OEII - "Open Educational Innovation and Incubation"

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Open Educational Innovation

and Incubation

Deliverable No.	**D11**
Workpackage No.	**WP4**
Workpackage Title	**Assessing the incubation of versatile advancement pilots**
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Executive Summary

This document provides the results of the assessment of a number of pilots on new educational initiatives. A total of 15 examples have been examined related to three main topics:

1. Open Education, OER, OCW and MOOCs.

2. Educational innovation and knowledge circulation with companies.

3. Social Innovation and Crowdsourcing.

In the first part we present the general methodology of the OEII-project and the specific place of WP4: **Assessing the incubation of versatile advancement pilots**.

In the main part of the document, all the pilot assessments are described. For each group of examples (clusters) a standardized template has been used. The analysis of specific issues and recommendations for universities are included in Deliverables 12 & 13.

Annex 1 presents one of the templates used for assessment (Cluster 2).

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1. Introduction

In face of enormous socio-economic and demographic challenges, Europe requires an advanced educational system, which contributes to innovation, competitiveness and economic growth. The higher education sector should be a key part of this system, leading through demonstrating and delivering innovation. Many factors contribute to universities' successes and failures, including: course offering, pricing, openness, social and professional regional embedding, market conditions, access to finance, educational R&D, constellation of the local regulatory framework, entrepreneurial capabilities and culture, intermediaries, stakeholder cooperation, and knowledge transfer mechanisms.

Educational systems and associated business models must be increasingly agile to respond to, and survive, (more versatile) changing (external) factors. Universities must search to create added value and innovate (more) systematically. They must learn to reinvent, reinforce and restructure educational programmes with requirements of the innovation-driven economy in mind. They must do this by acknowledging the centricity of the lifelong learner. As the call for highly educated, employable and entrepreneurial students with more converging market skills is loud, curricula infusion with new elements must be a part of a systematic discussion of universities and external parties. It is high time that the acceleration processes to university entrepreneurship, university interfacing, and university-market receptiveness are identified and assessed. Universities must systematically explore how higher education can better connect with the labour market opportunities, and enact a dialogue between university management, public (policy) bodies, social partners, foundations, commercial & non-commercial partners, so as to increase the strength of the links between the education, training & retraining of individuals, academics and professionals and the needs of European society as a whole. The collection of practices of (university-market) interfacing must systematically contribute to this objective, and increase capacity building in favour of more rapid educational innovation and incubation.

2. Objectives, actions, methodology

a. Objectives of the OEII-Project

The aim of Open Educational Innovation & Incubation (OEII) is to conceptualise the design of a sustainable organisational interface, which supports improved university-market receptiveness and improves (internal) university incubation and innovation. OEII intends to systematically involve university management, change agents, internal & external stakeholders, multipliers and accelerators, to promote the knowledge exchange process between different parties. It intends to seek solutions to optimise the educational innovation and incubation process, and identify any organisational structures and opportunities that can be taken advantage of. Recommendations to improve organisational interfaces are formulated, and appropriate motivation and reward mechanisms for academics and accelerators are provided.

To accumulate knowledge, OEII performs a cross-comparison of university interfacing models, and deduces flexible interface models for improving support to the (pre)incubation of new educational initiatives. It seeks more empirical insight into the process of incubation by assessing the actual strengths and weaknesses of emerging, running, and small-scale experimental pilots, which actually go through the process of (pre)incubation.

The primary objective of OEII is to formulate recommendations on the organisation of a (more) transparently organised, and sustainable, university-market interfacing, which is receptive to inside and outside developments, and the valorisation of educational innovation. This may be powered by commercial & Open Educational Resources (OER). Secondary objectives include: (a) driving the employability-dialogue with external stakeholders on curriculum innovation & student skills and competences, (b) enhancing educational attainment by establishing connective (post-academic) HE learning paths, (c) acting as a provider towards more inclusion of the population, and (d) improving the possibilities of social mobility for disadvantaged groups.

b. General methodology of the OEII-Project

In order to keep coherency between the different workpackages (WP), this paragraph gives a brief introduction of the methodology applied by the project as a whole.

The primary objective of OEII is to formulate recommendations on the organisation of a (more) transparently organised, and sustainable, university-market interface, which is receptive to inside and outside developments, and the valorisation of *open* educational innovation. *The recommendations will include the following aspects*:

1. driving the employability-dialogue with external stakeholders on curriculum innovation & student skills and competences,

2. enhancing educational attainment by establishing connective (post-academic) HE learning paths,

3. acting as a provider towards more inclusion of the population, and

4. improving the possibilities of social mobility for disadvantaged groups.

The aim of the research-oriented WP2 is to analyse different university interfacing with external stakeholders, based on questionnaire and interviews. Main aspects which should be taken into account by universities for improving relations with external world and support new educational initiatives were identified.

WP3, titled as Flexible interface models and pre-incubation of educational initiatives aimed to offer possibilities for wide-scale dialogue – consultations, workshops, meetings with regional and professional stakeholders in order to explore opportunities for detailed pilot case assessments. Following the first, analytical review of WP2, this second run of consultation meetings with wide range of relevant stakeholders wishes to articulate the voice of practitioners and to select some appropriate fields and opportunities for further assessment in WP4. Findings of all three previous stages will be synthetized by WP5, leading to development of recommendations of WP6.

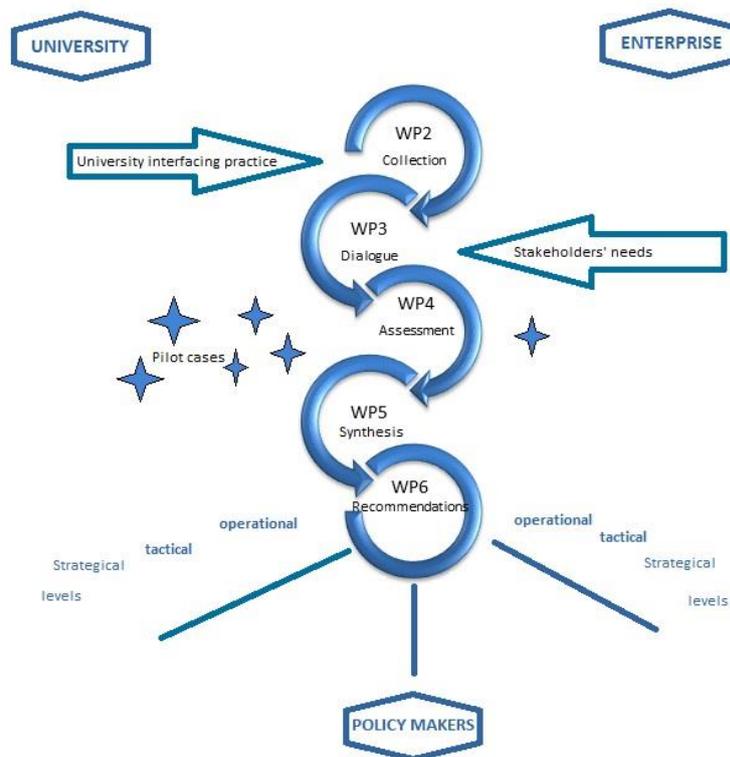Figure 1 describes the relations between the different workpackages.

