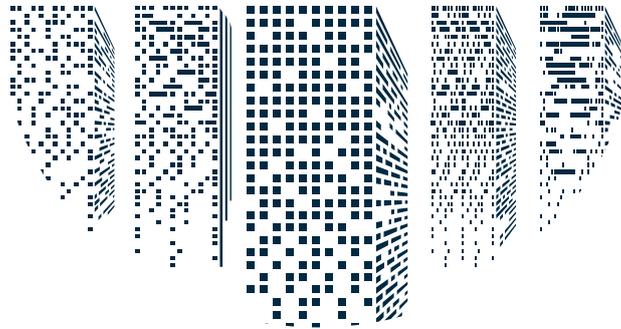


WISE CITIES

A GLOBAL THINK TANK NETWORK



Wise Cities

A new paradigm for urban resilience, sustainability and well-being

Josep M. Coll (coord.)

CIDOB

BARCELONA
CENTRE FOR
INTERNATIONAL
AFFAIRS



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City planning and management has increasingly become fragmented by a wave of concepts that seek to define and frame the new trends in urban development. Terms such as “sustainable city”, “green city”, “eco-city”, “ubiquitous city” and more recently “smart city” have been gaining more traction among urban planners, policymakers and practitioners. They attempt to embrace new models and approaches that help them to design urban policies aimed at meeting pressing challenges such as environmental degradation, climate change, mass urbanisation, migration, growing inequality and the fourth industrial revolution, to name a few.

Notwithstanding this, these concepts have not always been able to generate consensus on which urban models should guide policymakers who, regardless of their political ideology, take a long-term view that transcends partisan governments. This also has repercussions on the private sector, which is often conditioned by the vision and strategy framed by the city council. Against this background, we ask ourselves a fundamental question: **what is the highest aspiration for a city?**

Amidst volatility, uncertainty, complexity and ambiguity, leading urban development policies and initiatives requires a holistic vision and approach that conceives of cities as open ecosystems of actors and policy areas that are interrelated and interdependent, but which have a shared aspiration: maximising citizens’ well-being. Often given as the supreme objective in nation-states’ constitutions, in practice national, regional and local governments often dismiss the nature of such statements in the current political system, which is still dominated by the axioms of infinite economic growth and paternalistic international development.

In this new paradigm, local governments have the advantage of being closer to their citizens and, thus, of being aware of their dreams and worries much better than national governments, meaning their capacity to respond to their problems and foster their goals should be higher. Such a comprehensive, integral view is reflected in the concept of Wise Cities. Wisdom is the ability to think and act using knowledge, experience, understanding, common sense and insight. This involves

an understanding of citizens, contexts, events, situations, and the willingness and ability to apply judgement and action in keeping with the understanding of the optimal course of action. Thus, wisdom involves doing good (the right policies and actions for citizens' well-being)) by doing it well (the most efficient mechanism to achieve it).

Against this backdrop, the guiding principles of a Wise City are the universal values (or virtues) relating to justice, democracy, care of the natural environment, kindness, compassion and excellence. Indeed, one of the big challenges for this century's urban planners and managers will be to design an urban model that is human-centred and takes into account each city's idiosyncrasy and cultural trajectory in order to avoid a "one-size fits all" approach. The ultimate goal of this model should be the improvement of citizens' quality of life, including the fulfilment of basic needs, the creation of a safe environment, access to opportunities and the pursuit of happiness.

This conceptualisation does not disregard those that have gone before, but includes and transcends them. Sustainability and ecological, green or technology-smartness are also features present in a Wise City, but they are not the end objectives per se: they are a means of improving citizens' quality of life. The Wise City concept can help us align all interdisciplinary areas of study that take place in the complex ecosystem of cities, organising a science of cities into a common direction or framework. There are no more purposeful approaches to development than wisdom.

This vision is conveyed by "**Wise Cities - a glocal think tank network**", which is shaped by fourteen research institutions from all over the world. This initiative aims to influence and inspire local governments, international organisations and policy researchers to better adapt to the current transformations and future challenges that affect urban development.

The Wise City is characterised by the following seven principles:

- People-centred approach: citizens' well-being is at the heart of policy setting;
- Resilience: adapted to each city's cultural idiosyncrasy, socioeconomic context, environmental setting and overall sustainability;
- Techno-culture: technology as a means to improve citizens' well-being;
- Quadruple helix: integration and engagement of stakeholders through public and private partnerships (citizens, government, private sector, academia);
- Trust-building: as a result of stakeholder collaboration, building and consolidation of social capital;
- Experiential learning: benchmarking best and worst practices, monitoring and evaluating policies and sharing knowledge gained by experience (intra-city and international cooperation);
- Brand identity and reputation: adopting solutions that suit citizens' culture, building a brand that inspires.

This joint paper presents five state-of-the-art articles analysing challenges and trends through paradigm shifts in environment, competitiveness, social cohesion, transportation and global governance. The analysis is enriched with the views and experiences of the different cities that are part of the network. This approach renders a global perspective of

local issues. In every thematic area, the topics chosen are trends that are significantly changing the way cities and metropolitan areas address their challenges. Therefore, they emerge as paradigm shifts, that is, new approaches to addressing existing problems, or new conceptualisations of global problems that challenge existing local solutions.

Network

The network's purpose lies in the following dimensions of analysis and research:

- i) improving the quality of citizens' life (by minimising urban threats/challenges and maximising citizens' well-being);
- ii) advising and empowering urban enablers such as mayors, local authorities and international organisations that work on urban development issues;
- iii) influencing the global debate by providing a fresh, new international relations narrative around cities and the global urban agenda;
- iv) the foundation of a global network of think tanks as a unique opportunity to include North-South and East-West views and relations in an initiative of global reach and local impact;
- v) to influence the UN-SDG localisation process;
- vi) to engage citizens, especially the youth, in fostering greater visibility at social level.

List of members

Coordinator: Barcelona Centre for International Affairs (CIDOB)
Agencia de Cooperación e Inversión de Medellín y el Área Metropolitana (ACI)
Centro Studi di Politica Internazionale (CESPI)
EU-Asia Global Business Research Center
Ecologic Institute Berlin
Gateway House (Indian Council on Global Relations)
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Istanbul Policy Center (IPC)
Lagos Business School (LBS)
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Background contextualisation: Introducing the new paradigm

Cities are the most durable institutions built by humans and come in all sizes, shapes and compositions, each one being a unique result of the local and regional environment, the availability of natural resources and transport corridors, the historical circumstances of its founding, and subsequent development. The importance of natural circumstances for the evolution of cities was reduced somewhat by the relatively recent invention of first the railways and then the automobile, but with global environmental change accelerating, natural conditions are once again powerful drivers of migration and urban development.

In a nutshell, cities are complex systems for managing environmental and resource flows in the most effective and efficient way in order to provide for the existence, social and cultural development, and economic activities of its inhabitants. The density of population in cities and their size can only be maintained because water, food, fresh air, energy and other natural resources are brought into a city, essentially without interruption, and because the waste produced in the city in the form of air and water pollution, solid waste, and heat are efficiently removed from the city.

Cities, their suburbs and wider surroundings are the most important enablers of modern lifestyle choices:

- On the one hand, cities stand for a resource-intensive hedonistic lifestyle, the “Atlantic lifestyle” (McGlade et al., 2016), with conspicuous consumption beyond a level that would meet normal needs. In this light, cities are the cause of the rapid erosion of the Earth’s carrying capacity for human population as measured by the Earth Overshoot Day (EOD) which falls earlier each and every year.
- On the other hand, cities are much more efficient at providing the resources necessary for any given standard of living, because the (technical) networks for the management of environmental, energy, resource, and transport flows are shared among the population and thus much cheaper to build and run than they would be for a more dispersed

population. Seen in this light, cities are the only hope for 10 billion people to share planet Earth without overtaxing its ability to produce the ecosystem services needed for human civilisation.

When it comes to experiencing and coping with increased environmental stress, the focus is often placed on existing cities, which are presumed to be at a disadvantage compared to newly built cities as agents of environmental efficiency and sustainability. This presumption is based on the idea that existing cities are somehow inefficient. While this may be true for some existing cities, especially those built up in the last 50 to 60 years with a transport system designed for individual auto-mobility, it cannot hold for all existing cities in their magnificent diversity. Some dense old cities, such as many mid-sized towns in Italy, are highly efficient in terms of land use, density, openness for social life and energy use, while some new towns are highly inefficient, badly located in view of global environmental change and patently unsustainable.

Nevertheless, the distinction between existing cities, which have to adapt to changing circumstances, and newly built cities, which can be designed – well or badly – from scratch, is useful in highlighting the fundamentally different options available.

A third category may be cities that cannot adapt to environmental changes but need to relocate. A historical example is presented in the box below. Recent data and information from observation of the earth indicate that sea-level rise is likely to be faster than previously thought, and accelerating (Jones, 2016; Fasullo, et al., 2016). The water levels in slow-flowing low-land rivers will rise approximately in line with sea-level rise, inundating ever larger areas of many fertile river plains. Groundwater levels and salinity will also be affected.

Relocating the ancient town of Winchelsea, East Sussex, south coast of England

Winchelsea is a rare example of a town that survived its own death by hurricane. Around the year 1200, the town was the second largest seaport in Britain, the home of fishermen, merchants, sailors and pirates. Three decades later, heavy storms began afflicting the town again and again, over five decades. Ultimately, Winchelsea could not continue resisting – but it survived its own destruction by the waves. The citizens, who repeatedly decided to rebuild a living place in the exact same locality, eventually understood the futility of this approach. They finally rebuilt their town on higher land. From there they watched their old town being devoured by the sea in 1287. They could not rescue their former homes and churches but the economic foundations of the seaport remained, and thereby its political and military standing. The history is obscured by the sad fact that the town was ravaged by the Black Death two generations later and then lost and never regained its pre-eminent status. Otherwise, the town would be known today as the first to survive, by relocation, its own death by the forces of a changing climate (Kraemer et al. 2008; 122-124).

Wise Cities will anticipate the specific environmental change and the threats emanating in their locality. They will seek to reduce vulnerability and prepare for the abandonment of some areas while developing others.

To make an analogy with biology, there are cities with urban metabolisms dominated by anabolism – the growth in structure and size (like a growing child or teenager, or a bodybuilder on anabolic steroids); there are cities that cannot cope well with the stresses they experience and whose development is dominated by catabolism, a process of erosion, decay and shrinkage that comes with illness or old age. The third category of cities experiences decline in some areas and growth in others, catabolism and anabolism co-exist in proximity or at a distance in a more complex form of metabolism requiring substantial inputs of resources, energy, and human ingenuity.

In the recent past, the era of industrialisation and global urbanisation, the development of towns and cities was based on the often unstated premise of infinite growth potential, if not of the settlement itself then of the economy within it and surrounding it. Much of the current economic and infrastructure policies are still based on the growth paradigm.

Wise Cities will base their development planning and investment on a very different outlook, recognising both the limits to growth imposed by planetary boundaries, and the need to transform practically all of the technical, social and institutional systems that make a city. Chief among those are the technical networks that manage energy and resource flows, because they are uniquely vulnerable to changes in the environmental and resource conditions of the city, and they provide leverage in implementing solutions for society to live within the ecosystem constraints currently experienced by industrial civilisation as a whole.

Challenges in urban resource and energy flow management

Physical and technical networks or grids serve a number of essential functions, with most having to be provided without interruption or only with short interruptions, in particular:

- Public sanitation, in the form of water supply and sewerage, including rainwater removal through physical networks of pipes and canals, waste collection, separation, recycling and disposal using a system of interrelated but distributed installations and rolling stock forming a logistical network;
- Energy, in the form of electricity supply, including street lighting, gas supply, or the provision of heat (as hot water or steam) or cold, providing economic and technical support to public and individual transport, housing and commerce;
- Transport below, on and above the ground, on roads, rails, waterways or on cables, including provisions for the separation of and complementarity between different modes of transport, from cars, buses and trams to cycling and walking;
- Information as an enabler of rational and efficient use of shared spaces and infrastructure for managing resource and energy flows, from physical cable networks for (fixed-line) telephony to wireless access to the internet in public spaces. Cities' information services go beyond the provision of physical infrastructure and extend to the provision of enabling information content for inhabitants, from hazard warning to entertainment of local interest.

All of these networks share a number of characteristics. They are capital-intensive and have a long technical and economic life, and thus they generate path-dependencies with the effect that any design decisions affect the shape and functions of a city for a long time. The quality of the networks and the services they render often vary between parts of a city, and differences in quality often cause or reflect differences in property prices.

As a consequence, the management and development of the networks affects the distribution of economic and social opportunities in a city. Denial of network services to parts of a city generates health risks for the whole city and leaves room for exploitation of the inhabitants of unserved areas, for instance by resellers of bottled water or gas tanks.

Most of the networks are “natural monopolies”: For economic or physical reasons they cannot be duplicated, so competition is restricted to what can be achieved by regulation concerning access, conditions of services, prices and profits. Regulation can be provided by (central) government or by city authorities, especially if the latter are also owners of or in other ways control the physical networks.

Regulation is a key challenge that determines the long-term economic viability, social acceptability and distributive effects of the networks and the services they provide, and the environmental footprint of a city in terms of resource consumption, energy use, pollution caused or avoided, and resilience or vulnerability to environmental and other hazards.

Trending solutions in the adaptive management of city networks

From the perspective of natural resource use and environment protection, the key trends in the management of physical and technical networks in cities are:

- **Efficiency and reuse:** City-driven (public) policies tend to spur efficiency in operation, e.g. by reducing losses and the networks' own consumption, and in the form of lower water and energy consumption by end users, be they industrial, commercial, public or private. Lower throughput in networks can have the effect of increasing unit prices (for water or energy), which can in turn negatively affect poor households or neighbourhoods. Reuse of goods (e.g. bottles) reduces waste, and the recycling of materials from waste streams can reduce the environmental footprint of a city significantly.
- **Smart grids and electrification:** Advances in information and communication technology enable cities and their inhabitants to manage networks and the energy and resource flows on them in smart new ways. Traffic flows, the collection of waste, the flow of rainwater through the sewerage system, and the stability of the electricity grid can all be managed better and at lower cost than before. Smart-grid technology is an enabler of efficiency, and is coupled with a parallel trend towards more electrification. Trams and light railways are mostly driven by electricity, and a shift from individual mobility towards mass transit is a shift towards electric

mobility. More recently, air pollution, for instance in cities in China, is a key driver for a push towards electric mobility, a trend that is likely to be replicated everywhere in the world and eventually drive polluting internal combustion engines out of most uses in urban areas. There is an emerging co-transformation of electricity grids and transport systems with electric cars being integrated into the urban energy network.

