Alberto Leboreiro Amaro

STATE OF THE ART OF STRATEGIC PHYSICAL PLANNING

INTRODUCTION

The urban reality of Europe is metropolitan, and good governance of Europe's metropolitan regions is crucial for the future wellbeing and prosperity of Europe.

The total population of the European Union is estimated at about 533 millions inhabitants, with 73% living in urban areas. The Urban Audit of Eurostat identifies 127 Larger Urban Zones with populations of over half a million. These are Europe's metropolitan regions and areas. A Metropolitan Region is defined by at least 50,000 inhabitants in its core city and 500,000 inhabitants in the entire region (BBR, 2005; DATAR, 2004).

From an economic point of view, deregulation policies are applied to the liberalised markets of metropolitan areas. In the global context, competition is emerging between all the cities and globalising cities require internal restructuring based on the information revolution. In the new information society there is a need to modify the spatial network which is concentrating people and activities in cities and financial centres, but dispersing activities in their peripheries.

The Metropolitan areas are the engine of European development, the centres of economic, political and cultural life. They are also the centres of political and economic management, expressed in a highly developed infrastructure of specialised services.

Acting as external challenge the globalised economy is characterised by the flow of people, goods, capital, services, ideas and information, as well as relationships between organisation and interaction. Metropolitan regions face serious structural transformations, economically, politically and territorially. (Blotevogel 2005a, OECD 2001, Sassen 1991). It is necessary to reconsider the process of evolution of both core cities and the periphery, the urban environment and rural space.

Metropolitan regions face internal challenges of urbanisation, such as population growth, land use conflicts, sprawl, and shortage of open space, traffic and environmental problems, in which economic competitiveness and liveability are two sides of the coin. Cultural globalisation produces a change in lifestyles of contemporary society which is becoming more individualistic and autonomous. Globalisation leads to standardisation but also to diverse urban demands.

New forms of activities appear with these changes, a growth of the tertiary sector, a shift towards a network economy. New habits emerge with changes in consumption based on leisure; for example families spend their entire weekends in malls at motorway crossroads. However, these changes affect people differently as demographic evolution is producing diversity between employees and increasing income disparities.

Transport infrastructure, new motorways, high-speed trains, air traffic and airports are increasing to accommodate global mobility. In inner cities and metropolitan areas an exponential increase in the use of the private car and intra-city mobility are putting new demands on the road network. Some cities are consuming more land to develop new suburbs, thereby producing a steady increase in the process of dispersion and delocalisation of activities, while other cities undergo population and employment decline.

Some cities like London or Paris have experienced urban riots in the past years. Many countries lack policies of social integration. Quite to the contrary, there exists segregation and discrimination due to existing parallel lives between immigrants and the rest of the population. The number of poor people is increasing while the "middle-class" is declining and the rich are getting even richer which has led to the gentrification of the core of many cities.

Climate change is another constraint which requires common efforts at an international level, strategies to avoid global warming, floods, natural hazards, etc. and cooperation to mitigate adverse effects such as CO2 emissions and adapt to climate change by reducing the consumption of finite resources.

For such measures to succeed participation of the whole society is needed. In Mediterranean countries the participation of politicians (leaders) is always greater than the participation of citizens. Conversely, in the Nordic countries the administrative strength of their governance mechanisms is proportionate to the scale and significance of the strategic issues which are being addressed. For example, a strategic plan to ensure a comprehensive and multi-sectoral approach to metropolitan issues is based not only on top-down but mainly bottom-up participation, which enables these countries to choose a model of governance which is based on local differentiated capacities.

The topic here is how to tackle different processes of change in metropolitan areas, but it is not possible to cover all aspects in a short paper. Those considered are globalisation, competiveness and inequalities, climate change, governance, sprawl, mobility, shrinking and smart cities and finally the necessity of a Strategic Physical Plan as a framework to develop the future of metropolitan areas.

GLOBALIZATION

In 1800 the urban population of the world was 2%, at the beginning of the last century it was 10%, currently it is more than 50%, and it is forecast to reach 70% by 2050. The urban population of Europe will reach 70% by 2020, higher in percentage terms than in Africa and Asia (UN-HABITAT, Frédéric Saliez).

