

## ECOLOGICAL CITY BETWEEN FUTURE AND MEMORY: A GREAT OPPORTUNITY TO RETHINK THE WORLD

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### Abstract

L'attuale momento di crisi sociale, ambientale e spaziale può essere una svolta - uno dei significati della parola greca originaria *κρίσις* - del modello di sviluppo basato sul paradigma industriale (Kuhn, 1962) i cui limiti erano ipotizzati nell'omonimo *The Limits of Growth* commissionato dal Club di Roma ad alcuni ricercatori del MIT di Boston (USA) edito nel 1972. Il presente scritto suggerisce di sostituire al modello industrialista del "fare la città" - indifferente alle condizioni locali grazie alla supremazia data alle "soluzioni" tecnologiche (Del Nord, 1991) - l'approccio ecologico che parte dalle condizioni locali quali indicazioni di piano/progetto/realizzazione per la trasformazione dell'anthropocosmo, cioè del rapporto tra contenitori, reti e comportamenti, ovvero del *λόγος*, discorso, studio, con l'*οἶκος*, ambiente ([www.ekistics.org](http://www.ekistics.org)) con le finalità di *Smart City* cioè costruire *Comunità inclusive, sostenibili socialmente e materialmente* avendo il risparmio di consumo di suolo come presupposto della sostenibilità. Ciò significa per i paesi ormai più che emergenti - BRIC e tutti gli altri in forte crescita economica - evitare gli errori compiuti dalle nazioni, usualmente chiamate Occidentali, di devastazione del territorio oltre che in termini di danni sociali. Mentre per quest'ultime l'attenzione va posta al tema della riqualificazione dell'esistente sotto il profilo funzionale, spaziale, ambientale e sociale. Per entrambe si pone la questione centrale del rapporto con la storia, i segni di essa sul territorio, cioè la memoria quale essenziale componente del *senso delle cose*.

### English Abstract

The current social, environmental and territorial crisis, can be a turning point - one among the meanings of the originary Greek word *κρίσις* - of the development model based on the industrial paradigm (Kuhn, 1962) whose limits were declared in the homonymous *The Limits of Growth* commissioned by the Club of Rome at Boston MIT researchers (Meadows and al.) and published in 1972. This paper suggests to replace the industrial model of "making the city" - indifferent to local conditions thanks to the supremacy given to the technological "solutions" (Del Nord, 1991) - with the ecological approach that starts from the local conditions such as indications of plan/project/construction for the transformation of the anthropocosmo, i.e. the relationship connecting shells, networks and behaviours. That is to relate the *λόγος*, discourse, analyses, with the *οἶκος*, the environment ([www.ekistics.org](http://www.ekistics.org)): finally the purpose of Smart City. It requires to build *inclusive Communities, socially and materially sustainable*, having the saving of land use as precondition. This should mean for most countries now more than emerging - BRIC and everyone else in the strong economic growth - try to avoid the mistakes made by the nations, usually known as Western ones: i.e. devastation of the territory, social harms, and attention to the spatial redevelopment, and to the functional and social ones. For both there is the central question of the relationship with history, the signs of it, ie the memory as essential component of the *meaning of things*.

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## 1. A path for new ways of anthropization

The territory, and the city in it, are an expression of social and economic relations. From the Industrial Revolution onwards the city grew up based on economies of scale and integration. While modernity, agreeing with Purini (2007), can be initiated with Piranesi (fig.1) when it starts the annulment of the concept of distance, of space and time - the architecture, begins to become simulacrum, citation and lose the sense *in itself*<sup>2</sup> - it is with the Fordism that is produced the modern city (Tafuri, 1972).

Figure 1 – Rome, G.B. Piranesi, etching ,1756

Column of Trajan and churches



Source: @ Comune di Roma

Figure 2 – Metropolis, F. Lang, 1927

The New Tower of Babel



Source: wikiFileMetropolis

It instead, paradoxically, provides rules, synchronicities between space and time and arrives to the “mechanism town” of Metropolis (Fig. 2), fantascientific, hypermodern place of the individual - which becomes the sole true subject - that in Blade Runner and The Matrix (Fig. 3 and 4) shows his demonic attractive landscape<sup>3</sup>. The advent of telematics makes it possible modification of those synchronic relationships formed in about 300 years<sup>4</sup>. While the policy choice is to leave

<sup>2</sup> For details, see Aragona (2009) Progetti, desideri dei cittadini e qualità urbana (*Projects, desires of citizens and urban quality*).

