Guidelines for STSM applicants – *2nd round* – Future of the University and Transdisciplinarity

1 Second ROUND OF INTREPID STSMs– the Future of University and Transdisciplinarity

1.1 Background on the 1st round of STM's (2 cycles)

The first round of INTREPID STSMs – which took place from January 2016 to April 2017- aimed to inquire into details of the actual practice of interdisciplinary knowledge construction in institutions – research/teaching and funding – that were considered to be excellent examples of interdisciplinary practices. This followed INTREPID's meeting in Lisbon (November 2015) where it was agreed that the field of interdisciplinarity has been dominated by conceptual discussions and that there is insufficient understanding of how ID knowledge is created/developed in practice, and how funding enables or constrains it. For details see: http://www.intrepid-cost.eu/lisbon-meeting/

In this first round of STSMs we aimed to **reflect and learn (Challenge 1,** see: http://www.intrepid-cost.eu/about-intrepid/**)** about how ID knowledge creation is embedded in the research institutions work, formally and informally, and how it is enabled or constrained by current funding practices, by targeting institutions that are considered examples of good practice.

All the information on previous STSM's can be found here (link)

1.2 2nd round -The future of University as the leader of knowledge construction for a more just and sustainable society: transdisciplinarity and beyond

Background

Previous STSM's and INTREPID discussions in meetings and workshops have guided the Action towards a reflection on the future of universities and their contribution to a more sustainable society. This will be the main focus of the second round of STSM's.

INTREPID STSM'ers will inquire how HEI are embedding Transdiciplinarity, among other challenges, in their strategy to meet the challenge of global sustainability. In INTREPID we consider that one main purposes of HEI is to lead social change for a more just and sustainable society. A society where the wellbeing of the planet and its people alike (UNESCO – DESD) are the final goals and priorities. Hence HEI should "empower and motivate learners to become active sustainability citizens who are capable of critical thinking and able to participate in shaping a sustainable future" (UNESCO –DESD). In INTTEPID we contend that inter/transdiciplinary knowledge is a means to that goal.

A diagnostic of the status quo, resulting from the London workshop (http://www.intrepid-cost.eu/wp-content/uploads/2017/05/4th-INTREPID-Report-4th-Action-Workshop-London-1.pdf), plus an academic literature review, reveals that, for the great majority, HEI's are not up to the challenge above and have been diverging into a path that endangers such goals. General societal trends such as marketization, economisation, technologisation, quantification, bureaucratisation, homogenisation, are impacting on HEI teaching and research, its organisational structuring and management style, and culture (the values and norms cultivated) and making them leaders of the raising inequalities, rather than of the transformation for a more sustainable society.

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The UNESCO itself recognized, in its evaluation of the Decade of Education for SD (2005-2014) that the "global transformation of higher education towards sustainable development has yet to occur". Hence, universities have not been up to their responsibility of transforming societies, and in particular contributing to its sustainable development. One serious obstacle has been the persistent incapacity of mainstreaming inter and transdisciplinary teaching and research. Another serious obstacle has been the prioritisation of the scientific, technical and economic project and the marginalisation of the social, political and ethical project (e.g. Roling and Wagemakers 1998). "While the HEI worldwide have invested millions in the production, dissemination and application of scientific and technical knowledge and information, investments in the social production of wisdom are far smaller and weaker (Maxwell 2007).

Many believe that "Our education systems need to focus on the universally positive goals of building personal competencies, expertise, and wisdom for all learners. All students need to learn to consider the wider implications of their actions, to act mindfully in the world, and to reflect and adapt as the world changes." (Fadel et al., 2015: 13)

However our education system has not up to this challenge. One trend, within the university system, which is still Hegemonic, builds upon the industrial society model of fragmentation, prescription, management, control and accountability. As such the epistemology followed is that of finding an objective truth, establishing causality, maximize predictability and minimize uncertainty. Another emerging but still marginal trend is based on a model of knowledge integration, self-determination, agency, learning and reflexivity (Unterhalter and Carpenties 2010). In this socio constructivist model, knowledge is co-created **,** intersubjectively validated, there is **no**t one single "truth" but many, uncertainty is a given and facts and values are inseparable. This model, usually far outweighed in the university system today calls for an emancipatory approach that recognises that the dynamics of our current world are such that all citizens – including scientists and scholar- need to become engaged in an active dialogue to establish co-owned objectives, shared meaning and a joint self-determined plan of action to make changes that they themselves consider desirable, and that contribute to a more sustainable society as a whole (Wals and Jickling 2002)

Today, at a moment where we have accepted to tackle the UN Sustainable Development goals we know that "western education, while founded on mechanistic paradigm and overlaid by a utilitarian market philosophy, cannot much assist us towards sustainable lifestyles. […] I believe that ecological or whole systems thinking offers the potential both to critique current educational theory and practice and to provide a basis by which it may be both transformed and transcended." (Sterling, 2004: 17)

Moving forward

For HEI to play a meaningful role a major reorientation of teaching, learning, research and university-community relationships will be required.

