

SAO PAULO 2007::ENDLESS GLOBAL CITY & ENVIRONMENTAL (DES)CONTINUITIES

CARLOS LEITE, ARCH.,PHD



METROPOLITAN BLINDNESS: 1
100 YEARS OF ENVIRONMENTAL MASS
DESTRUCTION, SAO PAULO
AN UNCONVENIENT 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
BARCELONA 22@
MONTREAL ATELIERS ANGUS
MONTREAL CITÉ MULTIMÉDIA

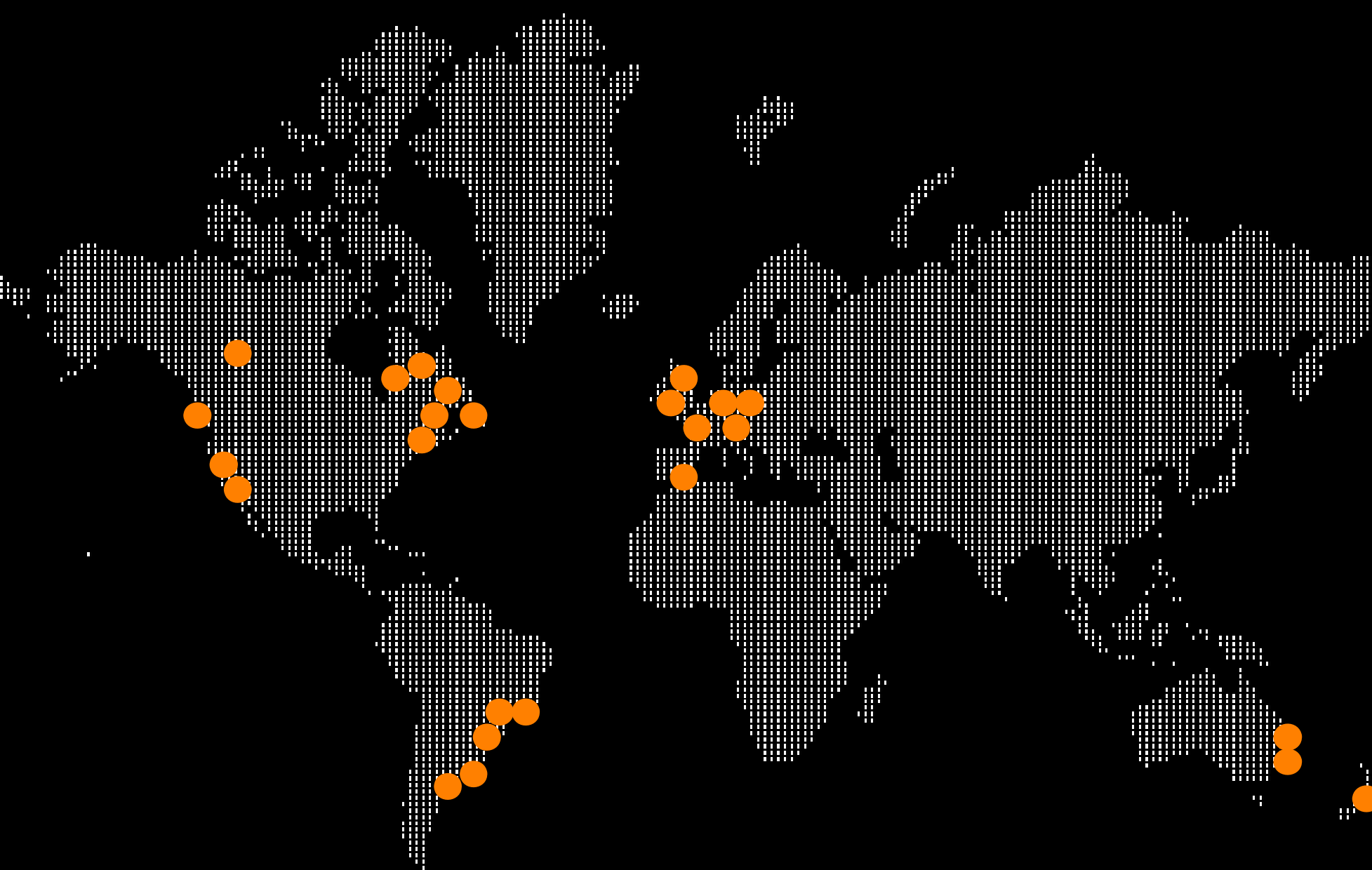
GLOBAL CITIES & SUSTAINABILITY 4
HOW GREEN IS YOURS?

PORTAL EDUCATORIUM
WWW.EDUCATORIUM.COM/LEITE

GLOCAL CITY SUSTAINABILITY::SAO PAULO CONTEXT+LESSONS FROM



- RIO
- CURITIBA
- BRASILIA
- MONTEVIDEO
- BUENOS AIRES
- SAN FRANCISCO
- LOS ANGELES
- SAN DIEGO
- NEW YORK
- BOSTON
- WASHINGTON DC
- TORONTO
- MONTREAL
- WINNIPEG
- DUBLIN
- LONDON
- CAMBRIDGE
- PARIS
- LILLE
- BERLIN
- AMSTERDAM
- ROTTERDAM
- BRUSSELS
- MILAN
- BARCELONA
- AUCKLAND
- SYDNEY
- BRISBANE



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

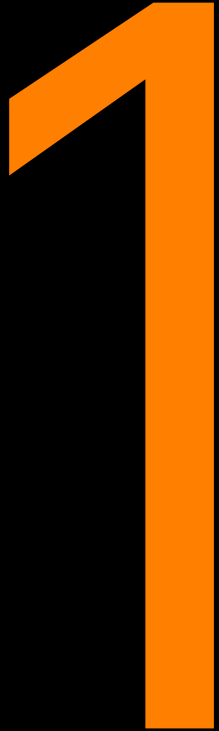




ENERGY CONSUMPTION OF THE WORLD THROUGH CITIES (BY EARTH'S CITY LIGHTS PHOTO VIA NASA)

world civilization warning

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



Sao Paulo Metropolitan Blindness

100 years Environmental Mass Destruction

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	5.5 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

- >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



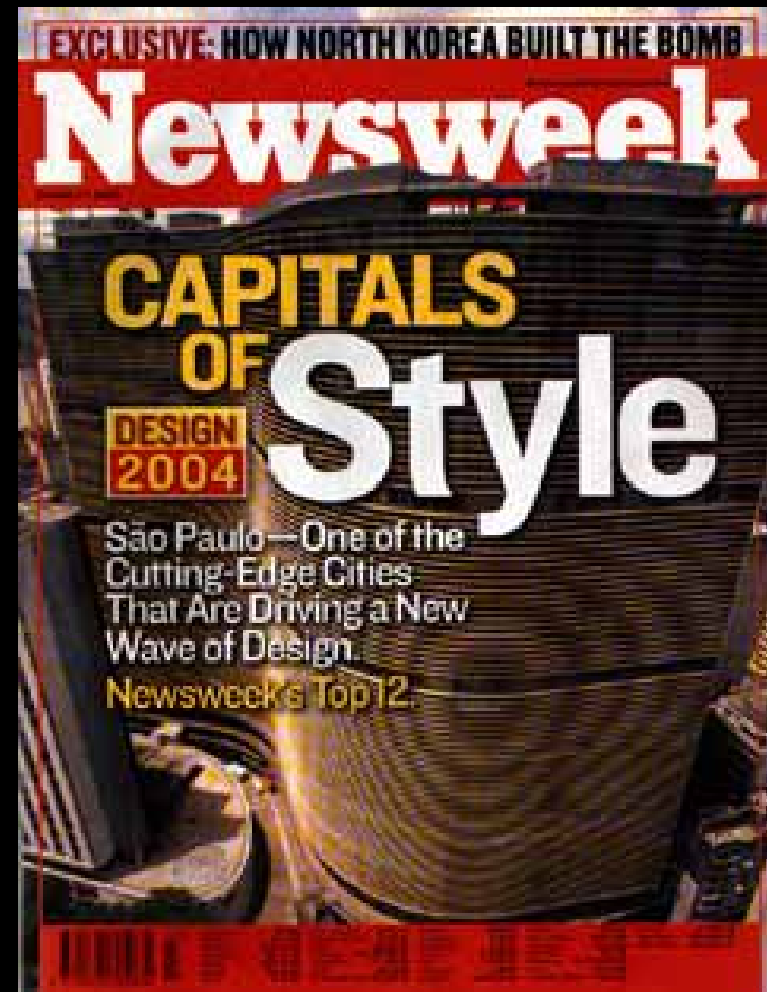
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OSCAR NIMEMAYER'S COPAN BLDG., BRAZILIAN
UNITÉ D'HABITACIÓN W/ 5,000 PEOPLE,
DOWNTOWN SAO PAULO, 1951
(NEWSWEEK MAGAZINE, 2004)



scene 2::railroad axis [inner city emptiness]

- > 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



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



INNER CITY EMPTINESS

Brownfields being occupied by favelas (shanty-towns)



INNER CITY CROWD

Open spaces being occupied by camelos (street-vendors)

scene 3 > the periphery [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?