- **Integrated management:** Many cities integrate the management of their networks. In some cases, this may mean that one legal department in the city government manages the contracts with private services providers that operate the networks, in other cases, a works unit is in charge of several of the networks. Joint billing and the management of customer relations also provide synergies through the integrated management of networks. The most advanced form of integrated city management is in the form of specialised agencies or city-owned business units for the management, maintenance, and adaptation of networks to new technologies and needs. Increased professionalism in integrated network management is helped by more trends.
- **Full cost recovery and financial capacity:** The capital-intensive nature of city networks and the reduced capacity of central governments to provide subsidies is pushing policies towards achieving full cost recovery for urban network services from the users. Full cost recovery is a precondition for good financial capacity of the service to maintain the network and plan re-investment, expansion or replacement of outdated plants.
- **Good tariff principles:** The development towards full cost recovery is not without social consequences, but if well-managed the overall effect on the equitable treatment of all users and the social cohesion in a city is positive. Successful reforms are based on principles such as:
 - **Inclusion:** everyone can be a user, and all users pay a share. This is a specialised application of (egalitarian) universality in citizenship;
 - **Fairness:** every user pays the same, no-one exempt, non-payment is tolerated only temporarily and in extreme circumstances. Implementation of this principle presupposes admission that network service provision is not a good instrument of (redistributive) social policy;
 - **Quality of service:** The quality of the service is good and tends to improve, not deteriorate;
 - **Incrementalism:** There are no sudden changes in prices, cost or quality of service;
 - **Non-appropriation of any surplus:** There is either no (financial) surplus accumulated on the back of service users, or any surplus arising remains in the service or returned to the community in a transparent manner, and is not appropriated, e.g. by overstaffing, overpay, lavish buildings, entertainment of politicians, etc.
- **Managerial independence and legal standing:** The increased complexity and interconnectedness of city network management has resulted in a need for higher levels of professional competence and less interference of non-professionals in operational decision-making. As a consequence, there is a trend towards more independence and autonomy of network management, from political oversight on behalf of and often elected by the city population. Legal independence or “standing”, with the right to sign contracts, and sue or be sued in court, is becoming more widespread among network operators, both

as a consequence of involving private contractors in service provision, and by more city-owned private-law enterprises being formed for the purposes of network management.

- **Social embeddedness:** The service providers are local companies employing local labour, paying taxes in the city and practicing good corporate citizenship. This principle is important where private contractors are entrusted with the provision of network services.

Together, these characteristics and trends allow cities to adapt to environmental change and other developments, from more frequent and more intense extreme weather events and relocation needs in response to changes in water levels and regimes to changes in the number and composition of urban population as a consequence of climate-induced migration.

The extent to which these characteristics improve the management of environmental resource and energy flows in city networks varies between cities and depends on legal traditions in countries and the general power balance between cities and central government. As a general global trend, however, there is a resurgence of city power in the face of government weakness, leading to an eroding financial standing of central government, or even state failure. The growth of city or city-mayoral initiatives at global level is evidence of this trend, and it is particularly remarkable in the areas of climate protection, energy system transformation, urban mobility, and the evolution of “smart cities”.

Lessons learned and/or policy recommendations

From an environment and resource perspective, the need for efficient and rational management of energy and resource flows in technical or physical networks is paramount, because they determine the environmental footprint of a city. The quality of service provision and professional management are enhanced by managerial independence and autonomy of the network operators in their day-to-day work, including recruitment and investment, while they must obviously also remain under political control concerning strategic decisions tied to the long-term interests and development of a city. Such control is usually exercised by elected (or unelected) city officials, under varying conditions of transparency and accountability.

The most successful network operations are those that combine high levels of service with broad (or even complete) coverage at lowest cost for total system operation and thus affordable prices for all users. Such successful operation cannot be achieved overnight but is the result of established traditions in management and supervisory control. In many cases, the most suitable institutional arrangement is the establishment of city-owned private-law companies with managerial independence, commercial cost-accounting standards, and legal standing. City representatives of the population can (and will) exercise supervisory oversight, using ownership (or shareholder) rights they exercise as trustees for the city and its population. The division of roles and the clarity of responsibilities, the accounting standards and accountability thus created, along with the strategic oversight all combine to enable city network management to be professional, efficient, and adaptive in the light of changing needs.

Not all countries and legal systems allow cities (and other small territorial units) the right to establish, buy, hold, expand, control, or sell private-law companies as described. The “Plan B” solution is then often an imperfect public-law organisation open to political interference from many sides, or privatisation as investor-owned utilities which require additional and very complex layers of regulation and high levels of legal expertise in city government.

Given the advantages of entrusting city network operations to city-owned private-law enterprises, all countries should allow, enable and encourage their cities to become engaged in “municipal enterprise” and contribute to reducing their ecological footprint for the benefit of future generations.

References

Fasullo, John T., Robert Steven Nerem & Benjamin Hamlington. “Is the detection of accelerated sea level rise imminent?” *Scientific Reports* 6, article number: 31245 (2016). DOI:10.1038/srep31245.

Jones, Nicola. “Abrupt Sea Level Rise Looms As Increasingly Realistic Threat”, in *Yale Environment* 360, 5 May 2015. (Online). http://e360.yale.edu/feature/abrupt_sea_level_rise_realistic_greenland_antarctica/2990

McGlade, Katriona, Lucy O. Smith, R. Andreas Kraemer, and Elizabeth Tedsen. “Human Environmental Dynamics and Responses in the Atlantic Space” in: Jordi Bacaria and Laia Tarragona (eds.): *Atlantic Future. Shaping a New Hemisphere for the 21st century: Africa, Europe and the Americas*. Barcelona: CIDOB. 2016. pp. 69-85. ISBN: 978-84-92511-46-4.

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Background contextualisation: introducing the new paradigm

Throughout the history of humankind the whole context of competitiveness in society has been developed as a consequence of a dynamic set of variables. Natural resource management, environmental conditions, industrial policies and economic power have shaped cities and directly influenced modern urban lifestyles. The 20th century has seen the explosion of megalopolises around the globe. Cities have attracted and concentrated a massive number of people, generating new problems of management and creating huge challenges not only for the public sector – in managing limited resources – but also for the private sector by pushing companies to promote continuous adaptation in business to answer the new consumption demands. By 2030 over 70% of the world's population is likely to be concentrated in cities, having a dramatic impact in our lifestyle. Some countries that are still in the process of urbanisation will face mass migration of their population in the coming years. How to promote inclusive and sustainable competitiveness is one of our greatest challenges.

The disruption of the fourth industrial revolution

These outstanding transformations in our society are happening in parallel to another rising megatrend: the fourth industrial revolution. In the first industrial revolution, water and steam energy were used to replace manpower and mechanise production. The second revolution brought the concept of mass production through the use of electricity. The third revolution was evidenced by the use of information technology and electronic means to automatise the production. The fourth industrial revolution, probably one of the most disruptive, is bringing a new perspective of time and space by combining physical, digital and biological domains.

The emergence of new economies

Against this backdrop, our society is evolving at the pace of rapid technological change in a context shaped by high levels of volatility, uncertainty, complexity

and ambiguity (Bennet & Lemoine, 2014). This is transforming the economy into a new, unique format with four main dimensions:

The creative economy

The creative economy redefines the economic system based on the use of creativity as added value for the local economy. It also suggests that the promotion and full support of a creative class, as proposed by Richard Florida, may be a factor behind the blooming of prosperous high-tech clusters such as Silicon Valley in California, Austin Technology Cluster in Texas and East London Tech City or Silicon Roundabout, the new paradise for world-class Fintech start-ups (Florida, 2014).

The concept became fashionable in 2001, when John Howkins applied it to 15 different industry sectors from the arts to technology. Nowadays the approach of the creative economy is even wider, including services, cultural goods, toys, games and is one of the main areas for research and development departments.

For some researchers, creativity nowadays has the same impact on our lives and in the development of the fourth industrial revolution as steam power and electricity had in the 19th and early 20th centuries.

The sharing economy

As a consequence of the creative economy and the rapid evolution of information and communication technologies, society is evolving new collective behaviour. Another important milestone to understand the phenomena behind the shift in consumption behaviour was the 2008 global crisis. Not only did a real need to save, reuse and divide resources emerge, it also brought about the questioning of a capitalist system based on the values of consumerism and materialism and an economic system driven by consumer spending.

Against this background, the concept of the sharing economy is related to solutions based on peer-to-peer interaction. "The sharing economy is an emerging economic-technological phenomenon that is fueled by developments in information and communications technology (ICT), growing consumer awareness, proliferation of collaborative web communities as well as social commerce/sharing" (Hamari, Sjöklint et al., 2016). Recently, revolutionary services such as Airbnb and Uber are deeply disrupting our traditional urban services marketplace and bringing a new dimension to the provision and delivery of services. This sharing behaviour that is emerging in our modern society is definitely shaping a new idea of "access over ownership". This new scheme will affect the whole global production and distribution chain and will promote the rise of new business and innovation models.

The circular economy

The idea behind the circular economy is to take a new approach to production cycles, creating a conscious and sustainable reuse of the

resources. The circular economy is characterised by three main principles:¹ 1) The preservation and enhancement of natural capital by managing finite stocks and harmonising renewable resources flow; 2) The optimisation of the resources by circulating products, components and materials; And, 3) the fostering of system effectiveness by minimising systematic leakage and negative externalities. In the circular economy approach there is no waste. It largely differs from the traditional concept of the linear economy where the cycle flows from raw materials to transformation to use and finally waste. The application of this concept requires a deep mindset change not only for consumers, but also for manufacturing as it entails the implementation of a new system of production and a new product design process. The same concept can be applied to cities and public management and services, implying a different relationship between citizens and local government. We can already see the influence of the circular economy in some products: BMW – seating made from recycled fibres in the electric BMW i3; Ford – a hybrid fibre for seating partly using recycled plastic; Jaguar Land Rover – aluminium that is up to 50% recycled for car body parts; Renault – reconditioning old engines to prevent contamination of the local environment when engines are disposed of in landfill.

Denmark hosts many businesses piloting circular economy solutions. In Copenhagen a local bike company called Baisikerli uses no raw materials to produce “new products”: it only uses old abandoned bikes.² They are shipped to east Africa to be repaired and sold on the market, helping to foster the local economy. Waste management is another successful case from Denmark where one third of all urban waste produced in the cities is recycled to produce heat and power generation. The Ellen MacArthur Foundation³ has dedicated a whole website just to promoting and disseminating successful circular economy cases from around the world.

Co-creation

Another important idea the creative economy is seeding in our modern society is the sense of co-creation. This is one of the main features of the millennial generation.⁴ The new breed of start-ups are being born with co-creation already in their DNA, welcoming open and actively external collaboration from employees, suppliers, customers and even competitors. Open data and open application programming interfaces (APIs) are becoming the standard, not only in the private sector, but also in the public spheres. Some cities are now trying to promote sustainable growth by engaging their citizens in a deeper, more responsible and long-term oriented process of co-creation.

From the perspective of a Wise City, we can develop this concept even further by having citizens co-create alongside public management, not only suggesting changes or reporting problems, but also by using public open data to develop and deliver new urban services. Following the same footsteps, cities can also boost public projects through modern tools such as crowdfunding, the collective raising of money to promote ventures or projects from a wide number of ordinary people. Far beyond a mode of subsidising, the idea brings in citizens as active stakeholders by fostering entrepreneurship, with a double return of investment: potential dividends as shareholders and a better quality of life for them and their livelihoods.

1. <http://www.coara.co.uk/definitive-guide-circular-economy-businesses/>
2. <http://www.worldwatch-europe.org/node/152>
3. <https://www.ellenmacarthurfoundation.org/case-studies>
4. Millennials Coming of Age Infographic. (2016). Retrieved from: <http://www.goldmansachs.com/our-thinking/pages/millennials/>

Challenges

As a result of the intense urban migration the world has been facing in the last decades and with the “unplanned” development of our cities, several solutions have been developed and tested in different fields since the eighties. A consequence of this attempt to solve urban problems is the rise of the “Smart City” concept. Around the world old cities have been retrofitted and some brand new cities are being built on greenfield land, fully planned and oriented to be smart from their first draft plans. The older and more developed a city is, the more complex it is to retrofit and adapt. Emerging economies such as China and India are heavily investing in cities that are forged to be models of sustainable urban life, combining the latest high-end information and communication technologies with state-of-the-art architectural design fully integrated into ubiquitous urban environments. These huge projects are getting global attention and attracting talented professionals, large corporations and massive investments. However some projects, mainly the ones related to a greenfield operation such as Masdar City in the United Arab Emirates;⁵ King Abdullah Economic City in Saudi Arabia;⁶ and PlanIT Valley near Porto, Portugal are struggling to attract not only investments, but also people to populate them. Probably the most successful case to date is Songdo International Business District, a \$35 billion project launched in 2004 in South Korea, that already has a population of almost 70,000 people and is forecasted to reach 300,000 commuters by 2018.

One of the first references to the term “smart growth” is related to an experiment in the US to regulate and incentivise policies for the development of cities. Portland, in Oregon, is a well-known successful example of these first models. A Smart City is defined as a city that uses information and communications technologies to make the critical infrastructure components and services of a city such as administration, education, healthcare, public safety, real estate, transportation, and utilities, in a more aware, interactive, and efficient way (Bélissent, 2010). Building smart cities is not just a fashion trend; they are needed by the entire civilisation as a sustainable solution for urban life (Townsend, 2013). The Smart City concept is so vast and abstract that a complete, precise understanding can only be obtained if several definitions, from different authors, backgrounds and dates are analysed together. Hollands stated that: “... we know surprisingly little about so-called smart cities, particularly in terms of what the label ideologically reveals as well as hides” (2008).

