

BUCHAREST MUNICIPALITY COMPETITIVE LOCAL ECONOMIC DEVELOPMENT THROUGH URBAN REGENERATION OF DESTRUCTURED INDUSTRIAL AREAS

Mihai-Alexandru MOȚCANU-DUMITRESCU

Teaching Assistant, PhD., urbanist, "Ion Mincu" University of
Architecture and Urbanism, Faculty of Urbanism, Department of Urban
Development and Territorial Planning, mihai.dumitrescu@uauim.ro

Abstract. The disappearance of part of the industrial areas in the European cities in recent years has allowed the expansion and planning of new public and / or semi-public spaces, more they opened new developing perspectives for cities. Rehabilitation of old industrial areas in the spirit of ecological concepts is the main concern for many European cities. Because of changes in technology and high-tech technology dissemination and transfer of manufacturing to services, the economic profile of European countries appear radically changed. Conservation and reconversion of the city valuable historic particularity (including the industrial and technological heritage) in the form of cultural and artistic goods is part of the new trend of *urban regeneration*, which is a mainly a strategy to attract private capital.

Key words: underutilized, outdated, multifunctional, accessibility, transformation.

1. Context

In recent years, concerns related to the natural and social environment have led to a change in approach to the economic development of the city. Throughout the second half of the 20th century, statistics revealed that most economic productivity growth was closely related to improving living conditions in urban areas. The need to better understand the relationship between economic competitiveness and social and environmental sustainability has been accentuated by increasing unemployment rate in many advanced economies (particularly among young population), the increase in income inequality and social unrest in the rapidly growing economies and increasing pressure on natural resources and the high level of pollution.

Thus, participants of the Seventh World Urban Forum held in Medellin, Columbia

(UN-HABITAT, 2014), highlighted the need to promote a new urban agenda that can overcome the challenge of the lack of adequate legal framework and planning, which leads to the relentless expansion of cities, intensive energy use, alarming and dangerous on climate change impacts, multiple forms of inequality and exclusion, and increased difficulties in providing decent work for all. This agenda should promote an urbanization model that is people-centered, based on "Cities for Life". The new urban agenda requires new technologies, reliable urban data and integrated, participatory planning approaches to respond both to present challenges and emerging needs of cities of the future. The new urban agenda should also:

- encourage governments to develop and use methods, such as national urban plans and policies, that link current urban development with future needs,

and that are solidly grounded in the fundamental principles of equity, justice and human rights;

- promote sustainable urban development, based on urban planning that promotes youth participation, gender equality, balanced territorial development; strengthened resilience to climate change and natural disasters; the upgrading and prevention of slums; and provision of housing, basic services and land tenure security, access to safe, affordable, accessible, and sustainable transport; and access to safe public spaces and services for all.

In this context are justified a series of questions about the opportunity of urban regeneration in addressing sustainable and competitive development of Bucharest City.

Why urban regeneration?

There is a consensus among European strategic documents (CEMAT CHF 84 - European Conference of Ministers responsible for Spatial / Regional Planning - Bratislava 2006, **Leipzig Charter** on Sustainable European Cities, European Commission may 2007 and **Toledo Declaration**, June 2010) regarding the importance of the current changes in urban areas and among these operations aimed at developing new ways of living, production and mobility are one of the key problems in the transformation of cities (see cases of cities like **Göteborg**, **Rotterdam** and **Lille** with Roubaix, its metropolitan area). It is necessary to find a new development model able to respond to new ways of life in post-industrial cities (Aalborg Charter, 1994), thus at present moment, the main problem that both local governments and specialists must resolve is: *how to efficiently manage the available land to change the existing urban functions?*

A possible answer to this question could be that the recovery and development of abandoned areas should be accelerated in order to attract investors, new residents, new businesses, in order to implement sustainable solutions for long-term development of the city, as outlined also in the article *Urban regeneration for sustainable communities* (McDonald *et al.*, 2009). In practice, all cities suffer from fragmentation, lack of urban spatial cohesion and integration, but at the same time, their industrial environment requires the existence of urban areas which must be recovered and reintegrated in the context of a post-industrial model city, new, diversified and complex, in parallel with finding a balance between public and private interventions (Murray and Szelenyi, 2009).

The potential role of industrial heritage in the urban regeneration process is given by its significance as a memory of the place (Lichfield, 1992). Art and culture are often used in successfully projects for brownfields reconversion and, thus using industrial heritage as a tool for improving the city's image and generating a stronger identity, being also the catalyst for successful flagship projects of urban regeneration process and contribute to strengthening community spirit and local economic development, as shown by the many examples in Europe (and beyond), examples that are discussed also in the *Urban Regeneration in Europe* book (Couch *et al.*, 2003).

Thus, regeneration of urban areas that have potential to provide social, economic, spatial cohesion is a process that focuses on the quality of public space, mobility and accessibility and helps create multifunctional urban areas, and not least is the process responsible for improving relations between the recovered areas and

the entire city (Chesters, 2009). Urban regeneration has to deal with people, their way of life and is linked to the quality of life that the city can and should provide to its inhabitants (Frumkin *et al.*, 2004). Urban regeneration is intended to transform outdated economic basis of certain urban areas (and hence the city as a whole) in a sustainable economy by attracting new business and enterprises, upgrading existing urban structure, ensuring environmental improvement and diversification of urban social structure (CEMAT, 2006).

But what happens to industrial buildings that have architectural value? Why could not the city, based on existing values, to try to obtain the distinctiveness and sustainable development that it needs?

We can answer these questions by studying examples of implementation of flagship projects, within the urban regeneration process, which have been and will remain a favorite tool for economic growth of the city (see the cases of industrial cities in the UK, especially **Liverpool**, or Scotland, **Dundee** and **Belfast**, the city of **Milan** and **Wallonia** or **Ruhr** region – see Fig. 4 - Moțcanu-Dumitrescu, 2014). Urban regeneration of disused industrial areas can have different effects: the development of economic activities, transforming these areas in quality public spaces or can be retained only as reserve land for future development of the city. In the case of economic activities, regeneration consist in construction of new buildings or it is aimed at the preparation of parts of industrial area (if we are talking about a greater area of land) to be sold to individual investors, the objective being creation of jobs. These activities can be carried out by a public or a private promoter.

