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Geospatially Enabling Communities for Sustainable Growth

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European Commission

Directorate-General Environment

Governance, Reporting and Information Unit

EU 2020 Strategy

- **growth strategy** 2010-20
- EU to become a:
  - **smart,**
  - **sustainable and**
  - **inclusive economy**

Environment Pillar – Where do we stand ?

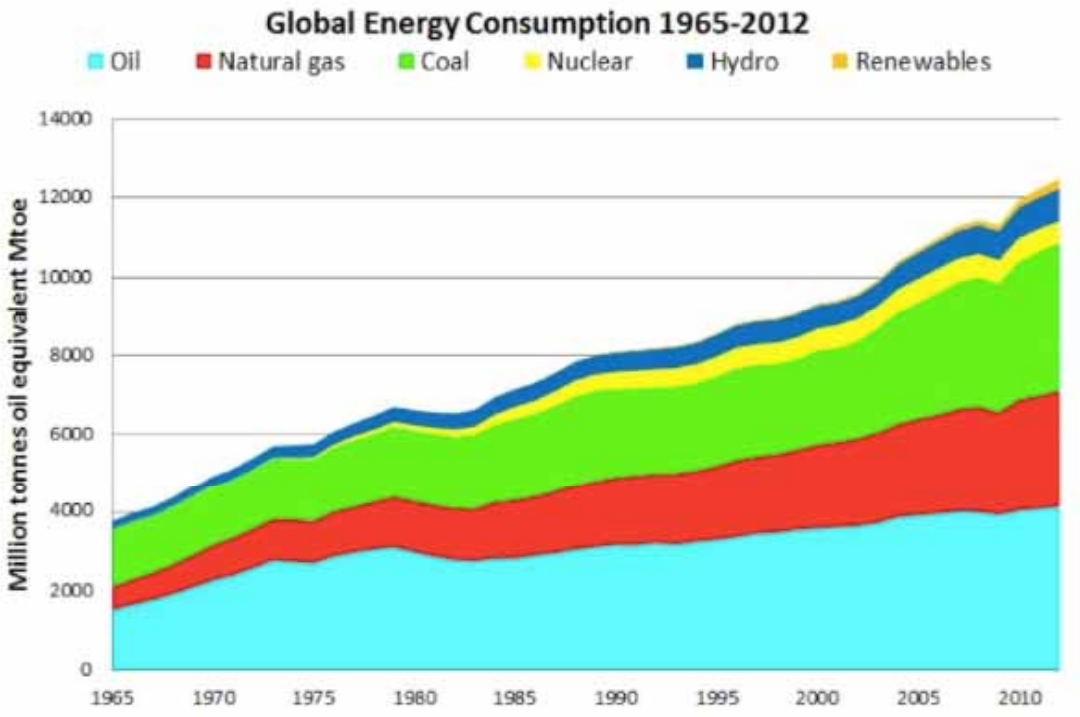
Climate change	
Global mean temperature change	☹
Greenhouse gas emissions	☺
Energy efficiency	😐
Renewable energy sources	😐
Nature and biodiversity	
Pressure on ecosystems	☹
Conservation status	😐
Biodiversity	☹
Soil degradation	☹

Natural resources and waste	
Decoupling use - growth	😐
Waste generation	☹
Waste management	☺
Water stress	😐
Environment and health	
Water quality	😐
Water pollution	☺
Transboundary air pollution	😐
Urban air quality	☹

- Source: EEA – State Of Environment Report 2010

UN - World population will reach between 8.3 and 10.9 billion people by 2050 (2011: 7 billion).

This development will put pressure on the environment, global food supplies, and energy resources.



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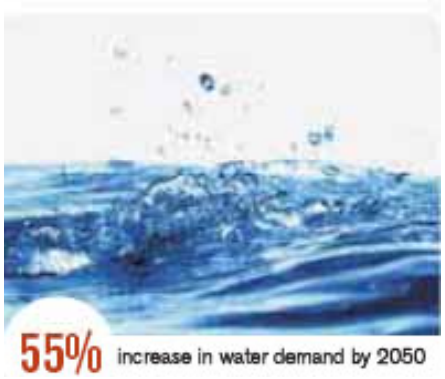
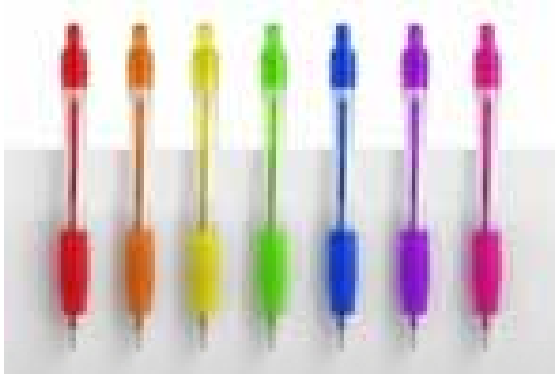
Increasing demand for resources