Figure 1: Workpackages and methodology

c. Objectives and methodology of WP4

The aim of workpackage 4 is the assessment of incubation pilots on new educational initiatives. 15 examples of educational openness and/or innovation were selected for investigation. The basis for selection was that each one should contribute to our understanding of how openness and/or innovation can contribute to improvements in universities interfacing with other organisations. We recognise that we have not made a universal study, in that the example cases we have chosen to analyse are only a small proportion of those that are available. However, the cases chosen are significant in relation to the objective of each cluster, and cover a variety of different types of interactions between universities and other organisations of different scales and types.

The cases investigated have been clustered in three groups:

1. Cluster 1 is related to Open Education, OER, OCW and MOOCs

2. Cluster 2 is related to educational innovation and knowledge circulation with companies

3. Cluster 3 is related to Social Innovation and Crowdsourcing

For each cluster a template for assessment of the cases has been developed, focused on specific dimensions: see example of templates in annex 1. Cluster 3 used the same template as Cluster 2, analysing the same dimensions, adapting some key issues.

Deliverable 11 presents a cross-over analysis of all the cases. Instead of individual university reports, it was decided to present an overview of all cases, analysing different aspects related to openness, educational offer, online offer, educational level and drivers of educational innovation, and interfacing activities according to several dimensions.

Section 3 gives an overview of all the tables used in the cross-over analysis of WP4 cases, and sections 4 to 15 include the tables for each dimension.

3. Overview of the tables for Cross-Over analysis of WP4 cases

All the case studies that have been examined in WP4 are analysed according to a number of dimensions in order to obtain a cross-over report. These are:

General features

        Table 1: Comparison / type of openness

        Table 2: Characteristics of the educational offer

        Table 3: Level of online offer

        Table 4: Educational level and (business) drivers of educational innovation

Interfacing activities related to several dimensions

        Table 5. Interfacing and stakeholder groups

        Table 6. Interfacing activities: financial aspects

        Table 7. Interfacing activities: Role of the Government

        Table 8. Interfacing activities: Social Mission

        Table 9. Interfacing activities: Quality aspects

        Table 10. Interfacing activities: Award

        Table 11. Interfacing activities: Infrastructure

        Table 12. Interfacing activities: didactics and vocabulary

For each dimension a cross-over analysis of the cases has been developed to detect similarities and differences, strong and weak points, …

4. Comparison of openness

Table 1 presents the type of openness for all case studies, related to MOOCs, OER and OCW and related to educational innovation and knowledge transfer with companies.

Several levels of openness are analysed (for some background information and recommendation we refer to deliverable 12) and are defined as follows:

1. **Open Access:** Can anyone access the course / educational program (no diploma requirement), or is there some kind of selection process?
2. **Free online availability:** Is access to the educational material available free of charge?
3. **Freedom of Pace:** Can learners study at any pace?
4. **Freedom of Place :** Can learners study from anywhere?
5. **Freedom of Start time:** Can learners start studying at any time and receive the same experience?
6. **Open educational programs:** related to bachelor/master programs that involve certain freedoms as regards their content and order; the student can take and if necessary combine modules/courses as he/she wishes; there are partial programmes and complete open programmes
7. **Open programming / open source:** Is the platform and other software components available under an open licence?
8. **Open licensing:** Is the content available under an open licence?
9. **Open creation:** Can anyone create a course (or educational program) on the platform, or is there a gatekeeper?

Table 1a: Type of openness for cluster 1

Case	edX	P2PU	Class2Go	Khan Academy	Udacity	OCW-EU	Coursera	MOOC EaD	OERU plans to[1]:
1. Open Access	Most[2]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2. Free online availability	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3. Freedom of Pace	No	Some[3]	No	Yes	Yes	Yes	Yes	Yes	Yes
4. Freedom of Place	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5. Freedom of Start time	No	Some	No	Yes	Yes	Yes	Some	Yes	Some
6. Open source	Yes[4]	Yes	Yes	Yes/No[5]	No	Yes	No	Yes	Yes
7. Open licensing	Some[6]	CC-BY--SA	No	CC-BY-NC-SA	CC BY-NC-ND	Yes	No	CC-BY	Yes
8. Open creation	No	Yes	No	No	No	No[7]	N0	No	No

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[1] OERu plans to launch in November 2013 (http://wikieducator.org/Another_world_first_for_Otago_Polytechnic:_OP_to_offer_full_credential_for_the_OERu), but a prototype course began in November 2012 http://wikieducator.org/AST1000

[2] Although access to most edX courses is unrestricted, the Harvard course on copyright is not open in that there were only 500 places offered to participants who were "selected through an application process" (edX, 2013).

[3] Some courses on P2PU are offered for lone students, so these may be studied at any pace, starting any time. Most courses run on the basis of peer support which requires organised pace and start time.

[4] Edx itself has described the platform as "open source" (edX, 2012h) but it appears that the code has yet to be released (StackExchange, 2012).

[5] The source code of Exercises is on the BSD Licence. The exercise framework is MIT licensed. The exercises are under a Creative Commons by-nc-sa license. Films are on YouTube - it is not programmable.

[6] MIT and Harvard plan to make more of the content available under 'more open license terms' (edX, 2012j)

[7] Only teachers from the University of Évora can publish materials in OCW

Table 1b: Type of openness for cluster 2

Case	Acqa-KULeuven	Innovation in Engineering Miskolc	Safety Engineering KULeuven	Telecom Italia, UNINETTUNO
1. Open Access	No: diploma requirement	No: diploma requirement	No: diploma requirement	No: diploma requirement
2. Free online availability	No	No (Only tasters/demos)	No	No: enrollment required
3. Freedom of Pace	No	No (only 1st of the 4 semesters)	No	Yes
4. Freedom of Place	No	No (only 1st and 4th of the 4 semesters)	No	Yes
5. Freedom of Start time	No	No (only for 1st semester as an independent on-line course)	No	Yes
6. Open Edu. Programs	No	No	No	Only 2 courses over 20
7. Open programming	No	Basically yes (Moodle), but there are some dev.tools which are not open	No	No
8. Open licensing	No	No	No	No
9. Open creation	No	No, but industrial experts (invited or voluntarily offered) may contribute	No	Only professors can

Table 1c: Type of openness for cluster 3

Case	Medialab Prado	Escuela Popular de Adultos "La Prospe"
1. Open Access	YES	YES
2. Free online availability	YES	NO[8]
3. Freedom of Pace	SOME	SOME
4. Freedom of Place	SOME (Audiovisual)	NO
5. Freedom of Start time	SOME	SOME
6. Open Edu. Programs	NOT FORMAL	NOT FORMAL
7. Open programming	N/A	N/A
8. Open licensing	CC-BY-SA[9]	N/A
9. Open creation	YES	YES[10]

