



interoperable Smart City services through an Open Platform for urban Ecosystems

Planning Times: social, inclusive and smart cities?

i-SCOPE - interoperable Smart City services through an Open Platform for urban Ecosystems





Duration: 2012-2014

Objective: An open platform that develops three 'smart city' services: improved inclusion, optimization of energy consumption, environmental monitoring. Based on interoperable 3D UIMs, i-SCOPE delivers an open platform on top of which it develops, within different domains, three 'smart city' services. These will be piloted and validated, within a number of EU cities which will be actively engaged throughout the project lifecycle.

Funding: ICT PSP

www.iscopeproject.net

i-SCOPE - interoperable Smart City services through an Open Platform for urban Ecosystems



SMART CITIES? SMART CITIZENS?

In the last years the EU has been concentrating on developing SMART focusing on:

- ▶ ICT driven development
- ▶ Human capital

The aim is to improve sustainability, local economy and knowledge development.

WHAT IS i-SCOPE?

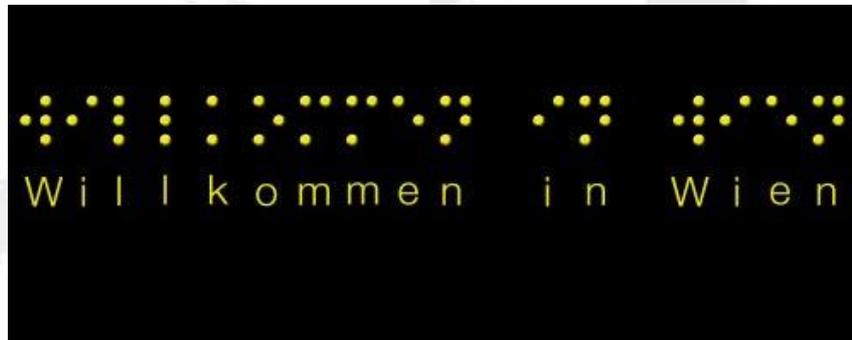
i-SCOPE is an EU funded project within the ICT PSP program that started in the beginning of 2012 and will have a duration of 3 years.

i-SCOPE delivers an open platform with three 'smart city' services:

- ▶ Improved inclusion and personal mobility of aging and diversely able citizens through an accurate city-level disable-friendly personal routing service.
- ▶ Optimization of energy consumption through a service for accurate assessment of solar energy potential at building level.
- ▶ Environmental monitoring through a real-time environmental noise mapping service.

ACCESSIBLE ROUTING

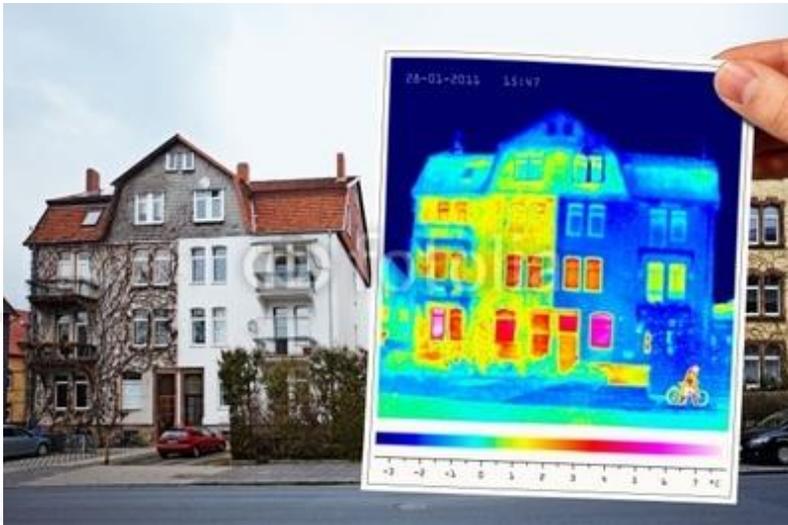
- ▶ **For users with mobility impairment:** User-friendly instructions shown on top of images
- ▶ **For blind and high visually impaired users:** Easy to read map (clearly highlighting only most important items, high contrast etc.).
- ▶ **For all users who cannot see/view small displays of mobile devices very well:** the digital map is automatically described in words; output is text which can be read out loud with a screen-reader; the users gets voice descriptions/instructions and (optionally) output through Braille display



