

The European Commission's science and knowledge service

Joint Research Centre

Sharing knowledge and practices of urban development European and Global perspectives:

Measuring SDGs at local level

Vladimír Sucha
Director-General
Joint Research Center
European Commission

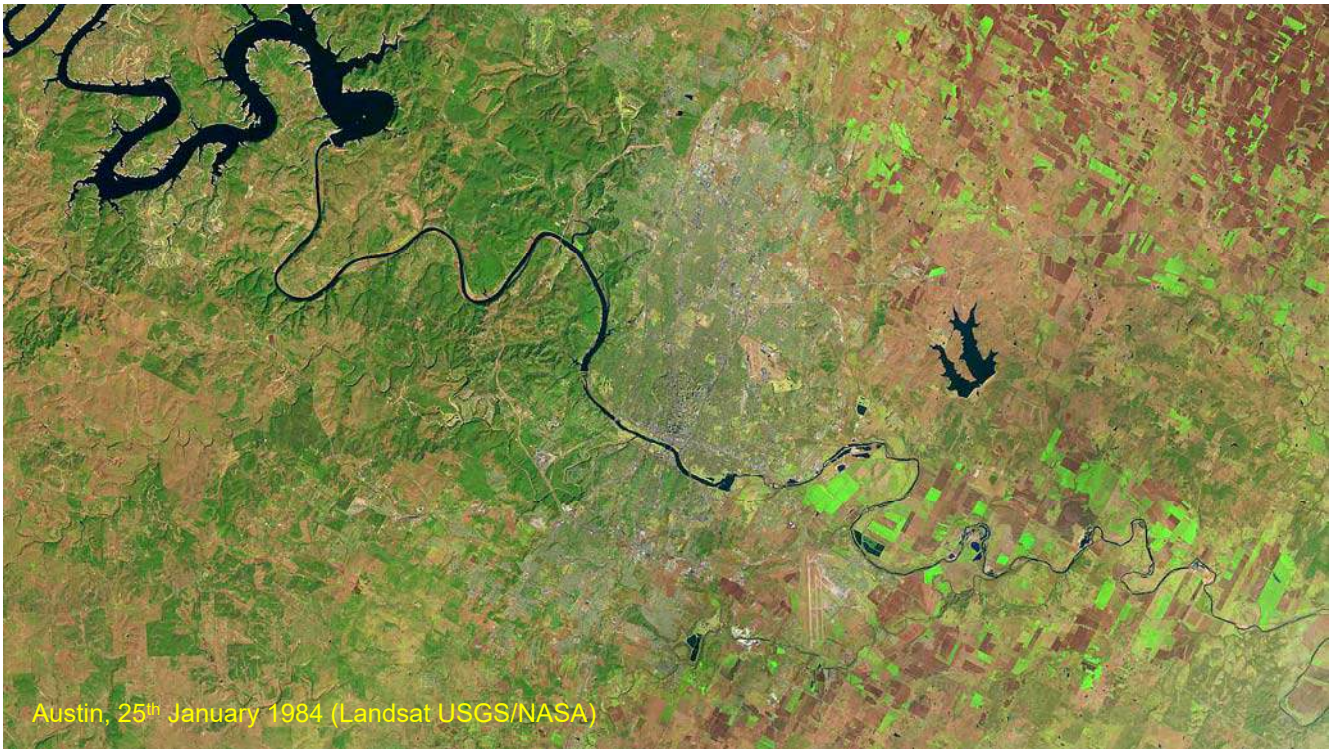
Urban Nexus: Harnessing Science, Technology and Innovation for Sustainable Urban Cities



