



THE ISSUE JOINT ACTION PLAN OVERVIEW

THE ISSUE PROJECT

THE ISSUE (*Transport, Health and Environment: Intelligent Solutions Sustaining Urban Economies*) is a *Regions of Knowledge* initiative, funded for three years through the European Commission's Seventh Framework Programme. THE ISSUE was launched in January 2012 and is being delivered by a Consortium of 13 core partners in four European regional research-driven clusters, together with the recent addition of 8 associate regions.

THE ISSUE aims to achieve greater integration, coordination and exploitation of the Research, Technological Development and Innovation (RTDI) capabilities within these clusters. It is focussing on the application of the Consortium's capabilities in ICT and downstream space data and services to support smart, green integrated transport and urban mobility.

JOINT ACTION PLAN

THE ISSUE has recently published its **Joint Action Plan (JAP)**. This sets out a coordinated RTDI Programme to address six key "**Societal Challenges**" in transport and urban mobility. The JAP is presented in the form of a "**Model Programme for 2014 to 2020**". This outlines priority RTDI actions that offer urban and transport planners and those responsible for Horizon 2020 and the European Structural and Investment Funds with new, viable, evidence-based and sustainable solutions to many of the operational transport problems facing cities and regions across Europe.

The implementation of the Model Programme will make a significant contribution to the EU "smart, green and integrated transport" agenda and deliver significant socio-economic impacts at the urban and regional levels.



Figure 1. THE ISSUE's Societal Challenges

THE ISSUE : "MODEL

1. Addressing Traffic Congestion and Associated Impacts on the Urban Environment and Infrastructure

The Challenge:

- Transport infrastructure reaching capacity in many cities.
- Intelligent Transport System (ITS) solutions as alternatives to major capital investment in new infrastructure.
- New solutions for efficient and effective management of existing urban networks, balancing the impact of increasing demand, delivering positive environmental impact and facilitating urban mobility.

THE ISSUE Priority RTDI Actions:

- Advanced Urban Traffic Management and Control systems.
- Intelligent Traffic Systems for safety and incident management.
- Intelligent Traffic Systems in transport planning.

2. Managing Urban Air Quality and Greenhouse Gas Emissions

The Challenge:

- Meeting EU directives and government regulations for air quality and greenhouse gas emissions.
- Increasing emissions from long distance HGV transport and urban traffic are major contributors to localised air pollution problems.
- Urban and regional climate change impacts - traffic emissions account for 25% of GHG emissions across urban Europe.

THE ISSUE Priority RTDI Actions:

- New integrated systems using space, airborne and in situ sensors to monitor air quality and identify sources of emissions in urban environments.
- New tools to support the regulation of emission levels.
- Satellite technology to determine greenhouse gas emissions.
- Advanced sensor monitoring and model forecasting of emission levels.

3. Improving the Utilization, Planning and Optimization of Urban and Regional Road Networks

The Challenge:

- European Environment Agency forecasts 80% of European citizens will live in urban areas by 2020.
- Growing urban sprawl, traffic congestion, overloaded infrastructure, noise and air pollution.
- Sustainable development of existing and planned road networks.
- Safe and efficient transport of people and goods, ensuring priority of public transport and counterbalancing the prevailing urban sprawl.

THE ISSUE Priority RTDI Actions:

- Integrated technologies and techniques for transport and physical planning.
- Innovations in data gathering, fusion and processing from multiple sources.
- Satellite and airborne-based technologies and Open Source GIS for transport and physical planning.

PROGRAMME 2014 TO 2020

4. Promoting Urban Transport, Mobility, Intermodality and Interoperability

The Challenge:

- Improvements in cost effectiveness and attractiveness of public and “soft” (cycling) transport modes.
- Seamless travel in the urban environment for all users, especially young people, elderly, disadvantaged and less able persons.
- Modal shift towards public and soft transport modes.
- Reduction in carbon footprint, noise and congestion; thereby enhancing the quality of urban life.

THE ISSUE Priority RTDI Actions:

- Localization-based services for mobile citizens.
- Tracking services for freight transport.
- Predicting and managing the behaviours of crowds.
- Innovative travel planning tools based on GIS Technologies.
- Smart integrated ticketing.

