



UNIVERSIDAD POLITÉCNICA DE MADRID

Global partnerships between universities of science and technology

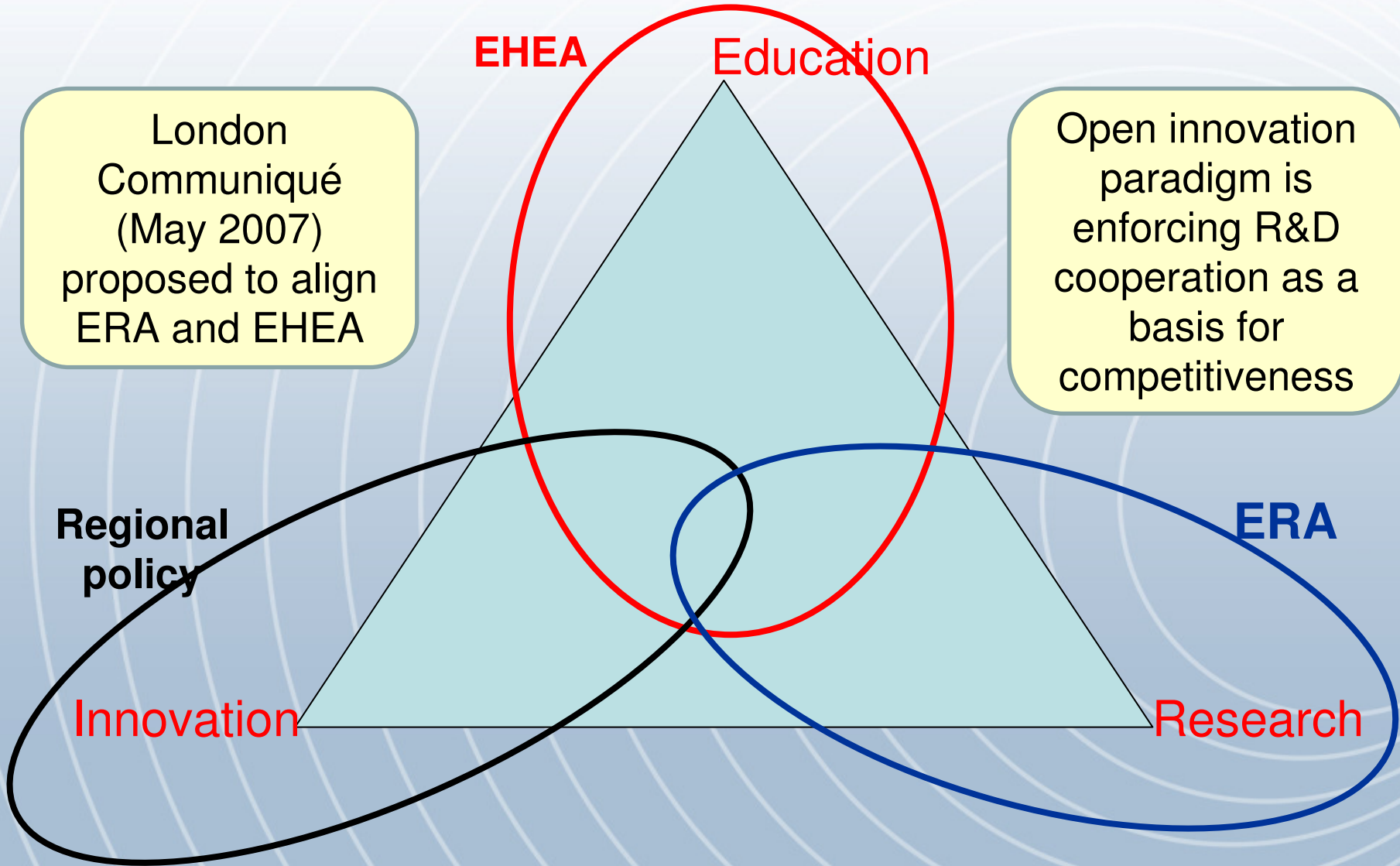
**Cooperation with universities of
technology in Latin America**