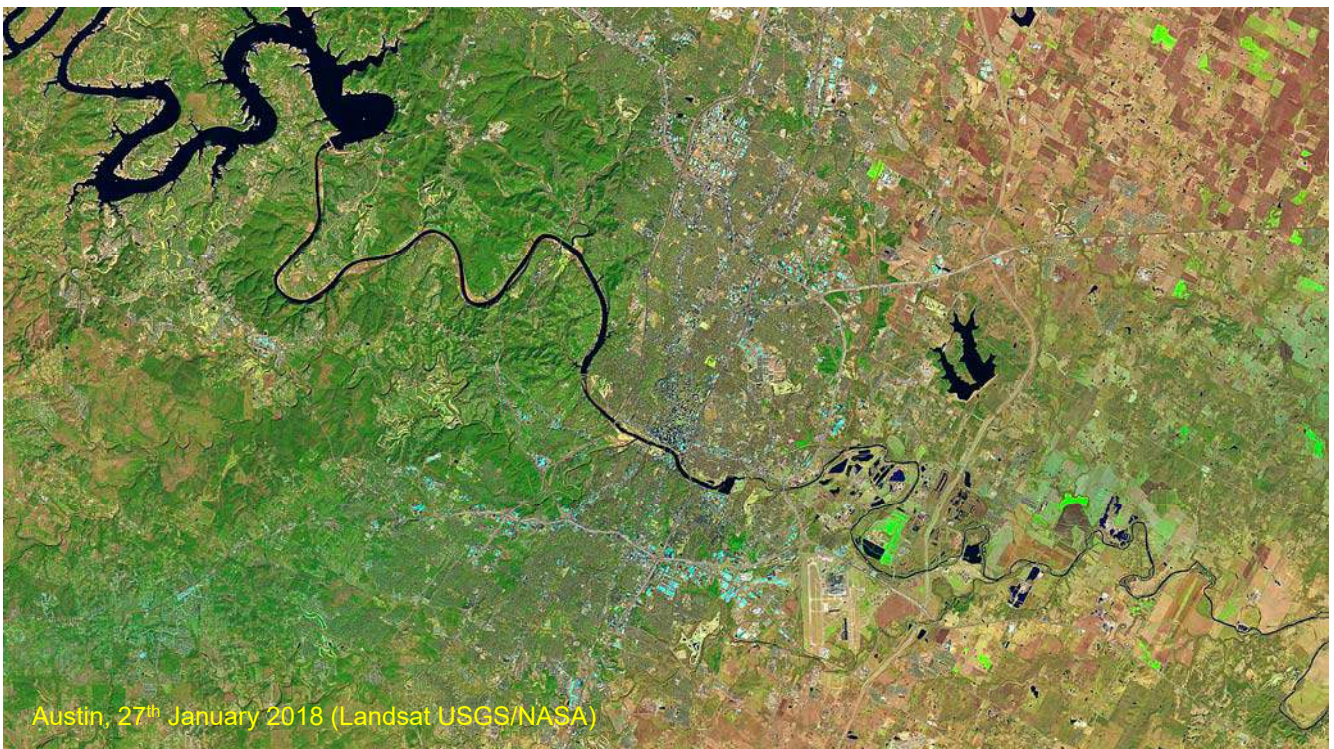
The % of world population and absolute number residing in urban areas



Source (photo: "Ginza area at dusk from Tokyo Tower" by Chris 73, statistics from United Nations, Department of Economic and Social Affairs, Population Division (2014). World Urbanization Prospects: The 2014 Revision)



Austin, 25th January 1984 (Landsat USGS/NASA)



Austin, 27th January 2018 (Landsat USGS/NASA)



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Discover the Urban Agenda for the EU (CITIES Forum 2017) on YouTube
<https://www.youtube.com/watch?v=moZLNpjBG7g>