IMAGE BY LASLO ALMEDA, FOLHA DE S. PAULO





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

STATEMENT?

"EVERY NOTION WE MAY HAVE ABOUT PLANNING AND ARCHITECTURE EVAPORATES HERE. WHAT DO YOU DO ABOUT CITIES WITH OVER 10 MILLION INHABITANTS? WHAT DO YOU DO ABOUT CITIES THAT THREATEN TO SWELL INTO METROPOLISES OF 25 MILLION INHABITANTS (SAO PAULO AND RIO DE JANEIRO)? WHAT DO YOU DO ABOUT CITIES THAT WERE PLANNED FOR A FEW HUNDRED THOUSAND PEOPLE BUT WITHIN A FEW DECADES HAVE 2 TO 3 MILLION INHABITANTS? YOU CANNOT DO THEM JUSTICE WITH 'NORMAL' PLANNING OR 'NORMAL' ARCHITECTURE. THAT WOULD SUGGEST THAT THE CONTEMPLATIVE SLOWNESS OF THE PLAN OR DESIGN WOULD WORK HERE. IN BRAZIL, ACTION IS CHRONICALLY OVERTAKEN BY EVENTS. NO TIME FOR CONSIDERATION, NO TIME FOR REFLECTION. THAT'S A EUROPEAN LUXURY, BUT HERE EVERY MUNICIPAL ORGANIZATION IS POWERLESS AGAINST THE PROLIFERATION OF THE CITY. ALL THAT CAN BE DONE IS TO KEEP THINGS UNDER CONTROL. URBAN PLANNING BECOMES A MATTER OF POLICING RATHER THAN A POLITICAL OR CULTURAL DISCIPLINE."

JOHN BOSCH, JULIETTE VAN DER MEIJDEN, MAURICE NIO, WIM NIJENHUIS, NATHALIE DE VRIES (MVRDV) IN "EATING BRASIL" (ROTTERDAM, 010, 1999)



2

Environmental Continuities:

Theory & praxis in urban sustainability, Sao Paulo

Global Cities

20 JUNE - 27 AUGUST 2007

MODERN



PICTURES BY NELSON KON



BY WWW.TATEONLINE.COM

SAO PAULO IS ETHNICALLY DIVERSE AND YOUNG: 66% OF ITS POPULATION IS UNDER 20. THE CITY HAS REMAINED MULTICULTURAL SINCE THE NINETEENTH CENTURY, WHEN THE REGION'S COFFEE PLANTATIONS ATTRACTED WORKERS FROM SPAIN, PORTUGAL AND JAPAN. MANY RESIDENTS ARE OF MIXED ETHNIC ORIGINS, DESCENDANTS OF MIGRANTS FROM MANY PARTS OF THE WORLD. IT IS SAID THAT SAO PAULO IS THE LARGEST JAPANESE CITY OUTSIDE JAPAN, THE LARGEST PORTUGUESE CITY OUTSIDE PORTUGAL, THE LARGEST SPANISH CITY OUTSIDE SPAIN, AND THE LARGEST LEBANESE CITY OUTSIDE LEBANON. MORE RECENT MIGRANTS FROM BRAZIL'S POOREST NORTH-EAST REGIONS FORM A LARGE PROPORTION OF THE CITY'S LOW-PAID SERVICE WORKERS.

SAO PAULO IS PROSPEROUS COMPARED TO THE REST OF BRAZIL, BUT POVERTY, UNEMPLOYMENT AND CRIME REMAIN MAJOR CHALLENGES. IN CONTRAST, THE CITY'S WEALTHY POPULATION IS REFLECTED BY ITS MORE THAN 1,000 PRIVATE HELICOPTERS, A RATE OF OWNERSHIP SIMILAR TO NEW YORK CITY AND TOKYO.

THE POPULATION OF THE CENTRAL DISTRICT HAS DECLINED STEADILY SINCE THE 1970S. DESPITE AMBITIOUS REVITALISATION PLANS, WEALTHY RESIDENTS AND BUSINESSES STILL MOVE OUT. THE POPULATION IS GROWING MOST IN PERIPHERAL AREAS WITH THE POOREST INFRASTRUCTURE.

CITY SUSTAINABILITY & GREEN DESIGN IN SAO PAULO?

PROJECT: 100 NEW SCHOOLS FOR SAO PAULO IN 2000, THE SCHOOL ATTENDANCE RATE OF 11-14 YEAR OLDS IN PERIPHERAL URBAN NEIGHBOURHOODS OF SAO PAULO STATE WAS ROUGHLY 20%. A LACK OF SCHOOL FACILITIES COMPOUNDED THE PROBLEM.

THE INITIATIVE TO ERECT 100 NEW SCHOOLS IS A DIRECT RESPONSE TO THIS CHALLENGE. THE SAME CONSTRUCTION GUIDELINES APPLY TO EVERY SITE: A HIGH-QUALITY DESIGN, SIMPLE PRE-FABRICATED STRUCTURES AND DURABLE MATERIALS. PROJECTS HAVE LOW COSTS AND SHORT TURN-AROUND TIMES. BEYOND ITS EDUCATIONAL ROLE, THE SCHEME HAS ALSO PROVIDED AFTER-HOURS, MULTI-PURPOSE SPACES FOR THE LOCAL COMMUNITIES. NEARLY 30 PROJECTS HAVE BEEN COMPLETED TO DATE.

SAO PAULO: FAVELAS UP GRADE?

CREATING ENVIRONMENTALLY FRIENDLY ARCHITECTURE IN THE METROPOLIS:
TRANSFORMING THE PERIPHERY FAVELAS INTO NEIGHBOURHOODS:
(PUBLIC SCHOOL AT FAVELA JARDIM ATALIBA LEONEL,
BY ALVARO PUNTONI & ANGELO BUCCI ARCHITECTS, 2005)



FAVELAS UPGRADE?

Creating environmentally friendly architecture in the metropolis: transforming the peripheral shanty-towns into neighbourhoods: reurbanization program in Cantareira Range [ex-Atlantic Tropical Forest]

These illegal settlements lack even the most rudimentary services such as drainage, electricity and clean water

Images from www.vitruvius.com.



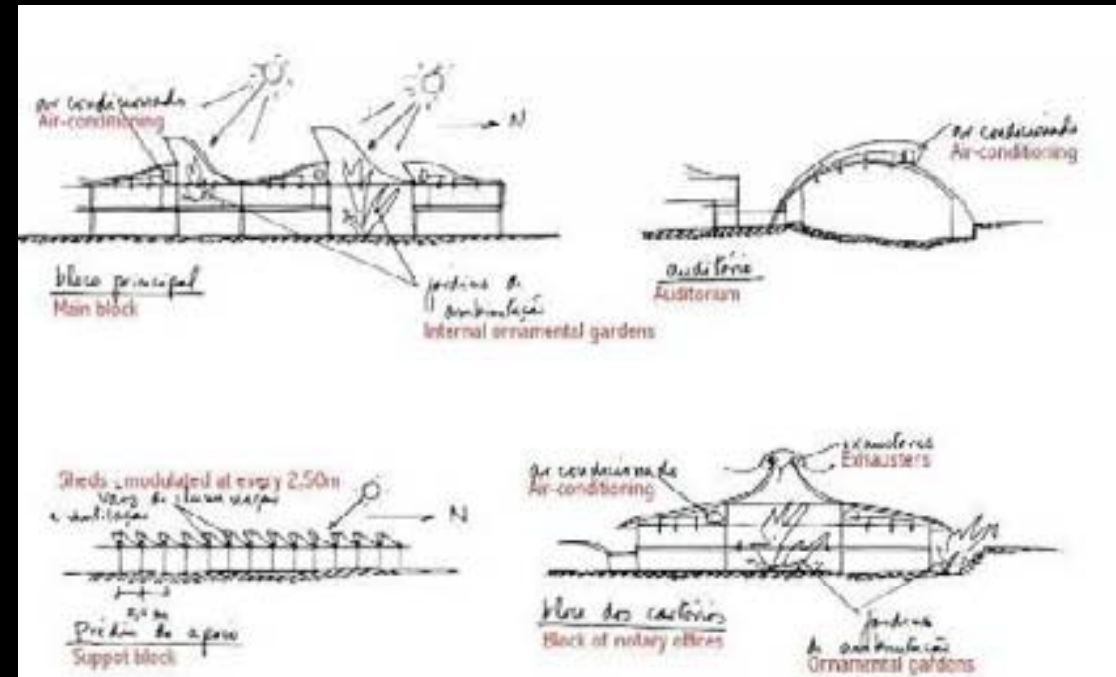


HELIO OLGA HOUSE,
MARCOS ACAYABA,
ARCH:
CERTIFICATED WOOD
ARCHITCTURE IN SAO
PAULO
(PICTURE BY NELSON KON)

GREEN DESIGN IN SAO PAULO & BRAZIL



LELÉ, ARCH: HOSPITALS & PUBLIC EQUIPMENTS IN BRAZIL: PIONEERING LOW-TECH GREEN DESIGN SOLUTIONS IN MODERN ARCHITECTURE



ELEMENTS OF AN "ECO-FRIENDLY-DESIGN" WAS ALWAYS PRESENT AT THE BEST EXAMPLES OF BRAZILIAN MODERN ARCHITECTURE



PARQUE GUINLE URBAN PARK & COLLECTIVE HOUSING PROJECT,
RIO, DE JANEIRO LUCIO COSTA ARCH, 1941

(PICTURES BY NELSON KON)



URBAN REGENERATION & PRODUCTIVE RESTRUCTURING PROCESS: RESEARCH PRECEDENTS

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

[CARLOS LEITE::ARCHITECTURE+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.