better understanding and managing resources

Deliver the Strategy

The 7 Flagship initiatives



- **Smart growth**
  1. Digital agenda for Europe
  2. Innovation Union
  3. Youth on the move
- **Sustainable growth**
  4. Resource efficient Europe
  5. An industrial policy for the globalisation era
- **Inclusive growth**
  6. An agenda for new skills and jobs
  7. European platform against poverty

EU Environment Action Programme to 2020 (7th EAP)

- **"Living well, within the limits of our planet"**, will guide environment policy up to 2020
- to enhance Europe's ecological resilience and transform the EU into an inclusive and sustainable green economy

The Roadmap to a Resource Efficient Europe COM(2011) 571

A framework for future actions

Key resources are analysed from a life-cycle and value-chain perspective.

Nutrition, housing and mobility are the sectors responsible for most environmental impacts

Actions in these areas ...

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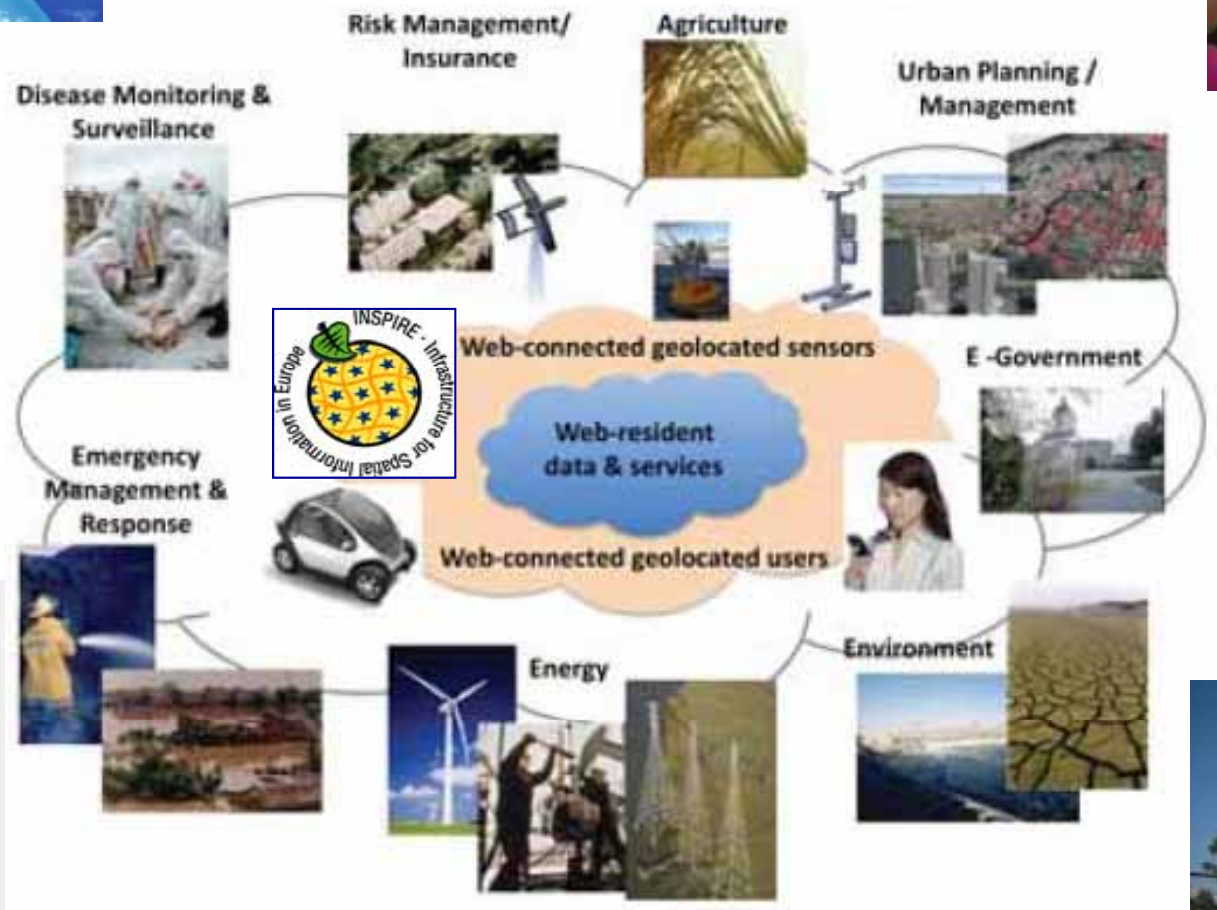

