Chair of / Cátedra de /
Lehrstuhl für

Architecture & Urban Design

Prof. Hubert Klumpner

ETH Zurich | DARCH | NSL | LUS
Chair of Architecture and Urban Design
Prof. Hubert Klumpner

ONA J25
Neunbrunnenstrasse 50
8093 Zurich

www.klumpner.arch.ethz.ch
+41 (0) 44 633 90 78

Studio Coordinators:

Diogo Rabaça Figueiredo	figueiredo@arch.ethz.ch
Alejandro Jaramillo Quintero	jaramillo@arch.ethz.ch
Fernando Tulio Salva Rocha Franco	salvarochafranco@arch.ethz.ch
Melika Konjičanin	konjicanin@arch.ethz.ch

Team:
Prof. Hubert Klumpner
Diogo Figueiredo
Alejandro Jaramillo Qunitero
Melika Konjičanin
Fernando Túlio Salva Rocha Franco*
*Brazilian / Swiss Government Excellence Scholarship 2022-23

In collaboration with:

FAU-USP | School of Architecture and Urbanism of University of São Paulo
Prof. Dr. Nabil Bonduki
Prof. Dr. Denise Duarte

Perifa Susentável Institute
Amanda Costa
Gabriel Alves
Mahryan Sampaio

D-BAUG Eawag
Dr. João P. Leitão
Lucas Gobatti

Movimento em Defesa do Parque Morro Grande

Swissnex Brazil

ETH zürich

Urban Prototyping

Central Park Brasilândia

Designing centralities in informal de-industrialized landscapes

Social / Environmental / Justice

São Paulo, Brazil
Design Studio | Spring'24

Table of Content

Design Studio	Our Chair and Studio Overview	8
	Semester Schedule	16
		20
Task Scenario	São Paulo Context	22
	Challenenges & Opportunities	24
	Site Overview	26
	Size Comparison	28
	City of São Paulo	30
	Idea Perimeter	32
	Area of Intervention	34
	Data Visualization	36
	Photo Essay	
Present Scenario	South America	
	Facts and Figures	50
	Internal Displacement & Migration	52
	Brazil	
	Country Profile	56
	Facts and Figures	57
	Megalópole, Macrometropolitan Regions & Metropolitan Region São Paulo	
	Facts and Figures	60
	São Paulo	
	Facts and Figures	62
	São Paulo History	68
	Urban Transformation	72
	Urban and Environmental Systems	80
Global Initiatives	Overview	84
	United Nations	85
	IPCC Report 2021	86
	Rockefeller Foundation	87
	New European Bauhaus	88
	The Davos Baukultur	89
	Universal Declaration of Human Rights	90
	Global Campus for Human Rights	91
Urban Toolbox	Urban Stories	94
	Operational Tools for the City	102

Selected Projects

Ibirapuera Park | São Paulo, BR 112
SESC 24 de Maio | São Paulo, BR 114
SESC Pompéia | São Paulo, BR 116
Fábrica de Musica | São Paulo, BR 118
Fábrica de Cultura | Barranquilla, Colombia 120
Learning Center | Cartagena, CO 122
Moravia Hill | Medellin, CO 124
Metropolitan Waterway Ring | São Paulo, BR 126
Connect the Dots | São Paulo, BR 128

MAK Vienna Biennale for Change 2021
Citizens of the Antropocene | Rotterdam, NL 130
A New Indigenous University | Villagarzon, CO 132
Cross Border Commons | Tijuana , MEX/US 134
Common Space | Vienna, AT 136
Incremental Development Manual | Mongolia , MN 138
The Elastic Grid | Lod, IL 140

Readings

Spatial Master Plan 2014 144
Brazilian Colorally... Which Is Also Uruguayan 148
São Paulo - Paraisópolis: Order and Progress? 152
Informal Toolbox, SLUM LAB Paraisópolis 154
São Paulo Architecture Experiment 156
What would the trees say? 158
Transitioning to Sustainable 162
Cities and Communities

Events

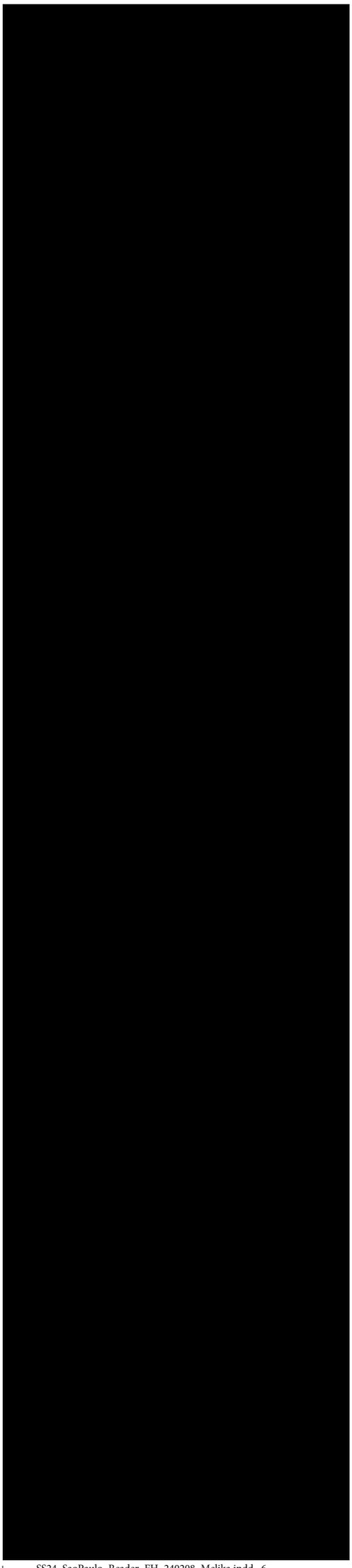
Enough / Genug 165
Designing limits in architecture for an earth of plenty 165
MediTirana: 100 Ideas for the Western Balkans

Bibliography

Bibliography 166

Impressum

Impressum 168



Design Studio

Our Chair & Studio Overview

Semester Schedule

Our Chair & Studio Overview

Our Chair

Focusing on **Researching, Teaching and Making** within a methodological paradigm of interrelated teaching and research design, the Chair of Architecture and Urban Design / Prof. Hubert Klumpner triangulates urban design, policy-making and habitat-building in current and future global research zones including **Latin America, the Balkans, and southern Africa.** The design studios at the chair lend themselves to long-term engagement in projects, allowing students to participate in research design and project-making from bachelor to PhD levels.

Studio Overview

Content
São Paulo, the second-largest city in the Western Hemisphere, is known for its diverse social, environmental, governmental, and architectonic inequalities. Its urban landscape is in the contrasts, encompassing diverse elements: forests, waterfalls, rural areas, indigenous villages, financial centers with corporate towers, and iconic buildings designed by architects like Lina Bo Bardi, Paulo Mendes da Rocha, Oscar Niemeyer, and Villanova Artigas. Additionally, the city features historic buildings from the colonial, modern, and industrial periods alongside informal settlements, often situated in landslide-prone regions and near flood-prone river zones.

Socially, Brasilândia is a low-income neighborhood challenged by growing favelas, ongoing infrastructure projects, post-industrial abandoned factories, and minimal green spaces, resulting in the city's lowest life expectancy rates for its citizens. **Environmentally,** this neighborhood is at risk of landslides and flooding, limiting access to public spaces and basic services.
Regarding justice, the São Paulo Government is committed to the Climate Action Plan 2020-2050, aiming to reduce greenhouse gases, achieve net-zero emissions, and promote resilience in the most vulnerable areas, attempting to develop innovative and sustainable urban prototypes.

The learning goal of Central Park Brasilândia is to design a public park addressing three adjacent areas: a zone of favelas along a river, new transport infrastructure, including a metro and highway, and a network of cultural and social facilities.

Socio-Environmental Justice forms the basis for sustainable development models, like the emerging Central Park in Brasilândia. This is the Design Studio's foundation for imagining new urban and ecological systems that enhance biodiversity, circularities, agroecology, food production, green jobs, and facilitate diverse community and cultural events. Designing a green and civic metropolitan center in the periphery of São Paulo could become a prototype and a city-scale reference, addressing the climate emergency locally and extending its impact beyond São Paulo and Brazil.

Source:
Climate Action Plan | 2020 - 2050

The design studio focuses on the transformative regeneration of the city on three scales:

A_City Scale: 1:150.000 / São Paulo as a whole: Mobility network, zoning, water systems, informal settlements, urban and rural zones, environmentally protected areas;

B_Regional Scale: 1:20.000 / North Zone: New orange subway line, Special Zones of Social Interest, Serra da Cantareira, High Voltage Power Grid, Informal settlements, Ring Road (Rodoanel), Tietê River and its tributaries;

C_Local Scale: 1:2.000 / Project site: Morro Grande Planned Park (abandoned mine) and the former industrial and cultural facilities associated with it, the future Brasilândia metro station, informal settlements, rivers, and green areas, a network of social facilities.

In the frame of co-creating new systems of repair, care, resourceful use of, and innovation, São Paulo can re-imagine and re-build its new urban central park as sociocultural and agroecological centrality. This reimagination involves creating innovative spaces for sustainable living for humans and non-humans, fostering participative learning, facilitating knowledge transfer, and contributing to economic development. The aim is to promote social and ecological cohesion and inclusion.

FS23 Sarajevo | Chair of Architecture & Urban Design | Prof. H. Klumpner

Our Chair & Studio Overview

Learning Objectives
The Design Studio's thesis revolves around imagining São Paulo as a city committed to Socio-Environmental Justice, local and municipal urban ecosystem adaptation, and promoting a healthy environment and well-being. In the context of climate change, widespread inequalities, and new urban transformation projects, it will be vital to co-design a human-nature-oriented city that invests in the urban regenerative processes, promotes biodiversity and circularity within resource constraints, and balances private and public interest.

Students are introduced to tools and immersed in our Chair's "method-design" to develop their prototypical design projects by:

1) Base-Line: Designing across a continuum of architectural, urban, and planning scales to collaboratively develop a basis for how the city is now.
2) Mapping: Identifying existing and future challenges and opportunities, taking on the stakeholder role, and visualizing demands and resources into three different scenarios.
3) Concept Design: Developing an urbanistic synthesis and translating concepts into an evidence-based prototypical architectural project - intervention.
4) Prototype Design: Presenting the synthesis of the process in time and space on different scales, framed as a narrative, consequentially developed and communicated in analog and digital graphic representations.
5) Upscaling: Testing project concepts and upscaling prototypes through design-policy recommendations to facilitate transferability in São Paulo and other cities.

Undergoing transformation, São Paulo has a range of urban and environmental tools, including the 2014 Master Plan, recognized by UN-Habitat as one of the best practices related to the UN's New Urban Agenda (1). Additionally, the city has adopted a Climate Action Plan 2020-2050 outlining objectives for decarbonizing and mitigating inequalities. Despite these initiatives, São Paulo faces the ongoing challenge of translating guidelines into tangible urban and environmental prototypical transformations, particularly at the local scale, involving democratic management mechanisms.

Architecture and Urban Design are at the forefront of making transformations visible in preparation for promoting social and environmental justice. The next generation of designers provides places of coexistence, biodiversity, and quality of life, which are essential for human and non-human beings. This way opportunities, traditional and contemporary knowledge, and technologies are translated into new spatialities. Changing the landscape and regenerating open and democratic neighborhoods full of architectural and nature-based opportunities.

The Studio will engage with a team of experts and policymakers from the city, members of the Faculty of Architecture and Urbanism of the University of São Paulo (FAU-USP), and advocates for urban and environmental causes.

Expectations:
· Students are expected to actively engage in all studio discussions and read suggested studio material in order to build a comprehensive knowledge base and common language within the studio.
· Students are expected to design clear ideas and narratives based on complex, varied, and potentially conflicting inputs from diverse and multidisciplinary sources or reviewers to form their own original design. The studio is engaged in very complex research and challenging design problems, and it is the task of the students to digest multiple inputs to generate a clear position and framework.

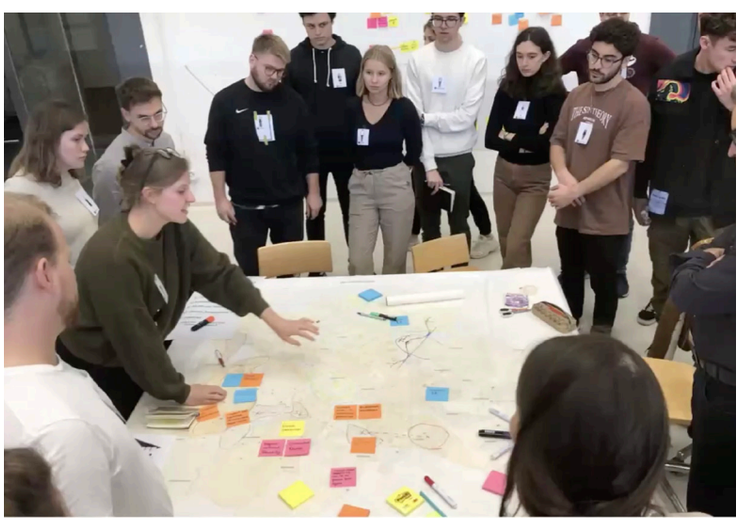
FS23 Sarajevo | Chair of Architecture & Urban Design | Prof. H. Klumpner

Our Chair & Studio Overview

Thematic
The driver for change in São Paulo, is architecture. We see this happening in cities like Sarajevo, Medellín, Barranquilla and Caracas. Architecture is at the forefront of making transformations visible in preparation for turning towards sustainable future. The next generation of designers is providing places of development, safety, and quality of life, which are essential for governments. Architecture and Urban Design are translating these opportunities, entrepreneurship, and technologies into these cities. Changing the landscape and regenerating open neighbourhoods full of opportunities, architectural and natural beauty.