Solutions relating to water management, clean and renewable energies, smart grids, intelligent traffic control, electronic government, urban mobility, wireless internet accessibility and waste management are just a few examples that can be highlighted in a long list of problem-oriented proposed solutions. The challenge is not technology per se, but how to design and use technology for the real benefit of citizens’ well-being.

Trends

Due to the radical changes we are facing, competitiveness and welfare are already highly influenced by our cities’ ecosystem. The right balance between economic, social and environmental sustainability is one of the critical success factors. A full citizen-centred approach in urban projects

5. <http://www.masdar.ae>

6. <http://www.kaec.net>

supported by a deep engagement of the civil society can foster economic growth and contribute to mitigating the social gap. Access over ownership and full inclusion over welfarism are key governance principles for managing cities in the near future.

The new urban mobility

Traffic management and transportation systems are recognised as one of the most chaotic problems a metropolis can face (Batty, Axhausen et al., 2012). Outstanding results have been achieved in projects developed in this field like the one in Singapore. Singapore's is easily one of the most developed transportation systems in the world. By combining investment in modern infrastructure, high technology and public policies the country has an efficient system with a 95% satisfaction index among users. A complex programme called "travel smart" has been used since 1997. It encourages workers and companies to shift their working schedule to promote off-peak travel. Traffic management programmes in Tokyo and Seoul are also relevant references to demonstrate how developed research in this field is, with a combination of innovation, applied engineering and management that is effective in managing mobility

New disruptive technologies are also rising in our cities. Autonomous cars are no longer utopian – they are already being tested in Singapore. The world's first self-driving taxis are a project headed by a company called Nutonomy, a start-up founded by two researchers from the Massachusetts Institute of Technology. Drones are also already part of our reality. As well as carrying goods, drones will soon be transporting people. A Chinese manufacturing company called EHang has stated that self-flying craft could be used as a smart fully autonomous drone taxi. They have already presented their prototype called 184, an all-electric vehicle with four arms and a total of eight propellers. These developments present huge challenges for cities: from the management of aerial space to the transformation of traffic management and citizen safety to name but a few.

Artificial intelligence applied to public security

A second big trend is the use of artificial intelligence and deep learning to develop new services for cities. Undoubtedly, public safety is currently one of the main issues. Latin American and African countries are struggling with high levels of street criminality while Europe and the United States are being hit by terrorism. Our modern society is willing to trade privacy for security but it is still not enough to fully prevent or solve the problem. It is here that technology is starting to play a big role. State-of-the-art video surveillance systems are using artificial intelligence to combine high definition cameras with social networks such as Facebook and Twitter on time messages, not only to react quickly to threatening situations but also to predict crimes before they happen.

Rising unemployment

As a consequence of the digitalisation of the economy and the robotisation of work, a growing trend will be the substitution of jobs for complex

robots. For the first time, robots are replacing not only blue-collar jobs, but white-collar too in unprecedented rates, especially in traditionally intensive manufacturing industries. Some studies foresee that in the next decades technology could replace workers in 80% of current jobs,⁷ which poses a huge challenge for employment policies and inequality. Some cities, such as Utrecht in the Netherlands, are already proposing to test the introduction of a universal basic income as a policy mechanism aimed at addressing this threat. However, there are also some voices that believe that the consequences of this intense process of robotisation will be positive. Philip Jennings,⁸ general secretary of UNI Global Union said: “We need some governance to ensure a democratic evolution and that requires public policy discussion. There is the opportunity to shape technology to improve people’s lives; through connectivity, education, health. We shouldn’t be fearful and fatalist about it.” Whereas we still do not know the scope and reach of this trend, we are entering a new paradigm that challenges the traditional view of work in a context of rising unemployment and inequality.

Solutions

The core of any evolutionary urban project is no longer technology but people. Cities also embrace ICT as one of the main drivers of successful implementation of Smart City projects. It is important to reemphasise that the old concept of IT (information technology) was upgraded by the addition of “communication”. In this case, communication is related to the capacity not only for one-way flows of information but to creating an interaction between the two sides: one that wants to inform and the other that is using and reacting to the information. And the trend is towards even deeper use of technology in the Internet of Things (IoT) era. Information and communication technology is being used to connect people to people, people to machines and machines to machines. Items in daily use like home appliances, bikes and cars are being connected. Public lighting is becoming smart and connected, as are water meters, car parking and so on. That said, the first step to scale up any tech-based project is to enable complete, ubiquitous and full-time internet connection in the city. The internet is becoming as important as a reliable and stable utilities supply (power, water or gas) to a city.

Scaling up tech projects for inclusive urban development

*Case study: The magic box – a “plug-and-play” Internet connection on a national scale.*⁹

Athonet is an Italian high-tech company. They have developed a solution to create large-scale internet coverage. They won the Global Mobile Awards 2016 in the category of Best Solution for Growing Smaller or Independent Networks issued by the World Mobile Congress in Barcelona. There are Facebook’s partners in the project to take free Wi-Fi worldwide. Athonet has successfully enabled customers worldwide to deploy local internet networks, simply, cost-effectively and in record time. Basically, they can enable a complete full internet network in a vast area with an initial cost of less than 5% of a normal investment budget by replacing all the expensive hardware with simple software running on standard IT servers.

7. <http://issues.org/30-3/stuart/>
8. <https://www.theguardian.com/business/economics-blog/2016/jan/24/4th-industrial-revolution-brings-promise-and-peril-for-humanity-technology-davos>
9. <http://www.smartcities.com/en/articles/city-scaleup-from-wow-now>

Connectivity and internet access are important elements in promoting digital inclusion and facilitating access to information. In this way, cities in developing countries can also benefit from these new disruptive and affordable technologies.

Connectivity also has applications in disaster management. Athonet developed a humanitarian service during the large earthquake in Italy in 2012. Within just a few hours they deployed a complete local wireless internet network in the affected area 35 kilometres north of Bologna. It allowed the Italian civil protection teams to run operations using HD live-streaming videos of the disaster area to control centres, communicating and co-ordinating the activities of emergency personnel and helping save lives. The main competitive advantage of the system is the low initial cost to the government or company seeking to establish city-wide internet networks. It removes the huge barrier to deployment of city-wide networks that comes from the cost of conventional technologies. Costs fall from seven or eight figures to a few thousand dollars. It is a pay-per-use model in which app companies, developers and finally the end-user will pay the bill in the long term.

As the concept is still in development, all the potential applications have still not been fully released. Considering, for example, the great challenge Europe is facing with the refugees, technologies like this could facilitate better management. Recent research done with refugees in Europe revealed that Wi-Fi is one of and perhaps *the* major need when they first reach the camps. "A lack of connectivity constrains the capacity of refugee communities to organize and empower themselves, cutting the path to self-reliance" according to UNHCR.¹⁰

Smart credit for financial inclusion and economic sustainability

Case: ZmartCredit: New technologies to propel Smart City development.

Smart credit is a concept that is becoming widespread in newly industrialised countries such as Brazil, Mexico and India. These are large, populous countries with young populations. Though they are all huge economies in terms of GDP, credit is not only a local need, it is also an important economic tool to promote economic development and social inclusion. One of the most successful cases in this field is a spin-off called Salaryfits, based in London. They have combined two traditional financial tools to develop the product they call ZmartCredit: salary deduction loans and big data deep integration, powered by a cutting-edge business intelligence platform. The basic solution proposed by Salaryfits is a Business Intelligence (BI) tool to quickly and efficiently integrate the credit offered by local providers into the payroll systems of organisations, regardless of whether the users are public administrations or private companies. Salaryfits will process this information and allow the credit providers to better access the credit profile of the employees of those entities. This technology helps reduce credit risk and enables employees to get interest rates lower than with other modalities. It works well with all stakeholders involved: the local financial institutions and other providers, companies and employees (citizens), who can get access to cost-effective, convenient credit lines, with the possibility of comparing costs and doing simulations

10. <http://www.unhcr.org/5770d43c4.pdf>

online, in the same way that they currently do when searching for flight tickets and hotel rooms on Kayak or TripAdvisor. Once the individuals decide what the best offer is, they can easily get the credit from the institution chosen and the instalment/repayment will be automatically deducted each month from their salary. It means that it does not matter if you are a citizen or not or whether you have a previous credit record or even a good credit rating, you can get good, fair credit offer whenever you need it. This is process that until now has been totally connected to your social status is becoming smarter and tailored to our new “Smart Citizens” profile.

Back to the challenge of the refugees, this technology could be used to help governments to better manage the huge and intense flux of financial resources. With just one tech solution we could distribute the money to the people in need (refugees) and better manage it, promote the local economy and bring full transparency to the whole process, avoiding traditional problems such as corruption and the misuse of financial resources.

Lessons learned and/or policy recommendations

With all these new paradigms, the whole concept of urban planning and development needs to be adjusted. Previously, the success of a city development project was a matter of “fighting” for budgets, non-repayable loans or grants from national government or financial support from international organisations. This approach is now almost obsolete. Projects were designed to suit the requirements related to these funds rather than to be economically sustainable or to promote the city's real competitive advantages. Solutions were ICT-oriented instead of citizen-centred. Problems are rising due to migration and population concentration, and new wise solutions are being deployed to improve people's well-being. Hence, citizens should be at the core of the new policies, followed by the economic sustainability of any new initiative implemented at the local level. Here is a four-step process that can help policymakers to implement inclusive and sustainable urban projects:

Step 1 - Sharpen the city's pitch

People have a deep connection with their cities, even deeper than with their province, region or country. To understand the unique DNA of the city and translate it in a strategy to develop a wiser city will be crucial for the success of any project. Citizens do not want a new city, they want a better city to live in.

Step 2 - Keep it simple

When thinking about the projects to solve or how to mitigate urban problems very often policymakers use the traditional top-down approach and keep their focus on long-term complex plans. Huge infrastructure changes, billion-dollar master plans and state-of-the-art technology can bring you a well-rounded road map, but is it doable? Does the city have the resources to make it happen? All concepts and applied technologies

should be observed in a harmonious combination between timing and budget and should definitely be focused on making citizen's daily life better. Keeping it simple, and focusing on solutions that can have a deep, positive impact and good results will help the city to attract partners and investors.

Step 3 - Find the right partners

As mentioned above, creative and sharing economies are driving the new economy. Start-ups oriented to urban solutions are emerging around the world. Some of them from newly industrialised markets such as Russia, China, Brazil and India are also showing the world new wise solutions. Probably the challenging reality faced in these countries is helping these enterprises to develop creative and affordable solutions. These companies are striving to go global and prove the effectiveness of their solutions and they need international cases to enhance their portfolio. It means that the city can get good cooperation agreements based on mutually beneficial terms with these companies. Rio de Janeiro, for example, has partnered with WAZE, the world's largest community-based traffic and navigation application, to develop a city traffic management solution on a win-win basis in 2013. Rio solved the problem of few cameras in the city and WAZE was able to develop, pilot and test a new product that is already being fully monetised. The focus lies not in asking for more budget but instead what value the city can offer in order to attract strategic partnerships.

Step 4 - The new 4Ps approach

More than a step, this is a radical shift in the political mindset. One of the most popular and most effective tools to promote investment attraction to public projects is the public-private partnership (PPP). These are basically contracts between the government and the private sector, in which a governmental authority allows the private sector to invest in and operate a public service. It is raising now the concept of PPPPs, public-private-people partnerships, which go deeper into the idea of citizen-centred approaches. People become active stakeholders in the process of planning, developing, testing, implementing and evaluating urban policies.

All in all, a successful model of urban development will go hand in hand with an increased sense of well-being within the city environment. This is particularly relevant because, firstly, the smart cities already built are not delivering the eco-friendly, hyper-connected future they set out to (e.g. Masdar, Songdo, and eco-cities in China) and secondly cities are accommodating more and more inhabitants who do not succeed in achieving a higher quality of life.

Understanding the urban determinants of intercity flows is indispensable to the city's capacity to improve its citizens' well-being (Wall, 2016). Therefore, it is argued that a city (space) depends on "glocal wisdom", which requires an understanding of the interdependency between "world" processes acting upon the city (global and regional competition), and subjective "people" processes within the city (local sustainability). Only by understanding this interdependency can "technology innovation" and "urban planning policy" be used as devices to achieve Wise Cities. Competitiveness needs to be steered at

an urban planning level while taking glocal conditions into account, which is an argument for uniting the theoretical fields of Happiness Economics, Smart Cities, Urban Competitiveness and World City Networks.

References

Batty, M., K. W. Axhausen, F. Giannotti, A. Pozdnoukhov, A. Bazzani, M. Wachowicz, G. Ouzounis and Y. Portugali. "Smart cities of the future". *The European Physical Journal Special Topics* 214(1): 481-518, 2012.

Bennet, N. & Lemoine, G. J. "What VUCA really means for you". *Harvard Business Review*, 2014.

Bélissent, J. "Getting Clever About Smart Cities: New Opportunities Require New Business Models", 2010.

Florida, R. "The Creative Class and Economic Development". *Economic Development Quarterly*, 28(3), 196-205, 2014. DOI:10.1177/0891242414541693.

Hamari, J., M. Sjöklint and A. Ukkonen. "The sharing economy: Why people participate in collaborative consumption." *Journal of the Association for Information Science & Technology* 67(9): 2047-2059, 2016.

Hollands, R. G. "Will the real smart city please stand up?" *City*, 12(3): 303, 2008.

Tibbits, S. "4D Printing: Multi-Material Shape Change". *Architectural Design* 84: 116-121, 2014.

Townsend, A. M. *Smart cities: big data, civic hackers, and the quest for a new utopia*. New York, NY: W.W. Norton & Company, Inc., 2013. First edition.

Wall, R. *Resilient Cities*. ETH Zurich, 2016.

