

REINVENTING SAO PAULO AT THE URBAN SUSTAINABILITY AGE

CARLOS LEITE, ARCH.,PHD



METROPOLITAN BLINDNESS: 1

100 YEARS OF ENVIRONMENTAL MASS DESTRUCTION,
SAO PAULO

AN INCONVENIENT TRUTH?

ENVIRONMENTAL CONTINUITIES I: 2

THEORY & PRAXIS IN URBAN SUSTAINABILITY, SAO
PAULO

CONNECTING THE DOTS?

ENVIRONMENTAL CONTINUITIES II: 3

BROWNFIELDS REDEVELOPMENT & CITY INNOVATION.
LESSONS FROM

SAN FRANCISCO MISSION BAY

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MONTREAL ATELIERS ANGUS

MONTREAL CITÉ MULTIMÉDIA

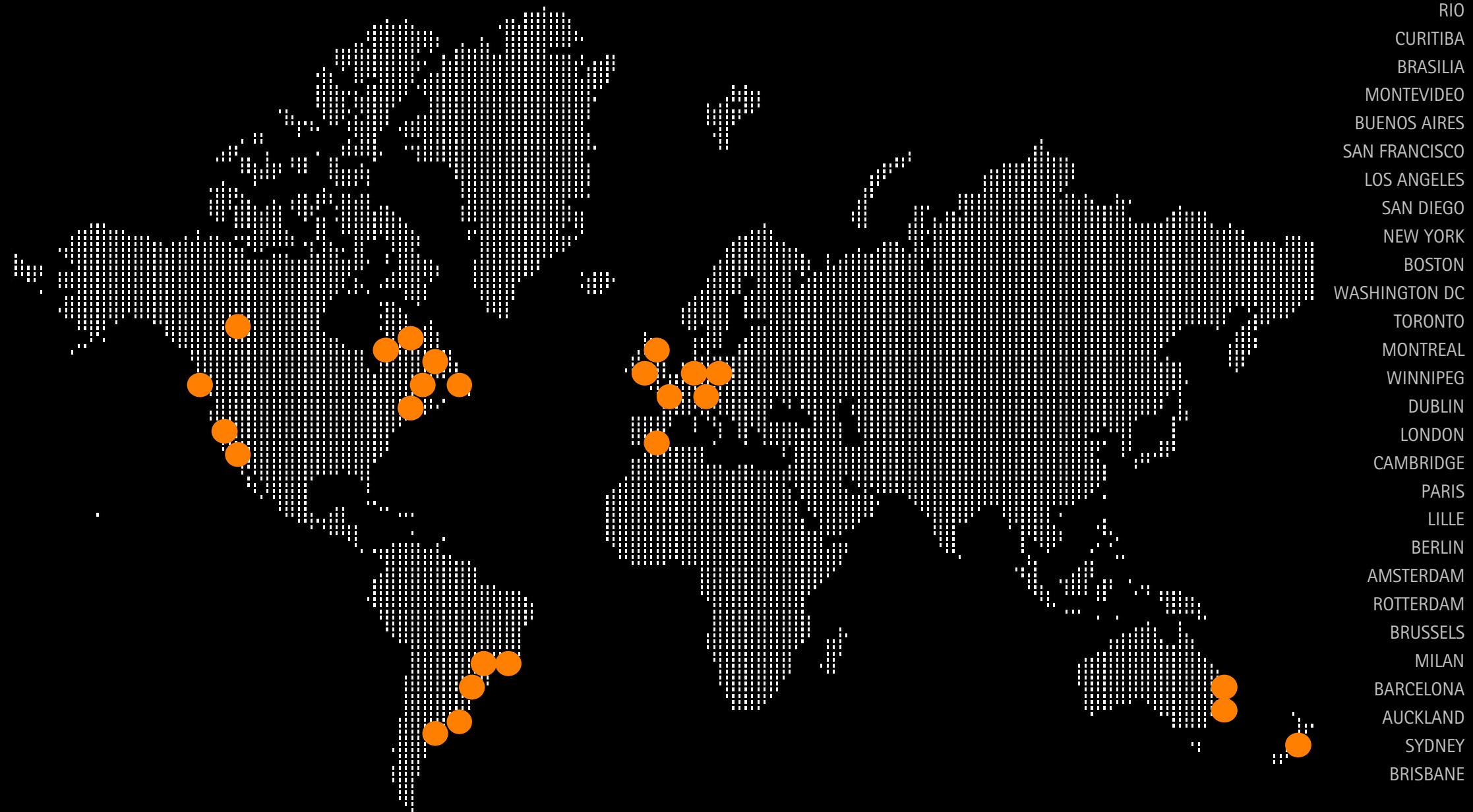
GLOBAL CITIES & SUSTAINABILITY 4

HOW GREEN IS YOUR CITY?

HOW CREATIVE IS YOUR ECONOMY?

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GLOCAL CITY SUSTAINABILITY::SAO PAULO CONTEXT+LESSONS FROM:



THINKING GLOBAL+ACTING LOCAL? FROM 2001 TO 2007 WE VISITED AND IN LOCO ANALYZED CASES IN:

1

Sao Paulo Metropolitan Blindness | 100 years Environmental Mass Destruction

AN INCONVENIENT TRUTH?

SAO PAULO: GLOBAL CITY, METROPOLIS IN MUTATION

São Paulo today is the paradigm of a local metropolis in the global world. At the same time, a world city linked to global networks and a local city, where banal space is manifested as unjust and disqualified. According to Sassen (1998) São Paulo is one of ten "world cities," integrated into the network of global cities. In truth, the city presents opposing realities in a contradictory way. On one side spaces defined by new financial capital and linked to new information technologies which in turn are tied to the global economy. On the other side so-called banal spaces appear in the fragmented territory showing all of the local deficiencies. We are dealing with a "glocal" metropolis, the repository of an urban area that faithfully portrays contemporary society, with all the contradictions of our time (Peixoto, 1998).

In this way São Paulo potencializes in its territory all contemporary mutations. We live in an era of accelerated transformation. Territorial dynamics have never been so dramatically perceived in the history of cities. Architecture is inserted into this context suffering transformations in all dimensions. The metropolis materializes in its fragmented territory points of rupture and lack of city consciousness. The consequences of the rapid transformations in the post-industrial metropolis are varied, heterogeneous. Complex, disqualified spaces emerge in cities, residues of older productive areas: vacant lots, urban dysfunctions. Transformations in architecture are present in the territorial environment and vice-versa (Peixoto, 1998).

At the scale of the building one proceeds to the transformation of functions. Adaptations demanded by the dynamics of the local society and of the surrounding territory are generated. Outdated historic buildings are functionally converted spatially for new uses. Architectural recyclings appear, as we shall see later in the case of the conversion of the old Julio Prestes train station into an important concert hall.

In the realm of cities, we live the moment of transformation of existing space. Different from other epochs where the transformation of the city generated imposed processes of renovation (the modernist projects of the *tabula rasa* sort) or the revitalization of scenic historic centers (postmodern projects typical of the 1970s and 1980s with historicist or pop character), we now have a much more complex, rich situation.

Functions, uses and spaces are transformed in a dynamic, unprecedented way. Apparently consecrated spaces are recycled. The perennial gives way to the transitory. Immense, historically shaped environments lose their functions. Historical centers are emptied. Industrial spaces suddenly become disqualified. Whole neighborhoods are the object of speculation about transformation. Forgotten spaces are the object of property development. Luxury residential areas emerge in old, devalued land at the edges of the city, like islands, amidst a complete lack of city services. Anti-cities appear in the middle of metropolitan territory. Environmentally protected lands are occupied and re-urbanized: the illegal city imposes itself on the legal city. Urban legislation is obliged to run after illegal reality; urban mutations emerge everywhere (Rolnik, 2000).

Society enters the twenty-first century with parallel concerns, a strong inclination toward environmental preservation and recycling existing resources. Agenda 21 places new demands in the territorial realm that architecture can no longer avoid in its new corollary of principles. [1]

The transformation of environments—on the scale of the territory and of the building—is set in this way within this new demand for sustainable development. Like other resources, existing environments cannot do without recycling and transformations. It is more intelligent to transform existing and under-utilized spaces rather than negating and substituting them.

[1] Agenda 21 is a United Nations program of environmental action that envisions the most daring and encompassing attempt to promote, on a planetary scale, a new standard of development, reconciling environmental protection methods, social justice, and economic efficiency. Governments and civil society institutions from 179 countries contributed to the plan over two years, culminating in the UN Conference on Environment and Development (UNCED) in Rio de Janeiro in 1992 (Earth Summit-92). In the realm of constructed environments, the plan seeks sustainable urban planning (Agenda 21 Brasileira, 2003).

SAO PAULO: GLOBAL CITY, METROPOLIS IN MUTATION

Today, São Paulo reflects such conditions in its more than 1.5 thousand km². The city cannot abstain from the global debate in the face of urgent local needs. The city, which ruled itself in these almost 500 years of existence by a painful process of historical negation, of a territorial palimpsest,^[2] where one always built over what existed, making it mutable and polynucleated, now confronts the challenge of restoration.

Within this extremely complex situation, architecture continues to be a fundamental alternative for the transformation of the territory: an essential instrument of spatial intervention. The challenge to contemporary architecture is its confrontation with the existing city, beginning with its infrastructures, without negating it. From Meyer's (2001) original and accurate observation, we have been developing this concept both in the academic debate and in the practice of urban projects.

Theoretical and conceptual analyses present, on the one hand in international discussion, and on the other hand in the local territorial context, should nourish methodological debate in the area of urban interventions and cancel out [dirimir?] the innocent nature of local actions. However, while many cities around the world promoted the large-scale redesign of downtown areas, this was until recently rejected in São Paulo, when the city turned to urban requalification processes in its center. In spite of the delay, and perhaps taking advantage of it, requalification in São Paulo can be positioned in a more coherent manner against contemporary reality without committing the errors of earlier processes.

Finally, the impossibility of operating a full process of urban design in a metropolis of this scale seems clear—its territory is on an immeasurable scale—, today the immense potential of government power to use urban design to stitch together territorial logics and to requalify disconnected public spaces is evident. On one hand, to design everyday space, to promote the best use of banal space, and on the other, to make possible urban connections and the linking of fragmented metropolitan territory: to use the potential of empty spaces to promote links that articulate the territory and effect a restorative urban planning process.

Can the metropolitan territory in a process of accelerated transformation be confronted by local actions? In this sense, can urban design still subsidize the rescue process of immense historical but degraded areas without creating scenic simulacra? At the other end of the problem, can large urban projects be configured as an instrument for the rearticulation of fragmented territory, on an immeasurable scale? Should planning be managed as an instrument for the viabilization of the illegal, although real, city (urbanization in environmentally protected areas)? Finally, how can the urban project confront wastelands, *terrain vague*, without constituting itself as an instrument of omnipresence, but rather as a possibility for the rearticulation of the territory?

"There is a worsening conflict between local space, a space lived in by all our neighbors, and a global space, inhabited by a rationalized process and an ideological content from far away, which arrive at each place with objects and norms to serve them... For this very reason the great contradictions of our time pass through the use of territory"

Milton Santos (2002: 15)

[2] The term "palimpsest" was very properly used by Benedito Lima de Toledo (1983) to characterize the urban evolution of São Paulo, when he described it as a city that built itself one layer on top of the other, in the same space.