From our Urban Stories lecture series, we have developed an urban toolbox that translates urban knowledge of internationally recognized development examples into strategic tools. We reference permanent and temporary strategies such as the destruction and re-construction of Berlin, Informal settlement upgrading in Capetown, Chengyecheon River Park, Seoul, Isarpark, Schlachthof / Munich, Corredores Verdes / Medellin or Cali, communal target-plan Zurich, closed highways in São Paulo or Bogota, etc.

These spatial processes follow a widely known practice of consolidating a sequence of transformations and short-term strategies for long-term value production. Urban and Landscape Design can create a measurable impact in cities by increasing social justice, health, and wellbeing. The development of robust frameworks adaptable to change enable processes for regeneration with long-term operational, environmental and social benefits in response to global, local, and site-specific challenges. The role of architects is to imagine and model sustainable urban scenarios recognizing new possibilities, to create multidimensional transformative design strategies with long-term benefits for people and cities.



FS22 Sarajevo | Chair of Architecture & Urban Design | Prof. H. Klumpner

Method Design
We systematically engage students in the semester research topic, to unlock their potential and skills towards developing prototypical design resolution on an urban and architectural scale. Identifying, understanding and developing local stakeholder networks, so as to translate challenges into opportunities and negotiate diverse interests into strategic ideas for development, geo-references, inter-linked systems, diagrams and maps. We develop design concepts for urban prototypes on different scales, framed by a narrative of a process that is consequentially visualized and communicated in analog as well as digital tools.

-Investigative Analysis/ Local Perspective:
We register the existing; prioritizing challenges and opportunities through qualitative and quantitative information; mapping on different design scales and periods of time; configuring stakeholder groups; connecting top-down and bottom-up initiatives; idea mapping and concept mapping; designing of citizen scenarios.

-Project Design:
Synthesizing between different scenarios and the definition of a thesis and program between beneficiaries and stakeholders; we projecti process presentation as a narrative embedded in multiple steps; describing an urban and architectural typology and prototypes; defining an urban paradigm.

-Domain Shift:
We shift and translate different domains; testing and evaluating the design in feedback loops; and include projects into the Urban Toolbox.

SS23 Sarajevo | Chair of Architecture & Urban Design | Prof. H. Klumpner

Our Chair & Studio Overview

Trans-Scalar Development:
· Territorial Scale 1:15.000
· Urban Scale: 1:5.000 and 1:1.000
· Architectural Scale: 1:500 and 1:200

Representation:
Analog & Digital Tools
Atmospheric Images, Project Process, Plans, Sections, Axonometric Visualization, Model Making. People, Buildings and Program

Workshops:
· Illustrator, Photoshop, and InDesign | Melanie Fessel
· Rhinoceros 3D+Grasshopper | Michael Walczak
· Georeferenced Data Processing with QGIS/ARCGIS | Marco Pagani
· Graphic Design | Integral, Ruedi and Vera Baur.

· Elective Course | **'ACTION! On the filmed city: What is not there in front of you?'** | is offered to complete the skillset of the studio, teaching in 3D modelling, filmmaking, and animating.

Tasks and Deliverables:
· Specific tasks will be handed out to students and uploaded to the server throughout the semester.
· Comprehensive lists of deliverables will be outlined within these tasks.

Grading:
· Grading will encompass the quality and clarity of each of the final projects, with special focus on the translation of conceptual ideas into multi-scale prototypes.
· Active engagement, Individual learning and growth trajectory throughout the semester will be taken into consideration.
· The clarity of visual and verbal representation, including the effective utilization of digital tools to enhance communication, will contribute to the assessment.

Submission of Work:
· Pin-ups and reviews will be presented in either digital or print format.
· All work must also be submitted to the server on time in the appropriate folder.
· Standardized naming conventions should be used for each studio submission to the server: YY_MMDD_Surname_DrawingTitle.EXT

Archiving of Material:
· Students will be required to maintain an archive of work throughout the semester, as well as submitting all work to the sever before review/ pin-up.

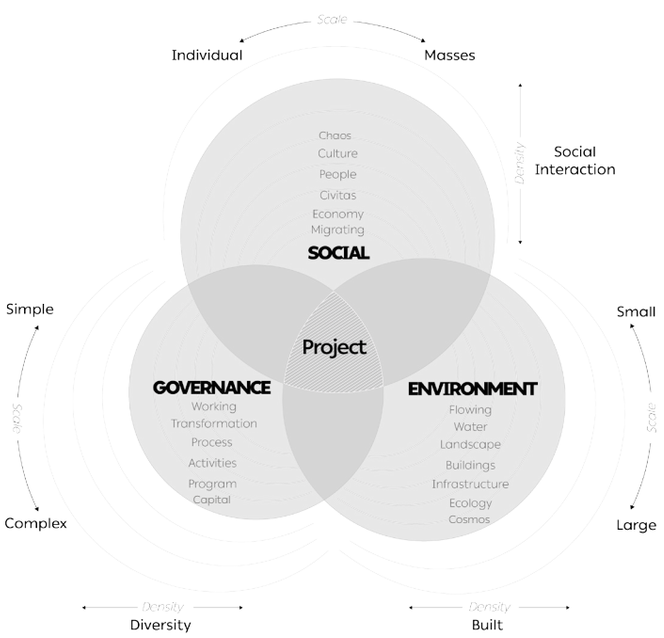
Contact:
By appointment Mondays, 10:30-12:30

Prof. Hubert Klumpner	klumpner@arch.ethz.ch
Diogo Rabaça Figueiredo	figueiredo@arch.ethz.ch
Alejandro Jaramillo	jaramillo@arch.ethz.ch
Melika Konjičanin	konjicanin@arch.ethz.ch
Fernando Túlio Salva Rocha Franco	salvarochafranco@arch.ethz.ch

Method Design

social

urbanization FS23
olympic SS23
care FS22
treasure SS22
inclusivity FS21
care SS21
chaos FS20
migration SS20
drugs FS19



justice

digitalization FS23
legacy SS23
health FS22
treaty SS22
collaboration FS21
transaction SS21
capital FS20
work SS20
gold FS19

environmental

ecologization FS23
regenerate SS23
center FS22
trash SS22
resource FS21
circulation SS21
cosmos FS20
flow SS20
coffee FS19

Chair of Architecture & Urban Design, Prof. H. Klumpner | 2024

Semester Schedule

Spring 2024

Task Scenario

São Paulo Context
Challenges & Opportunities

Site Overview
Size Comparison
City of São Paulo
Idea Perimeter
Area of Intervention
Data Visualization

Photo Essay

São Paulo
Context

São Paulo

Aerial View of São Paulo | Chensi Yuan 2010

Challenges & Opportunities

How can the de-industrialization of the neighborhood, Brasilândia, provide an opportunity to design a new centrality?
How can we transform an abandoned mine into a central park?
How can this prototype be evaluated and upscaled into a city-scale green system?

São Paulo is a place of architecture, resistance, social engagement, innovation, and cultural diversity, and is an urban laboratory. Ecology is the foundation for creating circular and biodiversity development models, like the emerging Central Park in Brasilândia, which are the Studio's grounds for imagining new relationships between a post-industrial area, rapidly developing informal settlements, and new infrastructures.

The Central Park Brasilândia is a central space for lifelong learning, knowledge exchange, and innovative circular ecologies and economies that can regenerate, restore, and build capacities, enabling quality of urban life in the new cultural, green, and civic centrality of São Paulo.

Context
Rediscover a new relationship between the built and natural environment.
Interrelate landscape, topography, infrastructure, and program as development drivers
Source the genealogy of a multicultural .

Local Resource
Address global topics locally to integrate material flows and lifecycle thinking.
Give agency to people, strengthen community networks, and create opportunities for collective action to improve life quality, and life-long learning.

Environment
Design for the resilience of the natural and built environment.
Respond to local climate challenges, poor air, and water quality, sunlight, and seasonal temperatures, integrating and designing regenerative systems.

Urban Form and Typologies
Interpret the rich, visible urban formal and informal diversity as a design informant, respond to urban morphology, typology, and cultural heritage.
Work with densification pressure / define voids vs. areas of intensification.

Present History
Re-interpret the meaning of places, routes, symbols, and monuments.
Integrate opportunities for upward social mobility and invested citizenship.

Spaces for Innovation
Adapt unused infrastructure to re-activate neighborhoods.
Interrelate different actors, functions, and systematic cycles that build circular economies.
Design for a creative and tolerant culture of inclusion with contemporary urban expression.

Culture And Creative Industry
Design with the dynamic of local creative industries, acknowledge subcultures and intensify cultural practices.
Enable social and creative entrepreneurship and circularity.
Build capacities and new industries by designing spaces for digital learning and knowledge transfer.

Public Spaces
Create safe, inclusive spaces that encourage mixed users and multiple uses.
Consider different age groups, gender, lifestyles, and climate, active/ passive re-creation.
Rejuvenate urban public spaces to enhance participation.

Integration and Cohesion
Develop spatial linkages and multi-functional ecological corridors between the former mining site and the adjacent neighborhoods.
Design feasible strategies to counter speculative and investment-driven urban development.

Materials
Consider local building materials, minimizing environmental impact, and relating systems of sustainable consumption to human/nonhuman interdependence.
Investigate ecological cycles, economic models, and skills development.

Scale
Explore an integrated urban design, considering independent or interlinked principles in various scales and hierarchies. Develop interventions that address the conflicts and incoherent urban spatial networks.

Stakeholders
Examine public and private interests, policies, and ownership structures. Support the goals of stakeholders, partners, and the urban transformation projects .
Design processes for change and long-term impact as part of a phased and adaptable transformation strategy.

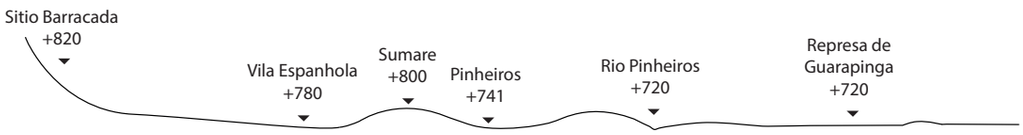
Site Overview

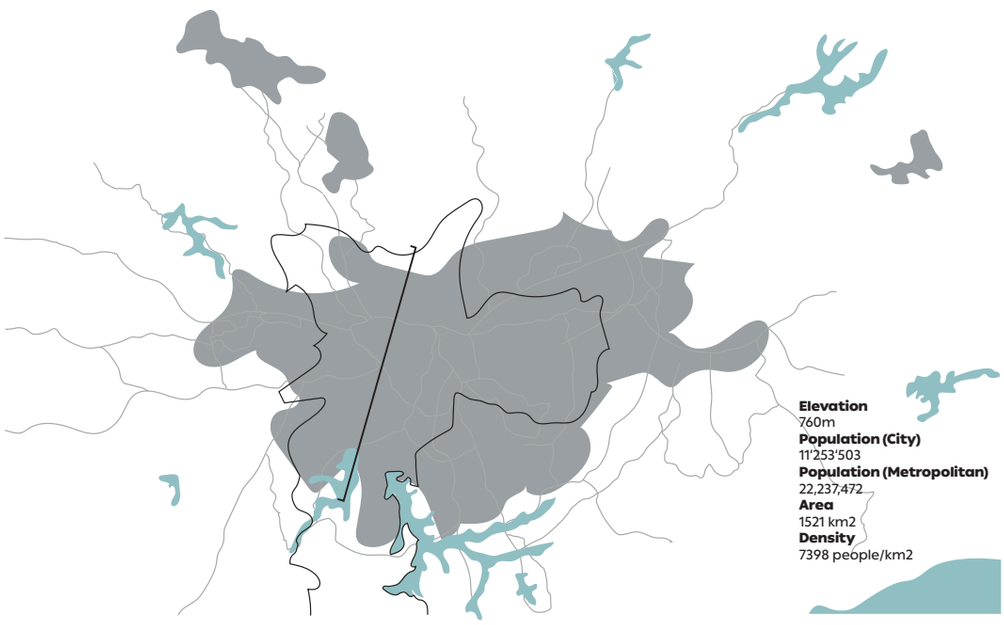
Bird's Eye View

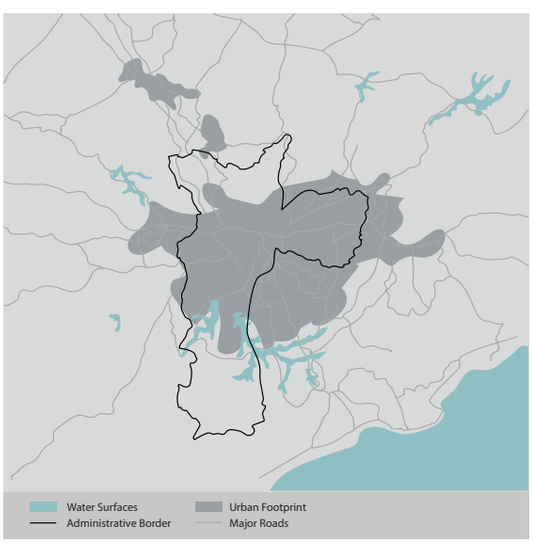
Chair of Architecture and Urban Design | Prof H. Klumpner | 2024