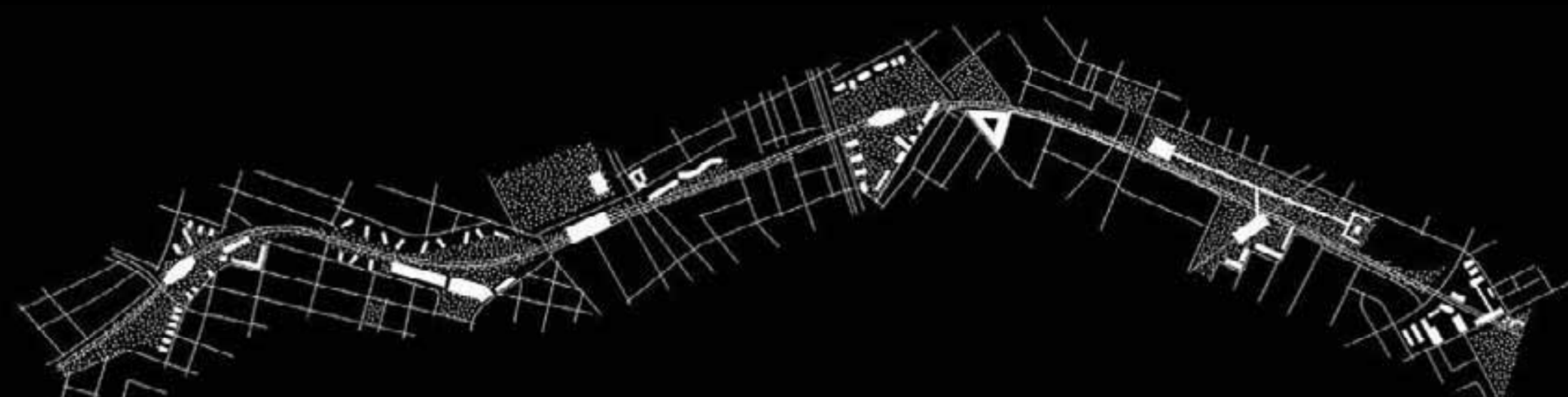
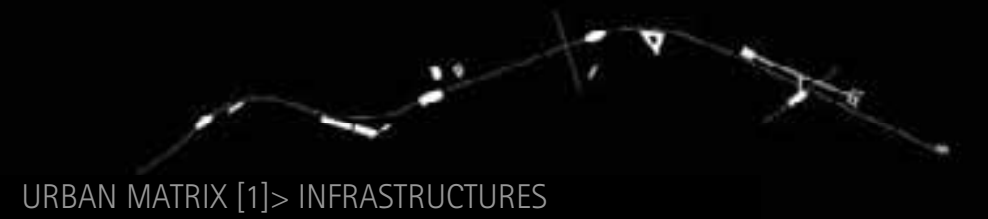
Master plan strategy: rescuing integrated sustainability inside the contemporary metropolis

- > OLD INDUSTRIAL LAND: BROWNFIELDS WAITING TO BE REMEDIATED AND TERRITORY REFUNCTIONALIZED
- > THE RAILROAD AXIS AS THE ULTIMATE OPPORTUNITY OF CREATING A COMPACT CITY INSIDE THE METROPOLIS



Master plan strategy: rescuing integrated sustainability inside the contemporary metropolis

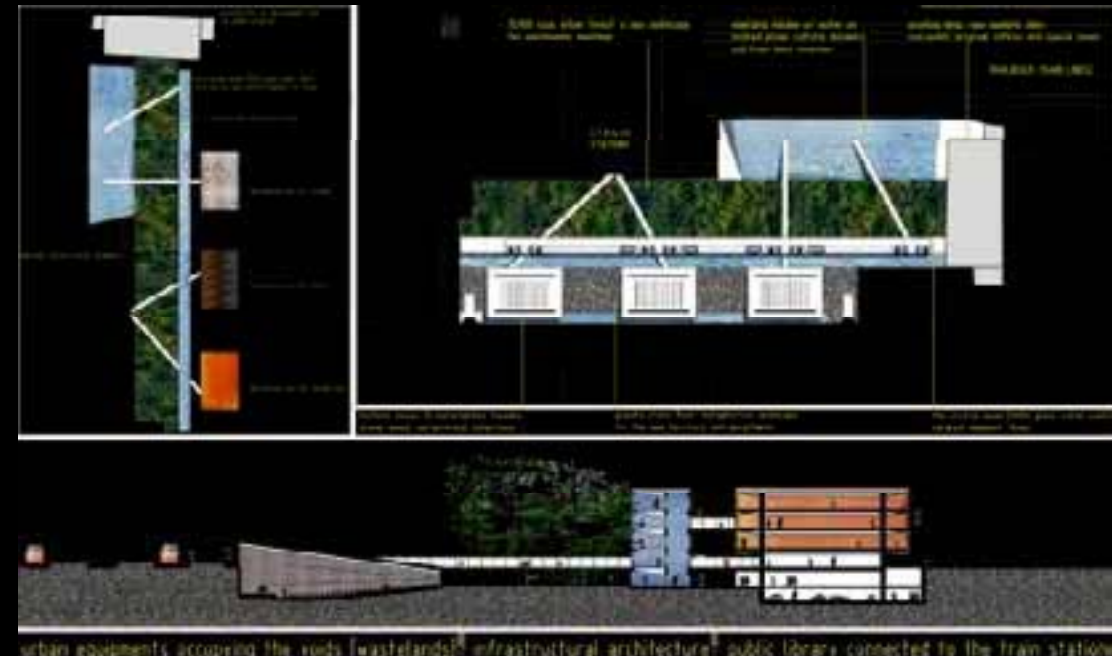
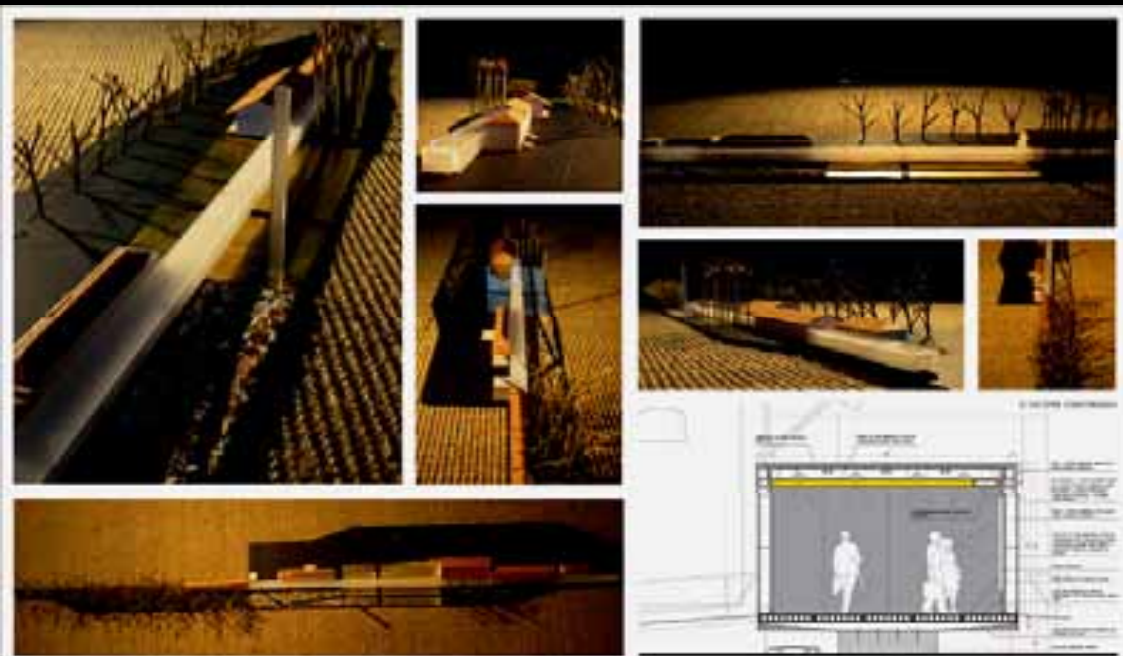
URBAN DIAGRAMS



Zoom areas interventions:

rescuing integrated sustainability inside the contemporary metropolis trough the redevelopment of brownfields into contemporary uses in metropolitan inner territory: creating a compact city

Projects and Images by Carlos Leite



urban equipments occupying the voids (wastelands) | infrastructural architecture | public library connected to the train station

3

Environmental Continuities II:

Brownfields urban-economic redevelopment & city innovation

Lessons from:

- > 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]

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 - "millieux 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.

