

Young Talent 2014 Smart City

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La Défense par David Monniaux

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Experts



Prof. Zef Hemel, professor in Urban and Regional Planning, Universiteit van Amsterdam



Prof. Isam Shahrour, professor at Université Lille 1 -Director of the Civil Engineering and geo-Environmental Research Laboratory (LGCgE)



Mrs. Véronique Vergès, responsable pour Lille Métropole communauté urbaine du GECT de l'Eurométropole Lille-Kortrijk-Tournai



Oras Abbas

With the appearance of smartphones, smart cards, telecommunication, smart houses, etc... people have a tendency to narrow the concept of "smart cities" and use it to describe the place which benefit greatly of smart means. We can consider all innovations technologies that improve urban life as an initiative for smart city. For example it is confirmed that the modern technology of communication and information contributes to improve the performance of the cities. Does that actually lead to make the city more intelligent and otherwise how we can transform our city into a smart system?!

In literature, there are many definitions of smart city which can be classified according to three categories: increasing sustainability, improvement of citizen lives and economic growth. Smart cities are affected by the influence of information and communication technology to solve urban fundamental problems (water, energy, transport, etc...). As a consequence, we reach the optimum degree of saving resources and security. In conclusion, these Smart cities permit to us maximizing the services offered to citizens, and providing a sustainable environment.

These services rely on the infrastructure of information and communication technology. Thus, the I.C.T is considered as an essential component of the acceleration of urban life, and as a tool to enable innovative solutions for issues related to urbanization trends.



Ahmad Afaneh

There still not common on how we can define the smart city in the 21st century, but that could change. The definition of smart city has been emerged in order to arising out and mitigates the "unplanned" urbanization problems. Research indicates that the current trend in smart city creation is twofold, one is about adopting the existing infrastructures in the cities to be smart, and the other one is creating the city from the scratch, in both cases information and communication technology (ICT) is used to achieve the aim of "smartness". However, recognizing the high level pace of change and the powerful methods that new technology can transform the management of city, researches argues that the smart city is coming together with digital city and intelligent city without forgetting the smart growth.

We define smart city as a knowledge-based city, that develops extra ordinary capabilities to be self-aware, functions 24 hours and 7 days a week, communicates, connects in real time for achieving the satisfactory way of life for the end users, uses comfortable mobility, sustainability, selectively, conservation of energy environment and other natural resources.



Lamia Brissel - Julien Hubert

The "smart city" is a city that should "listen" to citizens, take into account their needs, to enable a dialogue with them in a dynamic way as their needs evolve.

The solution, or solutions, to a smart city require:

- To consider the use as an integrative component of solutions in an ecosystem. The study aims at identifying emergent behaviors and patterns among users. But also to assess the socio-economic implications carried by the solution. The objective of this approach is to assess whether the future solution can be easily integrated into the current use.

- consider the need and constraints of all stakeholders on a territory. The project partners have the skills, training, various objectives and representations. This makes it difficult for collaboration between very different profiles. Although, all these persons are users in a broader sense. To optimize the integration of the solution, all stakeholders must be involved. In order to promote collaboration, to ensure the smooth running of the project.

- **To be integrated and appropriated in its ecosystem**. Giving solution only by considering citizens is not enough, it is also necessary to take into account the territory features i.e. historical, cultural, geographic, political context and even resources and constraints of that territory, to elaborate appropriate solutions.

- To find a sustainable and viable solution. Nowadays we can't seek for a smart city without thinking sustainable development, i.e. considering economic, social and environmental aspects. So, first of all, to be sustainable and viable, solutions must be designed for and with citizens, to meet their needs, by taking into account their real use. Before taking any decision It is important to weight the benefits and risks in the different aspect of a sustainable development by considering not only short term but also the medium and long term consequences.



Vincent Carlino

Smart City connects people, helping them to face political, economic and energy changes.

Smart City [sma:t 'siti] : a city opened to its citizens, which empowers them an trusts in their abilities in decision making.

Smart Cities are able to think their own transformations and view them as challenges instead of threats.

Smart Cities provide **sustainable** and **conscious** ways to develop aiming the target of "living better".



Valentin Collot

Tools to create smart cities and their links:

1: Politic: The willingness of the decision-maker to make everything to join skills to implement real possibilities.

2: Sociology: Understand why we arrive to this point and how we can't see the future without better management and how we are going to all be part of a smart city.

3: Economic: See new possibilities of economic development like new industrial revolution. Create new economic tools that will act on the behavior of smart citizens.

4: Technology: Information and communication on environment and Networks for suppliers, distributors and consumers. Gather the information on networks without boundary of who controls what. Understand the overall interconnections. Control those networks as one that has to be optimum.