Size Comparison
São Paulo & Zurich

São Paulo

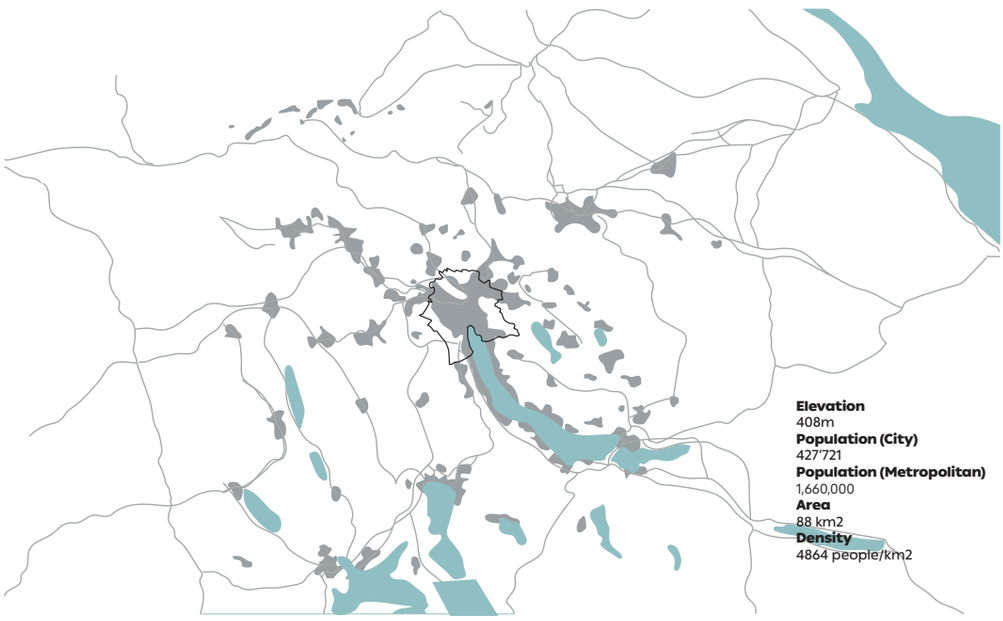


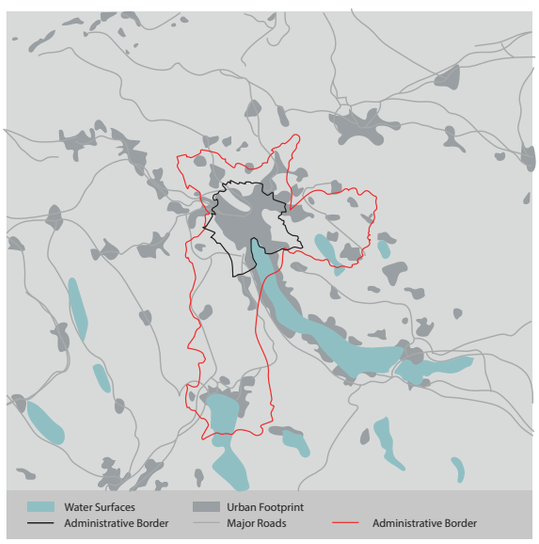


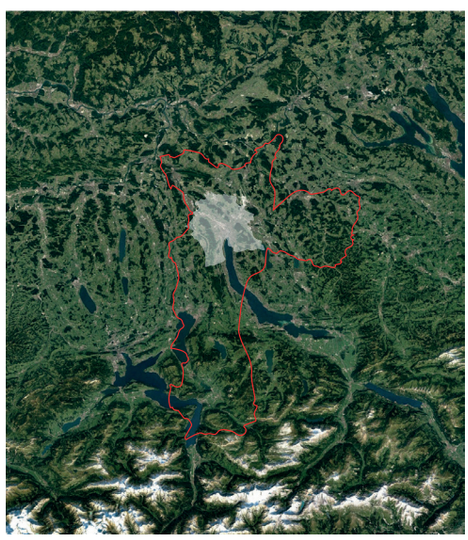


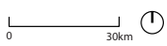
Chair of Architecture and Urban Design | Prof H. Klumpner | 2024

Zurich



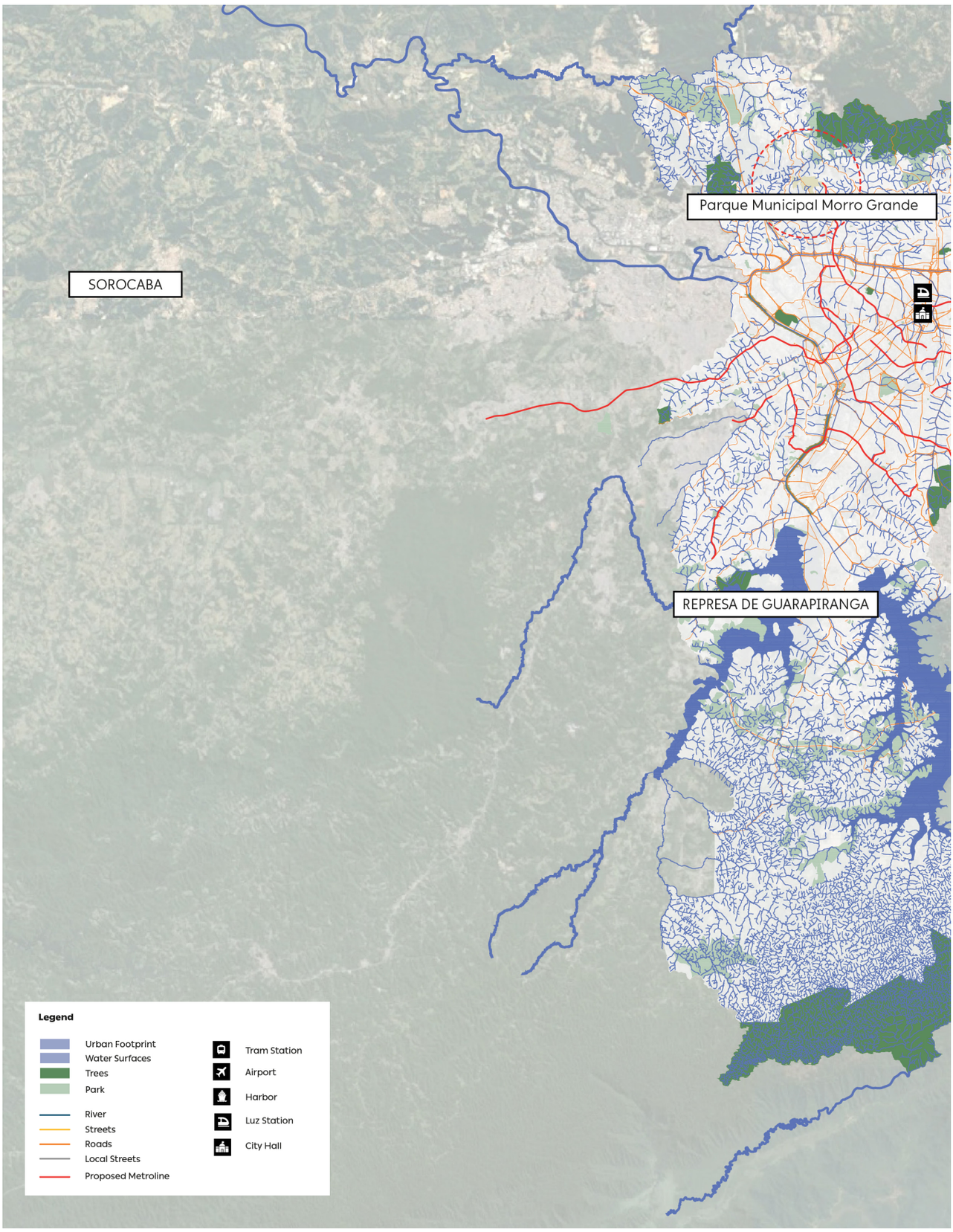




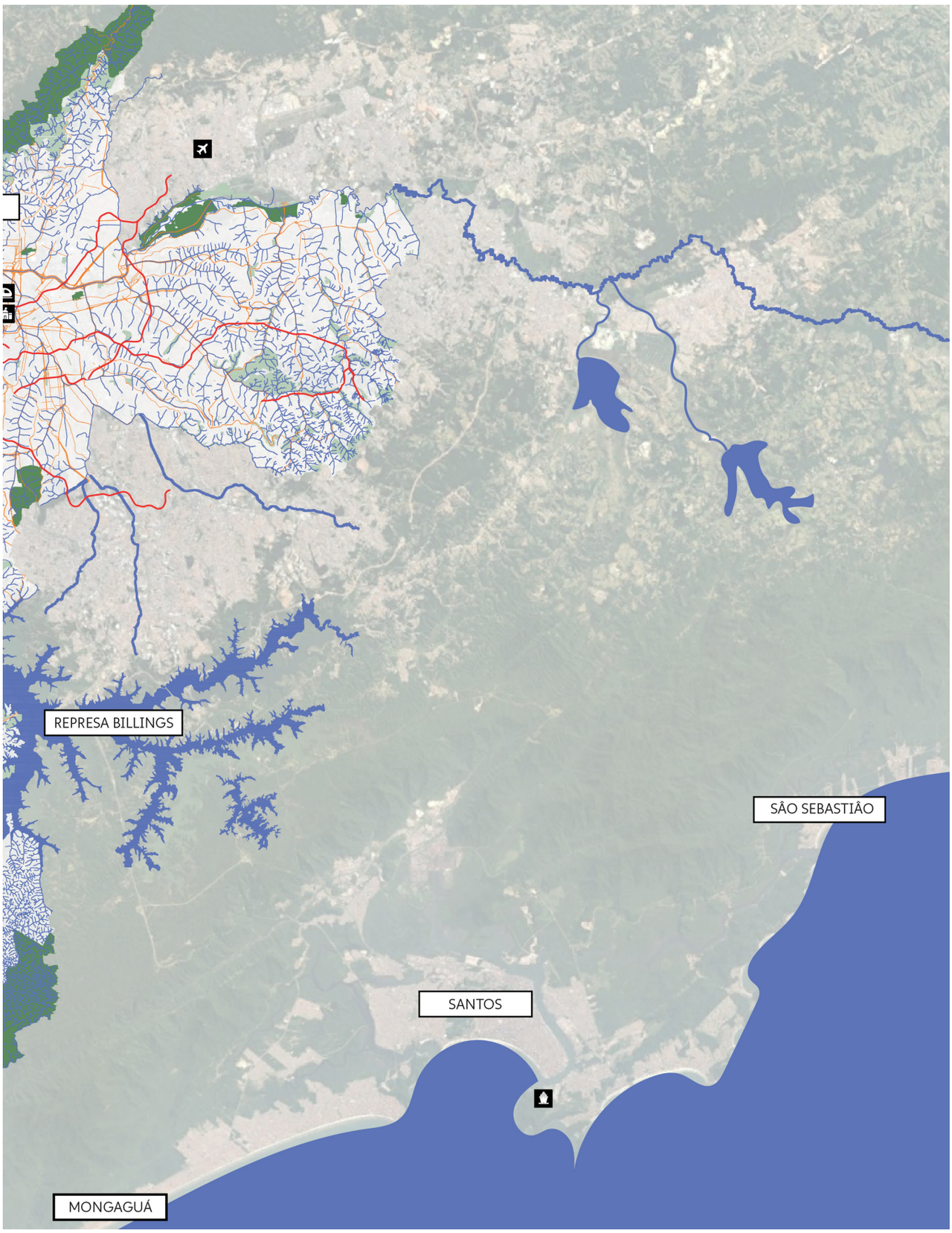


Chair of Architecture and Urban Design | Prof H. Klumpner | 2024

City of São Paulo



Chair of Architecture and Urban Design | Prof H. Klumpner | 2024



Idea Perimeter

Social

The subprefecture* of Freguesia do Ó/Brasilândia is one of the 32 subprefectures of the city of São Paulo and is governed by Law No. 13,999 of August 1, 2002. It is made up of two districts: Freguesia do Ó and Brasilândia, which together represent 31.5 km² and more than 400,000 inhabitants, according to data from the 2010 Census. The Brasilândia district is the 4th most populous district in the municipality and the first in the northern zone.