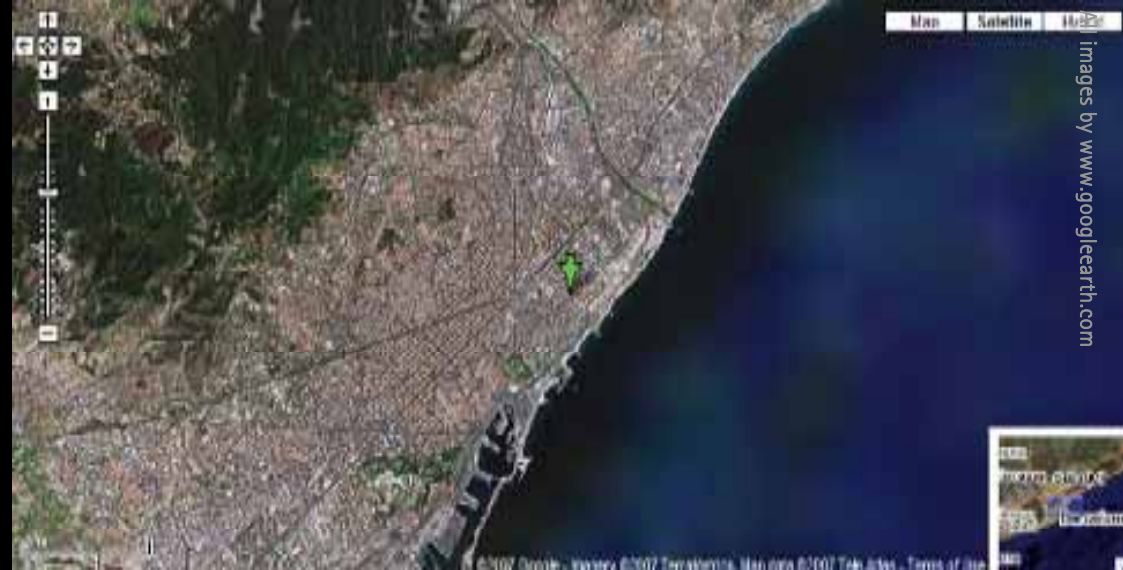
How creative strategies to reconfigure the urban dimension and the sustainable redevelopment can be generated from the new formats of local economic development [LED] - innovative environments and clusters?

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@

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



SAO FRANCISCO MISSION BAY

URBAN PROJECT BASED IN A STRATEGY OF URBAN INNOVATION AND BIOTECH CLUSTERS ESTABLISHING THE DESIRABLE PROCESS OF PRODUCTIVE REORGANIZATION OF 303 ACRES URBAN EMPTINESS TERRITORY: GIVING BACK THE METROPOLIS TO GROW TOWARD INSIDE, FUNCTIONALLY REHABILITATING ITS CENTRAL AREAS IN CONTRAPOSITION TO THE PERIPHERAL URBAN SPRAWL

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



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



BARCELONA 22@

INNOVATIVE PROGRAMS:

- >@TECHNOLOGY
- >@MEDIA
- >@IT
- >@BIO-COMPANIES
- >@CAMPUS
- >@POBLENOU
- >@ENTERPRISE



MONTREAL ATELIERS ANGUS

- > Pioneer case on large brownfield cleaning in Canada: important presence of the Canadian agencies of soil remediation
- > Reconversion of an old railyard into a mix of residential, commercial and industrial uses
- > 2 Phases: 1978-94, 110 acres, no soil remediation; 1998-2006, 120 acres, soil cleaned
- > A "flagship": an economically viable solution to soil remediation



1992: Fermeture définitive des ateliers (état de friche)





(IMAGES BY R.GOUVEIA/C.LEITE)

Le redéveloppement des anciens ateliers Angus





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.SDMTL.ORG/ENGLISH/FICHE_1020_EN.PHP](http://www.sdmtl.org/english/fiche_1020_en.php))

(IMAGES BY: C.LEITE)



MONTREAL CITÉ MULTIÉDIA

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



Cité Multimédia Parc technologique		Voisinage
	Ouverture	
1	1996	A Incubateur CÉIM, 33 rue Prince
2	1999	B The Zone, 10 rue Duke
3	2000	C Centre d'art: Quartier Éphémère
4	2000	D Hydro-Québec, Centrale 1
5	2001	E Hydro-Québec, Centrale 2
6	2001	F Centrale thermique CCUM
7	2002	
8	2003	
		Habitation
		G Quai de la Commune, 331 unités
		H 1 McGill, 135 unités
		I 100 McGill, 12 unités



4

Global Cities: How green is yours?

> URBAN REDEVELOPMENT+SUSTAINABLE CITIES COMPETITIONS+COMAPCT CITIES+URBAN DENSITY & ENERGY COMSUPTION+CITIES WASTE PRODUCTION+AND...

GLOBAL WARMING & URBAN HEAT ISLAND EFFECT: GLOBAL CITIES CROWDS



(PICTURES BY BBC-BRASIL)

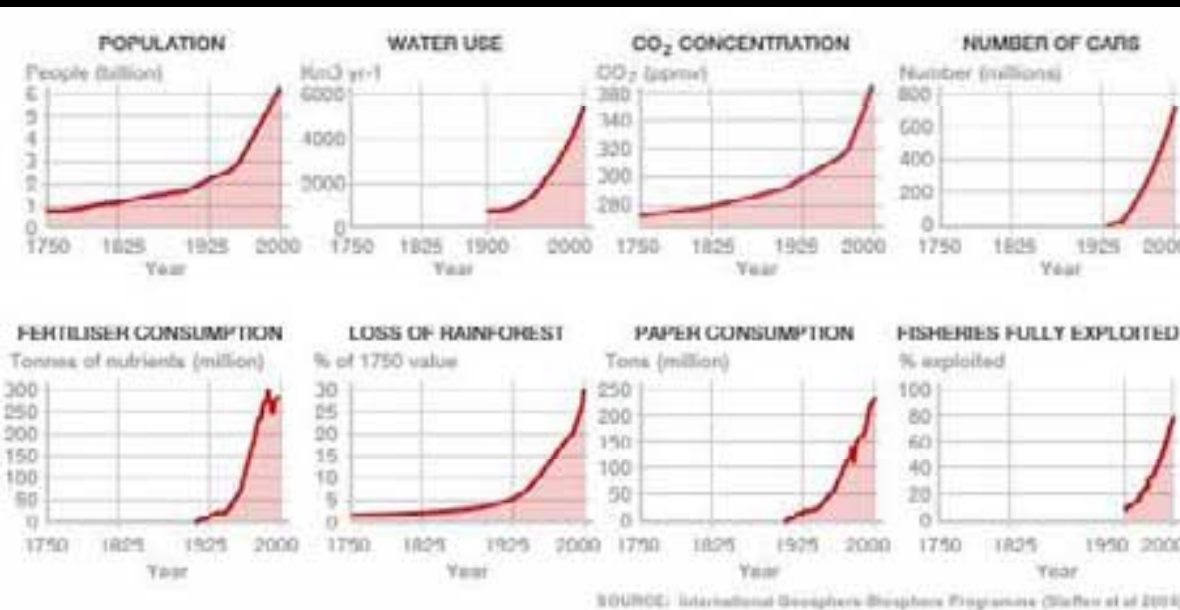


CITIES COVER LESS THAN ONE PER CENT OF THE EARTH'S SURFACE BUT...

