



EUROPEAN
REGIONAL
DEVELOPMENT
FUND



Green Mobility and Smart Growth

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UN Sustainable Development Goals 2016-30

Target 11.2

- ▶ By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons



Smart Growth - a reaction against US suburbia



Principles of smart growth

- ▶ Mixed land uses
- ▶ Walkable neighbourhoods
- ▶ Preservation of open space, trees, and other environmental assets
- ▶ Compact neighbourhoods and cities
- ▶ Transport choices
- ▶ Range of house types
- ▶ Sense of place
- ▶ Community participation

Smart Growth - Kentlands



The Kentlands is a Traditional Neighborhood Development, 27 miles northwest of Washington, D.C. Besides live/work units, the Kentlands includes houses, cottages, townhouses, apartments, and a town centre.

Smart Growth - Prairie Crossing, Illinois



Prairie Crossing is a “conservation community” in Grayslake, Illinois. The community was designed to combine the preservation of open land, easy commuting by rail, and responsible development practices. “It is a national example of how to plan our communities to enhance the environment and

Celebration, Florida



“Celebration is not a town, but a *community* in every positive sense of the word. While the population is diverse, the residents share a strong community spirit and a desire

Europe 2020: 2010 EU agenda for smart, sustainable and inclusive growth targets

- ▶ Employment - 75% of people aged 20–64 to be in work.
- ▶ 2008 – 70.3%
- ▶ 2016 - 71.1%:



Europe 2020: 2010 EU agenda for smart, sustainable and inclusive growth targets

Research and development

- ▶ R&D - 3% of the EU's GDP to be invested in R&D
- ▶ 2008 1.84%
- ▶ 2015 2.03%



Europe 2020: 2010 EU agenda for smart, sustainable and inclusive growth targets

Climate change and energy

- ▶ Greenhouse gas emissions 20% lower than 1990 levels
 - ▶ 2008 90.6%; 2015 77.9%
- ▶ 20% of energy coming from renewables
 - ▶ 2008 11.0%; 2015 16.7%
- ▶ - 20% increase in energy efficiency
 - ▶ 2015 achieved but increasing energy use



Europe 2020: 2010 EU agenda for smart, sustainable and inclusive growth targets

Education

- ▶ Rates of early school leavers below 10%
 - ▶ 2008 – 14.7%; 2016 10.7%
- ▶ At least 40% of people aged 30–34 having completed higher education
 - ▶ 2008 – 31.1%; 2016 - 39.1%



