the work they had to do. More information was available for them in the project website [www.e3mproject.eu](http://www.e3mproject.eu). They also received a detailed schedule of the three rounds.*

*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 a general overview on the whole set of indicators in order to achieve a consensus on the best indicators to use in characterising 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 basket 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.

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

**Table 1**

Questionnaires were sent by e-mail. During every round of the Delphi process the number and the quality of the answers were monitored and several reminders were sent out in order to promote participation (see Annexes).

## **Delphi procedure**

The Delphi procedure had three rounds of questionnaires and was carried out in the following seven stages:

1. Implementation of the first round questionnaire.
2. Analysis of 1<sup>st</sup> round responses.
3. Implementation of the second round questionnaire.
4. Analysis of the 2<sup>nd</sup> round responses.
5. Implementation of the third round questionnaire.
6. Analysis of the 3<sup>rd</sup> round responses.
7. Final report.

### **3.1 Methodology used for the 1<sup>st</sup> and 2<sup>nd</sup> 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 panellist 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 panellists.*

#### **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 consensus about the selection and definition of the indicators. The idea was to identify the most relevant indicators from an initial set of more than one hundred. Three questionnaires were elaborated for the first round, according to the three dimensions that the project had identified as part of the Third Mission activities. Experts were also asked to propose additional indicators that they considered important and they were not included in the initial list.*

*During the analysis of the first round the following criteria were adopted:*

*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 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.*

<b>Questionnaires</b>	<i>First round</i>	
	<i>Initial number of indicators</i>	<i>Final number of indicators</i>
<b>Continuing Education</b>	28	21
<b>Technology Transfer &amp; Innovation</b>	31	23
<b>Social Engagement</b>	36	19

**Table 2**

## **Second Delphi round**

*The second round was also composed of three different questionnaires for CE, SE and TT&I. 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 analysed 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 panellists 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.*

<i>Second round</i>		
<b>Questionnaires</b>	<i>Initial number of indicators</i>	<i>Final number of indicators</i>
<b>Continuing Education</b>	21	18
<b>Technology Transfer &amp; Innovation</b>	23	20
<b>Social Engagement</b>	19	16

**Table 3**

### **3.2 Methodology used for the 3<sup>rd</sup> Delphi round**

The third round of the Delphi was structured differently in comparison to the first and second rounds. In previous rounds the expert panellists 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. Experts assessed 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.

Similarly to the preceding rounds, a total of 19 questionnaires were received and evaluated. The results achieved from the third Delphi round were further processed for evaluation. The criteria applied for analysing 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.

<i>Third round</i>		
<b>Questionnaires</b>	<i>Initial number of indicators</i>	<i>Final number of indicators</i>
<b>Continuing Education</b>	18	18
<b>Technology Transfer &amp; Innovation</b>	20	20
<b>Social Engagement</b>	16	16

**Table 4**

Figure 1 shows a diagram presenting the evolution of the number of indicators in the three rounds of the Delphi study.