[8] All documents and didactic materials (when applicable) are available physically on site, not online, and they are free of charge.
[9] Unless otherwise specified
[10] Not on Platform but a group can be formed by approval at Assembly (non-lucrative and responding to the Prospe's philosophy)

5. Comparison of the educational offer

Table 2 presents the kind of educational offer that has been studied in the different case studies.
For each case study, the following dimensions could have one or more of the values listed:
1. Education level:
- post graduate (PG)
- higher education/graduate (G)
- further education (FE)
- school (S)
- …
2. Granularity of offering:
- lectures or tasks (LT)
- courses (C)
- programs (P)
-
3. Assessment:
- None
- Peer (Peer)
- Computer marked (C)
- Teacher marked (T)
- Proctored (Pr.)
(and all the above may be qualified by 'formative' or 'summative')
4. Certification awarded for:
- participation
- achievement
5. Certification awarded by
- University
- Platform
- Peers
- None

- …
6. Dominant didactics:
    - Instructor led
    - Connectivism
    - Vary per course

Table 2a: Characteristics of the educational offer for cluster 1

	edX	P2PU	Class2Go	Khan Academy	Udacity	OCW-EU	Coursera	MOOC EaD	OERU plans to
Education level	G	G	G/PG	S/FE/G/PG	FE, G, PG		G		G
Granularity of offering	C	LT, C	LT/C	LT/C/P	C		C		C, P
Assessment	C-formative, C-summative	Peer	N/A	C	fC		Peer, C Formative & Summative		Formative & Summative
Certification awarded for	A	A, P	participation	N/A	Achievement		A, P Verified Certificates (fee based) & Signature Track		A
Certification awarded by	Platform	Peers	University	N/A	Platform		University		University
Dominant didactics	Instructor led	Connectivism	Vary p. course	Instructor led	Instructor Led		Instructor led, they declare mastery learning		pedagogy of discovery

Table 2b: Characteristics of the educational offer for cluster 2

Case	Acqa-KULeuven	Safety Engineering KULeuven	Telecom Italia, UNINETTUNO	Innovation in Engineering Miskolc
Education level	*PG*	*PG*	*G*	*PG*
Granularity of offering	*C and P*	*C and P*	*C and P*	*C and P*
Assessment	*T - summative*	*T - summative*	*T*	*T - summative*
Certification awarded for	achievement	achievement	achievement	achievement
Certification awarded by	university	university	university	university
Dominant didactics	*Instructor led*	*Instructor led*		*Mainly instructor led, with some elements of connectivism*

Table 2c: Characteristics of the educational offer for cluster 3

Case	Medialab Prado	Escuela Popular de Adultos "La Prospe"
Education level	Non formal	Non Formal Adult and Further Education (FE)
Granularity of offering	Workshops, projects, seminars, debates, conferences, …	Collective Learning Groups (GAC's[11]), Cine Forum, debates, long-term workshops (i.e. to fix things: bikes, plumbing, electricity, etc.)
Assessment	N/A	Open assessment – collective self-evaluation
Certification awarded for	Non-official	Non-official
Certification awarded by	??	By the school itself
Dominant didactics	Collaborative work Varies according to activity	Collaborative work based on Critical Pedagogy and Intercultural approach

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[11] GAC's: Grupos de Aprendizaje Colectivo. Example: Colaboratorio Bikenstein, or Generosas (gender-related), Econonuestra

6. Comparison of the online offer

Table 3 presents the level of online educational offer that has been studied in the different case studies.

This table discriminates between the different online provisions of the course / educational program

1. Online content
2. Online learners community
3. Online tutoring / feedback
4. Online tests
5. Online exam

Values for all can be:
- Completely online
- For large part online
- For large part offline (only some parts online)
- Completely offline (i.e. on campus, or in study center, exam locations, etc.)

Table 3a: Level of online offer for cluster 1

	edX	P2PU	Class2Go	Khan Academy	Udacity	OCW-EU	Coursera	MOOC EaD	OERU plans to
1. Online content	Completely	Completely	Completely online	Completely online	Completely Online		Completely		Completely
2. Online learners community	Completely	Completely	For large part online	For large part online	Completely Online		Completely		Completely
3. Online tutoring / feedback	Completely	Completely	For large part online	Completely online	Completely Online		Completely		Completely
4. Online tests	Completely	Completely	N/A	Completely online	Completely Online		Completely		Completely
5. Online exam	Completely	Completely	N/A	N/A	Completely offline in Testing Centers		Completely		Mostly

Table 3b: Level of online offer for cluster 2

Case	Acqa-KULeuven	Innovation in Engineering Miskolc	Safety Engineering KULeuven	Telecom Italia, UNINETTUNO
1. Online content	*Completely offline (some parts online via blackboard)*	*For 1st semester completely online, for all others, online content is just complementary to f2f delivery*	*Completely offline*	*Completely online*
2. Online learners community	*Completely offline (partly possible via blackboard)*	*For 1st and 4th semester completely online, for 2nd and 3rd completely offline*	*Completely offline*	*Completely online*
3. Online tutoring / feedback	*Completely offline (very limited via blackboard)*	*For 1st semester completely online, for all others, on-line tutoring is complementary (involvement of foreign tutors)*	*Completely offline*	*Completely online*
4. Online tests	*Completely offline*	*For 1st semester completely online, for others, only complementary*	*Completely offline*	*Completely online*
5. Online exam	*Completely offline*	*For 1st semester completely online, for others, only complementary*	*Completely offline*	*Completely offline*

Table 3c: Level of online offer for cluster 3

Case	Medialab Prado	Escuela Popular de Adultos "La Prospe"
1. Online content	Mostly offline[12]	Completely offline
2. Online learners community	Under creation	N/A
3. Online tutoring / feedback	Completely offline	Completely offline
4. Online tests	N/A	N/A
5. Online exam	N/A	NO EXAMS (N/A)

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[12] Many workshops and other sessions are recorded and uploaded afterwards on the website. So it is available to many users, but there is not really online content or material as part of the sessions.

7. Educational level and (business) drivers of educational innovation

Table 4 presents the kind of educational innovation that has been studied in the different case studies.

This table discriminates between the level of educational innovation and the main (business) drivers of that innovation.

