

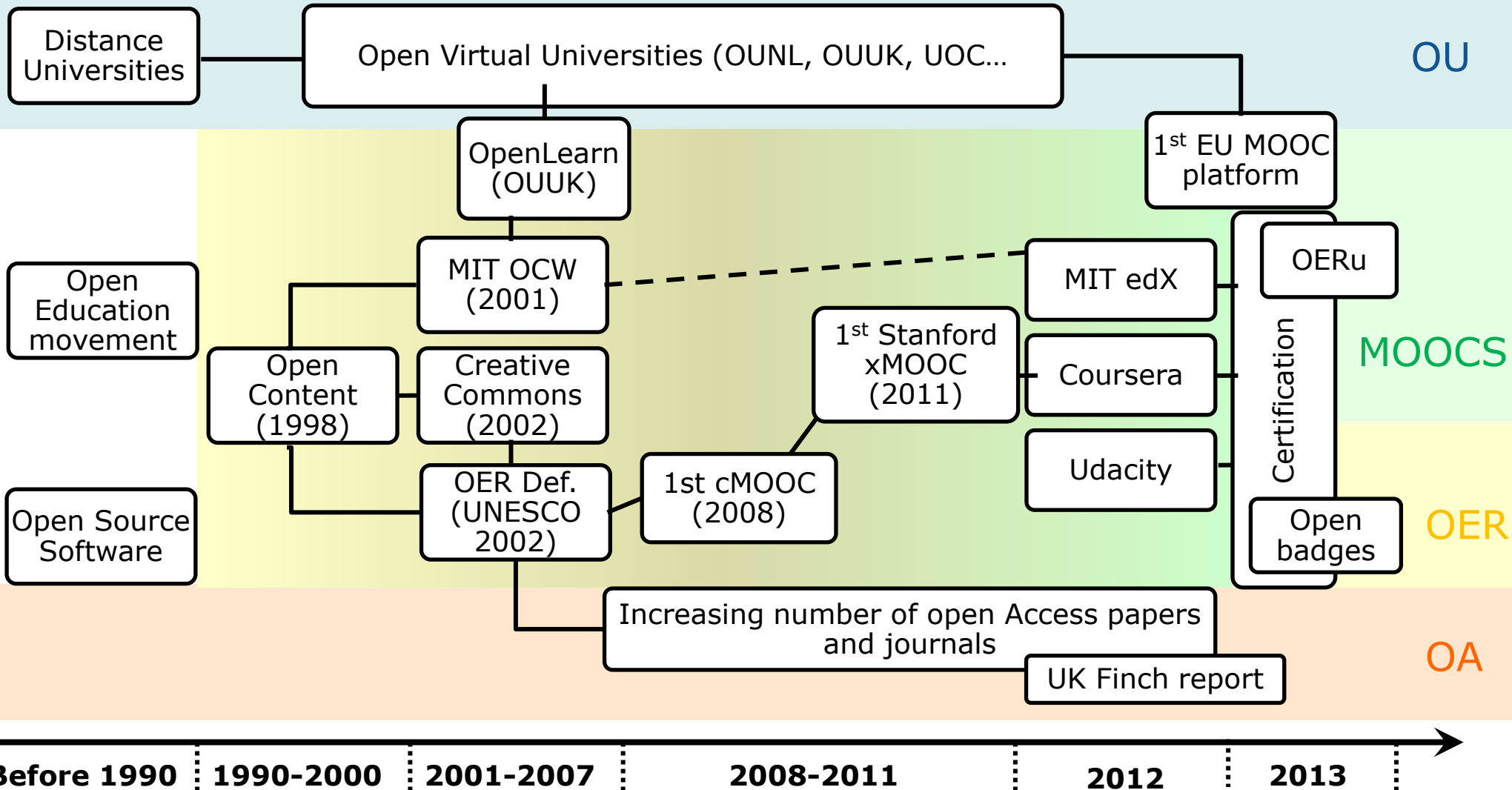


# Open Higher Education 2030 Starting off

**Open Education 2030:  
Exploiting the Potential of OER for Higher Education  
- A Foresight Workshop -  
Seville, 6-7 June 2013**