Environmental

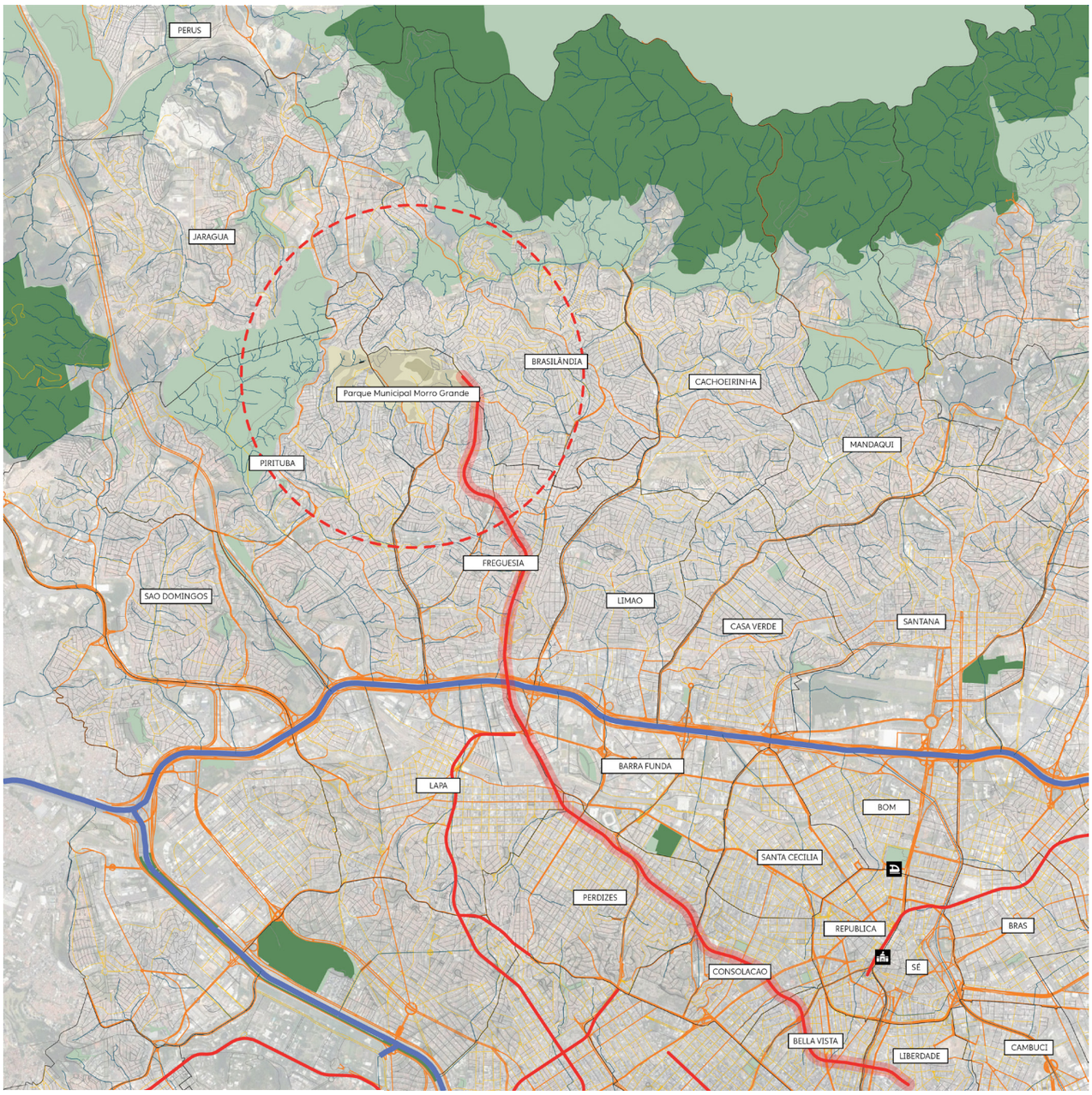
Most of Brasilândia presents severe challenges to urban inhabitation due to its rugged terrain, with high slopes, soils susceptible to erosion, cliffs and drainage headwaters. The region has been marked by informal settlements on the slopes of hills and valley bottoms, resulting in inappropriate urban occupation with varying degrees of geological and geotechnical risks. The intense occupation of the hills of Brasilândia increases the degree of impermeability of the territory, accelerating the flow of water into the streams and generating serious flooding problems. The territory is drained by three main sub-basins, tributaries of the River Tietê: the sub-basin of the Córrego Cabuçu de Baixo, with the main contributors Córrego Carumbé, Canivete, Bananal, Itaguaçu and Onça; the sub-basin of the Ribeirão Verde, formed by the Córrego do Congo, Guami and Tanque; and the sub-basin of the Córrego Água da Pedra, with the main contributor Córrego Guabiroba. One of the most pressing problems is the presence of 116 garbage dumps throughout the territory. The density of vegetation cover found in the subprefecture is 6.5m²/inhabitant, much lower than that found in the municipality (54.0m²/inhabitant). However, the density of green areas is higher (18.5m²/hab), which is explained by the presence and extent of the Serra da Cantareira State Park. This also contributes to the heterogeneity of its distribution, as 77.7% of the population lives more than 1 km from parks.

Justice

The contrast between the two districts of the subprefecture, Brasilândia and Freguesia do Ó, is striking. The social vulnerability of the former in relation to the latter stands out. Job opportunities are limited in Brasilândia. Land use reflects this lack when it shows that only 4% of the built-up area is used for non-residential purposes. This situation is reflected in the São Paulo Index of Social Vulnerability - IPVS. This index in Brasilândia is higher than that found in the municipality and much higher than that of Freguesia do Ó. In Brasilândia 29.8% of the population belongs to the most vulnerable groups, while in Freguesia do Ó it is only 1.3%. Violence in Brasilândia is higher than in Freguesia do Ó and the municipality. In 2013, Brasilândia had 20.19 homicides per 100,000 inhabitants, while in Freguesia do Ó and the municipality the figures were 18.57 and 14.17 homicides per 100,000 inhabitants respectively.

* municipality > subprefecture > district > neighborhood

Source:
Caderno de Propostas dos Planos Regionais das Subprefeituras, Quadro Analitico



Chair of Architecture and Urban Design | Prof H. Klumpner | 2024

Area of Intervention

A New Urban Park: Morro Grande

The former Morro Grande Quarry, located in the north of the Freguesia do Ó district, is the site of the Morro Grande Park (in the process of being expropriated) and the final station with a shunting yard of Line 6-Laranja of the Metro (construction in progress). The area still has some buildings of historical value, including a cinema, the Santa Clara de Assis Chapel, and the headquarters of Tecelagem Santo Eduardo, located on Rua Raimundo da Cunha Matos, which could be incorporated into the park.

A New Metropolitan Centrality

Metro Line 6-Orange will connect the region to the center by establishing connections with four other metro lines. In its first phase, it will be 15.9 kilometers long. Brasilândia Station is currently under construction, as is the Morro Grande Maneuvering Yard. Following the Master Plan and zoning, the area around the station has been defined as an Urban Transformation Structuring Axis, which provides for a series of urban planning rules and incentives to promote densification in construction and land use.

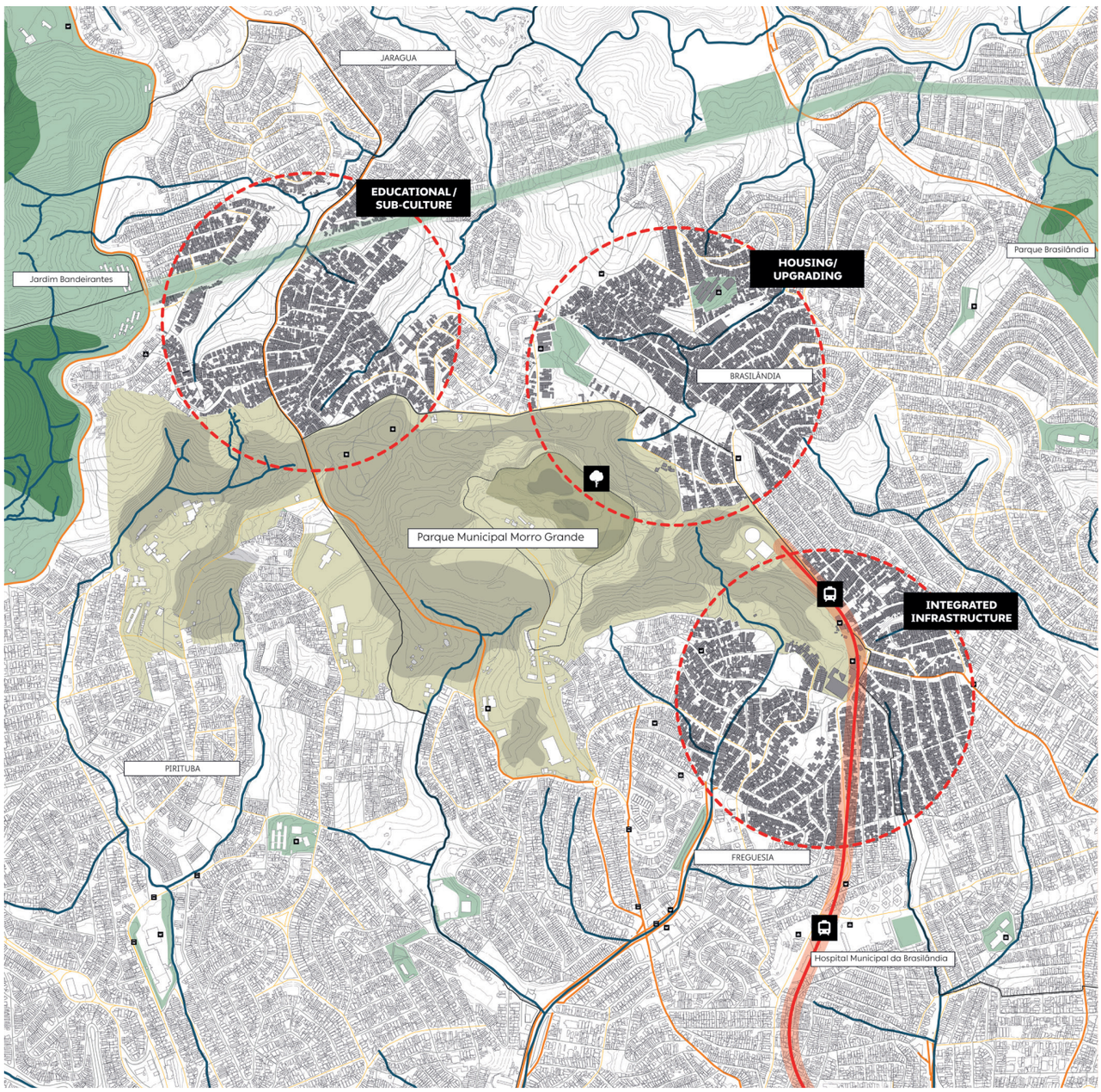
Informal Settlements and Environmental Systems

In the district of Brasilândia, in 2010, the number of slum dwellings was 23.7% of the total, and 12.4% of households were not connected to the sewage system. Because of this, in the Master Plan, the Special Zones of Social Interest (ZEIS) were 32.4% of the territory. Some of the most recent urban occupations have taken place in the direction of environmental protection areas and the Cantareira State Park, highlighting a socio-environmental conflict. In the Subprefecture, there were 6,861 residents at risk (R1 to R4), and the majority were in Brasilândia, i.e., 95.53% of the population (6,554 residents).

Socio-cultural Facilities Network

The region has a considerable number of socio-cultural facilities. These include the CEU Jardim Paulistano (an integrated education, sports and culture facility), the Casa de Cultura Brasilândia, the Unidade Basica de Saude (UBS) Jardim Paulistano, the Escola Técnica Estadual (ETEC) Paulistano, and some state and municipal schools, as well as community organizations with diverse activities. Activities in public spaces, especially in the streets, such as pancadão, are also present.

