SMART DEVELOPMENT IN CITIES AND REGIONS

GUIDOSECHI78@GMAIL.COM

SUMMARY

Smart city

Smart specialization

Evolution of the concepts

SMARTNESS AND URBAN / REGIONAL DEVELOPMENT

Urban level: Smart City policies

- Relevance of ICTs as decision making tools in cities, able to interconnect them and empower their growth capabilities

More recently: Smart regional policies

- Smart Specialization Strategies: focus on economic activities based on endogenous competitiveness factors

SMART CITY AND SMART SPECIALIZATION: EMPIRICAL RELATION

Empirical relation has been observed between development of smart specialization strategies (in a broad sense) and emergence of smart cities (in a broad sense), on the basis of EU data

SMART CITY AND SMART SPECIALIZATION: COMMON FEATURES AND EVOLUTION PATTERNS

'(No attempt) [...] has been made has been made to explain the difference between the concept of **Smart City** and **Smart Specialization Strategy.** [...]
These two policy concepts share several features:

- **Both have been inspired by the impressive impact of the diffusion of ICTs on US productivity growth**;
- Both started out as an **industry-based concept**, yet both evolved **to** a more **space-specific** concept, with the local characteristics of a region, or city, impacting on their effectiveness.
- They have both been discussed at length, and such discussion caused an **evolution of their definitions towards a higher complexity, and the inclusion of several other dimensions of urban and regional development, beyond the simple diffusion of ICTs**.' (Caragliu and Del Bo, 2012).

SMART CITY: FEATURES

Use of digital technologies as decision making support tools in order to:

Improve resource consumption / cost effectiveness

Improve interaction and knowledge / information exchange with the citizenship

Enhance performance

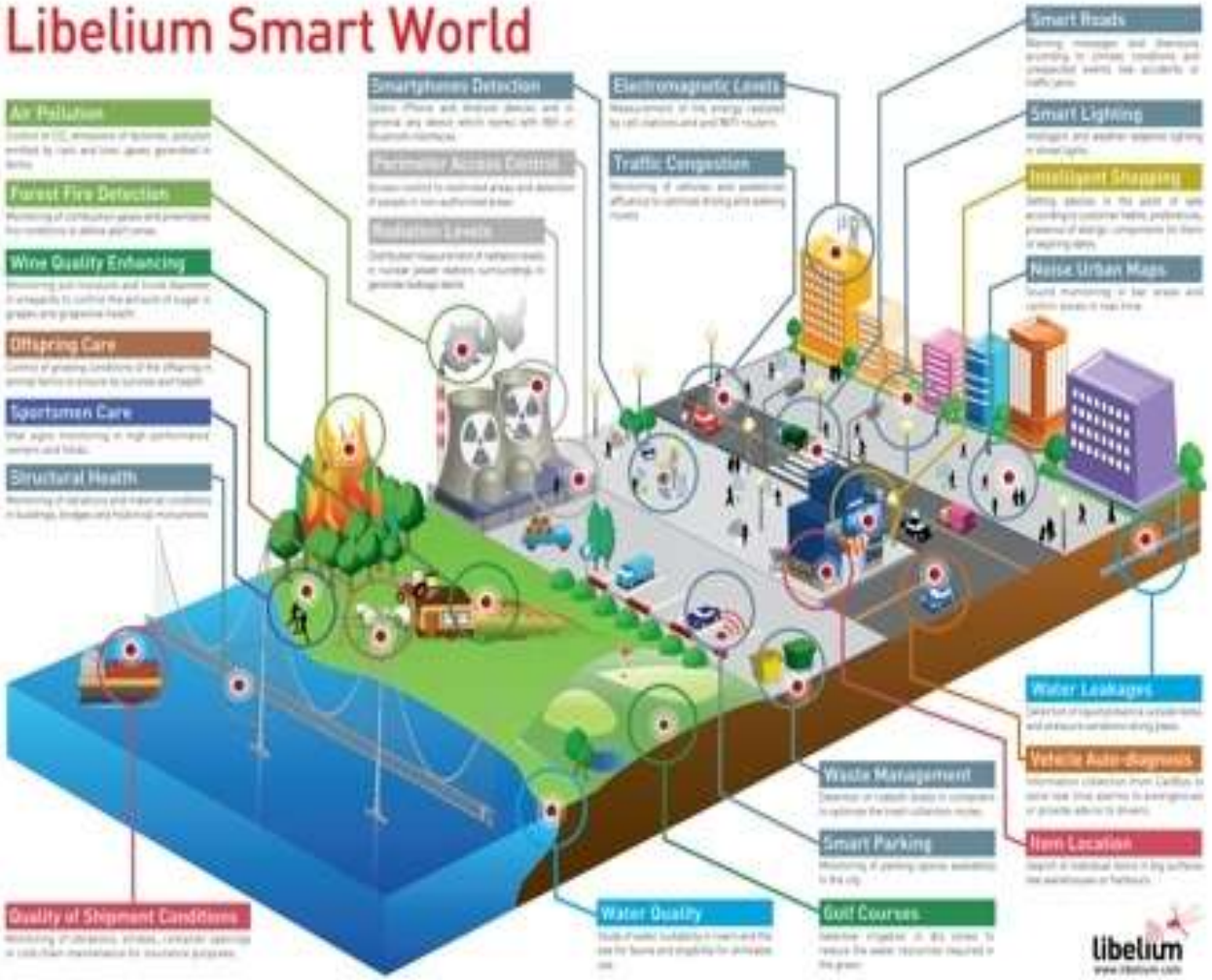
Tools: (open access) sensor data (Internet of Things); participatory platforms

