

**Cluster 'The Future of Cities'**

<b>NORFACE Partner</b>	<b>Theme Proposal</b>
The Academy of Finland	<ul style="list-style-type: none"><li>• Urban Studies – Emphasis on Research Training</li></ul>
The Netherlands Organisation for Scientific Research	<ul style="list-style-type: none"><li>• Connecting Sustainable Cities</li></ul>
The Swedish Research Council, Scientific Council for Humanities and Social Sciences	<ul style="list-style-type: none"><li>• Urban Research</li></ul>

The year 2007 meant an important milestone in the history of urbanization in our World: for the first time in human history more than 50 percent of the world population lived in urban areas. And this trend is still continuing, with urbanization rates above 70 percent in various European countries. This drastic transformation in settlement patterns forms a third revolution in the re-positioning of cities, starting with the first revolution (movement from rural to urban areas), followed by the second revolution (formation of large-scale urban agglomerations), and emerging into a world-wide dominance of both medium-sized and large urban areas as networks.

This evolution did not only reflect a quantitative change in the share of inhabitants in urban areas in the national economy, but had also qualitative impacts, of both a socio-economic and political nature. Modern network cities have turned into spearheads of (supra-) regional and (supra-) national power, not only from a socio-economic perspective (business, innovativeness, jobs, wealth), but also from a geo-political perspective ('cities as global command and control centres' à la Saskia Sassen).

Consequently, our views on the position of network cities have dramatically changed. Cities are strategic vehicles for the development of our world: future cities are not so much a source of problems anymore, but the geographic platform for creative solutions and new opportunities. Clearly, they are faced with a broad spectrum of challenges of all kind, which call for smart and effective responses (see Table 1). This variety in challenges and responses calls for a systematic analysis framework through which anchor points for effective action can be identified. Four such action points have been highlighted in the JPI positions document as Urban Europe, viz:

Table 1. Future Urban Challenges and Responses

### Urbanizing World: Ten Trends and Challenges

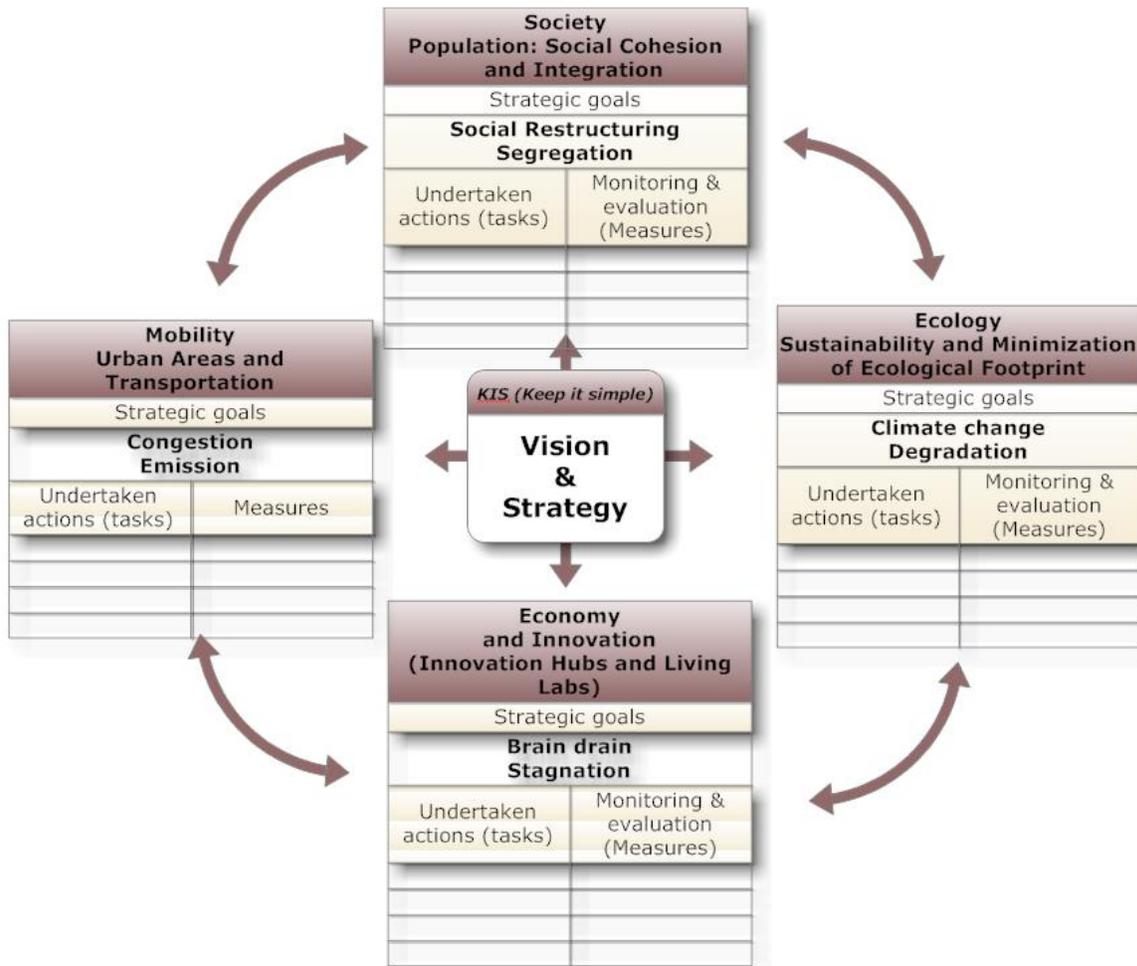
	Trends	Challenges
1.	structural urbanization in past centuries     2007: 50% world population in cities 2030: 5 bln people in cities (in particular, developing countries)	turn mass population movement towards urban agglomerations into new opportunities with great diversity
2.	double urbanization: big cities grow into mega-cities (including political power) and medium-sized cities grow even faster into big cities	develop a balanced national (or supra-national) strategy for emerging connected city systems
3.	urban economies become pivotal vehicles for future economic progress and welfare through their productivity enhancing potential	manage production and investments to the benefit of sustainable economic development of urban areas
4.	urban mass concentrations are accompanied by many negative externalities (e.g., pollution, congestion, poverty, unhealthy conditions, criminality) manifesting themselves often in large cities	develop an effective and broad-spectrum urban policy to ensure that the benefits of agglomeration advantages are higher than their social costs through appropriate urban amenities, effective institutions and citizens' participation
5.	structural urbanization tendencies are directly reflected in drastic land-use and infrastructural changes	design a spatially-integrated and balanced urban land use strategy that is compatible with ecological sustainability
6.	rapid urbanization leads to drastic changes in the demand for public amenities	satisfy the socio-economic demand of an increasingly large share of urban population for high-quality urban amenities
7.	climate change does not only affect coastal settlements, but all cities world-wide (e.g. urban heat islands)	develop effective measures for eco-friendly and climate-neutral metropolitan areas
8.	intra-urban accessibility and inter-urban mobility is under permanent stress	manage sustainable accessibility and mobility of urban systems through new logistic and infrastructural concepts