Source:
Caderno de Propostas dos Planos Regionais das Subprefeituras, Quadro Analitico



Legend

- Water Surfaces
- Trees
- Park
- River
- Streets
- Roads
- Local Streets
- Proposed Metroline
- Tram Station
- Bus Station
- Supermarket
- School
- University
- Hospital
- Church

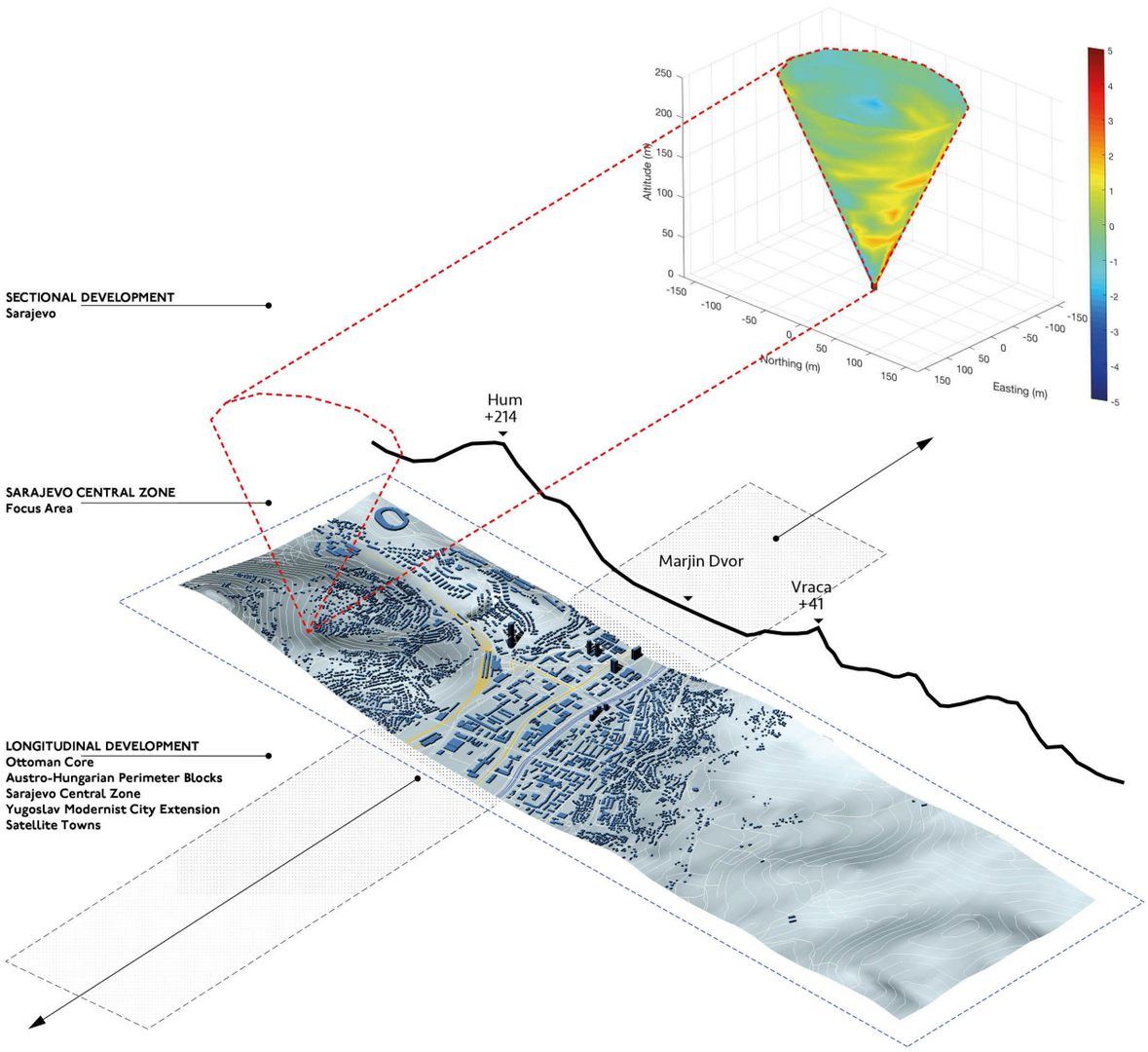
Chair of Architecture and Urban Design | Prof H. Klumpner | 2024

Data Visualization

3D Model Wi

Interactive 3D Model of São Paulo

Source:
Chair of Architecture and Urban Design | Prof H. Klumpner | 2024



Chair of Architecture and Urban Design | Prof H. Klumpner | Michael Walczak |
Impact of Urban Planning on Air Quality: The Consequences of the Mismatch Between Natural Wind Flows and Building Typologies | 2023

Photo Essay

Sesc 24 de Maio | São Paulo, Brazil | Nelson Kon | 2017

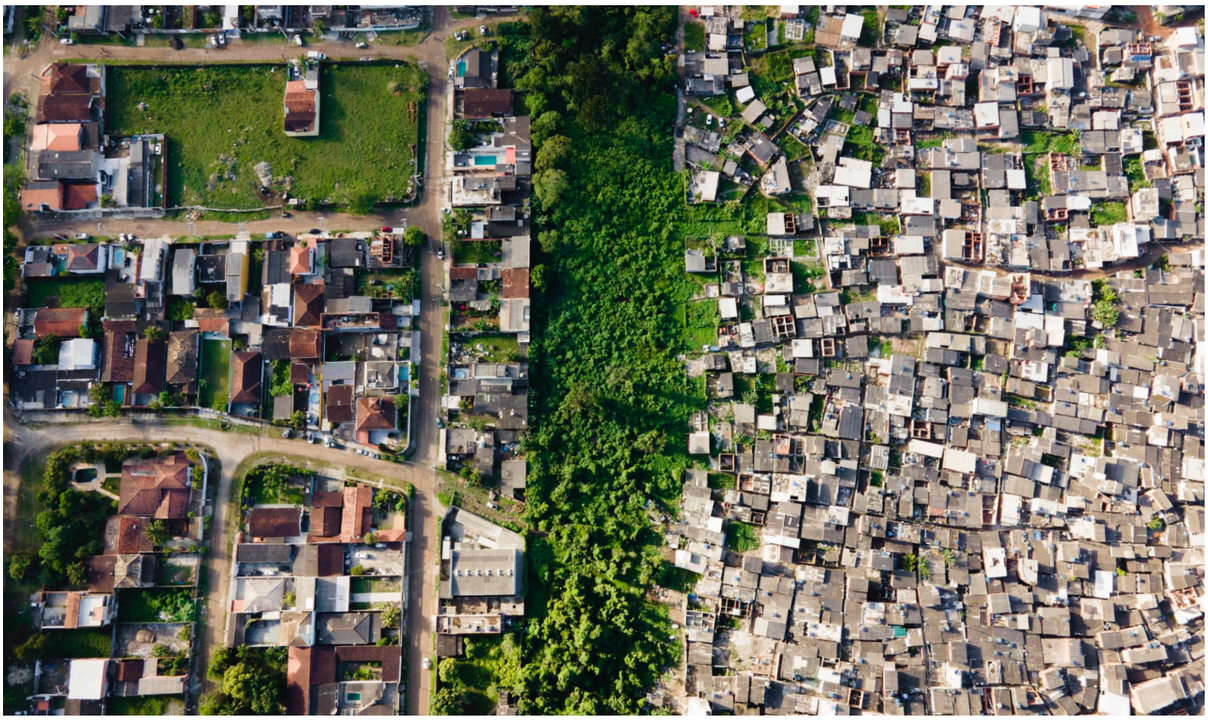
Built Environment

Above: Aerial Views São Paulo | Nelson Kon | 2004
Below: Social inequality in Paraisópolis | Johnny Miller | 2020

Above: Museu de Arte de São Paulo | Nelson Kon | 2004
Below: Aerial Views São Paulo | Nelson Kon | 2004

Favela Settlements

Above: Seminar Week São Paulo | Chair of Architecture and Urban Design | 2010
Below: Seminar Week São Paulo | Chair of Architecture and Urban Design | 2010



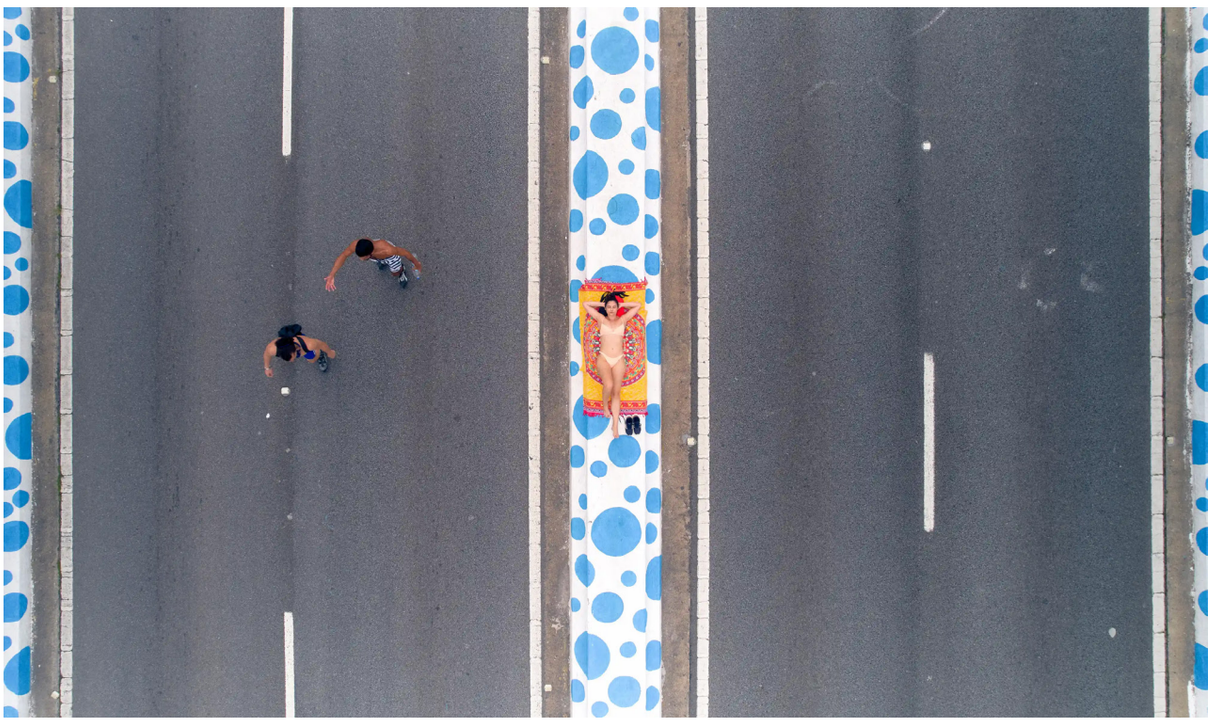
Above: Social inequality in Guarujá | Johnny Miller | 2020
Below: Seminar Week São Paulo | Chair of Architecture and Urban Design | 2010

Natural Environment

Above: Growing water pollution on Tietê River | Katrina Bulletin | 2022
Below: Overview of Sao Paulo's rural area | Luciana Travassos | 2013

Above: Aerial Views of São Paul | Nelson Kon | 2004
Below: Aerial Views of São Paulo | Nelson Kon | 2004

Social



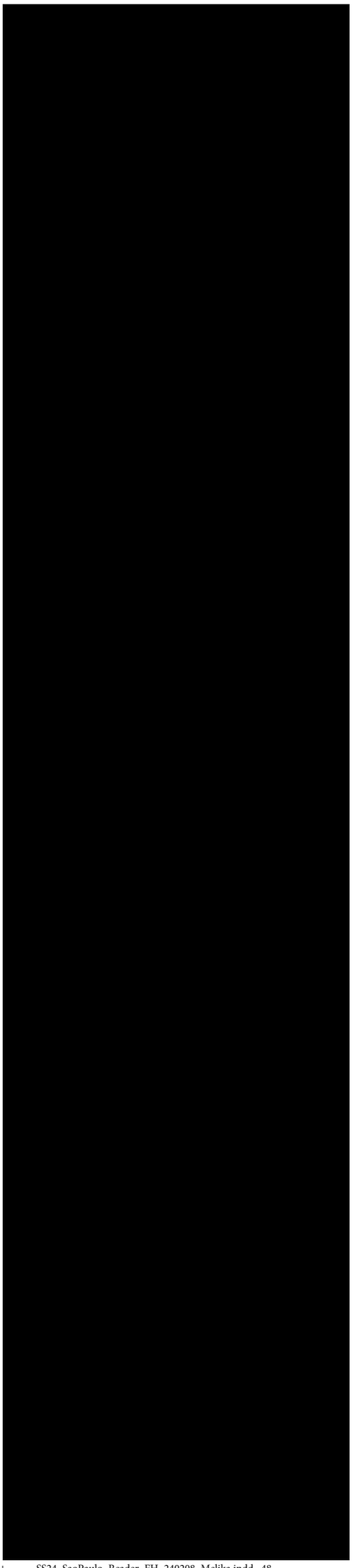
Above: Sao Paulo`s concrete "beach" | Pablo Albarenga | 2023
Below: Adriano Vizoni/Folhapress | 2020

Above: Members of "Movimento em Defesa do Parque Morro Grande" after the announcement of the implementation of the future park | 2023
Below: DZ7 party in Paraisópolis | Marlene Bergamo | 2019

Governance

Above: Prefeitura de São Paulo | 2014
Below: Aerial View of São Paulo *| Nelson Kon | 2004*

Above: Clean fuels for São Paulo's buses campaign | Paulo Pereira | 2019
Below: Inner courtyard of the Mauá Occupation, Juca Guimarães | 2017



Present Scenario

South America
Facts and Figures
Internal Displacement & Migration

Brazil
Country Profile
Facts and Figures

Megalópole, Macrometropolitan Regions & Metropolitan Region São Paulo
Facts and Figures

São Paulo
Facts and Figures
São Paulo History
Urban Transformation
Urban and Environmental Systems

South America

Facts & Figures

Definition

The Continent in the Western Hemisphere is the world's fourth largest.