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Background and context

Lagos is Nigeria's economic powerhouse, accounting for some 65% of Nigeria's industry and contributing more than 70% of its national economic output¹. It currently hosts the most active stock exchange in west Africa; its four ports collectively handle about 75% of the country's imports and 90% of non-oil exports by weight; and the city's international airport takes about 80% of both airborne international trade and passenger movements in and out of the country².

Lagos is seen as a microcosm of the internal dynamics of emerging megacities around the globe today. It is the world's fastest-growing megacity with compound growth rates surpassing that of any other megacity on the globe. It displays, and often accentuates, all the main features – both good and ugly – of megacity agglomeration of both human populations and economic activities. Historically, Lagos is a product of colonial times with inadequate strategic planning. When the British colonial government started recording population in 1866, Lagos had 25,083 inhabitants. At the time of Nigerian independence in 1960, the population estimate of the city was approximately 600,000. With a meagre 0.012% of Africa's land mass, Lagos currently hosts 1.8% of the continent's population. It is now a large and complex urban area with a current population density of 4,193 persons per square kilometre over the entire metropolis and 20,000 persons per square kilometre in built-up areas. Its population is now increasing by 70 people each hour and has a mean age of 19 years old. It has been estimated that the current population of 23 million is set to double within one generation (DASUDA, 2015). Geographically, the metropolitan area has continued to spread since colonial times and now the majority of the population commutes into the central business districts (CBDs) on the "island" from peripheral boroughs on the mainland. The further the distance from the CBDs, the longer the commute times and, in addition, the more inefficient public transport becomes. There is also severe gridlock on the island during peak hours due to the unsustainable traffic volumes.

1. LAMATA, December 2009: p. 19.
2. Ibid.

Challenges

The boom in Lagos's population since the 1960s was occasioned by the unprecedented rural-urban migration induced by declining agricultural productivity as the country switched to crude oil production and export. This rapid migration and concomitant urbanisation further increased as Lagos emerged as the country's political capital. In the 1990s, the federal capital moved to Abuja, but Lagos still remained the country's primary city and commercial centre. The explosion in population and economic activities following from this status exerted enormous pressure on the city's civil infrastructure. Currently, transport services and infrastructure are greatly inadequate to serve the needs of the population with some sources determining that in Lagos "... transport, infrastructure and services remain at levels that support no more than six million people" (The Quramo Report, 2015). Over the years, Lagos has grappled with enormous challenges in all aspects of urban transportation including modes, infrastructure, networks, flows and administration.

Of the four major modes of transport – road, rail, water and air – movement by road remains predominant, accounting for more than 90% of internal passenger and freight movement. The result is a highly motorised transport landscape with a 220 to 224 car density when the national average car density is 20 (The Quramo Report, 2015). It is predicted that vehicular growth will climb by 350% over the next 25 years (IBM, 2013). The implication of population size, density, poor planning, absent regulation, and general governance failure for transportation can best be described as intractable. *The Economist* recently described Lagos traffic to be among the worst in the world (2015).

The predominance of a unimodal transport structure in Lagos has had dire implications for the roads. In the absence of other alternatives, the available roads suffer from overuse. Given the rapid expansion of the city, housing developments are always ahead of infrastructure provision – not just roads and bridges, but also schools, hospitals and police posts as well. Routes and terminals have remained largely underdeveloped except in few older districts like Ikeja, Ikoyi and Victoria Island and some newer areas of the city like Lekki and Banana Island. Poor network planning has implications for the flow of traffic in the city. Inability to expand the network, poor and inappropriate maintenance, and the absence of alternative transportation modes like rail and water, in addition to the unmitigated explosion of the city's population, have created a traffic congestion nightmare that gives Lagos the unenviable reputation as one of the most congested cities in the world. This has been equally manifest in the dilapidation of existing infrastructure and rapid deterioration of any new investment. Lagos has lagged behind other emerging cities in the exploitation of modern transport infrastructure solutions that have curbed congestion problems, such as urban metro lines and high capacity buses.

Administratively, there has been an overlapping jurisdiction over transport in Lagos as in the rest of Nigeria between agencies of the federal, state and local governments, creating interagency rivalry. At the national level, agencies and parastatals under the federal government involved in transport management in Lagos include: National Inland Waterways Authority (NIWA), Federal Road Safety Commission (FRSC), the Federal

Urban Mass Transit Authority (FUMTA), Nigeria Ports Authority (NPA) and the Traffic Unit of the Nigeria Police. At the state level, the agencies and parastatals commissioned by the Lagos state government for the control and management of transportation include: Lagos State Traffic Management Authority (LASTMA), Lagos Metropolitan Area Transport Authority (LAMATA), Lagos State Ferry Services (LSFS), Lagos State Ministry of Public Transport (LSMPT) and the Vehicle Inspection Unit (under the State Ministry of Public Transport). One of the major achievements of the transport reform in Lagos is sorting out the web of overlapping mandates, streamlining responsibilities and harmonising authority over the transport system; although some grey areas and occasional skirmishes remain.

Until recently, public transport was dominated by the informal private sector, with minimal large-scale fleet operators, and characterised by excessive fragmentation, operational indiscipline, and thuggery. There was a near total absence of organised, public transportation system for the teeming population of Lagos. The absence of public transportation led to the explosion of private vehicle ownership, resulting in traffic anarchy, massive air pollution, and reduced quality of living. This is what the transport reforms targeted.

Trends

For years, Lagos lagged behind other emerging cities in the exploitation of modern transport infrastructure solutions that have curbed congestion problems – such as urban metro lines and high capacity buses. According to Dayo Mobereola, the erstwhile boss of Lagos Metropolitan Area Transport Authority (LAMATA), in 2006 Lagos' transport infrastructure and services were almost the same as they were in 1976³. Serious effort to combat the traffic situation in Lagos started in the 1980s in partnership with the World Bank, which wanted to fund the creation of a metropolitan transport authority according to international best practices to plan, manage and improve public transportation in Lagos. However, this attempt was truncated by the military coup d'état of December 31st 1983⁴. Before the failed World Bank attempt, several efforts had been made by the metropolitan government to tackle the transport challenge in Lagos, beginning in the late 1970s when the population started to grow beyond the capacity of installed infrastructure. In 1977, the government of Lagos enacted a Traffic Restraint Policy Edict which aimed to control traffic flow to Lagos Island (the better planned and more developed half of Lagos City) by allowing only specific vehicles (odd and even vehicle registration numbers permitted only at designated times and days of the week). Initially this worked quite well as there was a noticeable increase in car pooling and use of public transport, but again, the government failed to create the necessary structures to sustain the policy – like providing secure car parks and convenient mass transit buses to move people to and from the island which, in turn, created the incentive for people to design crafty ways to circumvent the policy⁵.

From 1979 to 1983, the Lagos urban rail scheme was initiated by the government of Lagos. The contract, awarded in 1982, was terminated when the military took power in Nigeria on December 31st 1982. Work was suspended on the urban rail system and the programme was alto-

3. Mobereola, 2006: p. 12.

4. Gomez-Ibanez, 2011: p. 2.

5. Ogunsonya, 2002: p. 35.

gether jettisoned by the military regime. During the 1990s military government, there were more than 100 agencies of federal, state and local governments with various roles in transport provision and or management in the city, with most agencies developing and implementing their policies in isolation, giving rise to a regulatory crisis and paralysis⁶.

Upon Nigeria's return to democratic governance in 1999, the World Bank renewed its interest in the plan to create and fund a metropolitan transport authority. Desirous of improving the seemingly intractable problem of the public transport system in Lagos, the city council bought into the programme and employed international experts to help draft the Lagos Metropolitan Area Transport Authority (LAMATA) law. The law legislated LAMATA into existence to be a semi-autonomous transport authority with overall responsibility for planning and coordination of transportation in the city of Lagos. The law was passed by the Lagos State House of Assembly in 2002 and LAMATA was set up the following year, with Mr Dayo Mobereola, a renowned transport economist, as its first Managing Director. Subsequently, the Lagos state government and the World Bank launched the Lagos Urban Transport Project (LUTP), which provided about \$100 million in World Bank loans for capacity building at LAMATA and for repairs and provision of transport infrastructure in Lagos⁷. LAMATA's jurisdiction included the management, maintenance and improvement of the 635-kilometre network of roads used by the public transportation system in Lagos. It was also charged with the coordination and implementation of the transport policies, programmes and actions of all transport-related agencies at different tiers of government in Lagos. LAMATA effectively harmonised the plethora of intersecting transport agencies – local, state and federal – that previously dotted the transport landscape of Lagos⁸. It effectively became the implementation agency of the Lagos Urban Transport Project, jointly funded by Lagos State and the World Bank. Its overall objective was to ensure that all the people in the Lagos metropolis had access to affordable, rapid, efficient and effective public transportation.

Solutions

LAMATA set out to develop a longer term strategic plan to deliver an efficient and sustainable transport service to Lagos City across all the aspects of the transport system including mode, infrastructure, network and flow. It embarked on a shift to an intermodal transportation system which would include, amongst others, the development of urban mass rail and water transportation; optimisation of the existing road network; creation of a new road network to improve access; and the massive development of a complex network of roads in Lagos to ease and anticipate future traffic growth. In the interim, however, it embarked on two quick-win projects. First, it needed to renovate and rehabilitate its 635 km road and commission monitoring studies on the transport needs of the Lagos megacity. Although it achieved rapid success with the rehabilitation of Trunk B and C roads – which are statutorily under state and local governments – it had difficulty with Trunk A roads, which are under the federal government. However, it is pertinent to note that LAMATA managed to renovate and rehabilitate the roads at one-fifth to one-third of the costs of comparable

6. Dayo Mobereola, *Op. Cit.*, pp. 2-3.

7. Gomez-Ibanez, *Op. Cit.*, p. 3

8. *Ibid.*

projects by the State Ministry of Works. This was highly acclaimed by the World Bank and awarded much needed social and political legitimacy to the agency.

Second, it also needed a quick, if temporary, palliative to deal with the grinding traffic gridlock occasioned by congestion, lawless driving, rickety and ramshackle minibuses that mars Lagos. It therefore came up with the idea of Bus Rapid Transit (BRT) – a network of high capacity buses that will run on dedicated lanes across the heavily congested corridors in Lagos which will encourage residents to leave their private cars and thereby decongest traffic. This initiative was suggested by the World Bank and had been tried and is in use in several cities in South America and elsewhere. The BRT scheme, in essence, was to consist of efficient service, a strong institutional regulatory framework, high socio-economic benefits – especially for the low income population, maximum private sector participation, minimal public expenditure and liability, and mitigation of the environmental and social impacts of the BRT system⁹.

LAMATA decided on two models in two corridors for the initial phase. The first was a “pilot exclusive franchise” scheme whereby the thousands of minibuses operating on the corridor would be replaced by a “single bus company operating full-sized buses”¹⁰. The second corridor also had the same feature as the first with the distinctive feature that it would run on special dedicated lanes for 65% of the corridor.

The plans met with stiff opposition especially from the city’s elite who had long given up on the use of public transport. The argument against the scheme was that by creating a dedicated lane out of the already inadequate and congested road network, the problem of traffic gridlock would be compounded instead of being solved. However, with the political backing of the governor of Lagos at the time, LAMATA went ahead with the demarcation and construction of bus terminals along its “declared roads”. The lanes were typically 3.3 m wide and separated from other traffic by concrete kerbs that were 400 mm high.

The next issue to be resolved was that of ownership and who to run the buses. Since it was meant to be private-sector driven, the state naturally contacted the National Union of Road Transport Workers (NURTW) and the Road Transport Employers’ Association of Nigeria (RTEAN)¹¹. The NURTW quickly saw the benefit of operating the BRT and quickly signed up¹². The World Bank had taken LAMATA and the unions on an educational tour of countries in South America where the BRT was in use on two different occasions in 2004 and 2006. In 2005, the NURTW agreed with an Indian truck manufacturer – Ashok Leyland – to finance about 100 buses over 18 months provided a local bank underwrote the risks. Finally, Ecobank agreed to finance the purchase of the buses for 24 months¹³. A company, the First BRT Cooperative of Nigeria (FBC), was formed to lease the buses and operate them in the BRT corridor¹⁴.

“Bus rapid transit” lite

On March 17th 2008, the BRT Lite scheme was launched by Bola Tinubu’s successor after eight years as governor: his former chief of staff, Babatunde Fashola, whom Tinubu picked for the job himself. The BRT

9. LAMATA, January 2009: p.4.

10. Ibid, p.4.

11. These were the two unions that organised and controlled road passenger transport operations in Nigeria. NURTW represented mainly drivers and workers while RTEAN represented owners’ interests. With time, RTEAN came to dominate inter-urban and large bus sectors while NURTW dominated the urban and small-bus sector. Also, membership was always fluid as many drivers were also owners.

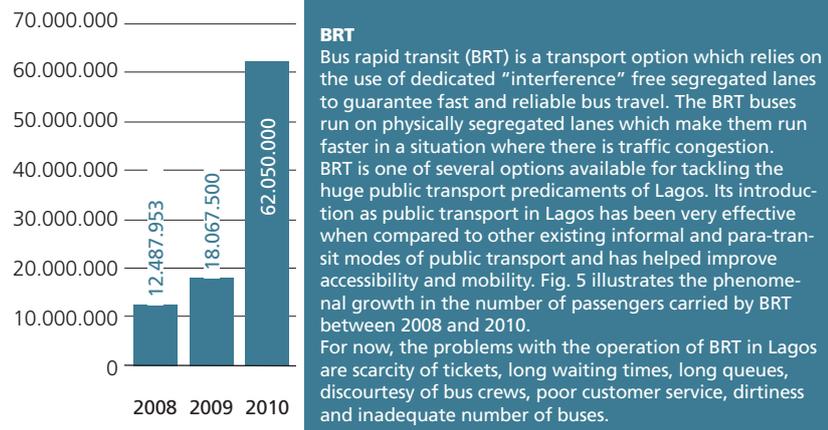
12. The NURTW’s support for the scheme was predicated on the realisation that their members would operate the buses, it would not lead to job losses for their members and it had better job and health security for their members in that they would enjoy less punishing work schedules. RTEAN’s support was on the basis that the banks would finance the new vehicles – something they were unwilling to do.