<sup>3</sup> The *démoned* from the ancient greek δαίμων, *dáimōn*, is “divine being” halfway between man and divinity .

<sup>4</sup> Issues covered in Aragona (1993a) *The virtual city: Urban transformations and new technologies of information*, chapp.1 and 2. and (2000) *Urban environment and innovation. The global city between local identity and sustainability*, chap. 3.

- it left for decades - the economy the guide of all that and the result is the current globalization devastating both in social and spatial terms<sup>5</sup>.

Figure 3 – The city in Blade Runner, R. Scott, 1982



Source: [dailygrindhouse.com](http://dailygrindhouse.com)

Figure 4 – The Digital Space of Matrix, L. & A. Wachowski, 1999



Source: . [www.fdwallpapers.com](http://www.fdwallpapers.com)

Figure 5 - Los Angeles, aerial image, a sort of city's Nightfly (Fagen, 1982)



Source: [www.zingarate.com](http://www.zingarate.com)

<sup>5</sup> Rodrik (2011) describes the process in *The intelligent Globalization*, Aragona in 1993 foresaw such outcomes if the choices had been those that occurred later (*The virtual ... op.cit.*, chap. 4).

Figure 6 – Hong Kong, urban landscape



Source: [travel.nationalgeographic.com](http://travel.nationalgeographic.com)

Figure 7 – Future city, Sant'Elia, 1914



Source: <http://it.wikipedia.org/wiki>

Los Angeles, Hong Kong are emblematic representations (Fig. 5 and 6) - realization of the idea of a city that was created with the futurism (Fig. 7) - as well as are the shopping centers (Fig. 8). These are based on the consumption and individual access, they impoverish and deprive urban areas of the neighborhood shops (fig.9) and of all the urban functions that make them (or made them until yesterday) places (Fig. 10).

Figure 8 – Shopping Center, “any interior” by the catalog of a firm producing them



Source: [www.covesatorino.com](http://www.covesatorino.com)

Figure 9 – Citizens protest against the closure of neighborhood shops



Source: [www.padovaoggi.it](http://www.padovaoggi.it)

Figure 10 – The historical “Sassi” in Matera, a consolidated urban tissue



Source: Stefano Aragona

The new path that is suggested, which is only at startup, is based on an integrated approach that combines human ecology and structuralism, i.e. the maximization of the return of capital, as well as proposed e.g. by Appold and Kasarda in 1991. This means, for example, that the use of photovoltaic is a resource but also that contains some inconsistencies of various nature. The panels are often imported, at the end of their period of use, the question arises of what to do, the raw material i.e. silicon has problems of a different geographic availability and there is a quantitative limit, the impact on the landscape is often remarkable and there may be a competition in the use of the areas. So, staying to this example, it means an industrial policy that encourages the construction of virtuous multipliers of production, ie employment and income, and supply of photovoltaic panels. That supports the research on the use of materials other than silicon, with fewer problems of availability, and efficiency of the panel itself. Proposing ways to reuse and the treatment of the panel at the end of its effective life. By giving priority to landscape impact assessments relating to their presence, making statements on the suitability or appropriateness with activities of agricultural<sup>6</sup>. In short, it should be used a philosophy careful to the “closing of cycles”, i.e. the direct and indirect impacts, current and future<sup>7</sup>. The considerations made now should be the criteria by which to deal with all other opportunities of renewable energy - from the forest resources up to the hydraulic, etc., - As it was done in the South pre-unification with the industrial area of Mongiana and Ferdinandea<sup>8</sup>.

Figure 11 – Ruins of industrial plants in Mongiana (VV)



Source: <http://istitutoduesicilie.blogspot.it/>

The *Report on good practices* (Ruaro, 2013) in this sense contains a number of useful examples to demonstrate the feasibility of several ecological solutions. But all this is in the “small” scale and represents the attention in the implementation of operational choices. Beside it is essential to think scenarios in which all this can be placed. Starting from the territorial structure, through the urban

<sup>6</sup> These observations must mean support experimental studies such as those carried out by ENEA (Ulivieri, 2012) on the panels that use berries instead of silicon (Secci, 2013) study of forms and systems compatible with agricultural use of the same area, etc.. But also vast use of an approach similar to the Strategic Environmental Assessment (VAS).