Countries

Spanish is the official language everywhere (Venezuela, Colombia, Ecuador, Peru, Bolivia, Paraguay, Argentina, Uruguay and Chile) except in Brazil (Portuguese), French Guiana (French), Guyana (English), and Suriname (Dutch). Four main ethnic groups have populated South America: Indians, who were the continent's pre-Columbian inhabitants; Spanish and Portuguese who dominated the continent from the 16th to the early 19th century; Africans imported as slaves; and the post-independence immigrants from overseas, mostly Germans and southern Europeans but also Lebanese, South Asians, and Japanese.

Economy

Most countries have free-market or mixed (state and private enterprise) economies. Income tends to be unevenly distributed between many poor people and a few wealthy families. Although growing, the middle class is still a minority in most countries. South America has one-eighth of the world's total iron deposits and one-fourth of its copper reserves. Exploitation of these and numerous other mineral resources is important to the economies of many regions. Still, also the trade in illegal narcotics (mostly for export) is a major source of revenue in some countries. Informal employment accounts for an estimated 51 percent of all non-agricultural employment in Latin America, but the share varies across individual countries from 48 percent in Colombia to 26 percent in Chile.

History

Two years after Columbus, the Catholic monarchs of Spain and Portugal reached a compromise and signed a pact in Tordesillas to share the "discovered and undiscovered" lands outside Europe. While Spanish is spoken in 19 different states, Portuguese remains the official language of only one, Brazil. One of the reasons was the administration of the colonies. The Spanish administration was established around two main centers: Mexico and Lima. This was not the case in Brazil, where the administration was centralized. Portugal did not establish universities in its colony, but the Spanish did. However, as Napoleon invaded Portugal in 1808, the Portuguese royal family fled to Brazil. Rio de Janeiro then became the political-administrative headquarters of the Portuguese Empire and the presence of the king in Brazilian territory served as a source of legitimacy for the colony to remain united.

Source:
britannica.com
INE | 2021
WIEGO
MinTic | 2021

Map of Southern America

The Geological Society of America | 1950

Internal Displacement & Migration

Context

According to UNHCR, every day between 4,000 and 5,000 Venezuelans leave the country, to an uncertain destination, but with the hope of a better future. Their mobilization is changing the face of Latin America and the Caribbean forever. "The number of Venezuelans who have left Venezuela has tripled and, by 2022, the figure is set to reach 8.9 million Venezuelan migrants.

Colombia Situation today

For five decades, Colombia has faced one of the world's most severe internal displacement situations caused by conflict and violence. This has caused 7 Million internally displaced people. Despite of the 2016, peace agreement signed between the government and the Revolutionary Armed Forces of Colombia (FARC), Colombia's biggest armed group, the active action of remaining other groups had resulted in 139'000 internal people displaced in 2017.
Brain drain is a major issue for Colombia. Nearly one-third (29 percent) of Colombian immigrants living in Organization for Economic Cooperation and Development (OECD) countries in 2011 were college-educated professionals. Spain, the United States, France, Germany, Australia, Brazil, and Argentina have been the leading destinations for highly qualified Colombians. Amid the recent influx of migrants and returnees from Venezuela, Colombia faces a growing demand for services for asylum seekers, refugees, and returned migrants. Most crucially, the post-conflict era will continue to be defined by the need for full integration of IDPs into Colombia's future, by ensuring the sustainable development of the urban areas that have become home to so many and that those who return or relocate to rural areas are not at risk of becoming victims again.
During 2020 Colombia consolidates its position as the main destination for migrants and refugees from the Venezuelan exodus as of January 31, 2021, more than 1.7 million Venezuelans were living in Colombia.

Chile Situation today

The wave of Haitian migrants to Chile, especially after the Haiti Earthquake of 2010, led to the growth of migration. This is attributed to the presence of Chilean troops in the stabilization mission after the 2004 Haiti Crisis and then as part of the blue helmets in the United Nations Mission for Haiti, which caused a rapprochement between the Haitian population and the Chilean military population.
Together with the Colombian and Dominican communities, they are the so-called "emerging communities", given their strong growth in the 2010s and their search for better living conditions. Likewise, the children of Haitian immigrants born in Chile have produced a new generation of people with african origin, historically almost nonexistent in the country.
During 2020, Chile became the third-largest country to host Venezuelan people, refugees and migrants at the regional level. According to data from the Department of Immigration and Migration (DEM), dependent on the Ministry of the Interior and Public Security, Chile is home to almost 500,000 Venezuelans who represent about 30% of its resident foreign population.

Source:
Reliefweb | OCHA Services 2021
R4V | 2022
Council on foreign relations, cfr.org | 2016
UNHCR | 2020

Venezuelan Refugees and Migrants in Southern America

POPULATION PER COUNTRY

1.74 M	Colombia
1.29 M	Peru
482.9 K	Ecuador
448.1 K	Chile
261.4 K	Brazil
Central America & Mexico	
121.6 K	Panama
83.0 K	Mexico
29.9 K	Costa Rica
The Southern Cone	
173.2 K	Argentina
15.3 K	Uruguay
11.0 K	Bolivia
5.05 K	Paraguay
The Caribbean	
115.3 K	Dominican Republic
28.5 K	Trinidad & Tobago
24.5 K	Guyana
17.0 K	Aruba
17.0 K	Curacao
Other Countries	
1.05 M	

R4V | 2022

Internal Displacement & Migration

Indigenous Land

Maria Stella Ferreira Levy suggests the following periodization of the process of immigration to Brazil:
- 1820–1876: small number of immigrants (about 6,000 per year), predominance of Portuguese (45.73%), with significant numbers of Germans (12.97%);
- 1877–1903: large number of immigrants (about 71,000 per year), predominance of Italians (58.49%);
- 1904–1930: large number of immigrants (about 79,000 per year), predominance of the Portuguese (36.97%);
- 1931–1963: declining number of immigrants (about 33,500 per year), predominance of the Portuguese (38.45%).

Slave Trade

On the American continent, Brazil was the country that imported the most enslaved Africans between the 16th and mid-19th centuries. Around 4 million men, women and children came, which is equivalent to more than a third of the entire slave trade. On May 13, 1888, the law abolishing slavery was signed, but it was still considered a partial abolition, given the absence of any mechanisms for the socio-economic inclusion of the black population.

Worldwide Immigration

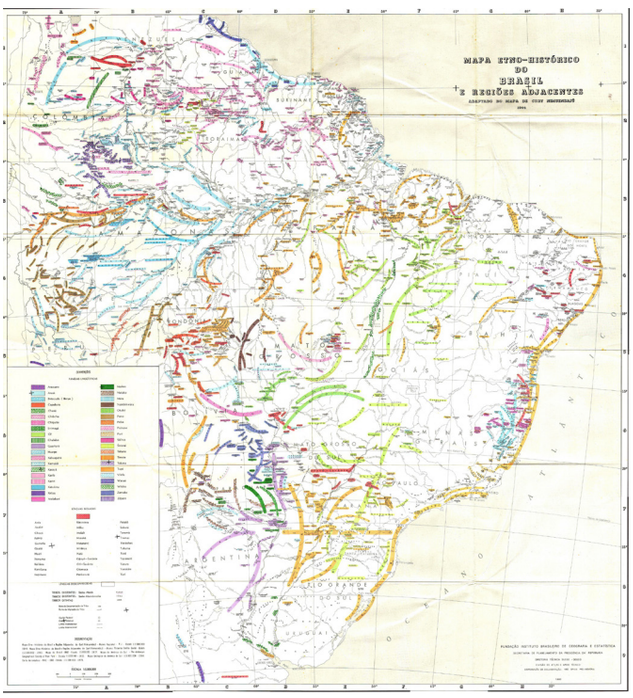
Faced with international pressure to abolish slavery and internal pressure from the elite to promote whitening policies and meet the growing demand for labor as a result of the growth of the agro-export economy, industrialization and the increasing process of urbanization, between 1889 and 1930 more than 3.5 million foreigners entered the country, most of them immigrants of European origin. Between 1820 and 1903, around one million 140 thousand Italians, 549 thousand Portuguese, 212 thousand Spaniards and 89 thousand Germans arrived in Brazil. Between 1904 and 1972, one million 240 thousand Portuguese, 505 thousand Spaniards, 484 thousand Italians, 248 thousand Japanese and 171 thousand Germans arrived.

Internal Displacements

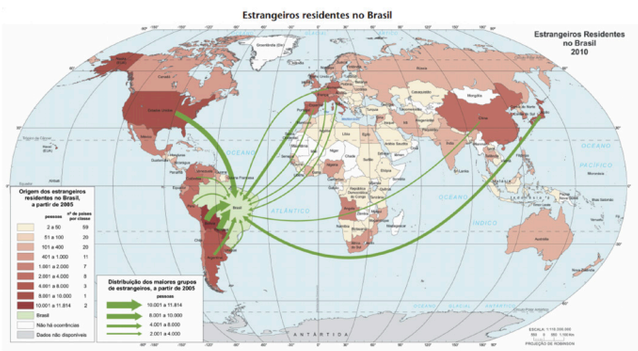
The drastic reduction in foreign immigration in 1930 was accompanied by a significant increase in internal migration, especially from the northeast towards the country's southeast. This migratory process increased from the 1950s onwards, in line with the rise in the supply of jobs arising from industrialization after the Second World War.

Source:
IBGE
Alma Negra
FGV
Wikipedia

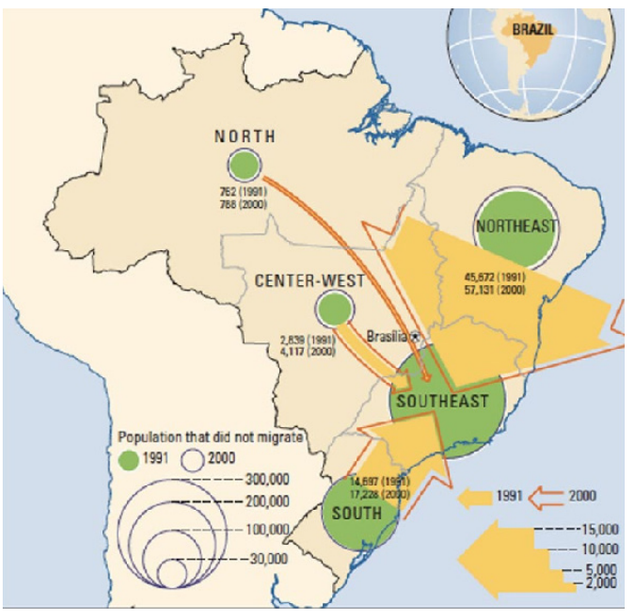
Etno - Historical Map of Brazil and Surroundings



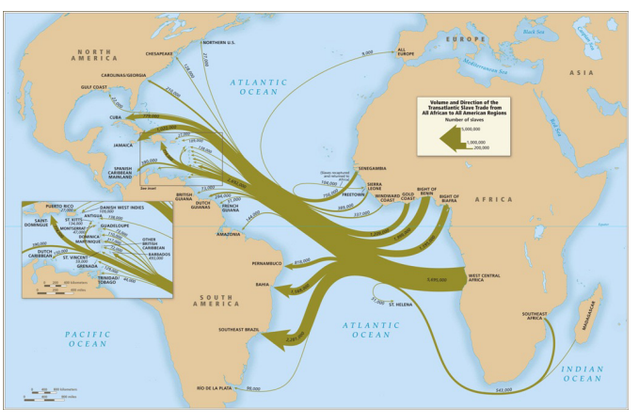
Worldwide Immigration



Internal Displacements



Volumes and Direction of African Slave Trade



Brazil

Country Profile

Location

Brazil is the largest country in South America and the fifth largest nation in the world. It forms an enormous triangle on the continent's eastern side with a 7,400-kilometer coastline along the Atlantic Ocean. It has borders with every South American country except Chile and Ecuador.

Area

8,511,965 km²

Climate

Brazil has a humid tropical and subtropical climate except for a drier area in the Northeast, sometimes called the drought quadrilateral or drought polygon, that extends from northern Bahia to the coast between Natal and São Luís; that zone receives about 375–750 mm of precipitation a year. Much of Brazil receives 1,000–1,800 mm annually, but precipitation often is much heavier in parts of the Amazon basin, and the sea-facing rim of the Serra do Mar.

Landscape

Brazil stretches roughly 2,700 4,350 km from north to south and east to west to form a vast irregular triangle encompassing a wide range of tropical and subtropical landscapes, including wetlands, savannas, plateaus, and low mountains. Brazil contains most of the Amazon River basin, with the world's largest river system and the world's most extensive virgin rainforest.

Capital

Brasília is the federal capital of Brazil and seat of government of the Federal District. Brasília was a planned city developed by Lúcio Costa, Oscar Niemeyer and Joaquim Cardozo in 1956 in a scheme to move the capital from Rio de Janeiro to a more central location.

Political System

Brazil is Latin America's largest and most populated country, the biggest democracy in the region. It is politically organised as a Federative Republic, formed by the Union, 26 states, 5 570 municipalities and the Federal District (Brasilia). The Brazilian Constitution establishes the principle of the separation of powers of the Union into legislative, executive and judiciary. The executive power is vested in the president of the Republic, who is both head of state and head of the government.