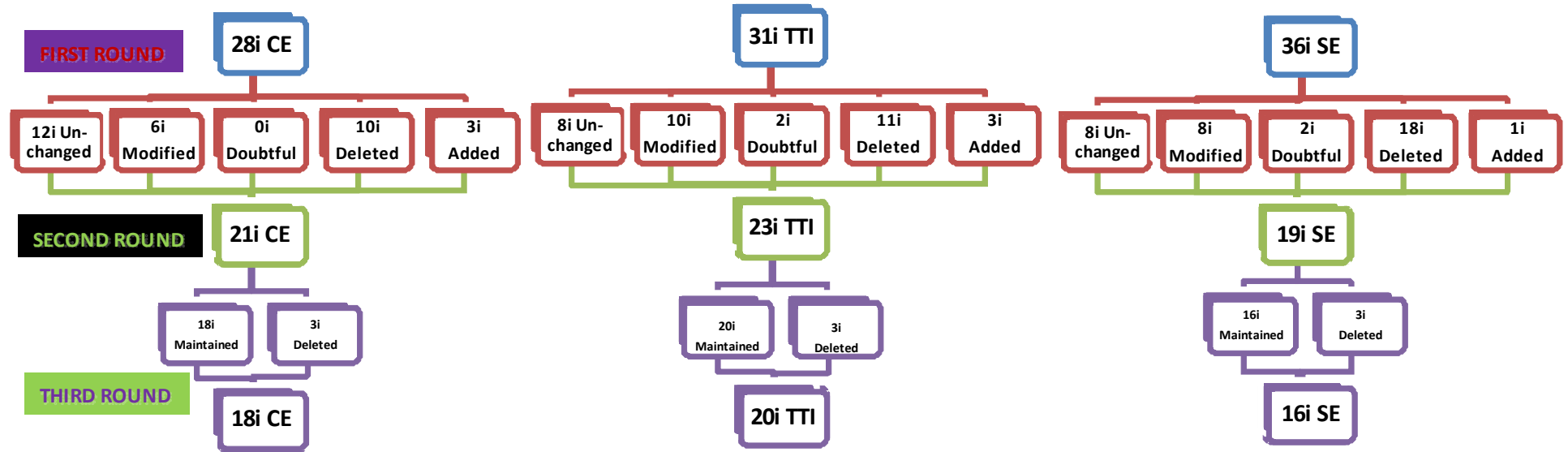


Figure 1

## 4. Results obtained with the Delphi process

### 4.1 Framework of CE, SE and TTI processes

#### Dimension 1: Continuing Education (CE)

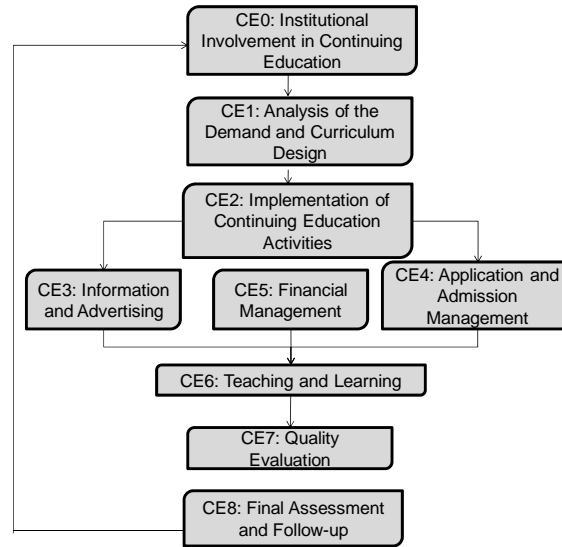


Figure 2

#### Dimension 2: Technology Transfer & Innovation (TTI)

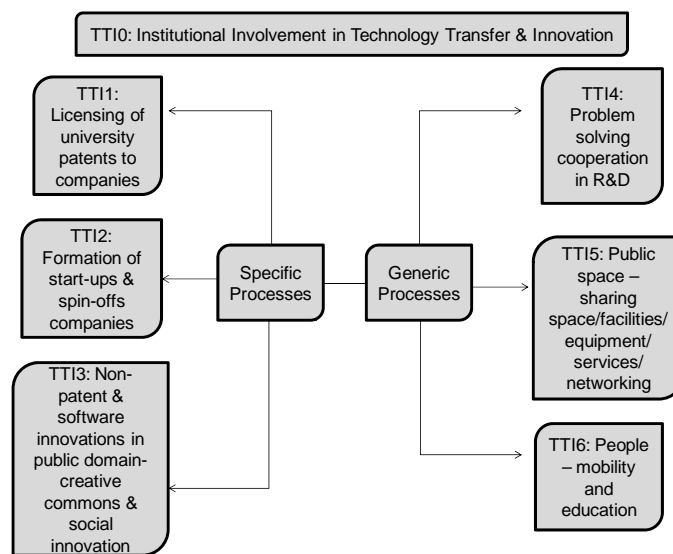


Figure 3

### Dimension 3: Social Engagement (SE)

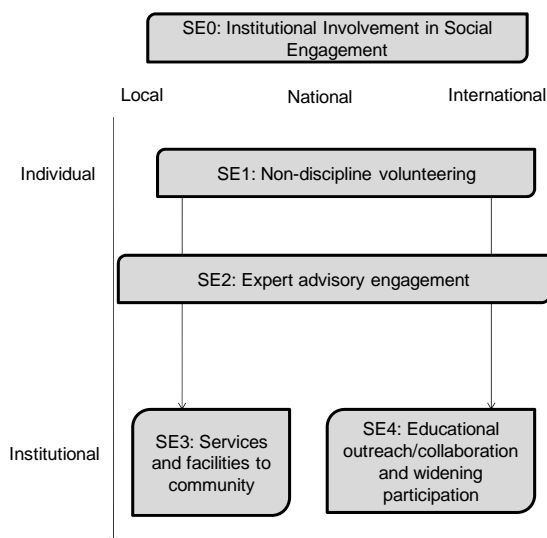


Figure 4

### 4.2 Indicators selected along the Delphi process

#### Continuing Education

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

#### CE Indicators

- CE0-11: PRESENCE OF CE IN THE MISSION OF THE HEI
- CE0-12: PRESENCE OF CE 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: CE PROGRAMMES ACTIVE FOR IMPLEMENTATION
- CE1-12: CE PROGRAMMES DELIVERED WHICH HAVE A MAJOR AWARD UNDER HIGHER EDUCATION SYSTEM
- CE1-13: PARTNERSHIP WITH PUBLIC AND PRIVATE BUSINESS CE PROGRAMMES DELIVERED IN THAT YEAR
- CE1-14: INTERNATIONAL CE PROGRAMMES DELIVERED
- CE1-15: FUNDED CE TRAINING PROJECTS DELIVERED
- CE1-16: CREDITS OF THE DELIVERED CE PROGRAMMES
- CE4-11: CREDITS ENROLLED
- CE4-12: REGISTRATIONS IN CE PROGRAMMES
- CE4-14: CE CREDITS ENROLLED REFERRED TO THE TOTAL CREDITS ENROLLED
- CE6-11: QUALIFICATIONS ISSUED REFERRED TO TOTAL CE REGISTRATIONS
- CE7-11: STUDENTS SATISFACTION
- CE7-12: KEY STAKEHOLDER SATISFACTION
- CE7-13: COMPLETION RATE FOR ALL PROGRAMMES
- CE8-11: CE PROGRAMMES WITH EXTERNAL ACCREDITATIONS

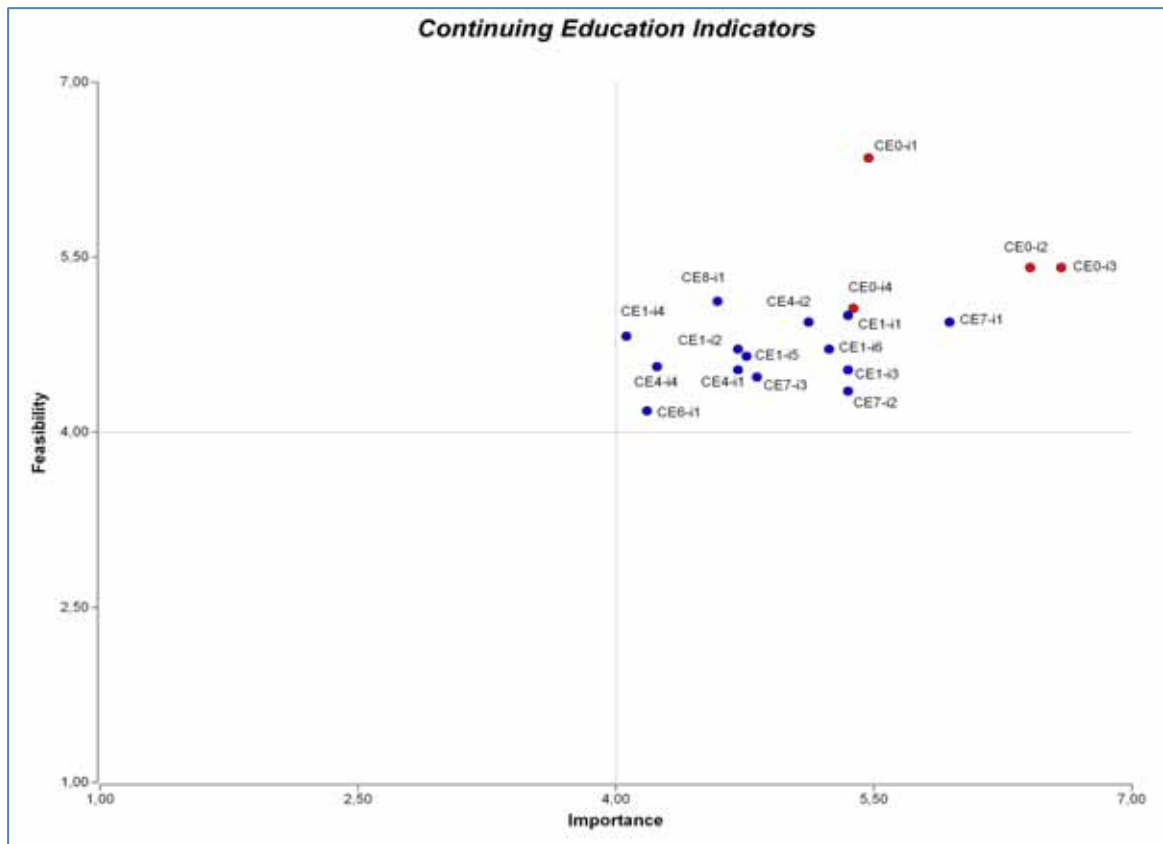


Figure 5

Figure 5 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:

<b>CE0-i1: CE IS INCLUDED IN THE MISSION OF THE HEI</b>			
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	<b>Level of data collection</b>	Institution
Formula (if applies)	--	<b>Type of data source</b>	Institutional data
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	<b>Level of data collection</b>	Institution
Formula (if applies)	--	<b>Type of data source</b>	Institutional data
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	<b>Level of data collection</b>	Institution
Formula (if applies)	--	<b>Type of data source</b>	Institutional data
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	<b>Level of data collection</b>	Institution
Formula (if applies)	--	<b>Type of data source</b>	Institutional data
Time reference	Last year		

**CE1-i1: CE PROGRAMMES ACTIVE 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	<b>Level of data collection</b>	Institution
Formula (if applies)	N_CE programmes	<b>Type of data source</b>	Institutional data
Time reference	Last year		

**CE1-i2: 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	<b>Level of data collection</b>	Institution
Formula (if applies)	N_Degree programmes	<b>Type of data source</b>	Institutional data
Time reference	Last year		

**CE1-i3: PARTNERSHIP WITH PUBLIC AND PRIVATE BUSINESS CE PROGRAMMES DELIVERED**

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

**CE1-i4: INTERNATIONAL CE PROGRAMMES DELIVERED**

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

**CE1-i5: FUNDED CE TRAINING PROJECTS DELIVERED**

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

**CE1-i6: T CREDITS OF THE DELIVERED CE PROGRAMMES**

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



**CE4-i1: CREDITS ENROLLED**

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

**CE4-i2: REGISTRATIONS IN CE PROGRAMMES**

<i>Purpose</i>	<i>To measure the total number of people registered in CE activities</i>		
<i>Definition</i>	<i>Total number of registrations of students in the CE activities (not just the number of students) in the year of reference</i>		
<i>Interpretation</i>	<i>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</i>		
<i>Measurement</i>	<i>Numerical</i>	<b>Level of data collection</b>	<i>Institution</i>
<i>Formula (if applies)</i>	<i>N_registrations in CE programmes</i>	<b>Type of data source</b>	<i>Institutional data</i>
<i>Time reference</i>	<i>Last year</i>		

**CE4-i4: CE CREDITS ENROLLED REFERRED TO THE TOTAL NUMBER OF CREDITS ENROLLED**

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

**CE6-i1: QUALIFICATIONS ISSUED REFERRED TO TOTAL CE REGISTRATIONS**

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

<b>CE7-i1: STUDENTS SATISFACTION</b>			
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	<b>Level of data collection</b>	Institution
Formula (if applies)	% of 3-4 answers in a 4 point scale degree of satisfaction question (0% = completely dissatisfied, 100% = completely satisfied)	<b>Type of data source</b>	Survey data
Time reference	Last year		

<b>CE7-i2: KEY STAKEHOLDER SATISFACTION</b>			
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	<b>Level of data collection</b>	Institution
Formula (if applies)	% of 3-4 answers in a 4 point scale degree of satisfaction question (0% = completely dissatisfied, 100% = completely satisfied)	<b>Type of data source</b>	Survey data
Time reference	Last year		

<b>CE7-i3: COMPLETION RATE FOR ALL PROGRAMMES</b>			
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	<b>Level of data collection</b>	Institution
Formula (if applies)	$\text{Completion rate} = \frac{\sum CR_i}{k}$ $\text{Weighted Completion rate} = \frac{\sum CR_i N_i}{\sum N_i} 100$ <p> <math>N_i</math> = Number of attendants to programme <math>i</math>  <math>CR_i</math> = Completion rate of programme <math>i</math> (in percentage)  <math>k</math> = number of programmes considered </p>	<b>Type of data source</b>	Institutional data
Time reference	Last year		

**CE8-i1: CE PROGRAMMES WITH EXTERNAL ACCREDITATIONS**

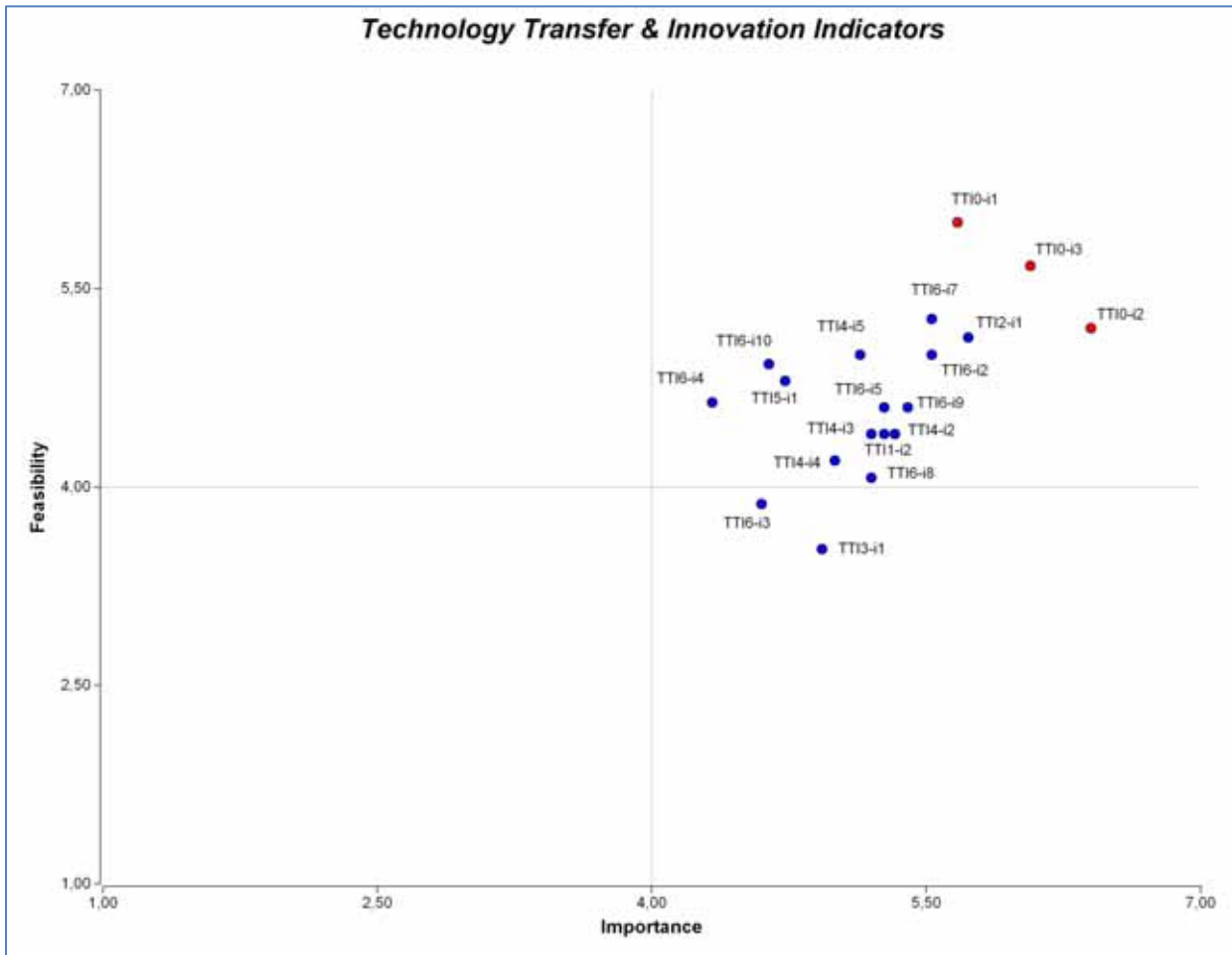
Purpose	To measure the quality of the CE programmes		
Definition	Percentage of accredited programmes by national or international agencies and official bodies		
Interpretation	Accreditation needs a big effort of the HEI. If the HEI has a large proportion of accredited programmes so the importance of CE for the HEI must be also high		
Measurement	Percentage	<b>Level of data collection</b>	Faculty/Department/CE centre
Formula (if applies)	(Accredited programmes with external accreditations / N Total programmes offered) * 100	<b>Type of data source</b>	Survey data, programme lists, programme folder and websites
Time reference	Last year		