5: Link and smart cities: The independent uses of the tools mentioned above are already actual but using them together would definitely make smarter cities.



Anne Durand

🖌 SMART CITIES 🧉



Data extracted from both crowdsourcing and sensors will be processed and analysed so that the experience of the city can be improved for everyone.





Dynamic tolling and routing via navigation systems and real-time guidance signs will alleviate congestion as well as air and noise pollution.



Smart Cities will be equipped with a resilient smart grid system that relies on a mix of different energy sources, preferably sustainable ones.



Smart Cities will be cities where people feel safe; smart lights, sensors and operations control centres will allow for more security.

but don't forget...



Smart citizens need to be empowered via democratic participatory platforms and should not be merely perceived as end-users in a commercial way, especially as smart devices are on the rise.





Jean-Baptiste Jamet

According to me, a Smart City consists of :

1. creating mathematical models and implementing technology that enable a better control of urban fluxes (pollution, water, energy, transport, information...). All this with a particular focus on sustainability.

2. mixing population from different social classes.

3. improving the environment of city-dwellers. Less noise, more elaborate architectures, more green spaces...

4. promoting the cultural scene and encouraging each city-dweller to be part of this scene.



Gavishta Jeeavoo

A smart city is an autonomous city meeting the needs of citizens.

Natural resources (rainwater, renewable energies) should be used smartly.

Smart design of buildings: Emphasis on the bioclimatic approach.

Modularity of space and of transportation system

Less waste products: Transform, reuse and recycle



Khadija Jnat

- Digital technology will make cities smarter, liveable, sustainable and perhaps more democratic.
- Smart city is that city will carefully balance the innovation of its individuals and communities with the support of its public and private organizations.
- Smart city: intelligent community, innovation society, small village with o big data.



Khan Maliha Zareen

The main characteristics I consider to be the requirements of a smart city are:

- 1. Help and integrate **3Rs** of Sustainability: Reduce carbon footprint, Reuse plastics and Recycle whatever you can; in the city so that future generations will have a better place to live.
- 2. Implementation of **Periodic** and **Preventive Maintenance** related to infrastructure in the city.
- 3. To provide inhabitants a **healthy platform** for cultural and social activities as well as equal opportunities to discuss their issues with governing bodies.
- 4. Policies for the integration of cheap renewable energy resources with the help of reliable and secure methods.
- 5. User Human interface for reducing the cost and increasing the competence and efficiency of the city.



Fig: Shows the Main Components in attaining my Smart City.



Julie Poitevin

A smart city is sustainable with regards to its environment: minimum resources consumption, products' reuse and materials recycling

A smart city relates authorities and the population in a reciprocal relationship: elects provide citizens with information, and citizens give feedback to elects

A smart city develops new uses and services thanks to innovation, digital technologies and data flow

A smart city favors stakeholders collaboration through sharing economy, open innovation and social networks

A smart city is economically, culturally and socially attractive





Nadia Shahrour

The Smart City concept aims at the use of digital technology as well as social intelligence for the sustainable development of the City. It constitutes a pertinent solution for the city's big challenges by its transformation into an ecoand socio – responsible city. This transformation concerns the optimal management of urban infrastructures such as those related to water (drinking & sewage), energy (electricity, gas, district heating and public lighting) and mobility (cars, public transportation, bikes, walking, parking), the improvement of urban services (education, health, culture, sports) and the enhancement of the city governance by reinforcing interactions between citizens and other city actors.

This concept allows **substantial economy in the consumption of natural resources** such as water and energy, and also an signification reduction in air pollution, which is one of our planet's major challenges. This concept is based on the **collection and share of urban data** from various sources such as smart monitoring of urban infrastructures and buildings, traffic, weather, mobile, social networks, commerce, administration. The analysis of this "Big Data" allows a better understanding of the city system and a real improvement of its management and governance. I'm looking forward to being an actor of this transformation



Martin Valenzuela



- + reduce natural resources consumption
- + make citizen participation easier



Shaker Zabada

- Analysis of Heating Expenditure in Social Housing
- Application of Economic Provisional Models of data in smart cities
- Smart cities and energy saving
- Economic impact of smart application in housing sector
- Social housing and smart cities



Cornelia Dinca

A city is only as smart as the people who live and envision it. But even more important than being smart is being wise – that is learning from past mistakes and carefully contemplating the future.

Smart Cities seek to become responsible and sustainable in three ways: socially, environmentally and financially, and appreciate the interconnections among these three realms.

Smart cities know that technology can unlock solutions, but are aware that technology alone cannot deliver the quality of life their citizens demand.