Why industrial areas?

Because of its architectural, historical, social and technological value, industrial heritage is a recognized factor for the consolidation of identity in many of today's cities and is often associated with the interests of the local community (Gabor, 2013) (see also the European **Lisbon Strategy**, the **Göteborg Strategy**, but also the European **Net-TOPIC** programs, and **URBACT II**, The Urban Development Network Programme, **URBAN II** in complementarity with the main forms of assistance from the structural funds and other Community initiatives - **Interreg III**, **Leader +**, **Equal**, or **RETINA** - "Revitalize former industrial areas" project funded by the transnational cooperation programme in South-East Europe).

As industrial areas turns into urban development opportunities, these opportunities must be integrated into a long-term planning process, involving both public sector and private sector. Industrial lands are an integral part of the city urban structure, which affects the quality of urban life, problems generated by abandoned and disused industrial sites requires multiple interventions in order to be restored to the state of the reuse, respectively re-integration in the viable economic cycle (Merlin and Choay, 2009).

In Europe, the industry tends to disappear at an accelerated pace. Can the European cities to develop sustainable if these industries disappear or relocate? Local governments (or administrations) can "destroy" all industries and build in their place a lot of office space, but this approach would be a sustainable one?

As shown in the special report No. 23 of the European Court of Auditors in 2012, in all Member States, the policy of disused industrial areas is implemented mainly by (specific) local planning

instruments, promoting the application of best practices, such as urban regeneration of these areas as preferred option for the use of undeveloped land (European Court of Auditors, 2012). Setting priorities is however difficult, given that there is not a comprehensive and appropriate statistical data for all disused areas, that includes both abandoned industrial areas and those contaminated.

As can be seen from the above, the issue of brownfields (or industrial areas - term used by many eastern European countries) is a priority for many European strategic documents (UN-HABITAT, 2014), but also for programs and projects implemented in different cities, by local administrations and governments. The focus is, most of the times, on the reuse of industrial areas (and sometimes contaminated urban areas) as an alternative to uncontrolled expansion of the city, the city inner cohesion being provided by integrating in the development strategies the social, economic, environmental and cultural dimensions (Gabor, 2013).

At European level industrial areas are important:

- whereas the European Commission aims primarily to reverse the decline of industry in the EU and to restore the 2013 level of about 16% of GDP and to rise at a value of 20% by 2020, and secondly to capitalize on the industry's ability to be the main destination for private and public investment in research, development and innovation;
- because new, innovative and integrated approaches (featured by appropriate policy and legislative framework) are needed to help cities to reach their potential and re-usage of old industrial assets by emerging technological

industries and entertainment services (Chandler, 1962);

- because large part of cultural and creative industries potential is not sufficiently taken into account in various re-industrialization policies, this representing a significant potential for growth, innovation and employment (this is not a dysfunction only at European level, but a global problem, as evident from the article about cultural initiative in urban regeneration processes in Latin America - Kanai and Ortega-Alcázar, 2009).

In the context of the priority given to industrial areas (both by spatial development strategy documents, as well as by cities that have implemented projects for recovery and reuse of these areas) it can be stated that Bucharest Municipality should benefit from the favorable framework for urban regeneration of industrial areas. Bucharest has a rich cultural and industrial heritage, and therefore a great potential to develop a strong image that can be built on this basis. Thus, the city must try achieving a distinctive character and create its own identity through various flagship projects and strengthen its European business market position.

Why industrial areas from Bucharest?

Bucharest Municipality has six administrative districts (or sectors), with significant disparities in terms of population structure, employment rate, access to education, total number of companies operating within their administrative boundaries, but also with different economic performance under the impact of political, legislative and economic factors recorded, between 1989 - 2012, accelerated process of privatization, decentralization, dismantling, etc. (Chelcea, 2008).

If you were to refer to the potential generated by industrial heritage in the city of Bucharest in terms of a SWOT analysis it would be useful to mention and highlight weaknesses, opportunities and threats that may affect the reuse of industrial heritage (Merciu *et al.*, 2012).

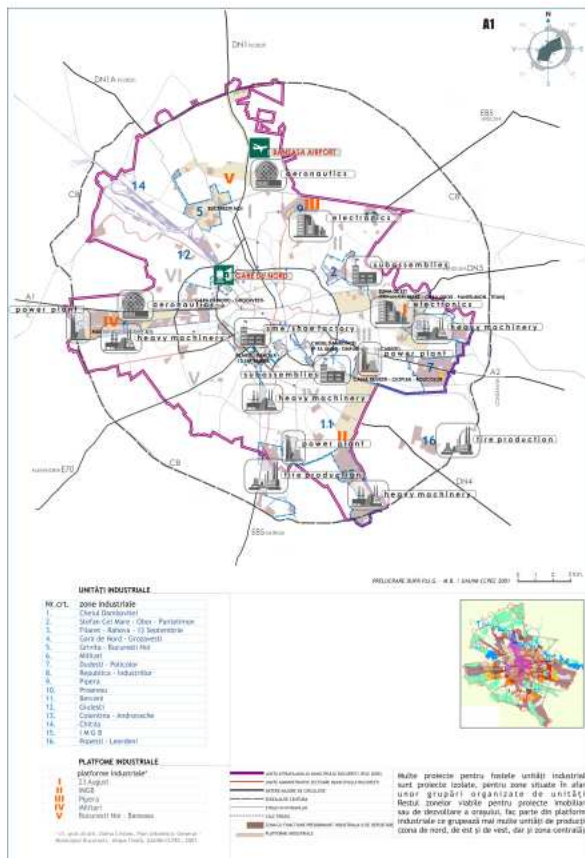


Fig. 1. Spatial distribution of industrial units in Bucharest City

In terms of weaknesses, it is worth noting that Bucharest local administration faces a limited space availability for future development (limited land availability is due to overlapping of its administrative limit and the built urban limit) given the need for potential capitalization of development represented by industrial urban areas, as shown in Fig. 1 (Motcanu-Dumitrescu, 2014). Even if the surface Bucharest is the lowest compared to other European capitals, Bucharest being the third capital of Europe in terms of density after Athens and Paris, with a

density of 8107,6 inhabitants /km² (RDA București-Ilfov *et al.*, 2006). High population density generates high traffic flows and pollution, while the limited availability of space has determined a rapid increase in property costs.