13. This was on the condition that the bank print and sell the tickets from which it would deduct its leasing fee first and pass on the profit to the bus-operating company.

14. Jose Gomez-Ibanez, Op. Cit., p.5.

became so successful and exceeded all expectations and projections. Ridership was 150,000 passengers per day when the forecast was only 60,000. Demand quickly outstripped supply and the FBC was forced to lease an extra 120 buses while it paid off the 100 buses earlier leased in record time¹⁵. Demand forecast showed about 300 buses were needed¹⁶. So successful was the scheme that every corridor in the city began to clamour for the service. It was also suggested that the FBC was grossing about the equivalent of \$20 million a year¹⁷. In no time, the Lagos BRT experiment became a model for other cities in Nigeria and across Africa.

Figure 1. Number of passengers carried by bus rapid transit



Source: Lagos State Government Digest of Statistics (2011)

With the BRT scheme up and running, LAMATA proceeded with the onerous task of developing a strategic transport master plan for the Lagos metropolitan area. This was all the more necessary as it was estimated that the population of Lagos was going to reach 36 million in 2020 and a consequent 350% growth in the number of vehicles in the state was expected. Such a megacity could not afford to depend only on roads for transportation. After extensive consultations with all stakeholders, the use of world-class forecasting models and thorough analysis of policies and alternatives, the strategic plan was released in December 2009. The plan clearly spelled out the transport vision, goals, policies and action plans for the Lagos metropolis.

While the plan was being prepared, Governor Fashola – who had made the promise to improve ferry services across Lagos waterways during the 2007 elections – consulted with LAMATA, the Lagos State Waterways Authority (LASWA), to prepare the necessary infrastructure and contract private operators to prepare service. Although LAMATA was not going to supervise the agency, the creation of LASWA by the state government did not violate the LAMATA establishment law.

The rail project

The master plan identified a Lagos Urban Rail Network to cover seven corridors as part of an integrated MRT system to link the major

¹⁵. Ibid.

¹⁶. LAMATA, January 2009: p.13.

¹⁷. Jose Gomez-Ibanez, Op. Cit., p.5.

population and activity centres in Lagos State. All the railway lines were expected to be delivered by 2020 at an estimated cost of about \$8 billion. The government was determined to bring to fruition the railway line projects. Work commenced on the Blue Line and it was planned to be ready and commissioned before 2015. LAMATA was charged with the execution of the project. However, because of the huge capital outlay – estimated at \$1.8 billion – the state government decided to divide the project into phases. The project was planned under a public-private partnership (PPP) model, whereby the state builds the infrastructure and the private sector provide the rolling stock and management¹⁸. The contract was awarded to the Chinese Civil Engineering Construction Company (CCECC). The first section of the network (phase one of the Blue Line) was scheduled to enter revenue service by the first quarter of 2014, but had not yet opened at the time of filing this report. However, construction is ongoing and nearing completion.

LAGBUS

The pressure on LAMATA to deliver bus services to virtually all corridors in Lagos became heavier after the success it recorded with the pilot bus services. It was argued that Lagos needed thousands of modern big buses to permanently replace the dilapidated buses and minibuses called *molues* and *danfos*, respectively, from Lagos roads. Before the success of LAMATA's experiment, it was assumed that the greatest obstacle to the roll-out of modern buses for public transportation was the unwillingness of the banks and other lenders to finance the projects on reasonable terms. Therefore, the government, as far back as 2004, created a parallel bus company, LAGBUS Asset Management, which was to report to the Ministry of Transport rather than LAMATA. As LAMATA had made the idea of big buses for public transportation quite popular, promises of buses soon found their ways into political campaigns and before long, LAGBUS was dabbling in public transportation.

LAGBUS's sole initial aim was to use the state's borrowing power to procure and lease buses to private operators on reasonable terms and also to establish a bus assembly plant to supply high capacity buses to Lagos and the entire Nigerian market. The company consequently negotiated with a Brazilian bus builder and by 2006 it started taking delivery of the first 200 buses. However, it could not find willing leasers of its buses because the prices were high (\$25 million compared to \$9 million for BRT's Ashok-Leyland ones). No one could give a satisfactory idea as to the huge differentials in prices and the buses were not utilised for more than a year. However, with the 2007 elections only months away, a political decision was taken to roll out some of the buses. This marked the entry of LAGBUS into the bus operator market, making a future clash with LAMATA almost inevitable. However, after much dispute, LAMATA was compelled to grant LAGBUS a "universal service license" that allowed it and its sub-contractors to operate any service – other than the BRT – it thought possible¹⁹. As in 2015, LAGBUS operated about 500 buses on 40 different routes in Lagos and neighbouring Ogun State. It also granted franchising rights to 10 companies operating a total of 238 buses on 17 routes under its Route Franchise Scheme in Lagos State.

18. <http://www.vanguardngr.com/2014/08/lagos-building-new-nigeria-rail-projects-lamata-boss/>

19. Ibid, p.8.

Lessons learned and recommendations

In the words of Diane de Gramont, “in fifteen years, Lagos has gone from being a symbol of urban disorder to a widely cited example of effective African governance. The Lagos State government has succeeded in multiplying its tax revenues and using these resources to restore basic infrastructure and expand public services and law enforcement” (2015). These reforms were driven mainly by electoral pressures as well as elite ambitions to construct an orderly and prosperous megacity. LAMATA, which remains the most manifest aspect of the reform, has been lauded as a model in sub-Saharan Africa for formulating and implementing innovative policies aimed at managing public transportation in megacities.

LAMATA is notable for its bid to harmonise discordant and competing territorial claims on the transport system among the plethora of government agencies – federal, state and local government – responsible for the management of transportation in the metropolis. However, over ten years after its establishment, LAMATA, unlike other model transport authorities in London, New York, Vancouver or Ontario, does not yet have sole authority and control of roads and buses in the Lagos metropolitan area. This is partly due to constitutional restrictions at the national level which mandates some federal routes to federal agencies and partly due to the overwhelmingly informal size of the transport system with arguably greater areas lying outside LAMATA’s purview. Until the government is able to expand the infrastructure network, especially to newer edge cities, LAMATA will continue to be overwhelmed by the sheer enormity of the transport challenge in Lagos.

In spite of this, the BRT scheme is considered innovative in many respects. It incorporated environmental and sustainability concerns in its plans by promoting a shift to more environmentally sustainable urban transport modes. In November 2015, LAMATA initiated plans to start deploying Compressed Natural Gas (CNG) buses on some of its routes. Although this will be a giant step in the direction of sustainability, the challenge is the scarcity of complementary infrastructure (like CNG refill stations) to support such ambition in Lagos.

An electronic ticketing system was implemented on the BRT and Bus Franchise Scheme in 2012. This provided more visibility in the ticketing process, increased revenue protection and data collection. The ticketing system was implemented on a PPP basis, with the system provider supplying and installing all equipment at no initial cost. The suppliers are scheduled to receive a percentage of each transaction for a period of 15 years. The ticketing system worked very well initially but has been undermined by lack of stakeholder buy-in and issues of trust. Commuters often complained of being short-changed by ticket handlers who would not give them their cash balances, making excuses of not having lower denomination currency. These are however, administrative problems that can be easily handled by better supervisory capacity.

Other forms of intelligent transportation systems (ITS, smart technologies) are in the process of being implemented including: real-time passenger information systems, automatic vehicle location systems, fleet management scheduling system as well as establishing a control centre for real-time monitoring.

The reform of the transport system in Lagos is a key strategy for achieving the SDG goal of making cities inclusive, safe, resilient and sustainable. Transportation developments, from the provision of adequate infrastructure (highly lacking in Lagos) to the improvement of public transport systems, and the implementation of various integrated intermodal transit options (e.g. the planned marina bus stop which will have various modes of transit including the Blue Line LRMT, the BRT and the minibuses (*danfos*) and ferry) are critical components of achieving this goal.

Although the Lagos urban transportation reform has been quite innovative, revolutionary and very successful since its launch in 2008, it has come under strain due to poor management. The buses, originally meant to transport people faster along congested corridors and also decongest the roads by providing a decent and quality alternative to car drivers, had largely been run unprofessionally, such that most of the buses were now broken down, dirty, filthy, congested and no longer attractive to car drivers. Consequently, traffic congestion along the routes had returned and the original idea of the BRT appeared to have been defeated. These are clearly difficult challenges, especially given the astronomical growth in the population of the city that seems to continually overwhelm every little effort to put things in check. The political nature of the challenges creates another set of challenges, requiring serious political will. The challenge for the city of Lagos in its ambition to become a competitive megacity is to find a way to fix the transportation problem, to provide, at least in the short term, an efficient and convenient public transportation system that will encourage the burgeoning Lagos middle-class population to drop their cars and use public transportation to and from work. For the sake of the city's sustainable development.

References

Adi, A.B.C. Lagos Megacity Competitiveness Project: Baseline Competitiveness Study

Center for City Solutions, Lagos Business School, Pan-Atlantic University, Lagos, 2014.

Adi, A.B.C. State of Infrastructure Report: Roads. Center for Infrastructure, Policy, Regulation and Advancement, Lagos Business School, Nigeria, 2014.

Coll, J.M. and Illan, C. "Wise Cities: Modeling the Local Contribution to Sustainable Development Goals." Notes Internacionales 134, CIDOB, 2015.

DASUDA "Lagos Lagoon City." Workshop Presentation, Lagos Nigeria, Dutch Alliance for Sustainable Urban Development in Africa, June 2015.

De Gramont, Diane. Governing Lagos: Unlocking the Politics of Reform. Carnegie Endowment for International Peace, 2015.

Gabriel, Chioma. "Lagos: We are building a new Nigeria through the rail projects – LAMATA boss", 2014. <http://www.vanguardngr.com/2014/08/lagos-building-new-nigeria-rail-projects-lamata-boss/> (accessed: July 12 2016).

Glaeser, Edward and Sims Helen (2015) "Contagion, Crime, and Congestion: Overcoming the downsides of density." Growth Brief, International Growth Center, May 2015.

Gomez-Ibanez, Jose. Lagos Metropolitan Area Transport Authority (LAMATA), Harvard Kennedy School of Government, 2011.

IBM. "IBM Helps Nigeria's Lagos State Design a Transportation System for Future Growth", 2013. <https://www-03.ibm.com/press/us/en/pressrelease/41296.wss>

LAMATA, Lagos BRT-Lite Evaluation Final Report, January 2009.

LAMATA, The Proposed Strategic Transport master Plan for Lagos Metropolitan Area, December 2009.

Mobereola, Dayo. Strengthening Urban Transport Institutions: A Case Study of Lagos State, Sub-Saharan Africa Transport Policy Program Discussion Paper, No. 5, October 2006.

Ogunsanya, Ade. Maker & Breaker of Cities, Inaugural Lecture at the University of Ilorin, Nigeria, June 27 2002.

Oni, S.I., Okanlawon, K. R. & Asenime, C.O. "Institutional Framework for the Transformation of Transport Administration in Metropolitan Lagos" in: An Agenda for a New Nigeria: The Imperative of Transformation, Anifowose, R. and Babawale, T. (eds.), Concept Publications Limited, Lagos, 2006, pp. 421- 437.

The Quramo Report. "Sustainable Cities: Lagos, the Transportation Challenge", 2015. <http://tkr.com.ng/article/sustainable-cities-lagos-transportation-challenge> (accessed: October 2016).

Venables, Tony. "Making Cities Work for Development." Growth Brief, International Growth Center, May 2015.

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A common trend among large and medium-sized cities is that they involve increasing and coexisting multiple social disparities. They are laboratories for social changes and tensions arising from growing inequalities but also provide privileged spaces for adopting inclusive local policies, in particular to face social challenges such as housing shortages, unemployment or poverty. Large imbalances in the standards of well-being in urban areas erode social and territorial cohesion and are sources of social conflict. The risks of marginalisation and exclusion due to the lack of opportunities, the effects of the economic crises and the pressures deriving from intensive population inflows require active policies to prevent ghettos in peripheral and degraded areas. Being the closest administration to the citizens, local authorities are called to guarantee welfare for all people within their territories, adapting policies to specific local factors.

Citizen well-being is at the heart of Wise Cities and an overarching objective for local governments. Providing social infrastructure, including education, culture, health, telecommunications and leisure, is essential for inclusive development. Local authorities often lack sufficient competences and resources to address all these challenges, but they are best placed to make an accurate diagnosis of citizens' living necessities in each urban area, to draw an integrated vision of problems and to generate innovative responses. Urban areas are drivers of social innovation and experimentation with new policies. Comparing and exchanging good experiences is a good instrument for elaborating guiding principles. The demographic agglomeration and the heterogeneous social composition of cities provide a playing field on which to put into practice innovative participatory experiences providing interaction between different actors.

This paper will analyse the state of the art regarding the social cohesion issues and current trends that are causing a paradigm shift in the way cities will be led and managed in the future. A first general overview will be complemented by specific case studies identifying best practices that illustrate new approaches based on fostering collaborative initiatives between local authorities, community-based organisations and other local actors, providing new models of social innovation and entrepreneurship initiatives based on creativity and inclusivity. Specific

cases will be highlighted from Milan and Barcelona, showing data and figures as well as policies and solutions that are relevant for other cities, not only in Europe.

Current trends and innovative solutions that respond to social cohesion challenges

The economic crisis, with higher levels of inequalities and the rise of unemployment, especially for young people and those over fifty is raising poverty levels and putting social cohesion at risk in urban areas. These trends together with ageing populations lead local governments to incur more financial pressures to maintain social services and assure a basic income. Local authorities should provide new instruments to address some of these challenges with an integrative vision. A people-centred approach is the priority of brand new social policies.