At present, the largest cities are situated mainly in the northern hemisphere, but the

growth of emerging countries will change this in the future, driven by 'time–space compression'. This concept was first articulated in 1989 by geographer David Harvey in "The Condition of Postmodernity". It refers to any phenomenon that alters the qualities of a relationship between space and time. Due to the improvement of communication and information technologies, cities cities are becoming larger while its population is moving further away.

Surprisingly perhaps, while the pace of life accelerated owing to new technologies the concept of 'slow society' had emerged. Slowness in all its creative forms, supported by diverse movement of people around the world, encourages a sustainable (slow) development path, which is transforming the way to learn, work, and live, and thus arguably to end the era of creative destruction. In these perilous times, it is difficult to imagine when Joseph Schumpeter's ground-breaking effort to explain "creative destruction" has shifted to "destructive creation"; when the perception of time and space has altered towards what François Ascher describes as the autonomy of the person - where, when and how we wish - akin to the concept of duo fridge-microwaves.

Until now though, the globalisation effects have produces changes in the population with growth and produced concentration in alpha and emerging cities and decline of population and employment in shrinking cities, as Edward Glaeser highlights in 'The Triumph of the City'.

COMPETIVENESS AND INEQUALITIES

The increase of unemployment looks as something that is going to stay into some future due to changes in the production processes based on new technologies which increase production mainly in the tertiary sector, but keep demand at the same level. Financial crises and global capital movements are becoming increasingly recurrent, as are changes in training and costs of labour throughout the entire world.

Imbalances are growing throughout the world and differences are increasing (the 20 richest countries are 37 times richer than the 20 poorest countries). There are 1,200 million poor people meaning 20% of the world population, and this inequality is getting more and more concentrated. Curbing this adverse trend would require new governance with a more participative and deliberative democracy.

These changes have developed the notion that cities are only a business. In reality, their rapid development produces a lot of value added but only for very small groups. Cities may be increasingly more productive but they are also becoming poorer and raising social inequalities.

Metropolitan environments tend to be more successful in areas which already have relatively large stocks of resources. Vázquez Barquero (1999) divides them into economic 'hardware', 'software', and 'orgware'. For cities, hardware means the labour market, capital, land and infrastructures; software encompasses physical and social conditions, the business environment, knowledge structures and human capital; orgware, a new necessary urban attribute refers to the social tissue, inter-administrative coordination, public-private partnerships (PPP), planning, management and promotion of metropolitan areas.

Success of cities does not always guarantee successful social cohesion. Similarly, the improvement of the economy does not necessarily produce a better quality of life if profits and benefits are not shared by the population, but inequalities are increasing instead. EU Cohesion Policy funded programmes aim to achieve a balance between economic growth and employment together with territorial cohesion, but it is cities which

face this two-fold challenge the most which is currently plaguing the European Union. Territorial and economic inequality generates migration. Migratory movements due to systemic wars or desertification or simply seeking employment or training opportunities can entail environmental risks and overcrowding in recipient cities. Tourists increase urbanisation of coastal resorts or congestion of urban attractors, while economic migration from the countryside creates population concentrations, often in cities of developing countries.

Where the poorest populations and recent immigrants are concentrated, local authorities often do not have sufficient resources and thus their social services, the police, schools and public transport are inadequate. Such places which can be located in the core of cities as well as in their periphery tend to be weakly governed. The unequal territorial distribution of such urban services can be both the result and the cause of further migration.

CLIMATE CHANGE

Cities need to take into consideration climate change by means of adaptation, capacity building, financing mitigation and adaptation actions, reducing emissions from deforestation, environmental degradation and technology transfer.

Two examples are the Draft Master Plan for the Île de France which contains a chapter called "Space Challenges" stating that sustainability has to be taken into account in all development objectives; and the Mayor of London's climate change mitigation and energy strategy of 26 October 2011 which includes a chapter on "Delivering London's energy future", introducing a new concept of 'alimentary challenge'.