Of interest to investors are lands suitable for residential building collective (medium and luxury segment) and individual as well as for development of office buildings and shopping centers. These lands are actually large parcels that can still be found scattered in traditional residential neighborhoods, resulting from redundant former industrial land. Regarding land suitable for new residential developments are currently preferred areas along the incomplete inner ring road (Nicolae Titulescu - Iancu de Hunedoara - Stefan cel Mare - Mihai Bravu - Calea Văcărești), as well as locations in the north, such as the Colentina, Petricani (north-east), Străulești and Chitila (north-west). The current provision of land inside the actual limit of built urban area of Bucharest Municipality is dominated by small individual plots, which rarely exceed 5.000 sqm., and former industrial buildings that can be demolished, which could release each between 10.000 and 50.000 sqm. (see Fig. 2, below - Motcanu-Dumitrescu, 2014).

From the pressure on the current supply of land, arise the development opportunities in Bucharest. Bucharest is the largest consumer market in Romania. High population density and high concentration of services and economic activities make the Bucharest the largest consumer market in Romania and one of the largest markets in South East Europe. Also the capital city functions as an engine of development. Bucharest City works as a development engine for economic growth and job creation at regional and neighboring counties, due to the

phase and reorganized during the socialist industrialization (Adler *et al.*, 1972). Proximity to the center and good accessibility, transforms these former industrial establishments in places of interest on local real estate market.

A second priority category of industrial areas is the ad-hoc reconverted industrial units, by renting the available space, process spontaneously carried out as a way to recover financial losses resulting from decentralization and privatization, and as a first step before the actual reconversion, esthetic and functional. This category covers an area of 696 ha, representing 2.92% of the city and brings together industrial units such as *Romaero, Atelierele CFR Grivița, Zefirul Iancului, Metaloglobus, Postăvoăria In Romanian, TextilCotton, Policolor, Miraj, Antilopa, Faur, Republica, Simtex, Grantmetal* etc.

Another category of industrial areas that need to come to the attention of local authorities and which should have a guided development, with the help of urban regeneration process, is **active industrial units which are sources of pollution**. This category brings together those industrial units established or reorganized before 1989 (Giurescu, 2009), and are currently carrying out productive activities. It occupies an area of about 1254.9 ha, representing 5.27% of the total area of the city. Recognized for environmental issues, which are generated in Bucharest area, are the following industrial units: *CET Titan, CET Sud, CET Progresu, CET Grozăvești, CET Vest (energy sector), SC CHIMOPAR SA, SC Policolor SA, SC Prodplast SA, SC Izolatorul SA (chemical field), SC DOOSAN IMGB SA, SC Petrolam SA, Republica SA, SC Grantmetal SA, SC Laromet SA, (metallurgical field), SC Mecanică Fină, SC*

CELPI SA, SC Turbomecanica SA, SC Ventilatorul SA (Chelcea, 2008).

In terms of impact on the environment it is found a decrease in industrial pollution sources (whether due to liquidation or restructuring), and inserting new environmental disturbances (uncontrolled waste disposal, increasing diffuse pollution sources, etc.). Besides the obvious environmental issues, there are social problems, especially those in the former working-class neighborhoods, affecting businesses, especially real estate (Berza, 2008). Land price in these districts is cheap and is automatically attractive to developers. Thus, conflicting incompatible activities have been developed in these areas (commercial, luxury new residential areas, office buildings).

The expansion of services and the increasing demand for office space, overlapping areas with mixed use consisting of old warehouses, industrial buildings (small workshops or large production halls) or degraded technical facilities (such as water towers) sometimes encounters the resistance of local community, which has completely different needs and interests in these areas. Regenerating industrial areas play an important role in avoiding chaotic real estate developments, helping to create the conditions for sustainable, integrated and high-quality urban development.

Present industrial activities, in the context of increased globalization, generates dysfunction manifested at the level of traditional industrial areas and have effects that are multiplying on the surrounding areas or on the entire city (such as unemployment, migration, social imbalances) which favors the extension of undesirable events (such as poverty, crime, monopoly, social segregation,

degradation of the environment, uncontrolled expansion of built areas, reduction of green areas). These dysfunctions manifest themselves in conditions of unfavorable *exogenous factors* (crises of industrial field / sector at regional or national level, global economic and financial policies, diminishing of resources, trade, law, restraining of markets) and of *endogenous factors* (labor resource and / or human resource, land resources, ownership dispersion, abandoning the business, lack of capital necessary to rebuild productive activity according to new technologies but also to the dynamics of the city - it can be seen as both the area of influence of endogenous and exogenous factors), all within a temporal vision.

In most of the cases, an urban regeneration project should include a variety of functions, but in the context of addressing issues of Bucharest industrial areas, how realistic is the expectation that smaller projects, under-funded and time - limited (such as those that have been implemented during 2000 - 2008 with the help of Urban Zoning Plans / PUZ) are capable to reverse a process that is part of the industrial restructuring chronic legacy? In this context, urban regeneration is a precondition for development of the city. Bucharest Municipality development should be planned in a rational manner, through General Urban Plan / PUG (or Masterplan) and zoning plans (PUZ) and should not be left to the will and decisions of individuals or legal entities that develop real estate activities (Berza, 2008).

Many of the categories of intervention upon industrial areas have been implemented or will be implemented through planning documents (or urbanism projects) from the Urban Zoning Plans/PUZ type, but there is a great deal of interventions regulated by

documentations (or projects) from the Detailed Urban Plans/PUD type, which is a dysfunction at the level of Bucharest Municipality. Urban effects (positive and negative) of Urban Zoning Plans/PUZ, and Detailed Urban Plans/PUD type of planning documents (or urbanism projects) that targeted specific industrial areas are directly influenced by the level of integration into the existing urban context (volumetric constraints, loading level of area / premises / plot, the relationship with public space) (Gabor, 2013).

