

Shaping the Image of Globalization: The Role of Technology in Urban Regeneration

Aleksandra Stupar

Abstract

The recent changes of the global economy, politics and technology have caused a significant transformation of numerous urban nodes interlinked by growing world networks. As a result, cities are adopting similar models of development and reanimation which should lead them to global recognition. The process of urban regeneration, broadly acknowledged as one of the best directions towards socio-economic and environmental quality, has become a politically and professionally 'approved' concept whose application should provide a vivid and eye-catching landscape of globalization. However, these complex initiatives require an advanced technological backup to facilitate their implementation and provide sustainability, connectivity and competitive advantages. The main aim of this paper is thus to present and analyze the multiple roles of technology in urban regeneration, raising some new questions about the outcomes and consequences of this relationship.

Introduction

*Omnis mundi creatura,
Quasi liber et pitura,
Nobis est, et speculum
Nostrae vitae, nostrae mortis,
Nostrae status, nostrae sortis
Fidele signaculum.
Alanus de Insulis*

The city and its architecture have always been a very precise reflection of society—its needs, values and imperatives. The city of the 21st century, however, has evolved into a unique mixture of different matrixes, styles, identities, symbols and tokens, incorporated into its public spaces, buildings and infrastructure. At the same time, advanced technology has become the

298 *Aleksandra Stupar*

main driving force of globalization—stretching its networks, multiplying layers and expanding their range. As a result, new dazzling and often puzzling urban landscapes have been created all over the world transmitting—directly or indirectly—the messages of neo-liberal order.

Ignoring space and time limitations, the city of globalization reinforces its image with different attractions, deliberately reinventing its forgotten and neglected segments. These remains of the urban legacy are gradually revived and improved, introducing the wonders of high technology. The aura of sustainability has also become a preferred ‘hallmark’ among planners and architects, even though its role and importance can easily be manipulated. Consequently, various modes of urbo-technology symbiosis are being planned and implemented in order to activate abandoned structures, generate attractive places and events, infiltrate new groups of consumers and increase global potential(s) of urban nodes. All these interventions, motivated by on-going global competition, are oriented towards urban promotion and driven by the requirements of ecological and / or techno-capitalistic sustainability, cultural uniqueness and / or inherited identity. Still, their real impact on the quality of cities and their further development has to be evaluated and confirmed. Modern technology certainly sets new standards and patterns of life, behaviour and urban / architectural design but the problem of its adequate use and (mis)interpretation remains.

The existing picture of globalization definitely has several perspectives readable in urban space and its regenerated areas. However, the question is, are they all (inter)active and functional, or are we merely living in a passive two-dimensional scenery whose flashy appearance leaves the superficial and short-lasting impression of power, wealth and progress?

Following the global patterns

The contemporary cities, exposed to the strong and often uncontrolled currents of economic, political, cultural and media globalization, have gradually developed a new spatial response which should accommodate various real and virtual elements. Additionally, the latest technologies have

been embraced without too much hesitation and, as a result, the inherited urban topography has been transformed. This currently displays a multi-dimensional image of limitless networks, uncovering the collection of activities more or less autonomous from spatial units and traditional material structures. Obviously, the malleability of the physical and functional formations has become an imperative which should ensure the endurance of our cities, establishing multiple levels of entangled spaces which can be perceived as vivid patchworks and / or unpredictable matrixes.

The 'urban menu' is also adjusted to the new demands, providing the globally 'approved' set of preferable / feasible activities—finance and business, command, control, culture, creativity, knowledge, media, tourism and new technologies. They complement each other and generate numerous combinations in diverse spatial formations, creating trans-urban and trans-national systems.

The resemblance of the architectural landscape is also noticeable. Besides the symbolic connotations which should express the values of the global society and its (im)balance of power, the polished and regenerated panorama reveals the genuine structure of the global economy. The inter-laced networks of all kinds of infrastructure (transportation, information, services), the standardized nodes of finance and consumption and the spectacular sites of new urban attractions represent a new visual vocabulary of the contemporary city. However, although these codes are directly 'invented' by celebrated architectural superstars or generated and applied by globalized architectural practice, their scale and nature are defined by the modern technology, its demands, potentials, performances, methods—and logic.

Apparently, the symbiosis between tangible reality and invisible nets has been established, boosting the next phase of the urban (r)evolution. This time, we shall float in the universe of flows—facing the computer-generated spaces, exploring the pseudo-historical layers of the regenerated areas and questioning the blurred ideas about efficiency, sustainability, networking and identity. In the meantime, the thrilling images of absolute utilization will become a new challenge for urban planners and architects, who will continue to stretch the limits of urban concentration and flexibility.