5. Increasing Safety, Security and Health for Urban Communities

The Challenge:

- Safety, Security and Health are at the heart of policies for Europe 2020.
- Reducing accidents, making streets safer and creating a better urban environment.
- Economic benefits from reduction in workloads in health services in accident and emergency centres and reductions in traffic congestion arising from incidents.

THE ISSUE Priority RTDI Actions:

- New monitoring and mapping systems to extend the amount and type of information that can be collected as inputs for road safety enhancement tools.
- New systems to control and manage the road network before, during and after incidents.
- Traffic systems that respond to community health issues.
- Security and location tracking for freight road traffic, including driver safety.

6. Introducing Disruptive Innovation for Sustainable Urban Mobility

The Challenge:

- Urban transportation decisions generally made vertically, with insufficient collaboration between political decision makers, users and system providers.
- More effective consultation between stakeholders leading to greater technical compatibility and integration of different transport modes and improved policy making and planning for sustainable urban transport.

THE ISSUE Priority RTDI Actions:

- SMART solutions for sustainable cities, regions and transport networks, including:
 - Triple-helix collaborations (industry, universities, public sector) to foster more effective organisational collaborations;
 - ITS solutions for changing user behaviour and overcoming barriers to modal shift;
 - Measures to overcome existing barriers and improve uptake of Low Carbon Vehicle Technology.



IMPLEMENTING THE JOINT ACTION PLAN

THE ISSUE Joint Action Plan provides a framework of RTDI actions that cover the highest priority objectives in the sustainable transport and mobility sector where the innovation and exploitation of RTDI capabilities in THE ISSUE Consortium can offer major advances towards operational implementation and market growth. The close academic-industry partnerships and alignment with the transport strategies of regional and local authority end-users ensures a strong regional focus to the RTDI priority actions identified in the **Model Programme**.

Many of the relevant technologies identified in THE ISSUE's **Model Programme** are already at high technology readiness levels, which demonstrate the high potential for their exploitation in the transport and mobility sector. However, in some cases barriers to uptake exist through resource limitations, lack of innovation and the need for definitive demonstration of operational capability. THE ISSUE will seek to address these barriers through carrying out pilot studies, demonstration programmes and pre-operational roll-out at regional levels to demonstrate market readiness.

New enabling and cross-cutting technologies, accessible through the industry landscape and the business partners within THE ISSUE Consortium, will support the delivery of the **Model Programme**. Furthermore, the research excellence of the universities and research institutes in THE ISSUE regional clusters provides access to a wide range of innovative research and blue skies thinking that will also be brought to bear on the objectives of the **Model Programme**.

The delivery of the **Model Programme** will be primarily through the research clusters of THE ISSUE Consortium, but the outcomes are widely transferable. Accordingly, the JAP incorporates plans for accessing funding sources to support delivery of the **Model Programme**, particularly through future calls under **Horizon 2020, Structural and Investment Funds** as well as national and regional programmes.

THE ISSUE PROJECT CONSORTIUM

THE ISSUE Project is being implemented by a Consortium of 13 core partners in four European regional research-driven clusters in the East Midlands (UK), Midi-Pyrenees/Aquitaine (France), Molise (Italy) and Mazovia (Poland). These are all "Triple Helix" cluster partnerships from business, academia and local/regional authorities.

THE ISSUE Consortium has recently expanded through the involvement of eight new region, Andalusia (SP), Basque Country (SP), Calabria (IT), Attica (GR), North-West Region of Romania (RO), Northern Ireland (UK), Primorje-Gorski (HR) and Uusimaa (FI), who have joined as associates to the Project as a step towards building their own research clusters. More regions will join THE ISSUE Consortium through its Associate Regions programme as the first steps towards setting up a sustainable network for the future beyond the lifetime of this specific Region of Knowledge project.

FURTHER INFORMATION

40 Case Studies of current RTDI actions by THE ISSUE Consortium is published in THE ISSUE-NEREUS joint publication. "Space and ICT Applications supporting Smart, Green, Integrated Transport and Urban Mobility". October 2013. Visit www.theissue.eu

