



POLITECNICO
MILANO 1863

International education as a way to survive

Prof. Giovanni Azzone – Rector of Politecnico di Milano

International Symposium on Double Degree Strategy 2015

The vision of our founder...

«Universities can be consistent with their mission only if they adapt to new scientific needs and to new social conditions»

Francesco Brioschi

Founder and First Rector of Politecnico di Milano

Milano, 29 novembre 1863

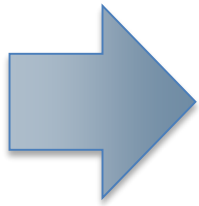
Agenda



- Driving forces for an educational strategy
- Renewing the strategy: internationalization at home
- Adding up: International experiences, Double Degrees and Free Mobility

Driving forces for a new strategy

- Globalization
- Urbanization
- Digitalization



Companies and People move to attractive cities

1900



2007



2030



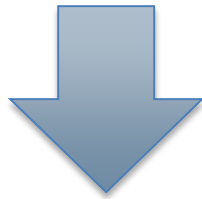
2050



A new mission for universities

These movements are creating a few «megacity regions»:

- attracting companies and talented people
- creating/integrated globally oriented ecosystems
- becoming centers of innovation and cultural life



Universities «must» be part of the competitive capacity of an ecosystem:

- attracting smart students
- educating them consistently with the new context

Students are moving

Box C4.1. Long-term growth in the number of students enrolled outside their country of citizenship

Growth in internationalisation of tertiary education (1975-2011, in millions)



Source: OECD and UNESCO Institute for Statistics.

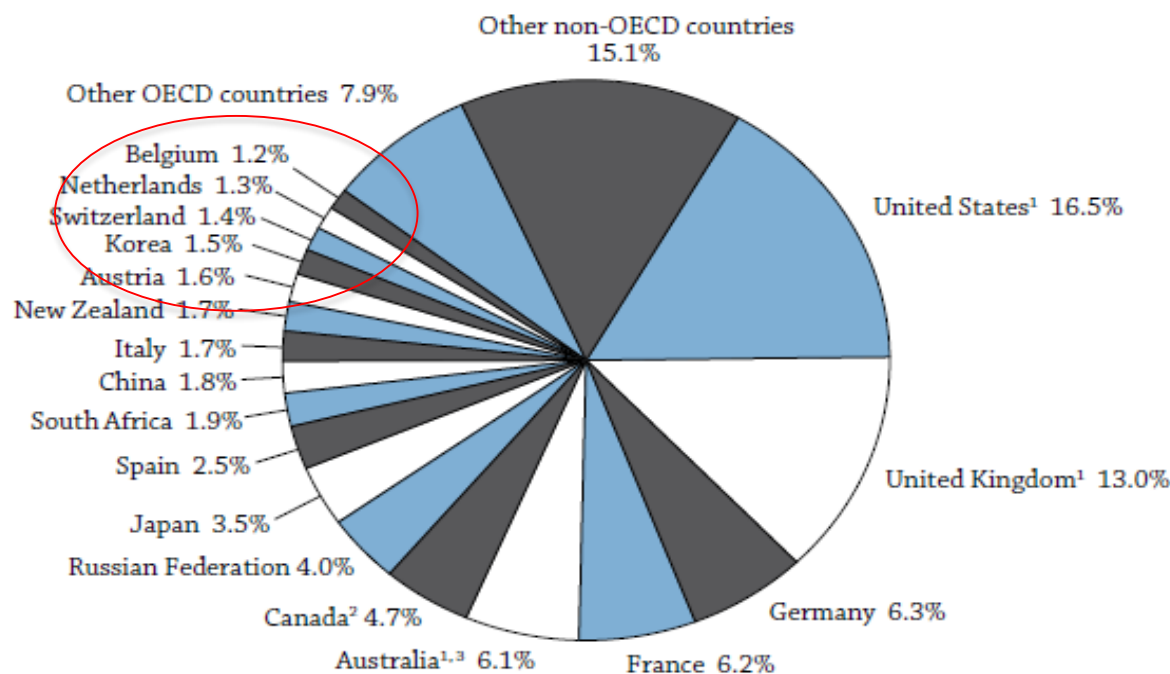
Data on foreign enrolment worldwide comes from both the OECD (2011 figures) and the UNESCO Institute for Statistics (UIS) (2010 figures). UIS provided the data on all countries for 1975-95 and most of the non-OECD countries for 2000, 2005 and 2010. The OECD provided the data on OECD countries and the other non-OECD economies in 2000 and 2011. Both sources use similar definitions, thus making their combination possible. Missing data were imputed with the closest data reports to ensure that breaks in data coverage do not result in breaks in time series.