The diagnosis has been made, the barriers and Challenges have been mapped, INTREPID would like to engage on the discussion of **how to move forward**? What may (or already does) drive this change and will fulfil the purpose of transformation of HEI to lead society's sustainability? What steps can be taken now by HEI administrators and academics (teachers, researchers) to initiate change.

The foci of STSM inquiry will be:

a) HEI's already engaging in transdisciplinary strategies for embedding sustainable development;

b) **HEI's willing and planning to engage** in transdisciplinary strategies for embedding sustainable development

Such inquiry is meant to serve INTREPID's Challenge 3: Enable Change (http://www.intrepid-cost.eu/about-intrepid/).

Interesting targets for inquiry (types):

- Administrators (leaders and staff)
- Fundraiser /project managers/ who manages the capture of funding
- Senior /tenured researchers
- Assistant /non tenured researchers
- Post docs
- PhD students
- Practitioners involved in the research

2   This Guidance

This guidance is meant to provide STSM applicants with a template for their STSM, indicating the type of data to be collected in their Host institution. The guidance distinguishes two Groups:

a) HEI's already engaging in transdisciplinary strategies for embedding sustainable development ;

b) **HEI's willing and planning to engage** transdisciplinary strategies for embedding sustainable development

Please document, based on the internet webpage of the institution or any internal document where do you locate a) or b) your Host instituion

In your final STSM Report you will need to state clearly which questions you have used from this Guideline (as well as any changes and additions). A template for the Final Report will also be provided.

Please note that STSMs are a unique opportunity to gather crucial information for the Action: we must listen carefully to our interviewees, and take clear notes (and/or record the interviewees) to be able to report back on your host transdisciplinary strategies for embedding (or planning to) sustainable development

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2.1 Guidance: interview questions to HEI

Table 1- Formal description and Characterization of the HEI

This **information should be collected as much as possible through the webpage, and available reports of these institutions.** The interviews can be used to obtain more qualitative (views, opinions) type of information and in case of need to complement and/or comment this data.

Formal organisation/organogram	To find out :
Name of instituion	
Public /private	
City and country	
Size	# of students; # of professors
Date of foundation	
Departments/Institutes	# and Names of departments; # and name o research centres division in departments/lines of study/groups of research (other designation)
Average budget	in euros Ask if there has been an increasing/decreasing tendency;
Average fee per year	
Sources of financing	Public (annual grant vs competitive project based); private (foundations, donors, firms). International funding . what % of each in the overall budget

The interviewee	To find out :
Name	<mark>Not needed , if anonymity preferred</mark>
Nationality	
Age	
Seniority	
Type of contract	
formal position	
Phd	area (or discipline);

Table 2 describing the interviewee

Table 3.1: TODAY: epistemological orientation (type of knowledge generated)

(Adapted from peters and Wals, 2014)

		In a scale from 1-10 where do you fit your institution **now**? (e.g. 1 is 100% empirical rationalist an 10 is 100% socio constructivist)
Empirical rationalism (meaning : Finding an objective truth. Establishing causality. Single truth exists and can be known. Maximize predictability, management, and control. Minimize uncertainty.	**Socio constructivism** (meaning: Co-creation of knowledge, intersubjectively validated. Pluralist. Not one single "truth" but many, subject to interpretation. Uncertainty as a given. Facts and values are inseparable)	
Scientific and technical knowledge	**Scientific and technical knowledge + practical wisdom** (meaning: active knowledge'[1] required for the work of making context specific value judgements about ends and means)	
Disciplinary	**Transdisciplinary** Different academic disciplines working jointly with practitioners (i.e., non-academic actors) to solve a real-world problem. (Klein et al., 2001),	
White-Anglo – Western science/knowledge	**White-Anglo – European centred plus Non- white- non-western -indigenous centred**	

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[1] Campbell H. (2012) Planning to change the world: Between knowledge and action lies synthesis. *Journal of Planning Education and Research* 32: 135-146.