Urban Agenda for the EU

maintaining economic productivity & innovation

improving quality of life

addressing environmental challenges

addressing citizens' social and physical problems



a key delivery mechanism of the Sustainable Development Goals within the EU



Sustainable Land Use



Public Procurement



Energy Transition



Climate Adaptation



Urban Mobility



Digital Transition



Circular Economy



Jobs and Skills in the Local Economy



Urban Poverty



Inclusion of Migrants and Refugees



Housing



Air Quality



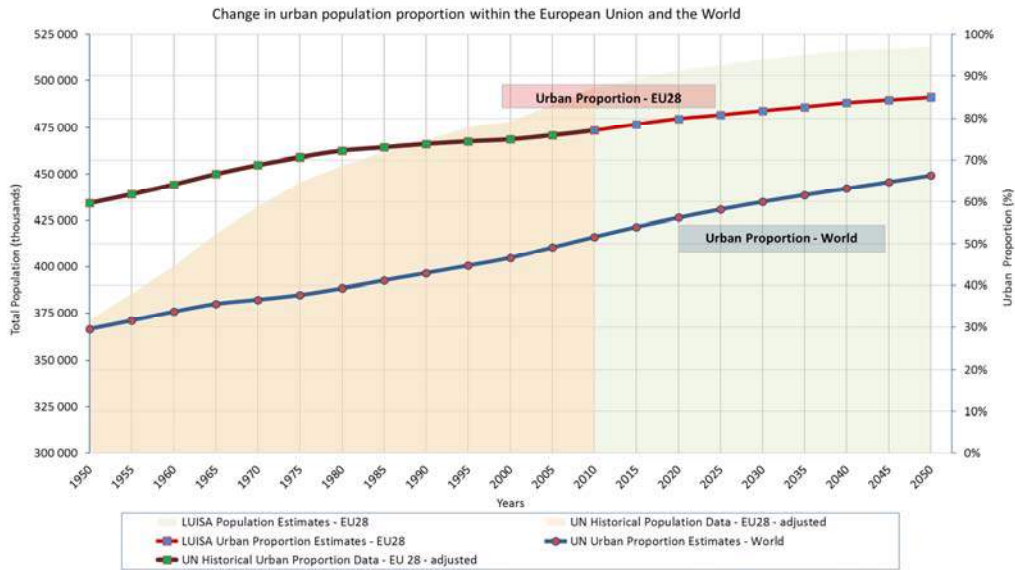
Building a Knowledge base for the SDGs



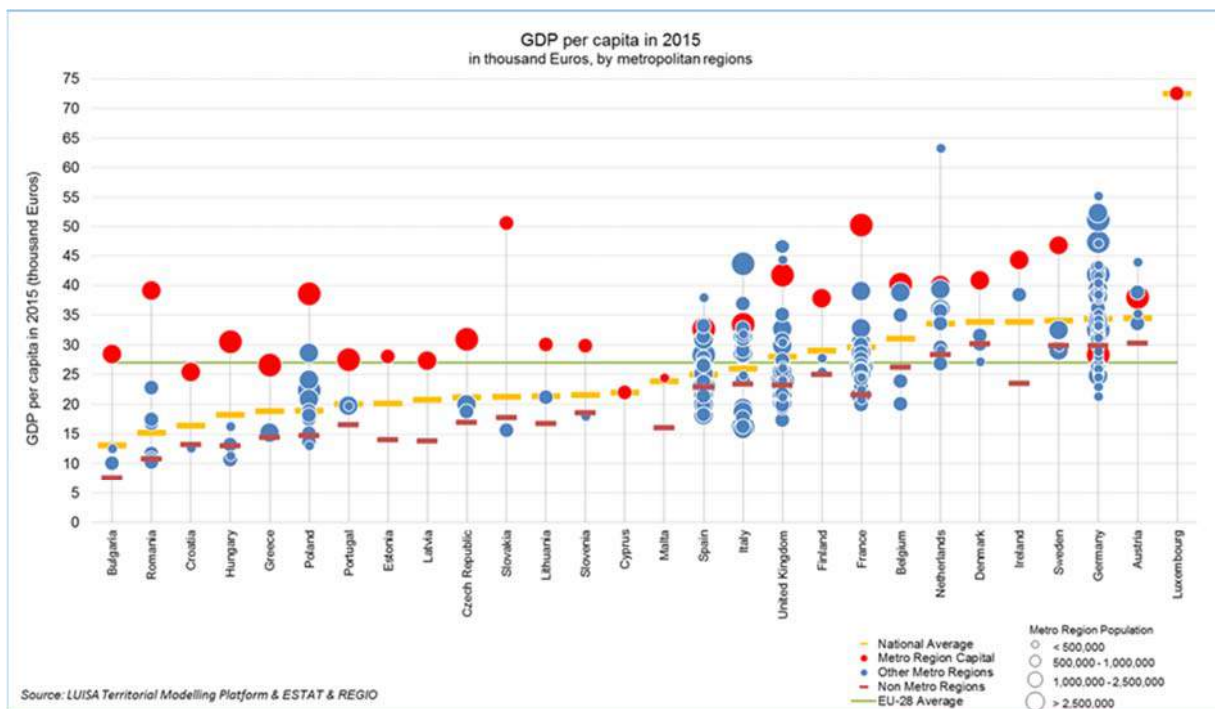
Models Geospatial-databases Monitoring Capacity building