Education at a Glance 2013: OECD Indicators © OECD 2013

...few towards Italy...

Chart C4.2. Distribution of foreign students in tertiary education, by country of destination (2011)

Percentage of foreign tertiary students reported to the OECD who are enrolled in each country of destination




Note: Year of reference of data for countries other than OECD and G20 is 2010.

1. Data relate to international students defined on the basis of their country of residence.

2. Year of reference 2010.

3. Student stocks are derived from different sources and therefore results are indicative only.

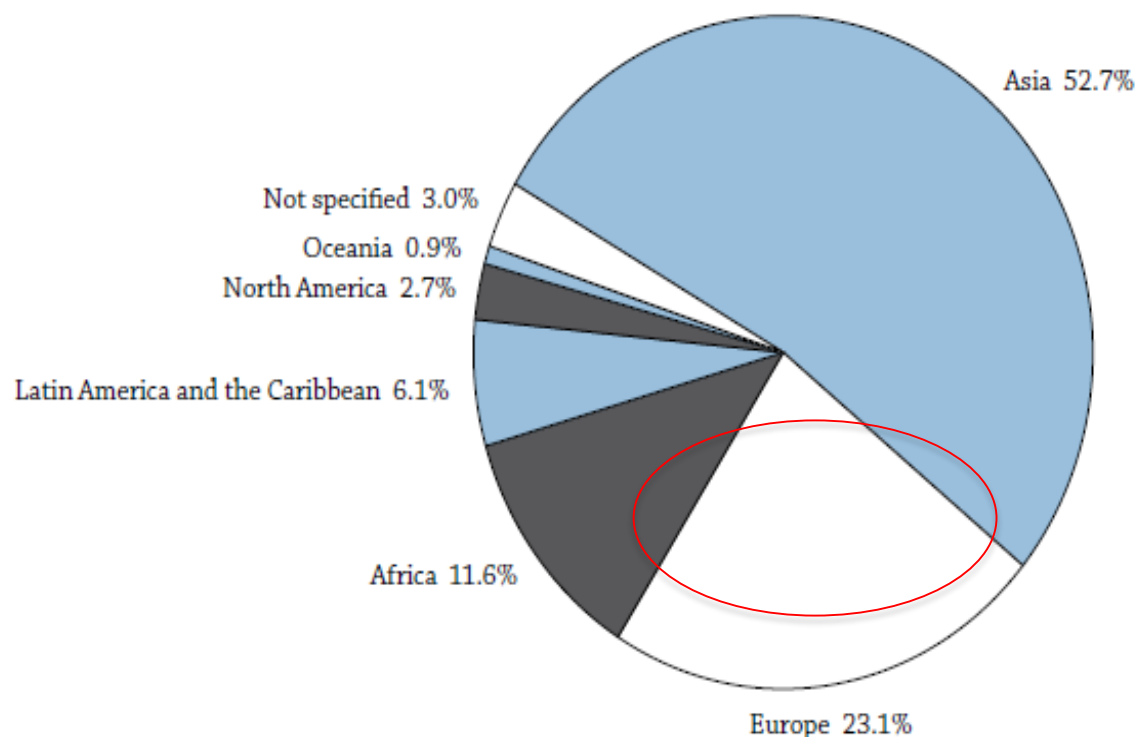
Source: OECD and UNESCO Institute for Statistics for most data on non-OECD destinations. Table C4.4 and Table C4.7, available on line. See Annex 3 for notes (www.oecd.org/edu/eag.htm).