**Technology Transfer & Innovation**

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

**TTI Indicators**

- TTI0-i1: **PRESENCE OF TTI IN THE MISSION OF THE HEI**  
 TTI0-i2: **PRESENCE OF TTI IN THE POLICY AND/OR STRATEGY OF THE HEI**  
 TTI0-i3: **EXISTENCE OF AN INSTITUTIONAL ACTION PLAN FOR TTI IN THE HEI**  
 TTI1-i1: **LICENSES, OPTIONS AND ASSIGNMENTS (ACTIVE AND EXECUTED, EXCLUSIVE AND NON-EXCLUSIVE) TO START-UPS OR SPIN-OFFS AND EXISTING COMPANIES**  
 TTI1-i2: **BUDGET COMING FROM REVENUES FROM COMMERCIALISATION OF HEI KNOWLEDGE**  
 TTI2-i1: **START-UPS AND SPIN-OFFS ESTABLISHED**  
 TTI3-i1: **CREATIVE COMMONS AND SOCIAL INNOVATION PROJECTS THAT HEI EMPLOYEES ARE INVOLVED IN**  
 TTI4-i2: **R&D SPONSORED AGREEMENTS, CONTRACTS AND COLLABORATIVE PROJECTS WITH NON-ACADEMIC PARTNERS**  
 TTI4-i3: **BUDGET COMING FROM INCOME OF R&D SPONSORED CONTRACTS AND COLLABORATIVE PROJECTS WITH NON-ACADEMIC PARTNERS**  
 TTI4-i4: **CONSULTANCY CONTRACTS**  
 TTI4-i5: **POSTGRADUATE STUDENTS AND POSTDOCTORAL RESEARCHERS DIRECTLY FUNDED OR CO-FUNDED BY PUBLIC AND PRIVATE BUSINESSES**  
 TTI5-i1: **CREATED (CO-FUNDED) OR SHARED LABORATORIES AND BUILDINGS**  
 TTI6-i2: **COMPANIES PARTICIPATING IN CONTINUOUS PROFESSIONAL DEVELOPMENT COURSES (CPD)**  
 TTI6-i3: **HEI EMPLOYEES WITH TEMPORARY POSITIONS OUTSIDE OF ACADEMIA**  
 TTI6-i4: **NON-ACADEMIC EMPLOYEES WITH TEMPORARY POSITIONS AT HEIS**  
 TTI6-i5: **POSTGRADUATE THESES OR PROJECTS WITH NON-ACADEMIC CO-SUPERVISORS**  
 TTI6-i7: **JOINT PUBLICATIONS WITH NON-ACADEMIC AUTHORS**  
 TTI6-i8: **ACADEMIC STAFF PARTICIPATING IN PROFESSIONAL BODIES, NETWORKS, ORGANIZATIONS AND BOARDS**  
 TTI6-i9: **EXTERNAL ORGANIZATIONS OR INDIVIDUALS PARTICIPATING AT ADVISORY, STEERING, VALIDATION, REVIEW BOARDS TO HEIS, INSTITUTES, CENTRES OR TAUGHT PROGRAMMES**  
 TTI6-i10: **PRESTIGIOUS INNOVATION PRIZES AWARDED BY BUSINESS AND PUBLIC SECTOR ASSOCIATIONS OR FUNDING AGENCIES (NATIONAL AND INTERNATIONAL)**



**Figure 6**

Figure 6 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:

<b>TT10-i1: TTI IS INCLUDED IN THE MISSION OF THE HEI</b>			
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	<b>Level of data collection</b>	Institution
Formula (if applies)	--	<b>Type of data source</b>	Institutional data
Time reference	Last year		

**TT10-i2: TTI IS INCLUDED IN THE POLICY AND/OR STRATEGY OF THE HEI**

<b>Purpose</b>	To measure the status of TTI within the HEI as well as the commitment of the HEI towards TTI		
<b>Definition</b>	Inclusion of TTI in the policy and/or strategy of the HEI		
<b>Interpretation</b>	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		
<b>Measurement</b>	Binary	<b>Level of data collection</b>	Institution
<b>Formula (if applies)</b>	--	<b>Type of data source</b>	Institutional data
<b>Time reference</b>	Last year		

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

<b>Purpose</b>	To measure the practical implementation- organisation, goals and measures – of TTI activities in the HEI. Measures the HEI's involvement in TTI in practice		
<b>Definition</b>	Existence of an institutional action plan for TTI in the HEI		
<b>Interpretation</b>	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		
<b>Measurement</b>	Binary	<b>Level of data collection</b>	Institution
<b>Formula (if applies)</b>	--	<b>Type of data source</b>	Institutional data
<b>Time reference</b>	Last year		