**Jonatan Castaño Muñoz  
Christine Redecker**

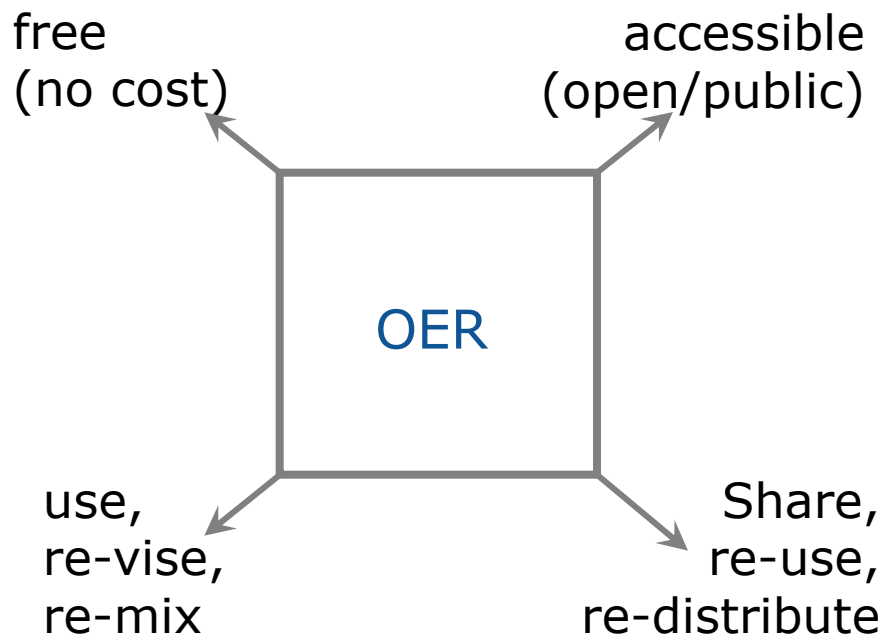
# A Brief History



# What are OER?

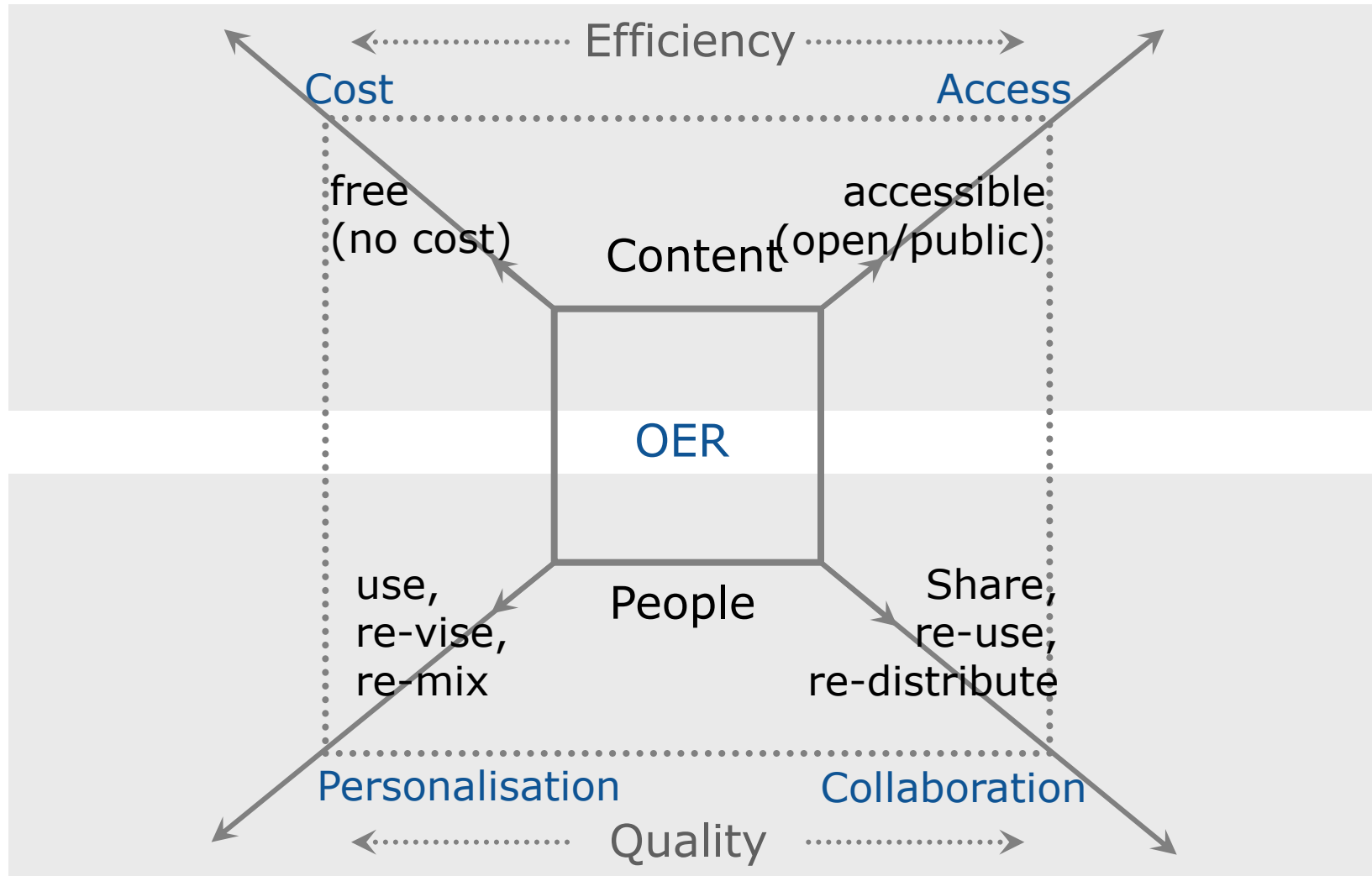


“OERs are teaching, learning or research materials that are in the public domain or released with an open license that allows for free use, adaptation, and distribution” (UNESCO, 2012)



The "4R" of OER

“Open Educational Resources are digital learning resources offered online (...) freely and openly to teachers, educators, students, and independent learners in order to be used, shared, combined, adapted, and expanded in teaching, learning and research.” (OECD, 2012)

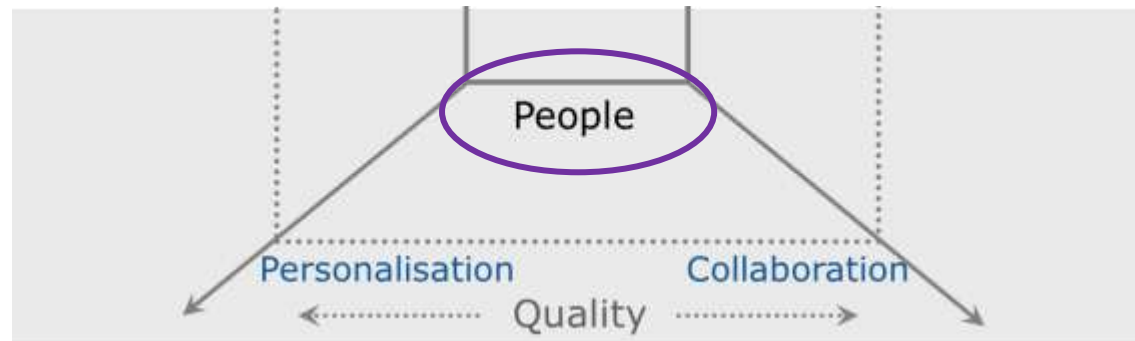


# Thinking About Open Education....



*[O]pen education is not limited to just open educational resources.*

It also draws upon open technologies that facilitate collaborative, flexible learning and the open sharing of teaching practices that empower educators to benefit from the best ideas of their colleagues. It may also grow to include new approaches to assessment, accreditation and collaborative learning.



Understanding and embracing innovations like these is critical to the long term vision of this movement."

<http://www.capetowndeclaration.org/read-the-declaration>

Your Visions



of the Future

# Open Education 2030

**Part III: Higher Education**

**Foresight Workshop**

6-7 June 2013

Participants' Background

# Open Education 2030

Contribution to the JRC-IPTS  
Call for

**Vision Papers**

**Part III: Higher Education**

Work in progress: 4 June 2013

# Access, Inclusion, LLL



HE is to be truly open with (virtual) mobility of (adult) students compiling degrees and study-programmes relevant for their career.

*Fred de Vries*

Authentic, real learning without barriers.

*Erik Duval*

My ideal vision for 2030 would be Higher Education institutions opening and sharing their resources to improve the quality of their learning practices and providing easier access to knowledge to people in developing countries.

*Carles Garrigues*

Open Higher Education is fully employed to maximise social justice and accessibility and consequently covers all dimensions of openness.

*Darco Jansen*

Higher Education in 2030 will be a fundamental global human right, combining advanced digital technologies with adaptive personalization learning, supporting openness, creativity, social inclusion and broader participation.

*Sofia Papadimitriou*

Education is a human right and knowledge a common good: let's have the courage to make it accessible to all:

Open revolution

*Sophie Touzé*

LLL will be for all persons and ages and universities are the predominant enablers.

*Alfredo Soeiro*

# Quality & Cost



My vision is that higher education is **more widely available** at **much lower system cost** than today yet with **greater output value to students and society**.

*Paul Bacsich*

Going global, while being local and at a **higher quality**.

*Jean Claude Burgelman*

The sum of the world's knowledge available to anybody, anywhere, in an **easily-digestible high-quality form**.

*Anthony F. Camilleri*

It is one where access is based on merit rather than origin; where organisations understand the students and students know what they want; and where staff looks how it can **change society for the better**.

*Georgi Dimitrov*

My ideal vision for 2030 would be Higher Education institutions opening and sharing their resources to **improve the quality** of their learning practices and providing easier access to knowledge to people in developing countries.

*Carles Garrigues*

In 2030 you will only need Internet access and a standard device to study at a global online university that provides **curated content, accredited micro-assessments, off-and online communication platforms**, that **respects privacy**, is **transparent about algorithms**, lets **participants vote** on its research agenda and is **inspired by curiosity, fun and fairness**.

*Bastian Hamann*

Higher education institutes, companies and educational researchers working together to provide **cheaper, better and more relevant education** in an open educational market.

*John van der Baaren*



# Collaboration



Being part of a **community** that contributes to the next renaissance (2.0) for global education.  
*Catherine Bruen*

Teachers and learners with the confidence to **share** what they develop openly and skills to **remix and repurpose**, sustaining open education as a **common, persistent practice of academic life**.  
*Chris Pegler*

MOBD – Massively Open Blended Learning higher education programmes with **student-led collaborative learning**.  
*Sandra Romenska*

**Knowledge is shared seamlessly** and without technical, social nor legal barriers, while people can **easily team up with others** more competent in a certain area to receive mentoring, get economic and learning opportunities, obtain experience and build up a **personal track record** that helps them to **signal their peers** and be found for future engagements.  
*Wouter Tebbens*

In the future, Open Educational Practices (OEP) will facilitate access to open materials by promoting **collaboration among educators**, who will share, reuse and evaluate digital pedagogical content using Repositories of Open Educational Resources (ROER).  
*Javiera Atenas & Leo Havemann*

**Community – understood as shared experiences**, past and present - will matter for the open higher education of the future  
*Tatiana Tatarchevskiy*

# Personalisation



Open resources and data analytics sustain timely and dynamic **feedback loops** between and within HE communities of practice, to the benefit of management and teaching practices and, in turn, of students' outcomes.