StatLink  <http://dx.doi.org/10.1787/888932847564>

...many from Europe

Chart C4.5. Distribution of foreign students in tertiary education, by region of origin (2011)


Percentage of foreign tertiary students enrolled worldwide



Note: Year of reference of data for countries other than OECD and G20 is 2010.

Source: OECD and UNESCO Institute for Statistics for most data on non-OECD destinations. Table C4.3.

See Annex 3 for notes (www.oecd.org/edu/eag.htm).

StatLink  <http://dx.doi.org/10.1787/888932847621>

R&D is moving

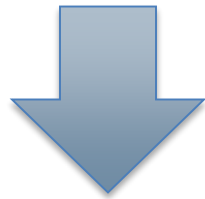
Share of Total Global R&D Spending

	2012	2013	2014
Americas (21)	34.5%	34.0%	33.9%
U.S.	32.6%	31.4%	31.1%
Asia (20)	37.0%	38.3%	39.1%
China	15.3%	16.5%	17.5%
Japan	10.5%	10.5%	10.2%
India	2.7%	2.7%	2.7%
Europe (34)	23.1%	22.4%	21.7%
Germany	6.1%	5.9%	5.7%
Rest of World (36)	5.4%	5.3%	5.3%

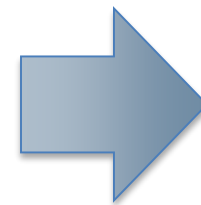
The impact of MOOCs

The aggressive strategy of top US universities in MOOCs will influence our results

They can enhance their reputation as world class teaching institutions and develop new responses to educational needs, especially for large classes, providing low cost education