Tempting (the) future or *status quo*?

300 Aleksandra Stupar

Figure 1. Images of the global identity,

Rotterdam—the importance of ‘the place’ is reduced, the number of different real and virtual matrixes / streams is drastically increased and higher urban and global efficiency are both encouraged and demanded. However, this kind of homogenized landscape is just one of the visual paragons which the contemporary city offers and displays, searching for its own scale and ideal content.



Regenerating the city, contesting sustainability?

In general, urban regeneration considers improvement of economic, social and environmental conditions caused by new socio-economic and technological demands (Lichfield 1992). Declaratively, the main aim of every regeneration project should be the well-being of the city and its citizens, but some post-regeneration evaluations do not confirm a positive and planned result.

The targets of the interventions are usually devastated and neglected quarters, outdated harbour areas, derelict ex-industrial sites and former

nodes of transportation infrastructure (stations, hangars). Additionally, in the attempt to strengthen their own position and attractiveness, cities become stages for marketing-oriented (re)development. They thus implant generators of 'vibrancy', mostly related to culture, business, technology and tourism. Within this same framework, however, the concepts of regeneration can vary in their scale, approach, objectives and applied instruments, depending on the local conditions, i.e. financial possibilities, cultural identity, ambitions and potentials of urban governance.

Urban regeneration, as a complex process, should be planned and well-elaborated, but it is often perceived as a side effect of various large-scale projects (airports, HST stations, ports) or a reaction to global and local challenges—important world events, natural disasters, urban riots etc. Thus, the intention, method and 'outline' of urban regeneration can be different, opening an immense space for creativity, innovation—and manoeuvring. Obviously, nowadays regeneration represents a trend and a specific kind of obligation which should accomplish economic goals but also highlight the role, determination and 'vision' of urban authorities.

Preferably, regeneration initiatives should embody a combination of policies and practice enabling a comprehensive and integrative approach, long-term sustainability, reduction of social disparities and protection of environmental values (including urban heritage). However, the success of a city is also based upon the size and productivity of all sectors. Consequently, every plan and project of regeneration should fulfil a number of objectives such as:

- achievement of higher competitiveness,
- introduction of new activities and investments,
- higher environmental quality,
- enhancement of spatial cohesion,
- new opportunities for employment,
- improvement of physical and electronic accessibility,
- (re)activation of inherited sites and buildings.

302 *Aleksandra Stupar*

The selected strategies are therefore usually oriented towards the modernization of urban infrastructure and buildings, reorganization of the production sector, diversification of activities and / or development of high technology. Furthermore, the process of regeneration can be considered as:

- compulsory—to activate abandoned areas (e.g. Bilbao – Abandoibarra and Galindo, Sao Paulo – Nova Luz, Mexico City – Centro Historico / Brasil 44, London – White City Development),
- anticipatory—to reanimate economically, ecologically and / or socially declined communities (Caracas – San Rafael Upgrade Project, Ho Chi Minh City – ‘PMU 415’ slum upgrading project, Rio de Janeiro – Favela-Bairro),
- entrepreneurial—oriented towards the realization of large projects, with questionable sustainability (for example Milan – ex-Fair Zone, London – City East, Tokyo – Marunouchi district),
- collateral—as a result of infrastructural transformation (for instance, the insertion of new traffic nodes / networks or reorganization and modernization of the old ones – Bordeaux’s tramline, LA – High Speed Rail, Istanbul – Marmaray Project, La Spina – Turin).

Regeneration programmes are usually structured around some of these features and combined with a selected urban ‘theme(s)’. As a result, some cities (re)create zones with a progressive techno-business appearance, while others, determined to keep the traces of urban history, connect their cultural tradition with the latest innovations. The difference between a radical and moderate approach is noticeable in the skyline and general spatial composition of regenerated area, while its content can be inclined either towards the future or to nostalgia.

The case of Lisbon’s 1998 EXPO site (now extended and named ‘Parque das Nações’) is a good example of a self-sufficient urban unit. The main idea was to host the World Exposition, simultaneously improving the condition of the area which covers nearly 340 hectares, including five kilometres of the riverfront. The main regeneration concept was focused on the link between the city and the river, its modernization and preser-

vation of its essential character. The ‘purified’ urban setting, planned as a new node of urban centrality, represents the glittering picture of globalization—labelled architecture, exceptional facilities, luxurious residential quarters and conveniently packed corporate activities—all attached to the new infrastructure and supported by the latest technologies. Almost ten years after the public inauguration, the ‘Parque das Nações’ remains one of Lisbon’s main attractions—in spite of the ongoing debates. Obviously, the radical approach is always the controversial one—stakes are higher and benefits seem placed too far in the future.

