



# International integration and local development: The role of the university system in the Abruzzo region

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# Outline

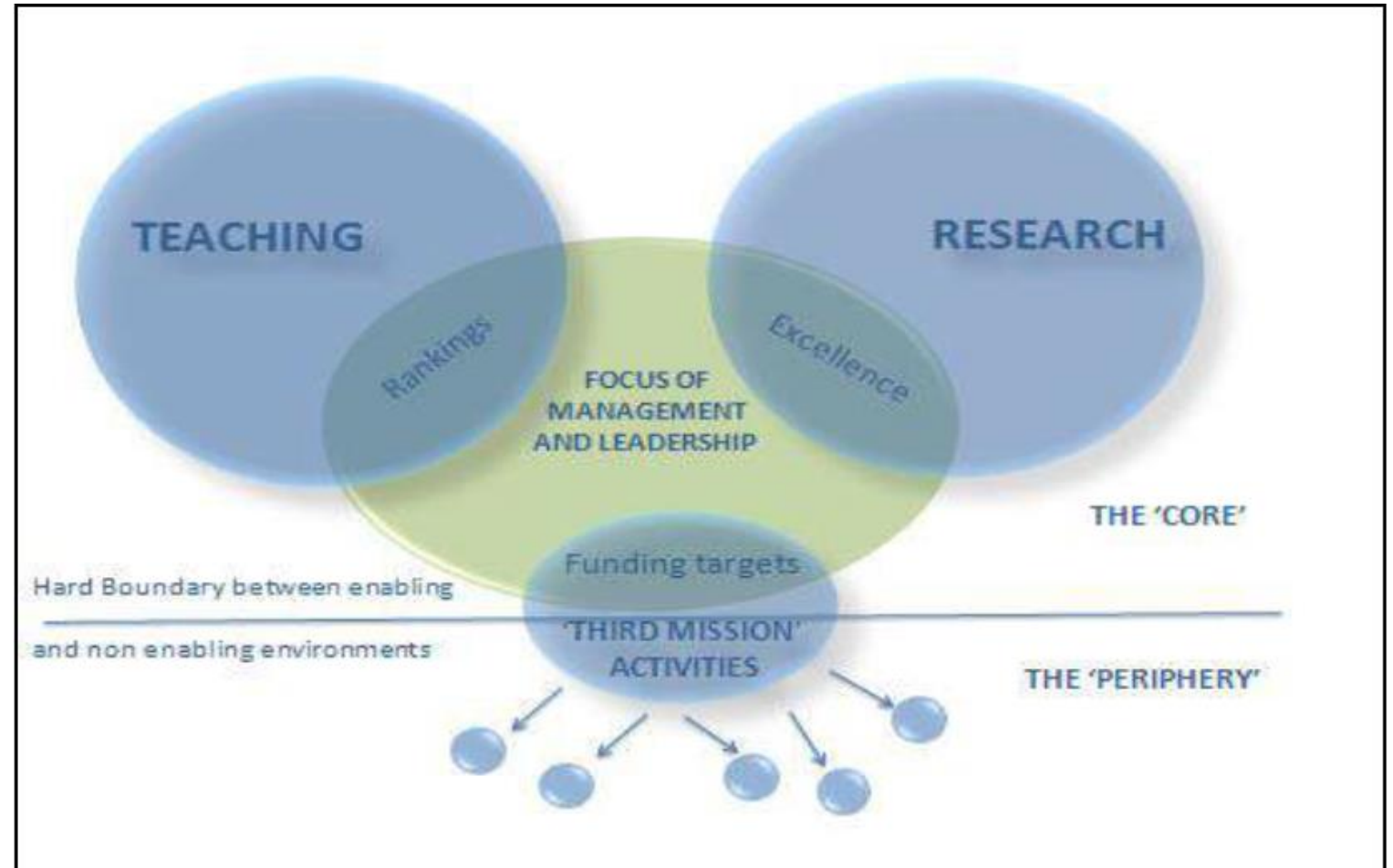
- International context: the missions of «civic universities»
- Sustainable development, social justice and international openness: the strategic agenda of the University of L'Aquila
- Concluding remarks