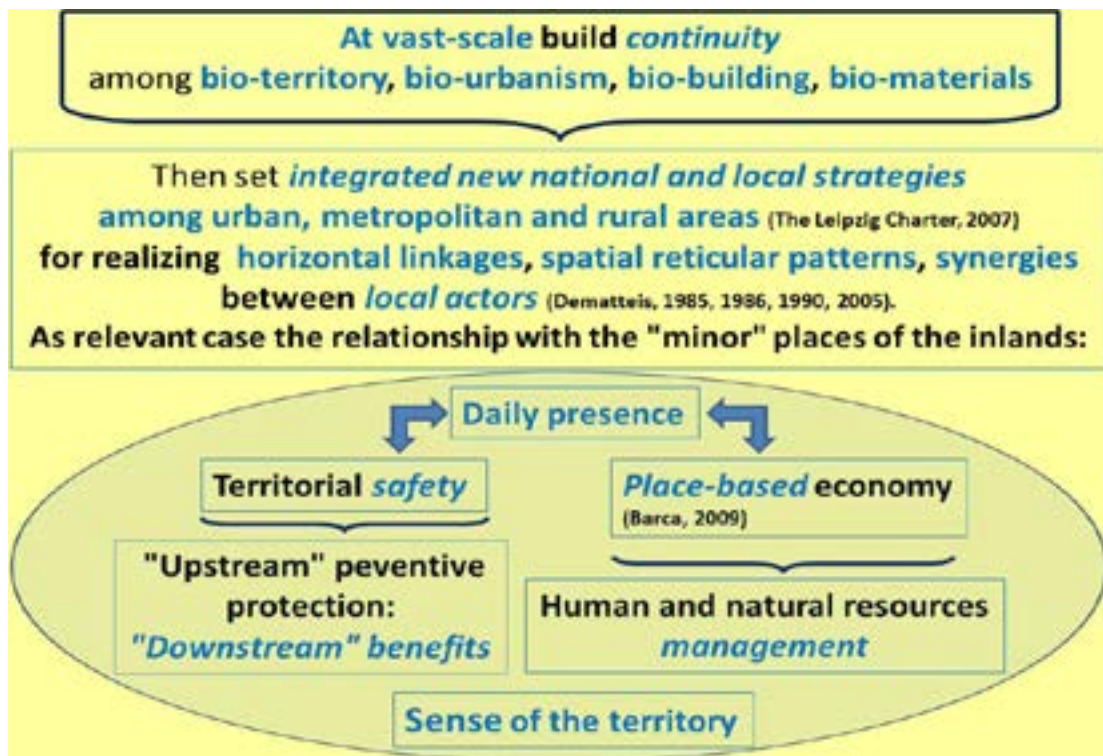
<sup>7</sup> With many similarities, therefore, what is the *ecological footprint*.

<sup>8</sup> In the Kingdom of the Two Sicilies starting from the '700 up to 1861 it was created the industrial hub of Mongiana and Ferdinandea, based on integrated territorial policies ( by recourse to current terminology) was used local material, iron and timber - the latter protected by laws “ad hoc”, which by recalling the criteria of modern bioengineering, allowed of lowering the hydrogeological risk - and created an access at the port of Pizzo to reduce transportation costs (Aragona, 2012a, chapter 1).

morphology, arriving to the selection of typology, building techniques and materials Scenarios that do not consist only of material facts but also by logistics choices and services management.<sup>9</sup> That is, while choice of using e.g. *smart lampposts* helps to both the control of the collection of waste and of road safety, and the *smart grid* can to give body to the *prosumer* (producer and consumer of energy), all this requires planning so that not only is more technically, and really, efficient but also socially and environmentally effective.