Popular participation is key to integrated urban development. Formal and informal participation processes to elaborate guiding principles and pilot experiences have been put into practice with the active involvement of municipalities, citizens' associations, third sector and other social actors in a multi-stakeholder approach in policy development. New approaches to local government interventions attempt to be preventive by anticipating future problems and creating resilient societies. They are also less bureaucratic and more community action-based in order to co-produce goods and services with different social groups and the private sector.

Technological and biological transformations affect citizens' lives negatively or positively depending on whether these changes are seen as a barrier or an opportunity to change the development model. The results will depend on the cities' capacity to boost integrated policies that support the development of an inclusive and creative society. The new paradigm includes innovation models that are based on the capacity to generate social networks and collaborative activities that accrue economic, social and environmental benefits for all. The smart city model is trying to be reoriented to focus on developing new technologies to solve social necessities.

To create new jobs and economic growth local governments can provide facilities to encourage circular, sharing and green economies, social entrepreneurship incubators, accelerators, co-working spaces and fab labs. Shared spaces and opportunities for people to start up new self-entrepreneurship projects offer new bottom-up social innovation models responding to urban challenges, as well as top-down processes able to increase the participation and engagement of citizens, while tending towards decentralising the role of public administrations. The availability of open source technologies, access to finance, talent education and vocational training also contributes to spreading the social capital needed to accelerate along the path towards a creative city.

Access to decent and affordable housing is also a big challenge for cities. This involves the availability of social housing at affordable prices. Experts estimate that to meet the needs of social housing a city's public housing should be around 15% of the total. This should translate into

building new homes that meet the necessities of smaller families and old people, but also reforms of the urban layout and old housing, and active policies to avoid empty houses.

Intensive population inflows also require active policies to prevent the risks of marginalisation and exclusion due to the lack of opportunities. Economic migration could be a contribution to improving the demographic transition in towns with aging populations, but it also poses challenges of newcomers' integration and pressures on social services and public spaces. Social infrastructure, including education, culture, health, telecommunications and leisure, contributes to inclusive integration. The current refugee crisis stresses the importance of active public policies tackling the massive influx of foreigners, even in societies with higher levels of social welfare provisions.

The provision of basic needs and services to the entire population is a key priority of municipalities and is increasingly viewed as a citizen's right. To be properly fed, have adequate housing and access to an energy supply have become obligations for local administrations. A more comprehensive debate is also now taking place on the need to ensure a universal basic income (UBI) for every citizen. However, national policies in many countries remain unable to reach everyone. Henceforth, some municipalities have begun to implement pilot programmes to guarantee a minimum income, even though these are still isolated experiences. See Box 1 below on the case of Utrecht.

Box 1. Utrecht: a laboratory for basic income experiments

The idea of a universal basic income for everybody is not new. The first proposal is attributed to Thomas Paine in 1795, and during the 1970s and 1980s several local initiatives were conducted in different countries with poor analysis of the results. The current economic crisis and the horizon of a more robotised and technologically advanced world have re-opened the debates. The Dutch city of Utrecht and the University of Utrecht decided to create several different regimes for the city's welfare recipients and test them to analyse the pros and cons with an empirical basis. Starting in January 2017, in a two-year test period the experiment will give 250 Dutch citizens currently receiving government benefits a guaranteed monthly income.

One group of benefit recipients will remain on the existing workfare regime, under which people who live alone get €972.70 and couples €1,389.57 (with the obligation to meet various conditions). Another group will receive the same benefits unconditionally, without sanctions or obligations. A third group will also receive the same benefits unconditionally, plus an extra monthly bonus of €125 if they choose to do volunteering work. A fourth group will be obliged to undertake volunteering work (and if they fail to do so, they will lose their €125 bonus). A fifth group will receive unconditional benefits without the bonus, while being allowed to earn additional income from other jobs.

The hypothesis is that traditional welfare schemes are too bureaucratic and costly and disincentives to work, since people lose benefits at around the same rate their income wage rises. Although the Utrecht experiment is reduced, the accurate design will provide evidence from different regimes, specifically concerning positive and negative incentives and the ability to motivate people to get out of the poverty trap. The logic of the experiment is to end specific social assistance programmes and replace them with a single wage. Future universality would eliminate the stigmatisation of poverty while reducing social barriers.

Sources: Basins Income Earth Network, 2016; Sanchez Diez, 2015; and Brown, 2016.

Some issues at the urban level have great potential – when appropriately put in place through participatory processes – to be used as framework policies and practices that can be replicated and shared between cities at the national and international levels, as well as for lobbying purposes. This is the case for example of the Milan Urban Food Policy Pact (see Box 2 below). By sharing experiences the city can become the positive field of action for healthy competition between public and private actors, for co-creating solutions that are capable of improving the living conditions of all citizens every day.

Box 2. The Milan Urban Food Policy Pact (MUFPP)

In 2014, as part of a EU-funded project titled “Food Smart Cities for Development” a core number of cities – including Milan, as leading partner, and Barcelona – which were able to involve key stakeholders in their respective local contexts, conducted an assessment of existing activities that could fall under a common “food policy”, with the aim of changing the urban food production and consumption paradigm. Examples included reducing food waste, promoting healthy food and the purchasing of food produced respecting the rights of people and of the environment, with the aim of triggering global change. Milan City Council adopted its “food policy” and while hosting Expo 2015 (devoted to the theme of food security), expanded its efforts beyond the projects’ objectives. Milan has been advocating for an international protocol which would engage most cities in the world in the development of food systems based on the principles of sustainability and social justice. This document was drafted by involving over 40 cities from every continent in exchanging views to define its content. The Milan Urban Food Policy Pact (MUFPP), a commitment to the coordination of international food policies, was launched and signed by 100 mayors on the occasion of Expo 2015 in the presence of UN Secretary-General Ban Ki-Moon. One year later (September 2016) the pact has been signed by 129 cities, and the advocacy and lobbying campaign continues to encourage new joint actions and partners.

Source: <http://www.milanurbanfoodpolicycompact.org>

In the next sections, specific cases from Barcelona and Milan are put forward. Both cities have experienced significant urban transformations in the past decades, from being two industrial poles in their respective countries to becoming capitals of the tertiary sector, with both projected into the international arena. Milan is an important financial district as well as a global reference point for design and fashion. Barcelona is a tourist capital in constant expansion and a leader in new technologies and the creative industries. The 1992 Olympic Games set a different pace for Barcelona’s urban development, while for Milan the boost came on the occasion of hosting the Universal Exposition in 2015. Both cities today are dynamic and full of opportunities, although they are also marked by tensions and contradictions, the effects of which have been broadened by the economic crisis. These are linked to growing inequality between inhabitants, housing speculation, gentrification of urban spaces and population inflows generating fear and insecurity. Local governments have been obliged to rethink social policies given the growing requests of the citizens to make changes to the current development model.

Milan: Refinding its purpose through manufacturing and social inclusion¹

Milan is considered the economic and financial capital of Italy. Milan was an industrial city and a major destination of internal migration from southern regions from the 1950s to the 1970s. Employment opportunities were high, and the city's social fabric pragmatically developed solidarity networks and supports. When tertiary and advanced tertiary sectors became the main characteristics of the city's economy, the municipal government was still key in designing and providing social services, especially in social and educational policies. Since the 1990s,² the political situation has changed along with the city's approach to welfare, which has translated to a disinvestment in social services directly provided by the municipality, and a more residual welfare system delivered by non-profit and private organisations and investment in market-oriented tools. This resulted in worsening conditions of social and spatial inequalities in Milan,³ which, combined with a still ongoing economic crisis, had severe consequences in terms of youth unemployment rates.

Since 2011, a new administration has been in place.⁴ "Participation" became one of the keywords, particularly in the field of social policy.⁵ Despite severe budget constraints, the city has experienced an increase both in the quality of life and in the availability of shared spaces and opportunities for people to start up new self-entrepreneurship projects. Milan retrieved its "mission" in line with growth patterns typical of advanced economies, with the aim of returning to "manufacturing" centred on handicrafts and commercial activities, with the idea of producing labour-intensive occupation matched with digital innovation, while in the meantime repopulating the peripheries.

It is interesting to note that the preparation and realisation of the Universal Exposition 2015 hosted in Milan generated a new dynamic in the city, giving a boost to initiatives directed at innovation, inclusion and participation.

Starting from April 2013 the local administration led a process by which *Guidelines for Milano Smart City* were drafted, validated through public hearings and approved by the city council (2014).⁶

In practice this resulted in supporting and funding practices that contributed to: i) generating employment opportunities for young people (470 new start-ups); ii) reviving thousands of square metres of disused urban areas (through fab labs, co-working spaces); iii) implementing business and social promotion activities in different neighbourhoods; iv) "developing a community pattern" through sharing economy platforms in support of socially innovative and sustainable services based on business models that enhance "innovation and inclusion".⁷

In line with the above, one interesting experience led by the administration is represented by a "civic crowdfunding" call for innovative projects (2015) with social impact, for promoting social networks and social aggregation for people with disabilities. Two municipal departments –

1. The section on Milan is based on: the authors' personal work conducted on urban and migration issues in the city of Milan and with the Municipality of Milan (in particular the International Relations and Social Policy departments); interviews with Emanuele Polizzi, sociologist and founding member of *IN-Innovarexincludere*, a laboratory on public policies; and secondary literature.
2. After the political collapse of the early 1990s, 20 years of centre-right local governments followed, with a Northern League majority (1993–1997) and for 14 years with mayors from Silvio Berlusconi's party.
3. This is well represented in the case of housing policies aimed at fostering affordability, which were almost abandoned for more than two decades.
4. A new administration was elected in June 2016, which is on the same lines as the previous one.
5. The Welfare Development Plan of the City of Milan (2012) affirms: "One of the guiding principles for the construction and management of this local welfare plan is greater participation and the real involvement of all the protagonists of local society". http://www.comune.milano.it/wps/portal/ist/it/servizi/sociale/piano_sviluppo_welfare/piano_sviluppo_welfare_%202012_2014
6. For more details see: <http://www.milanosmartcity.org/joomla/images/sampledata/programma/SmartCity/milano%20smart%20city%20-%20guidelines.pdf>
7. Municipality of Milan and Fondazione Brodolini, *Milan White Paper on Social Innovation Accelerating Milan's local ecosystem for social innovation*, 2015. <http://urbact.eu/file/13514/download?token=d5fYKDwl>.

Work/Employment and Social Affairs – managed the call for projects, providing up to 50% of the projects' budget while the rest was raised through crowdfunding activities developed within the proposals with the aim of promoting greater ownership.

All the initiatives mentioned above tackle social inclusion not through assistance, but by supporting productive activities and the revitalisation of local territories. A specific example with great potential is described in Box 3 below.

Box 3. The Fondazione Welfare Ambrosiano (FWA)

A heterogeneous group of actors created the Fondazione Welfare Ambrosiano in Milan to support individuals and families dealing with short-term risks and reduce economic precariousness. These include the Municipality of Milan; the Province of Milan; the Milan Chamber of Commerce and the three main trade unions (CGIL, CISL, UIL).

FWA promotes access to micro-credits for people not protected by existing, category-based social protection measures who are therefore exposed to new forms of social exclusion, and to persons or families who may not be in disadvantaged conditions but are at risk, due to temporary and unexpected difficulties, of falling into real poverty. The aim is not to substitute for the existing institutions assisting long-term situations of need (such as long-term unemployment); rather, the aim is to intercept the short-term risks of workers or jobless people with exceptional economic problems that often have serious long-lasting negative effects for the entire household. Thus far, two types of micro-credits are available: a) "social credit", reserved for persons who can hardly afford crucial expenses (such as the payment of university fees for their children or unexpected health expenditures); and b) credit for self-employment, to overcome unemployment or under-employment. The basic guidelines for actual and future programmes are an active approach to hardships following the "we help you to help yourself" idea and the rotation of existing funds by privileging financing tools such as micro-credit, as opposed to non-repayable loans. This policy is specifically due to the desire of the trade unions involved to create economic capital for the city that will last over time.

Source: Sabatinelli, S. and G. Costa (2016).

On a more controversial theme, immigration, Milan is also trying to intervene by innovating. Italy is a major destination for new immigration flows from the Mediterranean and Milan is one of the most popular destinations (after Sicily and a few other southern regions). The administration has been able to deal with the so-called "refugees emergency" by creating a hub close to the main central station where, along with third sector organisations, it provides for basic needs. The logistics of the intervention is very effective and it represents a good practice researched by local administrations abroad. Besides this, a consultative process for establishing a "one-stop shop" (called the "Centre of the Worlds' Cultures") – streamlining services to immigrants into one service location, which helps to integrate migrants into both city life and work much faster and with less frustration and fewer false starts – was also put in place.⁸ This also resulted in the creation of a stable network of organisations working on migrant integration, which includes non-profit and cultural organisations, NGOs, diaspora organisations, all of which are active and mobilised around the centre.

8. For more details see: Municipality of Milan, Immigration http://www.comune.milano.it/wps/portal/ist/it/servizi/sociale/servizi_interventi_sociali/adulti_immigrati/servizi_immigrazione

Barcelona, building a new social contract⁹

Barcelona has a long tradition of public-private collaboration, associations of multiple groups and neighbourhood movements that have developed various initiatives with the local administration. The challenge of the current municipal government is to promote a new model of public intervention that enhances community-based initiatives for greater social cohesion. The struggle against inequality has become the administration's number one social services problem. The previous *Barcelona Plan for Social Inclusion 2012-2015* created a public-private cooperation space called the *Citizens' Agreement for an Inclusive Barcelona*. This was a collaborative initiative to create a "shared strategy for a more inclusive city" and was adopted in 2014. Divided into 12 thematic networks, the strategy brings together more than 370 entities and 6 tractor projects were established in: social economy; social security; social housing; childhood; active citizenship; and inclusive sport. The annual general assembly reports on the implementation of the strategy, there is a governance council working in thematic committees as well as a coordination board.

