Overarching objectives

- Empower Earth Observation (EO)-enabled informed decision making
- Align national agendas and programmes, ongoing smart city projects
- Contribute to the implementation of the GEO Strategic Plan (2016-2025), optimize exploitation of Copernicus data and core services
- Augment cross-validated EO information and synergies between different platforms/services for city scale applications
- Reinforce interoperability via the use of the GEOSS Common Infrastructure (GCI) and the adoption of GEOSS Data Sharing and Management Principles

Expected impacts

- **Reinforce European Leadership within GEO post-2015** by bringing together EO-expertise and smart-city methods towards sustainable urban development
- **Build resilient societies** by identifying and facing cities' vulnerabilities and by supporting policies to mitigate the impacts of urbanization
- **Trigger economic benefits and growth** by canalizing technology, government and society into the smart city model, capitalizing on EO investments, creating cost-effective solutions and mitigating costs from urban pressures
- **Empower decision making and public awareness** by facilitating access to the information needed, in a timely, robust, understandable and open manner
- **Support the implementation of the Sustainable Development Goals (SDGs)** by realizing the potential of EO in the context of smart cities and urban resilience

A4_artdesign, info@a4artdesign.gr

FOLLOW OUR ACTIVITIES

Website: http://smurbs.eu/ | Twitter: @SMURBSproject

ERA-PLANET – Strand 1
"Smart Cities & Resilient Societies",
under H2020-SC5-15-2015 -
Strengthening the European Research
Area in the domain of Earth Observation
Type of action: ERA-NET-Cofund
Grant agreement no: 689443

GROUP ON EARTH OBSERVATIONS

Copernicus

CONTACT INFO
Evangelos Gerasopoulos
Project Coordinator
IERSD/NOA Athens, Greece
email: egera@noa.gr
smurbs.project@gmail.com

SMURBS

ERA-PLANET

SMart URBan Solutions for Air Quality, Disasters and City Growth

Challenge addressed

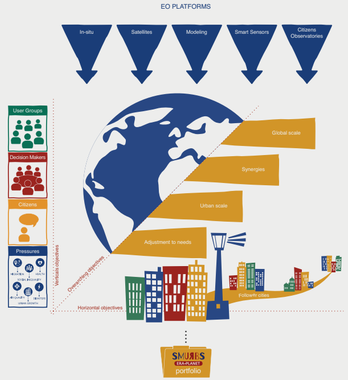
According to the UN "World Urbanization Prospects: 2014 Revision" in today's increasingly global and interconnected world, **over half of the world's population lives in urban areas**, while the coming decades will bring further profound changes to the size and spatial distribution of the global population, also due to increasing migration processes. The continuing urbanization is projected to add 2.5 billion of urban population by 2050, and the **world population living in cities to increase to 66%**. Under these circumstances, **sustainable development challenges will increasingly concentrate in cities**.

Ultimate goal

Promote and coordinate the **"smart city" concept** into a European network of cities, serving the need for a common approach to enhance **environmental and societal resilience** to urban pollution, natural/manmade disasters and uncontrolled city growth, while at the same time setting the stage for integration of the still fragmented, multi-scale and multi-temporal Earth Observation (EO) resources, into information and decision making tools for individuals and local governments, in support of GEOSS and the Sustainable Development Goals (SDGs).

Concept and methodology

- **Integrate still-fragmented EO, into information and decision making tools** for individuals and local governments, engaging citizens in collecting and sharing data
- **Stimulate strategic planning** by reaching out to local authorities, urban planners, city-level stakeholders to map what is out there and understand what the users want
- **Refocuse partners' expertise under the smart city banner,** to effectively interact and address the perplexed, urban environmental pressures
- **Develop a portfolio of Smart Urban Solutions** of tested, fine-tuned and inter-disciplinary products, tools and services for urban planners and decision-makers
- **Create a constellation of European and overseas cities** that employs, makes replicable and assures the cost-effectiveness of SMURBS products.



Pressures addressed

Air quality – unfold the full range of technologically available methods for the next generation of urban monitoring capacities, pollutants of emerging importance and high resolution city-scale modeling, adjusted to modern needs of AQ management.

Disasters – address natural and anthropogenic disaster affecting cities or peri-urban neighborhoods, covering all phases of the disaster management cycle, i.e. preparedness and planning, early warning, emergency response and post-assessment.

Urban growth – exploit the capacity of the Copernicus space missions to identify and define urban development EVs and indicators (incl. SDG relevant) to address trends in urban growth, urban density and sprawl, to develop novel city management methods.

Migration – identify patterns and processes in support of decision makers to prepare for, withstand and respond faster to the increasing migration process.

Health – exploit EO to address health related monitoring needs, in order to facilitate the potential weighing of mitigation options, taking additionally into account several socioeconomic factors.

Social inequalities – tackle with multiple aspects of social inequalities in human exposure to environmental pressures, with emphasis on vulnerable population groups .

"Smart City" network

The motivation for SMURBS rises from its aspiration to **promote and coordinate the "smart city" concept** primarily into a European network of cities but also to cities overseas, illustrating the experience and learnings from a number of cities at different stages on the smart city journey.

- A group of cities of varying sizes, geographies, environmental pressures and levels of progress in terms of 'smartness' are selected with a **multi-criteria analysis**
- Specific stakeholders and citizens' needs and requirements are gathered, clustered and classified allowing for the **hierarchy of urban pressures** and the optimum **issue-to-solution correspondence**
- Cities implementing an integrated plan of a series of solutions, to one or more of the pressures addressed, act as **Lighthouse Pilots**, while **Follower cities** observe, interact and contribute to the exploitation of the smart city concept, paving the ground for future implementation of SMURBS practices

SMURBS serves as **umbrella for "smart city" initiatives** in the EU relevant area, fosters networking, assures replicability and exploitation of existing and developed capacities.