First, there must be consistency in the choice of planning on a regional scale, as rightly required by remembered *Leipzig Charter of 2007*, among urban areas, large, medium, small and rural areas. Build horizontal linkages, territorial reticular, synergies between local actors (Dematteis, 1985, 2005<sup>10</sup>). So build a continuity between bio-territory, bio-urbanism, green building, bio-materials (Scheme 1)<sup>11</sup>. But in Italy, this is contradicted by the cutting of so-called "dry branches of the railways" launched in 1993<sup>12</sup> that has drastically eliminated the internal lines and the small local stations while, at the same time, the starting of the diffusion of the high-speed trains have caused a widespread abandonment of thousands of smaller centers<sup>13</sup>, feature of the landscape Italian and the increase the hydrological risks. Everything aggravated by choices of liberalization of services, up to a recent past managed by the public entity, and the consequential closure of points - e.g. the postal service - which were local social and spatial references. How is it possible to have sustainable mobility and less congestion in major centers where have been driven the inhabitants of the unarmed territories by microeconomic choices that have impacts on the macro scale<sup>14</sup>?

Scheme 1 - Choices/addresses for an ecological system



<sup>9</sup> For further details see Aragona (2012b) *The integrated City as renewable common good*.

<sup>10</sup> Dematteis has proposed such a model from the mid-80s and then revisited it several times.

<sup>11</sup> For an overview see: [www.climactregions.eu/document\\_library/get\\_file/uid=30886e1e-4b6e-4cc5-b4a2-b59b29957790&groupId=](http://www.climactregions.eu/document_library/get_file/uid=30886e1e-4b6e-4cc5-b4a2-b59b29957790&groupId=)

<sup>12</sup> Whose rationale Aragona (1993b) criticized immediately in the paper *In Infrastrutture di comunicazione, trasformazioni urbane e pianificazione: opzioni di modelli territoriali o scelte di microeconomia?*

<sup>13</sup> That has made closer those who are distant but more far the ones closer.

<sup>14</sup> In Finland, a country not particularly rich in raw materials, public transport on a regional scale is widespread, efficient and socially effective. (<http://www.finlandia.ws/muoversi-in-finlandia.html>).

Then has to be rethought the urban morphology intersecting the social issues, the environmental questions, and urban planning in order to make ecological the parts of the city. Considering the “consumption of soil 0” it is necessary to promote mechanisms for the transformation of the existing space. The Integrated Programmes (PRINT) of the new Master Plan of Rome can be a way to do this<sup>15</sup>, it should be remembered that even with PRiU (Urban Renewal Programme) there have been case of regeneration in the ecological sense of parts of the city<sup>16</sup>.

## 2. The first ecocity is the one safe, accessible to all

In the current state the priority is to make safe the territories and cities. In our country this is the most radical and ecological action. It requires the use of multi-criteria analysis in which appear not only the direct costs and benefits but also the various externalities current and in the future.<sup>17</sup> Security also means endowment of primary networks and services the as water or sewer systems. The first is a basic requirement of any democratic society, even before being ecological. Requirement that in various parts of Italy still is not guaranteed and that indeed in Africa or in other parts of the world is challenged by political choices that in one way or another make it a good of market while it is a *common good*<sup>18</sup>. Regarding the second, the system of collection and treatment of wastewater and waste is frequent experience that after a little rain the train stations, subways, etc. become clogged and the normal functioning of the service has blocked. While there is still a very limited capacity to transform waste into a resource both economic and employment.

All this leads to redevelop the territory and the urbanizations using indicators of life quality, going beyond GDP as the 134s of the *Fair and Equitable Wellbeing* and (BES) proposed by ISTAT-CNEL alongside those suggested by the Charter of Quality by AUDIs (Association of Urban Disused Areas) proposed since 2007. It requires to use multicriteria tools to (re-)internalize externalities for (re-)activate a transdisciplinary dialogue because otherwise, with phenomenological approach, “what you do not see does not exist”.

In this way it is possible explain because some land use plan decisions - the shopping malls as emblematic examples - have to be avoided: devastating for the landscape, for people’s lives, and last but not least for the economy as they create jobs part-time fixed-term rather than indefinitely as the neighborhood shops do etc. It should be noted that the initiatives to achieve these structures are still very numerous as they offer attractive concession fees to the municipalities. But a careful examination of the hypothetical effects does not recommend such choice. Significant is the case at La Rescaldina (BG, Lombardia Region), where the project for a new space Ikea about 74 thousand square meters large - according to a study of ConfCommercio (Merchants association) - will cause to lose jobs (a negative balance of 244 units) with an increase in private traffic every Friday in approx 3500 cars and over 5000 over the weekend to reach it, without considering the trucks to transport goods. These results are one of the most emblematic examples of the failure of the domain of the economy that occurred in recent decades, if you want a society and a more equitable and sustainable city, i.e. the objectives of modern urbanism. It needed to develop scenarios and action led by the new ecological approach to space that connects social, economic and environmental issues - that is the objectives of Smart City - thanks to integrated policy strategies for the territory (Scheme 2<sup>19</sup>). At the local level, emphasizing the collective public spaces, to