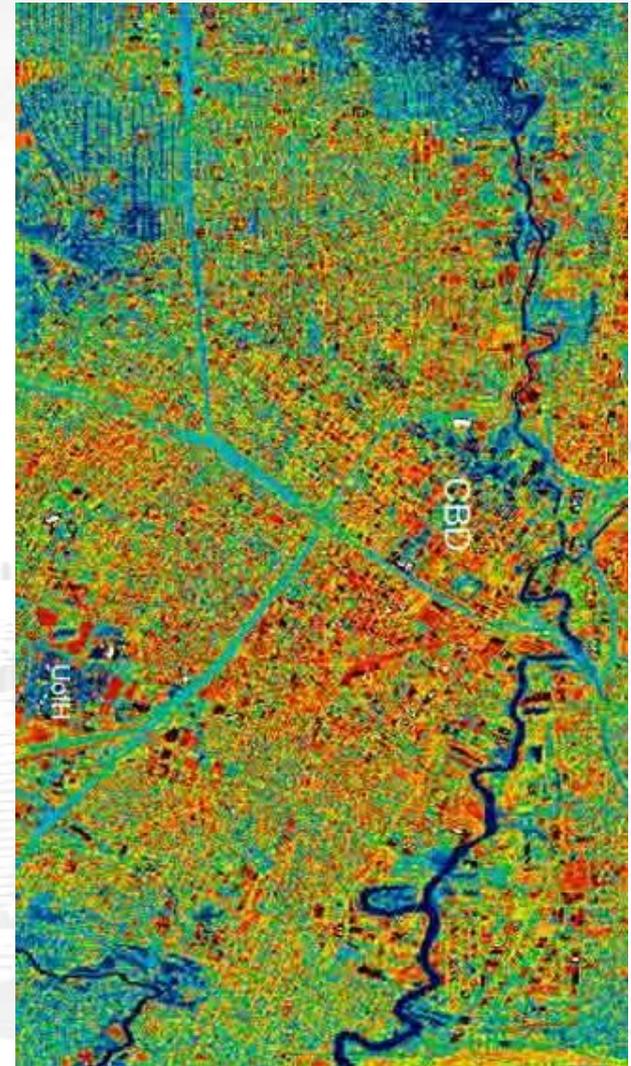
SOLAR ENERGY

Envisioned scenarios:

- ▶ City level solar potential assessment
- ▶ Heat dispersion mapping
- ▶ Heat dispersion surveying

