Building futures for an inclusive Society (SSH)

Status and challenges of SSH and interdisciplinarity in EU Funding for Accessibility

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Challenges: looking back (I)

- Considering the development of research in the last decades we see that main priorities were related with the following fields and some remain valid:
  - Change of **lifestyles** related with **demographics and health trends** (in radical opposition between new and old continents) and its impact on organization of mobility. Increased awareness on **benefits accruing from active modes brings back accessibility to the top of political agenda**;
  - Exploring the opportunities offered by **Big Data** in understanding behaviors and mobility needs;
  - **Decoupling freight-GDP relation** and wake-up call for the need to address **last mile in urban freight distribution** as a close partner of mobility of persons;
Challenges: looking back (I)

- Considering the development of research in the last decades we see that main priorities were related with the following fields and some remain valid (cont):

  - **Technological revolutions** within and outside transport sector and mostly in trade

  - Creation of conditions (i.e. means and processes) for the exercise of **smart mobility** (i.e. supported by ICT and other technologies, or just dignifying mobility);

  - Emergence of **shared economy and first declinations** in new mobility solutions with new business models;

  - Heavy concerns with worsening **weather related threats**.
CHANGES affecting challenges (I)

- **Facts I:**
  - Economic analysis reports a *slow growth world*. Ratio of international trade to GDP is declining. This increases uncertainty for transport;
  - Since last financial turmoil Asia and emerging markets *no longer serve as an economic driver*;
  - EU financial and economic prospects maintain a relative favourable prospects due to hardline policies on *financial easing* resulting in the depreciation of euro;

- **Implications I:**
  - Delayed maintenance of infrastructures and mass transit systems with *negative impacts on accessibility, congestion, safety and security*

- **Facts II:**
  - Positive impact of *COP21 agreements*;

- **Implications II:**
  - Transportation *industry* has now *a clear agenda and mandate*;
  - *Cities*, where world population is concentrating, also have *a clear mandate and transport agenda*
CHANGES affecting challenges (II)

- **Facts III:**
  - **Security** threats targeting Europe;
- **Implications III:**
  - Need to enhance **resilience** to ever more frequent (and maybe powerful) attacks;
  - Terrorism increases **complexity** for transportation management and increases costs

- **Facts IV:**
  - Lower oil price impacts negatively in some economic drivers and causes **dis-align with environmental targets**;
- **Implications IV:**
  - Overall, low fuel prices makes it **harder to justify energy/emission saving** measures;
And the focal points for change are ....

- Cities

  - Society of cities
  
  - Most challenging example of integrated problems, the main hurdles
    
    e.g. Poverty; Exclusion; Health; Etc; Etc

- People

> 75% of EU population lives in urban environment
Today and in the near future some of the previous challenges remain relevant but some other have increased their priority. In brief, the challenges and respective risks are organized around three overall objectives:

- **Ensuring mobility and access for all** as a contribution to inclusive society. This objective is associated with freedom of movement, democracy and self-stated happiness for all population irrespective of age, gender, or individual restriction;
- **Developing a sustainable and resilient urban transport system** that contributes to the environmental objectives and makes urban transport system capable to respond to new challenges.
- **Maintain the competitiveness of cities** and the contribution of the transportation system to this endeavor for which two research needs are instrumental to ensure a system of innovation: knowledge building on transportation as founding steps of research and innovation; and, **quality of governance and decision making** to ensure fair and efficient implementation of mobility solutions and urban development.
Mantra: Mobility and access for all

- Studies report “lesser mobility are found to feature less security, poorer governance and more unequal opportunities” (collected for TAG H2020)

- Some aspects are critical for their potential implication on needs to substantially redesign systems and continue to provide safe mobility:
  - Demographic change - ageing society;
  - Baby boomers individualistic lifestyle leads to behavioural uncertainty beyond 65 years - Correlation between age and disability
  - Unforeseen migration patterns;
  - Gender issues;
  - Cultural megatrends;
  - New employment models associated with precarious jobs
  - Risks
  - Health

There is reinforcing combination loop of poorer generations with new travelling and communication patterns.
Sustainable and resilient urban transport system (I)

- **Urban transport and environment**: establish knowledge, develop new technologies and facilitating transition to practice;

- **Synergies**: land-use; urban and regional planning; value chains, etc.
  - Managing transitions for effective enforcement;

- Mitigation requires **redesign of urban spaces**. Research and horizontal integration with all aspects of urban development is required;

- **Adaptation of transport systems** to climate change requires responsiveness and agility: Construction and maintenance standards

Society of cities is in the horizon. Ageing population reinforces the loop
Sustainable and resilient urban transport system (II)

- **Decarbonization**: core challenge to meet 2050 objectives

- **Technology development**: main partner for COP 21, knowledge platforms,
  - automatic, non-maned motorized mobility,
  - living-labs;

- **Smart greening of urban transport**:
  - More energy efficient vehicles;
  - Modelling how each transport mode impacts the environment, and how individual choices impact on different climate footprint

Foundations for new horizontal coordination interfaces, and respective analysis, are needed between institutional transport and shared economy, between local authorities, transport providers and web based services.

Multidisciplinarity of transport research should be explicitly stated in EU documentation.
Consequence: Competitiveness of cities

- Regulatory frameworks coping with innovation;

- Governance: sector; project; transitions;

- Congestion and infrastructure use;

- Technology and innovation:
  - Vehicle automation and consequences;
  - Automation for urban freight distribution:
    - Aerial solutions;
  - Automation in urban Rail;
  - Electro mobility

- Security and Safety;

- Integration of human dimension with new technologies:
  - understanding and anticipating dynamics of main drivers of change in urban mobility.

- Urgent need of integrated approach to research with other areas in urban living labs: ICT; Nanotechnologies; Energy; Biometrics;
SSH approach

Problem oriented research labs:

Ageing
Quality of Governance
Employment
Health
etc

EVIDENCE:

Problems are multidisciplinary by default
Human nature determines success of technology and innovation
Main weakness of the EU research process

Input | Process | Output
---|---|---

Monitoring results

Result | Impacts
---|---

Outreach

Project

Society, Agents, Business Models,
EXAMPLE: EIT innovation model, outreach orientation

INNOVATION CAPABILITIES

Entrepreneurial talent

Business creation activities

Higher education activities

Innovation-driven research activities

Research actors

Business actors

Entrepreneurship

Start-ups, Spin-offs

Dissemination

Outreach

New products, services and business models

JOBS

GROWTH
From the Knowledge Triangle to Stakeholders engagement

Building active culture

Bridging to Society

Stakeholders engagement
Thank you!
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(SSH) Social Sciences and Humanities