<sup>15</sup> At present (2013) there is only the Pietralata PRINT and another in working process for Tor Fiscale area; note that two thirds of the surplus value created by the transformation is for the Local authority.

<sup>16</sup> E.g. see Giustiniano Imperatore PRiU, XI Hall, Rome. The experience, however, shows that they require some special legal conditions first among all the public property (and the availability) of both real estate and of surfaces.

<sup>17</sup> Even if we limit the analysis to conventional economic aspects ISPRA (Superior Institute for the Protection and Environmental Research) reports (2013) that to make secure the territory are necessary € 11 billion but to repair the damage from 1951 up to 2009 have been spent 52 billion of euro.

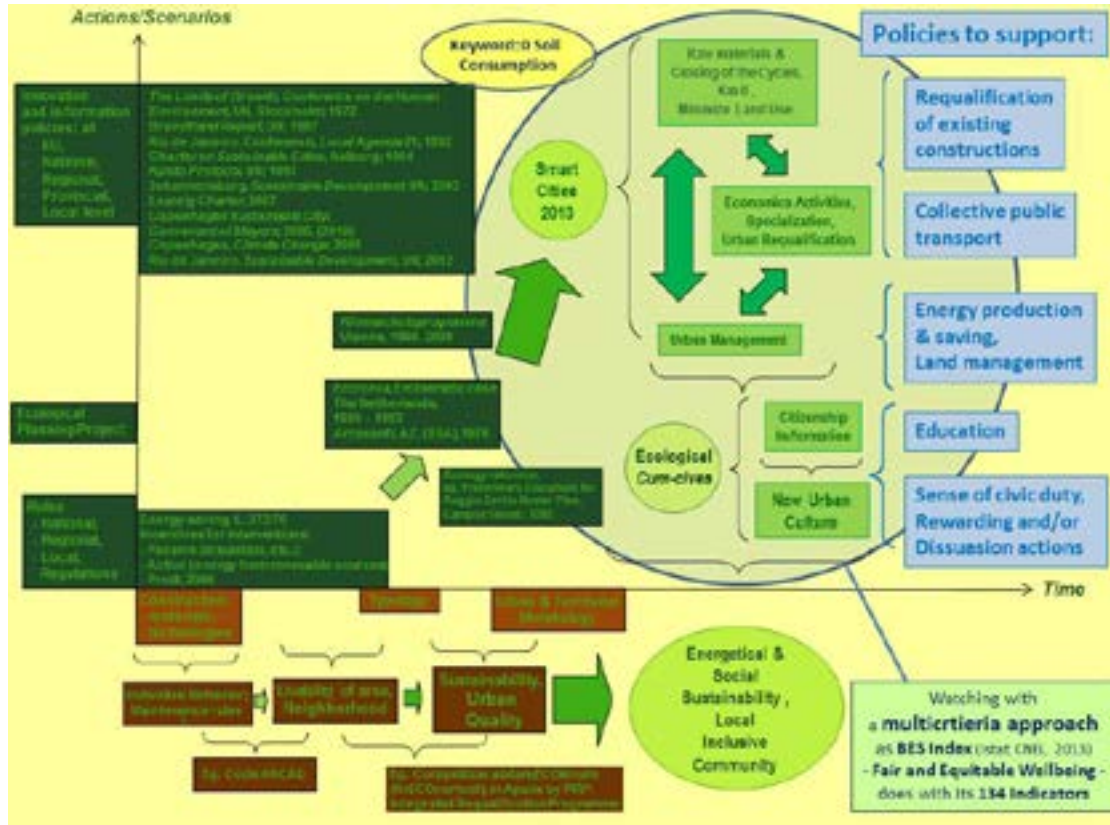
<sup>18</sup> Note that in Italy, thanks to the referendum won on the maintenance of water public management, that liberalist philosophy has been arrested even if it still does not seem completely stopped: as if scandals, economic vexations of citizens, wasteful, had not occurred (Stella, 2013).