*Carlos Gonzalez-Sancho*

*An open system of competency-based education consisting of **precision-built courseware that individualize learning.***

*James G. Mazoué*

Higher Education in 2030 will be a fundamental global human right, combining advanced digital technologies with **adaptive personalization learning**, supporting openness, creativity, social inclusion and broader participation.

*Sofia Papadimitriou*

Open education needs open quality approaches [...] using flexible instruments that allow learners and teachers to **assess their teaching and learning quality themselves through self-assessment and peer-assessment, rather than using rigid, pre-defined standards.**

*Jan M. Pawlowski, Anthony F. Camilleri, Grainne Conole, Alastair Creelman, Ulf D. Ehlers*

In 2030, **learners** are able to **assemble their own program** from the supply each institution of HE offers, both open as closed.

*Robert Schuwer*

# Glocalization, ubiquitous & blended learning



Being part of a community that contributes to the next renaissance (2.0) for [global](#) education.  
*Catherine Bruen*

Going [global](#), while being [local](#) and at a higher quality.  
*Jean Claude Burgelman*

The sum of the world's knowledge available to [anybody, anywhere](#), in an easily-digestible high-quality form.  
*Anthony F. Camilleri*

In 2030 you will only need Internet access and a standard device to study at a [global online university](#) that provides curated content, accredited micro-assessments, [off-and online communication platforms](#), [...].  
*Bastian Hamann*

[Globally engaged, locally anchored](#) so that students learn through- and not about innovation.  
*Hanne Shapiro*

Higher education (of technology skills) of 2030 needs [physical classroom teaching that complements MOOCs](#)  
*Juho Lindman*

We learn how to use ICT better; the requirement for people to meet [F2F](#) for effective teaching and learning [will diminish](#)  
*Mizanoor Rahman, Santosh Panda*

The upcoming model of education is [learning outside classroom](#), in the real world via [mobile](#) learning.  
*Sypsas Thanassis, Jenny Pange*

# Pedagogy & Content



In 2030 you will only need Internet access and a standard device to study at a global online university that provides **curated content, accredited micro-assessments, off-and online communication platforms**, that **respects privacy**, is **transparent about algorithms**, lets **participants vote** on its research agenda and is **inspired by curiosity, fun and fairness**.

*Bastian Hamann*

The key-parameters of open learning are **asynchronous activities, project-based modules, educational multi-media material**, and a **relaxed real-time interaction with the instructor**.

*Hrissi K. Karapanagioti*

An open higher education needs a **didactical and structural offensive** that considers both the required standards of education and the actual conditions of universities.

*Rolf Arnold, Virna López, Thomas Prescher*

By 2030 traditional teacher-directed pedagogies will have been largely superseded by **OER-enabled learner-centred pedagogies**, designed specifically to engender the development of digital learning literacies and **self-directed lifelong learning**.

*James C Taylor*



Universities and tertiary education institutions in the public realm **reimagine the nature and purpose of a campus-based education** and provide leadership in challenge-based approaches.

*Jim Devine*

A 2030 vision of European HE must **train students to be research users as much as producers**, enfranchising a new generation of knowledge workers to deliver high-yielding projects in academia, industry and the wider world.

*Sophie Kershaw*

# Certification & Accreditation



Because of the inherent scalability and essential sustainability of its business model, open online education will be the dominant mode of delivery in a diverse global system of higher education, which will include **extensive transnational credit transfer agreements and flexible micro-credentialing**.

*Jim Taylor*

Knowledge is shared seamlessly and without technical, social nor legal barriers, while people can easily team up with others more competent in a certain area to receive mentoring, get economic and learning opportunities, obtain experience and build up a **personal track record** that helps them to signal their peers and be found for future engagements.

*Wouter Tebbens*

Quality instruments will change with the rapid uptake of OER and OEP towards **dynamic, user-centered, crowd-based mechanisms substituting traditional certifications**.

*Jan M. Pawlowski, Anthony F. Camilleri, Grainne Conole, Alastair Creelman, Ulf D. Ehlers*

**Full mobility and recognition of HE study** whether achieved through open or closed means.

*Andy Lane*

# Future of Learning (2011)



Demography

Globalisation

Immigration

Technology

Labour Market

## Drivers

### Labour market trends & demands

#### New skills

Initiative, resilience  
Responsibility  
Risk-taking, creativity

Team-, networking  
Empathy, compassion  
Co-constructing

Managing, organising  
Meta-cognitive skills  
Failing forward

#### Personal skills

#### Social skills

#### Learning skills

### Education & Training

Personalisation

Collaboration

Informalisation

#### Learner-centred

#### Social learning

#### Lifewide learning

#### New ways of learning

Tailormade & targeted  
Active & constructive  
Motivating & engaging

Peer-learning  
Sharing & collaborating  
In communities

Anywhere, anytime  
Blending virtual & real  
Combining sources/providers

### ICT Trends

Augmented Reality

Data mining

Learning analytics

Electronic tutors

3D virtual worlds

Social networks

Games

Mobiles

e-books

OER

ePortfolios

LMS

# The Present



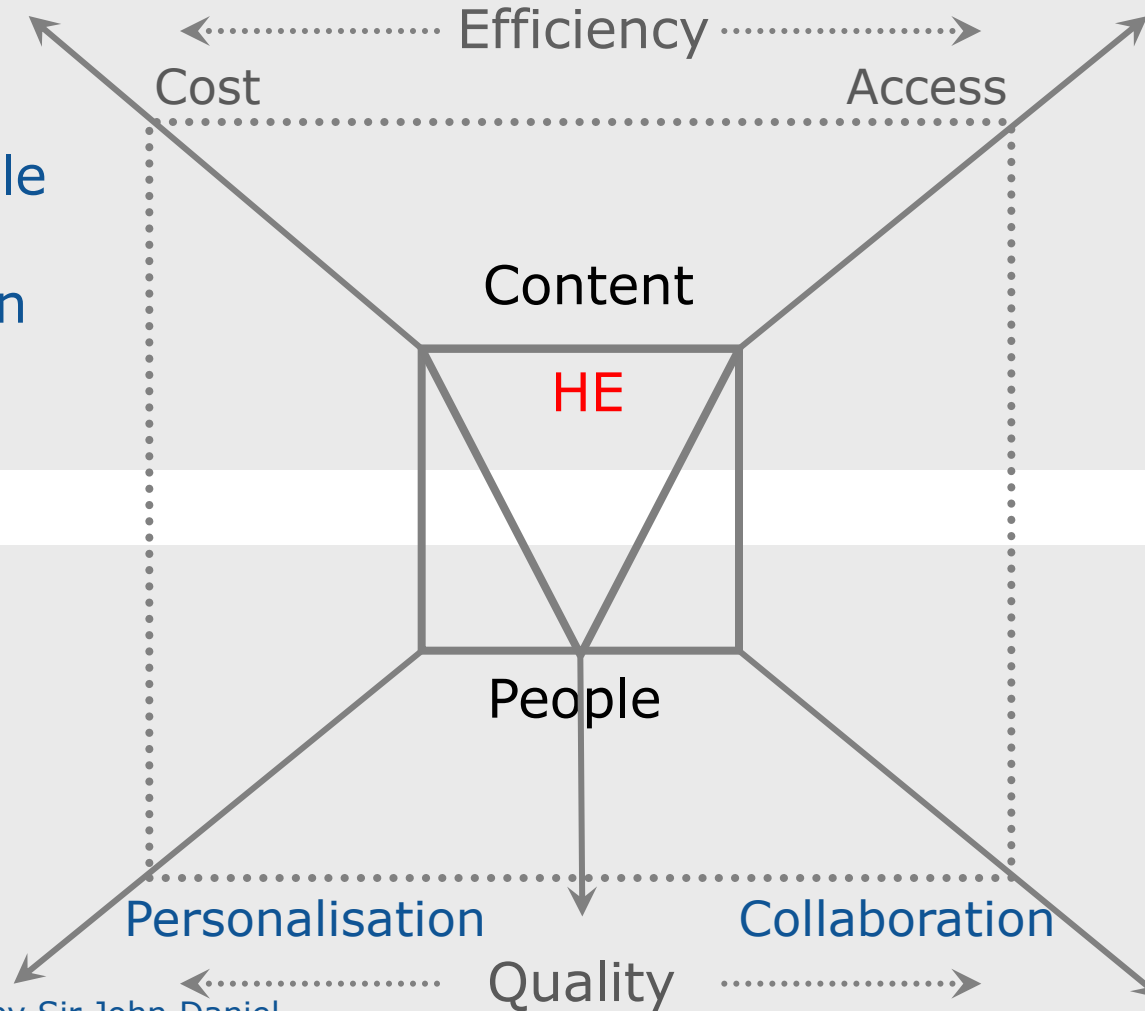
<http://www.youtube.com/watch?v=osJLr4Ed8gI>



