

Horizons for Social Sciences and Humanities

Smart, Green and Integrated Transport

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Implementation of SSH in Horizon 2020

Session: Smart Green and Integrated Transport

***Horizons for Social Sciences and Humanities
Vilnius, Lithuania
(23-24 September 2013)***

- Interdisciplinary role of SSH, with special reference to the relevance of transport evolution and its network externalities
- Role of SSH in the Horizon 2020 Transport Challenge
- Achievements?

SSH in Smart Green and Integrated Transport (Challenge H-2020)

■ **Where are we?**

State of the art: interdisciplinary approaches and players/actors

■ **Where are the problems?**

- The contribution of SSH to the understanding of the complex evolution of transport patterns

- Current practice: SSH in H2020-Transport Challenge

■ **What are the most promising perspectives?**

Methodological/empirical/policy reflections: novel directions

Where are We?

Complexity in Transport Networks

- **Transition to a (dynamic) networked society, where interconnectivity and interoperability between the different transport and socio-economic systems play a significant role**
- **'Network embedding': the implications for transport and socio-economic theory and related analyses**

Follow-up

- **Recent scientific issues on:**
 - how **network topologies (Hub & Spoke vs Random)** affect the evolutionary trajectories of **complex transport systems**
 - **Relevance of connectivity and accessibility**
 - **Resilience vs vulnerability** in transport economic systems
- **Search for a 'hidden' order/simplicity (transferability/generalization, with reference also to the past literature)**

Europe vs World: Transport Trends (2004-2030) (IEA)

- Most of the **increase in oil demand** comes from the transport sector
- **Transport oil demand in non-OECD countries will increase three times** more than in the OECD countries
- Increasing income will spur car ownership in **non-OECD countries**, where the **vehicle stock is expected to triple**
- Global emissions will **grow more than 50%** between now & 2030, with **developing countries' emissions overtaking the OECD's in the 2020s**
- **Transport** accounts for a **quarter of total CO₂ emissions** increase, most of which will come from **non-OECD countries**

Europe vs World: Transport Trends

Summary:

- Europe cannot be considered an 'isolated island'
- **Transport challenges in Europe** should also be considered with a view to these **emerging trends in the world**
- In air-transport new emergence of Asian and South-American markets, such as **Peru (28%: annual growth in 2012-2011), Indonesia (22%), Philippines (14%), Colombia (11%), China (10%) – markets which are also linked to Europe (4%)**

'Local' vs 'Global' Transport Issues

Different behavioural patterns and perceptions?

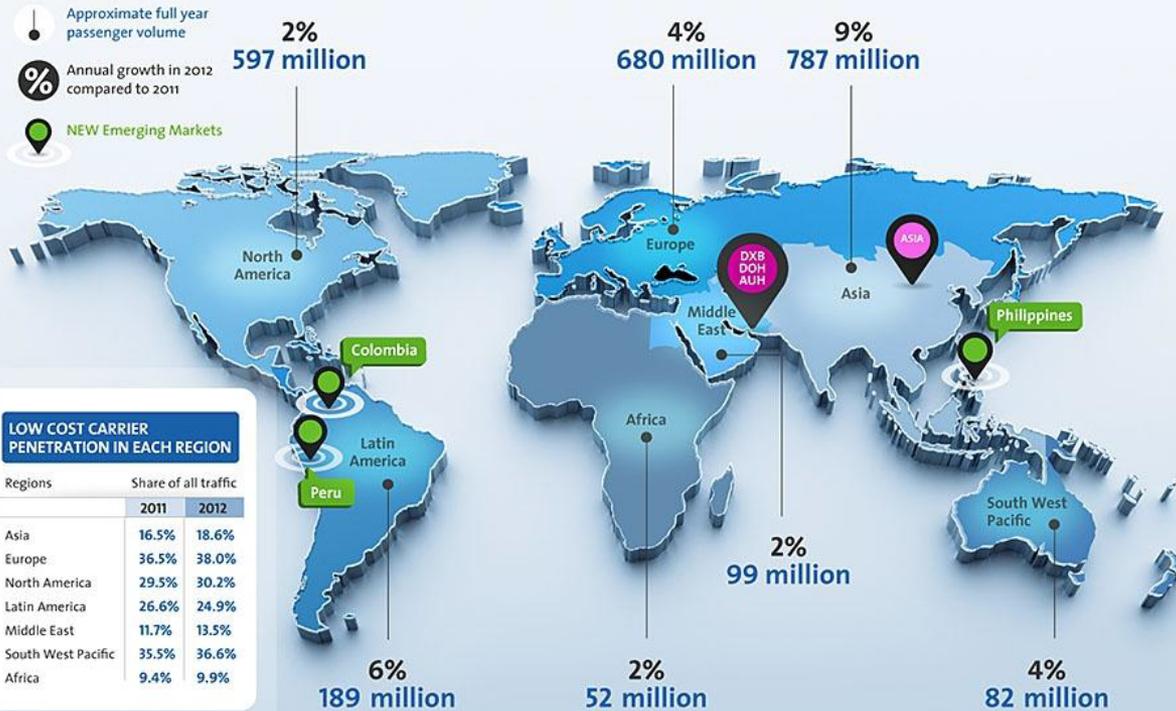
Europe vs World: Air Transport Trends

Global air traffic trends



New analysis by Amadeus reveals that:

- Asia still leads air travel growth with 9% increase in 2012 followed by Latin America with 6% increase.
- The Middle East is a rapidly growing hub. Dubai, Abu Dhabi and Doha have a collective growth rate of 20% when serving Europe and Asia traffic.



Among the fastest growing countries in passenger traffic we find:

Peru **28%** Indonesia **22%** Philippines **14%** Colombia **11%** China **10%**

General Trends in Europe: SSH's Role in Transport

Some Methodological Issues

- European trends show **different speeds of mobility dynamics (slow and fast)**, for different geographical and socio-cultural contexts (at different scale-levels):
 - *SSH efforts seem necessary here in understanding and forecasting these different trends*
- These different patterns reflect **different people's and societies' needs at different spatial scale-levels (urban/regional/national/European/worldwide)**: it then becomes essential, in the light H2020 actions, to **understand why there are these needs and what exactly are these needs**:
 - *Essential role of SSH here*
- How can **technical solutions and policies work together to address societal issues** such as *urban congestion, the mobility needs of an ageing population, or the need for low-traffic zones*?
 - *Here again there is an essential role for SSH*

General Trends in Europe: SSH's Role in Transport

Some Empirical Issues

- Do the transport research and innovation activities planned in the **Horizon 2020 Transport Challenge** include the *'real' practical applications of SSH approaches* that enhance the effectiveness of technical solutions?
- Will the objective "**Socio-economic and behavioural research and forward-looking activities for policy making**" be embedded – in a satisfactory way – in the coming Work-Programmes?

The Session's Platform

Reflections from Three Perspectives (9.45-10.30):

- a) **SSH in Transport Sciences** (*Maria Attard, University of Malta*)
- b) **A Future Perspective on SSH Research in Transport** (*Peter Nijkamp, VU University Amsterdam*)
- c) **SSH in Horizon 2020-Programmes** (*Alessandro Damiani, EU*)

Coffee Break (10.30-11.00)

Debate (11.00-12.15)

- d) **Conclusions & New Directions:** (*Peter Tindemans, Global Knowledge Strategies & Partnerships*)

Thank you for your attention

NECTAR (Network on European Communications and Transport Activity Research):

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