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

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

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

<b>Purpose</b>	To measure a specific mechanism of TT&I which is directly aimed at commercialising HEI knowledge		
<b>Definition</b>	Percentage of total budget generated from commercialisation of HEI knowledge, e.g. licensing income, total earned royalty income (ERI)		
<b>Interpretation</b>	This indicator measures the percentage of the total budget coming from commercialisation of HEI knowledge		
<b>Measurement</b>	Percentage	<b>Level of data collection</b>	Institution
<b>Formula (if applies)</b>	(Total revenue from commercialisation of HEI knowledge / Total HEI budget) * 100	<b>Type of data source</b>	Institutional data
<b>Time reference</b>	Last year		

**TTI2-i1: START-UPS AND SPIN-OFFS ESTABLISHED**

<i>Purpose</i>	<i>To measure a specific mechanism of TT&amp;I which is directly aimed at commercialising HEI knowledge</i>		
<i>Definition</i>	<i>Total number of start-ups and spin-offs established</i>		
<i>Interpretation</i>	<i>This indicator measures a total number of start-ups and spin-offs established</i>		
<i>Measurement</i>	<i>Numerical</i>	<b>Level of data collection</b>	<i>Institution</i>
<i>Formula (if applies)</i>	<i>(N_start-ups + N_spin-offs) established</i>	<b>Type of data source</b>	<i>Institutional data</i>
<i>Time reference</i>	<i>Last year</i>		

**TTI3-i1: CREATIVE COMMONS AND SOCIAL INNOVATION PROJECTS THAT HEI EMPLOYEES ARE INVOLVED IN**

<i>Purpose</i>	<i>To measure the engagement of HEI staff in non-patent public domain entrepreneurial activities, including creative commons &amp; social innovation</i>		
<i>Definition</i>	<i>Number of creative commons and social innovation projects</i>		
<i>Interpretation</i>	<i>This indicator measures a number of non-patent innovation projects of HEI staff</i>		
<i>Measurement</i>	<i>Numerical</i>	<b>Level of data collection</b>	<i>Institution</i>
<i>Formula (if applies)</i>	<i>(N_creative commons + N_social innovation projects) that HEI employees are involved</i>	<b>Type of data source</b>	<i>Institutional data</i>
<i>Time reference</i>	<i>Last year</i>		

**TTI4-i2: R&D SPONSORED AGREEMENTS, CONTRACTS AND COLLABORATIVE PROJECTS WITH NON-ACADEMIC PARTNERS**

<i>Purpose</i>	<i>To measure problem solving activities/cooperation in R&amp;D with non-academic partners. This process could be viewed as the input to the technology development and/or improvement</i>		
<i>Definition</i>	<i>Number of R&amp;D sponsored agreements, contracts and collaborative projects with non-academic partners</i>		
<i>Interpretation</i>	<i>This indicator measures a number of R&amp;D sponsored agreements, contracts and collaborative projects with non-academic partners</i>		
<i>Measurement</i>	<i>Numerical</i>	<b>Level of data collection</b>	<i>Institution</i>
<i>Formula (if applies)</i>	<i>(N_R&amp;D sponsored agreements + N_contracts + N_collaborative projects) with non-academic partners</i>	<b>Type of data source</b>	<i>Institutional data</i>
<i>Time reference</i>	<i>Last year</i>		

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

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

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

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

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

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

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

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

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



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

<i>Purpose</i>	<i>To measure mobility of non-academic partners. This process could be viewed as the input to the technology development and/or improvement</i>		
<i>Definition</i>	<i>Number of non-academic employees with temporary positions at the HEI, e.g. part-time lecturer and/or doing their master or doctorate</i>		
<i>Interpretation</i>	<i>This indicator measures the mobility of non-academic employees providing information about the relationship between academia and the external environment</i>		
<i>Measurement</i>	<i>Numerical</i>	<b>Level of data collection</b>	<i>Institution</i>
<i>Formula (if applies)</i>	<i>N_non-academic employees with temporary positions at HEIs/Total HEI employees</i>	<b>Type of data source</b>	<i>Institutional data</i>
<i>Time reference</i>	<i>Last year</i>		

**TTI6-i5: POSTGRADUATE THESES OR PROJECTS WITH NON-ACADEMIC CO-SUPERVISORS**

<i>Purpose</i>	<i>To measure collaboration with non-academic partners. This process could be viewed as the input to the technology development and/or improvement</i>		
<i>Definition</i>	<i>Number of postgraduates thesis or projects with non-academic co-supervisors</i>		
<i>Interpretation</i>	<i>This indicator measures the degree of collaboration of non-academic partners in research activities</i>		
<i>Measurement</i>	<i>Numerical</i>	<b>Level of data collection</b>	<i>Institution</i>
<i>Formula (if applies)</i>	<i>N_postgraduate theses + N_postgraduate projects with non-academic co-supervisors</i>	<b>Type of data source</b>	<i>Institutional data</i>
<i>Time reference</i>	<i>Last year</i>		

**TTI6-i7: JOINT PUBLICATIONS WITH NON-ACADEMIC AUTHORS**

<i>Purpose</i>	<i>To measure collaboration with non-academic partners. This process could be viewed as the input to the technology development and/or improvement</i>		
<i>Definition</i>	<i>Number of joint publications with non-academic authors</i>		
<i>Interpretation</i>	<i>All kind of publications in peer-reviewed journals, professional magazines and conference proceedings</i>		
<i>Measurement</i>	<i>Numerical</i>	<b>Level of data collection</b>	<i>Institution and/or public data sets</i>
<i>Formula (if applies)</i>	<i>N_joint publications with non-academic authors</i>	<b>Type of data source</b>	<i>Institutional data and/or bibliometric data</i>
<i>Time reference</i>	<i>Last year</i>		

**TT16-i8: ACADEMIC STAFF PARTICIPATING IN PROFESSIONAL BODIES, NETWORKS, ORGANIZATIONS AND BOARDS**

<b>Purpose</b>	<i>To measure collaboration/mobility with non-academic partners. This process could be viewed as the input to the technology development and/or improvement</i>		
<b>Definition</b>	<i>Percentage of academic staff participating in professional bodies, networks, organizations and boards</i>		
<b>Interpretation</b>	<i>This indicator measures the involvement of academic staff in external, professional and scientific organizations</i>		
<b>Measurement</b>	<i>Percentage</i>	<b>Level of data collection</b>	<i>Institution</i>
<b>Formula (if applies)</b>	<i>(N_academic staff participating in professional bodies, networks, organizations and boards / Total academic staff) * 100</i>	<b>Type of data source</b>	<i>Institutional data, public data sets and/or survey data</i>
<b>Time reference</b>	<i>Last year</i>		

**TT16-i9: EXTERNAL ORGANIZATIONS OR INDIVIDUALS PARTICIPATING AT ADVISORY, STEERING, VALIDATION, REVIEW BOARDS TO HEIS, INSTITUTES, CENTRES OR TAUGHT PROGRAMMES**