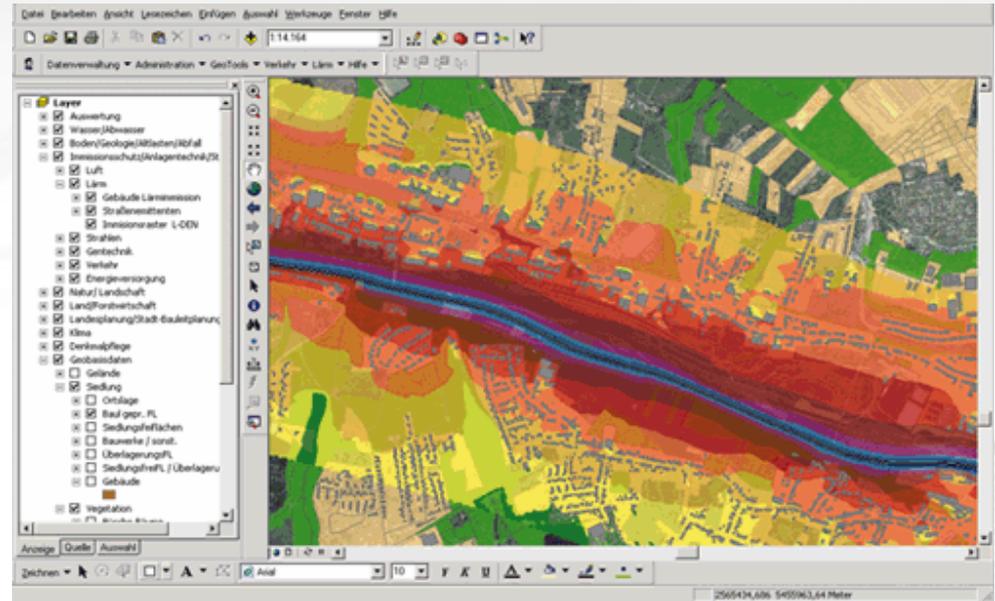


Thermal imaging of a building

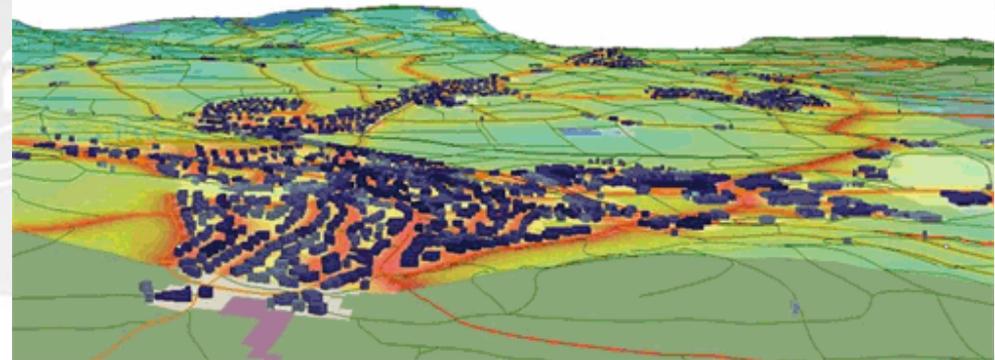


Thermal mapping of Houston

NOISE MAPPING



3D scene depicting how the possible result of the noise mapping and simulation services



i-SCOPE - interoperable Smart City services through an Open Platform for urban Ecosystems