Web services Indicators Reporting tools Assessments



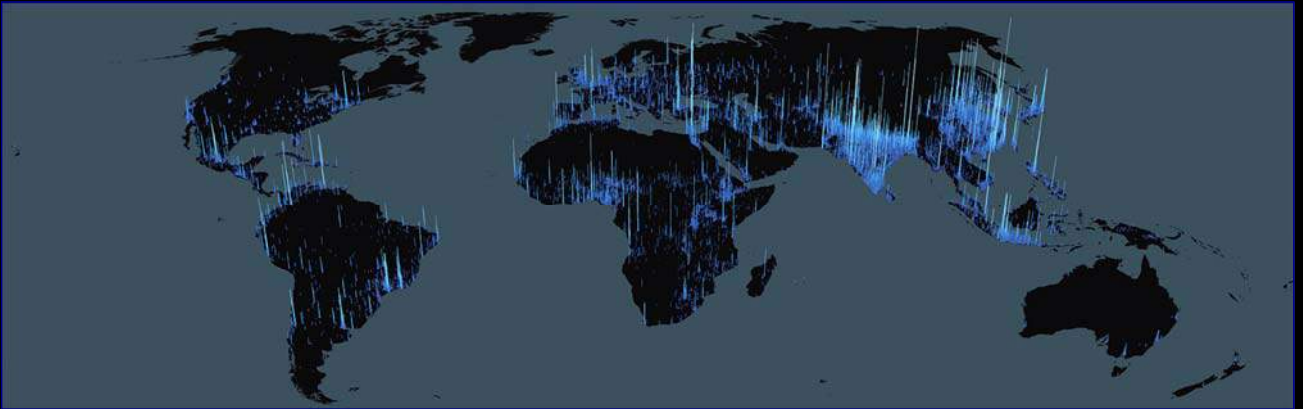


In 2015 75% of the population in Europe lived in urban areas, in 1950 the figure was 60%, by 2050 it will reach 85%.





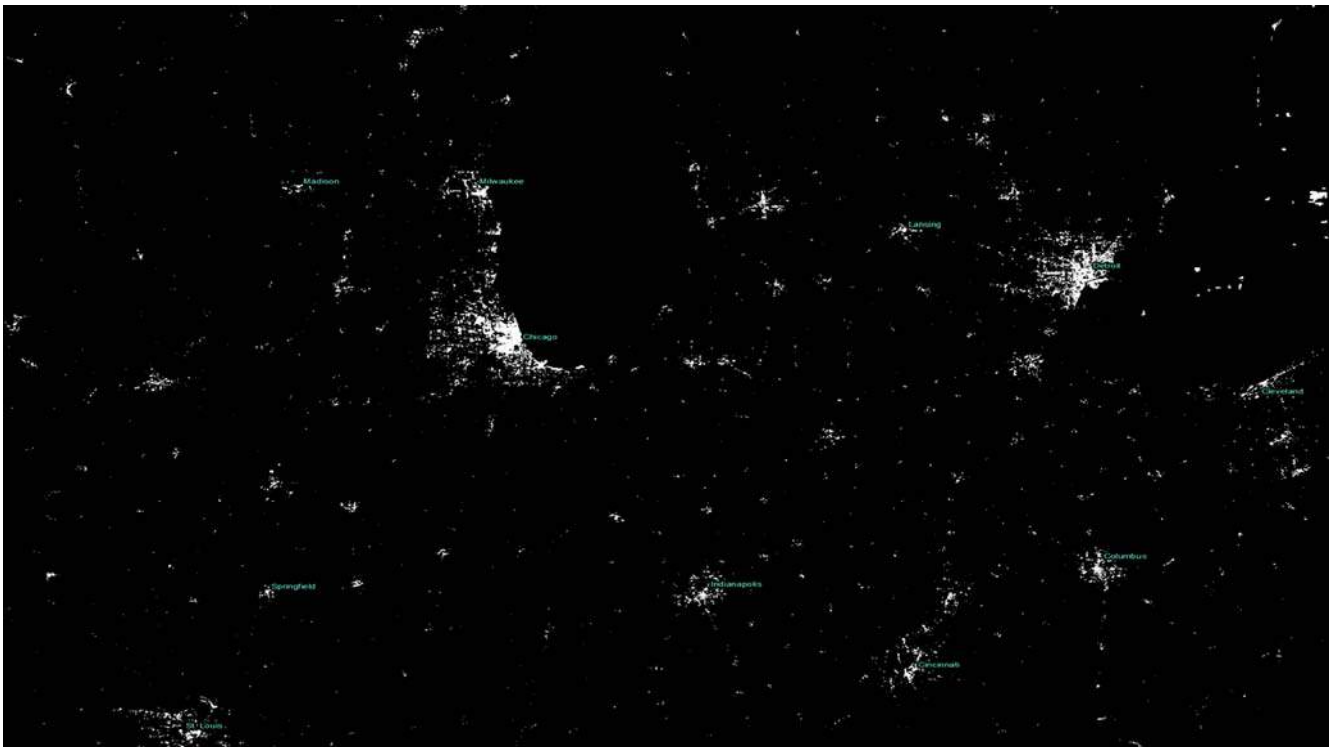
Population and Global Human Settlements Layer