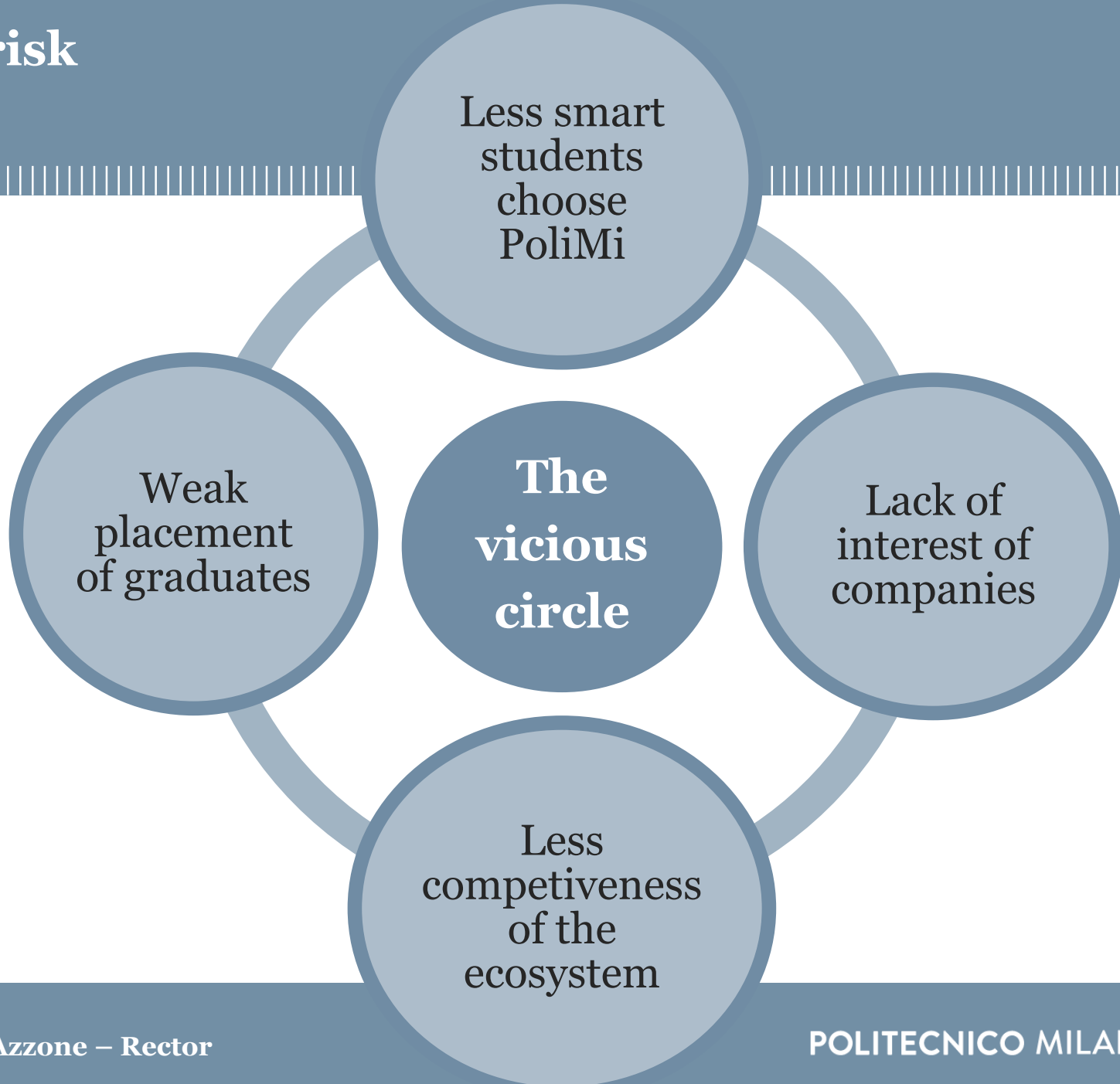


Less smart - national and international - students,
at PoliMi
Lack of competitiveness of the regional ecosystem