# International context: the missions of «civic universities»

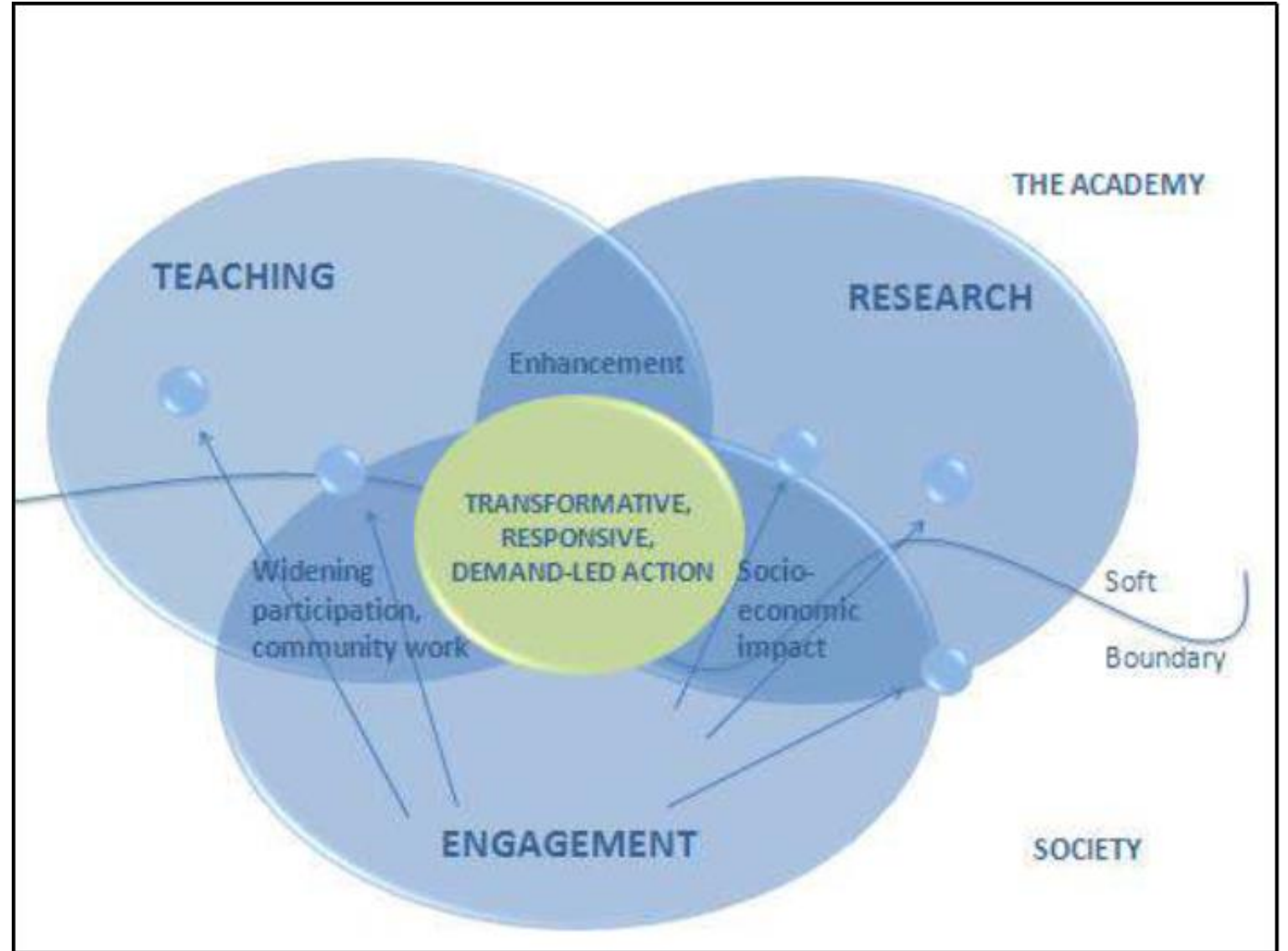
# The missions of «civic universities»