Europe 2020: 2010 EU agenda for smart, sustainable and inclusive growth targets

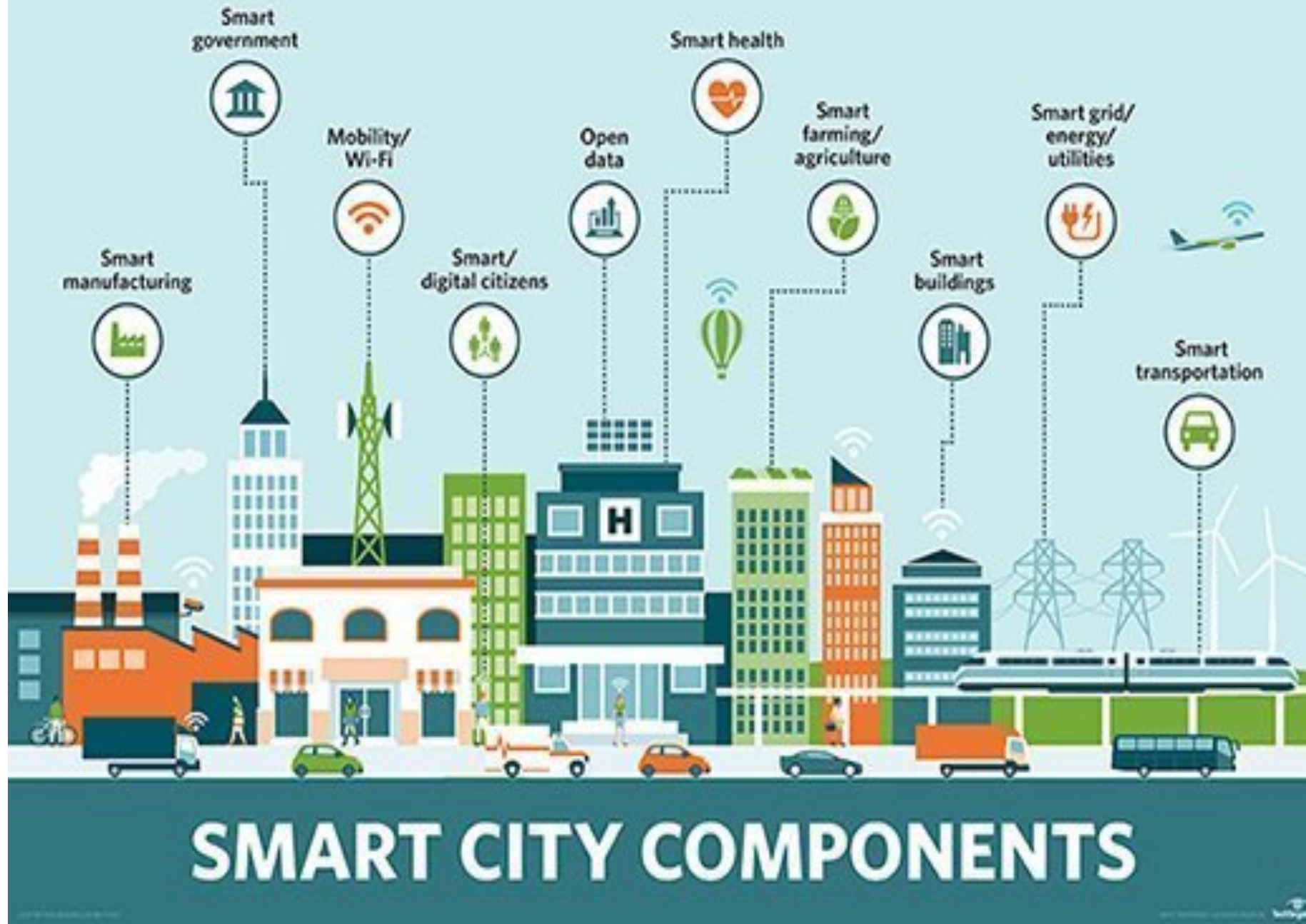
Poverty & social exclusion

- ▶ At least 20 million fewer people in – or at risk of – poverty/social exclusion, i.e. less than 96.2M in EU27
- ▶ *2008 – 115.9 million; 2015 - 117.6 million*



Smart Cities

- ▶ Use of digital sensors to collect real time big data, which can be analysed and modelled to optimise performance.
- ▶ Cities become networks of physical, digital and human systems that are integrated as never before.