Extracts of the latter are:

– Energy and climate change: arrangement of programmes to ensure the city is greener and litter free; cut pollution; reduce rubbish and use waste material more wisely; make the city more energy efficient and unleash a new generation of jobs and enterprise in a low carbon economy.
– A vibrant low carbon economy: reduce London's carbon footprint, generate tens of thousands of jobs by fitting green roofs, installing insulation and renewable energy supply; green financing or developing electric vehicle infrastructure;
– Ultra Low Carbon Transport: Foster travel by bike, foot, public transport or zero pollution emitting vehicles.
– An energy efficient city: use energy to cut co2 emissions and tackle climate by making all new buildings energy efficient;
– Secure and clean local energy: there are exciting new ways for the city to generate energy locally by tapping into natural resources like wind, sun and tidal power or generating energy from waste materials.

GOVERNANCE

According to the principles for Metropolitan areas developed by the OECD, governance has to be basic so that all the citizen can identify with the strategic visions that are being proposed. **Aspects include:**

– Identity and consensus: this involves setting reference territories for its population, to create a sense of belonging and solidarity and the establishment of discussion forums on metropolitan areas.
– Accountable: there is a need for a clear division of tasks, responsibilities and power so that conception gets as close as possible to the citizens;
– Transparent: institutions and main stakeholders of the governance process should work in an open way and explain how decisions are made; this includes responsive

government actions, public hearings, and information processes on the current proceedings;
- Equitable and inclusive: policies and actions have to be coherent and easy to understand, and all the stakeholders and institutions have to be involved in these processes;
- Effective and Efficient: decisions in urban politics and Metropolitan governance have to be timely and should be well founded on clear objectives,;
- Follow the rules of law: in the absence of metropolitan government, all must adopt the metropolitan area as relevant territory to reorganise the administrative division;
- Participatory: regional stakeholders should become involved in the policy making process from the conception phase to the implementation (principle of equality);
- Sustainability: the central objective of governance activities should be an economic environmental and social sustainable development.

SPRAWL

Another aspect to consider is diffuse growth. The characteristics of this phenomenon are "unlimited" external growth which breaks through administrative boundaries, low-density developments; "leapfrog" development; high cost of infrastructure; segregation of land uses; social fragmentation; dispersion of functions and services; automobile dependency; peri-urban development which is undermining the central city; environmental impacts. Among the main effects are also loss of nature and farmland, lack of governance and planning at the metropolitan scale.

According to "Urban sprawl in Europe", sprawl is due to new lifestyles, a better environment in outlying areas, more urban services and infrastructure outside urban centres.

The following economic factors need to be taken into consideration, ranging from macro-economic drivers, such as economic growth, globalisation and European integration, to micro-economic drivers, such as rising living standards, land prices, availability of cheap agricultural land, and competition between municipalities.

From a sociological point of view, sprawl is due to population growth; increase in household formation; search for more space per person; greater choice of housing types. Sprawl is also accelerated due to inner city problems, such as poor air quality; noise; small apartments; unsafe environments; social problems; lack of green open space; and poor quality of schools. The development of transport infrastructure increases private car ownership, together with greater availability of roads, low cost fuel and poor public transport. The regulatory frameworks also influences urban sprawl, mainly due to weak land use planning, poor enforcement of existing plans and lack of horizontal and vertical coordination and collaboration.

The effects of sprawl are well known. They encompass mono-functionality of uses, low density, poor connection to the overall city and general lack of infrastructure and services. Such morphologically and functionally isolated systems are like archipelagos as Francesco Indovina has highlighted, which is exacerbated by accessibility based on the car, weak relationships with urban centres and inadequate public transport. The outer city is closed by night or partially even by day, due to use of space at certain times only because of its mono-functionality. Sprawl has also a negative impact on the environment and natural resources, and contributes to the destruction of unique landscapes, besides social uprooting of such places without history, which leads to loss of sense of belonging and weakens social values.

MOBILITY

Cities require suitable densities. New York or Barcelona have a high quality of life at densities of 400 persons/ha. Depending on the cities density is also a cultural factor. Higher densities can encourage the use public transport as shown in the study by André Sorensen. In Atlanta (USA) a density of 6,8 persons/ha. and 8,7 miles/person of roads leads to a high use (95%) of private cars, while in cities like Madrid with a density of 74 persons/ha and 1,7 miles/person of road, the use of the car is 30%. But density is not sufficient to curb car use which needs to be restricted and public transport promoted. In the periphery of the Madrid metropolitan areas, where there is less density, the use of private cars is increasing with distance.