**We must
react!**

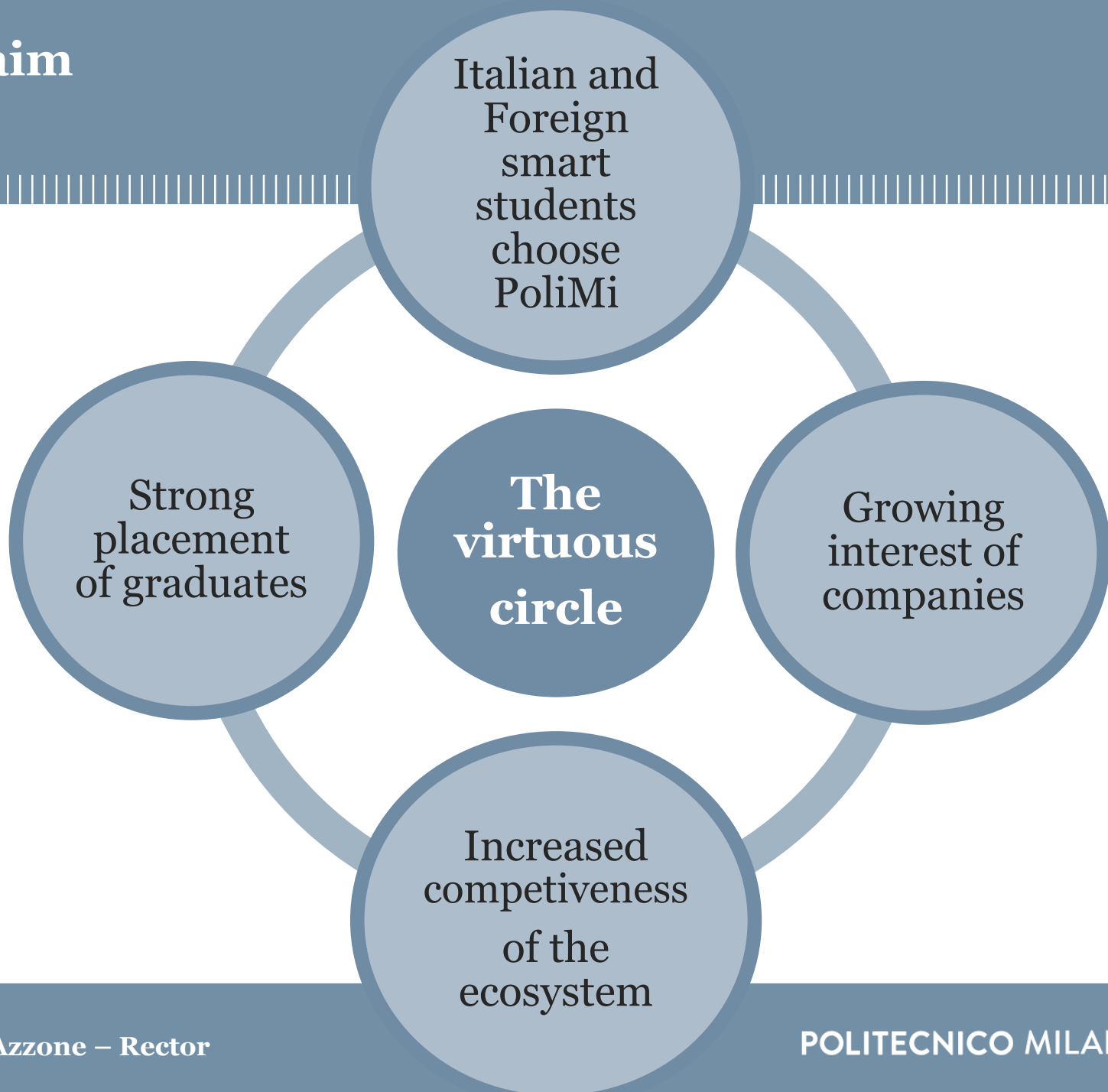
The risk



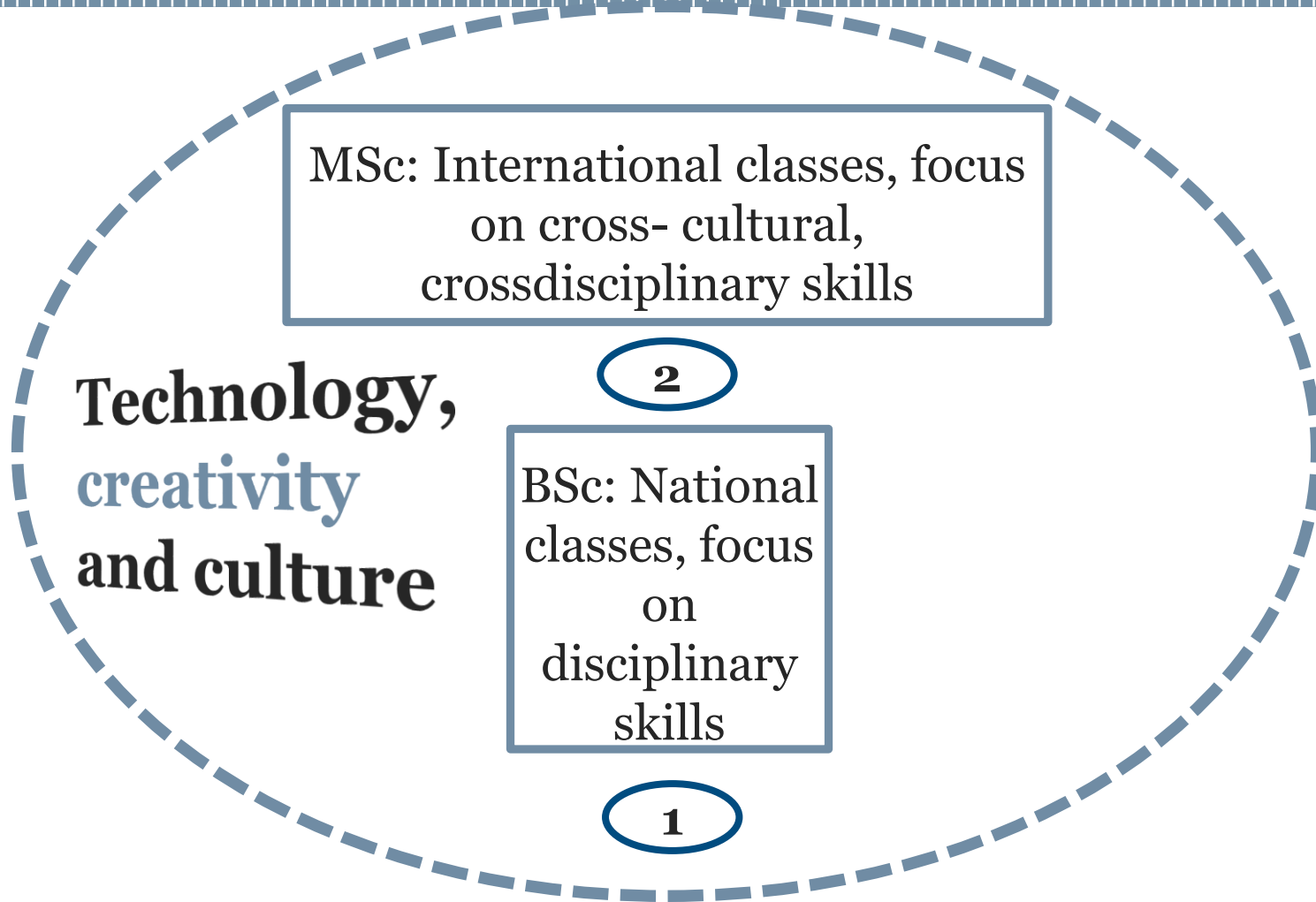
The new Strategic vision

1. Be an international university with strong Italian roots (attracting smart students from both Italy and abroad)
 - Curricula
 - Students
 - Professors
2. Support the competitiveness of the Ecosystem
 - Produce qualified Human Capital for export oriented companies
 - Research and innovation

The aim



The T-Shape Model



Using MOOCs to support a new educational model

We are designing MOOCs «open to anyone», but «suggested» to perspective students and graduates to complete their education, taking advantage of their «digital» skills

	Where	Problem	MOOCs topics
MOOC1 (Italian)	Before BSc	Insure a basic level of technical competence in National students. Improve the use of technology in high schools	Basics in Maths and Physics; Educating high school teachers
MOOC2 (English)	Before MSc	Inform International perspective graduate students on the basic knowledge they are assumed to have before entering MSc	Basics in Management Engineering, Basics in Computer Science..
MOOC3 (English and Italian)	After MSc	Support soft skills before looking for a job	Soft skills (change management,...)

MSc in English



	English only	English and Italian	Italian only
Engineering	18	5	1
Architecture	3	2	1
Design	3	1	2
Overall	24	8	4

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Old Italian School to Switch Instruction to English

By D.D. GUTTENPLAN
Published: June 11, 2012

MILAN — Although it is not as old as the University of Bologna, founded in 1088, nor quite as highly regarded, the 148-year-old **Politecnico di Milano** has a proud history. The oldest university in this prosperous industrial city, the **Politecnico** was host to the first European center for electronic computing during the 1950s. In 1963, a faculty member, Giulio Natta, received the [Nobel Prize](#) in chemistry. The European communications satellite Siro, launched in 1977, was a **Politecnico** project.