SMART CITY: FEATURES (II)

Kitchin (2014) identifies two smart cities

- the smart city linked to policy debates (Hollands 2008)
- the smart city as envisioned by technologists (Greenfield 2013)

Both are related to ICT interconnession


Libelium Smart World
Air Pollution
Forest Fire Detection
Wine Quality Enhancing
Offspring Care
Sportsmen Care
Structural Health
Quality of Shipment Conditions
Smartphones Detection
Perimeter Access Control
Radiation Levels
Electromagnetic Levels
Traffic Congestion
Water Quality
Waste Management
Smart Parking
Golf Courses
Smart Roads
Smart Lighting
Intelligent Shopping
Noise Urban Maps
Water Leakages
Vehicle Auto-diagnosis
Item Location
libelium

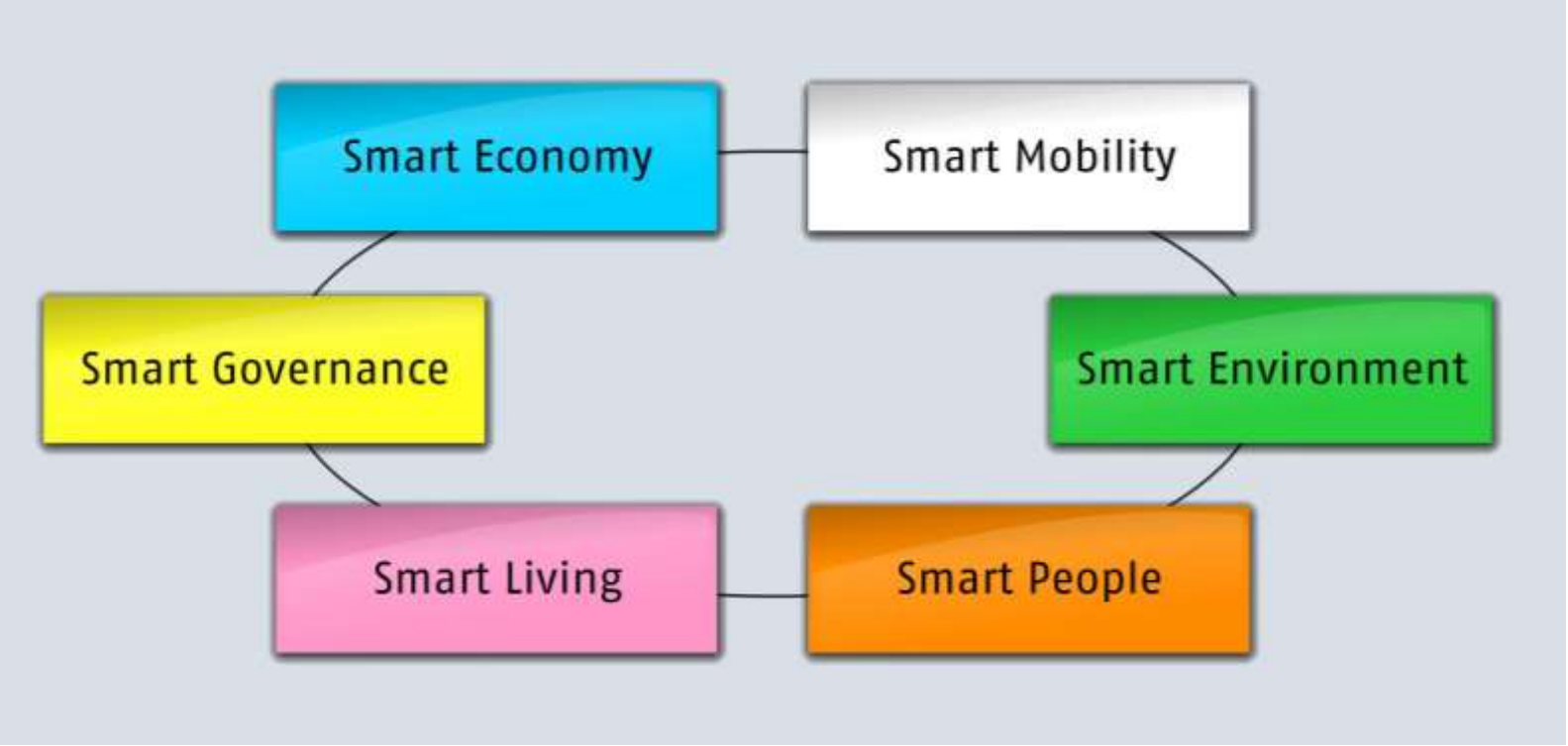
INTERNET OF THINGS (IOT)