Through this collaboration with social organisations a multiplier effect of actions was achieved. Social transfers in Barcelona have managed to reduce the risk of poverty rate from 47% to 18%, but there are still pockets of people excluded that demand complementary strategies. Ending poverty by facing inequalities at their origin and tackling the housing crisis are two of the current priorities of the Barcelona government. Short-term measures to alleviate the situation have been implemented, as well as also other medium and long-term policies tending to incorporate changes into the current pattern of growth. The goal is to move from a traditional welfare system to one based on subjective rights that does not stigmatise the recipient families and simplifies access and management of social services. Thus, social workers would be freed of bureaucratic tasks and could work to directly assist families and implement preventive strategies, enhancing community actions. To perform this transformation of the social services the council launched the IMPULSEM (Empowerment) programme, a reflection and action exercise in which professionals, users and other actors are involved, that aims to create a shared diagnosis, identify challenges and make proposals. In line with this new approach, an interesting example is the flagship project "Municipal Income" (see Box 4 for details).

An additional challenge is to introduce new technologies for the implementation of social policies, to facilitate access and improve efficiency. Taking advantage of the Mobile World Congress platform and the Smart City Expo and in collaboration with entities of the third sector the city council launched the "Market Place". This is a space of exchange where social institutions try to match the necessities demanded by citizens with entrepreneurs to develop new technological applications that contribute to citizens' welfare. This is an example of the concept of "techno-culture", which is one of the features of a Wise City.

9. This chapter is based on interviews with: Lluís Torrens, Director of Planning and Innovation, Marta Fabà, Head of Task Management at the Municipal Institute of Social Services, and Emilia Pallas, Head of Social Participation, all of whom are in the Social Rights Area of Barcelona City Council.

Box 4. The municipal basic income

In the field of the fight against poverty and inequality, a flagship project is the establishment of the municipal basic income. It is not fully a UBI, but it is understood as a guarantee of minimum income for families who, due to lack of employment and aid, are below the minimum income according to city standards. The first step has been a broad study on the living conditions in Barcelona designed to identify the number of future beneficiaries and calculate the total cost to the city budget. This will be ready in autumn 2016 and the results will be available for other research and public policy improvements. It is a pioneering project because up to now pilot projects only exist with limited scope. The initiative is intended to be:

- A complement to the benefits that already exist in other administrations;
- Without conditionality, but only for families below the minimum income level;
- A change to make the traditional aid regime a subjective right.

Sources: Interviews with members of Social Rights Area of Barcelona City Council.

The crisis and the rise of unemployment increased the traditionally difficult access to housing in Barcelona. Thousands of families have lost their homes due to unpaid rents or mortgage default. On average, there are 10 evictions every day. This must be added to the escalation of prices in the city due to tight supply, the pressure of tourism demand and speculative buying by investors (most of whom come from abroad). Furthermore, it is estimated that there are still 30,000 empty houses and 15,000 empty premises. Due to the aging of the city's population, many floors are underutilised and/or are inappropriate for the elderly. The municipality is implementing immediate measures under the campaign "*L'Habitatge, un dret com una Casa (Housing, a right as a house)*", and is also elaborating a new *Plan for the Right to Housing 2016-2026*.

Box 5. Housing: from emergency to universal right

The municipality is fighting against the housing emergency and implementing the right for all citizens to have a house with various measures.

For cases of imminent housing loss:

- There is a housing consortium with number of social rent houses that are assigned by the Barcelona Bureau of Social Emergency.
- The city council also works with numerous social organisations in the city to provide housing for evicted families.
- A network of Barcelona housing offices offers personalised attention, including legal advice for negotiating payment with owners and financial entities and aid to cover unpaid debts. The municipality has allocated €11.8 million in aid to pay rent.

To expand the supply of affordable rental property:

- The social housing plan approved the creation of 8,000 new housing units with a €17.3 million budget (currently there are 10,000, 1.2% of the city).
- The municipality finances the renovation of buildings, including inside homes, to expand the accommodation capacity, promote shared spaces and plans to expand the homes for the elderly.
- Barcelona City Council is promoting new cooperative initiatives to build new homes in partnership with the private sector.
- A campaign initiated to identify illegal tourist apartments offers the possibility of waiving the penalty in exchange for turning them into social housing.
- The city council collaborates with supply companies to identify empty houses and plans to create new penalties.

Sources: Interviews with members of Social Rights Area of Barcelona City Council.

Lessons learned and/or policy recommendations

The economic crises (lack of opportunities, unemployment) on the one hand and demographic trends (increasingly elderly population, migration inflows, etc.) on the other are increasingly putting pressure on and polarising “global cities” – important nodes in the global economic system – especially concerning social cohesion, the weakening of communities’ relational and social fabric, attention to inequalities and the sustainability of welfare systems.

The concept of vulnerability, which accounts for the combination of social disease and economic difficulties, seems to challenge the future, as it is becoming an intrinsic characteristic of the way of living in contemporary societies. Solutions are needed worldwide that can bring together well-being and development, social values and economic growth, technological innovation and the ability to cooperate and share information.

Innovative policies based on sound practices can be a starting point for putting together innovation, while linking it to inclusion (social, territorial, economic, etc.). There are, however, themes and subjects which are more controversial, or might normally be dealt with at the national level, such as migration. For these themes, it is easier to implement innovation through good practices rather than framework policies.

As this paper has been trying to put forward through illustrative selected examples in Barcelona and Milan – which might still appear too limited in time and space, and thus need to be scaled up and/or extended – it is important for cities to share their experiences to co-create solutions that are able to improve the living conditions of all citizens. Local actors are rethinking and experimenting with practices and policies that put people back at the centre while developing “techno-culture” capacities.

On top of the participation of all stakeholders in decision-making and collaboration between homologues (i.e. local administrations), solutions must also be rooted in the local history of each local context. It is impossible to invent new forms of innovation, participation and dialogue between social groups from scratch. It is important for success to find solutions embedded in each specific local context and value system.

Furthermore, it appears clear that today policies or practices cannot be developed by applying positive discrimination – leaving out those affected by disabilities (in a broad spectrum) – towards specific groups (young generations, women, migrants, etc.). The citizenry is one and must be approached through universal solutions that tackle specific themes – for example food, or housing, etc. – which inherently address the poor and vulnerable without reproducing or deepening forms of internal discrimination between different social groups.

References

Ajuntament de Barcelona (2016) “L’activitat de l’Acord. Memòria 2015”. pp. 52. http://www.bcn.cat/barcelonainclusiva/ca/2016/4/MemoriaACB_2015_acc.pdf (last viewed 5.10.2016)

Ajuntament de Barcelona (2014), "Estrategia Compartida per una ciutat més inclusiva" December, pp. 99. <http://www.bcn.cat/barcelonainclusiva/ca/2015/3/estrategiacompartida.pdf> (last viewed 5.10.2016)

Basin Income Earth Network <http://basicincome.org/topic/netherlands/> (last viewed 5.10.2016)

Brown, T. (2016) "The Netherlands' Upcoming Money-for-Nothing Experiment", The Atlantic June <http://www.theatlantic.com/business/archive/2016/06/netherlands-utrecht-universal-basic-income-experiment/487883/> (last viewed 5.10.2016)

Municipality of Milan and Fondazione Brodolini, (2015) *Milan White Paper on Social Innovation Accelerating Milan's local ecosystem for social innovation*,. <http://urbact.eu/file/13514/download?token=d5fYKDwl> (last viewed 5.10.2016)

Municipality of Milan, Immigration Service http://www.comune.milano.it/wps/portal/ist/it/servizi/sociale/servizi_interventi_sociali/adulti_immigrati/servizi_immigrazione (last viewed 5.10.2016)

Municipality of Milan (2014) *Guidelines for Milano Smart City* <http://www.milanosmartcity.org/joomla/images/sampled/programma/SmartCity/milano%20smart%20city%20-%20guidelines.pdf>, (last viewed 5.10.2016)

Municipality of Milan (2012). *Piano di Sviluppo del Welfare della Città di Milano*, http://www.comune.milano.it/wps/portal/ist/it/servizi/sociale/piano_sviluppo_welfare/piano_sviluppo_welfare_%202012_2014, (last viewed 5.10.2016)

Sabatinelli, S. and G. Costa (2016) "Milan: "We Help You to Help Yourself"-The Project of the Fondazione Welfare Ambrosiano", in Brandsen, T., S. Cattacin, A. Evers, A. Zimmer (eds.) *Social Innovations in the Urban Context*, (Online). https://www.researchgate.net/publication/299891105_Social_Innovations_in_the_Urban_Context (last viewed 5.10.2016)

Sanchez Diez, M. (2015) "A Dutch city is giving money away to test the "basic income" theory" Quartz, June <http://qz.com/437088/utrecht-will-give-money-for-free-to-its-citizens-will-it-make-them-lazier/> (last viewed 5.10.2016)

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Background and contextualisation: Introducing the new paradigm

New role for cities

It is a reality that cities will be home to the majority of the population around the world. In some regions such as Latin America, this is already the situation. In that sense, their growth, planning and social and economic dynamics are facing a lot of pressure. This only means that more people will prefer to develop their lives in these urban centres because of the different possibilities they offer for quality of life and human development. Cities offer connections that are undoubtedly a key aspect in generating value for humans in the world today.

The fact the people are turning to cities to generate more value for themselves, their families and their society is putting governments at the limit of their capacity and pushing urban and social planning towards a new agenda of solutions that revolve around citizens. Cities and city leaders today need to foster creativity and capacity building in order to generate better space for the citizens, better services and better options for them to thrive in the local economy.

Wise Cities understand the fact that cities need to integrate new trends in urban planning, so that everything that a local government designs focuses on citizens, and even (why not?) that it comes from citizens, instead of trying to generate value from programmes and initiatives that are designed without taking citizens' concerns into account.

One of the main challenges cities need to address is the fact that they should act more strategically on the international agenda and endeavour to be a key player in the new global governance scenario, while at the same time they need to improve access to citizens' ideas and promote open innovation practices to develop new programmes locally.

It is not only a challenge to generate economic opportunities for the citizens, but also to generate balance between the urbanisation process, the growth in importance of cities and the capacity to generate better design and planning at local level. And balance is a key feature that global cities need to polish if they want to succeed amid the new global governance requirements.

Cities are now centres for acquiring and sharing knowledge. A new concept of knowledge relies on the capacity to generate innovative programmes and to adapt existing solutions to different realities – solutions that actually create better opportunities and comfort for humans. In a way, cities are equipped to put the citizen at the centre of development. However, the international system that has led global governance still struggles when it comes to yielding power and participation to local governments or regional leaders on the global agenda. Wise Cities need to step up in the new global agenda, integrating while at the same time becoming leaders in institutions that have historically represented national governments. The complexity that comes with decentralisation will make citizens ask themselves a question posed by the World Economic Forum, “What can I do?, but ones we must ask if we are to learn how to be partners, in this new, more decentralized world” (Woods, 2015).

But new scenarios require new rules, new policies and new interactions. Cities need to be the places where the combination and balancing of these issues take place. Cities that are more capable of generating adaptation to these new challenges will be able to serve as laboratories for other cities to learn from. Urban organisations can promote new alliances with such cities in order to overcome problems that repeat themselves in specific regions. And it is precisely this kind of city that will be able to take advantage of cities’ new role to take the lead on the global agenda from the local level. It is these cities that are the ones required to lead a true change in the global governance dynamics.

Wise Cities understand that “a new historically distinctive form of the city – the Global City – has become a critical component of the devolved governance strategy of leading liberal states at the contemporary conjuncture. Such cities are, then, a facet of a historically specific form of world order” (Curtis, 2016).

In the end, a fair/virtuous city, that is, a Wise City should be smart, creative and fair, attempting to combine these qualities in such a way that its approach to citizenship is equal and inclusive rather than focusing on only the middle and upper classes (which smart and creative city/creative class arguments tend to do) it should serve for the needs of excluded, silenced, poor, aged, students, workers, etc.

Challenges

Sustainable Development Goals (SDGs)

The new global agenda – SDGs – provides a window to start integrating cities into the global governance of today. The fact that one of the SDGs addresses cities and the role they play in human development is

a hint that reveals the urgent matter of generating balance between nation-state institutions and local governments. Cities have become an opportunity to create and deliver possibilities and quality of life and the fact that, in the end, it is through local governments that the SDGs will be tackled. It goes beyond the new role of the cities, the recognition of the already existing capacities generated on the local level organizations. However, cities need to listen to their citizens: constant unplanned growth will only turn the odds against comfort and human development.

Goal 11, which is to “make cities and human settlement inclusive, safe, resilient and sustainable”, represents the first real development goal that addresses cities and local governments, enabling and aligning institutional efforts towards the development of cities. It should be used as a platform to establish new mechanisms for local level institutions to act and decide on better solutions to tackle the SDGs.

Integrated quadruple helix

The key now will be to transcend already hard to establish triple helix relations, and add a new component to them – the citizens. Individuals and organised collectives that allow citizens’ beliefs and real expectations to be met need to be actively involved in the development of the SDGs at local level. Therefore, citizens, collectively, are and should continue to be key actors in society and development. The fact that cities are now growing in importance and becoming more important than countries levels up the position and role of citizens as well. In a way, the layers of governance have reached down to the basis of society – the people – and their voices, dreams and complaints are now more easily heard than ever, and the integration of these voices into the urban agenda generates more possibilities for cities to understand the concepts suggested by Wise Cities.

We also have to take into account the fact that citizens as groups can really lead initiatives to encourage a certain topic or issue. They can generate awareness and put their own concerns onto the public agenda. Collectives of citizens are able to bring certain discussions to the table and even destroy corporate and public agendas when allowed to use the various tools of democracy to empower citizenship and allow them to control the government’s interventions and investment.

It gets even more challenging when you consider that citizens as individuals are also able to reach the highest levels of local, national and international organisations through social network. Public servants and leaders are now exposed and easy to reach through social networks. And they are actively responding to the possibility of generating a sensitive complaint through these channels. City leaders are now aware of the fact that governance translates into social networking and introduces new timing to answer and respond in a positive way to individuals’ concerns in a particular city.

People expect not only to be heard, but to be provided with a solution to injustices with a quick and efficient response. Governments have had to adjust and improve delivery for their citizens and this is only

escalating as urban areas become more crowded and as more people are becoming active members of society and, of course, active members of social networks. This discussion is not exempt from global governance, since links between cities and international organisations are also closing the gap which has existed throughout history.