In principal these are open textboxes, but please prefer to use the following values

1. Level of educational innovation. Please use one or more of values below and add other levels if applicable.
   - on course / training level
   - coherent structure of several courses
   - (part of) curriculum / program
   - pedagogical model of faculty or university
   - possible disruptive, i.e. innovation on HE-system level
   - *other ………….. free text………………………………*

2. (Business) drivers of (open) innovation. Please use one or more of values below and add other levels if applicable.
   - Use online offering to improve quality of (on campus) educational programs
   - To select the best of students in online offering for on-campus provisions (or as selection for recruitment by companies)
   - Competition for (international) students
   - To increase number graduates
   - To increase (non)governmental funding
   - To increase the pace of educational innovation (speed up)
   - To increase the impact of educational programs for SMEs / companies / society
   - To use ICT as enabler to improve the (quality / cost-effectiveness) of educational programs
   - To include more actors in educational innovation (e.g. by social innovation)
   - Politically initiated
   - Idealistically driven (e.g. social inclusion, social justice and/or open accessibility / access to higher education for all)
   - *other ………….. free text………………………………*

Table 4a: Educational level and (business) drivers for cluster 1

	edX	P2PU	Class2Go	Khan Academy	Udacity	OCW-EU	Coursera	MOOC EaD	OERU plans to
1. Level of educational innovation.	possible disruptive, i.e. innovation on HE-system level	possible disruptive, i.e. innovation on HE-system level	*possible disruptive, i.e. innovation on HE-system level*	*On course/coherent structure of several courses*	*On course / training level, Coherent structure of several courses*		possible disruptive, i.e. innovation on HE-system level		possible disruptive, i.e. innovation on HE-system level
2. (Business) drivers of (open) innovation.	improve quality of (on campus) educational programs To include more actors in educational innovation (e.g. by social innovation)	To include more actors in educational innovation (e.g. by social innovation) Idealistically driven (e.g. social inclusion, social justice and/or open accessibility / access to	To include more actors in educational innovation / To increase number graduates / Idealistically driven	Idealistically driven / To use ICT as enabler to improve the quality of educational programs / To include more actors in educational innovation by social innovation	*To increase the pace of educational innovation.* *To use ICT as enabler to improve the (quality / cost-effectiveness) of educational programs* *Idealistically driven*		Competition for (international) students To include more actors in educational innovation		Idealistically driven (e.g. social inclusion, social justice and/or open accessibility / access to higher education for all)

		higher education for all)							

Table 4b: Educational level and (business) drivers for cluster 2

Case	Acqa-KULeuven	Engineering Miskolc	Safety Engineering KULeuven	Telecom Italia, UNINETTUNO
1. **Level of educational innovation.**	-Course/training level -Coherence of courses/programs -Pedagogical model of faculty (methodology of measuring learning outcomes; learning design) -Related to quality assurance -Related to ICT -Communication between all partners (internal and external)		- Course/training level - Curriculum/program - Innovation of organisational and financing model for a program	- Course/training level - Related to quality assurance - Innovation of organisational and financing model for a program
2. **(Business) drivers of (open) innovation.**	- To increase the impact of educational programs for SMEs / companies / society - Use of a new methodology to improve internal and external quality assurance - Study of and more alignment with needs of labour market		- To increase non-governmental funding - To increase the impact of educational programs for SMEs / companies / society - To include more actors in educational innovation - To continue alignment of educational offer with needs of companies	- To strengthen the cooperation between University and Company - To increase the impact of educational programs for SMEs / companies / society - To increase (non)governmental funding - Use of a new methodology to improve internal and external quality assurance

Remarks

KU Leuven cases:

- For the Acqa-project:
  - what started as a project related to quality assurance, learning design and the implementation of a new methodology, turned out to be an important instrument of communication between all partners involved, internally on faculty and on university level, but also externally with stakeholders from the labour market. It has strengthened the possibilities for the university to collaborate with companies on educational topics.
  - Originally the driving force was situated within the university but during the project, different reasons and other on-going developments at the faculty and at the university, have led to the decision to organise a strong concertation of companies on the project.

- For the program Safety Engineering:
  - Driving force for the new program were the companies involved who expressed their needs for this kind of training.
  - Final result is an innovative organisational and financial model of the program, that is unique for this kind of programs in the university.

UNINETTUNO case:
- Driving force for this program was the company involved, Telecom Italia, who expressed their needs for this kind of training.
- Unions approved this training that allowed re-qualification of employees and made more secure keeping the job.

Table 4c: Educational level and (business) drivers for cluster 3

Case	Medialab	La Prospe
1. Level of educational innovation.	pedagogical model: collective knowledge construction	pedagogical model: collective knowledge construction – dialogic learning
2. (Business) drivers of (open) innovation.	- Politically initiated - Idealistically driven - To create a structure where both research and production are processes permeable to user participation.	- Politically initiated - Idealistically driven - To provide a space for learning in a collaborative way, with a horizontal structure. There are no teachers and students, all are considered learner, and contribute to the collective construction of knowledge. Open to all regardless of background and former qualifications.

8. Interfacing activities: Stakeholders

Table 5: Stakeholders

Case	Stakeholders
Class2Go MOOC	- Provider: Stanford University - Organisation: Class2Go team - Teachers: Stanford University professors - Students (Stanford and externals): anyone, anywhere, no admission procedure - External users: use for teaching and research
Coursera MOOC	- Providers - Teaching/content providers - Students - Business ventures
Edx MOOC	- Edx = not-for-profit enterprise - Providers: Harvard/MIT - Teaching providers: edX; staff of Harvard, MIT, Berkeley, University of Texas, company 10Gen - Resource providers: partnerships between edX and organisations and publishers - Students: anyone, no admission procedure
Khan Academy MOOC	- Provider: Khan academy team - Donators - Volunteers: translation project - Teachers: Khan academy team; all users can be teacher - Content providers: worldwide - Students/Pupils/Users = anyone: students, teachers, home-schoolers, principals, adults returning to classroom; no admission procedure - Other users: Schools

Case	Stakeholders
	• National partners and communities
MOOC EaD Portuguese	• Sponsors: TIDD (Portugal) /PUC-SP (Brazil) • Curators/Teachers: 2 experts in distance education • Professional teachers from universities • Students: higher education level; participants register • Other users, participants: professionals in distance education and e-learning • Support: JOVAED/ABED (Brazil)
OCW University Evora, Portugal	• Provider: OCW-EU, OCW platform of University of Evora; protocol with OCW Universia • Provider of content: teachers of University of Evora • Students: higher education level and self-learners; worldwide; no admission procedure • Other users Educators in non-profit sector, worldwide • OpenCourseWare Universia Network: network of universities on OCW
OER University MOOC	• Provider: OUR university, an open network and public-private partnership with post-secondary institutions, private sector, non-profits, government and international agencies • Founding anchor partners • Anchor partners • Teaching staff/content providers: from participating universities • global WikiEducator network of educators: collaboration on shared course development • Students: all worldwide • Volunteers: development of a volunteer services page • sponsors: Commonwealth of Learning, UNESCO • OER Foundation: independent educational charity that administers supporting infrastructure and generates funding
P2PU MOOC	• P2Puniversity = not-for-profit organisation • Funding: those who have provided grants funding the organisation and individuals to work with the organisation • Organisation by volunteers: both organisations and individuals • Providers of content and services: anyone • Teachers: anyone • Students: anyone, no admission procedure
Udacity MOOC	• Teaching staff/content providers: from participating universities (Udacity announced a partnership with San Jose State University (SJSU) on 15 January 2013 to pilot three new courses, two algebra courses and a statistics course, available for college credit at SJSU and offered entirely online)