- Three missions in the history of universities:
  - starting in the Middle Ages as institutions of **higher education**,
  - they assumed the nature of **research** centres only in a later period.
  - More recently, the acquisition of the "third mission": the **entrepreneurial functions** of universities, initially limited to technology transfer activities and then gradually extended to all the different actions with which universities can contribute to **economic growth and societal progress**.
- Gradual intensification of relations between universities, institutions and local communities

# The Un-civic University (Goddard et al., 2016)



# The Civic University (Goddard et al., 2016)



# The missions of «civic universities»: sustainable local development

- The natural result of this vision is the civic university's commitment to contribute to the achievement of the **Sustainable Development Goals** set by the international community in the United Nations 2030 Agenda.
- Greater importance in cases, such as that of L'Aquila, in which
  - **university students** represent an important **share of the total population**
  - the university is one of the essential parts of the **economic base of the local system**, so much so that it can be configured as an element of comparative advantage and a factor of development
  - the university is located in **relatively disadvantaged areas**
  - and/or in areas more **vulnerable to natural or anthropogenic disasters**

# Sustainable development, social justice and international openness: the strategic agenda of the University of L'Aquila



# Scenario: the future of the University of L'Aquila after the 2009 earthquake

- Global scenario: increasing inequalities and the revolt of “places that don’t matter” (A. Rodriguez-Pose)
- The situation of the Italian university system
  - Public spending cuts
  - Aging of staff
  - Regulatory constraints on the expansion of the educational offer
- Local problems
  - The material and immaterial reconstruction
  - The difficulties of the economic and social recovery in an internal area of the South
- The challenges
  - How to attract students and teachers?
  - How to respond to the new training needs imposed by the digital revolution?
  - How to combine physical reconstruction, sustainable economic development and social justice?
  - How to counter the wave of rejection against international integration?

# Scenario: the future of the University of L'Aquila after the 2009 earthquake

- The opportunities to be seized
  - The OECD Report: *Policy Making after Disasters: Helping Regions Become Resilient. The case of Post-earthquake Abruzzo* (2013)
    - The strategy for L'Aquila
      1. City of knowledge;
      2. Smart city;
      3. City of creativity;
      4. Open and inclusive city.
  - The Gran Sasso Science Institute
  - The Re-Start programme: 4% of the funds for physical reconstruction earmarked for economic and social development projects
  - The National Plan for Recovery and Resilience and the Complementary Fund for the areas hit by the 2016-17 earthquake
  - The new cycle of European cohesion policies

# The University of L'Aquila as a laboratory of social innovation

- The University should be "understood as a **laboratory of creativity**, which becomes an **active agent of local development**, enhancing its own **endowment of skills**, putting it **at the service of the community** and training its young people (students and researchers) in the ability to **undertake new initiatives in cultural, economic and social fields.**"  
*(Strategic guidelines of the University of L'Aquila 2014-2019)*
- **Work-training experiences of students** as a factor of attraction for the University

# The University of L'Aquila's commitment to sustainable development and social justice: chapter 3 of the 2020-25 Strategic Plan

1. Health and wellness: *Taking care of all people*
2. Respect for the natural environment: *A commitment to justice between generations*
3. Knowledge exchange and sustainable development: *Connecting local systems to global innovation networks*
4. Culture and territory: *A local identity open to the world*
5. Reduction of inequalities: *Tackling obstacles to the "full development of the human person"*
6. International cooperation and migration, between territory and development: *A horizon of peaceful coexistence for the human community*
7. Internationalization and cooperation in training activities: *Building together new paths for the dissemination of knowledge*

## Back in the past: external linkages and local development

- The power of L'Aquila in 13<sup>th</sup> century was based on the close connection between the city and its mother-villages, which had established the city as a federation, each of them building a borough and considering it as a part of the mother-village.





# Back in the past: external linkages and local development

- From its beginnings the city constituted an important market for the surrounding countryside, which provided it with a regular supply of food
- From the fertile valleys came the precious saffron.
- Surrounding mountain pastures provided summer grazing for numerous transhumant flocks of sheep, which in turn supplied abundant raw materials for export and, to a lesser extent, small local industries.
- This, in time, brought craftsmen and merchants from outside the area.
- Within a few decades L'Aquila became a crossroads in communications between cities within and beyond the Kingdom, thanks to the so-called "via degli Abruzzi".