Cities not only hold possibilities; they represent a way to fulfil expectations. Citizens in general have all been very critical of the government, especially in countries where the levels of corruption are high and growing and in regions where believing in the government and its agenda becomes a threat to society. Therefore, one of the main challenges that cities need to overcome in the Wise Cities approach is the generation of trust among the citizens. Not only are local governments more capable of tackling citizens' problems because they are closer to them, but this fact also creates an atmosphere for citizens to criticise and monitor local leaders in a very powerful way. Therefore, attention and communication strategies need to be implemented with citizens so that the gap between citizens and local government is narrowed through trust.

For instance, mayors can establish more direct channels with the citizens by working in the city directly, visiting the programmes and the streets to talk to people, as well as through a correct and active use of social networks. This way many voices can be heard in a more efficient way. Also programmes at the local level are called to integrate open innovation strategies that set up channels for the participation of the citizens in the decision-making process.

Financing the new agenda

This is probably the most critical part of the new urban agenda, because the mechanisms for income generation on the local level are very limited, and mostly cities rely on national or regional government transfers to finance their more competitive and strategic programmes. Hence, the financing of the new agenda needs to address the fact that if cities want to be more independent and to develop and act as global leaders, there should be a way to start generating new income and new ways of financing big programmes.

As soon as the discussions on the SDGs started, a parallel discussion on financing urban development began. An important moment in beginning the conversation came in July 2015, when the Financing for Development Conference took place in Addis Ababa, and further commitment was made with the integration of the UN's 2016 Inter-agency Task Force (IATF) report to serve as guiding principles. Moreover, Habitat III has also planned some preparation meetings to discuss the financing of cities, such as the one which took place in Mexico City in March 2016. This important meeting portrayed the main concerns on the issue and concluded that "financing sustainable urbanization implies empowering local, metropolitan and regional governments and their private and social sector partners, to address the growing needs of the population for quality urban services and infrastructure in an equitable and inclusive manner. The New Urban Agenda should enable the appropriate rules and regulations,

qualified human resources, strategies and tools to plan and act, to ensure the adequate access to funding at local, regional, national and international level" (UN Habitat, 2016).

This is basically an open discussion that will have a very important moment next year in 2017 with the High Level Political Forum on Sustainable Development in July under the heading "Eradicating poverty and promoting prosperity in a changing world".¹

Some of these discussions open the door to the implementation of new urban development mechanisms such as TIF.² Cities around the world and organisations such as Metropolis Network and others have also pursued the creation of a financing organisation strictly for local and regional governments called FMDV that supports local authorities to access funding.

However, while the big discussions take place, some cities have started to experiment on their own, with their citizens, to evaluate the possibility of helping local finances through innovative financial exercises. The universal basic income initiative led by certain cities establishes that a fixed amount is given to a specific group of citizens in exchange either for nothing or for certain volunteer activities. The test is yet to give any results but it aims to generate new paradigms and to prove that states should be able to provide for their citizens.

Global actors for development

The real challenge for governance on the new urban agenda is to integrate local level institutions into the global agenda and make cities attractive and subject to national government institutions' services. Renewing the modus operandi of such institutions may be one of the greatest difficulties of this new global agenda since, "International cooperation and global governance is often viewed as the domain of the United Nations and the set of global institutions that were created almost 70 years ago" (Woods, 2015).

This is not only a one-way challenge. Cities also need to move towards a more effective way of city management. Results need to show that local governments are determined and have the capacity to generate development, so that they can be taken more seriously as global players in such a way that if they connect directly to international and multilateral institutions and their services without going through their national governments, they need to be able to reach the standards and guarantees that nations normally provide to these organisations.

Geopolitics will be becoming more complex with the integration of a more decentralised world into the discussion of power-geography relations. Therefore cities need to have more professionals and start the professionalisation of their international action.³

But it is not only cities who need to step up to this new reality. "It then is no surprise that much of the public debate on transnational issues such as global warming, pandemics, and socioeconomic inequalities

1. For further reading on this see: Kim, Julie. *Handbook on Urban Infrastructure Finance*, New Cities Foundation, 2016.
2. Tax increment financing.
3. Messages from AL-LAs (Alianza eurolatinoamericana de cooperación entre ciudades).

points to the need for front-runners and innovators to lead the way and create the political momentum necessary to overcome the limits of international politics" (Acuto, 2013).

Companies, as part of cities, integrating government strategies through the quadruple helix of interactions are becoming more and more important in the search for development. The role of big multilateral organisations is also being challenged by the fact that services need to meet local level authorities in order to keep their job and their approach to development focussed and aligned with the new global dynamics and the importance of cities. As mentioned above, organisations have to celebrate the fact that it is on the local level that they first make contact with citizens and their problems, and therefore the alignment of these organisations' agendas with local level authorities should guarantee the fact that they will be more effective while providing solutions to different challenges in cities today.

So national and local organisations need to meet halfway to appreciate each other's strengths and establish procedures that benefit and make the citizen the ultimate purpose of city development and urban planning, as well as the ultimate objective of institutional and social development programmes.

Trends

Collaboration and co-creation

Cities are networks of citizens living in the territory but also with others abroad. Cities should aim to make those connections work in a positive way in order to get more citizens involved in the designing of solutions, new services and programmes. These trends also settle in the global agenda. Today, cities are known for establishing more collaborative links, instead of competing ruthlessly. The agenda for city-to-city collaborations is more open now than ever, through knowledge sharing activities, and co-creation initiatives. However, the evolution for governance has reached a point where people, culturally and generationally, have come to understand the power of sharing ideas, sharing knowledge and sharing services and products to create better solutions. Collaboration and co-creation are simple yet powerful ways to generate new ideas in a city.

But what does a city need to provide a good platform for collaboration and co-creation to thrive and integrate it into society and into a city's planning, dynamics and economy? Why are some cities better at integrating processes that lead to open innovation and co-creation as tools to implement more assertive and comprehensive programmes than others?

Co-creation is only the beginning of things. Cities are now dealing with innovative services generating new paradigms that produce such collaborative economy trends as Uber and Airbnb. Sharing goods and services has become a new way of interacting with the city by making it easier to generate comfort with less effort and to really focus energy and resources on the things that really giving meaning and value to life.

The benefits and challenges of a shared economy need to be considered by local government authorities, who not only face a problem with national regulations, but are the ones actually dealing with the daily problems caused by the non-regularisation of such services at national level.

But it is not all good. There is also the possibility of triggering crisis and riots with citizenship collaboration. People are also getting together to generate pressure against anything that is considered to be wrong or that will lead the city down the wrong path in the mission and vision of their governments. Therefore, city leaders need to be alert and open their ears to the voices of complaint before they become a real threat to city planning and the urban agenda.

Network platforms for problem-solving

Cities and governments have come to understand the fact that connections and collaborations can be increased and can generate more impact by the possibility of establishing connections through new technologies and digital tools, where barriers and boundaries are made to vanish by the possibility of connecting people and cities easily and for a purpose. New knowledge regarding city development and urban planning is being shared through different platforms that are established by cities for cities. Examples such as Cities4Life,⁴ the Metropolis Policy Transfer Platform,⁵ and many more were created to generate solutions through the possibility of connecting experts and practitioners throughout the world around a specific urban challenge.

Most of these platforms connect knowledge, good practices, practitioners and experts so that their experiences are available to other cities and can be used to integrate already proven solutions into challenges and problems everywhere.

City networks

The already established city networks should also find new ways to extend their relational capital by bringing together different cities around the world. They should work towards the capitalisation of these existing communities to really catapult these networks into the new global governance mechanisms. The fact that these networks are already in place should be used as a starting point to get more and more cities linked. The challenge is to really portray and design these networks in a way that cities really can get something in return for being members of them. These networks can evolve partially or open up new possibilities to create, as suggested by Citiscope, "The next step in the evolution of this model has been for cities to take a direct role by engaging in collaborative governance arrangements. This includes developing networks and partnerships for trade, investment, knowledge and economic development between cities" (Roberts, 2016).

It is time to start appreciating this existing global governance by acknowledging the fact that "we already inhabit a 'decentralized planet of networked cities, provinces and regions [which] while obviously dominated by traditional nation-states ... encompasses a wide variety

4. Platform created but Ruta N, Medellin in 2015.

5. Created by the City of Berlin as a Metropolis Network Initiative.

of sub-state and non-state actors, from multi-national corporations and global financial institutions to civic NGOs and global social movements” (Curtis, 2016), and that city networks can be a good start to integrating the local dynamics unto the global governance institutions.

City-to-city learning

A model of Wise Cities should of course integrate learning as a milestone to keep growing and improving at local level. Cities that have engaged in international cooperation strategies should realise that what leads cooperation relations today is the capacity to exchange knowledge in order to provide better solutions to a city’s problems. The fact that this has changed opens up new possibilities to cities that can implement mechanisms to exchange such knowledge and also to cities that, both politically and technically, can provide a strong service for knowledge sharing.

Also, this forces cities to think according to a win-win logic in order to establish international cooperation relations, since the more institutional capacity you have to establish best practices and exchange them with others, the more access you will have to other interesting practices.

Innovation districts and cross landing agreements

But we cannot assume that the evolution of governance is only to integrate cities into the global agenda. Cities today normally face more governance challenges for the fact that new structures are generated local and that these structures or districts start to take new shapes and create new connections that make even the local level authorities vulnerable to a new situation.

Cities are housing interesting economic development strategies such as innovation districts, which are and should be linked from creation with other international innovation districts. These new forms of cities enable local authorities to foster and strengthen already existing initiatives: “other such corridors cross multiple countries and will require special agreements to improve the flow of investment, people, goods and services, and co-investment between cities and firms in the critical infrastructure needed to ensure the efficiency of these flows” (Roberts, 2016).

Solutions

It is important that cities strengthen their internationalisation and foreign action properly, so that they can establish objectives in these strategies in order to become more relevant and active on a global agenda which will integrate cities more and more.

Also, every effort made at the local level to be more connected with the citizens will generate a much needed balance to be able to develop a city from a Wise City approach.

As Professor Coll states:

“Cities are more practical than ideological. Proximity to citizens make cities more aware about their problems and needs, which is a key feature for engaging citizens in political matters that directly affect their lives. Furthermore, cooperation amongst city networks favors the decentralization of decision-making and political power away from capital cities. This increases the role and influence of secondary and peripheral cities, which enrich the political processes of problem-solving with new perspectives, concerns and solutions that are close and inclusive to more citizens” (Coll, 2015).

Global governance led by cities needs to be able to generate practical mechanisms more than just strategic discussions on the global governance agenda. Just like, at national level, countries want to be leaders in the international organisations even though these organisations provide little possibility of actually acting on the specific problems the world faces. This same problem should be avoided on the local agenda or the new global governance agenda that integrates cities in a way that, by managing their role in global organisations, they can create options to work together on the problems and challenges cities face instead of relying on an organisation that wants to represent cities without establishing mechanisms for them to work on their main concerns. As the World Economic Forum addresses and refers/recommends to some international governance players, Wise Cities “should narrow their focus while deepening their engagement. They should tackle only the serious, collective-action problems, and they need to tackle these with their full concentration” (Woods, 2015).

Lessons learned and/or policy recommendations

In the configuration of the next Habitat III Conference, the importance and increasing role of cities is the core of the discussion; however, this meeting is not led by city leaders, only by national and international organisations. This concludes the need to really change paradigms on the global agenda, and the fact that the discussion is still a parallel agenda at the conference is evidence that there’s a long way to go in generating new governance for cities on the global agenda.

Cities are not dependent to see a decision made by nation-states, the agenda has been active this year to come up with recommendations for a new governance for cities. City networks have reviewed the different scenarios by strengthening a previously existing network of networks known as the Global Task Force to request a new dynamic in which cities are open to participate in the United Nations. Discussions have been held and will come out in the declaration that results from the 5th UCLG Congress, World Summit of Local and Regional Leaders, held in Bogotá.

A new mechanism for participation should integrate ideas and address challenges such as the ones discussed in this paper, but also many more regarding economic development, and specific issues that are critical for cities today.

Therefore, cities will not only have the opportunity to elevate their participation, they will also be responsible for generating local capabilities to meet the required standards to integrate their voices into the global references for development. The capacities generated by nation-states will be issues on which local government will have to work promptly, such as processes for city management, data, information systems and indicators, among others.

Whatever decision is made, it is now clearer than ever that cities are called to be leading actors in the new urban development agenda. Action will take place whatever the mechanism chosen to formalise the importance of cities in the new global agenda.

References

Roberts, Brian H. "The New Urban Agenda needs to recognize a future of city-to-city networks and trade". *Citiscopes*. June 14 2016, Available at: <http://citiscopes.org/habitatIII/commentary/2016/06/new-urban-agenda-needs-recognize-future-city-city-networks-and-trade>

Acuto, M. "City leadership in global governance". *Global Governance*, 19(3), 2013, 481–498.

Coll, J. M. "CITIES EMERGING SOFT POWER: 5 key advantages for improved global governance". CIDOB, May 2015, 1–3.

Curtis, S. "Cities and Global Governance: State Failure or a New Global Order?" *Millennium - Journal of International Studies*, 2016, 1–23. <http://doi.org/10.1177/0305829816637233>

UN Habitat. Mexico City Declaration for Habitat III Financing Urban Development : the Millennium Challenge, March 2016.

Woods, N. New governance architecture. *Outlook on the Global Agenda*, 2015, 60–63.

This monograph presents five state-of-the-art articles analysing challenges and trends through paradigm shifts in environment, competitiveness, social cohesion, transportation and global governance. The analysis is enriched with the views and experiences of the different cities that are part of the network. This approach renders a global perspective of local issues. In every thematic area, the topics chosen are trends that are significantly changing the way cities and metropolitan areas address their challenges. Therefore, they emerge as paradigm shifts, that is, new approaches to addressing existing problems, or new conceptualisations of global problems that challenge existing local solutions.