SMART CITY / DEVELOPMENT: EVOLUTION OF THE CONCEPT

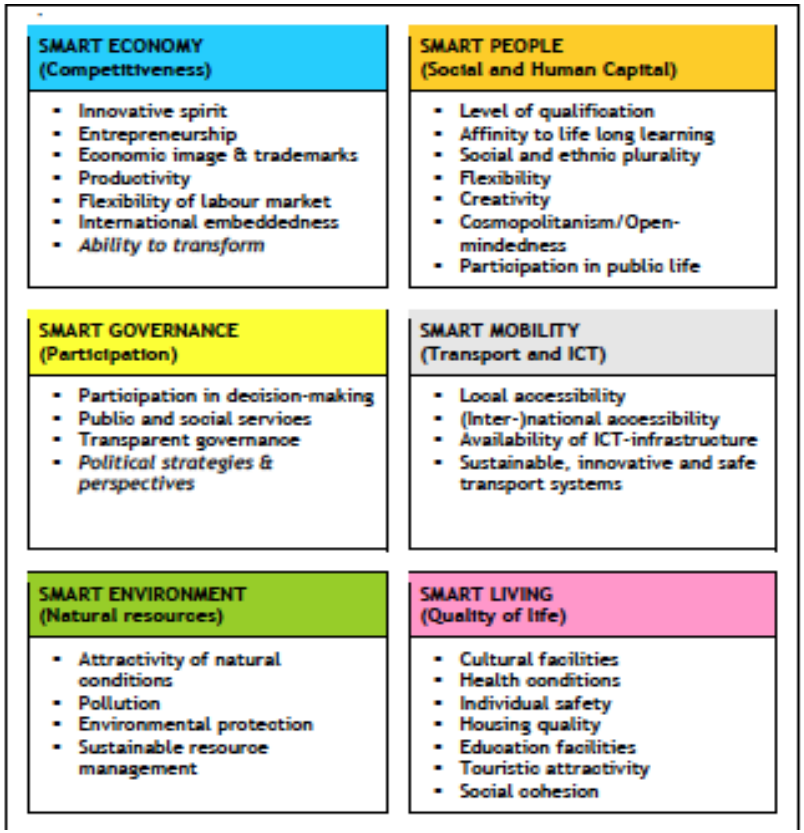
Caragliu, Del Bo & Nijkamp:

"A city can be defined as ‘smart’ when investments in human and social capital and traditional (transport) and modern (ICT) communication infrastructure fuel sustainable economic development and a high quality of life, with a wise management of natural resources, through participatory action and engagement."