Common themes in Smart Growth - a place-based, low carbon circular economy



US
Smart
Growth

- Walkability & transport choices
- Environmental assets

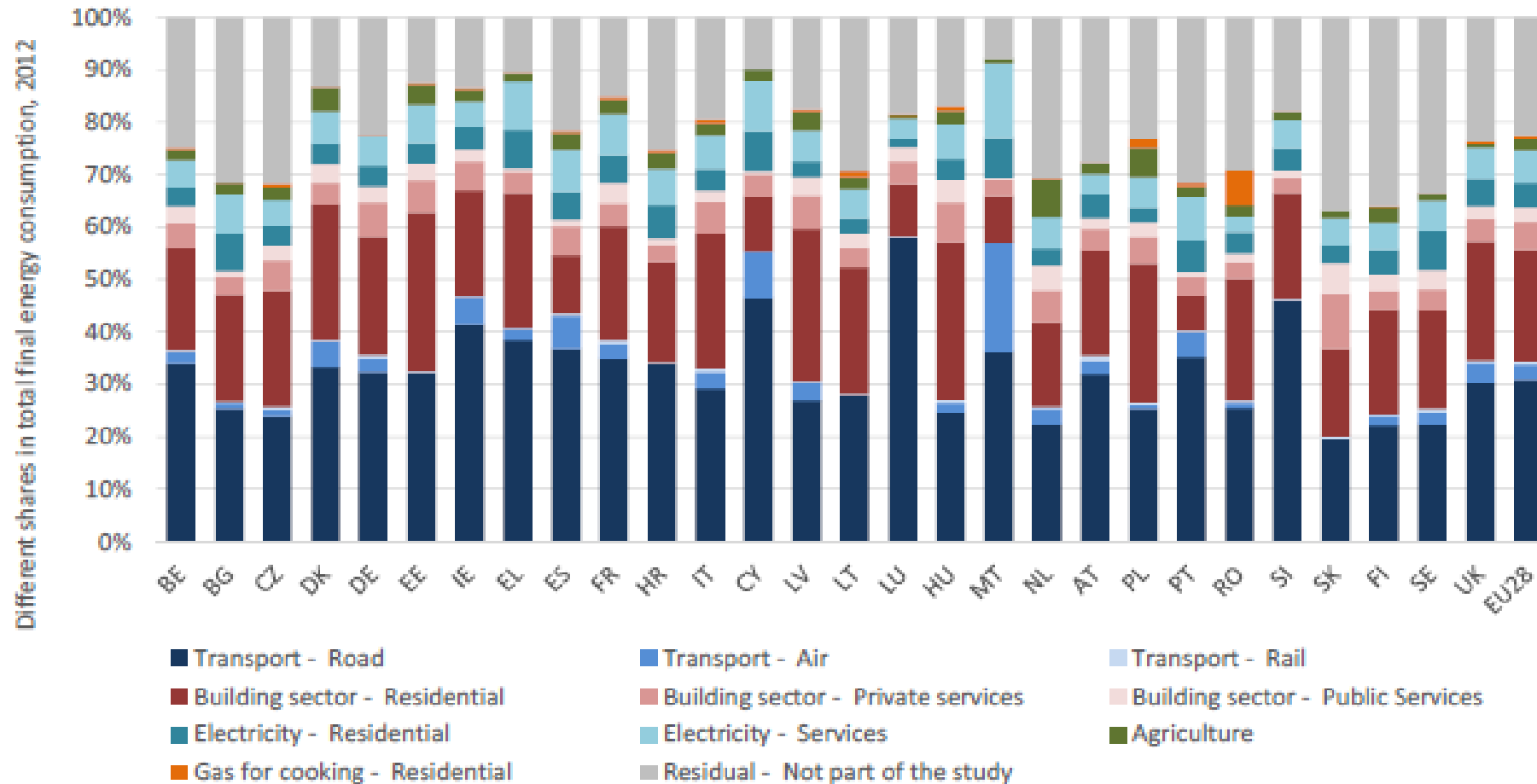
Europe
2020

- Employment
- Climate change and energy use

Smart
Cities

- Digital sensors
- Integrated systems

Shares of different sectors in total energy consumption, 2012: ESPON 'LOCATE' project



Sustainable Transport Systems

- ▶ Limit emissions and waste
- ▶ Minimise consumption of non-renewable resources
- ▶ Limit consumption of renewable resources to the sustainable yield level
- ▶ Reuse and recycle components
- ▶ Minimise the use of land and the production of noise



Examples of Green Mobility: Electric car sharing, Copenhagen

- ▶ Car sharing clubs are common in many cities, though not all use electric vehicles.
- ▶ Range is typically 140-160 km on a single charge.
- ▶ Cost DKK 3.95/minute (=0.50 Euros).
- ▶ Bonus minutes for charging it up.
- ▶ Data collected identifies hotspots and influences installation of charging sites.



Green mobility - encouraging cycling

- ▶ Sensors and traffic light management - allows steady speed progression for cyclists.
- ▶ Can be adjusted when rain is identified, so cyclists do not wait in the rain.
- ▶ Inter-municipal co-operation to create cycle superhighways to encourage commuting by bicycle.



Green mobility - cleaner public transport

- ▶ Hydrogen buses, now in many countries. Lot of interest in China.
- ▶ In Paris, ENGIE has joined forces with RATP (state owned public transport operator) to develop buses running 100% on biogas and provide dedicated refuelling centres. By 2025, 20% of the buses will use biomethane as a fuel.
- ▶ Use low emission bus zones on most polluted routes, e.g. London.