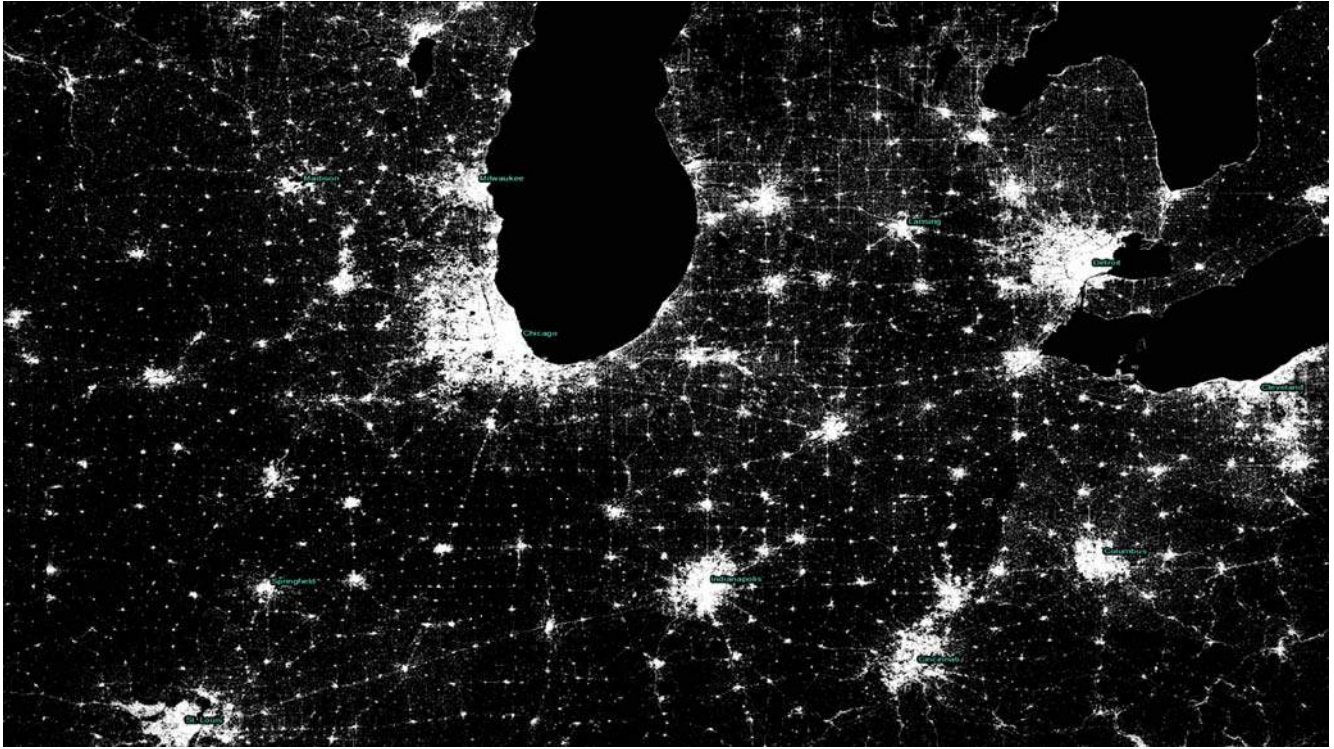


Austin airport (TX) 25th January 1984 Landsat USGS / NASA

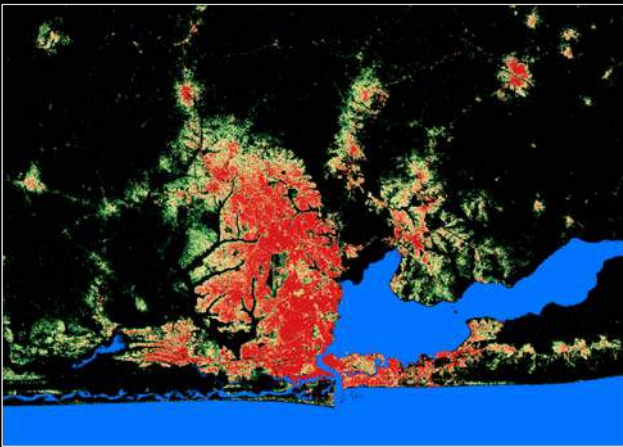


Austin airport (TX) 17th