NUMBERS & CONTRASTS OF A "GLOCAL" CITY

POPULATION: METROPOLITAN REGION	20 MILLION [3rd IN THE WORLD]
METROPOTITAN REGION AREA	3,100 SQ MILES
DENSITY	6,100 INH/SQ MILES [2,300 INH/KM2]
LATITUDE / LONGITUDE	23°32'36''S / 46°37'59''W
AVERAGE ELEVATION	2,000 FT
CLIMATE	WARM [SUMMER: 66°F-81°F; WINTER: 54°F-70°F]
RAINFALL HIGHEST AVERAGE	53 IN [WARMER MONTHS]
GDP	US\$ 99 BILLION [13rd RICHEST CITY IN THE WORLD]
POPULATION GROWING	0.5% PER ANNUM [5% DURING THE 70'S]
POPULATION IN 1900	0.2 MILLION [GREW 27,000% IN 100 YEARS]
URBANIZED AREA GROWING	40,000% IN 100 YEARS
COPAN BLDG. [OSCAR NIEMEYER'S UNITÉ D'HABITACIÓN]	1,104 HOUSING UNITS/5,000 INHA.
% POPULATION LIVING IN IRREGULAR DWELLINGS	20% [1.3% IN 1973]
METRO NETWORK	49.5 KM [3.5 MILLION PASS. DAILY]
BUS TRANSPORT	11,000 UNITS [3.5 MILLION PASS. DAILY]
NUMBER OF CARS	6 MILLION
MURDER RATE	35 PER 100,000 INH.

- > HEADQUARTER MORE AMERICAN COMPANIES AMONG ANY OTHER CITY OUTSIDE THE US
- > THE MOST CROWDED AIR SPACE BOTH IN LATIN AMERICA AND THE SOUTHERN HEMISPHERE
- > HIGHEST PER CAPITA HELICOPTER OWNERSHIP
- > LARGEST NUMBER OF JAPANESE OUTSIDE JAPAN

GREEN SPACE AND ENVIRONMENTAL ISSUES

- SEVERAL ENVIRONMENTAL PROBLEMS CAN BE NOTICED IN SÃO PAULO, WITH ITS HIGH NUMBER OF VEHICLES AND BUILDINGS. WITH APPROXIMATELY 5.5 MILLION AUTOMOBILES, THE CITY IS DISCHARGED OF 5.6 TON OF POLLUTANTS PER DAY IN THE ATMOSPHERE (90% FROM THE VEHICLES AND 10% FROM THE INDUSTRY). THE IMPACT OF THAT, SPECIALLY IN THE WINTER, IS THE CLIMATIC INVERSION THAT KEEPS AIR POLLUTION AT THE LOWER STRATA INTENSIFYING BREATHING DISEASES.
- ALTHOUGH THE CITY HAS 92% OF THE HOUSEHOLDS SERVED WITH WATER SUPPLY, ONLY 65% ARE SERVED WITH THE SEWERAGE SYSTEM. AS A RESULT OF THIS LACKING OF DOMICILE COLLECTION, PLUS OF INDUSTRIAL SEWERAGE AND STORM WATER, THE CONDITIONS OF THE TWO MAIN RIVERS IN THE CITY ARE PRECARIOUS. WHAT COULD BE AN OPPORTUNITY FOR LEISURE AREA AND WATER TRANSPORTATION ARE PERCEIVED BY THE *PAULISTAS* AS DEGRADING OPEN SEWERS.
- THE DEFICIT OF GREEN SPACE IN THE CITY IS OBSERVABLE BY THE RATIO GREEN AREA PER INHABITANT. SÃO PAULO HAS ONLY 4M²/INHAB WHEN THE MINIMUM SUGGESTED BY THE WORLD HEALTH ORGANIZATION (WHO) IS 12M²/INHAB. IN COMPARISON, RIO DE JANEIRO HAS 60M²/INHAB, CURITIBA 55M²/INHAB, AND BRASÍLIA [THE MODERNIST PLANNED CITY] 120M²/INHAB.
- SÃO PAULO IS HAVING THIS PROBLEM AGGRAVATED BY DEVASTATING THE SWAP OF RAINFOREST THAT GOES FROM THE CITY TO THE OCEAN (ATLANTIC TROPICAL FOREST) AT AN ALARMING RATIO. SINCE 1990, ATLANTIC TROPICAL FOREST LOST 1,700HA.
- AT THE SAME PACE, THERE SHOULD BE NOTED THE PROBLEMS OF WATER CONTAMINATION AND DEFORESTATION OF THE SURROUNDINGS OF THE RESERVOIRS AT THE SOUTHERN PART OF THE CITY, MOSTLY BY THE ILLEGAL FORMATION OF *FAVELAS* IN SUPPOSEDLY ENVIRONMENTALLY PROTECTED AREAS.
- REGARDING THE OLD INDUSTRIAL AREAS ALONG THE RAILWAY AXIS, NOW IN TRANSFORMATION AND SO CENTRAL TO OUR STUDIES IN SÃO PAULO, CASES OF SOIL CONTAMINATION (BROWNFIELDS) SHOULD BE A CONCERN ALTHOUGH THERE ARE NOT ENOUGH SURVEYS OF THIS EXPECTED PROBLEM.

Metropolitan Blindness | 100 Years Environmental Mass Destruction | Scene 1:: Downtown

[inner city emptiness::housing buildings emptiness]

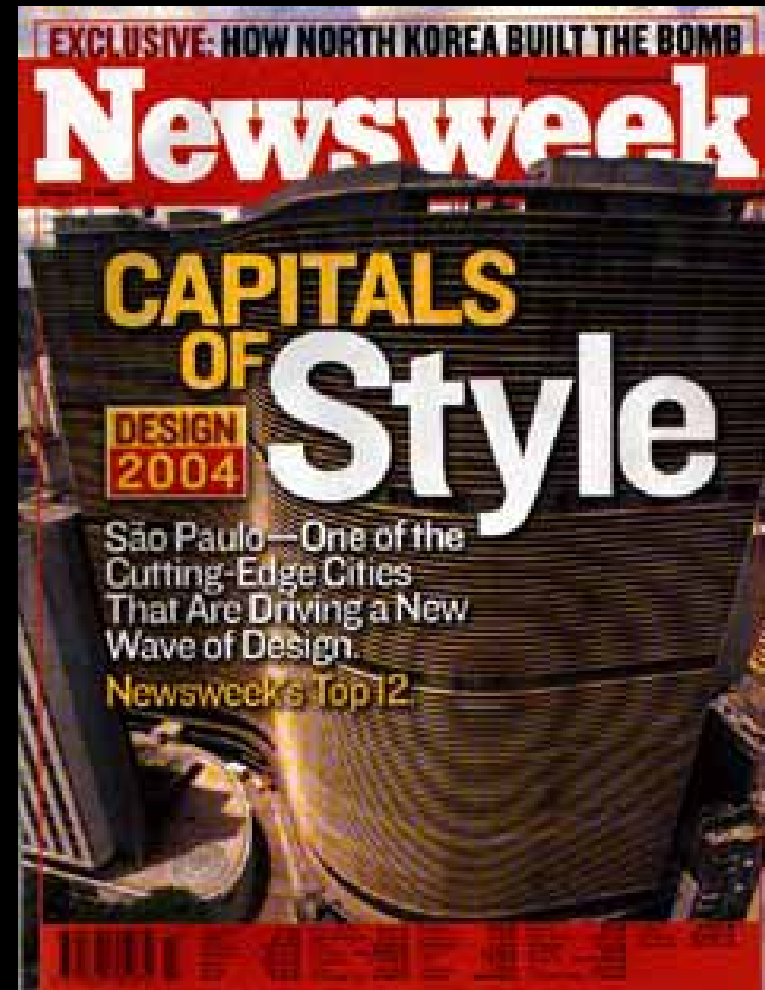
- > THE CITY AS A "PALIMPSEST": CONTINUOUS RECONSTRUCTION & SPATIAL SUPERIMPOSITIONS
- > THE OLD CENTRE [EUROPEAN] + NEW CENTRE [MODERN] + DETERIORATION AND EMPTINESS, BUT...
- > BRAZILIAN MODERN ARCHITECTURE PRODUCED GREAT EXAMPLES OF "DENSITY+QUALITY" CITY-BUILDINGS WITH A DESIRABLE MIX OF USERS DURING THE 50'S & 60'S [E.G.: NIEMAYER'S COPAN W/ 5,000 DIFFERENT PEOPLE LIVING IN HARMONY IN THIS LEAVABLE CITY-BLDG. 24 HS], BUT...
- > REAL STATE STOPPED DEVELOPING THIS AND THE CAPITAL MOVED TO WALLED CONDO'S OUTSIDE DOWNTOWN



IMAGES BY NELSON KON: WWW.NELSONKON.COM.BR



MODERN DOWNTOWN HAD HIGH DENSITY
OSCAR NIMEMAYER'S COPAN BLDG., BRAZILIAN UNITÉ D'HABITACIÓN (5,000
PEOPLE), DONWTOWN SAO PAULO, 1951 (NEWSWEEK MAGAZINE, 2004)



Metropolitan Blindness | 100 Years Environmental Mass Destruction | Scene 2::Railroad Axis

[inner city emptiness::territorial wastelands+brownfields]

> THE POST-INDUSTRIAL CITY UNDER TRANSFORMATION

> BROWNFIELDS & WASTELANDS EVERYWHERE IN CENTRAL AREA DOTATED OF ALL NEEDED INFRASTRUCTURE

> THE VOID'S POTENTIALITY: THE OPPORTUNITY OF RECREATING CENTRAL AREA WITH A SUSTAINABLE CITY WITH DENSITY, GREEN AND INNOVATION



IMAGES BY NELSON KON: WWW.NELSONKON.COM.BR



INNER CITY EMPTINESS

Brownfields being occupied by favelas (shanty-towns)



INNER CITY CROWDNESS

Open spaces being occupied by camelos (street-vendors)

Metropolitan Blindness | 100 Years Environmental Mass Destruction | Scene 3::Periphery

[periphery sprawl and high density: ex-atlantic tropical forest: yes, it was a forest 10 years ago!]

- > THE ILLEGAL BUT REAL CITY
- > THE PERIPHERY EXPANSION OVER UNDER PROTECTION ENVIRONMENTAL AREAS
- > URBAN SPRAWL PHENOMENA IN UNDER-DEVELOPMENT COUNTRIES SUBTROPICAL CITIES
- > THE SHANTY-TOWNS'S REURBANIZATION PROGRAM: FAVELA'S UP GRADE?



da Almeida

IMAGE BY LASLO ALMEIDA, FOLHA DE S.PAULO



A WALLED CITY: DIVIDING THE TERRITORY BY THE POOR (FAVELAS) AND THE NEW RICH (WALLED CONDOS)

2

Environmental Continuities | Theory & praxis in urban sustainability, Sao Paulo

CONNECTING THE DOTS?

