



# International integration and sustainable local development: Introductory remarks

Lelio Iapadre

(University of L'Aquila and UNU-CRIS, Bruges)

Italian Trade Study Group

Palazzetto dei Nobili, L'Aquila 6-7 July 2023



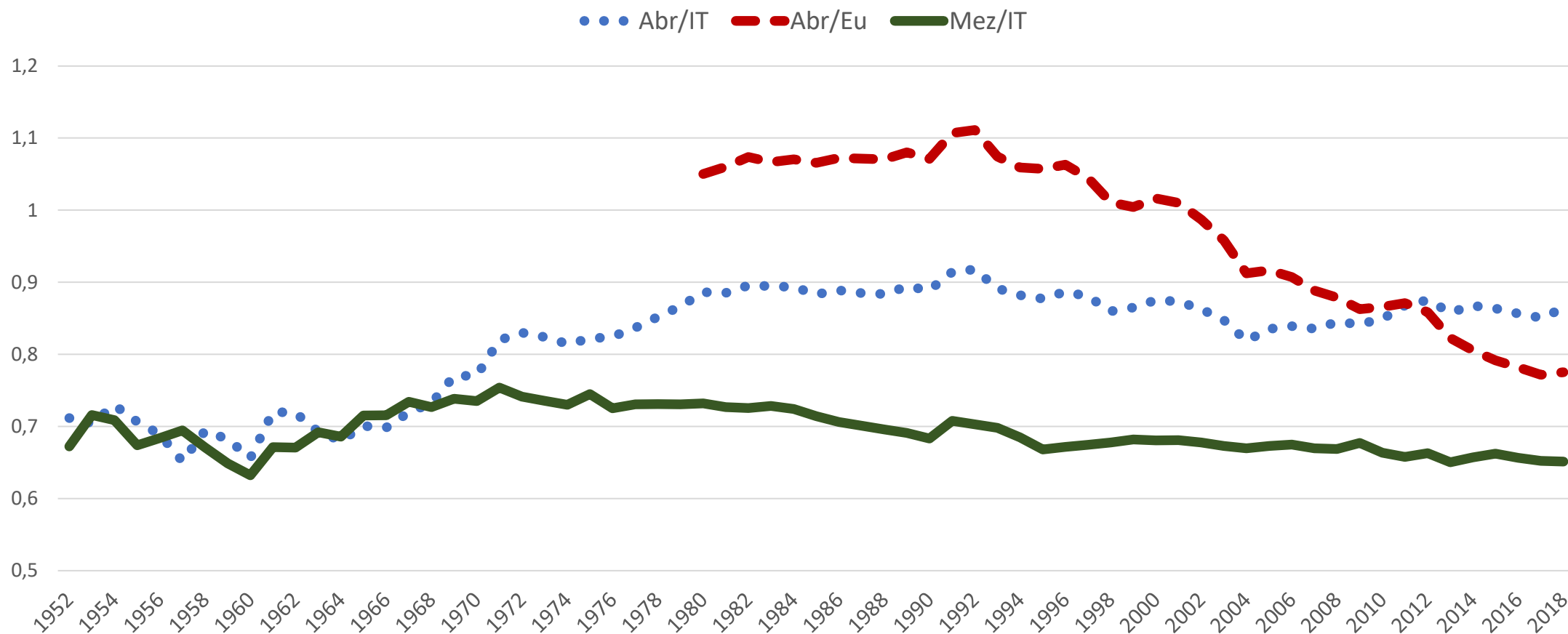
UNIVERSITÀ  
DEGLI STUDI  
DELL'AQUILA



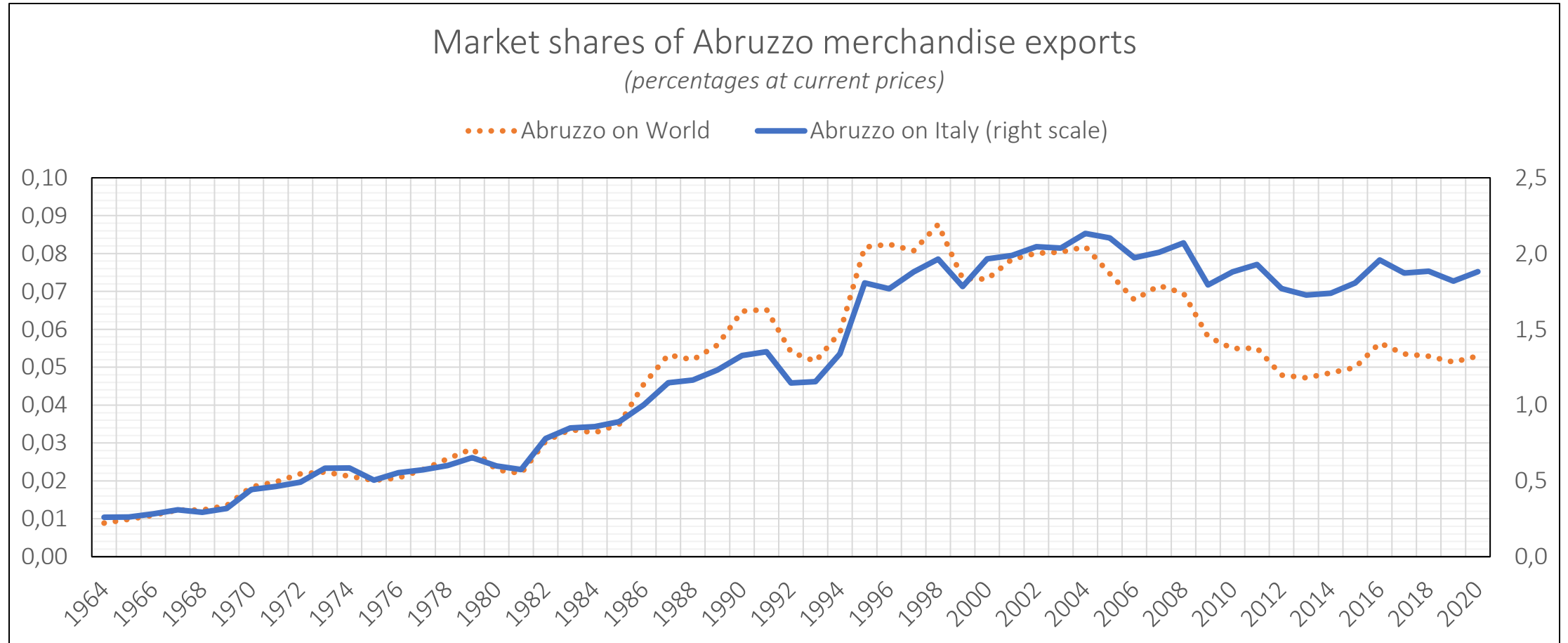
COMUNE  
DELL'AQUILA



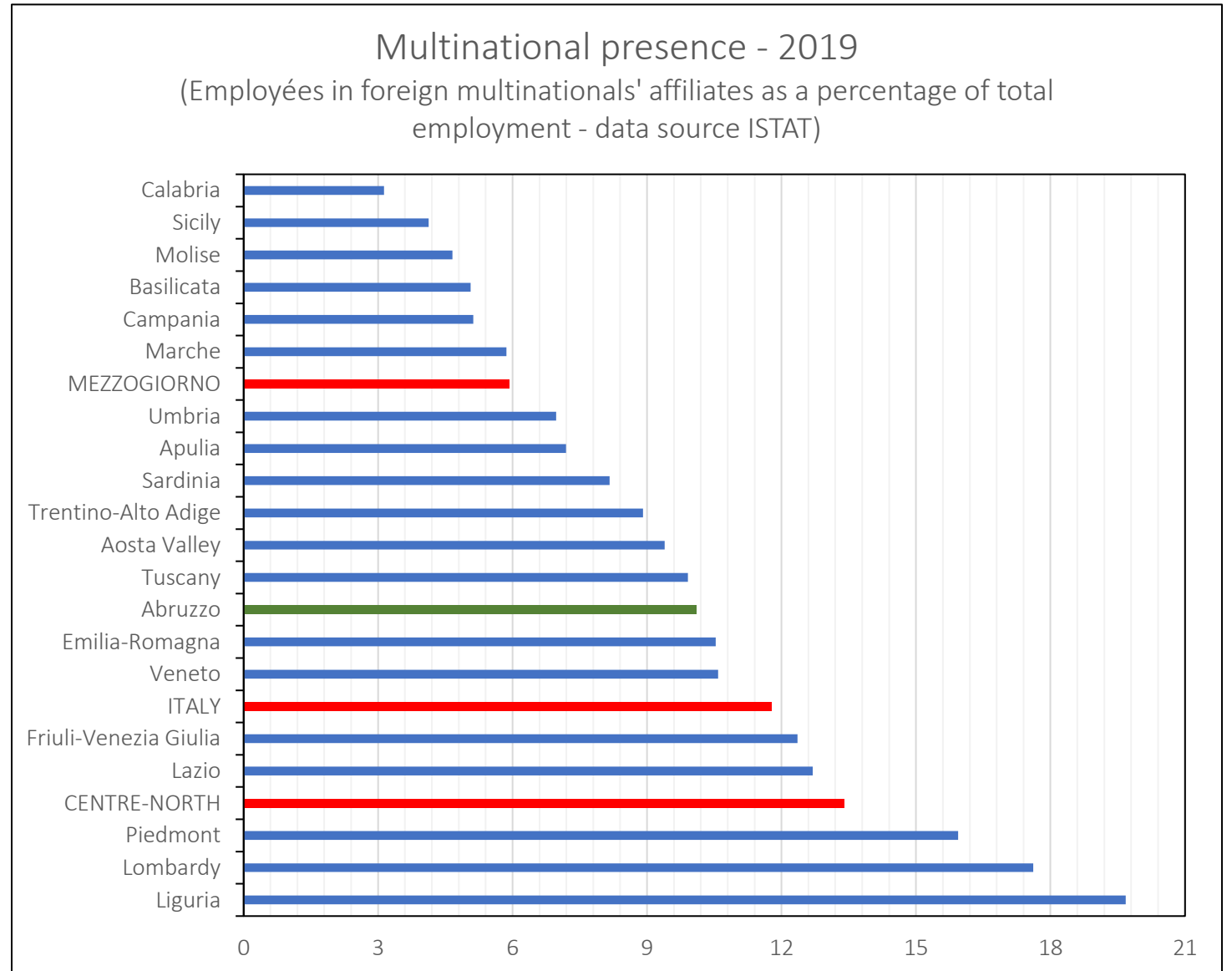
# The tale of a faded miracle: the Abruzzo convergence (per-capita income – constant 2005 prices)



# The tale of a faded miracle: the Abruzzo convergence (export market shares)



Abruzzo is the Mezzogiorno region with the highest relative presence of foreign multinationals.



# International integration and local development in Abruzzo: the challenges

- The regional economy's resilience to shocks is mostly based on large externally-controlled firms
- Spillover effects on local firms have been weak so far, although with important exceptions (the automotive system in the Chieti province)