Smart cities are experimental and foster their citizens' dreams and knowledge to transform environments into places worth living in.



Arne Driessen

What a Smart City is or could be like :

1) Smart Cities allow its community to take an active role in sustainable development.

Urban planning should be done both top-down and bottom-up. A good example of this is a recent project in my hometown, called 'Nieuw Leyden'. It allowed future inhabitants significant control in the design of their new home. The construction was then done by city-selected contractors using only sustainable materials. It resulted in a beautiful neighborhood with inhabitants invested in their homes and surroundings, built 100% sustainably.

2) A growing Smart City plans its expansions thoughtfully.

In many growing cities around the world, urban development just happens with little to no municipal control. Development companies buy large or small tracts of land and build, with little building code restrictions in place. This has in many places led to urban sprawl, a disjointed & haphazard cityscape and infrastructural deficits. Urban planning should be done the smart way. This is, in my opinion, a responsibility the city, municipality or government should act upon. They can do so by planning new neighborhoods or infrastructural projects themselves, getting them done by public tendering and placing strict sustainability requirements on these projects. Getting the community involved is also, as mentioned above, very important. For this to work the people who run a city have to be transparent, noncorrupt and knowledgeable about sustainable development. A successful example of such a city is Copenhagen, which aims to be carbon-neutral by 2025.

3) Smart Cities adapt to their (changing) environment.

This means that rather than purposefully ignoring its natural surroundings in urban planning, it incorporates them. In practice this means not only employing eco-city technology (green roofs, walkable urbanism, sustainable drainage, solar panels and so forth) but coming up with creative solutions to turn environmental problems into solutions. An example of this type of thinking is the Dutch idea of the floating city, recently realized in IJburg near Amsterdam. Floating houses are a proactive solution for low-lying cities which are faced with rising sea levels and increased risks of flooding.

4) Smart Cities use big data to their advantage.

Nowadays, wireless sensor networks allow a Smart City to constantly monitor a large range of data important for livability, such as water quality, air quality, traffic and so forth. Logging this data makes it possible to pinpoint issues and quickly respond to them with sustainable measures. Furthermore, the monitoring of rivers, forests or oceans can help prevent natural disasters and needless destruction of infrastructure. London is an example of a city which monitors the concentration of dangerous gases for citizens.

5) Smart Cities invest heavily in public transport.

This means that instead of letting urban sprawl happing haphazardly, cities should think ahead and construct an efficient network of mass rapid transit systems (buses, trams, metros, railways but also bicycle lanes) as integral part of urban planning. The city can then handle the growing traffic more efficiently which lowers the environmental and economic burden. It is always better to plan ahead than to try fixing an existing problem. Again, Copenhagen

a great example of a Smart City which has invested in public transport.



Oskar Eikenbroek

Smart mobility should make it fun and easy to go to work again.

Smart planning to improve urban quality.

Smart mobility has no congestion and no pollution.



Paul Koster

- 1. Smart Cities do not exist: Smart City Actors do.
- 2. Smart City Governance: nudging City Actors to pro-social and long-run responsible behavior.
- 3. Smart City Mobility requires market provided technology driven transport solutions.
- 4. Smart City Mobility has regulating the social costs of traffic accidents as priority.
- 5. Smart City Mayors cycle to work.



Sam Peetsold



Public parks - Meeting points Youth programmes focused on the environment

Bottom-up

- Support for resident initiative
- More place for innovative buildings

Top-down

- Strict regulation on polluting transportation
- Minimum of open spaces per square km
- Invest in public transport

The Goals

Create a city in which people can pursue their dreams Where growth and the human well-being are in balance A city where people work together to become better



Erik Plas

A smart city:

- 1. Uses Cradle to Cradle technologies, aided by the effective yet prudent use of ICTs;
- 2. Actively promotes bicycle use and creates the preconditions for safe large scale participation;
- 3. Is governed at a local level through smart governance programs and encourages private initiative;
- 4. Puts 'think global, act local' into practice, notably in the fields of energy and nutrition;
- 5. Accords importance to moral education and phronesis.



Albert Richters

A SMART CITY is a place of <u>learning</u>

A SMART CITY <u>collaborates</u> with other smart cities

A SMART CITY regulates through <u>guidelines and not bureaucracy</u>

A SMART CITY connects the <u>local with the global</u>

A SMART CITY deals with <u>densities</u> (physical and social)



Federico Savini

A city is never smart per se, it can be smartly functioning and governed

Smart does never apply to technology: technology is stupid. People are smart

Smart is not always synonymous of efficiency: it is synonymous of livability

Smart enhances unpredictable self-organization of cities, it should not allow for a new modernist urban project.