URBAN REGENERATION & PRODUCTIVE RESTRUCTURING PROCESS: RESEARCH PRECEDENTS

THE RAILROAD AXIS URBAN REGENERATION & PRODUCTIVE RESTRUCTURING PROCESS, 2003-6*

[CARLOS LEITE::ARCHTECTURE+URBAN DESIGN+CITY SUSTAINABILITY RESEARCH]

THIS IS A PERFECT EXAMPLE OF A POST-INDUSTRIAL CITY WITH AN URBAN STRUCTURE THAT SUFFERS A PROCESS OF CONSTANT TRANSFORMATIONS THAT LEAVE A NUMBER OF RESIDUAL AREAS, BLIGHTED AND ILL-DEFINED SPACES IN THE CENTRAL AREAS: WASTELANDS AND BROWNFIELDS.

THIS COMPLEX PROBLEM IS TYPICAL OF GLOBAL CITIES – PARTICULARLY IN THE DEVELOPING COUNTRIES – AND IS ONE OF THE GREATEST CHALLENGES OF CONTEMPORARY URBANISM.

THE REGENERATION OF THESE AREAS MUST BE CARRIED OUT THROUGH AN INTERDISCIPLINARY DESIGN APPROACH THAT RELIES ON ALL FACETS OF SUSTAINABILITY – ENVIRONMENTAL, ECONOMIC, SOCIAL, CULTURAL, POLITICAL AND TECHNOLOGICAL.

THE DEVELOPMENT OF SAO PAULO HAS INDUCED A GROWTH PROCESS THAT GENERATED A LARGE NUMBER OF BLIGHTED AND UNDERUTILIZED AREAS ALONG THE RAILROAD AXES. PARTICULARLY ALONG THE CENTRAL AREAS, THESE RESIDUAL AREAS ARE WASTELANDS THAT DISARTICULATE THE URBAN TISSUE, ARE IMPEDIMENTS FOR MOVEMENTS, AND PREVENT AN INTEGRATED AND MORE HARMONIOUS CITY DEVELOPMENT. ON THE OTHER HAND, IF TACKLED WITH A COMPREHENSIVE STRATEGY FOR SUSTAINABLE REDEVELOPMENT, THESE AREAS MAY BE REGARDED AS EXCELLENT OPPORTUNITIES FOR POSITIVE TERRITORIAL AND SOCIAL TRANSFORMATIONS.

> THESE REDEVELOPMENT SITES REPRESENT IMPORTANT OPPORTUNITIES TO IMPROVE THE SUSTAINABILITY OF CITIES BECAUSE IT REPRESENT THE REDEVELOPMENT OF INNER CITY URBAN VOIDS INSTEAD OF IMPROVING THE URBAN SPRAWL TENDENCY WHICH IS, IN METROPOLIS LIKE SAO PAULO, REPRESENTED BY ILLEGAL SETTLEMENTS INSERTED IN PROTECTED NATURAL ENVIRONMENTS.

> THE CHALLENGE FOR A SUSTAINABLE METROPOLIS MUST CONTAIN A COMPACT CITY.



Image by Nelson Kon

THE RAILROAD AXIS [DIAGONAL SUL URBAN OPERATION] AS THE ULTIMATE OPPORTUNITY OF CREATING A COMPACT CITY INSIDE THE METROPOLIS

MASTER PLAN STRATEGY: RESCUING INTEGRATED SUSTAINABILITY INSIDE THE CITY URBAN VOIDS

> OLD INDUSTRIAL LAND: BROWNFIELDS WAITING TO BE REMEDIATED AND TERRITORY REFUNCTIONALIZED

> THE RAILROAD AXIS [DIAGONAL SUL URBAN OPERATION] AS THE ULTIMATE OPPORTUNITY OF CREATING A COMPACT CITY INSIDE THE METROPOLIS

The proposal is sustained on the desire of a desirable city. The challenge of the contemporary sustainable metropolis must be of a compact territory that allows an integrated urban net: a dense and socially diverse metropolis where economic, cultural and social activities overlay themselves and where local communities are developed on neighborhood surroundings and in integrated polycentric nodes.

The redeveloping areas represent fundamental opportunities to optimize integrated sustainability – environmental, economical, social, cultural, political and technological – of the metropolis, since they represent the redevelopment of urban voids in the center of the city, opposing the tendency of urban sprawl which is, in metropolises such as São Paulo, represented by illegal occupations inserted in territories of environmental preservation.

Quoting our greatest paulistan architect, Paulo Mendes da Rocha: "An Erotic Vision of the City".

The intervention is guided by the integrated and complementary approach of two types of territorial operation, in the metropolitan scale and in local actions. In the metropolitan scale the aim is to rescue the integrated sustainability inside the contemporary metropolis through its recyclable structural elements: the Green Matrix, the Water Matrix, the Mobility Matrix and the Prototypical Collective Housing Matrix (a possible answer, in industrial production scale, to the dramatic housing deficit). The local actions pose architecture as an urban system according to the local recyclable potentialities.

Promoting density with quality in the central area through, predominantly, the insertion of collective housing – recycle of the current underused residential reserve and insertion of new prototypical units – and urban equipments – public and private – through new dynamics in urban blocks: urban design of block recycle.

The new dimensions that lie in this territory – the fragmentation, the retails, the de-articulation (the un-articulated territory), the wastelands, the fluidity and the flows' network – are all presented at the territory of the railroad axis in Sao Paulo.

With the emptiness of the industrial occupation, the railroad loses very of its function. The lack of incentive to the railroad while a system of efficient and integrated public transport connected to the metro system, decisively corroborated for its emptiness of importance.

Its decay in the last decades also represents the spatial dereliction of its borders. A fragmented and deprived of characteristics territory was generated. The structures that had defined its occupation and consolidation today represent its obsolescence: the wastelands.

The railroad axis urban project, by Carlos Leite, is based on the strategy of four matrixes superposition in time/space: infrastructure; flows; green axis; urban borders.

[http://www.educatorium.com/leitebrooke/LBAA_projetos.htm]

The project implementation within the green axis on the central void and housing and urban clusters on the borders



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A view of the Brás area redevelopment showing the new infrastructural connections, the forest, the bordering housing and the proposed industrial cluster on the terrain vague (in orange)

The architecture on the contemporary metropolis must have the plasticity that allows it to absorb the net of flows, the wastelands, and the new dynamics present in the disarticulated territory. Formal plasticity and programmatic flexibility are imperious in the contemporary urbanism.[i]

The urban discontinuities and territorial fragments offer a new possibility of urban project: the construction of a new metropolitan territoriality.

The metropolitan residual areas should contain the new urban projects and should articulate the new territory spaces. The void spaces operate as a potential instrument for the construction of the new public space.

In this sense, we can think of the presence of the void in the urban fabric as a fundamental parameter on the contemporary dynamics in opposition to the common idea of the redevelopment of the wastelands in central metropolitan areas within a massive architecture presence. Sao Paulo needs an *architectonic silence* in opposition to the grey and dense built masse. The new program should appear just on the borders, facing the silence. The minimal. It is launched, then, an intervention strategy for a stretch of the railroad: a linear axis of 12.6 km extension.

It is established a dynamic urbanism through the urban matrixes system: four complementary urban matrixes that open the possibility of multiple designs through its many combinations. A new urban strategy, more flexible to the demands and the multiple programs of the contemporary metropolis. It is changeable in time and space. After all, the idea is about the establishment of an urban strategy that prepares the conditions for the construction of the territory. It prepares the territory to receive, coherently, the diverse urban programs and architectural elements, without, however, defining the final architectural forms.

The four urban matrixes are:

1. Infrastructures:

It is configured for the reuse of the existing infrastructures and the optimisation of the existing field conditions: modernization of the railroad system and its transformation into a surface metro system; modernization of the existing stations and creation of new ones; reactivation of the non-used patrimony; recycling of the industrial areas into a new technological basis industry (industrial/services clusters and technopoles).

2. Flows:

It is configured through the combination of projects for the transports system – road, pedestrians and collective – which results in the flows optimisation in the metropolitan axle.

3. Green axis:

Throughout all territory, together to the railway line, appears a green axis, a linear metropolitan park, whose final image constitutes a green gradient that varies of density from the central body forest to its dilution in the territory: an urban forest.

4. Urban borders:

The consolidation of the great metropolitan public axle – the railroad axis as integrator of public activities mainly – will be possible within the implementation of the complementary program on the bordering territories: programmatic elements that respond to the forces of the surrounding neighbourhoods.

It is proposed the implementation of collective housing: affordable housing is an essential parameter on the process of reclaiming and renewing metropolitan wastelands.

It is proposed a whole process of reindustrialization of some specific and huge urban voids – the typical brownfields: under a productive restructuring process based on local redevelopment characteristics it is possible to implement a linear system of connected high tech clusters that works as urban catalytic elements.



[i] ALLEN, Stan. *Points and lines: diagrams and projects for the city*. Nova Iorque: Princeton Architectural Press. 1999.

MASTER PLAN STRATEGY: RESCUING INTEGRATED SUSTAINABILITY INSIDE THE CITY URBAN VOIDS

THE RAILROAD AXIS [DIAGONAL SUL URBAN OPERATION] AS THE ULTIMATE OPPORTUNITY OF CREATING A COMPACT CITY INSIDE THE METROPOLIS



URBAN MATRIX [1]> INFRASTRUCTURES



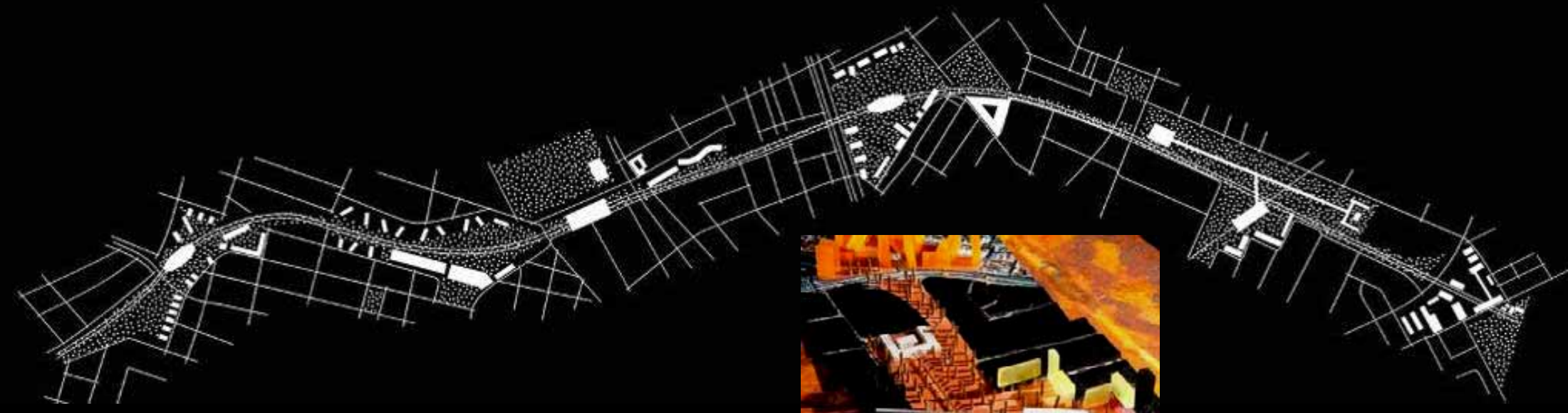
URBAN MATRIX [3]> GREEN AXIS



URBAN MATRIX [2]> FLOWS



URBAN MATRIX [4]> BORDERS



SUPERIMPOSITION OF THE 4 URBAN MATRIXES: [1] + [2] + [3] + [4]



> THE RAILROAD AXIS [DIAGONAL SUL URBAN OPERATION] AS THE ULTIMATE OPPORTUNITY OF CREATING A COMPACT CITY INSIDE THE METROPOLIS

> ZOOM AREA 1: MOÓÇA

Urban Voids

On the railroad axis, the Mooca/Antarctica area constitutes a typical urban void: an old industrial yard of 200,000 km².