<sup>19</sup> Evolution of schemas by Aragona 2013



be redevelop or create in the more or less recent peripheral areas. That means revitalize roads and urban places such as theaters, cinemas, markets and re/design the pedestrian and cycle paths, the principal axes of the territorial and urban space<sup>20</sup> thus giving more substance to the city without barriers i.e. for all<sup>21</sup>.

Scheme 2 - Integrated policy strategies for the territory



Integration and ecological vision that seems only timidly be present in countries that have become major international players such as China (Figure 12). However at Beijing Forum 2012 differences have emerged among the different mentioned BRIC countries. While China neglects, for the most, its millenary heritage and allows the destruction of it instead India has a great deal of attention to its historical traces and in Russia not only sensibility in this direction is awakening but also in the protection of natural resources: for e.g. one-third of the territory of Moscow is protected as a green area (Klimanova, 2012). These considerations, however, should be reviewed in the light of the radical cultural differences between peoples concerning the processes and terminologies about the ways of anthropization. From the Greek *polis* derives the word policy, the art of its management, then “used” - translated - by the Romans but on a different idea of the city, *urbs*, whose inhabitants of the one and then the other - respectively *polites* and *cives* - have a diverse meaning, as noted by Cacciari (1990). Concepts related to the greek-latin world, that must be used in a way cautious in facing these other universes characterized by other alphabets, other grammar and other syntax: thus respecting their history and not be accomplices of the thrusts of a globalization that has convenience to be blind to diversity and to cultural richness of each antropocosmo, base of the human ecology and of the different landscapes.

<sup>20</sup> Vienna's Klimaschutzprogramm 1999- 2009 is a relevant esample case (Vienna\_Eco\_Buy\_final\_edited\_11-9-11).

<sup>21</sup> Echoing the themes of the two Biennials of the Public Space and previously thought in the Regulatory Plan of girls and children of the 90s (Aragona, 2003)

Figure 12 - Beijing urban traffic, buildings and small pagoda



Source: Stefano Aragona

### 3. Toward the ecocity: closing notes

If the first step of the ecological city in Italy consists in reducing the risk of earthquakes, hydrogeological, etc. the recent cut in funding from the Ministry of the Environment - from 1.2 billion euro in 2009 to 468 million euro today - does not go in this direction<sup>22</sup>. As well as it is serious that at the local, regional, first of all, of the 1,500 projects planned for 2010 to counter the hydrogeological only 134 (101 in Emilia Romagna) have been completed (Mira, 2013).

The overall perspective to radically alter the industrial city does not consist just in having renewable energy and save fossil fuels, soil, water, but also propose a different style of life, “other” from the mass city paradoxically based on the created individual demand. The attempt by the Minister of ‘Environment ecological District goes in this sense.

Concluding, give particular importance to: i) the “boundary conditions” of each reality from which to get information to plan and to project, ii) an integrated approach among urban/non-urban and rural areas; iii) raise the welfare of the inhabitants then use of multi-criteria analysis with quantitative and qualitative indicators that consider effectiveness and efficiency related to social and environmental aspects (can be helpful tools such as the VAS - Strategic environmental assessment -, the Local Agenda 21 or the aforementioned Urban Regeneration Charter); IV) Strategies of scenery and good practices, as they were two parallel lines, that must bring “more close” the infinity point of their encounter and of which must be continually verified the concordant directions<sup>23</sup> also because the outcomes of the social and spatial urban transformations are deferred and continually “cropping” over time, especially when there are significant size and quantity V)

<sup>22</sup> As it is written by more than 140 NGOs and CGIL, CISL, UIL in the Appeal “In maneuver for 2014, the government proves to be worthy of the green deal. Stop the horse’s care that is killing the Ministry of Environment”, 16 October 20013

<sup>23</sup> Just think of the consequences that would have been made if in Italy at the 2011 referendum on nuclear power had prevailed the use of this form of energy

give great attention to the management (of plans and services) of the city, a key element of living in the city that minimizes the use of soil. All this assigns to “urban planning and its key instrument of intervention, the plan, a greater and more important role than in the previous phases of expansion and urban transformation” (INU, 2013, p.5).

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