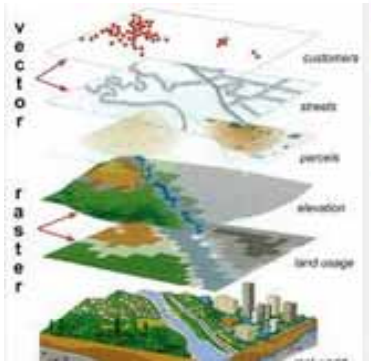

Green currencies for the great transition

- *Schemes designed to promote environmental sustainability through all actors in society.*
- *Instruments to reorganise economic activity in order to fit the ecological boundaries of planet Earth, which in practice entails reducing environmental footprints of human activity.*
- *Promote localised, fair, collaborative and seasonal consumption patterns, import substitution, waste prevention and separation, use of public transport and shared alternatives, use of renewable energy sources, as ways to reduce our impact to the environment.*

http://www.qoin.org/why/community-currencies-at-a-glance/green-currencies/

Green currencies for the great transition

- *Used in settings in which businesses, consumers and governments are challenged to decrease the environmental effects of production and consumption.*
- *Can be behavioural change programs.*
- *Combination of loyalty schemes and barter exchange networks.*
- *Green currencies can be denominated in ordinary 'points' or take over more complex concepts such as carbon credits, kilowatt-hours or kilometres/miles.*

http://www.qoin.org/why/community-currencies-at-a-glance/green-currencies/

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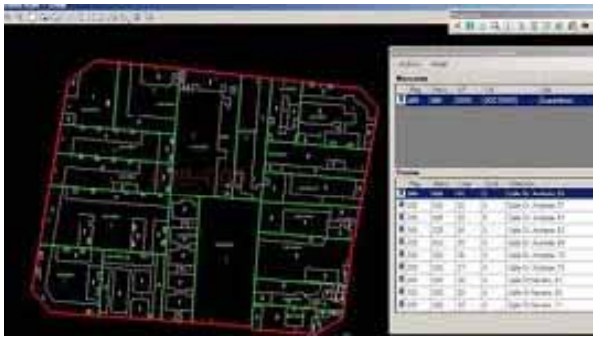
A Green Currency idea…