The general proposal of developing an "architectonic silence" here found its potential, opposing the common idea of imposing a massive architectural occupation in this urban island.

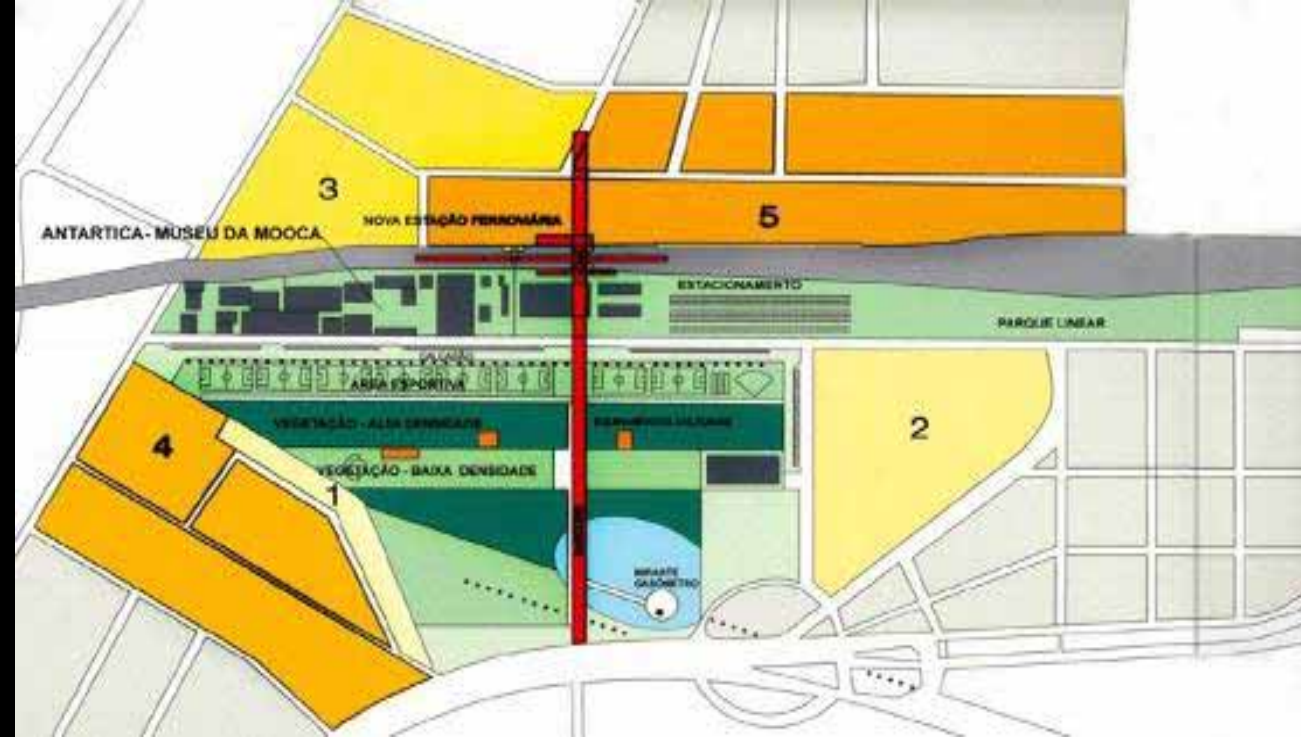
The strategy was to develop in the urban void a huge park with public program.

A 400 meters esplanade connects the train stations and surface metro with commerce and leisure inside.

The old historical buildings of the Antarctica industrial complex were recycled and received cultural program.

On the borders were developed a proposal of varied collective housing and urban design, within commercial and leisure bases.

In resume: on the *terrain vague*, it is proposed the silence, the park within infrastructure connections. On the borders, appears the high-density collective housing.



TOP

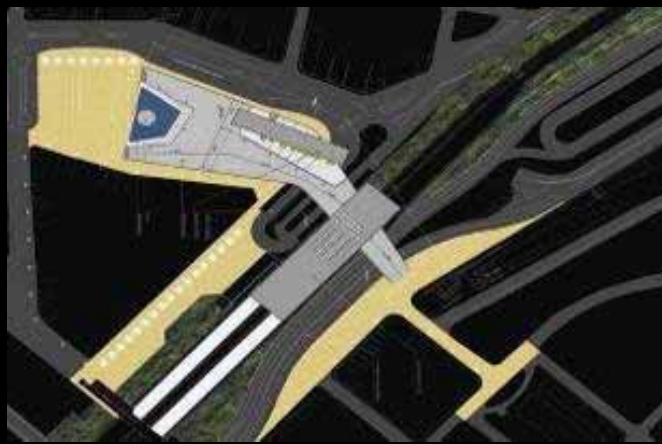
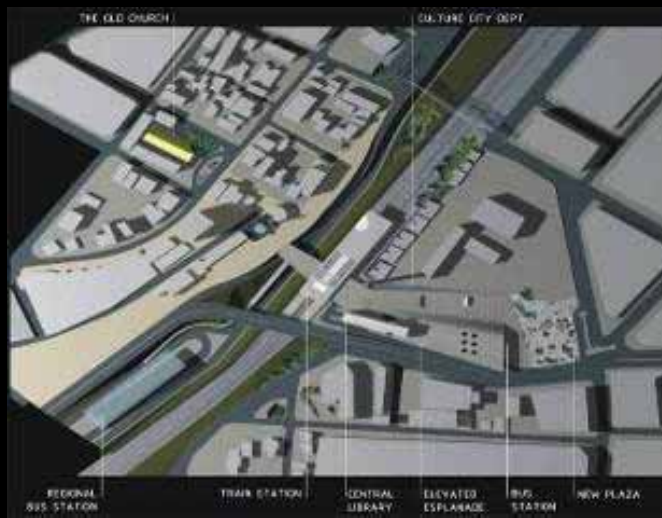
The typical terrain vague at Mooca were transformed into an urban park

BOTTON

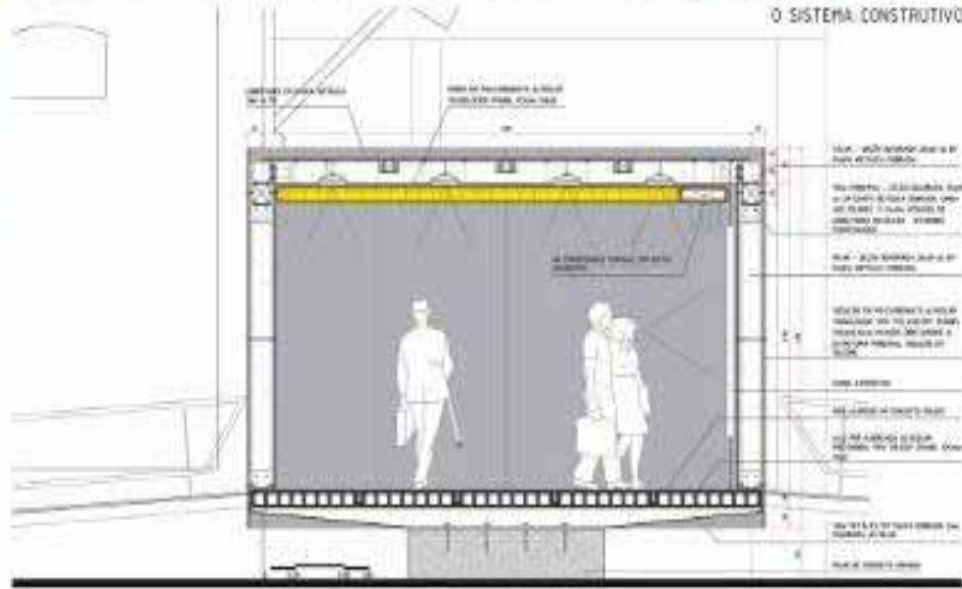
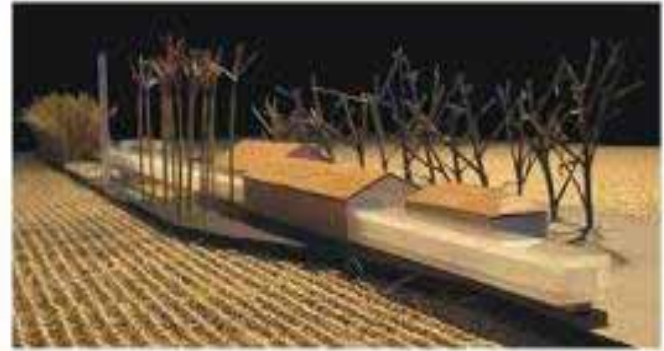
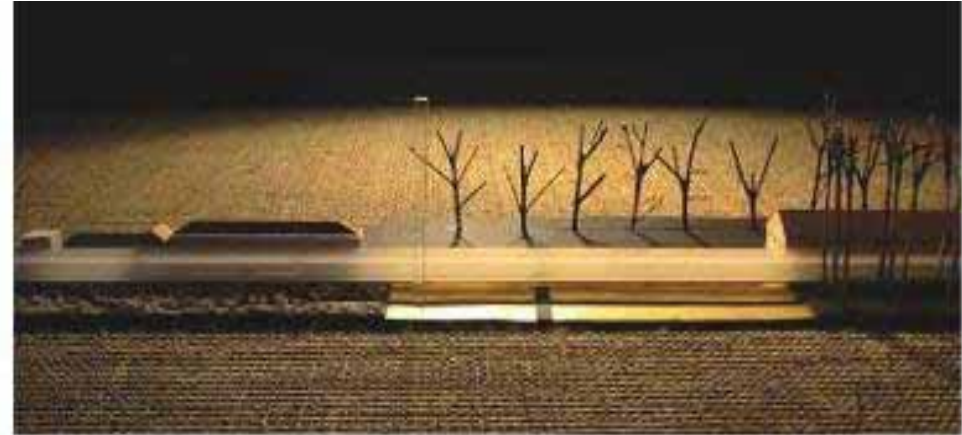
The typical terrain vague at Mooca/Antarctica: the main idea is to offer a high-density housing complex on the borders of the urban void which is maintained as a park within a 400m marquise that connects the two stations.