Smart urbanism is emancipatory. It is not expensive and it is not a product to buy from somebody.



Camiel Simons

A smart city is compact

A compact city where houses and offices are close together yields sustainable travel patterns.

There is no place for cars in the centre of a smart city

Urban roads require too much space that can be used better for living, working and recreating.

The government of a smart city coordinates live information feeds

The government is the coordinator in the data streams and databases that are used by subsystems of the city.

A sustainable city requires change of behaviour

The cities will not become sustainable without behavioural changes, for example in energy use, food waste and food packaging.



Luuk Slooter

Smart cities are not a goal in itself, but should rather be seen as a possible method to improve everyday urban life. The creation of smart cities should therefore start and be ingrained in a broad and profound analysis of the major contemporary problems and the challenges for future cities.

Thinking about smart cities should be informed by urban projects in the past. The French 'grands ensembles', for example, were mainly built in the 1960s and early 1970s at the borders of big cities. These projects were not only an acute and practical answer to the housing scarcity after WWII, but also presented as 'a modern and new way of living'. The new buildings of the grands ensembles were simple and straightforward, located in quiet areas far removed from the noisy, dense and hectic city centre. The apartments were spacious, neat and accessible also for the less affluent. The ambition of the architects was embedded in the term 'ensemble': living together as a group. Although the grands ensembles were initially received enthusiastically by its socially mixed inhabitants, the image started to change soon afterwards. Social and psychological problems were linked to the highly planned and technocratic architecture of the grands ensembles. The housing projects were seen by some as soulless 'cité-dortoirs' (dormitory neighbourhoods) or 'HLM couchés' (sleeping housing projects), where people live their lives in a standardized 'métro-boulot-dodo'-rhythm. Today, these neighbourhoods are by some labeled as 'ghetto's and many of the high-rise buildings have been or will in the near future be demolished. Thinking about smart cities should be informed by a critical analysis of past failures.

In the development of smart cities attention should be paid to growing inequalities between the affluent city centre and the poor periphery; to the rise of 'borderlands' or ghettos. Smart cities should think critically about how new technologies may enhance, but also hamper the relations between different parts of and populations in the city. It should think critically about processes of in- and exclusion, both from a physical and psychological point of view.



Peter van Aacken

A Smart City represents a practical strategy of promoting and implementing technological solutions and alternative urban governance models to respond to key challenges originating from the rapidly expanding urban population and global climate change.

It focuses on key sectors such as energy efficient buildings, water treatment facilities, transportation infrastructure, public safety systems and healthcare imaging and diagnostics.



Rosa van Werven

What is a Smart City?

- 1. Optimal combination of good governance and technology to become transparent and efficient.
- 2. Smart use of citizen participation and other stakeholders' involvement: Use multiple knowledges and perspectives to create support, commitment and legitimacy.
- 3. Create certainty/robustness but still be flexible! Be aware of the consequences an intervention can have in the future. There is a demand for certainty and longterm planning, however, projects and processes have to be flexible to deal with changing circumstances.
- 4. Innovation to survive! A city should adapt to the contemporary developments, for instance globalization, to stay attractive. Trends as green roofs and community gardening in a city can create an attractive and sustainable image of the city and improve the quality of life in the city



Nard Vermeltfoort

In smart cities:

- People still want freedom and privacy
- Energy will be the most important commodity
- Energy will be generated and balanced locally
- Information technology will be the catalyst for energy conversion
- Transport (of people/goods/energy) will be the key challenge



Rick Vermeulen

smart	
smart	
smart	
smart	
smart city is not	
smart government, nor	
smart technology	
smart	
smart	
smart	
smart	
smart city is	
smart people	
facilitating other smart people to be	
smarter	
smart	
smart	
smart	
smart	
what about the not-so- smart ?	
smart	



Jonna Zwetsloot

A smart city is evoked when all traditional boundaries between functions, sectors and disciplines are crossed: it's a place where end users become designers and where collaboration is the standard for innovation.

A smart city allocates its' budget to social and economical development, has a well working infrastructure and manages its resources efficiently. Yet above all, a smart city is a great place to live.

A smart city should always be looking for the equilibrium between using ICT and technology to enable wealth and efficient living, while keeping the human scale of the city and leaving space for creativity, engagement and participation of people.

Every city has its own characteristics and challenges but there is no need for each city to reinvent the wheel: smart cities use and produce open source data and share knowledge to grow further, together.

Becoming a smart city is not a onetime transformation; it's an ongoing process of re-inventing the city and asks for continuous tracking of the urban challenges and opportunities. Réseau franco-néerlandais & Nuffic thank you for your participation.

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