Public interventions (like the one necessary in Bucharest) are aimed at developing integrated approaches to urban management in a framework of environmental sustainability, critical approaches to solve complex and interrelated urban problems and to maximize the potential of urban opportunities, thus implementation of specialized development strategies requires a high degree of coordination and cooperation between state institutions and agencies to avoid traditional approach and sectoral fragmentation of duties and responsibilities among the various levels of government (Myfanwy *et al.*, 2008).

City competitiveness no longer lies in immobile, physical resources like coal, timber or gold but in highly mobile brain power and creativity (Landry, 2008). There is less value in labour, even in capital and more in applied creativity as software embeds information in every product, transforming every manufacturing and service products. Change, atomisation, overload, these are syntagms that are used in an attempt to adapt to spacial and institutional transformations by building a new system of values. The emerging post-industrial system of values is reinforcing

along the old with pre-industrial and industrial system. In a world where you can make transactions in cyberspace within 24 hours, population mobility (knowledge and skills) is forcing cities to improve their services (especially public sector), to decorate public spaces amenities with a modern design and invest in entertainment (Landry, 2008).

2. Relevant aspects of the case studies in the the context of addressing Bucharest City issues

Bucharest Municipality issue is not unique at European level. Almost all large cities with strong industrial tradition, have been forced to rethink their development strategies through the re-integration of former major manufacturing facilities in the general scheme of sustainable and competitive development.

Although there is no unique "european model" to the successful implementation of urban regeneration (Colantonio and Dixon, 2011), there is a coherent approach that emerges from all the case studies examined, but also in other cases, such as Glasgow, the European Capital of Culture in 1990 (Mooney, 2004), as detailed in the *Urban regeneration, arts programming and major events* paper (Garcia, 2004). Most of the times, the implementation of sustainable competitive development was based on a strong local authority, who was responsible for each stage of urban regeneration, using this tool not only to improve a degraded area of the city, but also to change the image of the entire city and transform and strengthen its strategic economic position (Roberts and Sykes, 2000).

The distinctive characteristics of case studies are:

- **Liverpool** - a conurbation with more experience of urban restructuring and change than almost any other British

city (or any other european city). It is among the poorest conurbations in western Europe, and has been the subject of an extensive variety of urban policy initiatives over the past 30 years. As a case study it provides an opportunity to learn about the possibilities for and limitations of regeneration in a situation of extremely limited demand for land, property, goods and services coupled with low levels of both consumers and business confidence;

- **Dundee** - it offers different insights of an area that has seen the decline of traditional industries (outside studying problems of the cities like Glasgow and Edinburgh) coupled with some successes in the regeneration process;
- **Belfast** - the primary city of Northern Ireland, where urban restructuring policies have become intertwined with internal civil and political conflict, with important consequences for economic development, social structures and local governance;
- **Lille** - traditional center of (a former) textile and mining industry in northern France, that has, in recent years, undergone a transformation to become an icon of the new Europe, at the heart of London - Köln - Paris „golden triangle“;
- **Milan** - provides contrasting experiences to those of the northern European cities: a prosperous city in a growing region, with the impact of industrial restructuring that are more subtle;
- **Rotterdam** - the largest port in Europe and largely rebuilt after the Second World War, provides an interesting contrast to Liverpool and Dundee. A successful port-city located in a prosperous region, this case study illustrates a process of urban

restructuring and decentralisation in a growing conurbation, with a strong local government that provides a number of early innovations in community participation in the regeneration process. Nevertheless, deprivation and social exclusion remain serious issues (Richards and Wilson, 2004);

- **Wallonia** - especially the valley of the Sambre-Meuse from Mons through Charleroi to Namur and Liège, has seen the collapse of its former prosperity and political influence, which was dependent upon the industrial base of coal, steel, chemicals and textiles. In this case, regional and local governments are struggling to get to grips with social, economic and environmental problems of immense complexity and scale;
- **The Ruhr** - the North-Rhine Westphalia has endured more than 20 years of economic restructuring and regeneration activity. This area has become famous for the activities of the recent high-profile Emscher Park IBA. The environmental problems of this region are substantial, but within a strong economy and a stable political framework, some novel planning solutions are emerging.

Returning to the issue of case studies, we can observe that over the last three decades **Liverpool** has probably experienced more urban regeneration than virtually any other city either in UK or in Europe as a whole. Since 1971 the city has had to respond to a reduction in its population of about one quarter as well as the loss of more than half of its manufacturing industry. Liverpool and its City Centre (as shown in Fig. 3 - Motcanu-Dumitrescu, 2014) experienced a substantial population loss between the 1970s and the early 1990s, although there was some levelling-off in the decline as observed from the standpoint of the late

1990s. This was associated with a general ageing of the population of working age, and an increasing proportion of the economically-dependent population. The unemployment rate in Liverpool - at 9.5% in 1999 - was twice the then national average and higher than in Merseyside as a whole. Long-term unemployment was a particular problem - 36% of the unemployed, compared with 24% at national level.

Following the recommendation from *Towards a Strong Urban Renaissance* report (Richard Rogers *et al.*, 2005), the UK Government supported the establishment, in 1999/2000, of three pilot URCs in Liverpool (City Centre), East Manchester (situated immediately to the East of the City Centre) and Sheffield (City Centre) to “*work with a range of private and public sector partners, including the Local Strategic Partnerships, to redevelop and bring investment back to the worst areas in our cities and towns*”. This pilot projects were designed to deliver physical and economic regeneration within focused geographical areas through implementation of a shared vision by co-ordination of investment plans from both the public and the private sectors and the attraction of new investment through the marketing, promotion and regeneration of their areas, as shown in Fig. 3 (Motcanu-Dumitrescu, 2014).

As seen from above, the urban regeneration process is characterized by interventions from the central government through various instruments and tools, but also a liability fragmentation between public and private organizations (local councils, regional development agencies, other organizations, homeowners associations, regeneration agencies, public and private companies, etc.). However, the disadvantage of these complex systems is that they are hard to managed,

local pride and build social cohesion (Garcia, 2004).