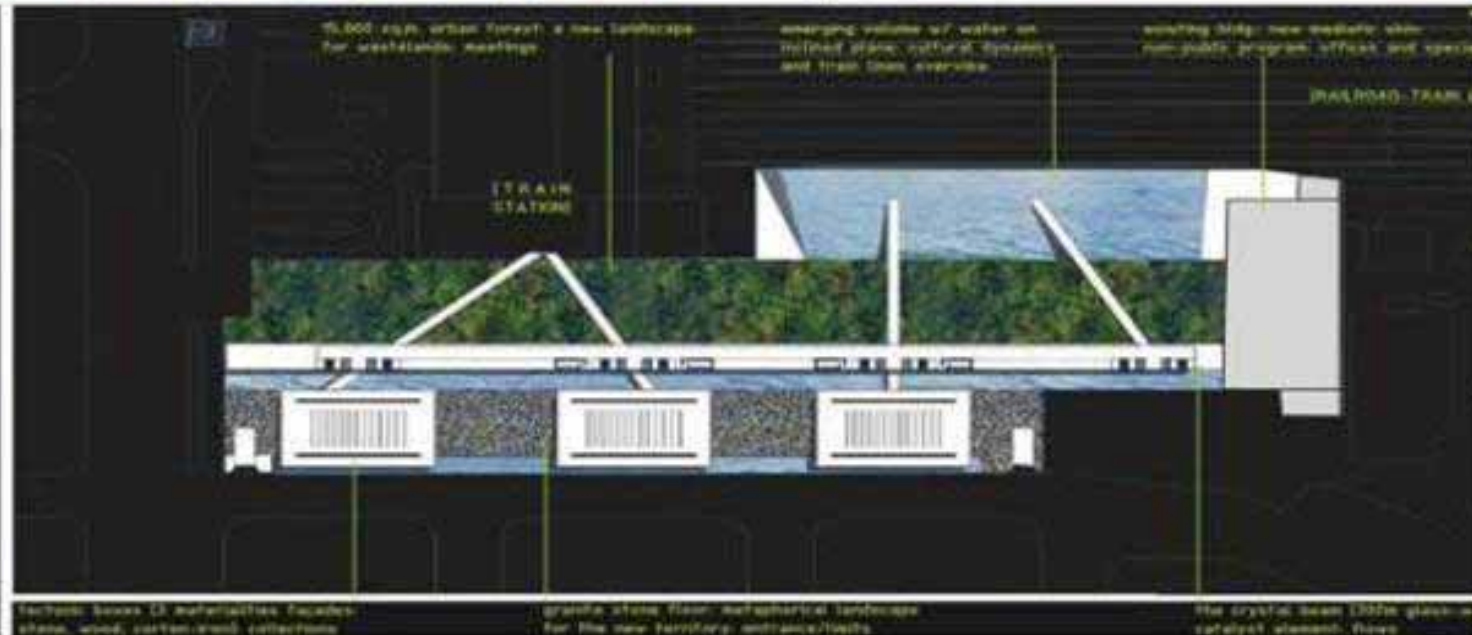
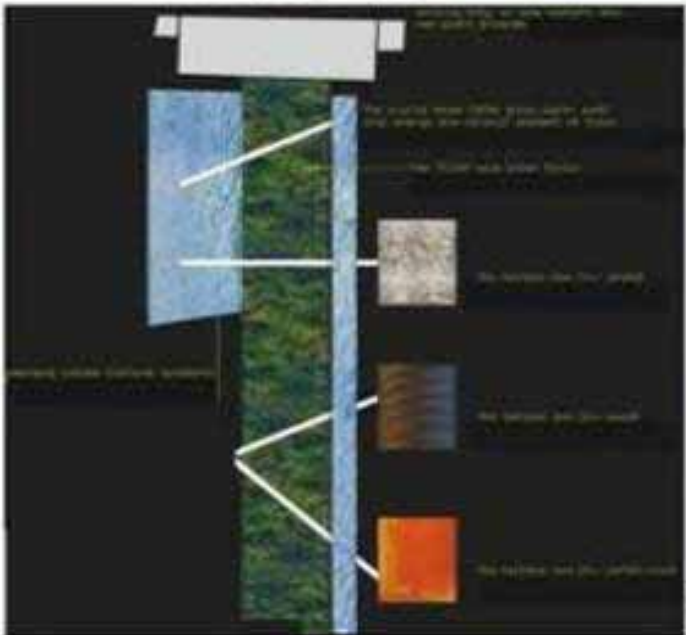
> THE RAILROAD AXIS [DIAGONAL SUL URBAN OPERATION] AS THE ULTIMATE OPPORTUNITY OF CREATING A COMPACT CITY INSIDE THE METROPOLIS:: ZOOM AREA 2: MAUÁ

In Mauá the urban project seeks to redeem connections and to rearticulate the territorial fragments around a public esplanade that transposes the railway, linking the two historical nuclei of the city and important public equipments like the train and bus stations, and a new central public library. The dynamic of the metropolitan region of São Paulo is reflected in a particularly dramatic form in the transformations of structural knots along the edges of railways [former industrial territories, nowadays converted into wastelands and brownfields]. In the case of the city of Mauá, located in the southeastern zone of Greater São Paulo, its structure is strongly determined by the evolution of industry and the presence of the old Santos-Jundiaí railway. The final project, whose construction began in 2004, arose from a strategy to revalue the historical nucleus of the city and rearticulate fragmented terrain.



THE RAILROAD AXIS AS THE ULTIMATE OPPORTUNITY OF CREATING A COMPACT CITY INSIDE THE METROPOLIS:: ZOOM AREA 3: TYPICAL URBAN VOID/WASTELAND
IN THIS DEACTIVATED OLD RAIL YARD, THE IDEA WAS TO GENERATE A LINEAR CULTURAL PIECE OF LIGHT WICH CONNECTS ALL THE OLD HISTORIC PEACES, AS WELL AS TO CREATE A NEW LANDSCAPE FOR THE TERRAIN VAGUE





THE RAILROAD AXIS AS THE ULTIMATE OPPORTUNITY OF CREATING A COMPACT CITY INSIDE THE METROPOLIS:: ZOOM AREA 4: TYPICAL URBAN VOID/WASTELAND AGAIN, IN THIS DEACTIVATED OLD RAIL YARD, IT WAS GENERATED A LINEAR COONECTOR PIECE OF LIGHT (PUBLIC LIBRARY), AND IT WAS CREATED A NEW LANDSCAPE FOR THE TERAINE VAGUE

3

Environmental Continuities II | Brownfields urban-economic redevelopment & city innovation

Lessons from Urban Clusters:

- > SAN FRANCISCO MISSION BAY
- > BARCELONA 22@
- > MONTREAL ATELIERS ANGUS
- > MONTREAL CITÉ MULTIMÉDIA

SOME METROPOLIS ARE SHOWING US THAT IT IS POSSIBLE TO:

- > REDEVELOP OLD INDUSTRIAL DEACTIVATED SITES AND TRANSFORM BROWNFIELDS INTO CONTEMPORARY CITY USES
- > IT REPRESENTS IMPORTANT OPPORTUNITIES TO IMPROVE THE SUSTAINABILITY OF CITIES BECAUSE IT REPRESENTS THE REDEVELOPMENT OF INNER CITY URBAN VOIDS INSTEAD OF IMPROVING THE URBAN SPRAWL TENDENCY
- > CITY INNOVATION AND NEW ECONOMY URBAN CLUSTERS SHOULD BE INSIDE THE INNER CITY WITHIN HOUSING AND MIXED USE: CREATIVE CLASS, METROPOLITAN DIVERSITY AND COMPACT CITY



METROPOLIS: CONCENTRATION OF DIVERSITIES [JANE JACOBS; JOHN SPERLING]

METROPOLIS: TALENT, TOLERANCE & TECHNOLOGY = INOVATION [RICHARD FLORIDA]

*REUSE OF CENTRAL CITY URBAN VOIDS INSTEAD OF PERIPHERICAL SPRAWLING
COMPACT CITY = SUSTAINABLE CITY [RICHARD ROGERS; PETER HALL]*

INNOVATIVE ECONOMIC GROWTH: NEW ECONOMY [TECH-CLUSTERS] [J. JACOBS; J. SPERLING]

METROPOLIS WITHIN HIGH-TECH CLUSTERS CONTAIN CREATIVE CLASS & HIGHER ECONOMIC GROWTH [R. FLORIDA]

FLORIDA, RICHARD. *THE RISE OF THE CREATIVE CLASS: AND HOW IT'S TRANSFORMING WORK, LEISURE, COMMUNITY, AND EVERYDAY LIFE*. NOVA IORQUE: PERSEUS BOOKS, 2002.

HALL, P. & PFEIFFER, U. *URBAN FUTURE 21: A GLOBAL AGENDA FOR 21ST CENTURY CITIES*.

JACOBS, JANE. *CITIES AND THE WEALTH OF NATIONS*. NOVA IORQUE, RANDOM HOUSE, 1984.

ROGERS, RICHARD. *CITIES FOR A SMALL PLANET*. CAMBRIDGE: MIT PRESS, 2001

SPERLING, JOHN. *THE GREAT DIVIDE: RETRO VS. METRO AMERICA*. NOVA IORQUE: POLIPOINT, 2004.

CITY INNOVATION: BROWNFIELDS SUSTAINABLE REDEVELOPMENT & NEW ECONOMY URBAN CLUSTERS

Strong territorial mutations emerged in the post-Fordist city, more emphatically after the reorganization of the spatial economy on the last decades. The industrial decline - deindustrialization - generated the emptiness of entire urban areas. The metropolitan territory became, suddenly, depository of enormous transformations and urban abandonment and wastelands had become particularly evident on the contemporary urban fabric: underutilized industrial zones, non-used industrial warehouses and deposits, abandoned buildings on the inner city and deactivated rail yards [wastelands, brownfields and terrain vague].

On the other hand, new forms of local development are appearing on the wave of the New Economy - IT economy - potentially offering new and rich subsidies as possible answers to the above described urban picture.

The local productive systems emerged in some cities of the globalized world and, under the approach of the technological innovation of the production, have appeared the innovative environments - "milieux innovateurs" - while strategies of local development.

Therefore, it seems urgent to study and better understand these new positive impacts on the urban development of the productive territories under transformation in these contemporary cities.

Particularly, clusters seems to be a quite precious instrument of local development strategy in the new bases of territorial "refunctioning" - to give new functions for the territory under urban regeneration - in the cases of innovative reindustrialization Areas.

The interest here is to raise some questions concerning the possibilities of local development of these immense urban territories in productive transition through the new strategies that come upon from the innovative environments and clusters.

Been working with urban regeneration programs since some years, more recently we have been searching to analyze alternatives for the territories in process of productive restructuring of the contemporary metropolis. Urban strategies and projects in these territories must operate new functions and productive programs: differently, therefore, of the urban revitalization programs traditionally developed on central areas, normally consisted of cultural, tourist and scenographic bias. In the current picture of global competition of cities and city-regions, the programs of productive reorganization must search to unite competitiveness and innovation through some opportunities generated by the new productive systems.