Economy

Brazil is one of the world's mining, agriculture, and manufacturing giants, and it has a strong and rapidly growing service sector. It is a leading producer of a host of minerals, including iron ore, tin, bauxite (the ore of aluminum), manganese, gold, quartz, and diamonds and other gems, and it exports vast quantities of steel, automobiles, electronics, and consumer goods. Brazil is the world's primary source of coffee, oranges, and cassava (manioc) and a major producer of sugar, soy, and beef; however, the relative importance of Brazilian agriculture has been declining since the mid-20th century when the country began to rapidly urbanize and exploit its mineral, industrial, and hydroelectric potential. In particular, the city of São Paulo has become one of the world's major industrial and commercial centers.

Source:
Wikipedia | Brazil
Britannica | Brazil
National Geographic | Brazil

Map of Brazil

Map of Brazil

Facts & Figures

Natural Resources

The availability of adequate rainfall and the fertile nature of its land make the country ideal for agriculture. The major agricultural products include sugar cane, corn, cassava, soybean, oranges, coffee, cotton, tobacco, and cocoa. Brazil's annual coffee production of 2.6 million t is the world's highest and the second-largest producer of soybean and sugar. Brazil is rich in various natural resources and is the world's leading tin, iron ore, and phosphate producer. It has large deposits of diamonds,

Population

Brazil is the fifth most populous country on Earth, accounting for one-third of Latin America's population. Its population is about 203,062, 512 people. (2022)

In- and Out-flux

In the second decade of the 21st century, Brazil experienced a steady increase in immigrants, mostly of Haitian and Venezuelan descent. Each year, the number of refugees increases, which led to the creation of the 2017 Migration Law. The Brazilian population mainly has immigrated to the USA, making the USA the home of the largest Brazilian community outside of Brazil, mostly in New York and Miami. The largest home of Brazilian immigrants in Europe is Portugal, and in South America, Paraguay.

Health

Brazil has a robust public health system covering everyone legally living in the country. The Sistema Único de Saúde (SUS) is Brazil's national health system that provides universal health coverage.

Poverty

In 2021, according to criteria of the World Bank, 62.5 million persons (29.4% of the population in Brazil) were in living poverty, and, among those, 17.9 million were in extreme poverty (8.4% of the population).

Housing

Brazil faces a shortage of more than 6 million homes. People earning less than US$1,000 monthly account for about 90% of this deficit. It is estimated that more than 25 million Brazilians live in inadequate conditions. In the cities, overcrowding and housing deterioration are among the problems.

Social Issues

Brazil faces issues centered mostly around political violence, corruption and discrimination. Government has struggled to address crime and disproportionate violence against and economic exclusion of minorities. Corruption is very high, and governmental transparency has decreased. Social discrimination and violence against LGBT+ people remain serious problems.

Religion

64% Catholics
17% Pentecostal Protestants
5% non-Pentecostal Protestants
3% Kardecists or Spiritists
3% followers of other religions
7% non-religious or atheists
Less than 1% Afro-Brazilian religions

Cultural Life

The cultures of the indigenous Indians, Africans, and Portuguese have together formed the modern Brazilian way of life.

Source:
Statista | Migration in Brazil - statistics & facts
Columbia University | Public Heath | Brazil
Agencia IBGE | Government of Brazil | Social Statistcs
FAO | Brazil

Map of Brazil

States of Brazil

Megalópole, Macrometrópolitan regions & Metropolitan Region São Paulo

Facts & Figures

Megalópole Region of Rio-São Paulo

Location	Rio-São Paulo Megalópolis (also called Brazilian Megalópolis and Southeast Brazilian Megalópolis) is the term used to refer to the conurbation process existing between the Expanded Metropolitan Complex, in the state of São Paulo, and the Metropolitan Region from Rio de Janeiro.
Metropolitan Centers	Brazilian metropolitan centers are located in the southeast region of Brazil. They are Rio de Janeiro, São Paulo, Campinas, Piracicaba, Jundiaí, Vale do Paraíba, Sorocaba and Baixada Santista.
Municipalities	This area consists of 232 municipalities from three states: Rio de Janeiro, São Paulo, and Minas Gerais.
Area	82,616 km²
Population	42 million (2007)
Density	Information not available
Ciimate	Subtropical temperate and, humid subtropical at the coast

Macrometropolitan Region of São Paulo

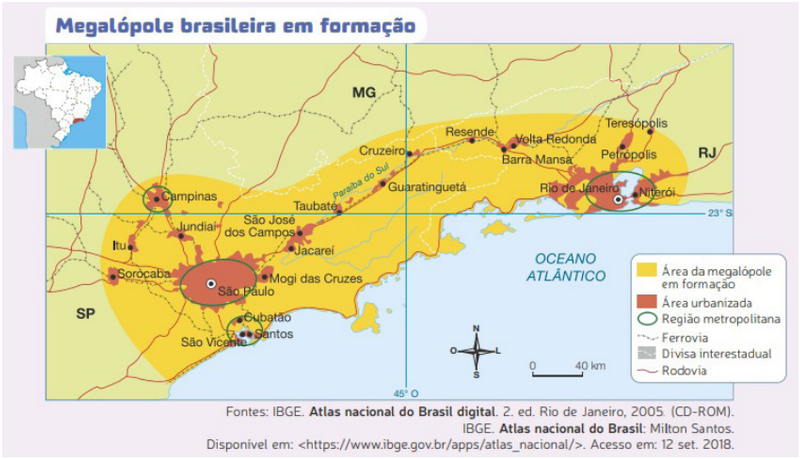
Location	Estate of São Paulo
Municipalities	Consist of 173 municipalities, its area is equivalent to that of Slovakia. Its population corresponds to that of countries like Canada, and it has a GDP close to that of Switzerland, the 18th largest economy in the world (Data from 2012). It comprises 5 metropolitan regions, 2 urban agglomerations, and 1 institutionalized micro-region in São Paulo.
Area	49,927.83 km²
Population	30.5 million (2012)
Density	611.23 inhabitants/km²
Climate	Subtropical temperate and, humid subtropical at the coast

Metropolitan Region of São Paulo

Location	Estate of São Paulo
Municipalities	39 municipalities
Area	7,946.96 km²
Population	20,743,587 (2021)
Density	2,610 inhabitants/km²
Climate	Subtropical

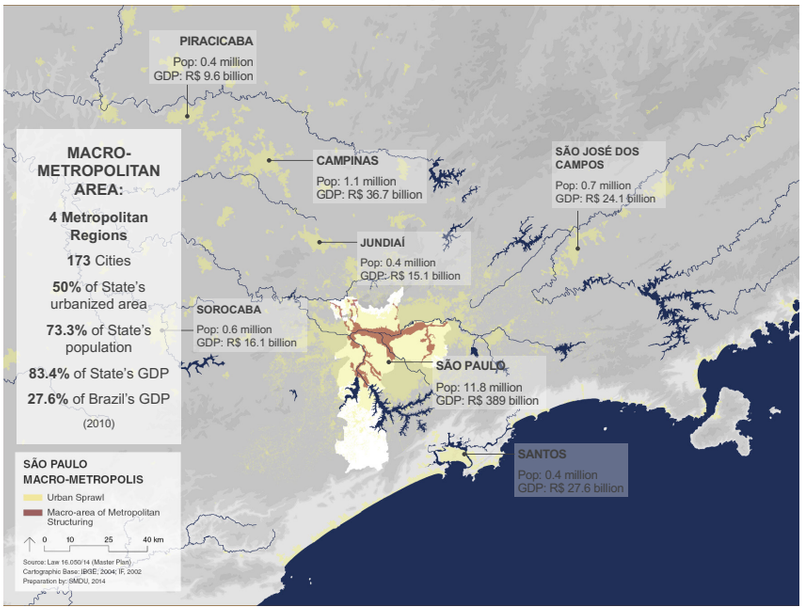
Source:
Wikipedia | Rio-São Paulo Megalopolis

Megalópole of Rio-São Paulo



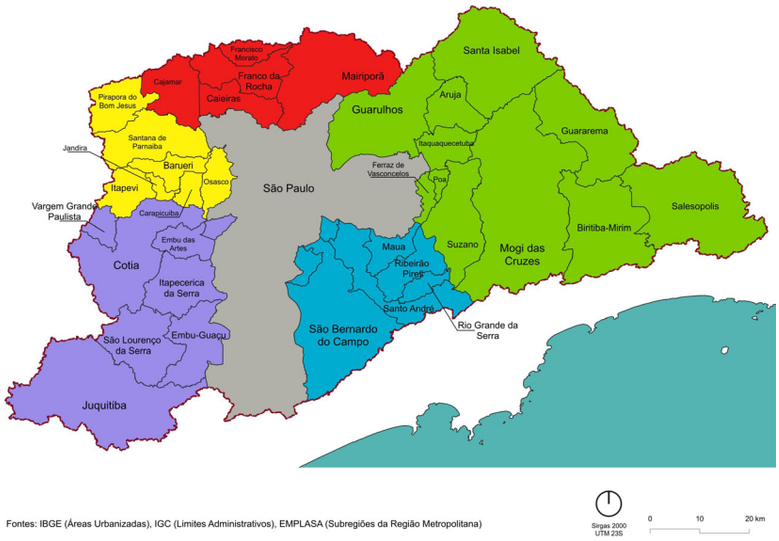
Fontes: IBGE. **Atlas nacional do Brasil digital**. 2. ed. Rio de Janeiro, 2005. (CD-ROM).
IBGE. **Atlas nacional do Brasil**: Milton Santos.
Disponível em: <https://www.ibge.gov.br/apps/atlas_nacional/>. Acesso em: 12 set. 2018.

Macrometropolitan Region of São Paulo



SMDU | PMSP | 2014

Metropolitan Region of São Paulo



IBGE (Áreas Urbanizadas) | IGC (Limites Administrativos) | EMPLASA (Subregiões da Região Metropolitana)