# The IRON Triangle



The Iron Triangle reflects "the assumption that **quality**, **exclusivity**, and **expense** necessarily go together"



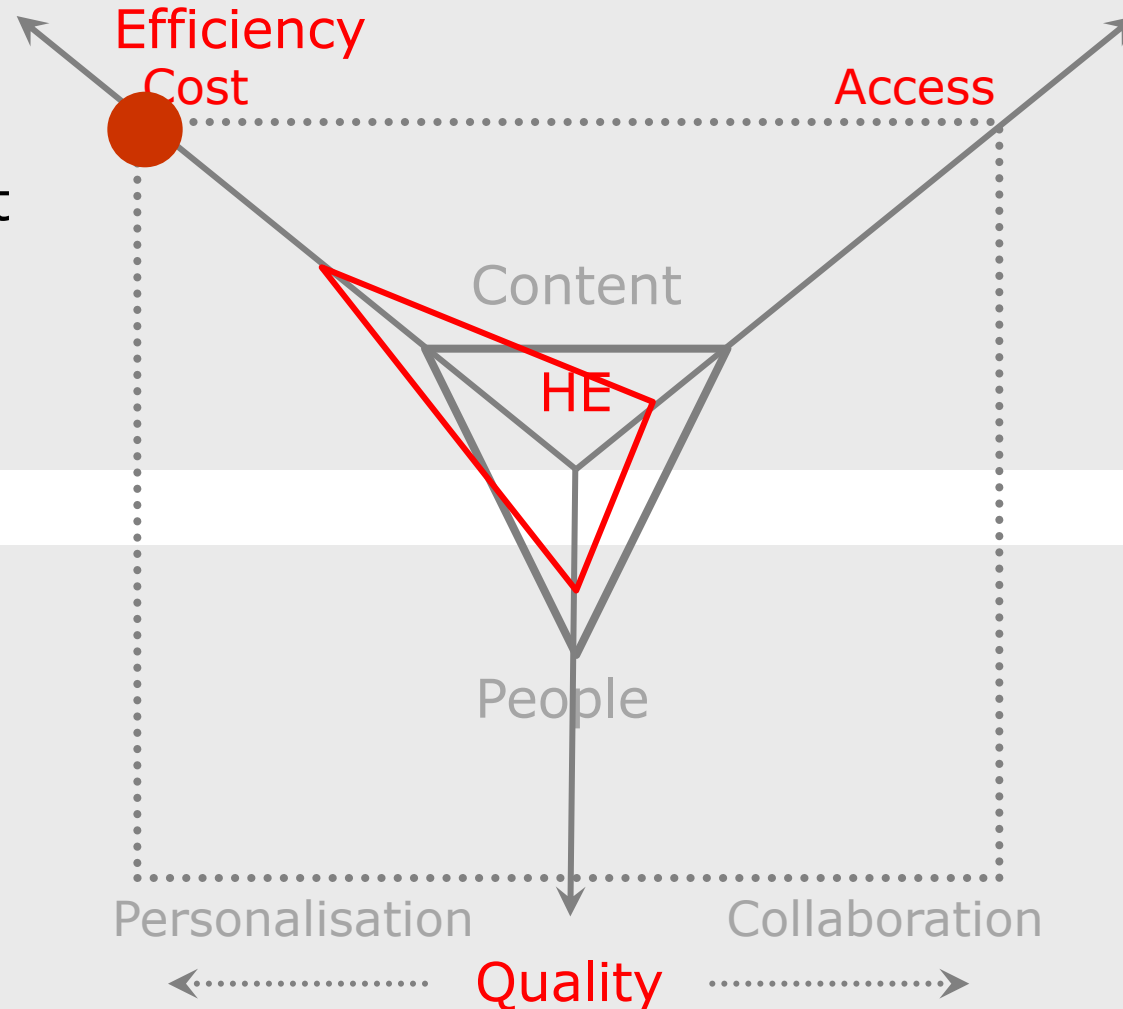
# Cost

## An obstacle to access

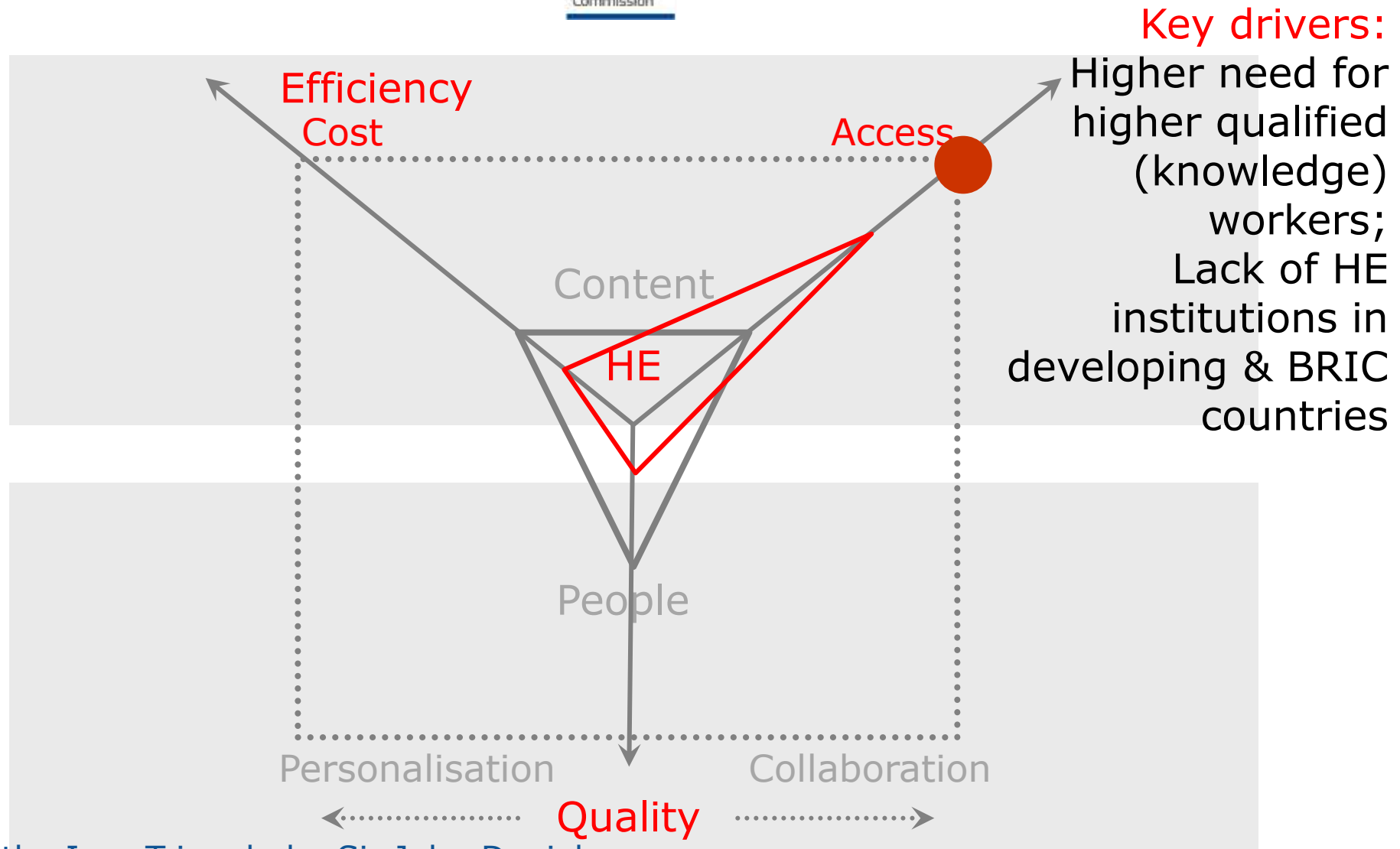


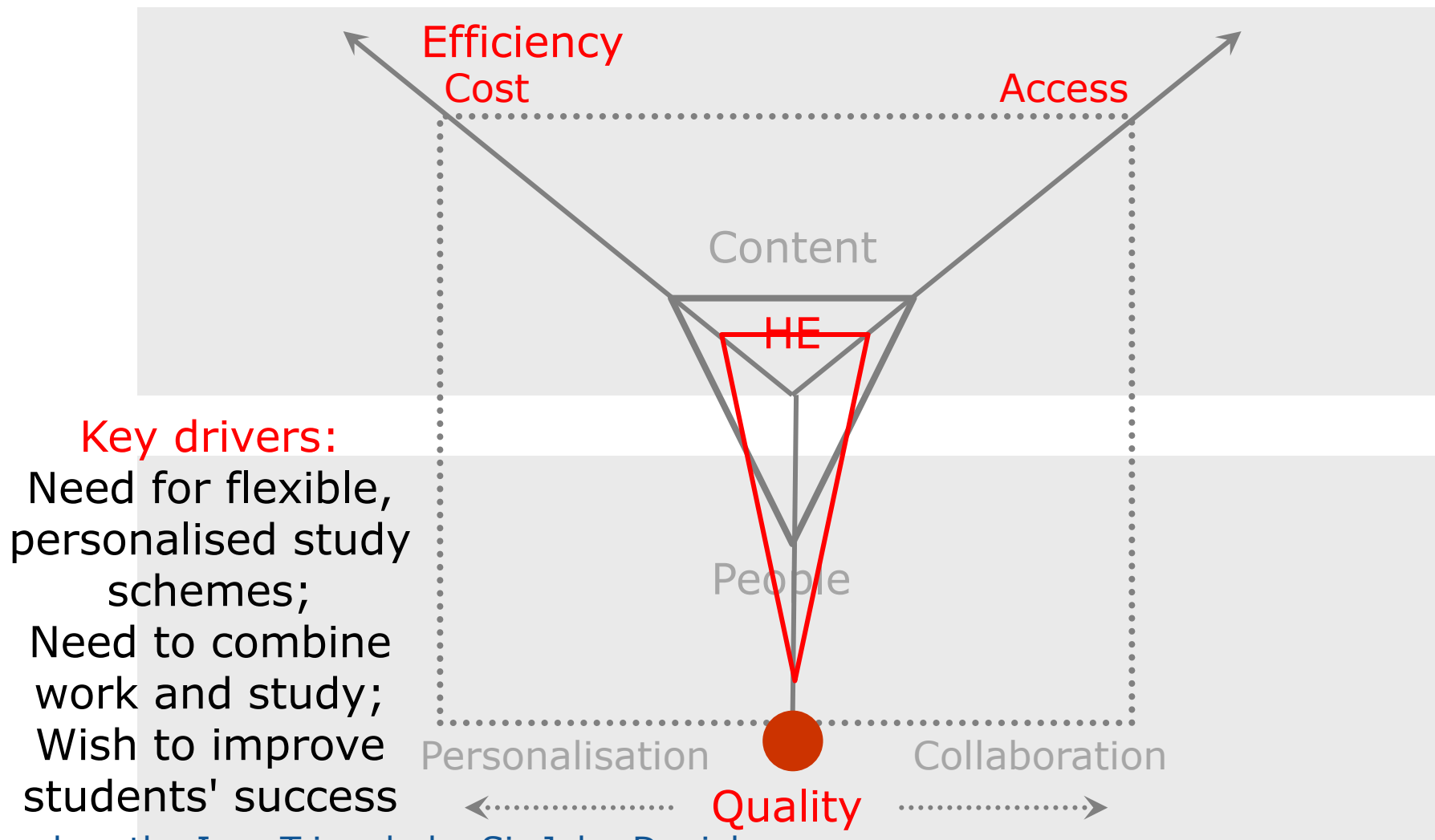
### Key drivers:

High cost for university study (in the US);  
High cost of text books;  
Economic crisis;  