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But the school's most recent innovation may prove more controversial — and perhaps just as influential. Starting with the 2014-15 school year, all graduate-level courses will be taught in English.

"An educational institution must adapt itself to the evolving world," said **Giovanni Azzone**, the engineering professor who was elected to the university rectorship two years ago. "We believe that globalization is so important that training

people to be cross-cultural is a compulsory skill that we must provide to our students."

Speaking in his office in the school's leafy main campus on the Piazza Leonardo da Vinci.

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The Monaco Grand Prix Still My Racing Hero

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The New York Times International

Key figures on students

	2015
Applications (BSc)	17.896
Applications/Enrollment BSc	2,5
Foreign students	6.050
% Foreign MSc	26,7%
% Foreign PHD	28,6%

Internazionalization abroad...




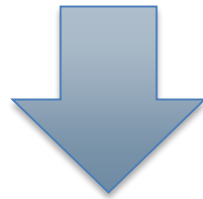
Not only traditional exchanges...

... but also

- Double degrees
- Free mobility

Double Degrees

- «something more»  requires more effort (+1 year)
- «possibility to get in touch with another way of life»



Strong interest from international companies, people can be a bridge between the company national culture and the market national culture

ALLIANCE TECH

- Strong partnership
- Cooperation in curricula development
- Curricula as a set of opportunities



No more Italian and International students...

...but Polimi students

No more Home and Abroad...

**...but free mobility between
(strategic) partner universities**