Case	Stakeholders
	• Students: in engineering, higher education level and self-learners; worldwide; no admission procedure
Acqa-project in Faculty of Engineering, KU Leuven	• Faculty of engineering: dean and vice-dean, academic staff, programme director, educational working group, staff members on education • Industrial Advisory Council • TU/e in the Netherlands • Students in engineering
Innovation in Engineering Education, University of Miskolc, Hungary	
Master Safety Engineering, KU Leuven, Belgium	• Universities // Faculty of engineering: 1° dean = recognition and support of the program 2° Program committee (academic staff, students, companies) and program director = * quality assurance of the programme * responsible for the educational programme • Universities // Teachers - Researchers: *teachers in the programme *coordination of co-teaching with external teachers *researchers communicate on the program within their research networks • Universities // Students of the program: *added value for the program because of active input from students who are working already *input from alumni is pointed out as a lack to be filled in in the future • Universities // Industrial Research Council: *financing of innovative research through mandates, projects or knowledge platforms *financing of the knowledge platform 'SCORES4CHEM'

Case	Stakeholders
	- Companies // CEOs – safety engineers – …: *advise on education *were partner in launching the idea to review the existing master program *participate in teaching and selection of teachers *take part in the follow-up and the evaluation of the program *take part in the financing of the program *invest in publicity for the program *support the international character of the program Through membership of: 1° the Industrial Advisory Council = external advisory structure where academic staff and external specialists meet to discuss the profiling, strategic choices and content of the education programs and where the follow-up of the new program is taken up twice a year 2° the Working group (Think-tank) = academic staff and industrial partners that worked on the preparation and realisation of the reform of the old program 3° essenscia = association of chemicals and life sciences industry in Belgium 4° SCORES4CHEM and its Steering Committee = knowledge platform aimed at Safety, Control & Optimization: Research, Education and Services FOR the Chemicals and life sciences industry - Government: *accreditation of the program *no funding
Telecom Italia, UNINETTUNO, Italy	- University: *responsible for the educational programme *other employees may be willing to get additional training and enrol as students; *student-professor interactions can start new scientific cooperation between the University and company branches - Company: *define the "agreement" on educational programme is a strong element of interfacing *agreement concerns: financial support from companies / involvement in design of the programme / teaching / involvement in quality assurance

Case	Stakeholders
	*more skilled and qualified people work in the company; *more motivated people • Employees: *increased self-esteem and social-status improved; *sense of belonging to the company; *employees can advance in their career
Case 1 cluster 3	•
Case 2 cluster 3	•

Remarks

KU Leuven cases:

- In both cases, the innovation is not the educational 'product' as such but the way how concertation and collaboration with companies around educational topics is developed, from first idea, through the development of a program until its management.
- The Safety Engineering project is a unique model of collaboration with and financing by industry, although not possible to adopt for traditional bachelor / master programs. It is an example that can inspire organisers of similar 'master-after-master-programs' and of continuing education programs.
- Strong success factors in the master program: the engagement and enthusiasm of all partners.
- Constraints in the collaboration with external teachers (in the master program):
  - lack of time
  - fundamental and complex changes in the area of higher education that are not easy to capture by the external partners
  - lack of or limited accessibility of educational means and platforms for external teachers
- In general, the experience of having more exchange with companies on their needs related to education and on their perception of higher education is seen as valuable and a possible source of further 'innovations' in education.
  Research networks are more and more addressed on educational matters. At KU Leuven this interest is experienced in both directions, as a potential basis for reorientation and innovation of education.
- Possibilities to broaden the network: The topic of safety is specifically developed for the chemical industry. Other sectors could be interested in this kind of training programme. Broadening of the network with industry to other sectors as construction, food industry and transport is a future working point.

Miskolc cases:

- As the most important characteristics of our case, the active involvement of industrial firms may be mentioned. Coordination of this active networking is provided by the professional body, which may find the most appropriate contributors to any field/process to be discussed.
- Another benefit of involving the world-wide professional federation is seen with regarding dissemination, valorisation and exploitation. Application of advanced ICT supported networking tools and learning environment makes it feasible to manage a real international, joint development and delivery process – video-conferencing and versatile functions of the Moodle platform support effective communication and collaboration.

9. Interfacing activities: Financial aspects

Table 6: Financial aspects

Case	Finance
Class2Go MOOC	- Class2Go Platform = not-for-profit enterprise of Stanford University - Financed by Stanford University - MOOC courses for free - Portable: ability to move documents and media to other platforms
Coursera MOOC	Venture capital and philanthropy. Revenue opportunities: data mining; cross- or up-sell; advertising model.
Edx MOOC	- Overall venture: not-for-profit - Partnerships between edX and resource providers: provide services for free to the MOOC as a marketing strategy. - Venture capital is invested in the companies providing services.
Khan Academy MOOC	- Khan Academy = non-profit organisation - funded by donations - free service for all stakeholders - free materials and resources for all users
MOOC EaD Portuguese	No overt financial deals with commercial companies or explicit funding from sponsors
OCW University Evora, Portugal	No finance model
OER University	- Free learning - Financial resources:

Case	Finance

MOOC	*contributions in time from participating institutions
	    *external donor funding for strategic elements
	    Are required to address gaps in available OERs and the design of new components of the OERuniv system
	• OER Foundation:
	    *funding through contributing partners, public gifting and donations, government contracts, support from international agencies and grants from the international donor community.
	    For the development of strategic components of the international OER ecosystem
	• The OER university aims to achieve a critical mass of anchor partners who agree to the core principles of engagement for providing formal academic credit for OER university courses. Initially, the project aims to recruit one institution from each of the major regions of the world. As an open project, all post-secondary that care about sharing knowledge as a core value of education are free to join the OER university in planning and implementing sustainable education futures.

P2PU MOOC	• Grants • Operating model: P2PU organisation provides the platform, anyone can educate and experiment with it
Udacity MOOC	Udacity business model is based on the Career Placement system and their collaboration with the companies interested in hiring Udacity students. From the official Udacity site, its business model is not visible. However it appears to be based in charging employers for access to high-performing students and charging for in-person certification. Udacity seems to be built on the standard VC model of get scale first, worry about monetizing it later. And if Udacity does end up with millions of students, there will be quite a lot of companies which would pay Udacity to be able to reach those students. Simply charging technology companies to put job opportunities in front of students with given grades and qualifications would probably generate quite hefty fees. So long as the education itself remains free
Acqa-project in Faculty of Engineering, KU Leuven	• educational research project funded by the university • own resources from the faculty of engineering science • working with new methodologies requires the agreement of the university/faculty to create sufficient financial resources
Innovation in Engineering Education, University of Miskolc, Hungary	
Master Safety Engineering, KU	• unique model of financing education with support from industry • no government subsidies

Case	Finance
Leuven, Belgium	• three sources of finances: *tuition fee of the students *essencia Chair 'Safety Engineering' *financial support by the Faculty to cover part of the honoraria for teachers
Telecom Italia, UNINETTUNO, Italy	• University give discount on tuition fees • Telecom pays tuition fees to students that pass successfully at least two exams per year
MEDIALAB	• Department of Arts of the City Council of Madrid (Spain) programme
Escuela Popular de Adultos La Prospe	• Self-financing - members pay a small fee • Fund-raising activities - voluntary fees

Remarks

KU Leuven cases:
• General remark: working with new methodologies requires the agreement of the university/faculty to create sufficient financial resources
• Master Safety engineering: unique model of financing education with support from industry
• Constraint in the financing of the master program: The Chair ends in 2014, new financing must be found by then because there are no formal subsidies and the tuition fees and the limited financial support of the Faculty are not enough to cover all costs of the MNM.