‘Greening’ the valuation of property
Increase benefits for societyy

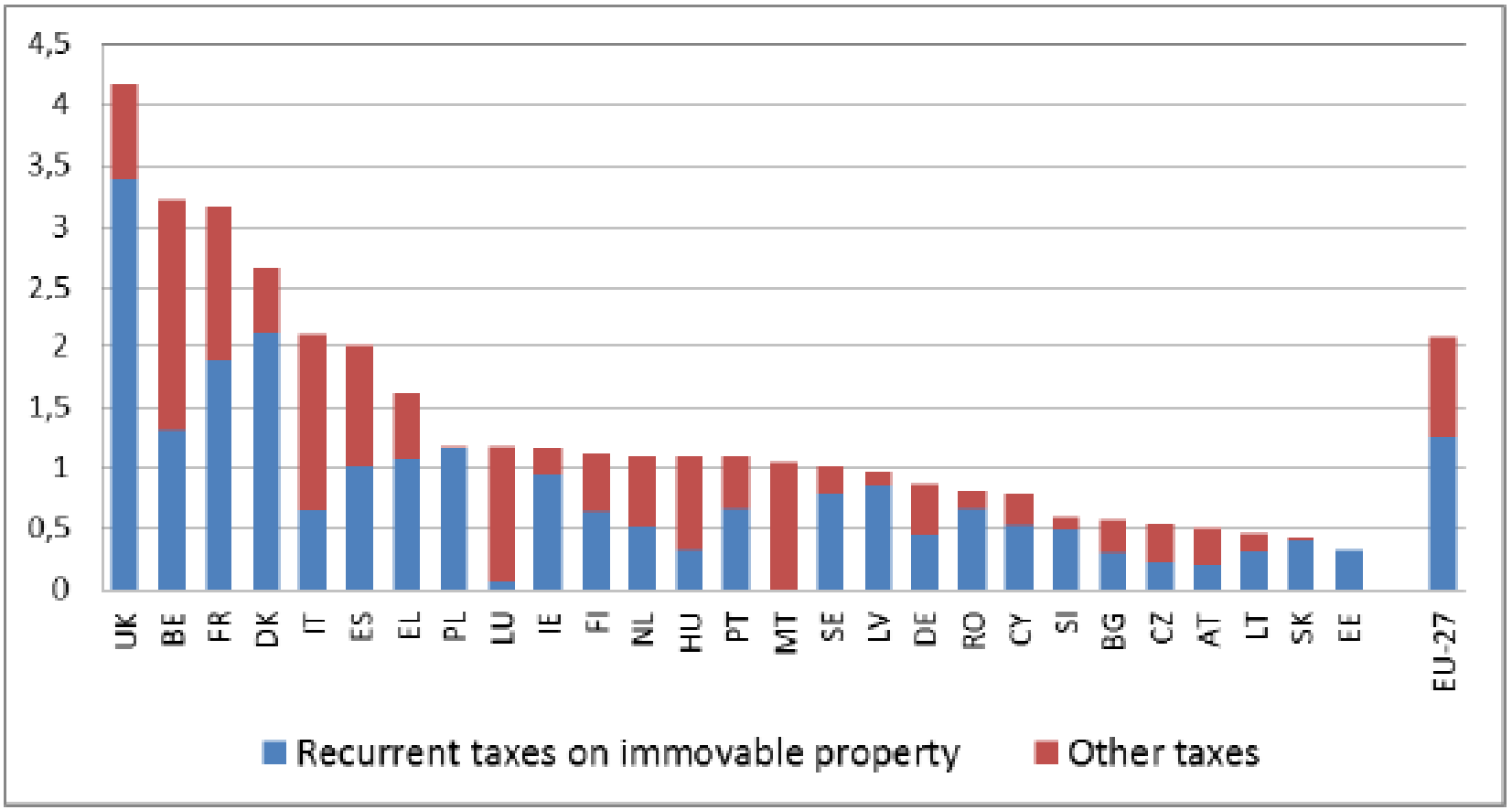
"Low-cost housing has a profound impact on the environment.

Buildings contribute approximately 40% of global greenhouse gas emissions, consume vast amounts of natural resources, and are major solid waste and water pollution generators - representing a critical area for multi-stakeholder action.

Poorly built, low-cost housing is one of the worst offenders within the built sector with respect to environmental impact"