SMARTNESS DIMENSIONS (VIENNA UNIVERSITY OF TECHNOLOGY, 2007)



SMARTNESS DIMENSIONS (VIENNA UNIVERSITY OF TECHNOLOGY, 2007)



SMART SPECIALIZATION: FORMAL DEFINITION

Concentrating resources on the most promising areas of comparative advantage

The concept rests on the following characteristics:

- Specialization
- Creation of a large research and innovation area
- Bottom up process in discovering 'pertinent specializations' of the region
- Distinction between research intensive regions (leaders in generating new knowledge in general purposes technologies) and innovation intensive regions that concentrate on the applications of new knowledge
- Role of regional governments in concentrating public available resources to the promising area of specialization and facilitating the collaboration between clusters within the region and between complementary regions

OPERATIONAL DEFINITION: FROM 'HARD' TO 'SOFT' FACTORS

'The smart specialization concept is essentially a local knowledge and learning enhancement concept'. (McCann and Ortega-Argiles, 2011)

'The development of regional smart specialization policies will therefore require a great deal of careful thought and will require the engagement of a range of local actors and institutions' (Barca, 2009)

'Importance of including in any regional smart specialization strategy all matters relating to local intangible capital, including capabilities and competences, and institutional issues.' (id., 2009)

SMART SPECIALIZATION: LATVIA

Regional GERD: 0.46 %

% of Unemployment: 15.4

Region's Web Site

Description	Capabilities	Target Markets	EU Priorities
Smart Energy	1. Energy production & distribution	1. Energy production & distribution	1. Sustainable innovation 2. Sustainable energy & renewables
Smart materials, technology and engineering.	1. Manufacturing & industry 2. Other manufacturing	1. Services 2. Architectural & engineering activities, technical testing & analysis	1. KETs 2. Advanced materials
Biomedicine. medical technologies and biotechnology.	1. Manufacturing & industry 2. Basic pharmaceutical products & pharmaceutical preparations	1. Manufacturing & industry 2. Basic pharmaceutical products & pharmaceutical preparations	1. KETs 2. Industrial biotechnology
Knowledge intensive bio-economy	1. Manufacturing & industry 2. Biotechnology	1. Manufacturing & industry 2. Biotechnology	1. KETs 2. Industrial biotechnology
Advanced ICT	1. Information & communication technologies (ICT)	1. Information & communication technologies (ICT)	1. Digital Agenda

Regional GERD: %

% of Unemployment: 3.5

Region's Web Site

Description	Capabilities	Target Markets	EU Priorities
Industry processes, services and products	1. Manufacturing & industry	1. Manufacturing & industry	1. KETs 2. Advanced manufacturing systems
Experience economy. creative, culture and tourism industries.	1. Creative, cultural arts & entertainment	1. Tourism, restaurants & recreation	1. Cultural & creative industries
Suppliers to seafood industry	1. Services	1. Agriculture, forestry & fishing 2. Fishing & aquaculture	1. Service innovation

RIS3 Related Links

RIM Link

Region Related News

FREE MARKET AND URBAN DEVELOPMENT: ISSUES AND CONTRADICTIONS

Environmental irreversibility of decisions (the *trial and error* mechanism does not hold)

Negative externalities descending from private behaviour

Public goods: non-excludability

Necessity of interconnected decisions and actions in order to create value (e.g. complementary goods / services)

SMART URBAN / REGIONAL DEVELOPMENT AND PRIVATE INVESTMENT

Factors behind smart development-consistent investments attraction strategies:

- technology-based
- human capital-based

I.e. knowledge % innovation-based, long term and sustainable factors able to attract investors who are interested in long-term strategies rather than short-term profit.

Therefore, smart strategies for investment attraction:

- aim as selecting strategic and sustainable investment
- in particular in the case of interdependent economic factors and relevant social impact (e.g. urban development strategies) require a constant interaction between local institutions and private developers

ARTICLES FOR DEBATE

http://archinect.com/news/article/114178291/smart-cities-called-smart-but-condemned-to-being-stupid

http://www.theguardian.com/sustainable-business/2014/nov/21/smart-city-sensors-big-data-internet