Figure 2. Expo area (Parque das Nações),

Lisbon—sustainability in the long run? The landscape which reveals ambitions, improves the situation, incorporates contemporary technology and certainly brings a new identity to the ‘place’. Financial, environmental and social effects still have to be verified.



304 Aleksandra Stupar

The other mode of regeneration is more locally oriented, taking urban legacy into consideration as a competitive advantage. It is usually caused by previous or future infrastructural solutions and combined with a public interest and environmental improvement. For example, the moderate approach can be recognized in the redevelopment of the old railway area in Antwerp (Spoor Noord) where a comprehensive regeneration programme has been launched. The result of this transformation should be focused mainly on leisure and recreational activities placed in an urban landscape park, but the regeneration programme also includes new cultural, educational and commercial activities, a student campus and a monumental footbridge designed to connect this part of the city with a new marina—Willemdok. In this case, the sustainability of the solution is more evident, incorporating the invisible threads of technology and its history.

Figure 3. Damplein,

Antwerp—the square created on the top of the new railway tunnel, with the renovated Antwerp-Dam station. The old station has been transformed into a community information centre, while the tunnel represents a part of the new urban and traffic infrastructure for the North-South railway connection.



Some cities, such as Philadelphia for example, combine different approaches and themes, even within a single location. The Navy Yard (around 1200 acre), situated along a historic waterfront at the confluence of the Schuylkill and Delaware Rivers, is one of the cases where radical and moderate models of regeneration have been applied, creating a new competitive urban environment. The area is divided in five segments—the Shipyard, the Historic Core, the Corporate Center, the Research Park and a zone for future development. The Historic Core provides the opportunity of renovating existing buildings, the Shipyard offers both existing and new amenities, while three other zones introduce a new, ‘globalized’ set of activities, merging business, consumption, research and high-class residence. The connectivity and accessibility are also improved and modernized in order to underline the potential of the whole area. Another interesting idea is the Keystone Innovation Zone, which promotes collaborative innovation between academic institutions, government research and private industry. The technology sectors, such as power and energy, nanotechnology, advanced manufacturing, communications and IT, homeland security and life sciences are the focal point of this initiative.

Obviously, there is neither a single nor a universal solution for the problem of urban regeneration, but there are some models and themes which have become quite popular. For instance, the frequently exploited model of cultural regeneration, generally used to confirm the prevailing or preferred urban identity, turned into a global fashion, followed by urban nodes from highly developed as well as developing countries. This, however, appears to be an insufficient accelerator of economic growth. The importance of the knowledge economy is thus increasing, bringing about some new spatial and technological demands. These should certainly be fulfilled by significant investments in urban infrastructure, innovation and environment, imposing the quality of sustainability.

The prevailing opinion is that sustainable regeneration ought to be based upon local conditions with the necessary technological backup in every phase and every aspect of the process. Evidently, technology facilitates the construction and application of databases, the conducting of relevant analyses (for example—SWOT) and the formulation of possible strategies. Additionally, it represents an instrument for the development of complex

306 *Aleksandra Stupar*

scenarios, models or designs, simultaneously improving impact assessment, implementation and evaluation. For example, AMT3D is an Ad-engine based on 3D software technology developed by a consortium of European research institutes led by the University of Leeds. It can be used in the process of urban design, stakeholder consultation and marketing, enabling the calculation of the local and environmental impacts of proposed development.

The technology, perceived as an important element of the future regeneration, should also be assessed in order to provide sustainability of the final solution. Therefore, it must be embedded in the architecture, urban infrastructure, planned and expected connectivity, mobility, energy efficiency, treatment of the open spaces and ecological balance. Unfortunately, even though the concept of regeneration puts forward globally approved requirements of sustainability, the reality often demonstrates distorted images of idealized planning models. Consequently, the actual result of urban regeneration is usually an uneven and highly accelerated development, directed by the imported or replicated scenarios, suitably inserted into new and / or renovated buildings and ‘wannabe’ pulsating public spaces. Furthermore, urban regeneration is often misinterpreted and its complexity remains ignored. It thus comes as no surprise that a number of examples represent a mere recycling of a model and an idea, lacking in-depth elaboration and proper evaluation.