- > 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)

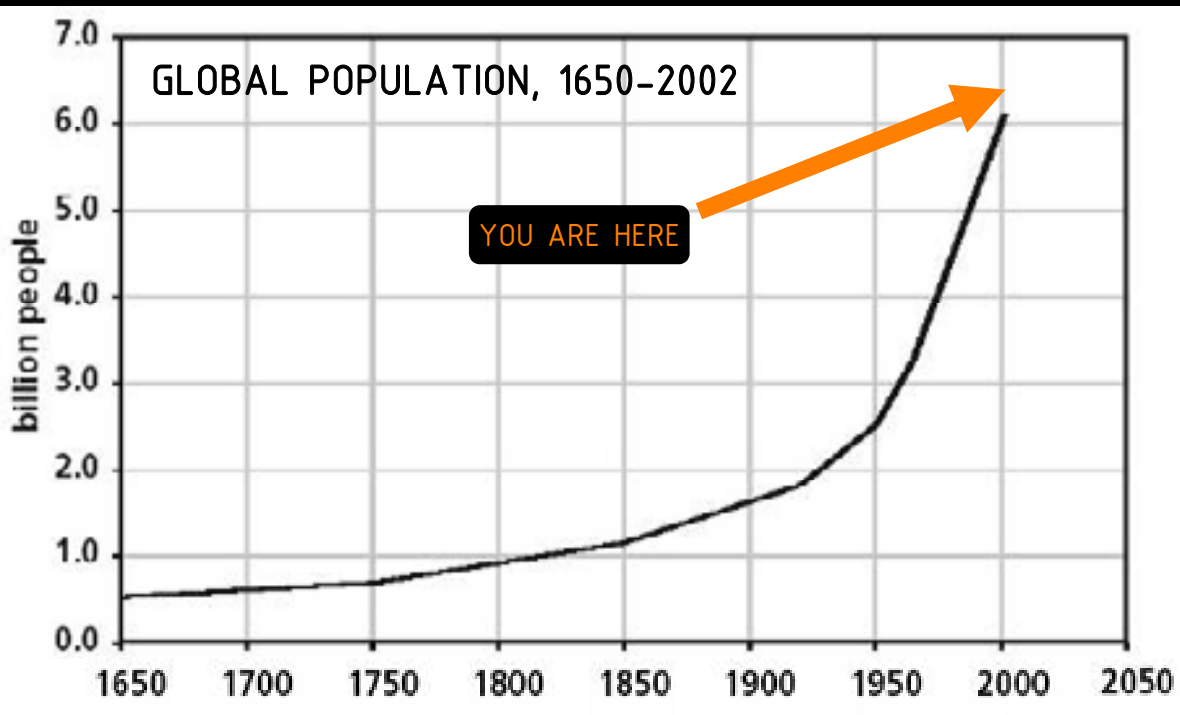
GLOBAL WARMING: A FEW RELEVANT INDICATORS:



WE HAVE IT:



EXPONENTIAL GROWTH... AGAINST SYSTEM LIMITS:



AND WE ARE USING IT:

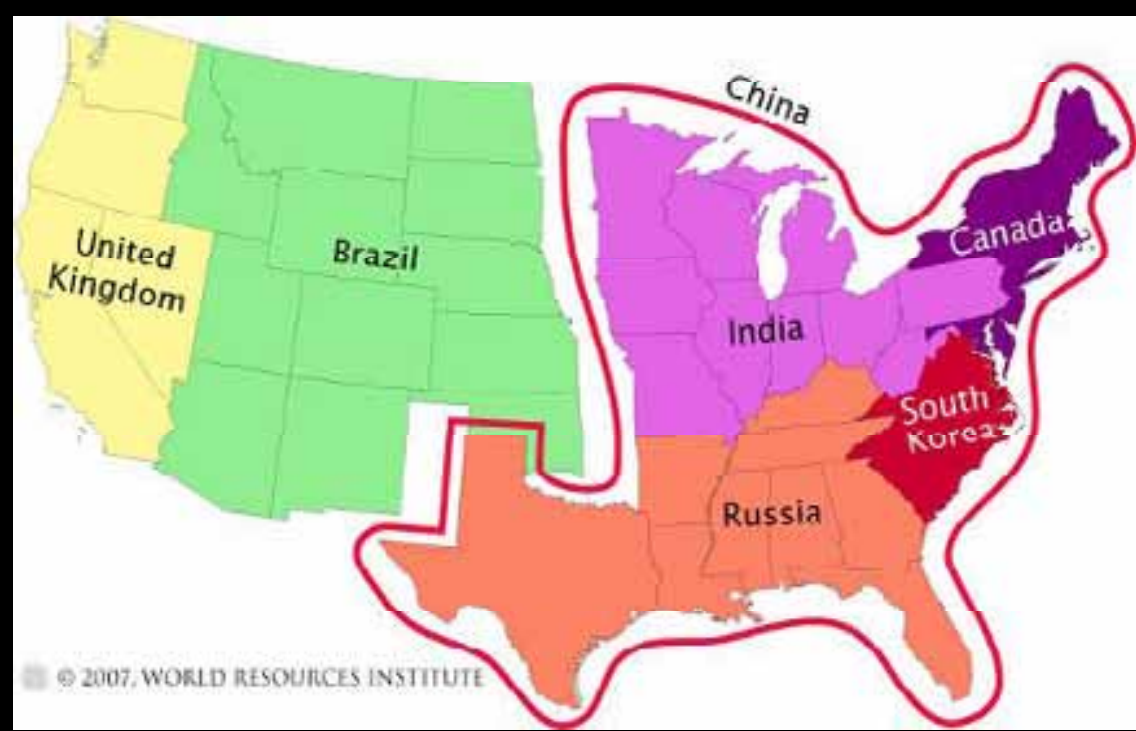
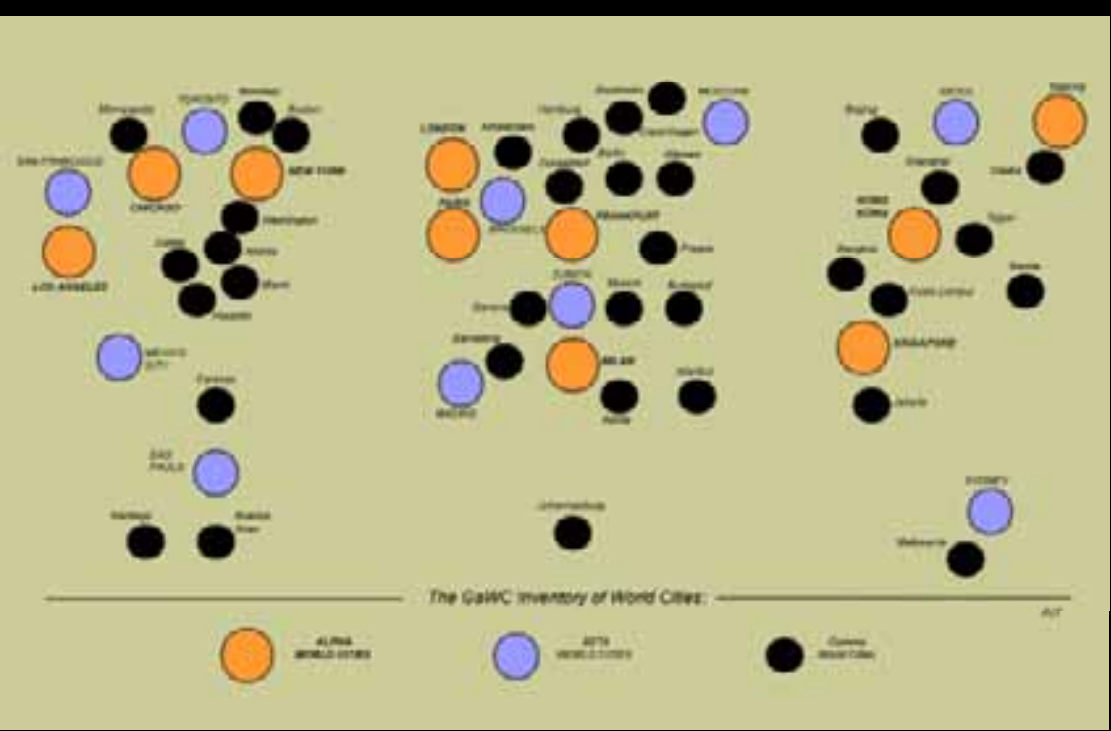


-ELKINGTON, J. CANNIBALS WITH FORKS: THE TRIPLE BOTTOM LINE OF 21ST CENTURY BUSINESS. CONNECTICUT: NEW SOCIETY PUBLISHERS, 2005.

-GORE, AL. AN UNCONVENIENT TRUTH. THE PLANETARY EMERGENCY OF GLOBAL WARMING AND WHAT WE CAN DO ABOUT IT. NEW YORK, RODALE, 2006.