January 2018 Landsat USGS / NASA

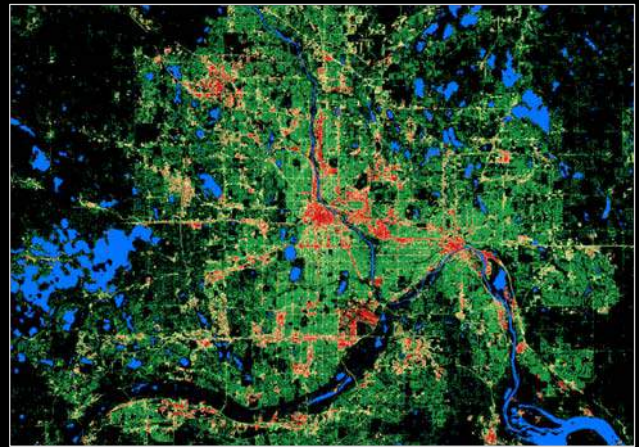




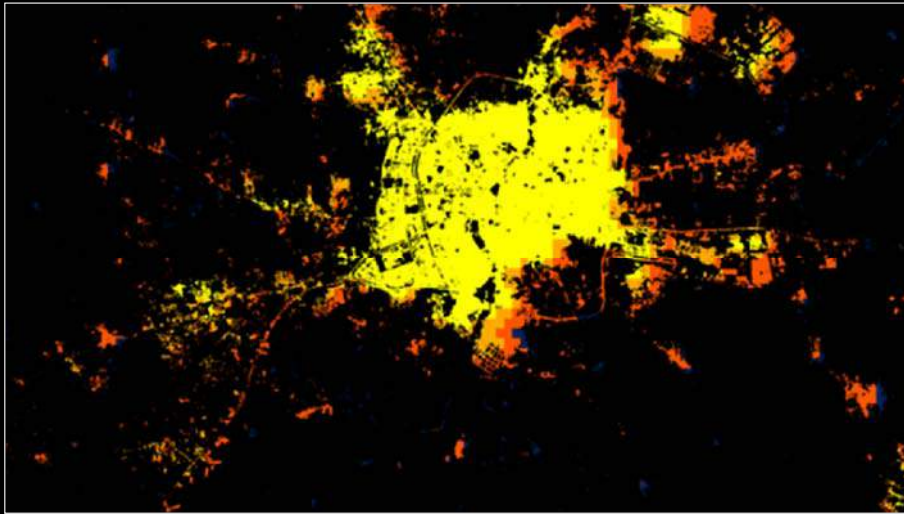
Objective city-level comparisons: Green areas in 2015