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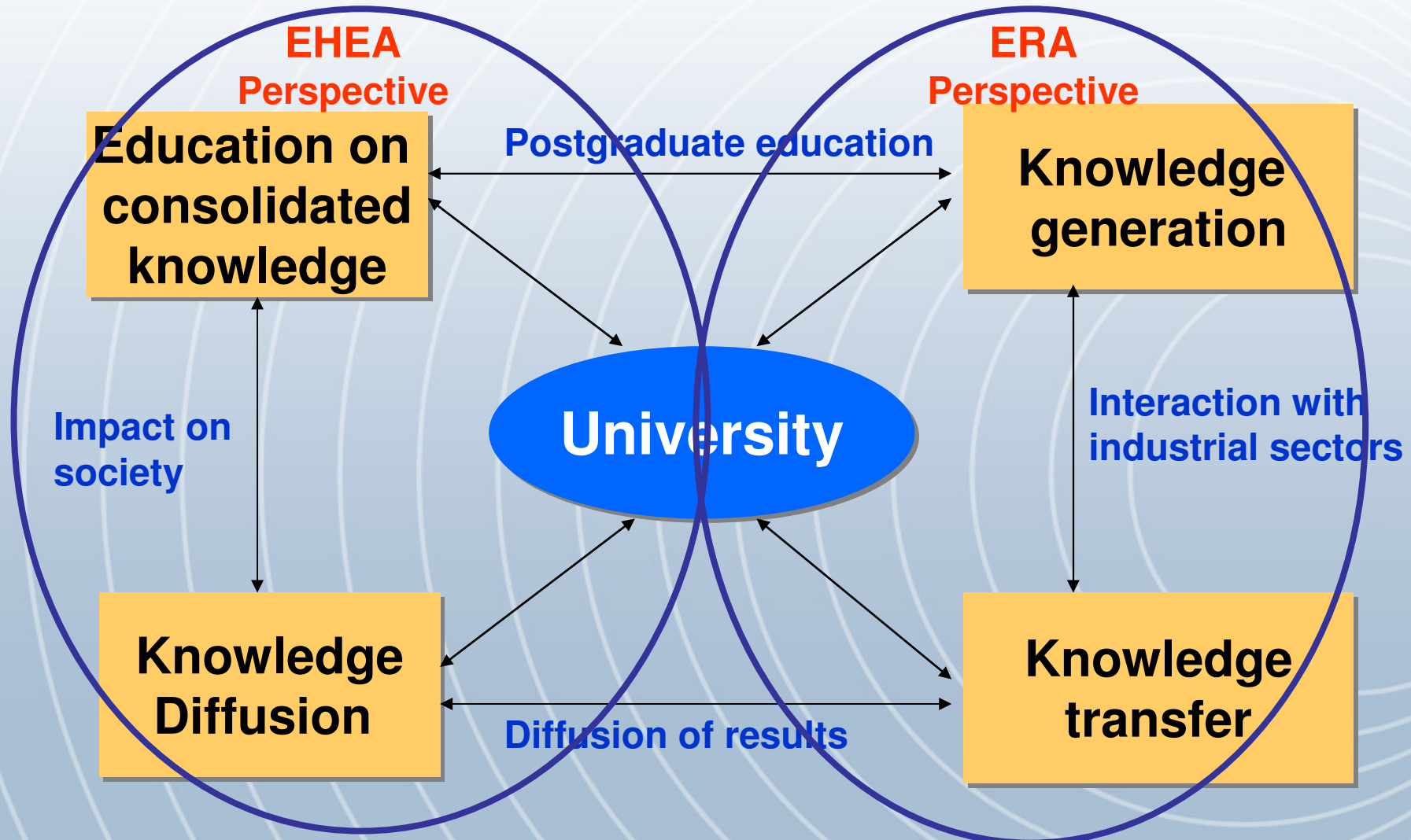