reduced educational budgets



Based on the Iron Triangle by Sir John Daniel,  
[http://www.col.org/SiteCollectionDocuments/Daniel\\_110308AustraliaHE.pdf](http://www.col.org/SiteCollectionDocuments/Daniel_110308AustraliaHE.pdf)

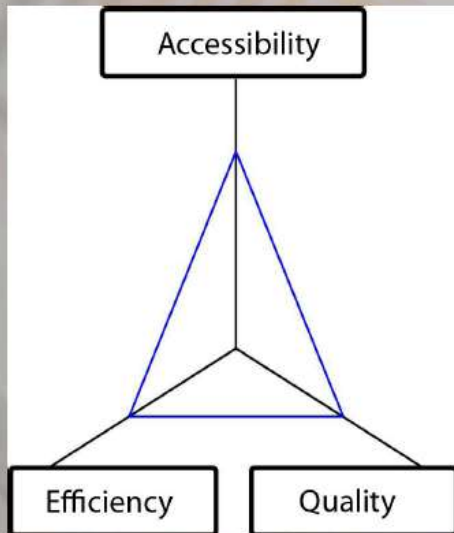




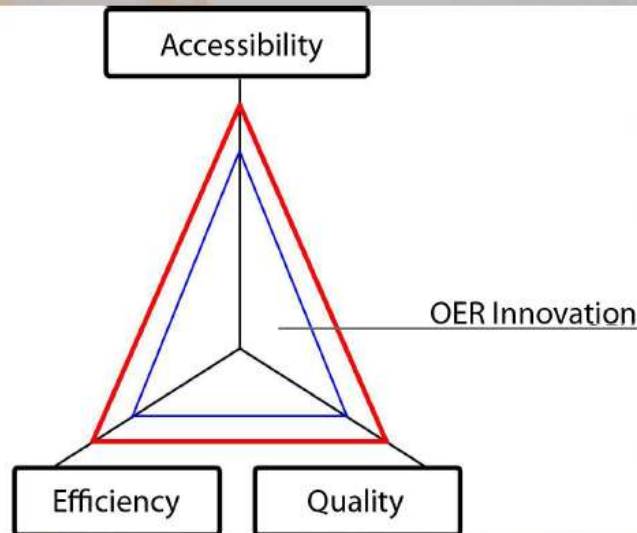


## Education 3D Performance (after an OER system intervention)

'Starting situation'