Apparently, urban regeneration and its sustainability still cannot maintain the expected equilibrium.

The challenge(s) of technology

Today, a city can be perceived as a place with the highest concentration of numerous technological networks which, all together, should ensure the longevity of its complex organism. Consequently, a higher level of flexibility and mobility is achieved and the service sector is intensified. This condition instigates, directly or indirectly, transformations in other fields of the intricate urban system—from housing, transport, education to social welfare and environmental protection.

The existing technology, with its various applications and manifestations, becomes a vital ingredient of urban culture but, simultaneously, the specific urban situation has an important influence on the design of technologies and their performances. Obviously, the interaction of the city, society and technology is intensive and it often causes, stimulates and promotes urban and technological innovations.

However, the parallel world of technology has already established the substitutes for a number of mundane life-supporters and anchors. According to Paul Drewe (2000, 9), these 'pairs' are:

- bookstores – bitstores
- stacks (in libraries) – servers
- galleries – virtual museums
- theatres – entertainment infrastructure
- schoolhouses – virtual campuses
- hospitals – telemedicine
- prisons – electronic supervision
- banking chambers – ATMs (automated teller machines)
- trading floors (stock exchange) – electronic trading systems
- department stores – electronic shopping malls
- work (in offices) – telework
- at home – @ home

Although advanced technology can indeed cause ambiguous feelings and distort human perception, it is evident that its power moves our world in the same direction. Our lives are saturated by technology and the challenges initiated by its proclaimed omnipotence are multiplying every day. They are visible on all scales and in each activity, especially in the case of urban technology networks. Therefore, the necessity for integrated planning of land use and urban technology networks should become an essence of contemporary planning practice in its attempt to anticipate a spatial impact of the new technologies.

308 *Aleksandra Stupar*

A great number of contemporary urban networks are technology based, even though their universal service has still not been achieved. Furthermore, instead of being open and flexible they are often exclusive and (un)-expectedly rigid. This problem is particularly manifested in the process of urban regeneration which often takes place on sites with inadequate technological conditions.

Focusing on the role of obduracy / inflexibility in urban socio-technical change, Anique Hommels (2005) presents three different conceptions applied in urban and technology studies, which are dealing with this problem—the concepts of frames, embeddedness and persistent traditions. Each one of these can be also used to explain the relationship between technology and urban regeneration since the obduracy of form and / or technology could be a possible obstacle for future development.

According to Hommels, the concept of frames can be applied to situations in which architectural, planning and technology experts, as well as users, are limited by rigid ways of thinking and interacting. Therefore, this model is often used in urban planning and (re)design when actors, with their needs, are identified and involved in the planning process. Simultaneously, their interactions are developed and conducted within a specific technological frame which directly and indirectly moulds their problems and goals. The same frame applies to the professionals, shaping their theories, strategies, procedures and methods which should offer acceptable solutions and solve the identified problems.

The concept of embeddedness explains the tight relationship between technology networks and socio-technical systems, actor-networks and socio-technical ensembles. It can be used for various kinds of urban analysis—stressing the importance of interlinked social and technical elements which create a well known tension between a stability of built environment, transportation, water / waste networks and mobility of people, information and capital. The model explains the heterogeneous nature of the city and its networks, taking into account the technological inflexibility of the urban systems or their elements.

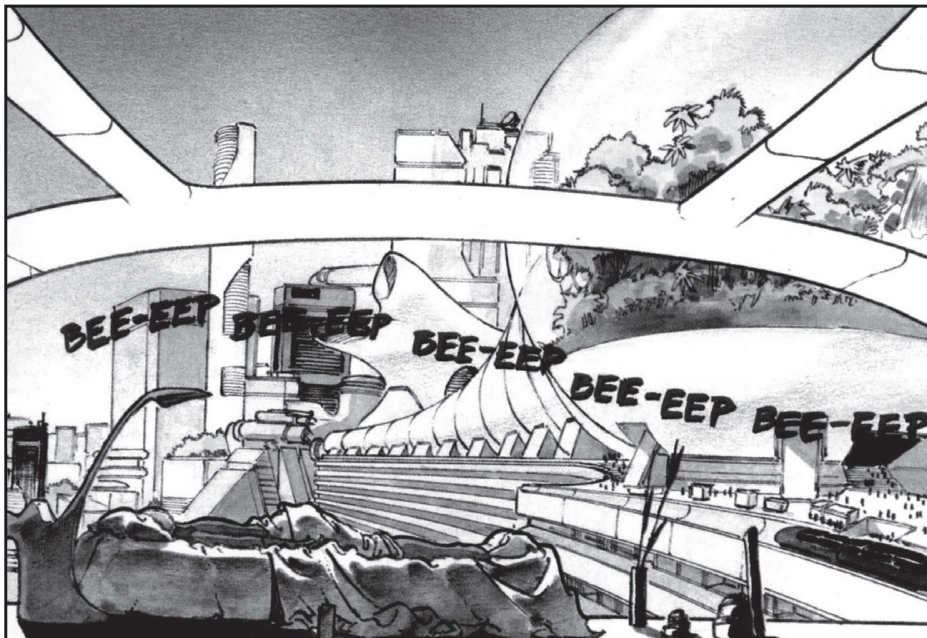
The model of persistent traditions emphasises the role of the shared cultural context, its values and traditions in the process of technological (and urban) development. The concept also tends to explain the dynamics

