The DECUMANUS project has received funding from the European Union’s Seventh Framework Programme for research, technological development and demonstration under the grant agreement no 607183.

**URBAN GOVERNANCE STRATEGIES**

Smart governance sustaining urban futures

**How much does climate change affect our cities?**

**How green are our cities?**

**How high is the air pollution in our cities?**

**How does bad air quality affect our daily life?**

**How much energy do our buildings lose?**

**How many people are affected by climate change effects?**

**AIR QUALITY | HEALTH | ENERGY EFFICIENCY | URBAN GROWTH | IMPACT ASSESSMENT**

**DECUMANUS contact**

To discover how DECUMANUS services can more effectively address the societal challenges facing your city contact:

Indra Sistemas S.A.
C/ Mar Egeo, nº 4. Polígono Industrial, nº1
28830. San Fernando de Henares. MADRID
SPAIN

email: jpecci@indra.es

**DECUMANUS project partners**

**DECUMANUS city partners**

"Climate change management requires reliable knowledge about the adequate scale of adaptation measures and, on the other hand, how the emissions from energy use can be effectively decreased. This is exactly what the DECUMANUS services will deliver [...]. Besides, we can use this data in monitoring the implementation of our regional climate strategies."

Johannes Lounasheimo, Climate Specialist, HSY

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City of Madrid
Spain

City of Antwerp
Belgium

City of Helsinki
Finland

City of Milan
Italy

City of Kensington & Chelsea
United Kingdom

City of Helsingborg
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The 21st-century is also witnessing the impact of other societal challenges, including climate change, based on corresponding research and development gaps necessary to understand the impact of global climate change on the local urban environment and to identify key adaptation challenges using urban climate atlases. It also assists in identifying vulnerable hotspots over cities.

The service provides information to detect energy waste due to anthropogenic heating and cooling, and provides a quantitative estimate of integral light pollution. This information can be used to locate areas with excessive light levels (thermal loads). To quantify where energy is consumed in specific areas of the city, and to identify high potentials for solar panel installation. Furthermore, the service can be used to monitor light emissions over time, for example in evidence-based policy support before, during, or after large-scale retrofitting campaigns across the city.

The service demonstrates how urban climate solutions respond to different future climate scenarios and how human health could be affected identifying vulnerability hotspots and risk adverse to the health service users to understand the health impact of the global climate change for the local urban environment, identifying vulnerabilities, and how human health may be affected by changes reduced by global warming emissions. The health service focus is on the direct health effects of global climate change in terms of temperature and air quality, but also on the potential of urban design and engineering strategies to improve human health.

The service provides information on the night-time (residential) population based on various population data, such as a variety of land data, people counting data, with works, the service further derives population distribution information on buildings. As both scenarios are hereby considered, for example the outcomes of urban climate models and air quality models and flood prediction model is used to derive population. The service comprises indicators describing the development of cities, such as the generation of urban climatic conditions and the exploration of the greenhouse gas emissions. This information can be used to support the development of new services in response to the needs of the individual city.

The service supports decision makers to understand the impact of climate change scenarios and how human health could be affected by changes. It also assists in identifying key adaptation challenges using urban climate atlases. It also assists in identifying vulnerable hotspots over cities.