Miskolc case:
Typically project durations are too short for getting an innovative idea to the maturity phase of operable, self-financed practice. When the result of any EU project seems to offer a real added value, possibility for applying for some follow up financial resources would be effective in multiplying the benefits and in achieving sustainable, high standard programs and services.

10. Interfacing activities: Role of the Government

Table 7: Role of the Government

Case	Government
Class2Go MOOC	No involvement
Coursera MOOC	No involvement
Edx MOOC	No involvement
Khan Academy MOOC	No involvement
MOOC EaD Portuguese	No involvement
OCW University Evora, Portugal	No involvement
OER University MOOC	Support from Commonwealth of Learning and UNESCO
P2PU MOOC	No involvement
Udacity MOOC	No involvement
Acqa-project in Faculty of Engineering, KU Leuven	• Indirectly at the occasion of accreditation • Support by government to organise concertation with companies on development of new methodologies
Innovation in Engineering Education, University of Miskolc, Hungary	Indirectly at the occasion of accreditation
Master Safety Engineering, KU Leuven, Belgium	Indirectly at the occasion of accreditation
Telecom Italia, UNINETTUNO, Italy	Indirectly at the occasion of accreditation
MEDIALAB	• Department of Arts of the City Council of Madrid
PROSPE	• No involvement

11. Interfacing activities: Social Mission

Table 8: Social mission

Case	Social mission
Class2Go MOOC	To provide free on-line education (courses and platform) to universities, private schools, students and NGO's.
Coursera MOOC	To democratize education, making necessary, important, invaluable learning available to the widest number of people everywhere for the lowest cost.
Edx MOOC	Open access to higher education to all at all ages.
Khan Academy MOOC	To change education for the better by providing a free world-class education for anyone anywhere
MOOC EaD Portuguese	• To get the Portuguese language used in MOOCs with an eye on Brazil. • To connect and strengthen the Portuguese speaking community. • To democratize education.
OCW University Evora, Portugal	• To provide educational content that is internationally recognized. • To develop presence of Latin American Universities, cultures and languages, in the OCW project worldwide.
OER University MOOC	• To develop and implement a sustainable and scalable ecosystem that provides free learning opportunities for students worldwide. • To provide pathways for learners to obtain credible certification and qualifications within national education systems. • To democratize education for regions or cultures who have no or little access to higher education.
P2PU MOOC	To facilitate learning with and teaching and from peers.
Udacity MOOC	• To provide open education and lifelong and vocational learning opportunities in specific fields. • To eliminate the gap between learning and practice = To bridge between university and industry
Acqa-project in Faculty of Engineering, KU Leuven	
Innovation in Engineering Education, University of Miskolc Hungary	

Case	Social mission
Master Safety Engineering, KU Leuven, Belgium	To create certification for specific functions that companies are obliged to realise.
Telecom Italia, UNINETTUNO, Italy	To augment job security for employees.
MEDIALAB	• Aimed at the production, research, and dissemination of digital culture and of the areas where art, science, technology, and society intersect
LA PROSPE	• To build and consolidate social innovation initiatives (knowledge and practices), alternative to capitalism and neo-liberalism.

12. Interfacing activities: Quality aspects

Table 9: Quality aspects

Case	Quality
Class2Go MOOC	• Content: provided by professional educators • Platform: open for comments and suggestions from all users
Coursera MOOC	**Quality is assured by working** with high-**quality** university partners. Coursera courses are primarily offered by high-prestige name-brand universities in several countries (see section 1.10.1)
Edx MOOC	• Open admission • High attrition rates • Very large population courses –typically 30k participants • University staff teach • 1 autograder • High quality institutions with high brand • Very strict schedules – do not wait for participants lagging behind • No feedback to struggling learners • No assessment • Focus on 'shallow learning' and passing exams rather than transformation 'deep learning'.
Khan Academy MOOC	• Content: provided by professional educators
MOOC EaD Portuguese	• Framework of graduate program at background • Experts develop materials • Teaching by staff of higher education • Moderating influence of experts • Tutorials and facilitation provide personal contact with participants • Participants are registered – only the wiki is open to all
OCW University Evora, Portugal	Educational resources at university level and internationally recognized
OER University MOOC	**assured by working with high-quality educational partners**
P2PU MOOC	• guidelines but no formal quality control

Case	Quality
	- individual users can apply their own quality procedures - Given that some data on learner behavior are available, it is possible that quality control could include the process of analyzing this data for a particular course and acting on the results
Udacity MOOC	Although Udacity quality standards are not public and therefore are not uploaded in the Udacity official page, Udacity has cancelled courses before their beginning, because they did not live up to the quality standards. Udacity founder Thrun, admitted that they had recorded the entire class and edited the most of it, but in their internal tests it didn't meet their quality bar. He also noted that they have enormous respect for their students' time and didn't want to release anything that wouldn't meet their bar
Acqa-project in Faculty of Engineering, KU Leuven	- fixed protocols and standardized questioning for interviews - training of interviewers - follow-up in the ACQA Working Group of TU/e in the Netherlands - explicit support from Government during accreditation procedures to continue using the ACQA framework - the communication between students and teachers has improved because of the use of a common language - thinking in terms of competences was a new and valued experience for students - the introduction of a new methodology has a positive impact on the personal reflection of teachers on their courses - the introduction of a new methodology has a positive impact on collaboration between departments and faculties, at different levels
Innovation in Engineering Education, University of Miskolc, Hungary	
Master Safety Engineering, KU Leuven, Belgium	- procedure of curriculum development that applies to all bachelor and master programs - same quality assurance system (internal from university and external from Government) as for all bachelor and master programs - companies are involved in the follow-up of the program twice a year - collaboration between university and companies in developing profiles and competences needed for external teachers - added value of 'team teaching' - external professionals as teachers demands extra attention to guarantee the quality of these teachers: training, support, … - active input of working students = added value for many courses

Case	Quality
	• close collaboration with companies brings in extra expertise from the workplace through: external teachers/visiting professors; integration of the practical experience in courses; variety of site visits
Telecom Italia, UNINETTUNO, Italy	• guarantee of the quality of the training by the University • Telecom Italia is part of a joint board that oversees the quality process: involvement of HR/professionals from the company in the internal QA process is a guarantee for a better preparation of the students for the job • Human Resources Services of Telecom Italia monitor the quality process • QA-process is enhanced because of involvement of stakeholders • Involvement of professionals as teachers is a guarantee for more quality of education
MEDIALAB	• Yearly reports to Madrid City Council
LA PROSPE	• Participation, cooperation, and continuous self-questioning

Remarks

KU Leuven cases:
- As a university master degree the academic level of the programme must be guaranteed. The strong link with the research activities of the academic staff and the initial master degree as a condition to start the MNM, are guarantees for this academic level within a strong professionally oriented organization of the MNM. In the recent Government evaluation of the MNM, further development of this academic character of the MNM has been asked.