of technological change and to clarify the relationship between technological determinism and social constructivism within the urban system. It takes into consideration categories such as 'shared visions' and 'archetypes' focusing our attention on structural, cultural and symbolic factors which influence the inflexibility of urban structure and its technological background.

The expansion of technology—especially concentrated on information, communication and transport, also enables the existence of polycentric urban formations. The connectivity becomes a key word of progress, while all cities act as more or less independent nodes which pulsate, periodically imploding or exploding. Electronic and media over-stimulation can also cause confusion and a 'digital divide'—a new kind of social exclusion. Paradoxically, even in this case, technology can offer valuable support—enabling communication, interrelations and networking with / within a community. This kind of 'assistance', coupled with physical regeneration, could have an enormous and sustained long-term effect.

Figure 4. 'Technotize' (Grkinic, Gajic 2001)

—scene from the comic. Overwhelming technology in a futuristic Belgrade landscape—wishful thinking or a nightmare?



Somehow, a new technology always brings uncertainty in its wake. Its role in the contemporary city is undeniable, however, since it instigates a unique chain reaction—being an urban activator and / or generator, a tool, a backup, a leitmotif or an icon of further development and regeneration. It therefore comes as no surprise that various initiatives and programmes, oriented towards urban regeneration, reveal the crucial position of technology in this process.

The Urban Community Initiative, for instance, with its two programme periods (URBAN I, 1994 – 1999 and URBAN II, 2000 – 2006) has encouraged the promotion of sustainable development, as well as a creative and innovative regeneration approach in 188 sensitive urban areas in cities within the EU (selected in both phases). According to the Commission Communication of 28 April 2000 to the Member States, the list of priority activities underlines a necessity for a mixed-use redevelopment of brownfields, development of economically efficient, effective and environmentally friendly integrated public transportation and anti-exclusion / anti-discrimination strategies. The issues of employment, entrepreneurship, environmental measures, urban governance and information technologies are emphasized accordingly. The selected projects have therefore incorporated technology as an important element, applied directly or indirectly to increase the quality of life and advance the expected development.

The interesting mixture of technology and regeneration can be also seen in the project RESTART (Renewable Energy Strategies and Technology Applications for Regenerating Towns) which was promoted by the European Commission and coordinated by RESET (Renewable Energy Strategies for European Towns). The result of this initiative was a realization of eight large-scale building programmes in participating cities:

- Area Metropolitana Barcelona (Molins de Rei—district heating with biomass),
- Glasgow (rehabilitation of the Lighthouse by C. R. Mackintosh, which now hosts Scotland's Architecture and Design Centre, offices and the Renewable Energy Advice Centre for the promotion of renewable energies),
- Greater Lyon (Solar Habitat—renovated dwellings with reduced energy consumption),

Shaping the Image of Globalization: The Role of Technology in Urban Regeneration 311

- Turin ('The Science and Technology Park for the Environment'),
- Rotterdam (new district of low energy dwellings in the Stoopweg area),
- Copenhagen (renovation of an 1870 – 1900 urban block—visible balance of resources),
- Porto (rehabilitation process in the historical centre),
- South Dublin (energy-efficient housing).

Unquestionably, technology is shaping the landscape of tomorrow, structured like a kaleidoscope of infinite possibilities and challenges. It will certainly bring some unexpected innovations and sensations, but the key of its success, as always, lies in our capability to control and maintain our actions, ambitions and aims. Mirroring our needs, embedded patterns and weaknesses, the application of technology should represent another verification of our civilization maturity.

Are we capable of reaching the next level?