- The social diffusion of the benefits of globalization has remained limited, also due to governance and participation problems, particularly in internal areas
- Earthquakes and other natural calamities have worsened the situation
- Big challenges for the regional innovation system, including the four universities

## 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 its **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

# Bridging connections: the regional specialization strategy

- Deep linkages between economic structure and growth capacity
- «Smart specialization strategy» of the Abruzzo region
  - Automotive
  - ICT/aerospace
  - Life sciences and pharmaceutical industry
  - Agri-food
  - Fashion and design
- The «Pescara charter»: Abruzzo as the region of sustainable industry



# Bridging connections: the «Territori Aperti» project

- An integrated information system about areas exposed to natural disasters, connected to the European *SoBigData* network
- A Master in Post-Catastrophe Management for local administrations
- Research activities on areas exposed to natural disasters
  - ICT and applied data science
  - Legal aspects of big data analysis
  - Economic and social issues
  - Territorial and urban planning
  - Environmental and sanitary issues

# Bridging connections: HPC4DR consortium (High-Performance Computing for Disaster Resilience)

- **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

# Deep in the future: Darkside

- An international collaboration programme for the research of «dark matter» in the universe
- Argon-40 extracted from wells in Colorado and purified in a distillation tower 350 meters high in abandoned mines in Sardinia
- Silicon light detectors, with production chain entirely based in Abruzzo
- Development of ultra-pure structural materials (titanium, copper, teflon) and construction of the world's largest electron beam welding machine, also with a supply chain entirely based in Abruzzo.