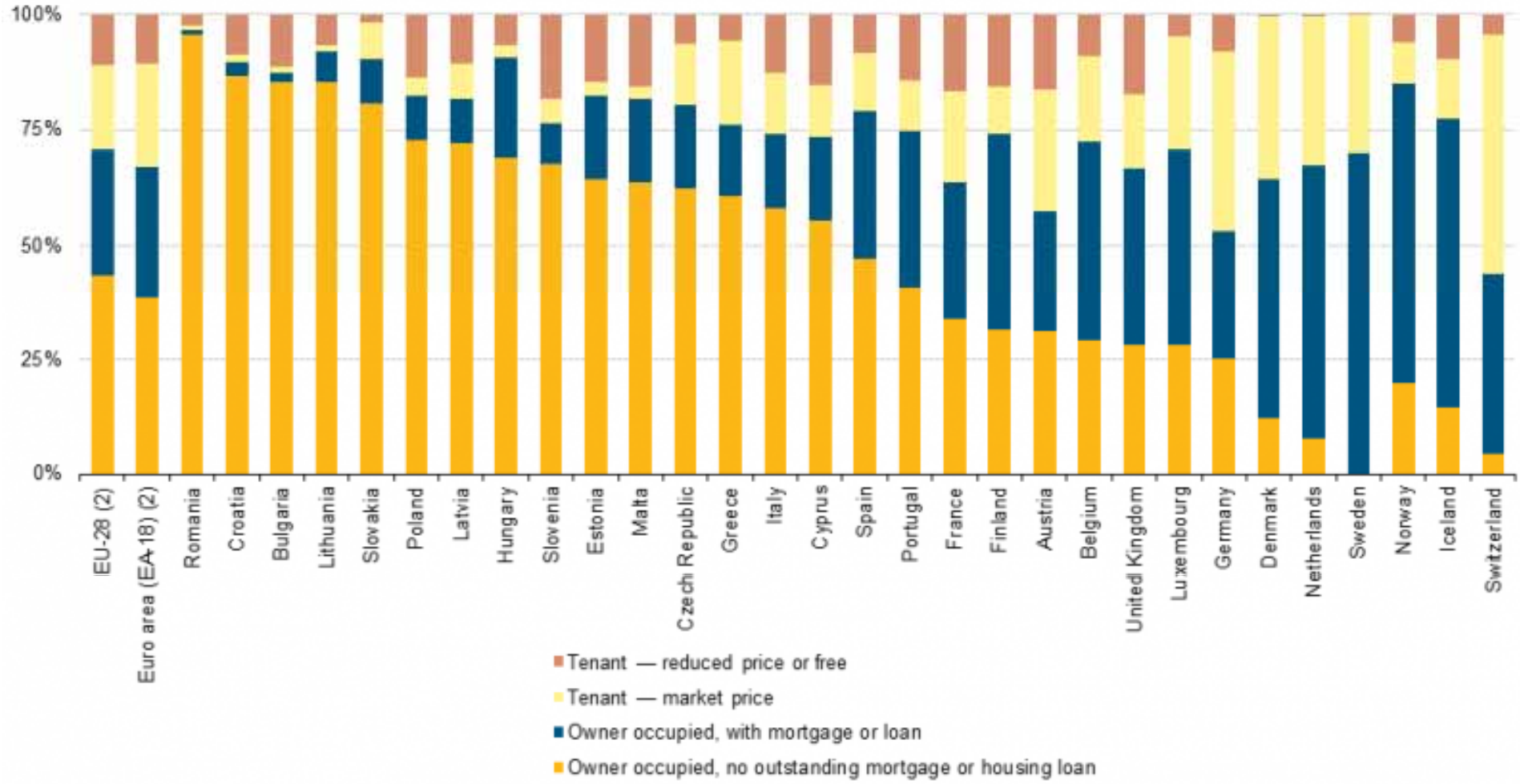
Source: http://www.driversofchange.com/housing/introduction/impact-on-environment.html

Figure (9): Revenues from other taxes on property in 2011 (in % of GDP)



Note: "Other taxes on property" includes taxes on net wealth, inheritance, gifts and other property items as well as financial and capital transactions. Data does not include PIT on imputed rents. Source: European Commission; Taxation Trends in the EU 2013.

Population by tenure status, 2012



http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/File:Population_by_tenure_status,_2012_(1)_(%25_of_population)_YB14_II.png