Testing the flexibility, using the technology

The future agglomerations are usually described as non-hierarchically ordered flexible networks, with complementary nodes and well-developed communication layers (physical, electronic, symbolic). However, the logic of these complex systems has already been tested *in vivo* in numerous regeneration projects which tried to achieve the most effective and profitable mode of multiple aggregation, with real and virtual interactions. At the same time, these projects reveal a common design 'procedure', which can be described in computer terms as:

- upgrading of hardware (buildings, urban infrastructure),
- updating of software (introduction of new activities, establishment of new networks, improvement of connectivity and accessibility, social cohesion),
- improvement of interface(s) (architectural design of exterior / interior).

312 *Aleksandra Stupar*

Urban regeneration also confirmed the emergence of numerous mutations of traditional building types affecting the generation of new spatial typologies with eye-catching envelopes for multiple activities. This stimulates the flexibility of urban space while at the same time increasing the number and capacity of recombination possibilities. Besides sustainability, contemporary urban space and architecture should offer adaptability, transformability, movement and interaction, leading to a flexibility that responds to changing situations and adjusts to greater urban dynamism (Kronenburg 2007).

What, however, would be the best proportion of the city-technology mixture to provide an ultimate recipe for urban regeneration?

The City of Arts and Science in Valencia, situated in the former bed of the River Turia, represents one of the possible answers to the previous question. Following a model applied and varied by numerous EXPO sites and theme parks (from 'Parc de la Villette' in Paris to the 'Eden Project' in Cornwall), this 'regeneration unit' combines science, entertainment and technology. Used as a spin-off and a new tourist attraction, it should also be a specific 'transmitter' of knowledge which supports the development of the information society. The Art Palace, L'Hemisfèric – the Cinema-Planetarium, the Science Museum and the Universal Oceanographic Park certainly offer the astonishing architectural shells where technology is mostly exhibited.

Technology parks have a slightly different structure, but they can also be used, among other things, to revive outdated urban areas. For example, the Australian Technology Park in Sydney occupies the site of the former Eveleigh Railway Workshops, which was the largest and most technologically advanced in the southern hemisphere. Today, it is again a pulsating place where research, technology, education and business create a new kind of fruitful cooperation.

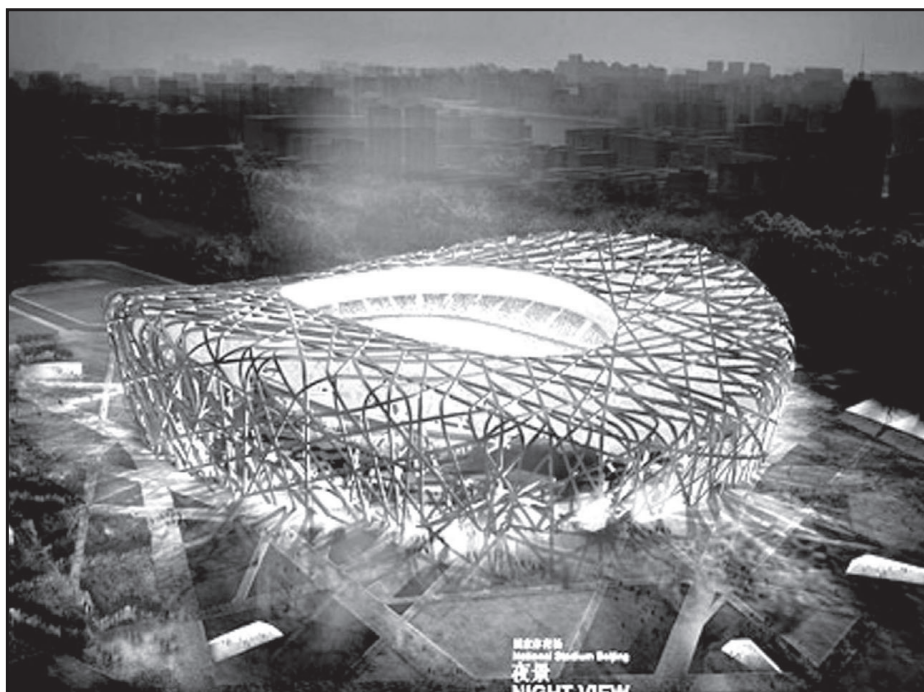
The same idea, although extended and elaborated on a larger scale, can be recognized in Singapore's One North initiative, which aims at ensuring the city a top position through a new high-technology research hub. The importance of natural qualities and the architectural heritage has not been forgotten, however, but is accepted as a competitive advantage of this forward-looking city.