There is a vicious circle of transport, whereby increasing numbers of cars in the city produce congestion and make public transport run slow. Given limited urban space, increased investment in parking lots and road space to maintain the same level of service is undermining public transport even more while increasing the use of private cars. However rising congestion makes the city centre less attractive and eventually economic activities and population are declining in the core city. More sustainable transport in cities requires a reduction of automobile dependency, which would also avoid urban sprawl. By reducing the number of motorised trips, increase public and alternative transport, it would be possible to rescue the quality of urban space and recover the value of proximity.

SHRINKING CITIES

In the centre of Europe and especially in eastern European countries, cities are losing population and the economy is in decline. Reasons range from the loss of attractiveness and quality of life to lack of economic diversity which leads to a decline of demand and investment. When local government tries to increase the infrastructure or develop new land this often results in a waste of money. Planners know how to plan for growth but not for urban decline. Shrinking is a vicious circle for cities. Their populations are aging and less likely to change behaviour or accept new technologies. Infrastructure becomes less efficient which results in declining capacities and resources. Longer term strategic planning combined with improving quality and diversify the local may make the city more attractive again (Olofsdotter B. et all. 2013).

Loss of population and economic strength dates from the 1970s in many European cities in connection with dynamic suburbanisation or severe economic structural changes. After the collapse of the socialist system in Eastern Europe in 1989 the phenomenon of shrinking cities became widespread, alongside persistent demographic structural changes, which became a challenge for urban planning and politics.

The root causes were:

- the emergence of newly industrialising economies
- new waves of economic restructuring associated with rapid technological changes and capital mobility;
- cities became less attractive and quality of life declined;
- local economies were not sufficiently diverse and their main activities were lost to more competitive areas;
- the attraction of global cities.

The effects were:

- city population loss and urban decline (13% of urban regions in the US and 54% of those in the EU have lost population in recent years);
- some cities found themselves in the unusual situation of abundance of land with no demand for new urban land;

– the land market became dysfunctional because of lack of demand.

The proposals:

– At the outset of such situations of decline municipal decision-makers often worsened conditions considerably by allocating more land for different building purposes, offering subsidies and relaxing environmental and social controls, due to fear of competition from neighbouring cities.
– This problem can only be overcome through cooperation between cities, qualitative regulation of land use at regional level and equalisation of financial burdens.
– Older cities can improve and become more self-sufficient by reducing their ambitions, and bringing their level of infrastructure and housing into line with their smaller populations.
– The most successful efforts of renewing old urban neighbourhoods tend to come from organic, bottom-up, community-based efforts to strengthen and build on neighbourhood assets.
– It would be better to let residents take control and build on community assets, engaging themselves in community-based organisations to spearhead revitalisation and build real quality of place. "The key is to engage the residents of the area, the business owners, the shopkeepers, the workers and the commuters"(Jane Jacobs 1967).

Different strategies applied by shrinking cities:

– Tearing down large vacant housing stock of low quality because cities are unable to do anything about them.
– Betting big on improved attractive environments to give people a good self-image, create a positive atmosphere and hope to generate increased interest from the outside. This approach tends to lead to a loss of a lot of public money.
– Adopting a lean city strategy which does not attempt to change the trend of declining population and economic base. It tries to adapt what remains positive to new conditions, on the basis that development does not have to assume continuous growth.
– Adopting a heterogeneous configuration strategy which aims to coordinate contradictory issues into a single vision with encompasses a variety of measures to meet the target image.
– Building up a new networks strategy to form new alliances between actors.
– Negotiating and cooperating to manage urban land as a common good. Often bottom-up initiatives in neighbourhoods result in more sustainable characteristics of the area while fostering social cohesion among citizens in the process.
– Diversifying the local economy to make cities less vulnerable to global economic crisis.

SMART CITIES

The concept of "smart cities" has appeared where "smart" has gained importance in urban planning as "smart growth". Instead of submitting to market dictated laissez faire planning resulting in urban sprawl or unsustainable densification, smart growth argues that greater efficiencies can be accomplished by coordinating transportation, land speculation, conservation, and economic development. Smart planning consists of synthesising hard infrastructure with the availability and quality of knowledge, communication and social infrastructure, the latter being critical for a city's competitiveness. It is also argued that smart cities based on information and communication technology can – or have the potential to – improve competitiveness in ways that strengthen community and improve quality of life for all. (Batty et al. 2012; Caragliu et al. 2011).