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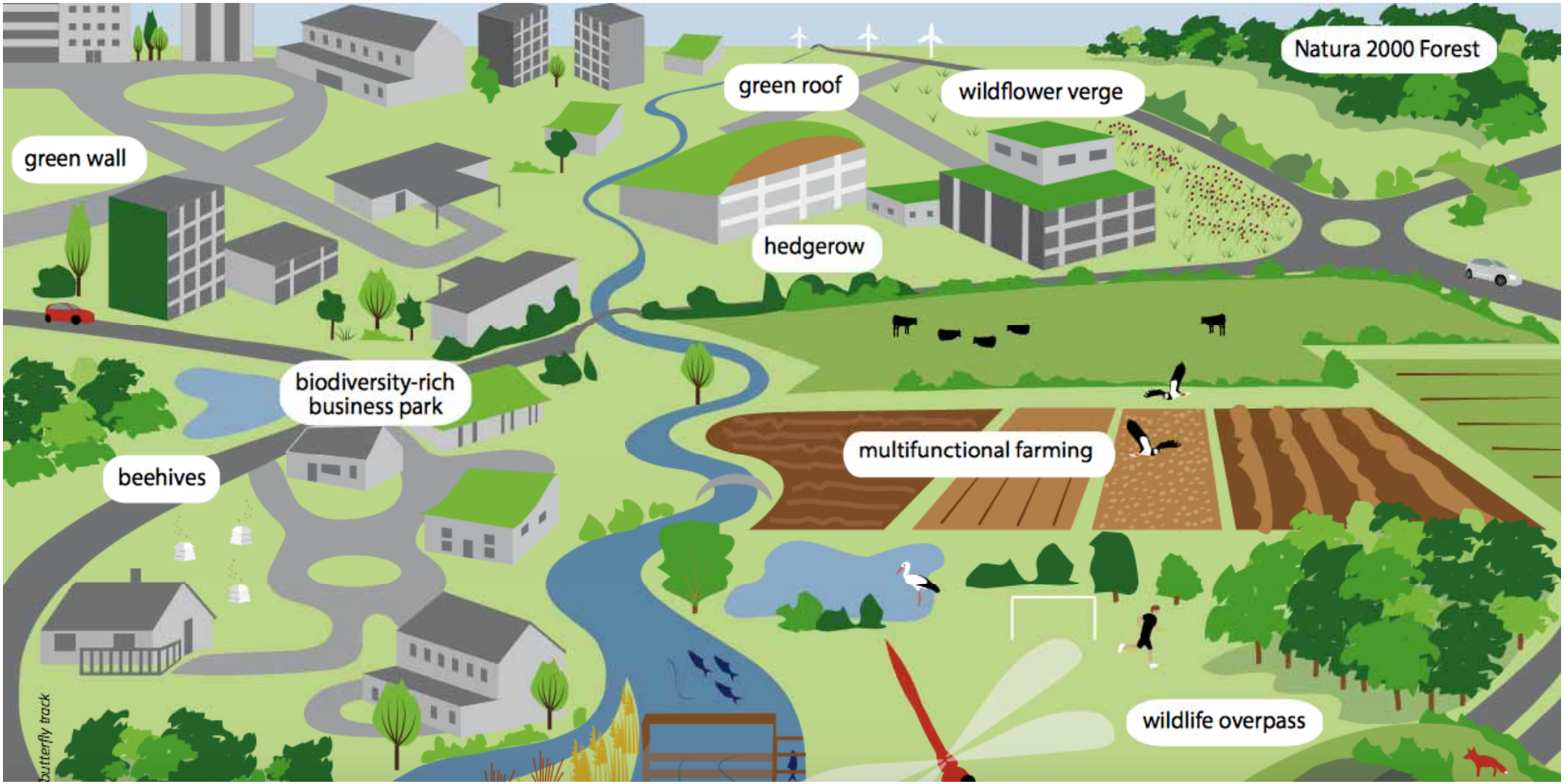
Green Infrastructures



Action on : SUSTAINABLE CONSUMPTION AND PRODUCTION

- Building the Single Market for Green Products
- Measure environmental performance throughout the lifecycle
  1. **The Product Environmental Footprint (PEF)**
  2. **The Organisation Environmental Footprint (OEF).**

Source: "Communication on Building the Single Market for Green Products"
"Recommendation on the use of the methods"

Source: TOWARD A NATIONAL GEOSPATIAL STRATEGY
Recommendations from the National Geospatial Advisory Committee
December 2012

- Stimulating Economic Growth through Geospatial Technology
- Using Geospatial Information to Control Costs and Save Taxpayer Money
  - **More efficient response to disasters**
  - **Enable more effective decision making**
  - **Better services to the public**
- Applying Geospatial Tools to Ensure Public Safety and Decision-Support

Geospatial Technology Industry

- Top 10 fastest growth employment 2002-12
- 30 billion revenue/year
- biggest challenge before the industry is the availability of geospatial data
- “restrictive practices of some organizations and governments in terms of making their geospatial information publicly available has been a great concern” Source: Ed Parsons - Google
- Shortage of skilled human resources

What is needed ?