Miskolc case:
- As an external, international professional body, IOM3 has examined and verified the quality of the programs. Regarding the continuous quality management of this international master programme, the close collaboration with the Global 21 project (which focuses on analyzing trends, progress in technological development, channeling of the results of research into education) may be mentioned.

13. Interfacing activities: Award

Table 10: Award

Case	Award
Class2Go MOOC	Statement of Accomplishment from instructor
Coursera MOOC	• No degrees • Development of 'Verified Certificates' as prove of completion of a course
Edx MOOC	• Certificate from edX if final exam is passed • Plans for proctored exams, what can raise the value of edX certificates
Khan Academy MOOC	• Built-in system of badges • Map of knowledge / skills with possibility of checking path of development
MOOC EaD Portuguese	• No type of award • Not clear how to get credits • Collaborative knowledge construction • Practical knowledge on digital tools
OCW University Evora, Portugal	No type of award
OER University MOOC	• No degrees • Partnership with accredited educational institutions that provide assessment and credentialisation services on a fee-for-service basis • OER University Network will provide mechanisms for articulation and credit transfer among participating institutions • Because courses are part of accredited programmes, they are designed to respond to industry's skills requirements.
P2PU MOOC	• No degrees • Development of badges is on-going
Udacity MOOC	• System of mastery points • Udacity certificate for mastery levels (no credits) • Proctored exams in order to receive credits or certification • 'Testing kit', delivered by Udacity to any institution interested in providing proctored exams on Udacity courses • Udacity Career Team connects students with Udacity partner employers • Learners can submit their resume to Udacity's Career Placement Program

Case	Award
Acqa-project in Faculty of Engineering, KU Leuven	Bachelor and master degrees
Innovation in Engineering Education, University of Miskolc, Hungary	Master degree
Master Safety Engineering, KU Leuven, Belgium	• Master degree • Possibility of additional certification for specific legally obliged jobs/functions in companies
Telecom Italia, UNINETTUNO, Italy	• Formal degree • Examination sites in the companies • More job security and possibilities for career development for employees
MEDIALAB	• N/A no degrees
LA PROSPE	• N/A no degrees

Remarks

- Among MOOCs, OER and OCW the deliverance of credits, degrees or other kinds of award is very different. In most of the cases no formal credits or certification is offered.

  Some platforms collaborate with external exam centres

  Others are in search for a system to at least give the possibility for the student to earn a prove of completion of a course

- Case studies from universities are all situated within the framework of formal bachelors and / or master degrees. Innovations pay a role in more job security, certification for new functions, career development, …

14. Interfacing activities: Infrastructure

Table 11: Infrastructure

Case	Infrastructure
Class2Go MOOC	• Internal open-source platform for on-line education. • Builds on existing software (some commercial, some open source): YouTube and Popcorn.js for video; Piazza for forums; MySQL is our database; massive Python Django ecosystem (eg. South, Registration); Amazon AWS suite for hosting (EC2, S3, RDS, Route53, IAM); Chef from Opscode for configuration management; Github for source code management and issues. • Immediate access for educators to valuable data, allowing to make refinements to educational experiences.
Coursera MOOC	Coursera was developed at Stanford University in fall of 2011 by computer science professors Daphne Koller and Andrew Ng. They developed its core technologies, many of them deployed in their own computer science classes (University of Pennsylvania, 2013). The Coursera platform has cost the University about $250,000 to implement. The money supports faculty and graduate student assistants who are developing the online offerings and video lectures. The $250,000 figure includes the cost of utilizing the broadcast facilities in creating the video lectures, according to Deputy Dean of the College (Santoro, 2012). Now **Coursera** is operating as a service provider, an independent for-profit educational technology company. Coursera has the Course Operations team that helps teachers offer their classes to tens or hundreds of thousands of students. The team started with 2 founders and now they have more than 20 people doing Engineering, Design, Course Operations, and Business Development (https://www.coursera.org/#about/team). Award related to interfacing are described in section 1.8 and didactics and pedagogic approach in section 1.7.
Edx MOOC	• MITx is the MOOC platform • This is an xMOOC – behaviourist pedagogy • Time limited courses • Honour code certificates available • Organisational Mission: to transform understanding of on-line teaching
Khan Academy MOOC	YouTube channel: *include video library with over 3900 videos on various topics and over 225 million lessons delivered;

Case	Infrastructure
	*videos are licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 License. Exercise system: *web-based, that generates problems for students based on skill level and performance; *available as open source under the MIT license.
MOOC EaD Portuguese	• Uses proprietary software applications • Connectionist pedagogy – easy to implement under expert supervision
OCW University Evora, Portugal	• Teacher may use the tool EduCommons in approach and availability of open content • Use, reuse, adaptation and distribution of content is permitted under certain restrictions. This makes it possible that the institution/author who published content, can get recognition for his expertise. • The University is responsible for maintaining the platform: content can be used by its own teachers in their courses what supports the teaching-learning process
OER University MOOC	• Reliable and scalable support infrastructure including open source software ICT infrastructure and sustainable business models are provided: * Institution specific services are provided on a cost-recovery basis; and * Shared infrastructure services are funded through OER university consortium collaboration. • The services are provided through a collaboration among a consortium of participating post-secondary institutions. Supporting infrastructure is administered by the OER Foundation.
P2PU MOOC	• P2PU has developed an infrastructure called Lernanta for building and delivering its courses (https://github.com/p2pu/lernanta). This infrastructure is open source and is based on the code that powered the Mozillia Foundation's Drumbeat initiative. • P2PU's infrastructure has been used to support collaborations between individuals and organisations to deploy courses e.g. the Mechanical Mooc (coordinated by P2PU, featuring content from MIT OpenCourseWare, communities from OpenStudy, exercises by Codecademy http://mechanicalmooc.org/) and the School of Open. (P2PU and Creative Commons
Udacity MOOC	In terms of infrastructure, courses have high requirements in Python, since this is the only language Udacity uses. However, course designing, due to high level of interactivity could be considered as time consuming and this could be account for the low number of the offered courses. Hence, courses need considerable resources that can be reimbursed thanks to the Udacity Career Placement and Student Profile tracking
Acqa-project in Faculty of	

Case	Infrastructure
Engineering, KU Leuven	
Innovation in Engineering Education, University of Miskolc, Hungary	
Master Safety Engineering, KU Leuven, Belgium	1. Site visits in companies are part of the education program: they are easier to organise and more varied due to collaboration with companies 2. Activities on the job (visits of companies, …) strengthen the relation between university / stakeholders / students
Telecom Italia, UNINETTUNO, Italy	• University e-learning platform: provides authentication and is usable on all Internet devices and platforms (desktop (Microsoft, Apple, Linux), tablet (iOS, Android), smartphone (iOS, Android)) • exams at Telecom Italia premises • Activities on the job (visits of companies, …) strengthen the relation between university / stakeholders / students
MEDIALAB	• Physical location with versatile spaces and website. Activities registered in video available to all.
LA PROSPE	• Physical location with computers, climbing wall, library, free store (exchange of goods)… Also website to inform on activities.