The knowledge triangle





University missions





Types of international cooperation for universities

- Cooperation in “science”
 - Based on the quality of research groups
 - Focused on the international research agenda
- Cooperation in “technology development”
 - Involvement of industry
 - Interest in engineering and technology transfer
- Cooperation in “socio-economic development”
 - Based on the support to less developed regions
 - Oriented towards problems where technology is a must



International cooperation for (technical) universities

All phases
overlap
over time

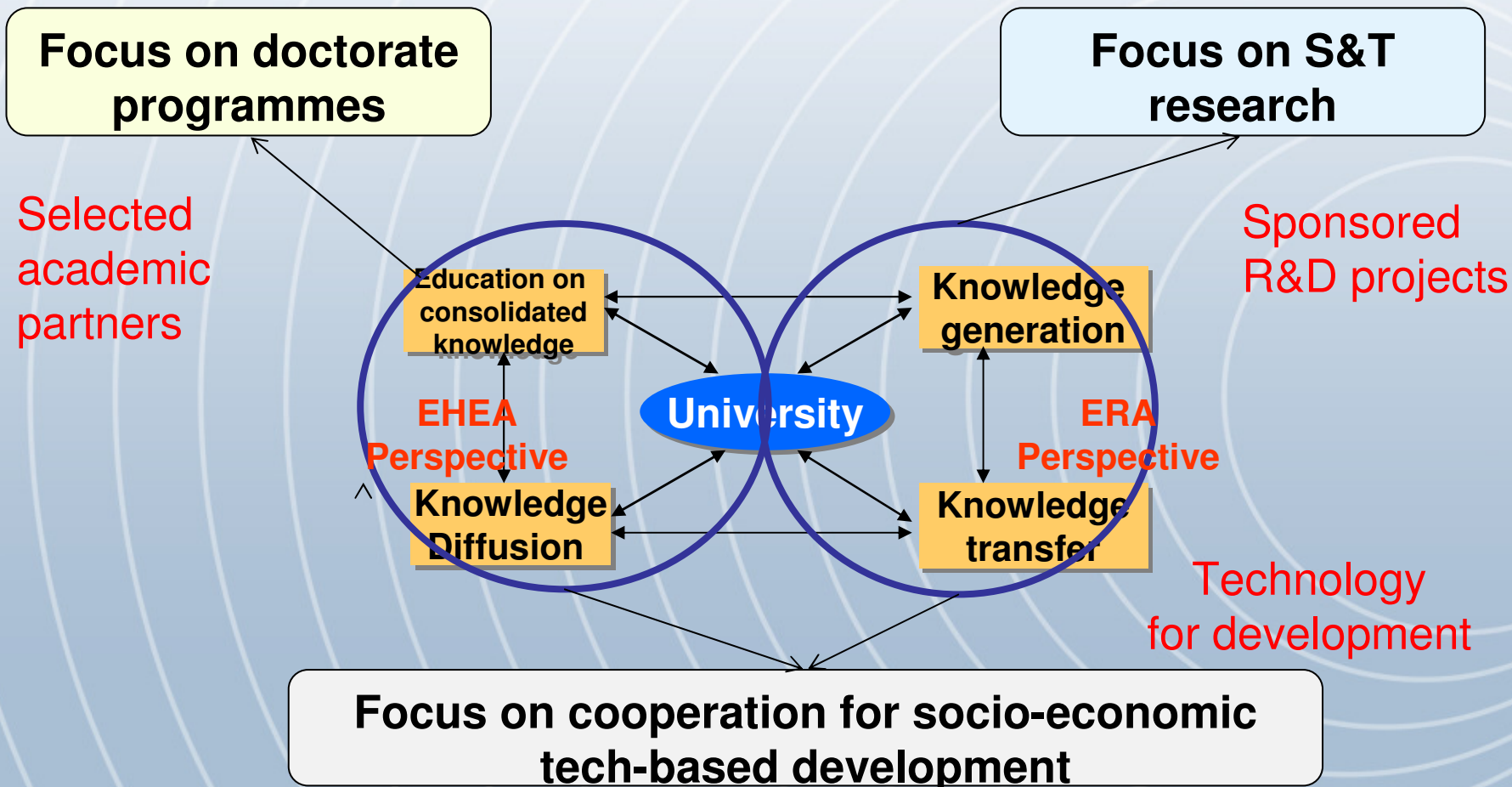
- 1st phase
 - Students mobility
 - Visiting professors
- 2nd phase
 - Research cooperation
 - International programmes
 - Joint master/doctorate programmes
- 3rd phase
 - Joint institutions
 - Stable partnerships