The urban legacy can also be recycled and reinvented, providing scenery for a technological apex. Playing several roles in this intervention, modern technologies ‘inhabit’ the old industrial zones, partially transforming them. They create a new, enhanced environment for the techno-elite which is responsible for further research, innovations, creativity and development. The cases of Poblenou in Barcelona and the Liberties area in Dublin are well-known examples of this practice. Their new ‘names’ – ‘22@Barcelona’ and ‘Digital Hub’ are quite explicit statements of the expectations imposed, but behind the official rhetoric and positive media representations, a bittersweet picture of community protests and disappointment may be hidden.

Figure 5. The National Stadium – ‘Bird's Nest’,

Beijing (arch. Herzog & DeMeuron, 2008)—new urban landmark which instigates the regeneration of the whole area. The new technologies are embedded in construction, materialization, conservation of water and numerous systems of maintenance and control.

(<http://en.beijing2008.cn/cptvenues/venues/nst/n214078095.shtml>)



314 *Aleksandra Stupar*

Asian cities, besides focusing on large infrastructural / communication projects, also search for the best solution to solve problems of traffic congestion, pollution and global warming. They are thus using new technologies and elements of their traditional design to attain the preferred balance, demanded quality of life—and competitiveness. The Greenbelt / Ring Park in Shanghai, which aims to provide a new ecological zone for the suburbs, as well as Tokyo's projects for a network of green spaces and flood control for the Kanda River, present a different side of regeneration adjusted to rapid urban growth and the sheer scale of modernization. One of the possible approaches was also applied in Beijing, using a special urban catalyst—the Olympic Games. In this case, the high level of urban regeneration was aimed at raising the quality of the urban environment—through intelligent transport systems, use and dissemination of highly energy efficient and environmentally friendly materials and technologies, rehabilitation of green spaces, biological purification and recycling of water, sandstorm prevention and control.

Finally, apart from the pro-Western techno-glorifications, there are a number of cities, mostly in Asia, Africa and South America, which are still unable to cope with everyday problems caused by poverty, migration, fast-growing population, degraded environment, social inequalities and outdated, inadequate technologies. In their case, the process of regeneration is especially sensitive, usually oriented to community support, education, integration and mobility, switching the influence of contemporary technology to a user-friendly mode.

Clearly technology could increase the flexibility of urban space—its hardware, software and / or interface, often healing the wounds of previous overexploitation and negligence. The omnipresence of technology in urban regeneration thus represents a response to our indolent behaviour and the current global condition.

Still, it is up to us to decide—should we use it as a contaminant or an antidote?

Conclusion

Structured around fast-moving life, the contemporary city and its media-focused society have become an experimental polygon for the application of new technologies which have pervaded every sphere of human existence. At the same time, the urban structure, shaped by so-called 'flexible capitalism', advanced technology and ad-hoc strategies, reveals the logic of a confusing collage, upgraded by electronic webs and simulated experiences. The numerous problems, conflicts and paradoxes remain and multiply, while the flamboyant scenery of the globalized landscape sends a shudder down the spine.

The flows and networks, which simultaneously support and shake the stability of urban systems, intersect each other, absorbing everything and everyone in the labyrinth of technological progress. On the other hand, technology offers innovative solutions questioning, protecting or incorporating the legacy of previous epochs. Urban regeneration, promoted as a magic wand for the development of obsolete urban areas, has thus been embraced by the professionals, local authorities and developers as a method to ensure a prosperous future. Unfortunately, the complexity of the process and the suggested integrated approach are often neglected, leaving behind polished traces of history and glamorous techno-chimeras which s(t)imulate a progressive architectural landscape.

Generally, the role of technology in regeneration is multiple and ambivalent. It can provide the necessary infrastructural foundation, enable real and virtual connectivity, support environmental protection and increase energy efficiency, but it can also foster social segregation and diminish the meaning and importance of the human scale. Technology thus happens to be an inevitable ingredient of every regeneration project designed to detoxify the 'overdosed' zones and maintain the various nets of multi-cultural, multilateral and diversified relations.

Sometimes the ambitiously conceived regeneration programmes do not have the appropriate financial and political impetus or they just ignore the existing complexity of the problem. Even then, the support of technology is evident and quite useful—the copy / paste tool never fails, as well as the potential of the recycle bean. The result may not be

316 Aleksandra Stupar

sustainable and may not emphasise the local uniqueness and qualities, but the miracles of technology are endless. 'The place' could be launched through numerous media and short-term propaganda, while computer generated models could, at least for a while, transmit a preferred picture of progress.