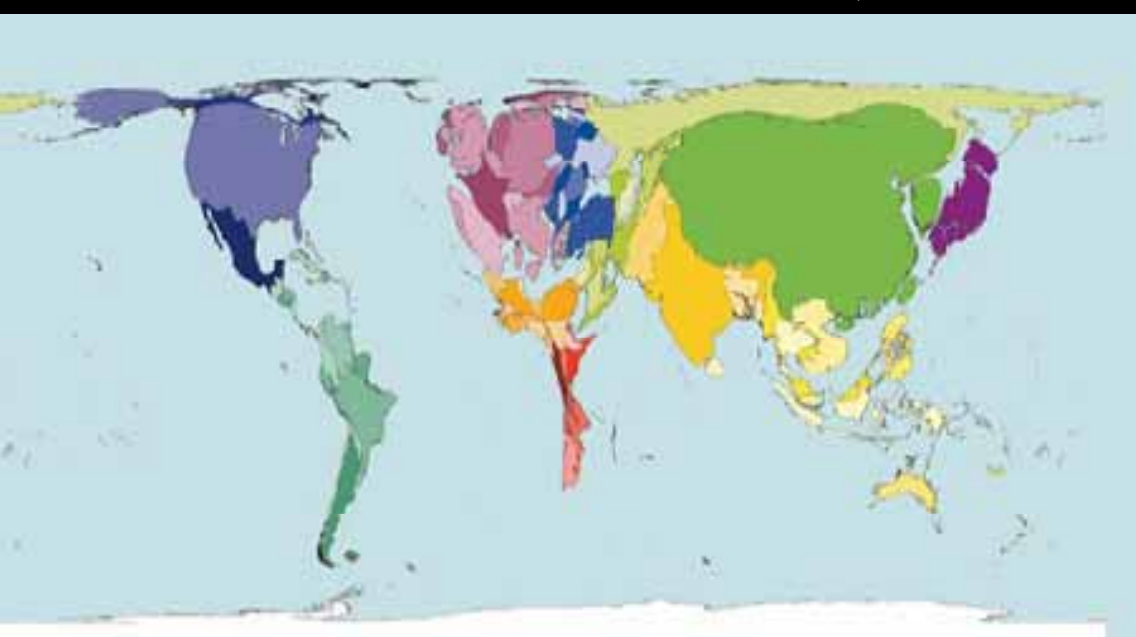
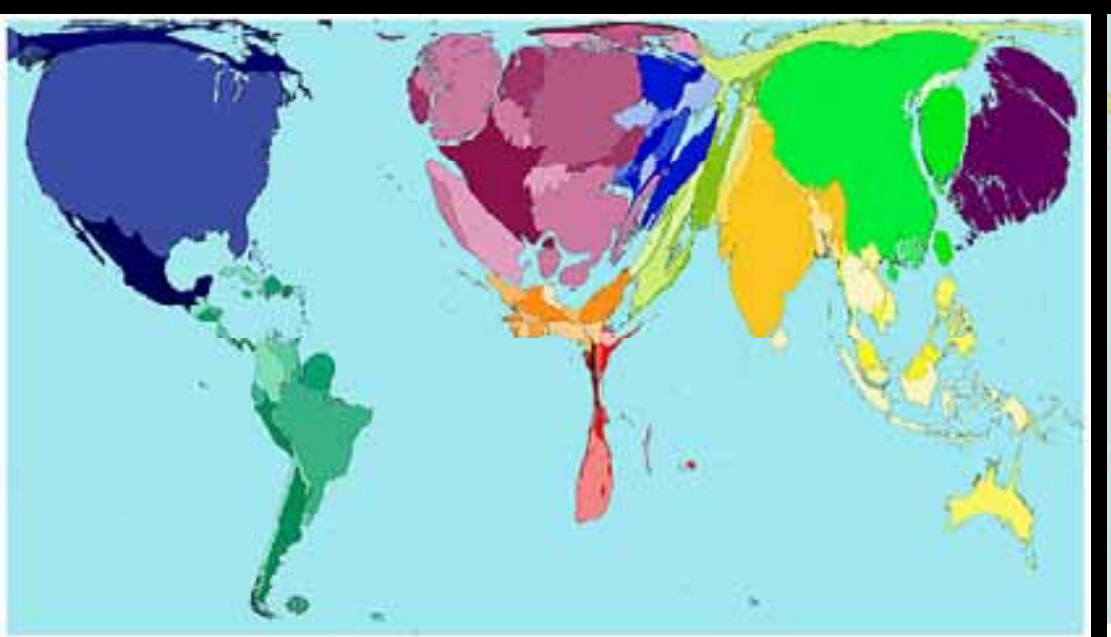
(GRAPHICS AND DATA BY GLOBAL TREND GRAPHS FROM BBC WEBSITE, "PLANET UNDER PRESSURE", 2004 ACCELERATOR: A TOOLBOX FOR USTAINABLE DEVELOPMENT BASED ON THE ISIS METHOD, ATKISSON GROUP, 2005;; NICOLA BOULD/DESIGN)

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



WORLD CITIES: ALPHA, BETA & GAMMA (BY GAWC INVENTORY OF WORLD CITIES & S.SASSEN)

US GREENHOUSE GAS EMISSION COMPARED TO OTHER COUNTRIES (BY: AMERICAN INDICATORS, THE PROGRESSIVE REVIEW)



WORLD WEALTH SIZE PROPORTION (BY WWW.WORLDMAPPERS.COM)

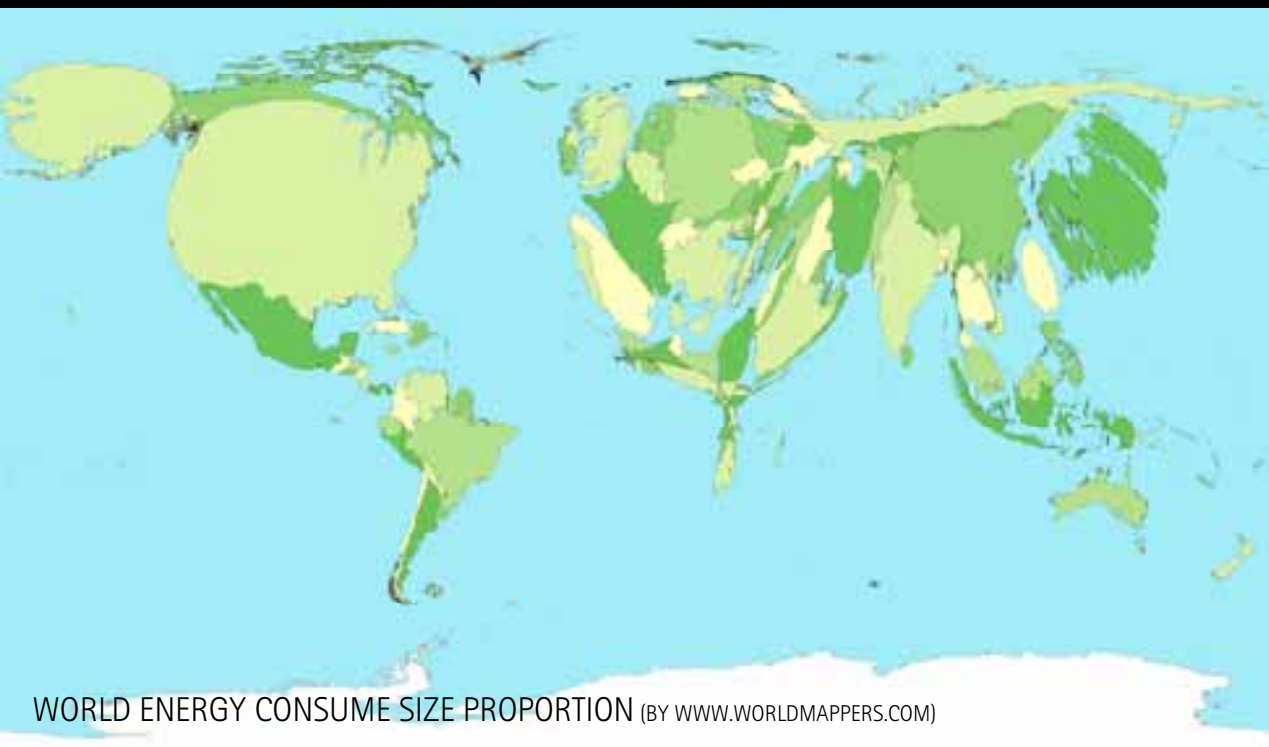
WORLD CITIES CARBON EMISSION SIZE PROPORTION (BY WWW.WORLDMAPPERS.COM)

"AMERICAN BEAUTY" URBAN SPRAWL WAY OF LIVING: FROM AMERICA TO THE WORLD?

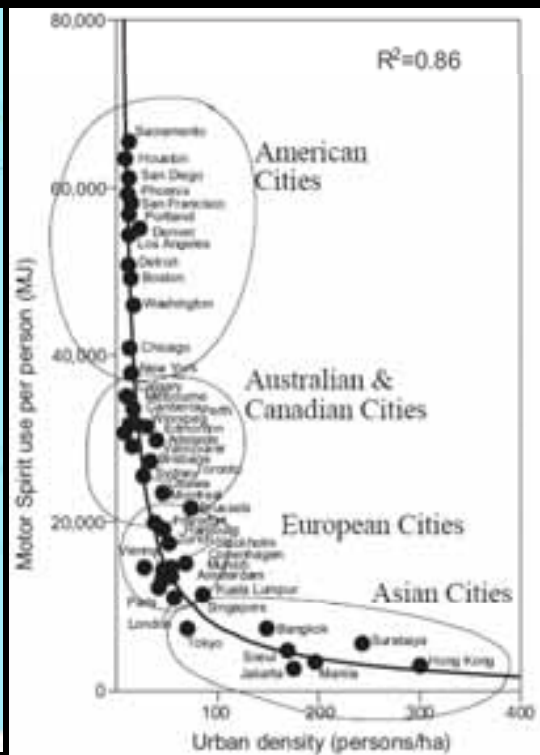
CAN THE AMERICAN DREAM SUBURB COPE
AS IT MORPHS INTO
A VAST LANDSCAPE OF CONFLICT?