Green mobility and smart growth in rural regions

- ▶ Discussions and commercial interest have concentrated on urban areas.
- ▶ Rural regions face specific challenges:
 - ▶ Sparsely populated
 - ▶ Long distances and possibly difficult terrain (mountains etc.)
 - ▶ Ageing populations
 - ▶ Poor public transport / car dependency



Ideas and practices for Green Mobility in rural regions

- ▶ Use / sharing of electric bicycles.
- ▶ Easier to cope with hills and longer distances.
- ▶ Relatively expensive to buy (1000 Euros +) but cheap to run and service.
- ▶ Tourism.



Ideas and practices for Green Mobility in rural regions

- ▶ Better integration, targeting and marketing.
- ▶ Integrated ticketing and timetables.
- ▶ Identify and target potential user groups - age, gender, disabilities, tourists.
- ▶ Dialogue marketing - individual contacts with stakeholders.



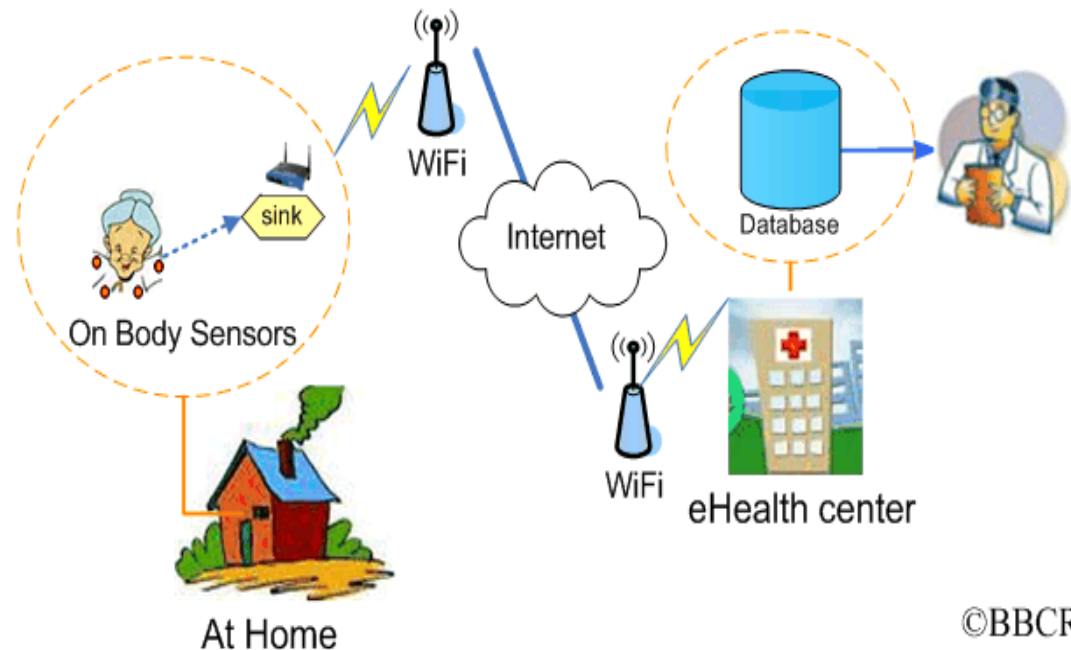
Ideas and practices for Green Mobility in rural regions

- ▶ Flexible, on-demand public transport.
- ▶ Uses smaller vehicles.
- ▶ Faster services because not all stops have to be visited.
- ▶ Link to dial up and to convenient bike / car parking - “the last mile”.



Ideas and practices for Green Mobility in rural regions

- ▶ More use of e-governance and services.
- ▶ Reduces need to travel and can overcome problems of sparse population.
- ▶ E.g. Telecare / telemedicine.



Smart growth - waste management and recycling

- ▶ Being pushed as a priority for the next round of Cohesion Funds.
- ▶ Aligns with Circular Economy aims.
- ▶ Central and Eastern Europe still performs badly on the Waste Framework Directive. Countries expected to strengthen separate collection for all waste streams, increase recycling to at least 65% and put in place a separate collection scheme for biowaste.
- ▶ Estonia burns >50% of municipal waste.



Conclusions

- ▶ Concepts of Smart Growth differ - from urban design to EU targets.
- ▶ Increasing emphasis on “Smart Cities” led by tech’ companies.
- ▶ Transport is an important sector in relation to energy and emissions.
- ▶ Green transport in rural regions gets less attention and is more problematic than in cities.
- ▶ Potential in technology/ IT, coordination, service delivery innovation and marketing.