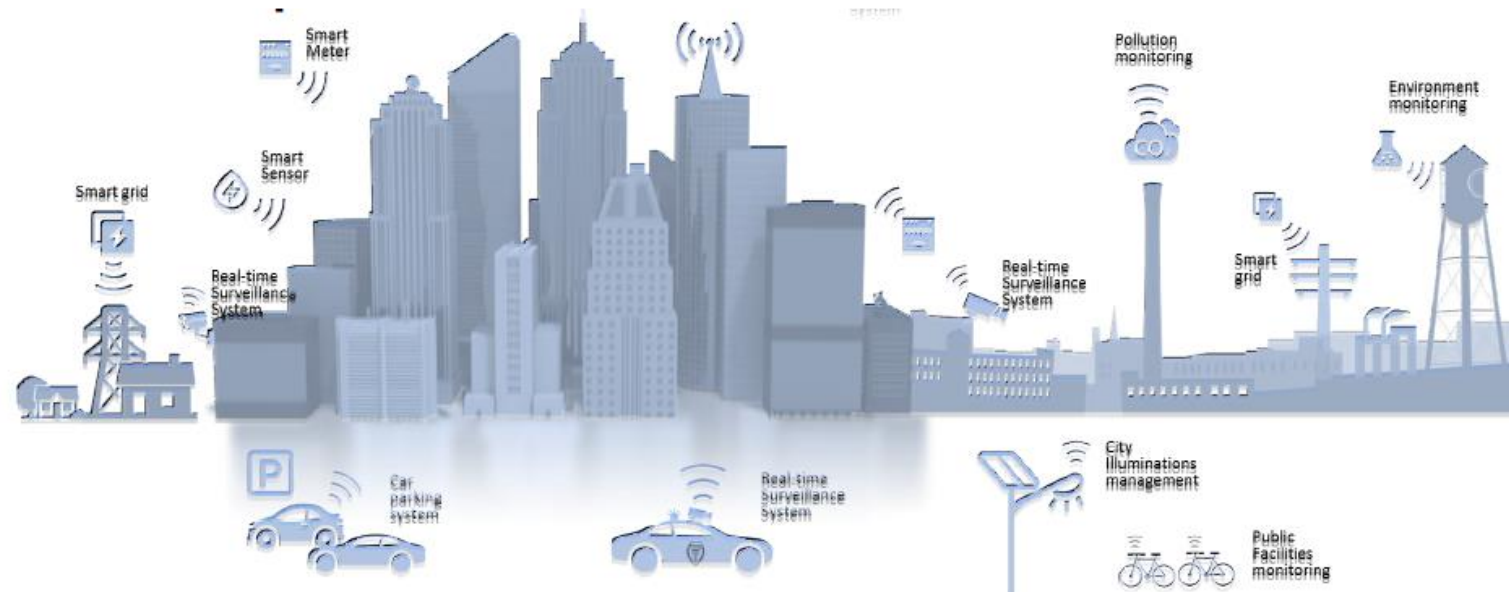
# Deep in the future: NUSES

- Silicon Photomultipliers in a space environment
- A new satellite for Astro-Particle Physics
- The search for precursory signals of seismic events