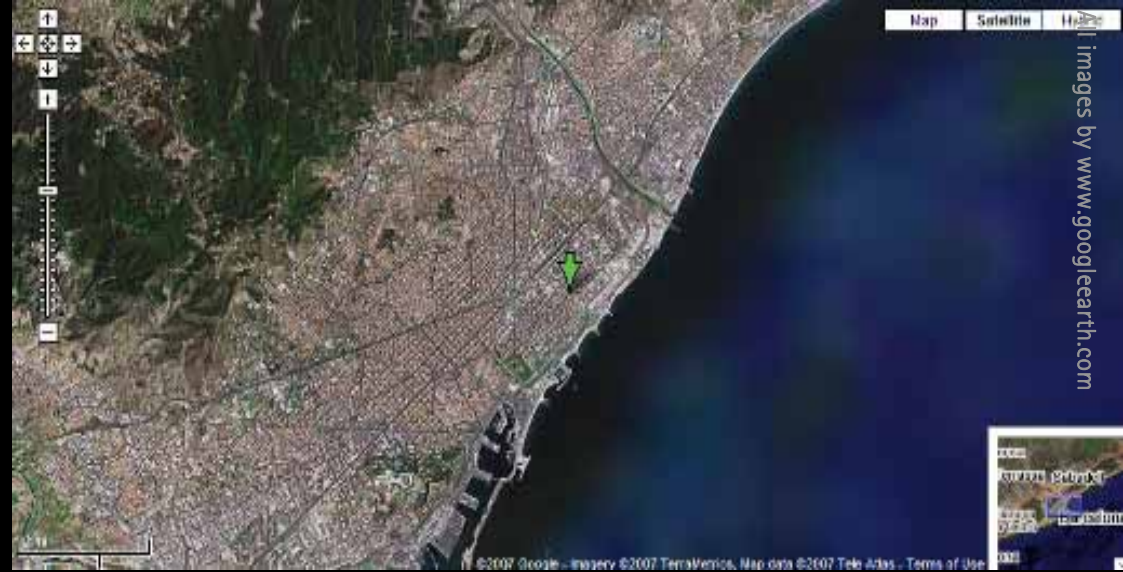
How creative strategies to reconfigure the urban dimension and the sustainable redevelopment can be generated from the new formats of local economic development [LED] - innovative environments and clusters?

Which are the possible conclusions generated from the correlation - quite non explored until the moment - from the "urban dimension" and the effects of the new "local productive arrangements"?

If the configuration of the well developed clusters presents a synergic cooperation between firms, research and community in a geographically clear-cut territory and they have been analyzed through economic and entrepreneurial parameters, what constitutes them under the urban and architectural prism?



SAN FRANCISCO MISSION BAY



BARCELONA 22@

CITY INNOVATION: BROWNFIELDS SUSTAINABLE REDEVELOPMENT & NEW ECONOMY URBAN CLUSTERS

MONTREAL: ATELIERS ANGUS + CITÉ MULTIMÉDIA



SÃO PAULO RAILROAD BROWNFIELDS AXIS





SAO FRANCISCO MISSION BAY

- > THE SPECIFIC TERRITORY: CENTRAL URBAN VOID, DEINDUSTRIALIZATION PROCESS AREA AND PRODUCTIVE REORGANIZATION, 300 ACRES
- > THE VOCATION OF THE REGION: PRECEDENTS. BAY AREA: CLUSTERS OF HIGH TECHNOLOGY, FROM SILICON VALLEY TO BIOTECH
- > THE URBAN PROJECT: A PROCESS, AN INTEGRATED STRATEGY [URBANISM AND LOCAL DEVELOPMENT]
- > BASIC DEMANDS: UP-TO-DATE INFRASTRUCTURE AND ACCESSIBILITY

(BY: [HTTP://PUB.UCSF.EDU/MISSIONBAY/](http://pub.ucsf.edu/missionbay/))

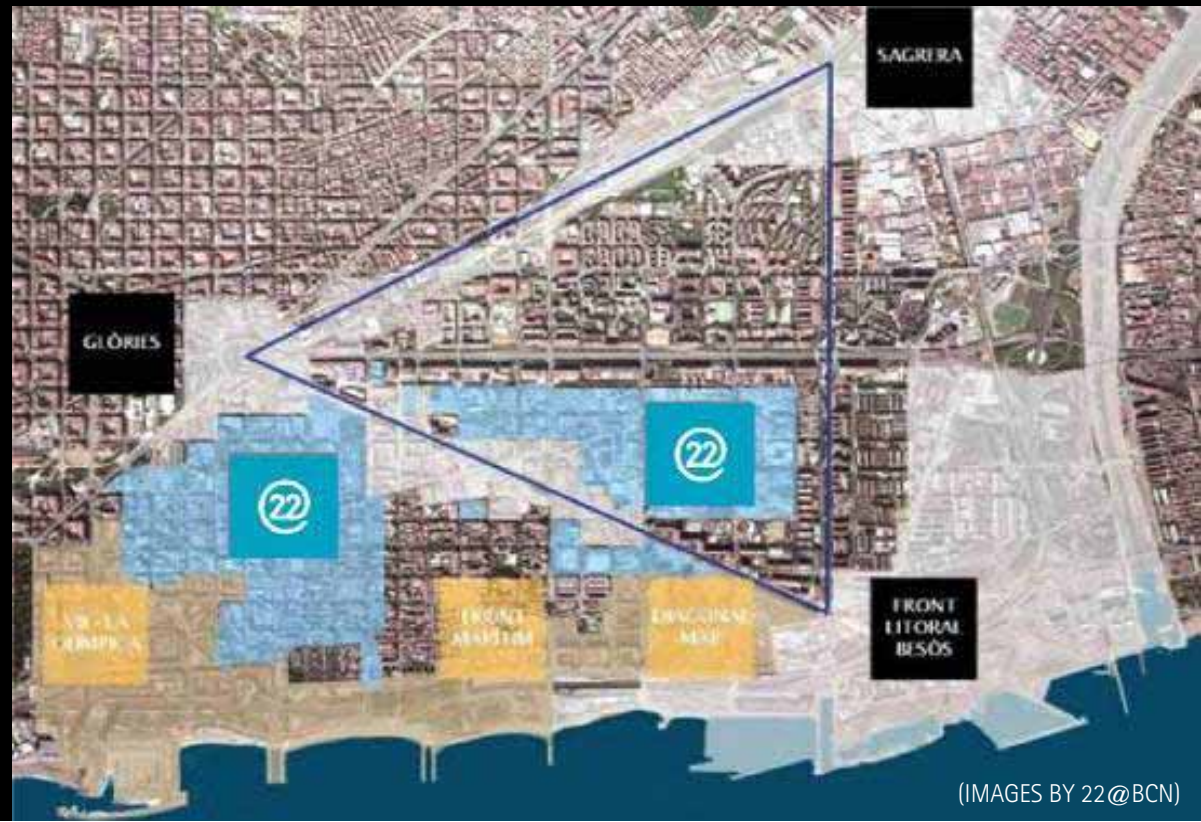


- > MISSION BAY DEVELOPMENT PROJECT
- > DPT. OF PUBLIC WORKS
- > PLANNING DPT.
- > REDEVELOPMENT AGENCY
- > PORT OF SAN FRANCISCO
- > MUNICIPAL RAILWAY (MUNI)
- > SAN FRANCISCO PUBLIC UTILITIES
- > CATELLUS DEVELOPERS



BARCELONA 22@

- > TRANSFORMATION OF AN OBSOLETE INDUSTRIAL TERRITORY OF 200 HA, POBLENOU, INTO AN INNOVATIVE PRODUCTIVE DISTRICT WITH MIX OF USES
- > GOAL: TO CREATE 3.2 MILLION M2 OF SPACE FOR INNOVATIVE COMPANIES, 400,000 M2 OF EQUIPMENT, 4,000 SOCIAL HABITATIONS UNITS AND 75,000 M2 OF GREEN AREAS



MONTREAL CITÉ MULTIMÉDIA

Cité Multimédia

- A PROJECT FOR THE URBAN REVITALIZATION OF AN OBSOLETE, ABANDONED INDUSTRIAL NEIGHBOURHOOD ALONG THE SHORES OF THE LACHINE CANAL

The Old Montreal

- BROWNFIELD RETERRITORY REDEVELOPMENT: SOIL REMEDIATION & URBAN REGENERATION

The International Quarter

- REAL ESTATE DEVELOPMENT OF A TECHNOLOGY PARK

The Business Centre

- A FINANCIAL ASSISTANCE PROGRAM BY GOVERNMENT TO ATTRACT BUSINESSES FROM THE INFORMATION TECHNOLOGY SECTOR TO THE TECHNOLOGY PARK

The St-Lawrence River

(BY: [HTTP://WWW.SDMTD.ORG/ENGLISH/FICHE_1020_EN.PHP](http://www.sdmtd.org/english/fiche_1020_en.php))

(IMAGES BY: C.LEITE)



4

Global Cities: How green is yours?

Global Cities: How creative is yours?

URBAN REDEVELOPMENT + SUSTAINABLE CITIES COMPETITIONS + COMPACT CITIES + URBAN DENSITY & ENERGY CONSUMPTION + CITIES WASTE

PRODUCTION + BENEFITS FOR THE REAL STATE SYSTEM + CREATIVE ECONOMY + AND MORE...



ENERGY CONSUMPTION OF THE WORLD THROUGH CITIES (BY EARTH'S CITY LIGHTS PHOTO VIA NASA)

world civilization warning

THE FUTURE OF GLOBAL SUSTAINABILITY WILL BE DETERMINED BY THE CITIES AND INSIDE THE CITIES

1900



2007



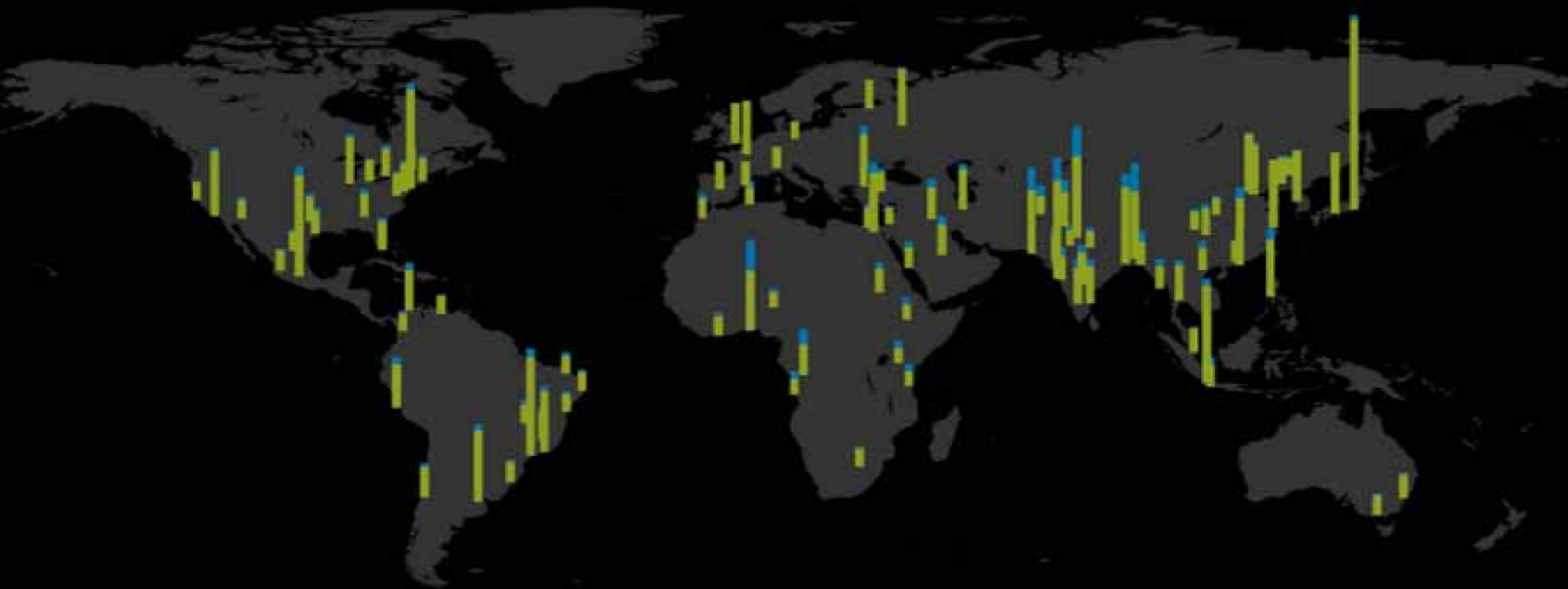
2030



2050



NOW THE WORLD IS URBAN (SOURCE: RICKY BURDETT / THE URBAN AGE: www.urban-age.net)