3. Possible implementation modalities of urban regeneration process

The dynamic character of the factors that condition the development of Bucharest (investment implications of market globalization, regional competition between localities, changes in domestic and European legal framework, etc.) requires regular updating of the list of development priorities and necessary objectives.

A successful urban regeneration process is based on social and environmental policy, resulting from the comprehensive approach of renewal and revitalization techniques. In any urban operation is necessary to sensitive understanding of the context (Lichfield, 1992), which includes transforming affected urban tissue, but also considering culture as an important element of this transformation. The success of urban regeneration operation of former industrial areas located in traditional quarters of Bucharest, or even close to the central area, is due to an integrated, holistic and systematic approach, thus capitalizing reclaimed land to meet a large number of city and community needs, also by the degree of proposed functional diversity (Mooney, 2004). Also, urban regeneration operations must have a strong irradiation capacity in the surrounding areas, especially where industrial areas are in the proximity of the Bucharest central area.

As noted in part 1, not all industrial areas and platforms from Bucharest should be subject to urban regeneration. Possible modalities of implementing the urban regeneration of industrial areas in Bucharest are connected and come to complete the city development strategic objectives of Bucharest Municipality Strategy (UAUIM-CCPEC *et al.*, 2011),

which is the basis for the new General Urban Plan, which must pay attention to priority categories of industrial zones.

In these circumstances, Bucharest must be more attractive for:

- the development of existing enterprises assets;
- the creation of new enterprises in the field of production of innovation and technology;
- introducing new fields of activity oriented towards interference fields of ecology, economy and technology, all in order to raise the employability of the workforce.

These general objectives can be achieved only through risk mitigation and through an integrated approach. Integrated approach at the institutional and spatial level, in the context of the implementation process of regenerating industrial areas of Bucharest Municipality must address current and future issues and challenges (Peylet *et al.*, 2007), related to public space, derogatory urbanism, lack of coordination, management development, the built heritage, public transport and accessibility (Rotaru and Rotaru, 2009).

Outlining the framework for actions on industrial areas of Bucharest is based on a number of specific recommendations:

- a. recommendations regarding the institutional framework;
- b. recommendations regarding the necessary and specific planning and design instruments;
- c. recommendations regarding spatial and functional configuration
 - recommendations for the protection of and capitalization of industrial heritage,
 - recommendations regarding urban regeneration by introducing cultural

functions - cultural reintegration of former industrial areas;

- d. recommendations regarding the partnership framework (including Public Private Partnerships - PPPs);
- e. recommendations regarding the sustainable development principles in urban regeneration.

If the recommendations for the institutional framework concerns the inclusion in urban regeneration projects, in procedures and decision-making processes, the non-administrative actors (residents, businesses, etc.) recommendations on planning and design tools relate mainly to the adjustment and correction of existing specific planning documents (**General Urban Plan/PUG and Urban Zoning Plan/PUZ**) in the context of urban regeneration approach for sustainable and competitive development.

Therefore, the 2013 General Urban Plan must take the existing development strategy (mentioned above) and should analyze their specific goals, yet unrealized, from current perspective. Along with translating these directions and objectives in terms of regulating the spatial development through background studies and prior analysis of specific urbanistic documentation, G.U.P. identifies an additional set of targets designed to further support the sustainable and competitive development.

Thus, in order to achieve the goal of *a competitive economic profile of the city and its territory of influence and support with highly specialized economic activities* (UAUIM-CCPEC *et al.*, 2011), is necessary and useful to identify industrial areas that are a priority for this object and implementing intervention measures in accordance with the specific of concerned area and its capacity to support the development. These priority areas should obviously be

included in *an economic policy regarding tertiary activity and "creative industries"* - *encouraging the development of existing local enterprises and attracting new ones.* But not only these priority areas should be part of the program for the achievement of *a specialized economy based on economic activity groups - clusters, industrial parks, research and development centers* (UAUIM-CCPEC *et al.*, 2011), but all the industrial areas of Bucharest, which undergoes a process of transformation, whether it is functional profile change, whether it is the change in the spatial configuration of the industrial unit or industrial platform as a whole.

In addition to the strategic objectives set out in the 2035 Bucharest Strategic Concept (UAUIM-CCPEC *et al.*, 2011), which will be integrated into G.U.P., is necessary to ensure a spatial planning for the industrial areas flexible enough to allow adjustments to strategy development, and in order to include investment in optimal conditions unpredictable at the moment of its implementation. The main ways of providing planned flexibility and adaptability of urban regeneration operations are:

- the provision of reserve land within the city for long term development (opportunities unknown at the time of designing the present G.U.P. or, possible to occur after the expiration date of G.U.P.);
- compulsory additional forms of detailed planning (Masterplan type or Metropolitan Planning Scheme, Plan Directeur + Sectorial U.Z.P., Urban Regeneration Plan) for industrial areas/platforms (who have stopped activity or still operating);
- ensuring a phasing scheme for interventions in industrial areas/platforms (considered key areas for development of the city) for a better management of land resources.

Considering the size of areas for urban regeneration operations of destructured industrial urban areas, the cost and complexity of such operations requires a thorough phasing addressing these areas. Through G.U.P. are identified and defined industrial urban areas with mandatory drafting of Urban Zoning Plan (or Urban Regeneration Plan, if is the case, especially for industrial platforms - regarding a greater area of intervention) and are defined stages of expansion for neighboring built-up areas each stage being prepared by a Sectorial U.Z.P. as part of a Plan Directeur. It is strongly recommended the designing of a Plan Directeur that encompasses Sectorial U.Z.P. for each stage of urban regeneration process in order to provide a unitary approach for the success of the operation in the sense of coherent organizing the network of streets, the technical infrastructure and facilities, development of public spaces and social issues.

Another condition for ensuring sustainable development of these areas is the land (property) restructuring of former industrial units or platforms, operations based on parcelling and re-parcelling the lots. In the absence of such operations, providing accessibility to local and municipal road network, connection to public facilities and green spaces development would be extremely difficult and expensive in a medium to long time horizon (Voiculescu *et al.*, 2009).