<b>Purpose</b>	<i>To measure collaboration/mobility with non-academic partners. This process could be viewed as the input to the technology development and/or improvement</i>		
<b>Definition</b>	<i>Number of external organizations/individuals participating at advisory/steering/validation/review boards to HEIs/institutes/centres/ taught programmes</i>		
<b>Interpretation</b>	<i>This indicator measures the involvement of external organizations in HE organizational structures</i>		
<b>Measurement</b>	<i>Numerical</i>	<b>Level of data collection</b>	<i>Institution</i>
<b>Formula (if applies)</b>	<i>(N_external organizations+N_individuals) participating at advisory, steering, validation, review boards to HEIs, institutes, centres or taught programmes</i>	<b>Type of data source</b>	<i>Institutional data or survey data</i>
<b>Time reference</b>	<i>Last year</i>		

**TT16-i10: PRESTIGIOUS INNOVATION PRIZES AWARDED BY BUSINESS AND PUBLIC SECTOR ASSOCIATIONS OR FUNDING AGENCIES (NATIONAL AND INTERNATIONAL)**

<b>Purpose</b>	<i>To measure collaboration with non-academic partners. This process could be viewed as the input to the technology development and/or improvement</i>		
<b>Definition</b>	<i>Number of prestigious innovation prizes awarded by business &amp; public sector associations/funding agencies (national/international)</i>		
<b>Interpretation</b>	<i>Recognition of outstanding TT&amp;I contributions</i>		
<b>Measurement</b>	<i>Numerical</i>	<b>Level of data collection</b>	<i>Institution</i>
<b>Formula (if applies)</b>	<i>N_ prestigious innovation prizes awarded by business and public sector associations or funding agencies (national and international)</i>	<b>Type of data source</b>	<i>Institutional data and/or Public data sets</i>
<b>Time reference</b>	<i>Last year</i>		

## Social Engagement

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

### SE Indicators

**SE0-i1: PRESENCE OF SE IN THE MISSION OF THE HEI**  
**SE0-i2: PRESENCE OF SE 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: ACADEMICS INVOLVED IN VOLUNTEERING ADVISORY**  
**SE3-i1: EVENTS OPEN TO COMMUNITY/PUBLIC**  
**SE3-i2: RESEARCH INITIATIVES WITH DIRECT IMPACT ON THE COMMUNITY**  
**SE3-i4: COST OF STAFF/STUDENT HOURS MADE AVAILABLE TO DELIVER SERVICES AND FACILITIES TO COMMUNITY**  
**SE3-i5: PEOPLE ATTENDING/USING FACILITIES**  
**SE4-i1: PROJECTS RELATED TO EDUCATIONAL OUTREACH**  
**SE4-i2: ACADEMIC STAFF AND STUDENTS INVOLVED IN EDUCATIONAL OUTREACH ACTIVITY**  
**SE4-i4: BUDGET USED FOR EDUCATIONAL OUTREACH**  
**SE4-i5: COMMUNITY PARTICIPANTS IN EDUCATIONAL OUTREACH ACTIVITY**  
**SE4-i7: ACTIVITIES SPECIFICALLY TARGETING DISADVANTAGED STUDENTS /COMMUNITY GROUPS**  
**SE4-i9: COMMUNITY REPRESENTATIVE ON HE BOARDS OR COMMITTEES**  
**SE4-i11: GRANTS/DONATIONS/CONTRACTS ARISING FROM ENGAGED PARTNERSHIPS**

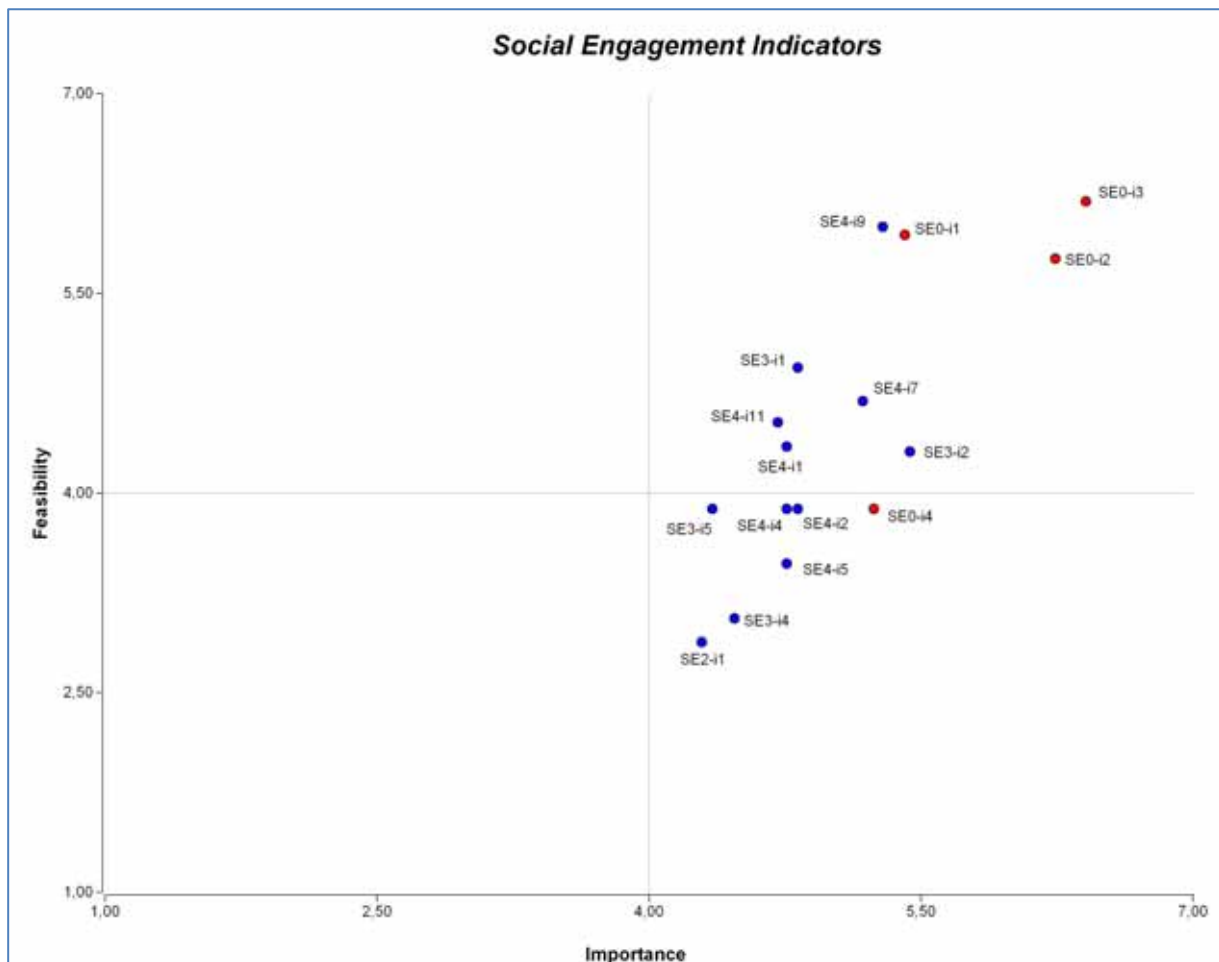


Figure 7

Figure 7 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:

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

<b>SE0-i2: SE IS INCLUDED IN THE POLICY AND/OR STRATEGY OF THE HEI</b>			
<b>Purpose</b>	To measure the status of SE within the HEI as well as the commitment of the HEI towards SE		
<b>Definition</b>	Inclusion of SE in the policy and/or strategy of the HEI		
<b>Interpretation</b>	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		
<b>Measurement</b>	Binary	<b>Level of data collection</b>	Institution
<b>Formula (if applies)</b>	--	<b>Type of data source</b>	Institutional data
<b>Time reference</b>	Last year		

<b>SE0-i3: EXISTENCE OF AN INSTITUTIONAL ACTION PLAN FOR SE IN THE HEI</b>			
<b>Purpose</b>	To measure the practical implementation - organisation, goals and measures - of SE activities in the HEI. Measures the HEI's involvement in SE in practice		
<b>Definition</b>	Existence of an institutional action plan for SE in the HEI		
<b>Interpretation</b>	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		
<b>Measurement</b>	Binary	<b>Level of data collection</b>	Institution
<b>Formula (if applies)</b>	--	<b>Type of data source</b>	Institutional data
<b>Time reference</b>	Last year		

**SE0-i4: BUDGETARY ASSIGNMENT TO SE**

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

**SE2-i1: ACADEMICS INVOLVED IN VOLUNTEERING ADVISORY**

<b>Purpose</b>	To measure the involvement of academics in volunteering advisory activities towards the community		
<b>Definition</b>	Percentage of academics (in terms of FTE) involved in volunteering advisory		
<b>Interpretation</b>	This indicator evaluates the extent and engagement of the academics in volunteering advisory towards the community		
<b>Measurement</b>	Percentage	<b>Level of data collection</b>	Institution
<b>Formula (if applies)</b>	(N_academics involved in volunteering advisory / Total n_academics) * 100	<b>Type of data source</b>	Institutional data/Survey data
<b>Time reference</b>	Last year		

**SE3-i1: EVENTS OPEN TO COMMUNITY/PUBLIC**

<b>Purpose</b>	To measure the numbers of events held by the HEI open to the general public (excluding invitation-only events)		
<b>Definition</b>	Numbers of events held by the HEI open to the general public (excluding invitation-only events)		
<b>Interpretation</b>	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)		
<b>Measurement</b>	Numerical	<b>Level of data collection</b>	Institution
<b>Formula (if applies)</b>	N_events per year	<b>Type of data source</b>	Institutional data
<b>Time reference</b>	Last year		

**SE3-i2: RESEARCH INITIATIVES WITH DIRECT IMPACT ON THE COMMUNITY**

<b>Purpose</b>	<i>To measure the level of community-based research and research with a policy implication and/or benefit for the community</i>		
<b>Definition</b>	<i>The level of community-based research and research with an explicit policy implication and/or explicit benefit for the community</i>		
<b>Interpretation</b>	<i>Research must be carried out with a stated benefit for the broader community, whether it is collaborative research or HEI-driven research</i>		
<b>Measurement</b>	<i>Numerical</i>	<b>Level of data collection</b>	<i>Institution</i>
<b>Formula (if applies)</b>	<i>N_research projects</i>	<b>Type of data source</b>	<i>Institutional data</i>
<b>Time reference</b>	<i>Last year</i>		

**SE3-i4: COST OF STAFF/STUDENT HOURS MADE AVAILABLE TO DELIVER SERVICES AND FACILITIES TO COMMUNITY**

<b>Purpose</b>	<i>To measure the cost of staff/student hours made available to deliver services and facilities to community</i>		
<b>Definition</b>	<i>The cost of staff/student hours made available to deliver services and facilities to community</i>		
<b>Interpretation</b>	<i>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)</i>		
<b>Measurement</b>	<i>Numerical</i>	<b>Level of data collection</b>	<i>Institution</i>
<b>Formula (if applies)</b>	<i>N_staff x hours x hourly cost, plus N_students x hours x ¼ of equivalent staff hourly cost</i>	<b>Type of data source</b>	<i>Institutional data</i>
<b>Time reference</b>	<i>Last year</i>		

**SE3-i5: PEOPLE ATTENDING/USING FACILITIES**

<b>Purpose</b>	<i>To measure the extent of provision of services by the HEI and their relevance to the public by quantifying attendance</i>		
<b>Definition</b>	<i>Number of people attending/using low-cost/free facilities offered by HEI</i>		
<b>Interpretation</b>	<i>The extent of provision of services by the HEI and their relevance to the community by quantifying attendance</i>		
<b>Measurement</b>	<i>Numerical</i>	<b>Level of data collection</b>	<i>Institution</i>
<b>Formula (if applies)</b>	<i>N_people attending/using facilities</i>	<b>Type of data source</b>	<i>Institutional data</i>
<b>Time reference</b>	<i>Last year</i>		

**SE4-i1: PROJECTS RELATED TO EDUCATIONAL OUTREACH**

<b>Purpose</b>	<i>To measure the activity of Educational Outreach projects on non-student population</i>		
<b>Definition</b>	<i>Number of Educational Outreach project targeting non-institutional beneficiaries outside the HE organization</i>		
<b>Interpretation</b>	<i>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</i>		
<b>Measurement</b>	<i>Numerical</i>	<b>Level of data collection</b>	<i>Institution</i>
<b>Formula (if applies)</b>	<i>N_projects related to Educational Outreach</i>	<b>Type of data source</b>	<i>Institutional data</i>
<b>Time reference</b>	<i>Last year</i>		

**SE4-i2: ACADEMIC STAFF AND STUDENTS INVOLVED IN EDUCATIONAL OUTREACH ACTIVITY**

<b>Purpose</b>	<i>To measure the effort of academic staff and students in Educational Outreach activities</i>		
<b>Definition</b>	<i>The number of academic staff and students that declare to have undertaken an Educational Outreach activity in the past twelve months</i>		
<b>Interpretation</b>	<i>“Academic 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</i>		
<b>Measurement</b>	<i>Numerical</i>	<b>Level of data collection</b>	<i>Institution</i>
<b>Formula (if applies)</b>	<i>N_academic staff and students</i>	<b>Type of data source</b>	<i>Institutional data/Survey data</i>
<b>Time reference</b>	<i>Last year</i>		