METROPOLIS OVER 1 MILLION HAB 2015 PROJECTION (SOURCE: RICKY BURDETT / THE URBAN AGE: www.urban-age.net)

GLOBAL WARMING & URBAN HEAT ISLAND EFFECT: GLOBAL CITIES CROWDS



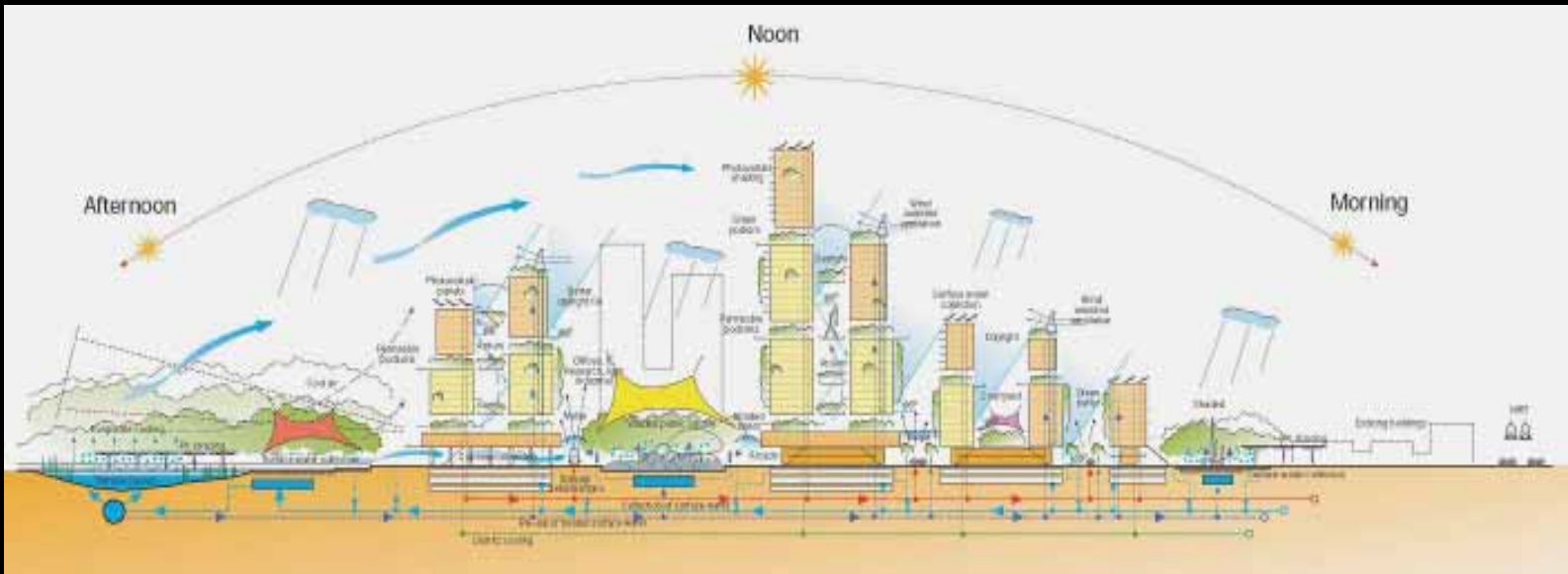
(PICTURES BY BBC BRASIL)



CITIES COVER LESS THAN ONE PER CENT OF THE EARTH'S SURFACE BUT...

- > AROUND 50 PER CENT OF THE WORLD'S POPULATION LIVE IN CITIES
- > CONSUME SOME 75 PER CENT OF THE WORLD'S ENERGY
- > ARE RESPONSIBLE FOR 80 PER CENT OF GREENHOUSE GAS EMISSIONS.

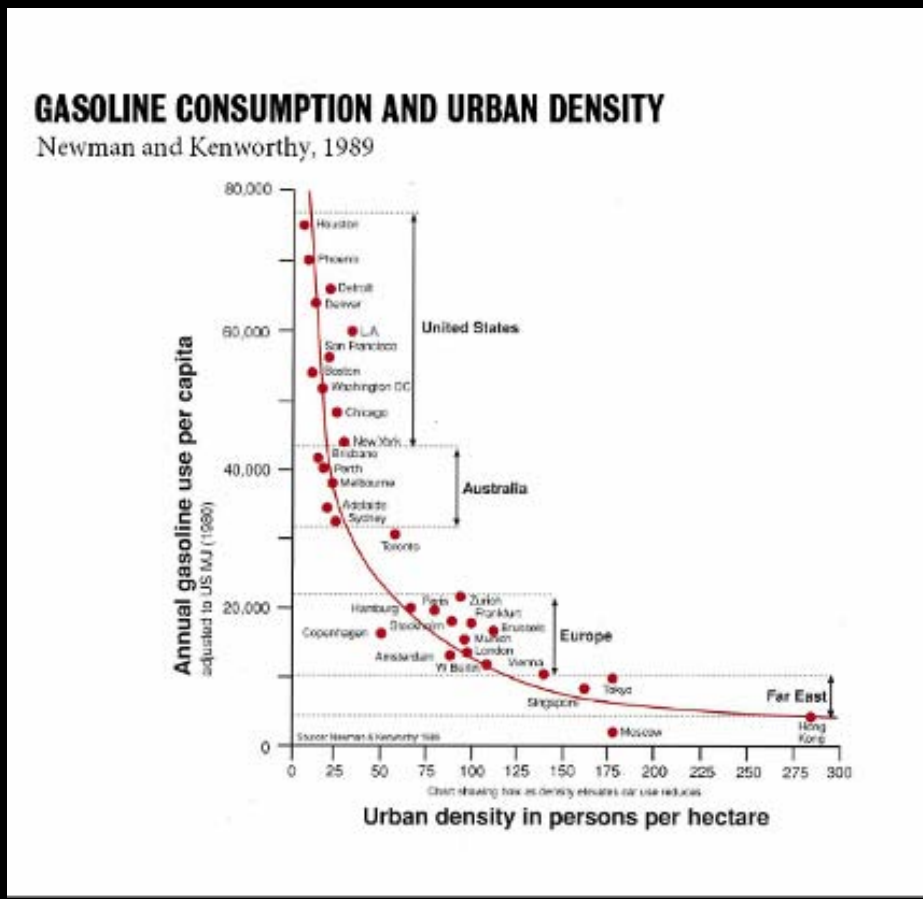
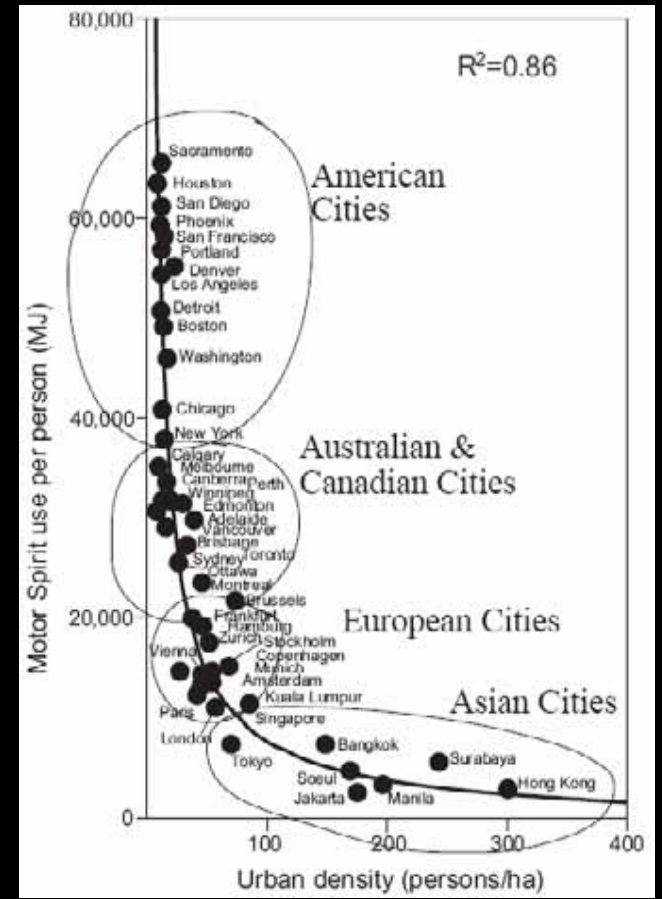
(BY C40 CITIES-CLIMATE LEADERSHIP GROUP-CLINTON FOUNDATION)



COMPACT CITIES OPTION

COMPACT CITY DESIGN

(BY R.ROGERS: CITIES FOR A SMALL PLANET)



URBAN SUSTAINABILITY = COMPACT CITY (SOURCE: RICKY BURDETT / THE URBAN AGE: www.urban-age.net)

CREATIVE CITY = CREATIVE ECONOMY + SUSTAINABLE CITY

Richard Florida's Cities and the Creative Class

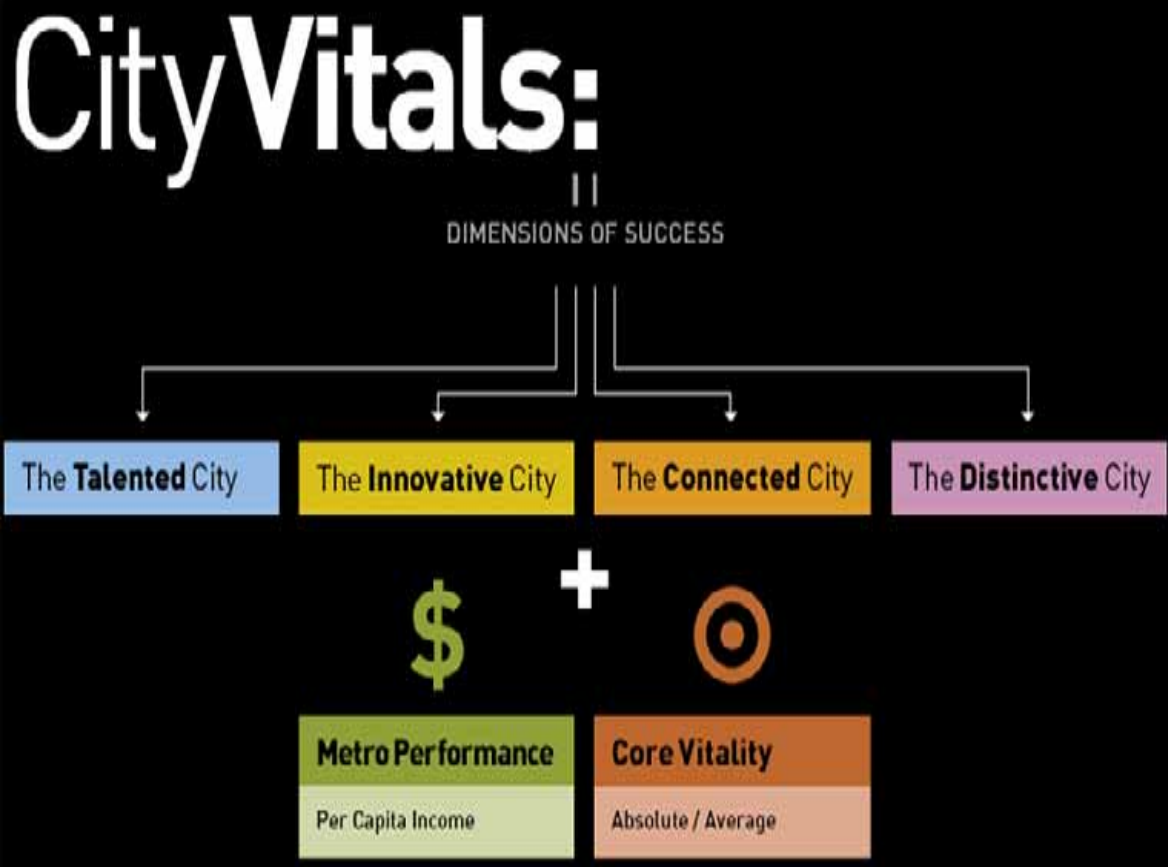
(NYC: Routledge, 2004)