Within the new General Urban Plan, by identifying areas within Bucharest in which are required P.D. (Plan Directeur) and Sectorial U.Z.P., has to be established the following set of principles:

1. land occupation giving priority to already available urban areas, activation, restructuring and densification of underutilized areas

within the city, rigorous staging of the extension of the built-up areas (development policy "from center to periphery");

2. timing of the expansion of the city by marking successive steps of growth and clear delimitation of industrial areas/platforms that are mandatory areas for P.D. (Plan Directeur - completed and detailed by Sectorial U.Z.P.);
3. designation of priority areas of intervention and conditioning of development by elaborating P.D. (Plan Directeur - completed and detailed by Sectorial U.Z.P.), reservation of areas for key city functions and land occupation on the basis of cost - benefit analysis;
4. regulations by Planning Policy Framework for the P.D. (provisions taken and completed by Urban Planning Local Regulations related to Sectorial U.Z.P.) of interventions for industrial units/platforms into well defined urban areas to avoid dysfunctions related to overall urban image and densification.

Municipal policy that promotes development "from center to periphery" is based on a principle formulated in the Romanian legislation (HG 525/1996, RGU, Art. 4, alin. 2) and presented in documents and international agreements to which Romania is part of (European Commission, 2007) and pursue rational management of land resources and protection of the natural environment of cities. The most important measures arising from this goal are:

- use and reuse of internal priority urban areas of cities as an alternative to occupying new territories by expanding into the natural environment;
- rational occupation of urbanization areas (areas of urban sprawl), which

involves accessibility and planning stages to ensure balanced use of surface densities.

Therefore, for the period following Bucharest General Urban Plan approval, it requires the development, adoption and publishing by the General Council or District Council an urban regeneration methodology aimed primarily at:

- urban actors involved and accountability structures;
- forms of association of landowners;
- forms of communication, decision making and transmission;
- transfer modalities of property;
- coordinating operations for technical equipment and achieving public objectives;
- correlation with the legal framework;
- updating topographic base and land registry for industrial areas.

For compiling the P.D. (Plan Directeur - completed and detailed by Sectorial U.Z.P.) or an Urban Regeneration Plan for industrial areas, it must respect the following conditions:

- the territory to be regulated is large enough to be relevant in assessing the impact of urban and functional intervention;
- will include servitudes established by G.U.P. and those subsequent release or whose necessity originates from the intervention which generate the regeneration project;
- the project would include G.U.P. regulations for the area and will detail urban composition in the Sectorial U.Z.P. The public interest objectives and public facilities will be taken compulsorily in the Sectorial U.Z.P., also detailed and regulated.

Adaptation, correction and conversion of specific planning documents (G.U.P. and

U.Z.P.) in the context of urban regeneration approach for sustainable and competitive development calls for the introduction of new functions and activities within the former industrial units or platforms. Recommendations regarding spatial and functional configuration elements allowed to be incorporate in an industrial urban area through urban regeneration project are proposed by intervention measures and can be developed options for low, medium and high levels of intervention (ie minimum, medium and maximum options). Proposed preliminary options for all variants of interventions (minimal, medium and maximum intervention) should be subject to multi-criteria analysis based on environmental, social and economic objectives to ensure sustainable development (see Fig. 5, next page)(Ianoș and Dobraca, 1997).

Among the options that may be considered are technology parks, cultural islands and entertainment districts, multifunctional spaces, public space with high-end design, exhibition centers, youth center and housing for students, but the function that has the highest potential to provide a competitive development for Bucharest Municipality is that of **business incubator**.

Former existing industrial units or platforms (with existing infrastructure and utilities, which only requires modernization) can be transformed easily into business incubators. General acceptance of the concept of business incubator is to define such an institution as a local partnership structure, which aims to create a sustainable environment for business start-ups, stimulating their growth potential and viability (Voisey *et al.*, 2006). From the point of view of development over time a business

generally follows the next path: a start (incubation within the institution), a period of maturation (external incubation), a period of development, a period of stagnation and a period of decrease. Throughout this period the business is vulnerable and submitted to risks. Recourse to the services of a *Technology and Business Incubator* is a form of protection for business growth and maturation of it, as shown in *The guide to set up a business incubator in Romania* (UNDP, 2010). Depending on the type of company that will be incubated building characteristics required for such activity may vary by size, space and services. *Creative industries*, by their nature, require joining a host of related functions and workspaces with a unique appearance and personality (Garcia, 2004). Objects created are often the work of a collective whole; collaboration represents a key aspect in the production process and the free circulation of ideas. All incubators should encourage social interactions and there should be common spaces and social services such as restaurants, bars, cafes, etc.

Another possible way of regenerating destructured industrial urban areas is the cultural reintegration of these areas (Soja, 1989), central theme of the development of post-industrial city, theme that occurred during the proposals made in 1999-2000 G.U.P. (*thematic routes*). The development of post-industrial economic activities along with entrepreneurial management model of towns and cities positively contributes to the reconfiguration of industrial urban landscape. Thus, the post-industrial city will recompose from two categories of urban development (Harper *et al.*, 2008): (1) entrepreneurial urban islands (eg museum district of Vienna), and (2) entertainment urban islands (also see Fig. 5 - Motcanu-Dumitrescu, 2014).

