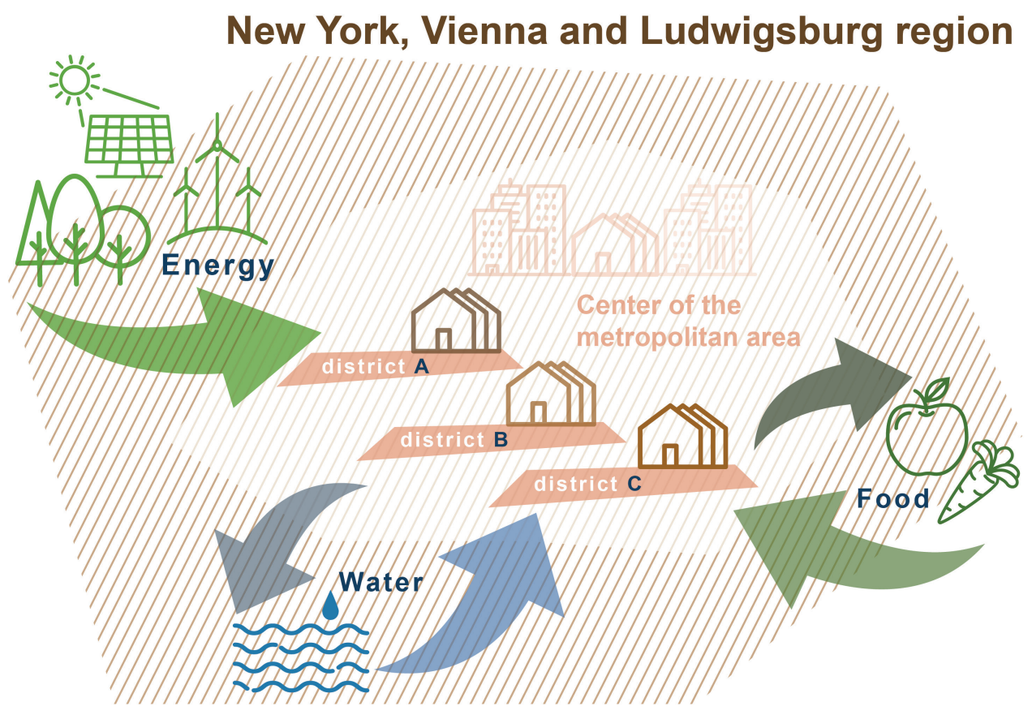
IN-SOURCE

As cities across the globe confront rapid change, they face common metabolic challenges to provide Food Water and Energy (FWE) supplies. IN-SOURCE will develop a shared urban data and modeling framework to help decision makers (such as governments, utilities, developers, investors) identify, quantify and visualize FWE systems and their interrelations for urban strategic planning and FWE infrastructure investments. IN-SOURCE is based on three case studies in Ludwigsburg (Germany), New York (US) and Vienna (Austria), and will examine scenarios for an integrated CO2-neutral and sustainable infrastructure as well as the scalability and transferability of prototype solutions to other cities.



Objective

Development and application of tools for case studies in order to quantitatively assess the predicted impact of changes in urban land use due to population, climate change, the energy transition and the challenges of providing a truly resilient infrastructure

Approaches

Using a bottom up approach to model urban system development, combining aggregated results with large scale (mainly regional, up to national) system models

Involving urban stakeholders throughout the process, including generating indicators and data, developing tools to model and visualize the impacts and contributing to shaping strategies

Considering urban challenges in very different case studies and thus improving the transferability of the local results to global urban areas

Expected results and impacts

CityGML Application Domain Extensions (ADE) will be made available as an open specification, allowing any interested institution to adopt it and develop data resources in a shared data model

Stakeholder involved as working consortia for collaborative planning of local FWE infrastructure projects

Creation of shared urban data and modeling framework with specialized tools for applications in food, energy and water interactions

Methodology and software tool set will be made available for use by further cities and regions

IN-SOURCE
– INtegrated analysis and modelling for the management of sustainable urban FWE ReSOURCEs
Duration: 2018–2021
Internet: jpi-urbaneurope.eu/project/in-source/
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Budget: 1.518.657 €
Partners: Hochschule für Technik Stuttgart, New York Institute of Technology, AIT Austrian Institute of Technology, City University of New York, Landkreis Ludwigsburg, Alpen-Adria Universität Klagenfurt, bw-engineers GmbH

Involved cities

- New York (USA)
- Vienna (Austria)
- Ludwigsburg Region (Germany)

Sustainable Urbanisation Global Initiative (SUGI)/Food-Water-Energy Nexus

The Sustainable Urbanisation Global Initiative (SUGI)/Food-Water-Energy Nexus is a call jointly established by the Belmont Forum and the Joint Programming Initiative Urban Europe.
The cooperation was established in order to bring together research and expertise across the globe to find innovative new solutions to the Food-Water-Energy Nexus challenge.

jpi-urbaneurope.eu **www.belmontforum.org**

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