**SE4-i4: BUDGET USED FOR EDUCATIONAL OUTREACH**

<b>Purpose</b>	<i>To measure the effort of HEI in supporting Educational Outreach activities through internal resources</i>		
<b>Definition</b>	<i>Percentage of HEI budget used for Educational Outreach</i>		
<b>Interpretation</b>	<i>In case of project with a Educational Outreach component it refers to the amount of budget specifically dedicated to it</i>		
<b>Measurement</b>	<i>Percentage</i>	<b>Level of data collection</b>	<i>Institution</i>
<b>Formula (if applies)</b>	<i>(Internal amount of funding allocated by HEI to Educational Outreach / Total HEI Budget) * 100</i>	<b>Type of data source</b>	<i>Institutional data</i>
<b>Time reference</b>	<i>Last year</i>		

**SE4-i5: COMMUNITY PARTICIPANTS IN EDUCATIONAL OUTREACH ACTIVITY**

<b>Purpose</b>	<i>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</i>		
<b>Definition</b>	<i>The number of people outside HEIs that take advantage of Educational Outreach activity in the reference year</i>		
<b>Interpretation</b>	<i>If a person participates in several activities it will count as many times as the person participates in such activities</i>		
<b>Measurement</b>	<i>Numerical</i>	<b>Level of data collection</b>	<i>Institution</i>
<b>Formula (if applies)</b>	<i>N_community participants</i>	<b>Type of data source</b>	<i>Institutional data</i>
<b>Time reference</b>	<i>Last year</i>		

**SE4-i7: ACTIVITIES SPECIFICALLY TARGETING DISADVANTAGED STUDENTS /COMMUNITY GROUPS**

<b>Purpose</b>	<i>To measure the effort of HEIs in developing activities specifically designed for disabled or socially disadvantaged communities</i>		
<b>Definition</b>	<i>Number of activities specifically designed for disabled or socially disadvantaged communities in order to enable better access to knowledge, economical means or educational opportunities</i>		
<b>Interpretation</b>	<i>A measure of the involvement with community</i>		
<b>Measurement</b>	<i>Numerical</i>	<b>Level of data collection</b>	<i>Institution</i>
<b>Formula (if applies)</b>	<i>N_activities specifically targeting disadvantaged students/community groups</i>	<b>Type of data source</b>	<i>Institutional data</i>
<b>Time reference</b>	<i>Last year</i>		

**SE4-i9: COMMUNITY REPRESENTATIVE ON HE BOARDS OR COMMITTEES**

<b>Purpose</b>	<i>To measure the extent of involvement of local institutions in the HE activities in general</i>		
<b>Definition</b>	<i>Number of community representative in HE boards or committees</i>		
<b>Interpretation</b>	<i>If a community representative sits in more than one committee counts the number of committees covered</i>		
<b>Measurement</b>	<i>Numerical</i>	<b>Level of data collection</b>	<i>Institution</i>
<b>Formula (if applies)</b>	<i>N_community representative on HE boards and committees</i>	<b>Type of data source</b>	<i>Institutional data</i>
<b>Time reference</b>	<i>Last year</i>		



**SE4-i11: GRANTS/DONATIONS/CONTRACTS ARISING FROM ENGAGED PARTNERSHIPS**

<b>Purpose</b>	<i>To measure the commitment to, and success in, getting funding for SE Partnerships</i>		
<b>Definition</b>	<i>Value per year of funding from partnerships in SE actions</i>		
<b>Interpretation</b>	<i>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</i>		
<b>Measurement</b>	<i>Numerical</i>	<b>Level of data collection</b>	<i>Institution</i>
<b>Formula (if applies)</b>	<i>Funds gained for SE actions coming from external sources (not community partners)</i>	<b>Type of data source</b>	<i>Institutional data</i>
<b>Time reference</b>	<i>Last year</i>		

## 5. 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 importance. This was expected considering the three round process used and the nature of the Delphi method. This contributes to achieving robustness of the results.*
- *Demonstrate that there is a general agreement on the fact that CE indicators 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.*

## 6. Project participants

The consortium formed for this Project consists of the following institutions and coordinators:



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*José-Miguel Carot*

*Andrés Carrión*



*University of Helsinki; Finland*

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*Dublin Institute of Technology, Ireland*

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*Javier Vidal*

### External experts:

*Christopher Padfield, University of Cambridge*

*José-Ginés Mora, Institute of Education, University of London*

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*Professor, Lappeenranta University of Technology, Lahti School of Innovation*
- Asta Manninen  
*Director of City of Helsinki, Centre of Urban Facts*
- Jussi Onnismaa  
*Adjunct professor, University of Helsinki, Palmenia Centre for Continuing Education*
- Mika Tuuliainen  
*Liaison Manager, University of Helsinki Career Services*
- Fabio Di Pietro  
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- Giunio Luzzatto  
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- Lars Miikki  
*Senior Consultant at Tomi Järvelin Design Oy*
  - Guy Haug  
*International expert in Higher Education*
  - Uwe Brandenburg  
*CHE Consultant*
- 

## 8. Annex. Model of on line surveys

**E3M PROJECT: CONTINUING EDUCATION SURVEY**



European Indicators and Ranking Methodology for University Third Mission




Education and Culture DG  
Lifelong Learning Programme

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**



European Indicators and Ranking Methodology for University Third Mission

Education and Culture DG  
Lifelong Learning Programme

0%

100%

**SOCIAL ENGAGEMENT PROCESSES**

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graph TD
    SE0[SE0 INSTITUTIONAL INVOLVEMENT] --> SE1[SE1 NON-DISCIPLINE VOLUNTEERING]
    SE1 --> SE2[SE2 EXPERT ADVISORY ENGAGEMENT]
    SE2 --> SE3[SE3 SERVICES AND FACILITIES TO COMMUNITY]
    SE2 --> SE4[SE4 EDUCATIONAL OUTREACH/COLLABORATION AND WIDENING PARTICIPATION]
    
```

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<sup>1</sup>- Modified: The indicator is maintained but with some changes
- Category 3- Doubtful: The indicator is still undecided
- Category 4<sup>2</sup>- Deleted: The indicator has been removed
- Category 5- Added: A new indicator is proposed

Note: 2<sup>1</sup> All kind of changes produced in the indicators are stressed in blue colour

4<sup>2</sup> 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	+	



**General comments about the indicator.**

**General comments about the process.**

Thank you very much for your participation.

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