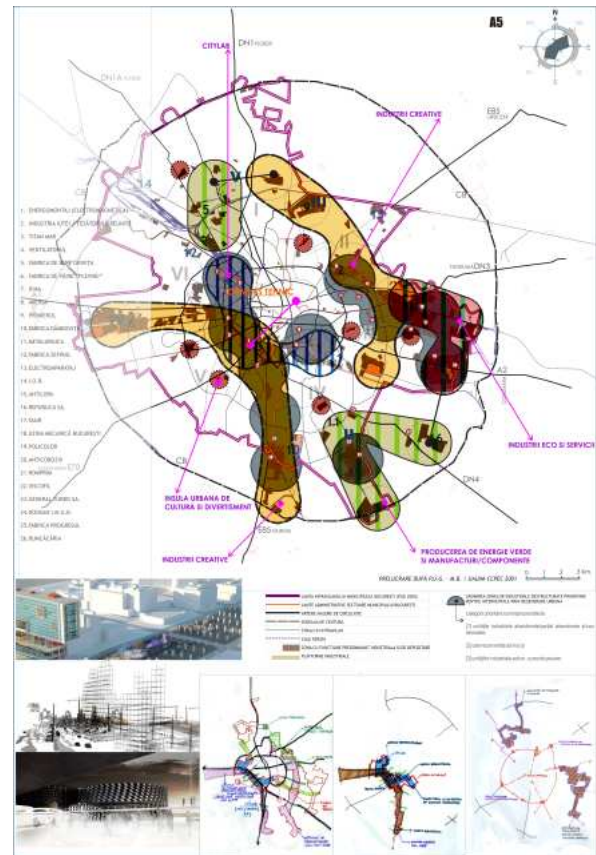


Fig. 5. Possible variations of functions allowed in order to incorporate in an industrial areas through urban regeneration project

Urban regeneration flagship projects at a large scale have been and will remain a favorite tool for economic growth of the city (Richards and Wilson, 2004). Such projects are intended to play a catalytic role in the process of urban regeneration often by creating a high status in terms of trade, housing, entertainment and public spaces where once there was an abandoned or underutilized urban space. These projects are often linked to aggressive campaigns of the city trying to launch a new urban vision (different from the vision of an industrial city), with a dynamic environment, creative, profitable, which is worth visiting and feasible investment.

4. Conclusions

Is urban regeneration of industrial areas an active ingredient of urban development policies or is part of a broader process aimed

primarily at technical and economic elements of city development?

Urban regeneration is often a long term process, complex and involving a wide range of professional disciplines. This requires the active support of political structures and an interface with different stakeholders throughout the lifetime of a project (Allen, 2001).

Industrial regeneration of Bucharest is one of the structural pillars of the spatial and functional evolution of the capital.

Why? Because as industrial units are changing their functional profile, being influenced by a number of economic factors rather than spatial, Bucharest can take advantage of the availability of free land for local development projects (really necessary) and can harness the elements of technical industrial heritage (from many different period of times), which through integration into cultural projects can contribute to a better city position at European level (Reid and Sanders, 2002). Current legislation enables the development of projects on existing industrial areas (eg. Plan Directeur - completed and detailed by Sectorial U.Z.P. - or an Urban Regeneration Plan); however there is a need for better institutional coordination to transfer enclosed nature of regulatory planning documents to an integrated and adequate scale of urban regeneration project.

Both European and the recent Romanian experience (Couch *et al.*, 2003) demonstrate that a disused industrial area, is able to perform its required features for reintegration within existing urban fabric, primarily for the sustainable development of the city, and secondly for the balanced development of the community. While the real estate developments in Bucharest reached a maximum in recent years, there are still

large areas of industrial land that requires "cleaning", interpreted not in a conservative sense, but rather in a contemporary sense with logical discovery of existing reality and the capacity offered by the site, clearly distinguishing what is useless to what is the real potential (Lynch, 1996).

Bucharest contemporary urban developments are based on the use of means of expression inspired by the past and the city's industrial heritage (Giurescu, 2009). Architecture and design of public spaces should take into account the preservation and improvement of industrial and technical heritage inherited. Industrial heritage is therefore regarded as an asset, a positive feature likely to generate local competitive sustainable growth and of quality, playing an active role to strengthen a local identity for the community and attracting tourists. Future strategies (and documentations) will have to accept the responsibility of a new urban development trend based on functional diversity and in agreement with the values inherited. It is necessary to outline a strategy inspired by the historical heritage and memory of the place, making sure the buildings or instalations found on site are in a good measure reused, their demolition serving as a last resort.

Note

This written article is an addition to the research conducted in my doctoral thesis, thesis which is entitled "*Methods of implementation of urban regeneration in destructured industrial areas. Interventions in Bucharest Municipality*". This thesis proposes a set of ideas / possible solutions that represents a direct contribution to the search for new spatial and functional evolution of industrial areas in the city and try to seize the differences in approach, on the one hand to a number of situations and actions

developed in urban areas of European cities with a tradition in problem solving, in relation to that in the former communist countries, on the other hand in terms of diachronic elements of management problems which Romania is forced to go through while assimilating specific new development visions.

The research seeks to reveal the opportunity (and necessity) to address urban regeneration in the city of Bucharest as a viable alternative to development planning through small projects with effects most often negative.