THE PILOT CITIES

BAIA – Municipality of Baia Mare,

DRAMA – Municipality of Drama,

GSYS - Malta

INDJ - Municipality of Indjija,

INFOTN – Trento,

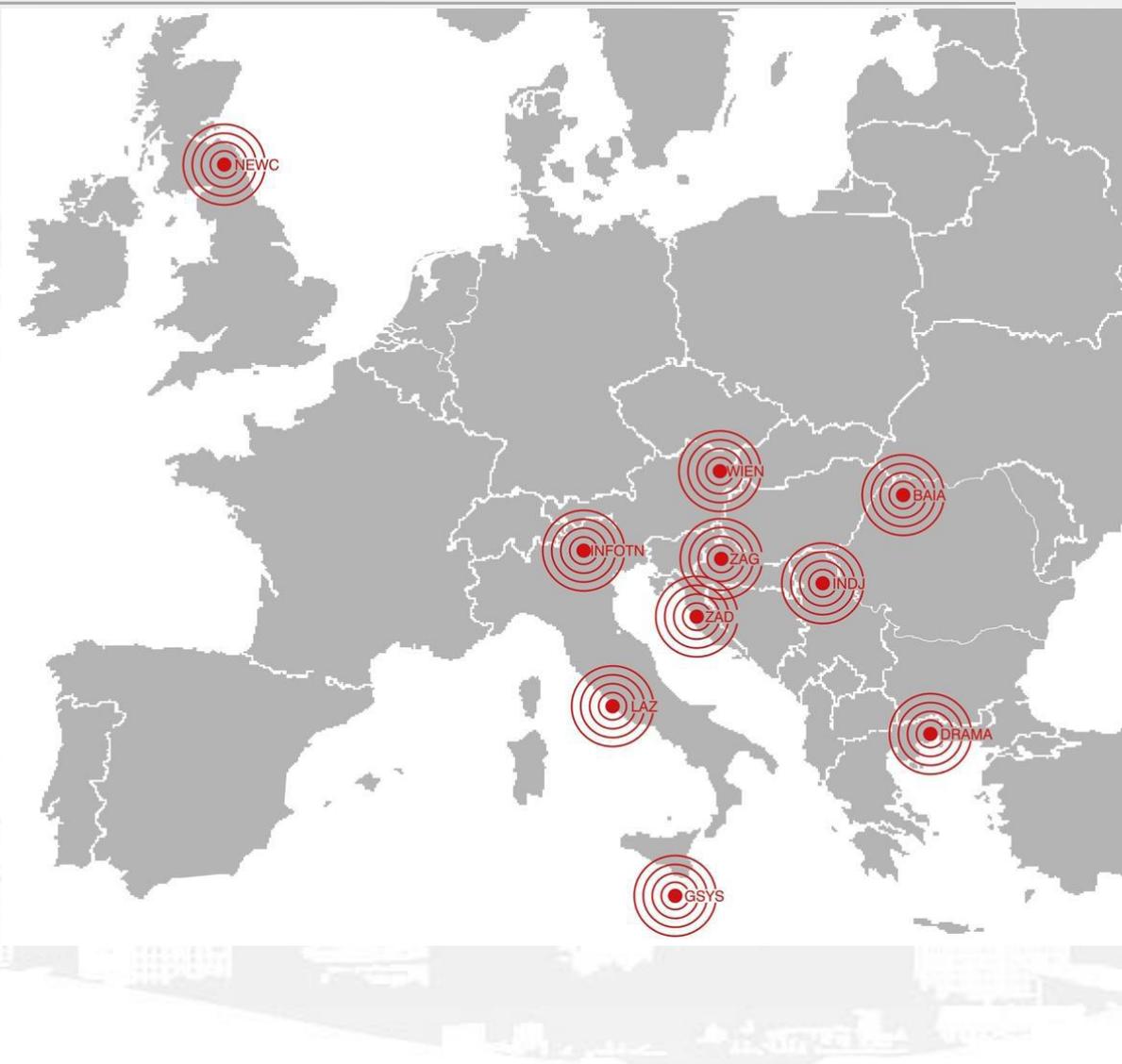
LAZ – Lazio Region / County.

NEWC – Municipality of Newcastle,

WIEN – Municipality of Vienna,

ZAD – Zadarska County,

ZAG – Municipality of Zagreb,



i-SCOPE - interoperable Smart City services through an Open Platform for urban Ecosystems

WHY IS i-SCOPE USEFUL TO CITIZENS?

3D Urban Information Models (UIM) can be used by citizens to:

- ▶ Help making decisions
- ▶ Promote inclusion among various users groups (e.g. elder or diversely able citizens) through services that account for barriers at city level.
- ▶ be involved in collecting geo-referenced information based on location-based services at urban scale.

HOW DOES i-SCOPE WORK IN VIENNA?

- ▶ The Vienna Pilot will be an accessible routing service provided by the Stadt Wien website.
- ▶ It will have a PC and smart phone application, so users can prepare the trip at home and receive guidance along the way.
- ▶ The pilot in Vienna will develop accessible routing in the first district with special user profiles:
 - partially sighted
 - blind
 - colour blind
 - wheel chair users

Vienna 3D City Model



i-SCOPE - interoperable Smart City services through an Open Platform for urban Ecosystems

All the 1st District of Vienna has high quality data with also information on the inclination of the roofs...



i-SCOPE - interoperable Smart City services through an Open Platform for urban Ecosystems



© Ron Leishman - www.CigartCt.com/1044400



i-SCOPE - interoperable Smart City services through an Open Platform for urban Ecosystems

i-SCOPE for the visually impaired

- ▶ The i-SCOPE service transforms the vector information of the map into text that can be read by a screen reader.
- ▶ How does it work?
 - The user accesses the Stadt Wien website
 - The user will define its profile (blind, partially sighted, colour blind)
 - The user will receive a specific map according to the user profile
 - The user can also receive additional information as Points of Interest that can be chosen (shops, parks, public buildings, etc)



i-SCOPE - interoperable Smart City services through an Open Platform for urban Ecosystems

i-SCOPE for the Wheel Chair users

▶ The i-SCOPE service will provide a basic routing service taking into consideration:

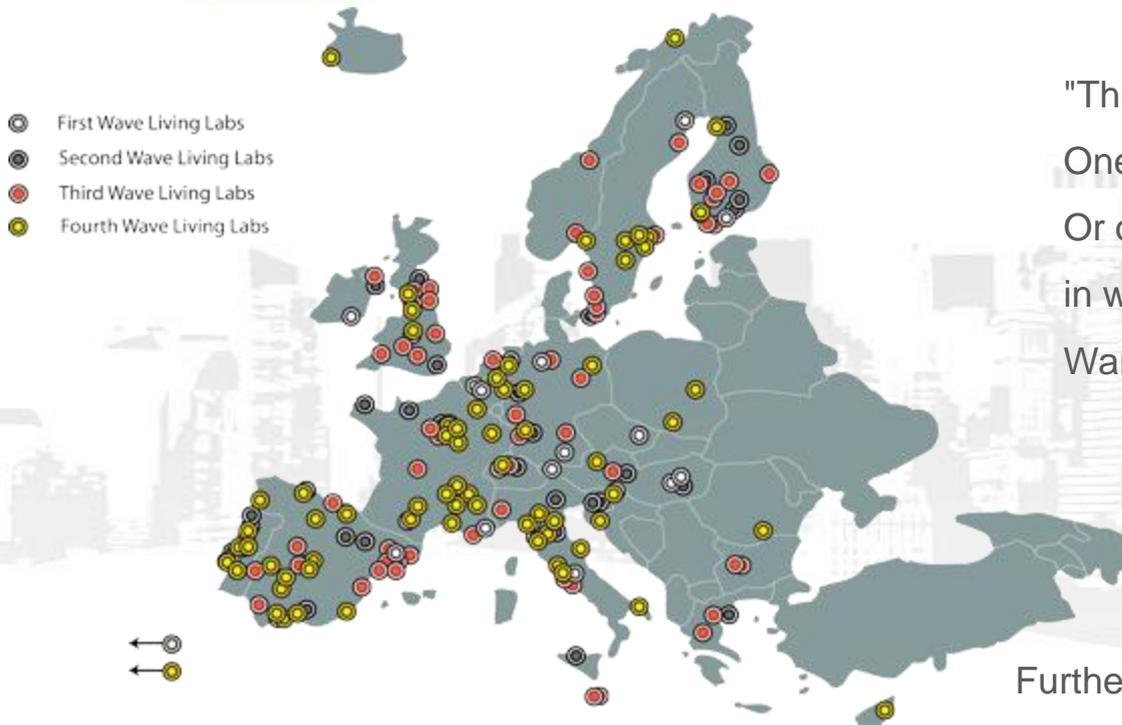
- inclination of the streets
- distances
- possible dangers (pavement discontinuities, lack of access ramps, etc)

▶ How does it work?

- The user accesses the Stadt Wien website
- The user will define its profile
- The user will receive a specific map

European Network of Living Labs

Vienna will develop a Living Lab within the i-SCOPE project, where the public administration together with companies and citizens collaborates to improve Vienna



"There are two ways of being creative.
 One can sing and dance.
 Or one can create an environment
 in which singers and dancers flourish."
 Warren G. Bennis

Further information: www.openlivinglabs.eu

i-SCOPE - interoperable Smart City services through an Open Platform for urban Ecosystems

SMART ACCESSIBLE ROUTING IN YOUR CITY?

Strength: Technologies are already available

Weakness: Data may not be always available or not in good quality

Opportunity: Improve accessibility of the targeted user groups

Threat: Lack of involvement of citizens and stakeholders

WHAT DO YOU THINK?

SOME INITIAL INPUT FOR DISCUSSION

- ▶ Would you use this service and do you think it could be helpful?
- ▶ What would you expect as a basic ground from the i-SCOPE service?
- ▶ Do you think it could be useful to start working together on this?
How?
- ▶ Questions and/or comments?

GRAZIE!

www.iscopeproject.net



i-SCOPE - interoperable Smart City services through an Open Platform for urban Ecosystems