Table 3.2: NEXT 5 years epistemological orientation (type of knowledge generated)

(Adapted from Peters and Wals, 2014)

		In a scale of 1-10 where would like to fit you institution **in the near future (5 years)?**
Empirical rationalism (meaning: Finding an objective truth. Establishing causality. Single truth exists and can be known. Maximize predictability, management, and control. Minimize uncertainty)	**Socio constructivism** (meaning : Co-creation of knowledge, intersubjectively validated. Pluralist. Not one single "truth" but many, subject to interpretation. Uncertainty as a given. Facts and values are inseparable.)	
Scientific and technical knowledge	**Scientific and technical knowledge + practical wisdom** (meaning: 'active knowledge'[2] required for the work of making context specific value judgements about ends and means)	
Disciplinary	**Transdisciplinary** Different academic disciplines working jointly with practitioners (i.e., non-academic actors) to solve a real-world problem. (Klein et al., 2001)	
White-Anglo – European centred	**White-Anglo – European centred plus Non- white- non-western -indigenous centred**	

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[2] Campbell H. (2012) Planning to change the world: Between knowledge and action lies synthesis. *Journal of Planning Education and Research* 32: 135-146.

Table 4.1 Today – HEI's "civicness" in research teaching and extension

HEI and the construction of knowledge . What is the purpose of the knowledge produced by academics and transmitted to learners? Is knowledge produced in HEI serving the market of building a community?

(Adapted from Peters and Wals, 2014)

	Knowledge as commodity serving the market	Knowledge as community serving society and the planet	In a scale from 1-10 where do you fit your institution now?
Research orientation	**Science for impact factors** (meaning: Strong emphasis on publication, targets to be met by publishing in ISI journals, preferably those with a high impact factor)	**Science for societal impact** (meaning :Strong emphasis on societal relevance, targets to be met by positive feedback by extended peers that include those who are to benefit from the research)	
Educational orientation	**Efficiency- cost vs benefits** (meaning :Students are viewed from an economic perspective as clients input, throughput, and output, who need to get their diplomas within the time allocated at minimal costs Instrumental—transfer of predetermined and relatively fixed outcomes)	**Authenticity –engaged citizens** (meaning: Students are viewed from a human development perspective as citizens who want to develop themselves and want to engage in meaningful learning around authentic issues; Emancipatory—high degrees of self determination, space for transformation and co-created and emergent outcomes)	

	Focus on financial growth	Focus on civic quality	
Business orientation	(meaning : The university wants or is forced (as governments withdraw public money) to get more money out of the market. Faculty get acquisition targets and "billable days" targets. Rapid growth of private universities and the Disappearance of public ones.)	(meaning: The university invests in community relations and community outreach, seeking to become indispensable and an integral part of the community, which in return is willing to support the university)	

Table 4.2 Next 5 years - HEI – civicness in research teaching and extension

(HEI ideal types /stereotypical orientation in the construction of knowledge . What is the purpose of the knowledge produced by academics and transmitted to learners? Is knowledge produced in HEI serving the market of building a community? (adapted form peters and wals table 1)

	Knowledge as commodity serving the market	Knowledge as community serving society and the planet	In a scale of 1-10 where would like to fit you institution **in the near future (5 years**)?
Research orientation	**Science for impact factors** (meaning : Strong emphasis on publication, targets to be met by publishing in ISI journals, preferably those with a high impact factor)	**Science for societal impact** (meaning: Strong emphasis on societal relevance, targets to be met by positive feedback by extended peers that include those who are to benefit from the research)	
Educational orientation	**Efficiency- cost vs benefits** (meaning: Students are viewed from an economic perspective as clients input, throughput, and output, who need to get their diplomas within the time allocated at minimal costs Instrumental—transfer of predetermined and relatively fixed outcomes)	**Authenticity –engaged citizens** (meaning: Students are viewed from a human development perspective as citizens who want to develop themselves and want to engage in meaningful learning around authentic issues Emancipatory—high degrees of self determination, space for transformation and co-created and emergent outcomes)	
Business orientation	**Focus on financial growth** (meaning : The university wants or is forced (as governments withdraw public money) to get more money out of the market. Faculty get acquisition targets and "billable days" targets. Rapid growth of private universities and the disappearance of public ones.)	**Focus on civic quality** (meaning: The university invests in community relations and community outreach, seeking to become indispensable and an integral part of the community, which in return is willing to support the university.)	