# Back in the past: external linkages and local development

- In 1311 King Robert of Anjou granted L'Aquila with privileges which had a decisive influence on the development of trade.
- These privileges exempted all activities related to sheep-farming from customs duties on imports and exports.
- This was the period in which merchants from Tuscany (Scale, Bonaccorsi) and Rieti purchased houses in the city.
- Hence the conditions for radical political renewal: in 1355 the trade guilds of leather-workers, metal-workers, merchants and learned men were brought into the government of the city.
- Eleven years earlier, in 1344, the King had granted the city its own mint.



# Back in the past: external linkages and local development

- In the middle of the 14<sup>th</sup> century the city was struck by plague epidemics (1348, 1363) and earthquakes (1349).
- Reconstruction began soon, however. In the 14<sup>th</sup>–15<sup>th</sup> century Jewish families came to live in the city.
- The 15<sup>th</sup> century was the golden age of the city of L'Aquila. After the reconstruction, it prospered for his trade, especially of wool and saffron, extending its relations in France, the Netherlands and Germany, and quickly becoming the most important city of the Kingdom after Naples.
- In 1481 Adam of Rottweil, a pupil and collaborator of Johann Gutenberg, obtained permission to establish a printing press in L'Aquila.





## Back in the past: external linkages and local development

- The 1703 earthquake destroyed the city almost completely, killing more than one third of its population.
- In the 1712 census, L'Aquila showed 2,684 inhabitants divided into 670 families, of which 149 were strangers attracted by the possibilities offered by the reconstruction.
- In the following twenty years, until 1732, 160 new families arrived, contributing to the repopulation of the city.





# The 2009 earthquake



# L'Aquila: the reconstruction challenges

- A slow reconstruction, whose economic benefits are captured by strong interest groups and are anyway going to fade over time
- A fragile urban system: elderly population, rentiers, public administration...
- A manufacturing base concentrated in few externally-controlled firms
- A weak public administration
- Limited social participation in local policies
- Widespread fear of international integration
  - «L'Aquila first»...
  - Invisible immigrant workers
- The difficult role of GSSI and the University of L'Aquila: developing connections between local communities and global innovation networks

# «Territori Aperti»

Data, knowledge and labour for the progress of areas affected by natural disasters

- Interdisciplinary Center for Documentation, Training and Research
  - Prevention and management of natural disasters
  - Reconstruction and development of the affected areas
- An integrated **information system** open to social sharing
- **Training and communication** activities
- **Research**: an international network of skills on the sustainable development of territories hit by natural disasters



# High-Performance Computing for Disaster Resilience (HPC4DR): Project Architecture

- **Resources**

- HPC4DR infrastructure, connected to the CINECA *Leonardo* hub in Bologna
- Big data made available by the digital transformation
- Human resources with specific HPC skills

- A **value chain** organized in four stages based on the Sendai Framework principles:

1. Hazard and probability of natural and anthropogenic disasters
2. Vulnerability and exposure to the impact of disasters
3. Preparedness and resilience to disasters
4. Reconstruction and sustainable development in areas hit by disasters

- Each stage uses **HPC** resources **directly and indirectly** benefits from the better-quality inputs produced by the upstream stages of the supply chain through HPC
- The ultimate goal is to increase the **resilience of local systems to natural and anthropogenic disasters**, providing citizens, businesses and public institutions with reliable scenarios and simulations

# Concluding remarks: the University of L'Aquila as a «civic university»

- The role of «civic universities» in the social diffusion of knowledge
  - Beyond the paradigm of a «third mission» based on (unilateral) technology transfer
  - Knowledge co-creation and reciprocal learning among universities, public institutions, social organizations and the business community
- The contribution of «civic universities» to the attainment of Sustainable Development Goals
  - Social and environmental justice: contrasting inequalities across individuals, territories and generations
  - International openness: connecting local systems to global networks of knowledge diffusion