"AMERICAN BEAUTY" URBAN SUBURBS WAY OF LIVING



WORLD ENERGY CONSUME SIZE PROPORTION (BY WWW.WORLDMAPPERS.COM)



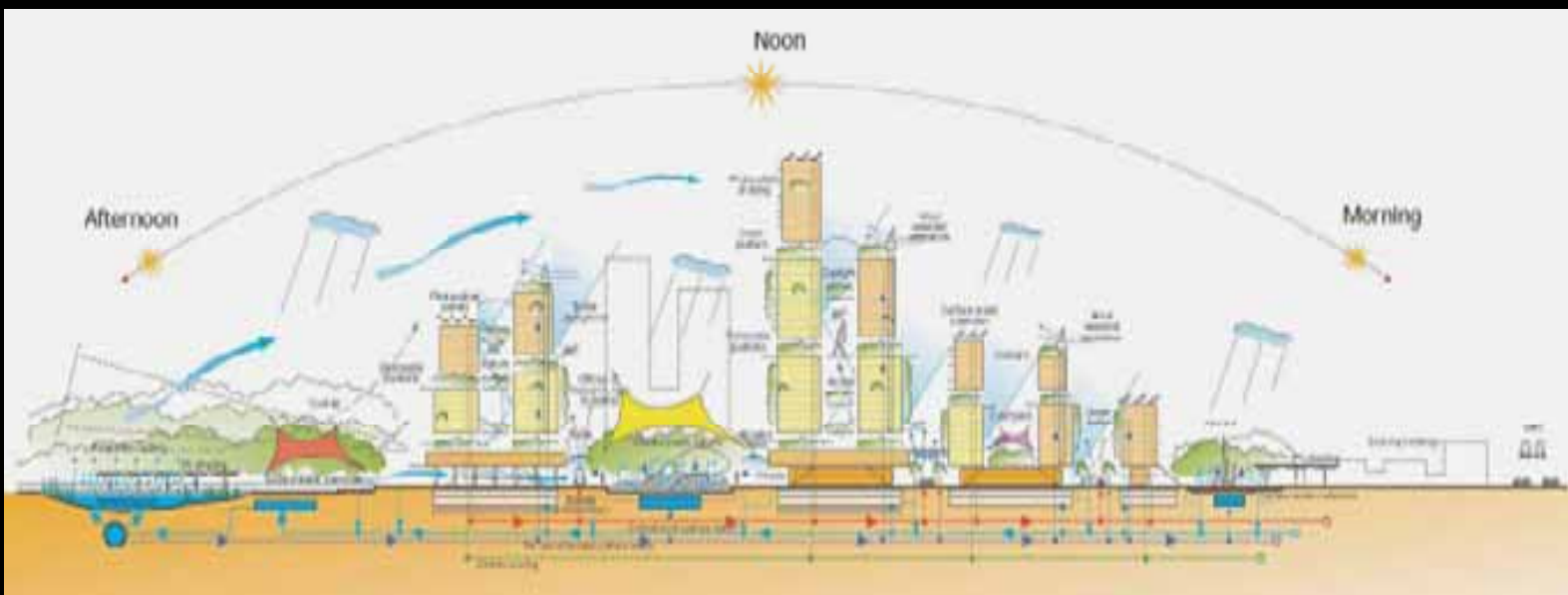
CITIES ENERGY CONSUME VS DENSITY

VS

COMPACT CITIES OPTION

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

Encouraging the redistribution, linkage and weaving; together can help to make public events accessible to all the community



15 GREEN CITIES IN THE WORLD

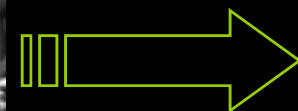
(BY: [HTTP://WWW.GRIST.ORG/NEWS/MAINDISH/2...IES/INDEX.HTML](http://www.grist.org/news/maindish/2...IES/INDEX.HTML))

1	REYKJAVIK, ISL	6	CONPENHAGEN, DIN	11	BARCELONA, SPA
2	PORTLAND, USA	7	LONDON, ENG	12	BOGOTA, COL
3	CURITIBA, BRA	8	SAN FRANCISCO, USA	13	BANGKOK, THA
4	MALMÖ, SWE	9	BAHÍA DE CARAQUEZ, EQUA	14	KAMPALA, UGA
5	VANCOUVER, CAN	10	SYDNEY, AUS	15	AUSTIN, TEX

RANKING THE GREENER CITIES IN THE GLOBALIZED WORLD CITY MARKETING AND INVESTMENTS COMPETITION

THE ECONOMIST INTELLIGENCE UNIT RANKS VANCOUVER #1 LIVEABLE AND SUSTAINABLE CITY IN THE WORLD (BY [WWW.MERCAOÉTICO.TERRA.COM.BR](http://www.mercaoético.terra.com.br))

RESULTS OF THE 2007 MOST SUSTAINABLE CITIES RANKING PUTS QUEBEC CITY NO 1 IN CANADA (BY CORPORATE KNIGHTS)



(BY: [HTTP://WWW.SUSTAINLANE.COM/US-CITY-RANKINGS](http://www.sustainlane.com/us-city-rankings))

HOW CITIES CAN HELP?

- > SOLAR PV ON BUILDING. (COPYRIGHT GREENPEACE/DAVISON)
- > CREATING BUILDING CODES AND STANDARDS THAT INCLUDE PRACTICAL, AFFORDABLE CHANGES THAT MAKE BUILDINGS CLEANER AND MORE ENERGY EFFICIENT.
- > CONDUCTING ENERGY AUDITS AND IMPLEMENTING RETROFIT PROGRAMS TO IMPROVE ENERGY EFFICIENCY IN MUNICIPAL AND PRIVATE BUILDINGS.
- > INSTALLING MORE ENERGY EFFICIENT TRAFFIC AND STREET LIGHTING.
- > IMPLEMENTING LOCALISED, CLEANER ELECTRICITY GENERATION SYSTEMS.
- > DEVELOPING BUS RAPID TRANSIT AND NON-MOTORISED TRANSPORT SYSTEMS.
- > USING CLEAN FUELS AND HYBRID TECHNOLOGIES FOR CITY BUSES, RUBBISH TRUCKS, AND OTHER VEHICLES.
- > IMPLEMENTING SCHEMES TO REDUCE TRAFFIC, SUCH AS CONGESTION CHARGES.
- > CREATING WASTE-TO-ENERGY SYSTEMS AT LANDFILLS.
- > IMPROVING WATER DISTRIBUTION SYSTEMS AND LEAK MANAGEMENT.

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



REQUEST FOR PROPOSAL: CAN DESIGNERS SAVE OUR CITIES?

BUILDING AND LANDSCAPE ARCHITECTS, ALONG WITH INDUSTRIAL, INTERIOR, AND GRAPHIC DESIGNERS AND ARTISTS CAN ALL PLAY A PIVOTAL ROLE. MOST OF THE 91,000 DESIGNERS IN CANADA, INCLUDING ARCHITECTS, LANDSCAPE ARCHITECTS, INDUSTRIAL, INTERIOR, GRAPHIC AND FASHION DESIGNERS, LIVE AND WORK IN CITIES. WITH 25,000, TORONTO IS THIRD IN NORTH AMERICA (BEHIND NEW YORK AND BOSTON) IN THE NUMBER OF DESIGNERS THE CITY EMPLOYS [DIAC DESIGN INDUSTRY STUDY, 2004]. WITH SO MUCH CREATIVE BRAINPOWER AT THEIR DISPOSAL, YOU WOULD EXPECT CANADIAN CITIES TO BE AT THE FOREFRONT OF URBAN INNOVATION. YES THEY HAVE LEED-CERTIFIED BUILDINGS AND ICONIC ARCHITECTURE—BUT IS THAT ALL IT TAKES? ARE DESIGNERS REALLY MAKING AN IMPACT ON SUSTAINABLE CITY-BUILDING WHEN IT COMES TO ECONOMIC COMPETITIVENESS, SOCIAL EQUALITY, PUBLIC SAFETY, AN AGING POPULATION, AND REDUCING ENVIRONMENTAL IMPACTS?