Batty et al. (2012:505) have identified six types of initiatives within the smart city movement:

- The development of new cities which are labelling themselves as smart. They are proliferating in rapidly growing countries. Masdar outside of Abu Dhabi being developed by GE is the world's first carbon neutral city.
- The development of older cities by regenerating themselves as smart in a much more bottom-up fashion. This includes many cities that are embedding new ICT as a matter of course.
- The development of science parks, tech cities, and technopoles focused on high technologies. Silicon Valley and Route 128 are classic examples.
- The development of urban services using contemporary ICT. In the form of a networked database, cloud computing and fixed and mobile networks
- The use of ICT to develop new urban intelligence functions that generate city structures and forms that improve efficiency, equity and the quality of life.
- The development of online and mobile forms of participation in which the citizenry is massively engaged in working towards improving the city

STRATEGIC PHYSICAL PLANNING

Planners need to develop a strategic physical plan, foster the development of a long term vision which is global, comprehensive, flexible and coordinated between public and private interests and between different levels of government. This vision has to project an image of the metropolitan region that is unique and attractive and that exploits the best relationship of competiveness, complementarity and cooperation with the neighbouring cities. A Strategic plan is outcome-oriented through actions on critical issues ranked and rated according to costs-benefits analysis. It is oriented towards demands and needs of citizens, investors and visitors, based in a consensus of decision-making with maximum participation of all economic and social stakeholders to extract maximum positive impacts from urban dynamics. The plan as a process, seeking results through a vision.

In their theory which Bernardo Sechi and Paola Vigano have applied to different projects, for example the "Competition for the elaboration of the draft concept of the Moscow city agglomeration" with the slogan "CIVIC MAGNIFICENCE" they use three concepts:

- meshing the metropolis using green and transport to equalise the urban condition
- continuous centrality, achieved through high densities, re-cycling the existing city, and mixed uses
- governance based on responsibility.

A strategic plan must consider external factors like changes in demographic structures, climate change, new liberal economy, technological cycle changes, emergence of global civil society, decentralisation vs. global supra-municipalities. It must also consider internal factors, such as cultural tradition in regional planning, political climate promoting a more participatory and deliberative democracy, informality, lack of social interest regarding aspects of land use planning, areas of high environmental and historical value, scarcity of natural resources and heritage, depressed territory, emerging areas, economically developed territory, economic commitment, economic and technical competencies, assigned means.

The city has historically been the area of citizenship, the territory of free men and women as equals. Metropolitan areas need to provide identity, where people are proud to live,

training and employment opportunities, access to housing, comprehensive social services, efficient mobility, easy information and exchange, a suitable environment and the possibility of appropriating the city as a set of freedoms.

Transport Oriented Development requires a suitable density and diversity (all services need to be close to homes), with a good design of the public space that can be used by all including the disabled, children and the elderly, working with distance as factor while having a lot of opportunities in proximity. This is best achieved by compact cities, with adequate density, diversity integrating all the different social groups, and diversity of facilities working with proximity as a factor of design. The ground floor of the building must be a window display making the street a space of exchange and interaction, a space for culture and socialising and a safe place with segregated traffic. Such a design strategy requires different kinds of connectivity to foster the quality of life for all citizens.

There must be continuity in planning principles, such as promoting metropolitan areas through a specialised and complementary city network, sprawl control, prioritising urban renewal over urban expansion, urban development along axes of public transport, preserving a dense public transport network, safeguarding and improving accessibility to green spaces.

Lastly there is a need for renewing existing planning instruments. What is required are flexible regulatory instruments instead of formal design; a strategic model giving directions for long term interventions to re-establish structural elements; cultural, social, economic and environmental sustainability; integrating of all parts of society; guaranteeing commitment of public investment; fostering public-private partnership; guaranteeing transparent governance and availability of public documents. The development of these objectives has to take into account all the requirements of stake holders and citizens, ascertained through a feedback process of reflection and proposal. These are the contemporary means to improve the quality of life in Metropolitan areas.

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