15. Interfacing activities: Didactics and vocabulary

Table 12: Other aspects (didactics, vocabulary, …)

	Didactics…	Vocabulary …
Class2Go MOOC		
Coursera MOOC	• Questions on the didactic quality of videos: splitting things into small pieces	
Edx MOOC		
Khan Academy MOOC	• Questions on the didactic quality of videos: splitting things into small pieces	
MOOC EaD Portuguese	• Learning outcomes are not clear • Strengthens students autonomy and learning style	
OCW University Evora, Portugal		
OER University MOOC	• courses and programs based solely on OER and open textbooks • concept of offering services around an OER-based curriculum • disaggregation of teaching, content and assessment	
P2PU MOOC	• **Focus on peer-to-peer learning** • **Efforts towards improving the processes of peer-to-peer learning** • **Considerable variation in amount of support of the individual learner**	
Udacity MOOC		
Acqa-project in Faculty of Engineering, KU Leuven	thinking in terms of competences is an added value in the communication between teachers and students, but also in the personal reflections of teachers and of students	in concertation and collaboration with companies, the use of a common and generally accepted, well defined language between all partners (programme director, lecturers, companies) is crucial
Innovation in		

Engineering Education, University of Miskolc, Hungary		
Master Safety Engineering, KU Leuven, Belgium	- importance of team-teaching - input from external teachers brings in extra expertise - active input of working students during the courses is an added value - demand for distance learning to reach international target groups	
Telecom Italia, UNINETTUNO, Italy		
MEDIALAB	- Collective learning, P2P, rhizomatic learning	Creative vocabulary (neologisms)
LA PROSPE	- Collective learning, rhizomatic learning	Multilingualism; Pedagogic-political vocabulary

Remarks

For KU Leuven cases:

- Didactics: The international character of the program Safety Engineering has not yet been fully realized. Better publicity can help but there is another element. The interest for the program abroad is real but for reasons of accessibility, international students ask for the use of 'distance learning' in the program. However, according to the organizers of the program, direct contact with practice is a must for the topic of safety. Therefore, this kind of changes in the program will not yet be introduced.

Miskolc case:

- Interfacing activities proved to be of key importance between experts in content related professional and didactic experts. Good practice examples, tasters were used to convince academics on the benefits of using new, innovative course development and delivery methods.
- Dynamically developing disciplines, interdisciplinary scientific fields may face to the problems of misused terms, confusing translations – forums for discussions, involvement of the world-wide professional community offers a specific possibility for overcoming these problems.

ANNEX 1 – Example of Template for Assessment
Template for assessment of cases and list of pilots
OEII – WP4

Cluster 2: Educational innovation and knowledge circulation with companies

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1. AIM

The global aim as defined for Cluster 1 (on MOOCs): clustered examination of the way in which open activity is leading to organisational innovation.

In cluster 2 focus is on knowledge circulation between universities and companies. Examples that will be investigated mainly come from strong research universities where the networking with industry is well developed for research purposes. Input from research activities will nourish the educational activities of these universities. For the purpose of OEII we will investigate how these networks are used for educational purposes and how they can be an incubator for educational innovation.

2. PLAN FOR WP4

The pilots in Cluster 2 are examples of collaborations between a university and companies in the development of a specific educational offer.

Often these collaborations are the result of 'personal' initiatives/networks of a faculty/department/research unit and strongly related to research activities. Education and interfacing activities on educational topics are related to research and will benefit from the exchange of knowledge and expertise in these networks. Eventually this will give rise to innovations in education. In this context we can talk about an open concertation between universities and stakeholders of the labour market.

Assessing these pilots we must look at

- what kind of collaborations are we talking about,
- how they get involved in educational matters,
- whether they are incubators for educational innovation and
- whether they are 'incubators' for the integration of these networks in appropriate education structures on the level of a faculty.

Among the pilots in Cluster 2 we will find examples of innovation that are rather unique cases in their university and others that are more integrated in formal procedures and structures.

Assessing the pilots can learn why some initiatives are unique and others not.

Interfacing with the labour market is also one of the criteria that is investigated in the formal accreditation procedure of universities. Stakeholders are questioned and the interfacing activities of faculties with companies related to education are evaluated. This does not fit in the context of an 'open' innovation but it provides information on existing interfaces and on what universities actually do with this information. Possibly these accreditation activities as

such are not a basis for educational innovation but their role as interface can be investigated.

The accreditation procedures differ between countries. Is it an option to look at this in a broader European context?

3. DIMENSIONS FOR ASSESSMENT OF CASE-STUDIES

1. *Goals / Aims*

   Brief overall description of the kind of case-study

2. *History / Evolution*

   Background bringing out how the innovation was established and initiated. A time line may be used to show the progress and plans. Note in all sections reference should be made to the way each dimension has changed.

3. *Kind of educational innovation*

   Assessment of the kind of educational innovation that is realised.
   Elements of assessment can be:
   a. **Level of educational innovation: course or training (regular education, continuing education, other); learning design; ICT- or other technology related; didactic model; organizational model; …**
   b. **Discipline**
   c. **Target groups and admission requirements**
   d. **Number of participants, ...**
   e. **Didactic model / Learning design**
   f. **Organizational model**
   g. **Quality assurance**
   h. **What is the 'innovative' element or importance?**

4. *Actors and roles*

   Assessment of the kind of interaction between universities and companies, its origin and development, and the actors involved
   Elements of assessment can be:
   a. **Kind of interaction / concertation / dialogue**
   b. **Objective: exchange of information, ideas; survey of needs; development of ideas; collaboration on development of a product; …**
   c. **What actors are involved: external and internal**
   d. **Role/Function/Kind of involvement of actors**
   e. **Origin of the concertation: education, research**

5. *Financing*

   How is the educational innovation as described in the case studies financed (subsidy, self-supporting, paid by participants, …)? What kind of financial obstacles/opportunities have been experienced?

6. *ANALYSIS*

   Draw out key points and issues from this case study with respect to the open education innovation and incubation. Think in terms of moving towards recommendations (both institutional and policy level). This section can be used quite flexibly to allow other interesting points to be recorded and allows space for reflection.