	in specific ing	need for conflict management and pro-active inclusion strategies for less privileged groups in urban areas
10.	uncontrolled urbanization leads to urban sprawl at an unprecedented level and with a high ecological footprint	design of fit-for-purpose institutional mechanisms and structures in a multi-layer dynamic system of urban areas

Overall Challenge for *Urban Europe*:

To manage the increasing concentration of people in Europe in urban agglomerations, so as to create a liveable, sustainable and economically viable environment for European citizens!

The SRA is organized around four strategic areas:



- cities as sources of economic vitality for a broader (supra-)regional system;
- cities as nodes for smart logistics and sustainable transportation;
- cities as centres for sustainable ecological development and for sustainable energy production and use;
- society as seedbeds for a broad socio-economic participation and cultural diversity.

These four pillars have individually received extensive attention in various distinct disciplines, such as social and economic geography, urban and regional economics, transportation and logistics, urban demography, political science, planning theory, urban ecology, business administration and environmental science. But the interfaces between these pillars have received far less attention, although it is likely that new perspective and



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ices. Research on the edges of these four pillars is however orientation that is centered around the future sustainability in areas. But precisely at these interfaces may one expect breakthrough innovations on the functioning of cities in the future (ranging from 2020 to 2050). Scientific research in this area needs long-range strategic foresight experiments, multi-component modelling based on non-linear dynamic (complex) systems analysis, and the use of advanced research tools from different disciplines.

In addition to a strategic re-profiling of urban areas into network cities, we also observe gradually a new transformation of cities into spatial-economic networks. Urban areas are becoming nodes in global city networks, in which regional and national borders play a less important role. This new development may turn into a fourth revolution in the history of human settlements. This may lead to the emergence of ,e.g., hierarchical networks or interconnected networks and this may prompt new research endeavours on complex network analysis (such as the analysis of black holes, scale-free networks etc.). City networks may become a source of creative and strategic research on the future of metropolitan areas.

The type of new research would be a great input for and complement to the strategic research endeavours which are at present being developed in the context of the JPI on Urban Europe. A close co-operation between NORFACE initiatives and JPI Urban Europe initiatives may be very beneficial for both sides and could lead to a new research profile in Europe of an unprecedented nature.