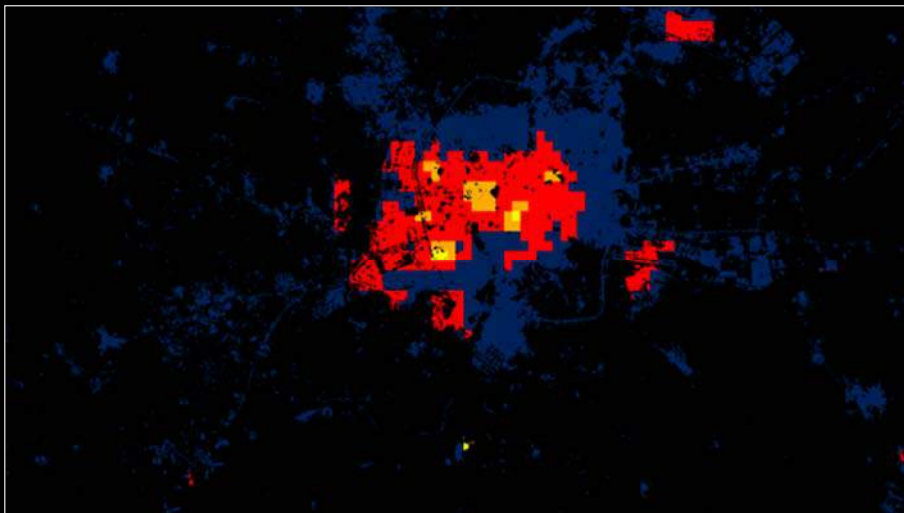
Lagos, Nigeria: ~ 5 million inhabitants



Minneapolis, US: ~ 0.5 million inhabitants



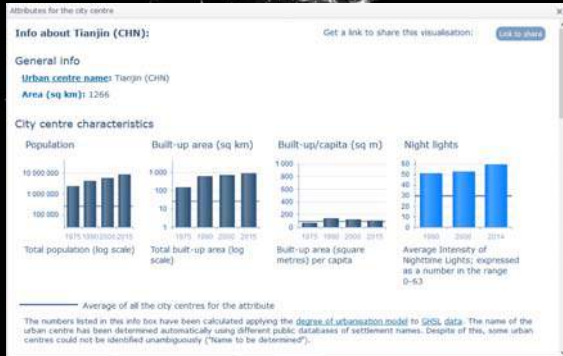
Aleppo, Syria, April 2012 GHSL combined with night lights



Aleppo, Syria, May 2015 GHSL combined with night lights

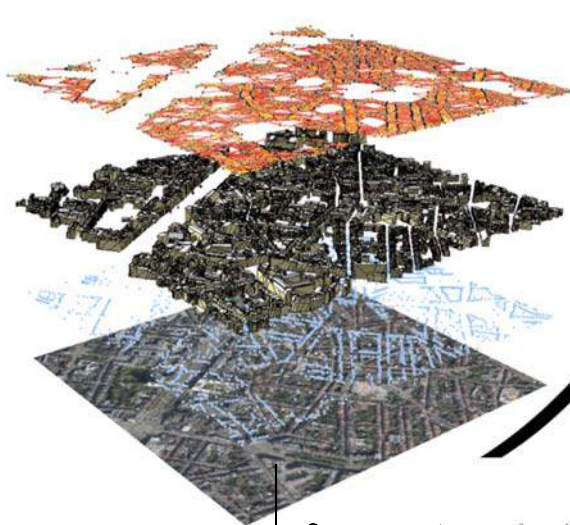
GHSL – City Centre Database

The City Centres Database describes more than 10,000 urban centres identified by the application of the "Degree of Urbanization" model to the GHSL baseline data.



<http://ghsl.jrc.ec.europa.eu/ccdb2016Overview.php>

Harnessing the use of information and communication technology to quantify complex interactions in urban networks



The role of **sensor networks** embedded in the urban environment will play an ever increasing role for **sustainable urban areas**

Interconnected Layers of Satellite imaging, GIS building inventory, and prototyping ad-hoc sensor networks for *Ixelles* in Brussels

Source: Meteosat image EUMETSAT, statistics UN Population Division and JRC Global Land Cover, graphic ASB