REFERENCES

- Adler L., Enescu M., Baiculescu E. (1972), *Architecture of modern industry. Economical issues* [in Romanian], Technical Publishing House, Bucharest.
- Allen T. (2001), *The Politics of Regeneration, Housing, Theory and Society* **18(3-4)**: 136-147.
- Berza V. M. (2008), *Risk and urban dynamics* [in Romanian], "Ion Mincu" University Publisher, Bucharest.
- Chandler A. D. (1962), *Strategy and Structure*, Harper & Row Publishers, New York, USA.
- Chesters G. (2009), *Social Movements and Regeneration: Within, Without, Against?*, Local Government Studies, Special Issue: Regeneration Management and Globalisation **35(3)**:371-384.
- Chelcea L. (2008), *Postindustrial Bucharest. Memory, deindustrialisation and urban regeneration* [in Romanian], Polirom Publisher House, Bucharest.
- Cina G. (2010), *Bucharest, from village to metropolis*. [in Romanian], Capitel Publisher, Architectural Library Colection/Cities Memory, Bucharest.
- Couch C., Fraser C., Percy S. (2003), *Urban Regeneration in Europe*, Blackwell Publishing, Oxford, U.K.
- Colantonio A., Dixon T. (2011), *Urban regeneration & social sustainability: best practice from European cities*, John Wiley & Sons, Chichester, West Sussex, U.K.
- Frumkin H., Frank L., Jackson R. (2004), *Urban sprawl and public health. Designing, planning and building for healthy communities*, Island Press, Washington DC, U.S.A.
- Gabor O. L. (2013), *Memory and Identity. The Industrial Heritage*, Acta Technica Napocensis: Civil Engineering & Architecture **56(3)**:63-74.
- Garcia B. (2004), *Urban regeneration, arts programming and major events. Glasgow 1990, Sydney 2000 and Barcelona 2004*, International Journal of Cultural Policy, Special Issue: Urban Space and the Uses of Culture **10(1)**:103-118.
- Giurescu C. C. (2009), *History of Buchares* [in Romanian], III-rd revised edition, Vremea Publisher, Bucharest.
- Harper T. L., Anthony Gar-On Y., Costa H. (2008), *Dialogues in urban and regional planning Volume 3. Portraying, classifying and understanding the emerging landscapes in the post-industrial city*, Routledge, New York, USA.
- Ianoș I., Dobraca L. (1997), *Anthropogenic systems dynamics and sustainable development in Annals of West University of Timisoara*, Geography Series **7**:101-106.
- Kanai M., Ortega-Alcázar I. (2009), *The Prospects for Progressive Culture-Led Urban Regeneration in Latin America: Cases from Mexico City and Buenos Aires*, International Journal of Urban and Regional Research **33**:483-501.
- Landry Ch. (2008), *The Creative City. A toolkit for urban innovators*, Comedia/Earthscan, London, UK.
- Lichfield D. (1992), *Urban regeneration for the 1990s*, London Planning Advisory Committee, Dalia Lichfield Associates, London, UK.
- Lynch, K. (1996), *The image of the city*. Massachusetts Institute of Technology, Cambridge, UK
- March H. (2011), *Sustainability in Austerity. How Local Government Can Deliver During Times of Crisis*, Journal of Cleaner Production **19**:1770-1771.
- McDonald S., Malys N., Maliene V. (2009), *Urban regeneration for sustainable communities: A case study*, Ukio Technologinis ir Ekonominis Vystymas **15(1)**:49-59.
- Merciu F-C., Merciu G-L., Stoian D. (2012), *Romanian industrial architectural heritage - past and present*, Urbanism. Arhitectură. Construcții **3(3)**:29-36.
- Merlin P., Choay F. (2009), *Dictionnaire de l'urbanisme et de l'aménagement*, PUF, Paris.
- Mihăilă M., Bănică C. (2014), *The myth of urbanization through industrialization*,

Urbanism. Arhitectură. Construcții
5(1):25-36.

- Mooney G. (2004), *Cultural policy as urban transformation? Critical reflections on Glasgow, European city of culture 1990, Local Economy, Special Issue: Cultural policy and urban regeneration* 19(4):327-340.
- Motcanu-Dumitrescu M.-A. (2014), *Methods of implementation of urban regeneration in destructured industrial areas. Interventions in Bucharest Municipality*, doctoral thesis, UAUM, Bucharest.
- Murray P., Szelenyi I. (2009), *The city in the transition to socialism*, International Journal of Urban and Regional Research 8:90-107.
- Myfanwy T., Cook D., Nelarine C. (2008), *Creative dimensions for branding and regeneration: Overcoming negative perceptions of a city*, Place Branding and Public Diplomacy 4:29-44.
- Peylet R., Chapuis Jean-Yves, Jegouzo Yves; Lebreton Jean-Pierre (2007), *French experts rapport concerning the conception of Romanian Urban Planning Statute Book*, MDRT, Bucharest.
- Reid R.D., Sanders, N.R. (2002), *Operations Management*, John Wiley & Sons Inc., London, UK.
- Richards G., Wilson, J. (2004), *The impact of cultural events on city image: Rotterdam, cultural capital of Europe 2001*, Urban Studies 41(10):1931-1951.
- Richard Rogers (Lord Rogers of Riverside), Chris Brown, Sir Peter Hall (2005), *Towards a Strong Urban Renaissance*, Urban Task Force report, Igloo Regeneration, Linstock Communications, London, UK.
- Roberts P., Sykes H. (2000), *Urban Regeneration. A handbook*, Sage Publications Ltd., London, UK.
- Rotaru F., Rotaru I. (2009), *Cities' administration – managing Bucharest case study*, The International Conference on Economics and Administration, Faculty of Administration and Business, University of Bucharest, Bucharest, Romania.
- Soja E. W. (1989), *Postmodern geographies: the reassertion of space in critical social theory*, Verso, London.
- Voiculescu S., Crețan R., Satmari A., Ianaș A. (2009), *The Romanian Post-Socialist City. Urban Renewal and Gentrification*, West University of Timisoara, Timisoara.
- Voisey P., Gornall L., Jones P., Thomas B. (2006), *The Measurement of Success in a Business Incubation Project*, Journal of Small Business and Enterprise Development 13(3):454-468.
- Aalborg Charter (1994), *Charter of European Cities & Towns Towards Sustainability*, approved in Aalborg, Denmark.
- RDA București-Ilfov / PMB - CGMB / CPZMB (2006), *București-Ilfov 2007-2013 Regional Development Plan*, [in Romanian], document approved by the București-Ilfov Regional Development Council.
- CEMAT (2006), *European conference of ministers responsible for spatial/regional planning, cemat glossary of key expressions used in spatial development policies in Europe*, Lisbon, Portugal.
- European Commission (2007), *LEIPZIG CHARTER on Sustainable European Cities*, Leipzig, Austria.
- European Court of Auditors (2012), *Did EU structural measures successfully supported the regeneration process of industrial sites and disused military units?*, Special Report 23.
- UAUM-CCPEC / IHS Romania / EMI Invest (2011), *Integrated urban development strategy of Bucharest Municipality and of its support and influence territory. 2035 Bucharest Strategic Concept* [in Romanian], Stage I, City Council of Bucharest Municipality.
- UN-Habitat (2014), *7th World Urban Forum Medellín Declaration, Equity as a foundation of sustainable urban development*, Medellín, Columbia.
- UNDP(United Nations Development Programme) (2010), *Guide to setting up a business incubator in Romania* [in Romanian], Agency for the Implementation of Projects and Programmes for SMEs (AIPPSME), Bucharest.

Received: 9 May 2014 • Revised: 12 July 2014 • Accepted in final format: 25 July 2014