# Deep in the future: 5G

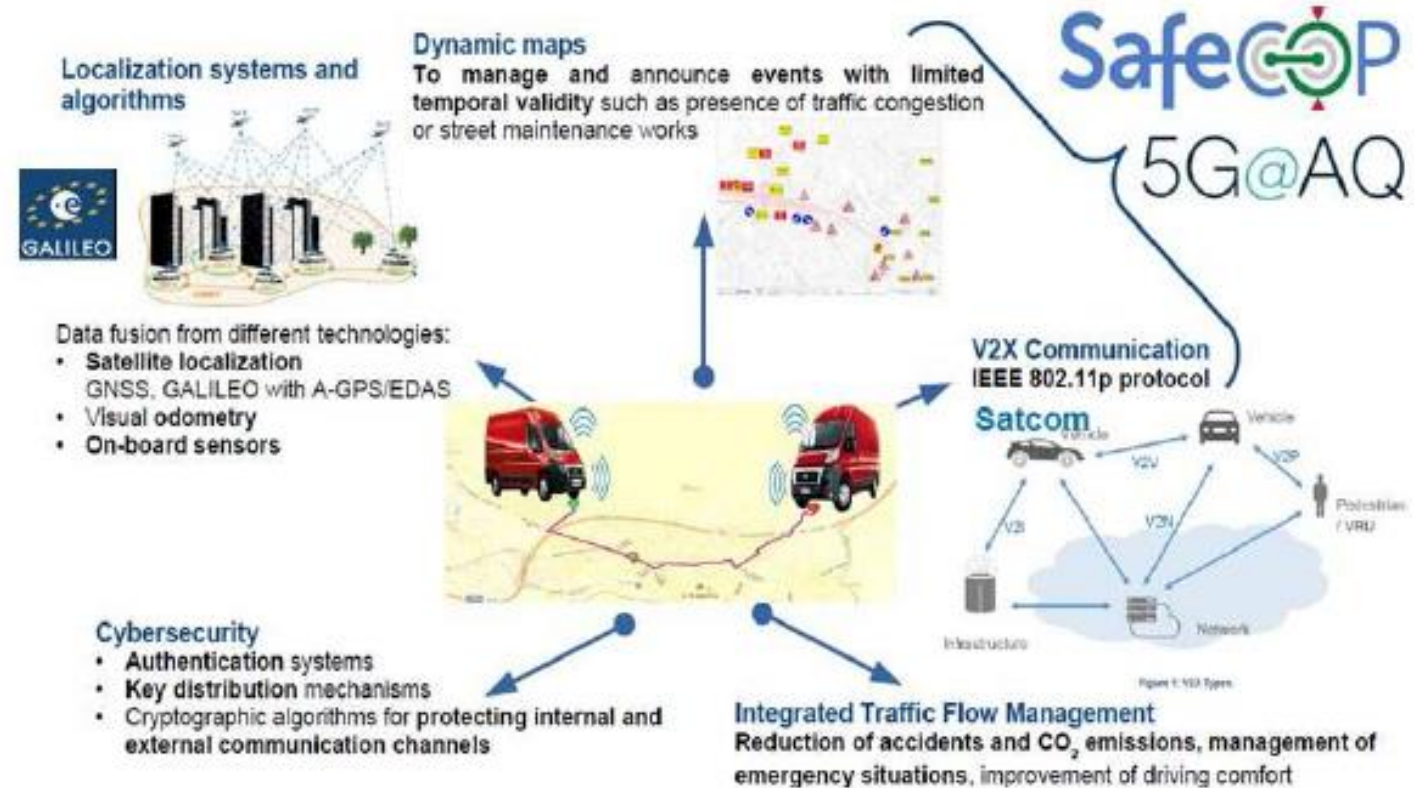
- Experimental activity to test innovative services for future 5G services
- Applications in
  - E-Health
  - Industry 4.0
  - Smart Grid
  - Automotive
  - Media & Entertainment





# Deep in the future: ex-Emerge

- Intelligent Transport Systems exploiting the geo-localization with Galileo and 5G
- Industrial vehicles equipped to operate for daily services and to support emergencies with advanced and cooperative navigation functionalities to improve safety and minimize the journey's time



# Concluding statements

- International integration is a fundamental driver of economic growth and societal progress
- The nationalist (and localistic) backlash can be explained by the increase in inequalities of income, wealth and opportunities
- However, the increase in inequalities is not due to globalization
- It is mostly the result of mechanisms of wealth accumulation, that are affected by political choices at the domestic level, e.g. fiscal policies
- The most important challenge for the education system is defending the ethical, social and economic value of international integration in all its dimensions