+ Institutional commitment



Areas for cooperation with LA

Universities should focus the cooperation with LA in those areas where partners find rewards at the individual/institutional level





Evolution of international cooperation in the EU

International cooperation in S&T and education is a crucial factor for European University competitiveness

- Progressive opening of ERA-EHEA
 - New approaches in the EU to create specific geographically-based agreements (S&T)
 - Support to institutionally based approaches
- Some experiences with Latin-America
 - Participation of Latin-American entities in the FP7
 - EU agreements with some Latin-American countries
 - Some CSAs (i.e. Mexico) to promote the participation
 - Political spaces: ALCUE, ALFA, etc.



ALCUE's cooperation

- The Magalhães network (under ALCUE)
 - Bilateral initiative in the fields of Higher education and scientific mobility initiatives
 - promoted by UPM in 2005
 - Leading European and LA&C universities in the fields of engineering and architecture
 - 16 technical universities from Europe and 10 from LA&C
 - 800 students mobilized every year
 - Cooperation network based on the EU Erasmus-Socrates program
 - Starting joint doctorate programmes Erasmus Mundus II



The Spanish experience

- Governmental approaches
 - CYTED (Science and Technology for Development)
 - Multilateral programme: 21 countries, annual budget US10 M\$ (Spain provides 70% of budget)
 - Mainly based on S&T networking activities
 - AECI (Spanish Agency for Int. Cooperation)
 - Specific bilateral aid programmes where technology transfer impact is growing up
- Private-sponsored approaches: Marco Polo
 - Banco Santander and Tsinghua University create an international mobility programme (25 scholarships/year)
 - Universities in Spain, Portugal, America, UK, Russia



The UPM-LA experience

- Historical, linguistic and cultural links could facilitate partnership but...
 - It does not guarantee success in the cooperation
- Some global figures
 - Institutional agreements with 200 LA universities
 - 25 joint doctorate/master programmes
 - 30-40 students from LA obtained the PhD in the UPM
- Mobility to LA (UPM programme: 0.5 M€/year)
 - Faculty members mobility
 - Master thesis in technology transfer issues to support the development in Latin American countries



Present challenges for cooperation with LA technical universities

- Mainly dominated by educational approaches
- Symmetric vs. asymmetric cooperation
 - Strong dependence on the level of development of the countries involved
- Common or inter-operable technical infrastructure is essential... but expensive
 - Easy in ICT but much more difficult in other areas
- Budget stability for multi-annual programmes
 - Need for integrated education/research perspective
- Better understanding of common problems
 - i.e. oriented Master/PhD thesis



Recommendations

To fulfill the goal “*Towards global partnership*” requires a sound political will to support stable institutional initiatives of European technical universities with LA

- New university attitude towards cooperation with LA
 - From mobility programmes to stable partnerships
- New policy instruments are needed
 - Extension of EIT to Latin-America
 - Open ERA-NET PLUS approaches to Latin-America
 - Faster recognition of Latin-America diplomas
 - Allocation of specific budget for Latin-America in multilateral programmes