Today, the old memories are discarded or revamped, the slick facades animated and the urban life partially regenerated leaving the global puzzle unfinished and potentially ominous. At the same time, the images which we perceive seem to be distorted and scrambled, echoing contemporary civilization. The city definitely remains a reflection of our society, however, even when we are not particularly fond of the features perceived in its mirror.

Seeing is believing? We may simply be blinded by the glow of the computer screen or too dazzled by the lavish urban extravaganza.

Literature

- Ajuntament de Barcelona (2003), *Urban Renewal in Poblenou District of Activities: 22@bcn*, Barcelona: Ajuntament de Barcelona.
- AMT3D—Interactive 3D Digital City Models, www.amt3d.com/regeneration.php [1 October 2007].
- Appadurai, Arjun (1996), *Modernity at Large: Cultural Dimensions of Globalization*, Minneapolis: University of Minnesota / Cambridge: Blackwell.
- Augé, Mark (1995), *Non-Places: An Introduction to an Anthropology of Supermodernity*, London: Verso.
- Augé, Mark (1999), *An Anthropology for Contemporaneous Worlds*, Stanford, CA: Stanford University Press.
- Batten, David (1995), 'Network cities: Creative urban agglomerations for the 21st century', *Urban Studies* 32 (2): 313–327.
- Brouwer, Joke, Arjen Mulder, and Laura Martz (Eds.) (2002), *Transurbanism*, Rotterdam: V2_Publishing, NAI Publishers.
- Castells, Manuel (1998), *The Rise of the Network Society*, Malden, MA: Blackwell.
- De Insulis Alanus (1855), 'Rhythmus alter, quo graphice natura hominis fluxa et caduca depingitur', Migne, Jacques-Paul (Ed.), *Patologia Latina*, Paris: Migne, 210–579.

Shaping the Image of Globalization: The Role of Technology in Urban Regeneration 317

- Drewe, Paul (2000), *ICT and Urban Form. Urban Planning and Design—Off the Beate-track*, Delft: Design Studio 'The Network City', Faculty of Architecture, Delft University of Technology.
- Foucault, Michel (1986), 'Of other spaces', *Diacritics* 16: 22–27.
- Graham, Stephen and Simon Marvin (1996), *Telecommunication and the City: Electronic Spaces, Urban Places*, London: Routledge.
- Grkinic, Darko and Aleksa Gajic (2001), *Technotize*, Belgrade: System Comics.
- Hommels, Anique (2005), 'Studying obduracy in the city: Toward a productive fusion between technology studies and urban studies', *Science, Technology and Human Values* 30 (3): 323–351.
- Kronenburg, Robert (2007), *Flexible—Architecture that Responds to Change*, London: Laurence King.
- La Biennale di Venezia (2006), *Cities, Architecture and Societ—10. Mostra Internazionale di Architettura*, Venezia: Marsilio.
- Latham, Robert and Saskia Sassen (Eds.) (2005), *Digital Formations: IT and New Architectures in the Global Realm*, Princeton: Princeton University Press.
- Lichfield, Dalia (1992), *Urban Regeneration in the 1990*, London: London Planning Advisory Committee.
- Mitchel, William John (2000), *E-topia: 'Urban life, Jim—But not as we know it'*, Cambridge, MA / London, England: MIT Press.
- Pain, Kathy (2007), *The Urban Network Transformation: Planning City-Regions in the New Globalisation Way*, GaWC Research Bulletin 225, www.lboro.ac.uk/gawc/rb/rb225.html [13 June 2007].
- Pearman, Hugh (2002), *Contemporary World Architecture*, London / New York: Phaidon Press.
- RESTART—Renewable Energy Strategies and Technology Applications for Regenerating Towns (1996), www.resetters.org/RESET/r-0-restart.html [1 October 2007].
- Sassen, Saskia (Ed.) (2002), *Global Networks, Linked Cities*, New York: Routledge.
- Taylor, Peter (2004), *World City Network: A Global Urban Analysis*, London: Routledge.
- The Navy Yard Philadelphia, www.navyyard.org [1 October 2007].
- URBAN II (2000), <http://europa.eu/scadplus/leg/en/lvb/g24209.htm> [1 October 2007].
- Waikien, Ng and Judith Ryser (Eds.) (2005), *Making Spaces for the Creative Economy—ISoCaRP Review*, Madrid: ISoCaRP.