- multi-agency approach for:
  - **‘shared’ creation and collection of data**
    - cost and resource savings
    - greatly increases the value of returns

  - **The development and implementation of a ‘shared’ geospatial technology infrastructure for use by all partners offers great promise as a model for cost-effective, efficient government.**

Source: TOWARD A NATIONAL GEOSPATIAL STRATEGY
Recommendations from the National Geospatial Advisory Committee
December 2012

United Nations

Economic and Social Council

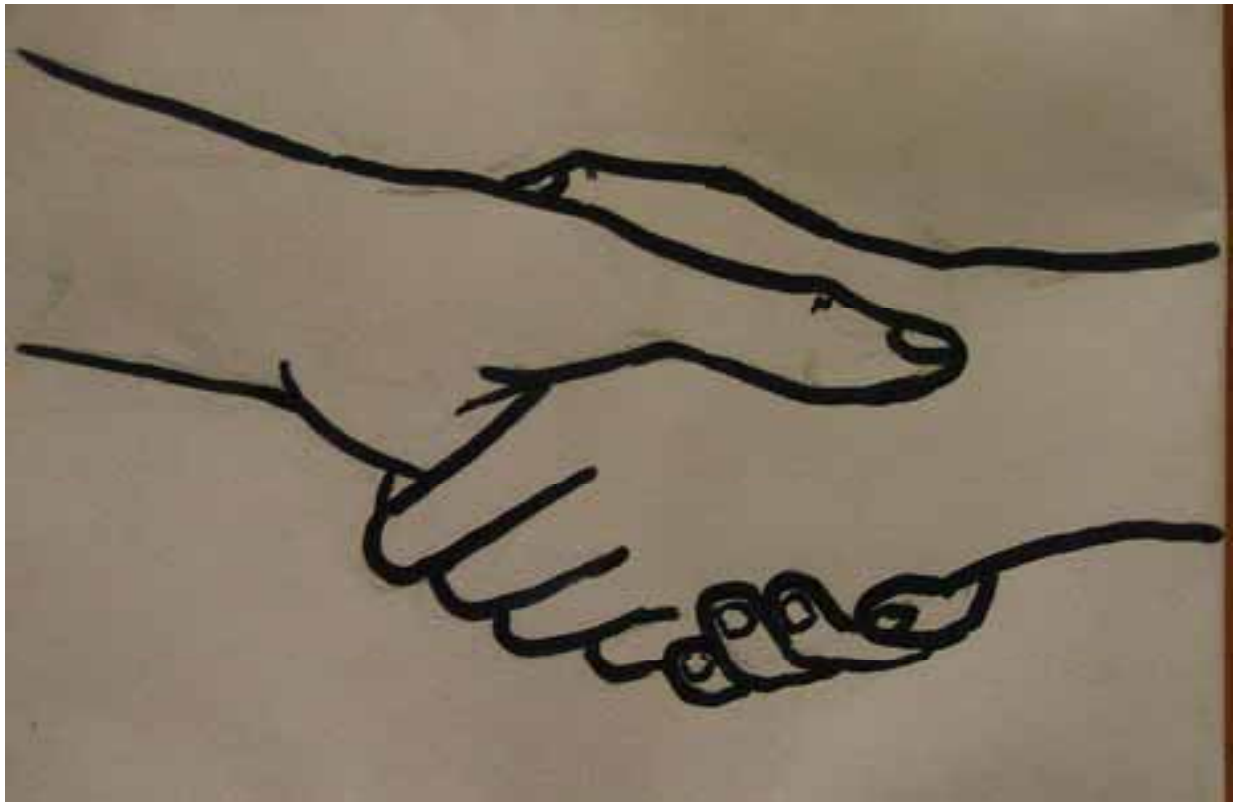
"Building infrastructure for the gathering, validation, compilation and dissemination of geospatial information is as important to countries as the building of roads, telecommunications networks, and the provision of other basic services.

…. it is increasingly recognized that the major barriers and impediments to building geospatial information infrastructures will not be technical ones, but rather institutional and organizational"

Environment

- *Building an environmentally sustainable, low-carbon economy with smart technologies*
- *Information and Communication Technologies (ICTs) are crucial to tomorrow's environmentally sustainable, low-carbon economy.*
- *ICT plays a leading role in enabling energy efficiency and sustainability.*
- *ICT can enhance water distribution networks to operate more efficiently and with higher resilience, while the significant reduction of waste and improved waste management enabled by ICT can lead to a more resource-efficient and eco-friendly economy.*

Top-down ? Bottom-up



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Thank you for your attention