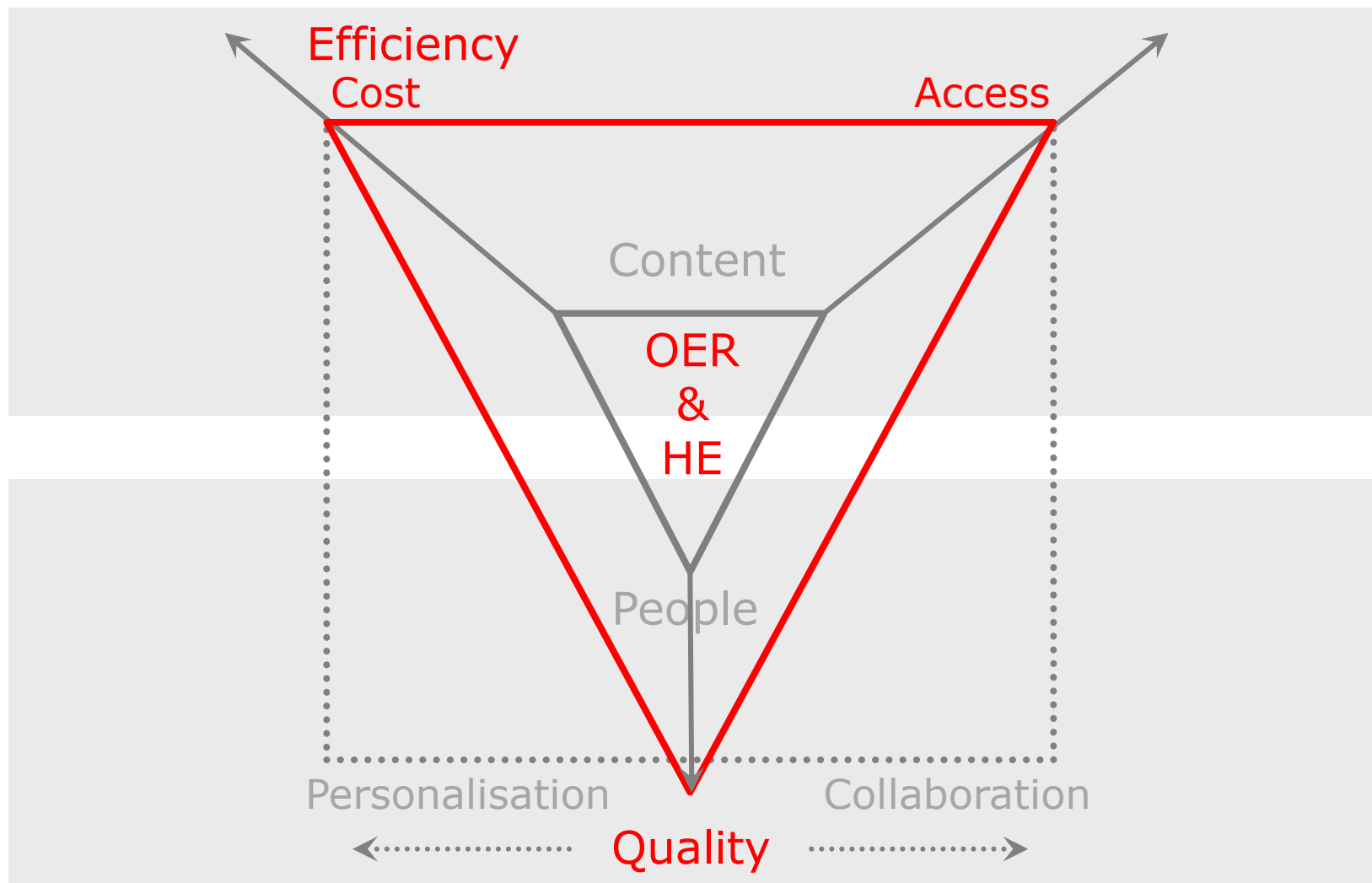


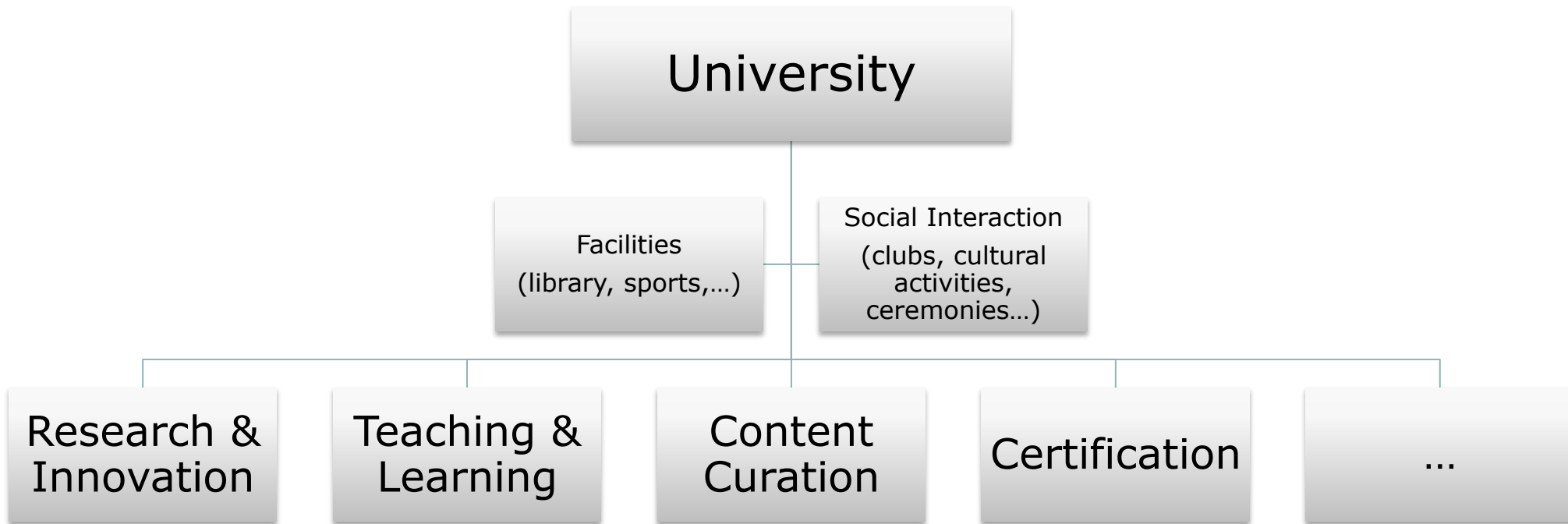
'OER situation'



"The OER System Intervention ...  
... facilitates performance improvement along **all three dimensions** simultaneously:  
**1 Accessibility** by free online availability of learning materials  
**2 Quality** by involvement of many experts and users in various roles  
**3 Efficiency** by not replicating other's efforts  
... and **adds** an extra dimension:  
**4 Innovation"**

# The Theory





# edX Business Model MOOCs as service for HE



## Business Model: \$30m, non-profit

- **University self-service model** allows a participating university to use edX's platform as a free learning-management system for a course on the condition that part of any revenue generated by the course flow to edX". self-service course goes live on the edX Web site, edX will collect the first \$50,000 generated by the course, or \$10,000 for each recurring course;
- **edX-supported model** casts the organization in the role of consultant and design partner, offering "production assistance" to universities for their MOOCs. The organization charges a base rate of \$250,000 for each new course, plus \$50,000 for each time a course is offered for an additional term, according to the standard agreement.

**Assessment:** Software grades tests & homework; Final exams at Pearson testing centres

### Certification

Two certificates available, 1) an honour code, 2) a proctored exam with Pearson. Both bear the edX and campus name (eg MITx,); no course credit, not even for enrolled students

Behaviourist **pedagogy**: focus on information transmission. Social interaction is rudimentary; Pacing: Courses have start and end dates.