TORONTO'S GREEN ROOFTOPS
MUNICIPAL INICIATIVE

(<http://www.toronto.ca/greenroofs/findings.htm>)

(BY ARLENE GOULD, FEBRUARY 27, 2007, WWW.THECORPORATEKNIGHTS.CA)

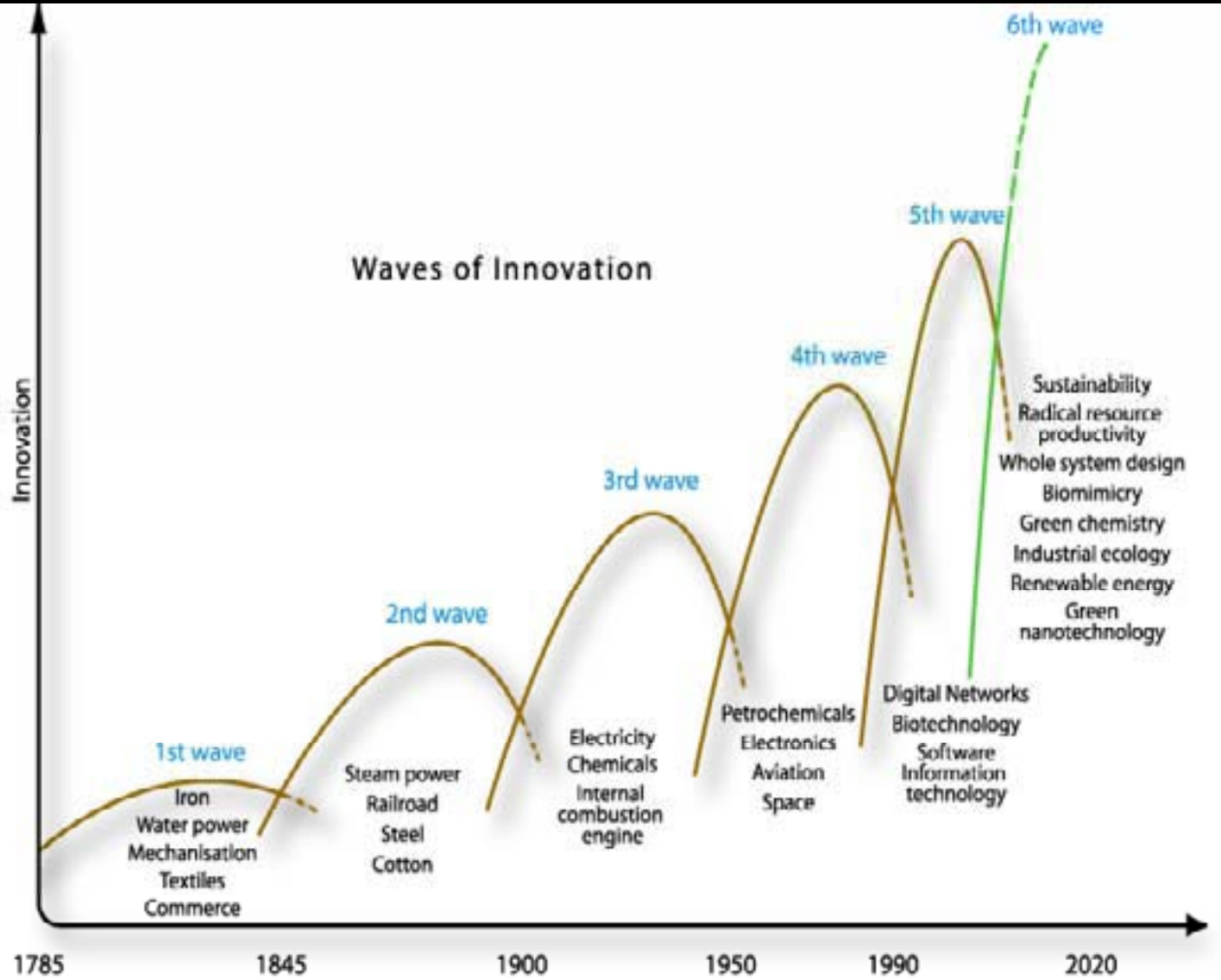
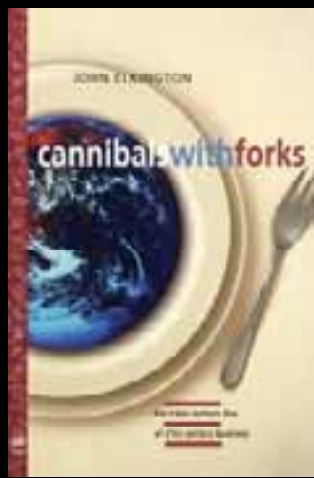
SHADOWS EVERYWHERE > LESSONS FROM BRISBANE

[exerpts from Glenn Weiss: <<http://picasaweb.google.com/maruglenn/LessonsFromBrisbane>>]

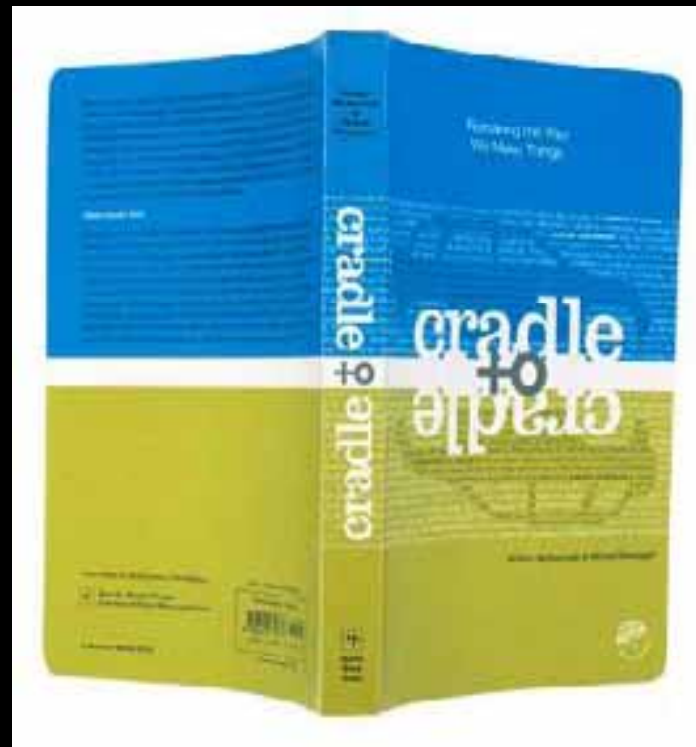


(FROM: CITY DESIGNED FOR SUBTROPICAL LIVING - CARRYING FORWARD THE MOMENTUM FROM SUBTROPICAL CITIES 2006)

CONNECTING THE DOTS: SUSTAINABILITY COULD BE THE SIXTH GREAT WAVE OF INNOVATION



FROM CRADLE-TO-GRAVE TO CRADLE-TO-CRADLE:
TECHNICAL METABOLISM
PAPER AS A TECHNICAL NUTRIENT



(BY: ACCELERATOR: A TOOLBOX FOR USTAINABLE DEVELOPMENT BASED ON THE ISIS METHOD, ATKISSON GROUP, 2005;
>MCDONOUGH, W. & BRAUNGART, M. CRADLE-TO-CRADE: RETHINKING THE WAY WE MAKE THINGS. NEW YORK: NORTH POINT PRESS, 2002.)

Positive proof of global warming.



(BY: CLIMATECHANGE.FLINDERS.EDU.AU/BL.0G.HTML)

18th
Century

1900

1950

1970

1980

1990

(ACADEMIC PURPOSE WORK: REPRODUCTION PERMITTED GIVING THE CREDITS)

CARLOS LEITE, ARCHITECT, WITH A MASTER AND A PHD DEGREES IN URBAN ENVIRONMENTAL STRUCTURES BOTH FROM THE UNIVERSITY OF SAO PAULO AND A POSTDOCTORAL DEGREE FROM CALIFORNIA POLYTECHNIC STATE UNIVERSITY, WHERE HE WAS VISITING PROFESSOR, WAS BORN IN SAO PAULO IN 1964. HE ALSO STUDIED AGRICULTURAL ENGINEER AT THE FEDERAL UNIVERSITY OF RIO DE JANEIRO. NOWADAYS, HE IS THE RESEARCH COORDINATOR AT THE DEAN'S OFFICE, FACULTY OF ARCHITECTURE AND URBANISM, MACKENZIE PRESBITERIAN UNIVERSITY, SAO PAULO. HE IS ALSO DIRECTOR OF THE PORTAL EDUCATORIUM (WWW.EDUCATORIUM.COM) AND IS DEVELOPING THE CIC_SP, THE SAO PAULO INFORMATION CENTER, A NGO, WITH OTHER PARTNERS. (WWW.MINHACIDADE.ORG). HE MAINTAINS HIS RENOWNED PRAXIS IN URBAN PROJECTS IN SAO PAULO. HE PUBLISHED MANY PAPERS AND HE HAS BEEN LECTURING IN MANY UNIVERSITIES IN BRAZIL, BUENOS AIRES, BARCELONA, AUSTRALIA, NETHERLANDS, US AND CANADA, AS WELL AS IN BRAZILIAN PRIVATE COMPANIES AND PUBLIC AGENCIES CONCERNING SUSTAINABLE CITIES AND URBAN REGENERATION PROJECTS.

WWW.EDUCATORIUM.COM/LEITE | CLEITE@EDUCATORIUM.COM |