The 4 T's for a sustainable economic development in the 21st C.:

- Talent
- Technology
- Tolerance
- Territory Assets

The creative economy human talent:

- > Super-Creative Core:
 - Computer and mathematical occupations
 - Architecture and engineering occupations
 - Life, physical, and social science occupations
 - Education, training, and library occupations
 - Arts, design, entertainment, sports, and media occupations
- > Creative Professionals:
 - Managerial occupations
 - Business and financial operations occupations
 - Legal operations
 - Healthcare practitioners and technical operations
 - High-end sales and sales management



URBAN-ECONOMIC SUSTAINABLE DEVELOPMENT IN THE 21st CENTURY

= CREATIVE CITY + GREEN CITY = QUALIFIED URBAN SPACES + URBAN CLUSTERS + URBAN MOBILITY + NEW ECONOMY + HUMAN TALENT + URBAN INNOVATION + COMPACT CITY + FLEXIBILITY
+ ...

This mixed economy offers a model of success for a sustainable creative economy. Brazil, given its unique cultural features – has a great opportunity to develop their creative industries and, through them, raise the value-added sector of services and segments of the industry.

(Lídia Goldenstein, Brazilian economist, BNDES; from *Economia criativa – nova oportunidade*, Jornal O Estado de S.Paulo, 27/04/2007)

The creative class and the creative city are two notions which have also recently forged a path to politicians and opinion-leaders in the field of urban society in the Netherlands. In particular, the much-discussed book *The Rise of the Creative Class* by the American economist Richard Florida sits on the bedside tables of city administrators. After our industrial production was taken over by low-wage countries, and now that sections of our service sector have moved there as well, Florida argues that human creativity will be the driver of economic growth in the 21st century. A new economic sector of scientists, researchers, innovative entrepreneurs, architects, designers, media people, artists and consultants is evolving, a sector that earns its living with 'creativity'. Cities that succeed in combining this 'talent', 'technology' and 'tolerance' have the greatest potency: businesses locate where there is talent. A successful urban environment is one that cultivates, fosters and attracts talent, one that generates research and is able to establish a bond with academics, and one which is open to outsiders: a tolerant society.

This development presents myriad new opportunities for cities: redevelopment of former industrial zones, new business activity in the old city centres and new jobs. Urban Clusters.

(S. Franke & E. Verhagen, *Creativity and the City. How the creative economy is changing the city*, Rotterdam: Nai, 2007)

The New York Times

The New São Paulo

Friday, October 5, 2007



The bar in the Edifício Italia, one of the tallest buildings in São Paulo. (image by Lalo de Almeida)

REINVENTING SAO PAULO?

WHERE IS OUR HUGE (13rd WORD'S RICHEST CITY) PRIVATE CAPITAL IF NOT TO INVEST IN THE CITY INNOVATION/CREATIVE ECONOMY?

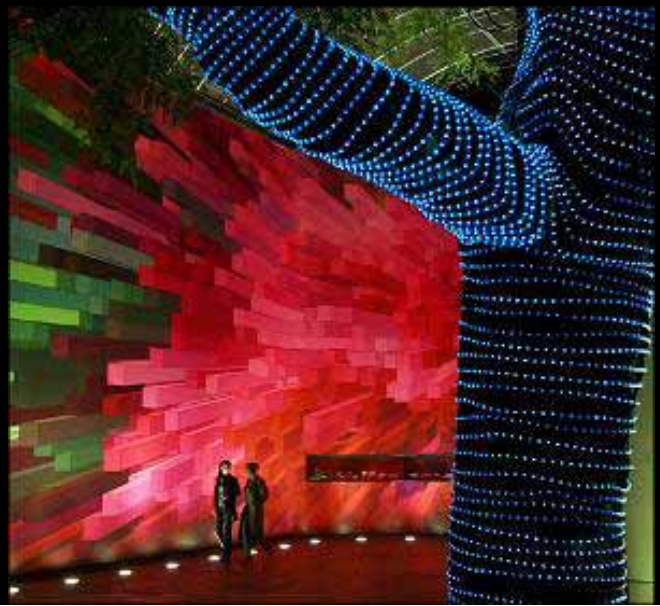
WHERE IS OUR HUGE (1st COUNTRY'S TAX PAYMENT CITY) PUBLIC CAPITAL IF NOT TO IMPROVE THE GROWTH IN THE CITY SUSTAINABILITY (BNDES)?

WHERE IS OUR HUGE POWERFUL NGOs IF NOT TO CATALYZE THROUGH THE HUMAN TALENT'S 3rd SECTOR A REINVENTION OF THIS TERRITORY?

WHERE IS OUR NEW POLITICAL CLASS IF NOT TO ADOPT A LONG-TERM SUSTAINABLE PLANNING IN THIS METROPOLIS?

At 450, São Paulo Is Full of Energy (New York Times, 14.10.2007)

(All images by Lalo de Almeida: <http://query.nytimes.com/gst/fullpage.html?res=9E03E4D6173DF931A15751C0A9629C8B63&sec=travel&spn=&tpagewanted=2>)



ARGUMENTS

The basic question that we raised was concerning the possibility of these innovative environments to operate positive transformations in the new strategies of urban regeneration processes.

We stopped, for a while, our research in Sao Paulo in 2004 to take a closer look at the international project because of its similar problems and conditions: the necessity of putting new productive functions as a basic condition on the strategy of urban regeneration of a huge wasteland.

The case studies are interesting as critical analysis and possible striking to our local reality when the analyzed problems are similar. The vocation of the territory – city and region – is the same: the productive historical vocation. It interests us, over all, the analysis of the problem and its strategy of regeneration, not the importation of models of urban design. It is obvious that the simple transportation of "international success models" is not enough for us. We always have to remember the huge obstacles for the local development in the periphery countries, in our urban areas of low income and with risks of exclusion. The local reality conditions are basic for a correct and critic reading of the territory.

The importance of the rule of strategically planning is fundamental. The joint of the agencies of local planning, management publishes, agencies of public-private urban planning and partnerships are basic in the analyzed cases of success, but here in Brazil we are only initiating this process in our metropolis. The integrated planning within the political, technological, economic and urban dimensions can act as a facilitator of the new economic-territorial organization.

Innovation and technology: transport and accessibility and infrastructure are prerequisites to attract new enterprises. There are no innovative environment in the world without the strong presence in the territory of (a) good urban infrastructure and (b) accessibility of transport and traffic. These conditions were developed before the new urban fabric appearance in San Francisco Mission Bay. But, again, in Brazil, there is a strong problem concerning the continuity of the public budget for specific projects because of the politics and absence of public dimension.

Innovation and human capital. The cases disclose, without exception, the strong presence of generating elements of specialized human capital, "of talent": universities and institutions of strong research. The more the territory has, it is better. Specializations could be highly favourable, as we can see in the huge researches conducted in 50 American cities by Richard Florida and, not by lucky, San Francisco pointed out in the first place on his famous ranking of most creative cities.

Concerning these aspects, Sao Paulo could be considered a favourable place, because of the presence of the main universities and research laboratories of the country. The problem is that we do not have the strategic view of its importance as strategic catalytic elements.

Innovative environments, productive restructuring and urban regeneration. Who is benefited in this new territory? Some questions that emerge immediately:

The economic development: new companies, more jobs? In the new economy, nor in such a way. Or, at least, the jobs and activities highly specialized in the beginning of the process predominate;

The local development: normally the revitalization of the bordering territory is verified. Positive side: re-appearance of spoiled or inexistent urban activities. Risk: radical transformation of the historical vocation of the fabric urban, also by the substantial increase of the price of the land;

Gentrification of the territory? Almost inevitable;

"Elitization" of the innovative environment: the presence only of the specialized human capital, "of talent" predominates in the new territory;

Image of the place: risk of substantial transformation of the place because of the technological resources implementation. However, if the territory always had productive, industrial vocation, it is only about a "new language" for these same vocations urban fabric;

Informational environments: some studies have already suggested emphatically that, in contrast of the predominant common sense, the informational environment communication and interaction system are only complemented with the traditional physical interaction. In clusters innovative of success, it has enormous valuation of the interactive human capital. Innumerable clusters had only had success for account of the rich and unique exchange of information propitiated by the presence, in the same environment, of common activities.

Therefore, it seems evident the unique rule of the metropolis in the new world-wide net of flows and innovative processes. The potential of the central territory regenerated and reorganized productively is immense in the new economy, since that strategically planned.

Under the prism of the sustainable urban development, to come back to grow toward inside the metropolis and not to expand it is another highly excellent aspect in these cases: to recycle the territory is more intelligent of than to substitute it. To reorganize it productively is possible and desirable in the metropolitan strategically planning.

In other words: productively regeneration of existing metropolitan territories must be the other face of the same coin of the new processes of economic and technological innovation.

Finally, despite of the enormous potential existing in Brazilian metropolises as Sao Paulo, we must still remember our immense local, inherent difficulties to a country in development process. Here, we cannot only demand the infrastructure and accessibility installations, for example, without before facing the challenges of abilities accumulation and of the construction of an ample social process that stimulates the local development.

If our metropolis can generate efficiency, diversity and innovation, it will be from proper models, which does not exclude, however, a process of cross-critical learning with the international and pioneering cases. Metropolis like Sao Paulo must urgently define its (enormous) paper in XXI Century. After all, as it is known, the future is not something that simply happens, but is created by us.

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(BY: CLIMATECHANGE.FLINDERS.EDU.AU/BL0G.HTM)

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Carlos Leite. Metrô x Retrô: Califórnia 2004. Cidades, diversidade, inovação, clusters e projetos urbanos in: <http://www.vitruvius.com.br/arquitextos/arg059/arg059_00.asp>