Some facts: Founded in autumn 2012 by MIT and Harvard

- 27 partner universities; several from Asia, 3 from Europe (TU Delft, EPA Lausanne, TU München)
- ~ 50 courses; 900,000 students
- learning platform developed as [open-source software](#)



# edX Profile



**edX**

**600k** users

**24** classes this year

**6** number of universities hosted

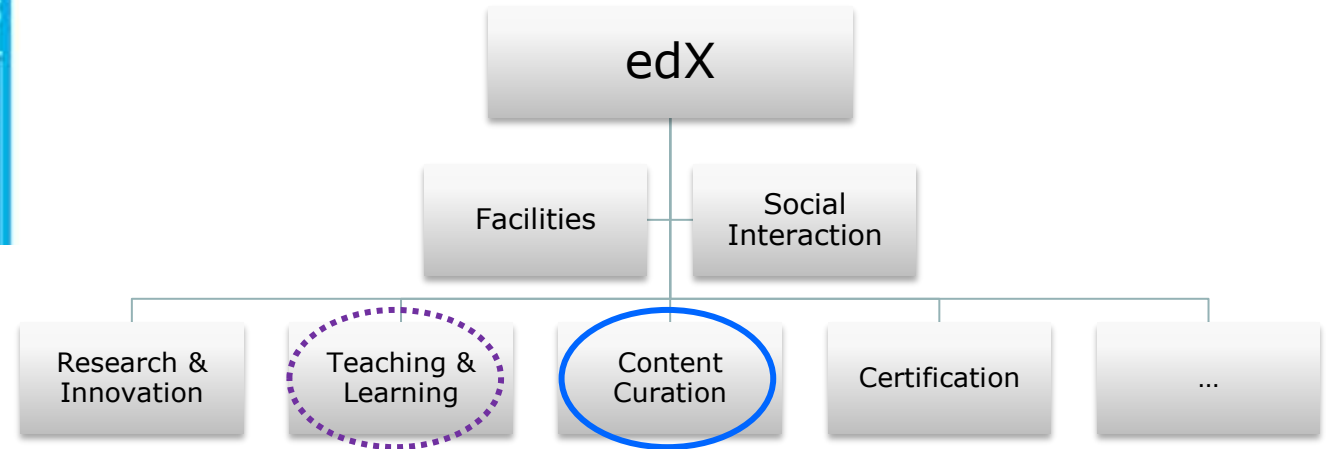
**24** classes this year

**nonprofit**

**HISTORY** MITx started in December 2011, but edX began the following April, when Harvard and MIT each gave \$30 million to the nonprofit. They launched classes this fall, with 7 total courses from Harvard, Berkeley and MIT. They've since added 17 classes, not all of them yet completed. In October, the University of Texas system joined edX. In December, Georgetown and Wellesley joined, planning to start offering classes in fall 2013.

**Prominent schools that use it:**  
HARVARD (6 classes)  
MIT (8 classes)  
BERKELEY (10 classes)  
coming this fall: Georgetown, the University of Texas and Wellesley

Started as a joint venture between Harvard and MIT, led by MIT's Anant Agarwal



## "New MITx online physics course combines latest in learning technology with classic videos

*MOOC pairs cutting edge online assessments with legendary lectures and demonstrations by renowned MIT professor*

CAMBRIDGE, MA, May 30, 2013 — Much attention is given to the **automated assessments** that play a key role in allowing massive open online courses (MOOCs) to scale, and rightly so, as these tools permit hundreds of thousands of learners to receive an unprecedented level of feedback on their work. A new MIT MOOC starting September 9, 2013, [8.01x Classical Mechanics](#), combines these cutting edge assessments with lectures that have an unmatched pedigree in digital learning history."

# Coursera Business Model Freemium



## Assessment:

- Software grades quizzes, homework, problem sets;
- Peer assessment: five other students grade written responses.

Many instructors allow quizzes to be taken multiple times, with highest grade counting (a different quiz each time).

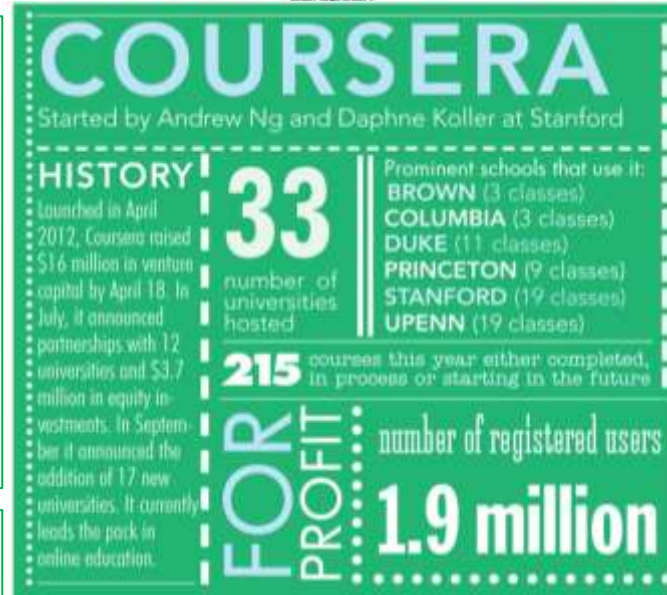
*Behaviourist pedagogy:* focus on information transmission

**Social interaction:** Online forums and study groups, meet-ups organized by students in about 1,400 cities.

*Pacing:* start and end dates, join before registration cutoff date.

Some facts: launched in April 2012

- 70 partner universities; 313 courses;
- 2.8 million students registered; 1.4 million course enrollments per month



**For-profit, venture capital** (\$220,000 1st quarter 2013)

- Revenue from an **Amazon.com** affiliates program if users buy books suggested by professors
- **Opt-in recruiting program** that matches students with employers
- Verified course **certificates for a fee.**

## Certification:

- Verified completion certificates (no university credentials)
- Antioch University students can get credit at the Los Angeles campus for approved courses; five courses approved by the American Council on Education for "credit equivalency," (→ college transfer credit)

# Coursera Profile



**COURSEERA**  
Started by Andrew Ng and Daphne Koller at Stanford

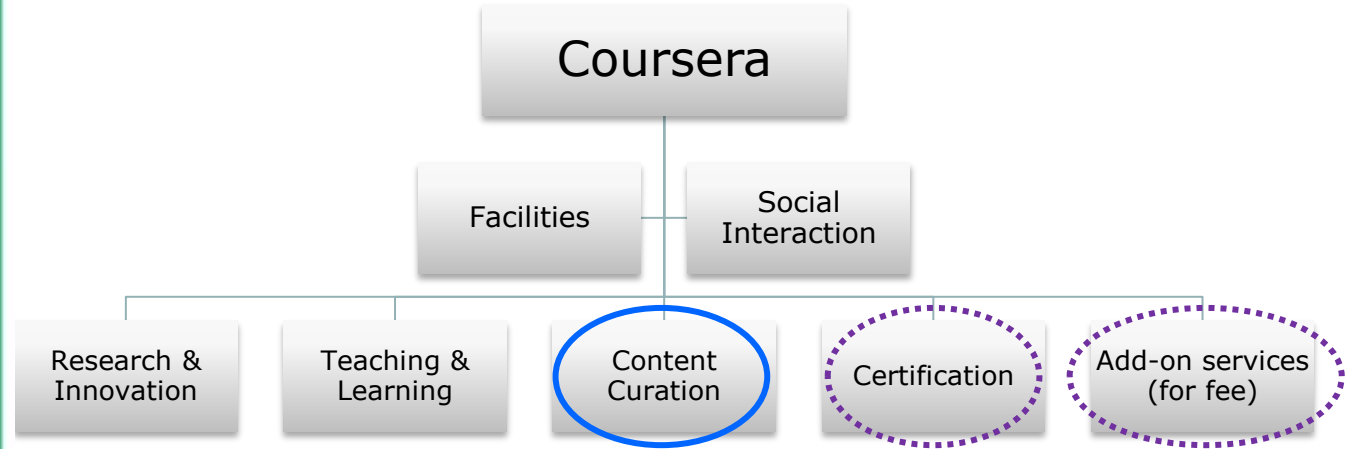
**HISTORY**  
Launched in April 2012, Coursera raised \$16 million in venture capital by April 18. In July, it announced partnerships with 12 universities and \$3.7 million in equity investments. In September it announced the addition of 17 new universities. It currently leads the pack in online education.

**33** number of universities hosted

Prominent schools that use it:  
**BROWN** (3 classes)  
**COLUMBIA** (3 classes)  
**DUKE** (11 classes)  
**PRINCETON** (9 classes)  
**STANFORD** (19 classes)  
**UPENN** (19 classes)

**215** courses this year either completed, in process or starting in the future

**FOR PROFIT** number of registered users  
**1.9 million**



## Trends:

- "Coursera is beginning to look and feel like a real, global online university."
- It is "becoming elearning courseware provider for standard education providers."
- Coursera will explore "MOOC based learning on campus"

→ The end of the MOOCs hype (?)