Table 5.1 Today - Competences and values acquired in this HEI

What are the **top three competences** your students **acquire** by studying here? (these can as varied as technical competences (e.g (statistics, programming, etc.), varied substantial contents (e.g. history, doing a project…) critical thinking, creative thinking self development, etc.)	
What are the **top three values** the instituion passes to his students? (e.g. need to promote sustainable development democracy, solidarity, survival of the fittest, success, discipline, etc)	

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Table 5.2 Tomorrow - Competences and values to be acquired in this HEI

What other competences **would you like** the students to acquire by studying here?	
What other values **would you like** the students to acquire by studying here ?	

Table 6.1 Reorientation challenges: What factors do you see favouring such change?

Factors favouring change	Answer from interviewee
Legislation **e.g** - autonomy to change legal rules	
Organisational structure e.g autonomy to change organisational structuring aspects/ rules	
Financial e.g. Existence of sufficient financial resources and/or flexibility on the use of financial resources	
Decision making e.g. - Democratic /participated vs centralised/authoritarian decision making	
Human resources e.g. competence, skills, willingness to engage in change ; existence of formal incentives towards initiating change (pedagogical, curricula, organisational)	
Organisational culture e.g. trust context; cooperative context; cultural (values, norms) favouring change	

Table 6.2 - Reorientation challenges: What factors do you see inhibiting/blocking such change:

Factors inhibiting/blocking such change :	Answer from interviewee
Legislation **e.g** lack of autonomy to change legal rules	
Organisational structure e.g lack of autonomy to change organisational structuring aspects/ rules	
Financial e.g. lack of financial resources and/or lack of flexibility in the use of financial resources	
Decision making e.g. Democratic /participated vs centralised/authoritarian decision making	
Human resources - e.g. lack competence, skills, willingness to engage in change ; lack of formal incentives towards initiating change (pedagogical, curricula, organisational)	
Organisational culture -e.g. lack of trust context; competition rather than cooperative context; Cultural (values, norms) inhibiting change	

Table 6.3 – Steps taken towards the desired change

Indicate what is already put in place/planned in the direction of the desired change?

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3   Some References

Campbell H. (2012) Planning to change the world: Between knowledge and action lies synthesis. *Journal of Planning Education and Research* 32: 135-146.
Fadel C, Bialik M and Trilling B. (2015) Four-dimensional education: The competencies learners need to succeed.
Molz M and Assenza G. (2016) Two paradigms of higher education - modernist and transformative.

Peters, S., Wals, A. (2014) Chapter 4. Learning and Knowing in Pursuit of Sustainability: Concepts and Tools for Transdisciplinary Environmental Research (ch.4), Eds. Marianne E. Krasny & Justin Dillon , Trading Zones in Environmental Education Creating Transdisciplinary Dialogue, PETER LANG

Scharmer CO and Kaufer K. (2013) *Leading from the emerging future: From ego-system to eco-system economies*: Berrett-Koehler Publishers.
Sterling S. (2004) *Sustainable Education: Re-visioning Learning and Change*: Green Books for the Schumacher Society.

4   INSTRUCTIONS FOR THE STSM Final Report

STSM holders must submit their Final Report up to one month after the mission is over to the INTREPID Network Manager, **Rafa Rodrigo** INTREPID Network Manager (intrepid.cost.manager@gmail.com) and to Marta Varanda (STSM Coordinator) (**marta@iseg.ulisboa.pt**).

The Final Report must include the following three parts in order to be considered for approval:

Part A – Scientific Report Section

Part B – Blog-type text

Part C – Detailed information.

4.1 Scientific Report Section

Length: approximately 5 pages. This Part will be sent to your Host.

This part must include:

- Aims and objectives of the STSM; description of the host institution; description of work undertaken; main results; future collaboration possibilities with the host institution; and future plans, including potential future publications.
- The outputs produced and/or:
  - future collaboration possibilities with the host institution- how would you see INTREPID, and its challenges, benefiting from further collaboration with the host institutions (and vice versa); and how did you benefit from this experience and envisage to follow up on it
  - based on your experience did you come up with any idea of an academic paper or funding application, that could be developed in a partnership of INTREPID with the home institution?
- Please address the questions of the template:

4.2 – Blog-type text

Please write a blog-like text between 600-800 words, to be included in the next INTREPID Newsletter, including major findings and questions arising.

- A catchy title (for example questions are good for titles- since many people search in Google writing questions)
- First paragraph sentence should include text main ideas.
- An image (600 px width)
- In short: image, a title, the beginning of the first paragraph and a read that take you to the full story.

4.3 – Detailed information on questions and answers

For each interviewee, please fill in a copy of the relevant tables (table 1- 6) above indicating the question as you actually formulated it, and the answer obtained.

You should include direct quotes in "…." wherever possible.

Interviewee #1

Interviewee #2

Interviewee #3

Etc…