"MOOCs are becoming a means of approaching elearning within traditional education systems, via distance and blended learning"

# Example: OERu

Low COST  
Model



## The OER university

Consortium of universities, colleges and polytechnics from all continents who will provide:

- **Free learning** opportunities for all students worldwide
- Using courses based solely on **OER**
- With pathways to achieve **credible degrees**

The OERu is an official project of the UNESCO-CO Otago Polytechnic



Adapted from Taylor 2007

oer

## The OER university concept



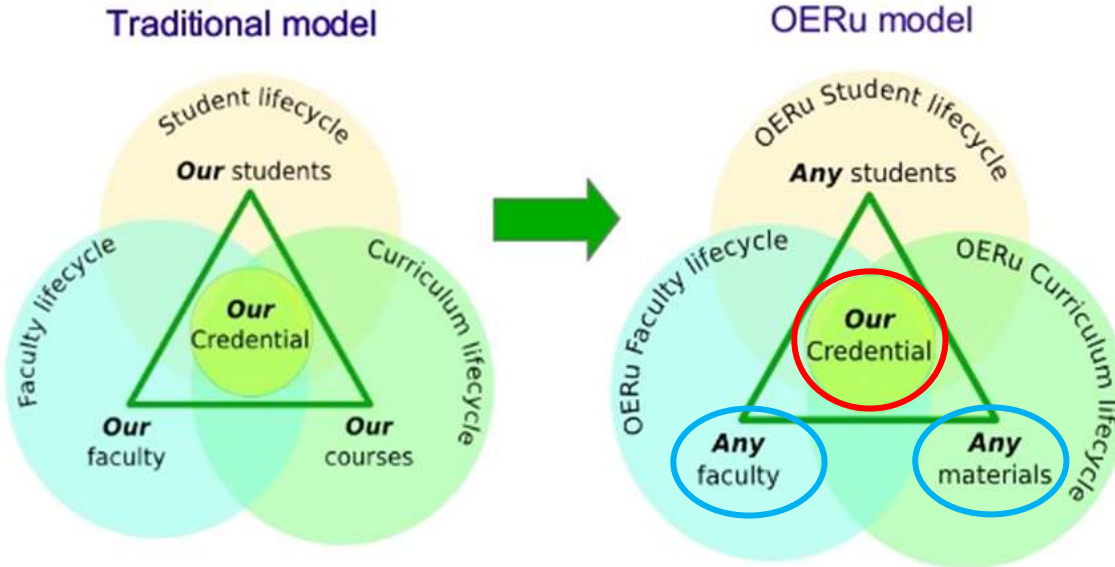
Adapted from Taylor 2007

Low Cost pathway  
to a certified degree

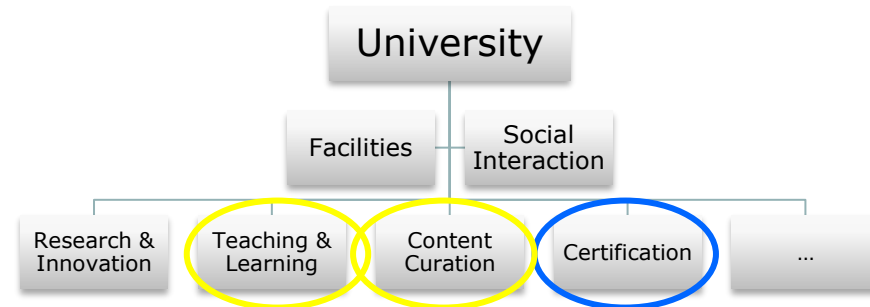
# OERu: Certification



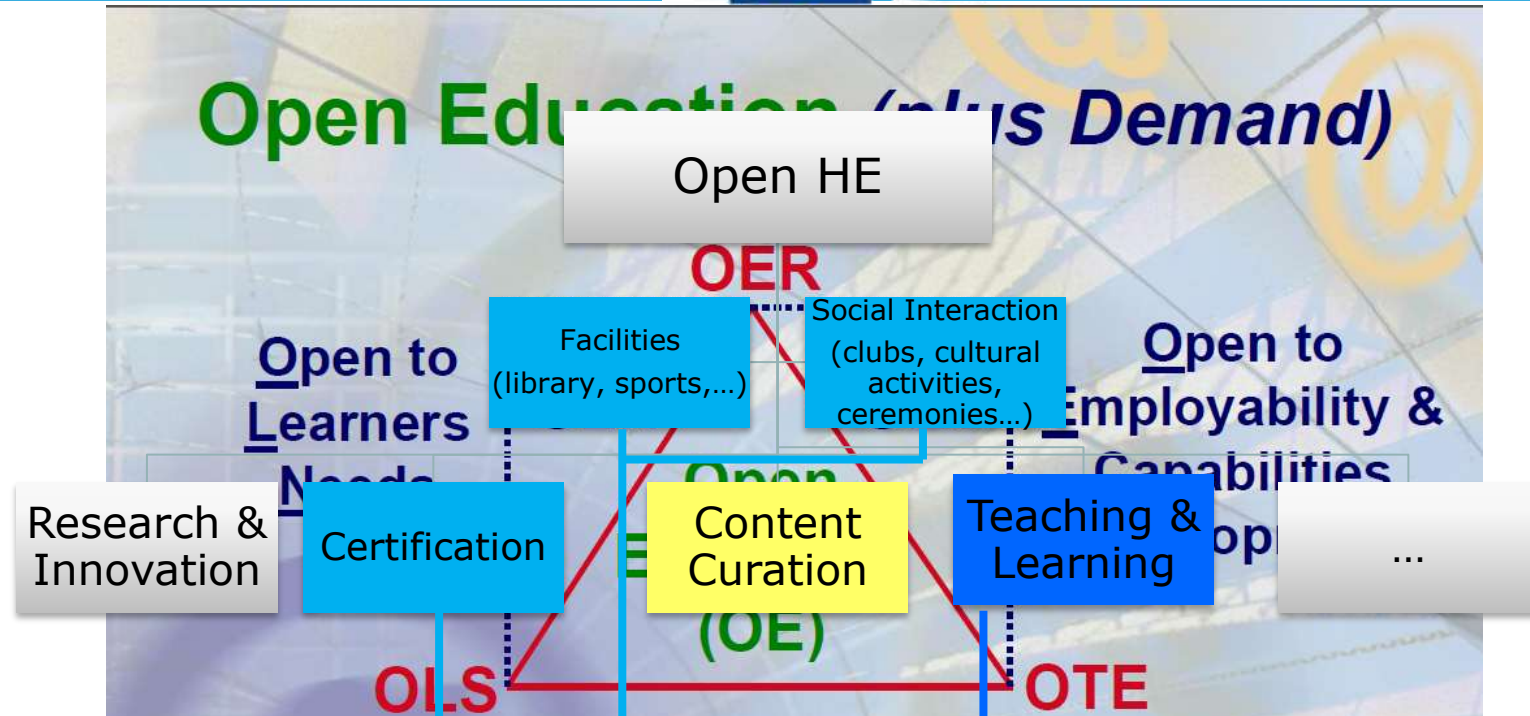
## The view from an OERu partner



Low Cost pathway to a certified degree



# Fred Mulder's Vision For OE in Europe



**Open Learning Services (OLS)**  
Complementary to OER, *free or to be paid*, and including a variety of **online** and **virtual facilities** for: tutoring, advice, meetings, communities, teamwork, presentations, testing, examination, consulting sources, internet navigation, etcetera ...

**Open Teaching Effort (OTE)**  
Complementary to OER and OLS, *to be paid for*, referring to the **human effort** in different roles [...] of **teachers** and **educators** [...] in a professional, open, and flexible learning environment and culture.

# Revisiting the IRON Triangle