São Paulo

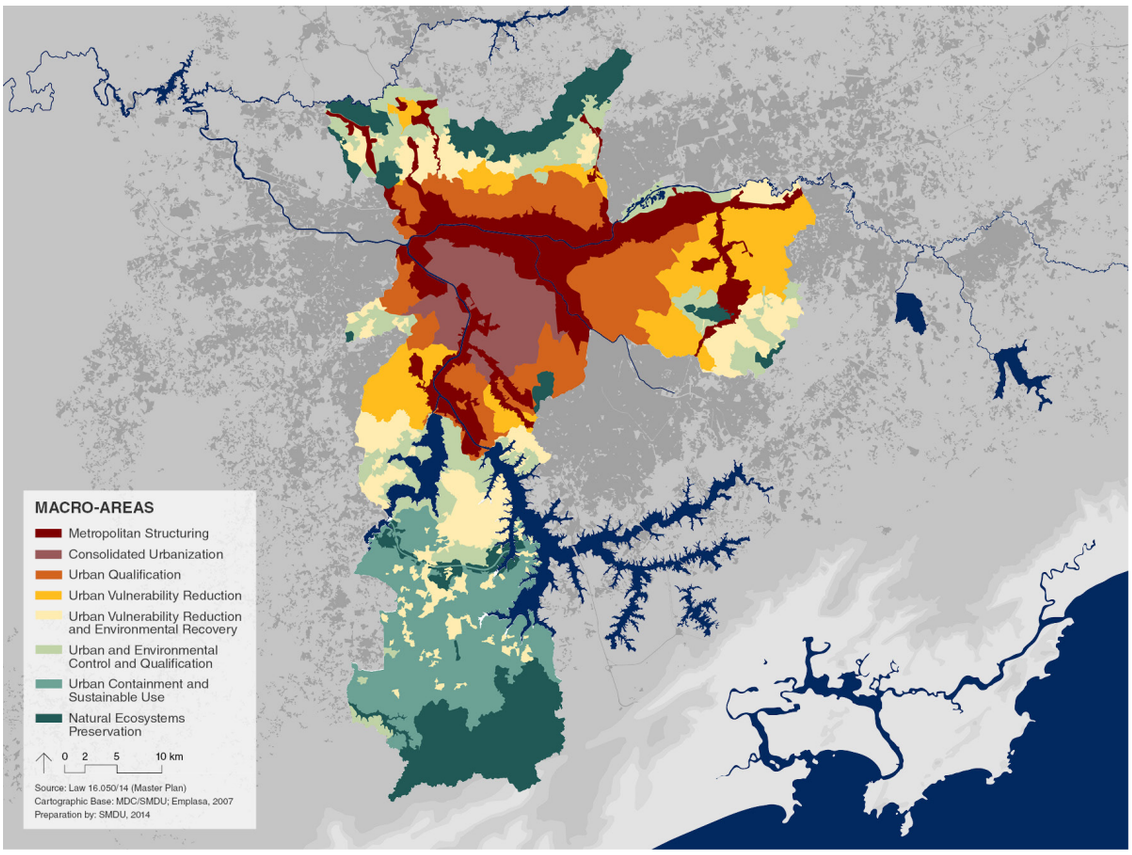
Facts & Figures

Profile

Urban region	The greater urban area with the municipality measures 949,611 km², making it the largest urban area in the country.
of São Paulo	Total city area is 1,521 km², making it the nation's ninth-largest territory.
Population	11.5 million (2022)
Density	7,528 people per km²
Economy	São Paulo is considered the "financial capital of Brazil," as it is the headquarters of major corporations, banks, and financial institutions. São Paulo is Brazil's highest GDP city and one of the largest in the world. Additionally, as of 2014, São Paulo is Brazil's third-largest exporting municipality after Parauapebas and Rio de Janeiro. The top five most exported goods are soybean, raw sugar, coffee, sulfate chemical wood pulp, and corn.
Unemployment	12.8% (2020) and 7.6% (2023)
Ethnic	In 2010, 60.6% of the population declared themselves white, 37% black (black and brown) and 2.2% yellow. 19,777 people declare themselves indigenous (Census, 2022).
Language	São Paulo is the largest Portuguese-speaking city in the world.
The Region	São Paulo is a plateau city comprising urban, rural, and environmental preservation areas. Initially an indigenous territory, the city was founded by settlers and became a small village surrounded by farms. With the coffee cycle and industrialization, an intense urbanization process began, replacing the territory's previous forms of occupation. From the historic center came a series of avenues that supported a process of peripheralization that accentuated inequalities, especially in income, race and gender. Two dams were built in the city to contribute to energy production and water supply (the Billings and Guarapiranga dams). With a thriving real estate market, the city is marked by contrasts. A series of plans and projects are being developed or implemented.
Topography	Geomorphologically, the city is characterized as a predominantly flat plain, interspersed with gentle hills and low hills, especially the Serra da Cantareira, to the north. The presence of rivers such as the Tietê and Pinheiros, initially used as river transportation routes, has shaped the landscape, creating valleys and floodplains along their course. Intensive urbanization over the years has significantly altered the natural landscape, with the expansion of the urban network over former floodplain areas with the predominance of valley bottom avenues.
Altitude	São Paulo is in a plateau (a high flat area), 760 meters above sea level. Because of its altitude, its climate (subtropical) is not as warm as it is near the coast.

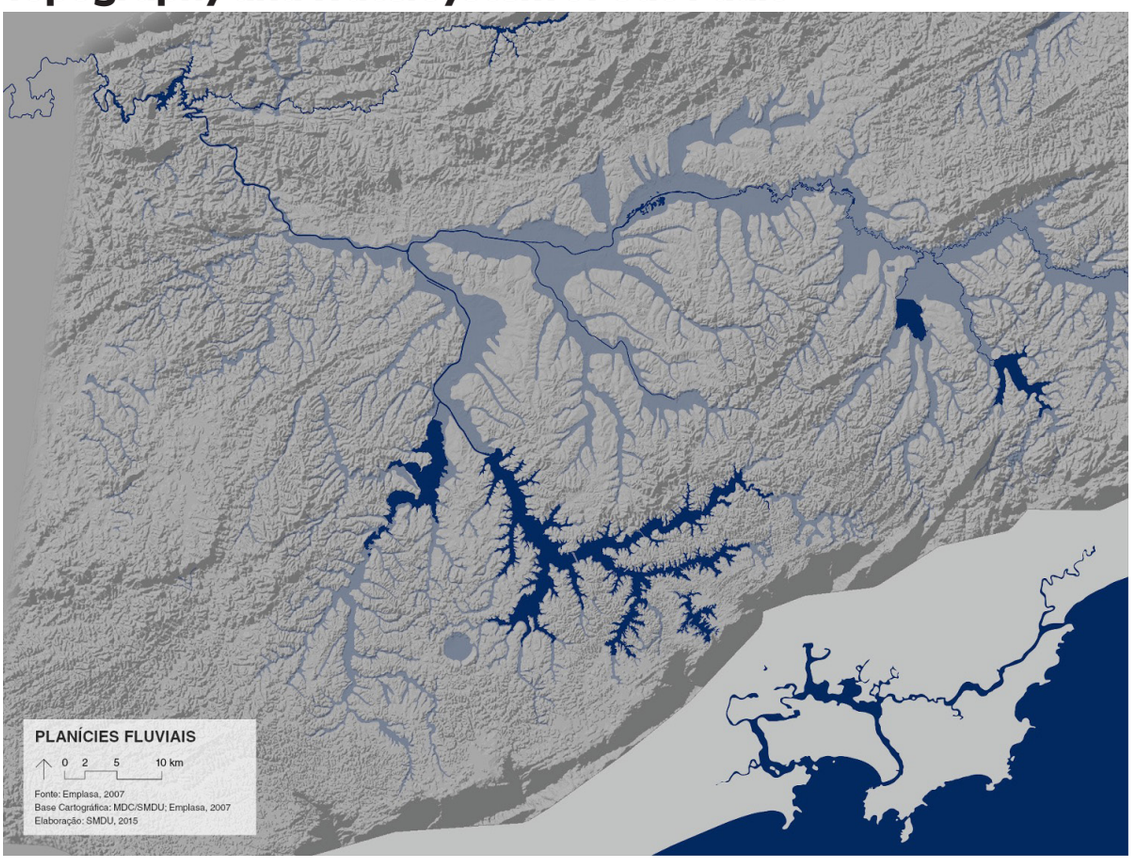
Sources:
City Population | São Paulo
Wikipedia | São Paulo

Macro Areas of São Paulo



SMDU | PMSP | 2014

Topography and Watersystem of São Paulo



SMDU | PMSP | 2014

Facts & Figures

Profile

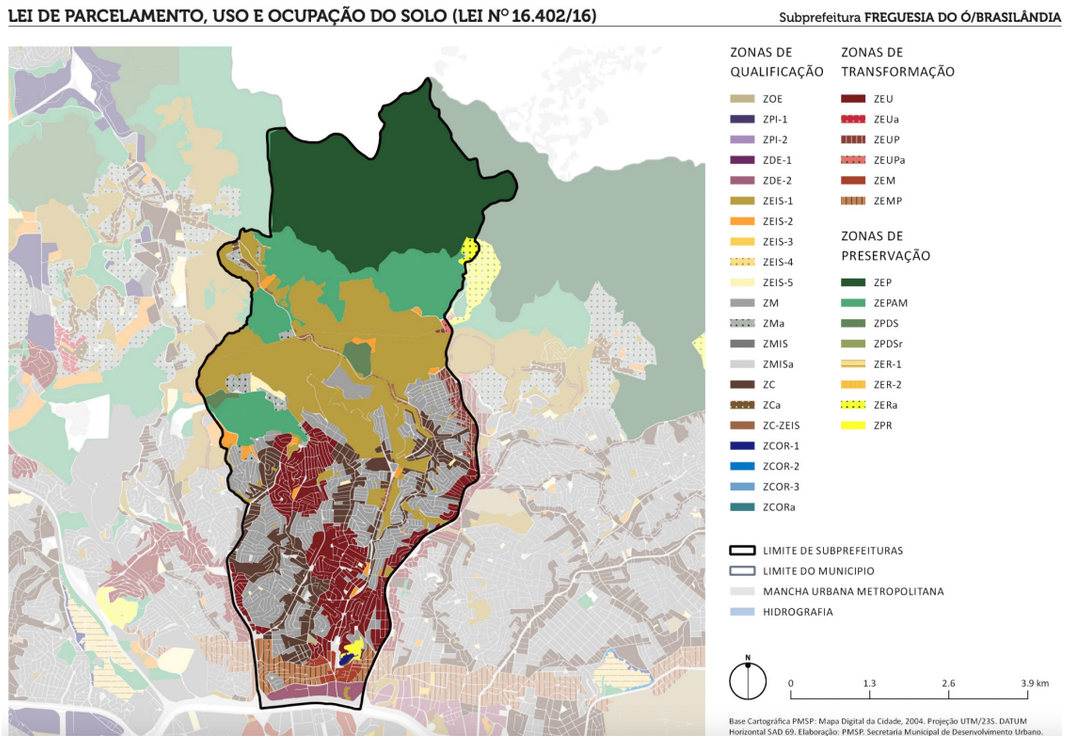
Administrative Territorial Units

The city of São Paulo is divided into 32 subprefectures, which in turn are subdivided into 96 districts. The Brasilândia/Freguesia do Ó Subprefecture (number 3 in the image), in the north, is made up of two districts, Brasilândia to the north and Freguesia do Ó to the south.

Subprefecture of Brasilândia and Freguesia do Ó (Zoning)

The subprefecture's zoning map reveals a lot about its characteristics and territorial transformation objectives. It reveals, in darker green, the more restrictive environmental preservation areas (ZEP); in lighter green, the environmental conservation areas (ZEPAM); in yellow, the informal settlements and shanty towns (ZEIS); in red, the areas around public transport hubs and stations, the existing and planned Urban Transformation Structuring Hubs (ZEU); and in brown (ZC) the main subcentralities, formed by the main avenues, often coinciding with the water network.

Zoning of Brasilândia and Freguesia do Ó



Subprefectures and Districts of São Paulo

Fonte: Secretaria Municipal de Desenvolvimento Urbano – SMDU/ Departamento de Produção e Análise de Informação - DEINFO.

Facts & Figures

Median death age per district (%)

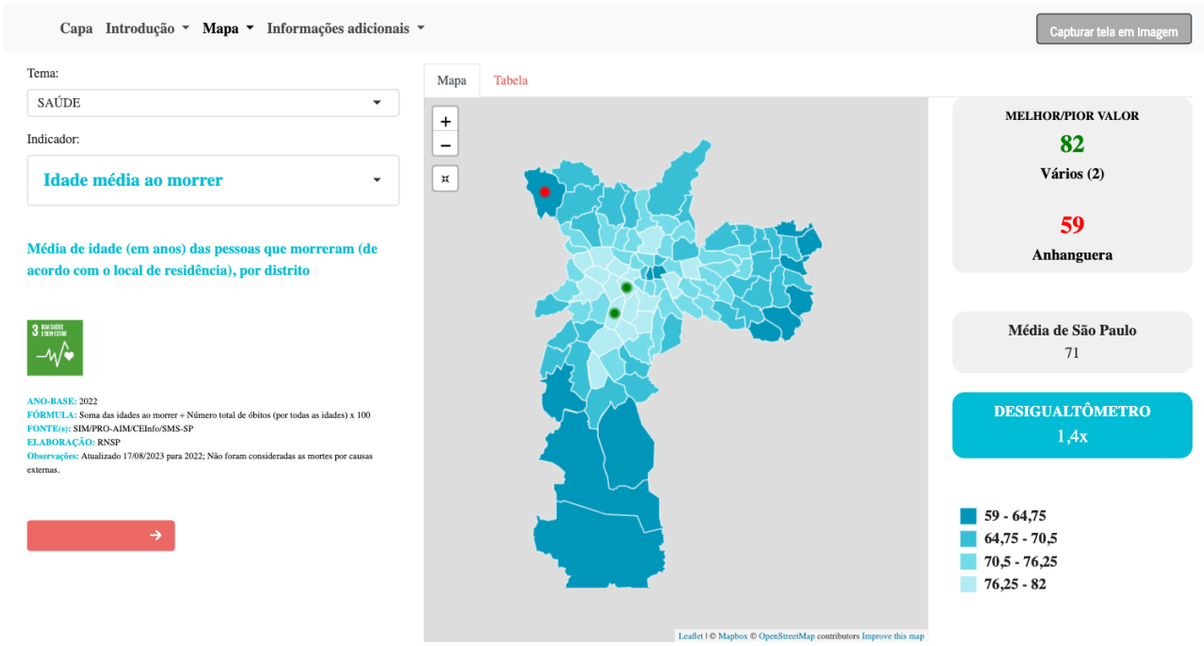
People who reside in upscale neighborhoods within the city of São Paulo live, on average, 23 years longer than those who inhabit the outskirts, as revealed by the Inequality Map annually published by Rede Nossa São Paulo. For instance, in neighborhoods like Itaim Bibi and Jardim Paulista, the death average age in 2023 was 82 years old, whereas in the Anhanguera district, located in the northern part of the capital, the average dropped to 59. Across the entire city, the average death age stood at 71.Among the neighborhoods with the lowest averages are Marsilac, Iguatemi, and Cidade Tiradentes, with an average of 61, along with Brás, São Rafael, Jardim ngela, and Grajaú, with an average of 62. These neighborhoods are situated on the outskirts of the southern and eastern zones, as well as in the central region of the capital.

Black population per district (%)

Data from the Map of Inequality released by Rede Nossa São Paulo and the Sustainable Cities Institute show that black people live more in neighborhoods on the outskirts of São Paulo. Jardim ngela, on the edge of São Paulo's South Zone, has the highest percentage of blacks in the city: 60.1%. This rate is 10.3 times higher than that of Moema, a noble region in the South Zone with only 5.8% black people. Next, the district with the largest black population is Grajaú, also in the South Zone, with 56.8% of residents. The second district with the fewest black people is Alto de Pinheiros, a noble area in the West Zone, with 8.1%.

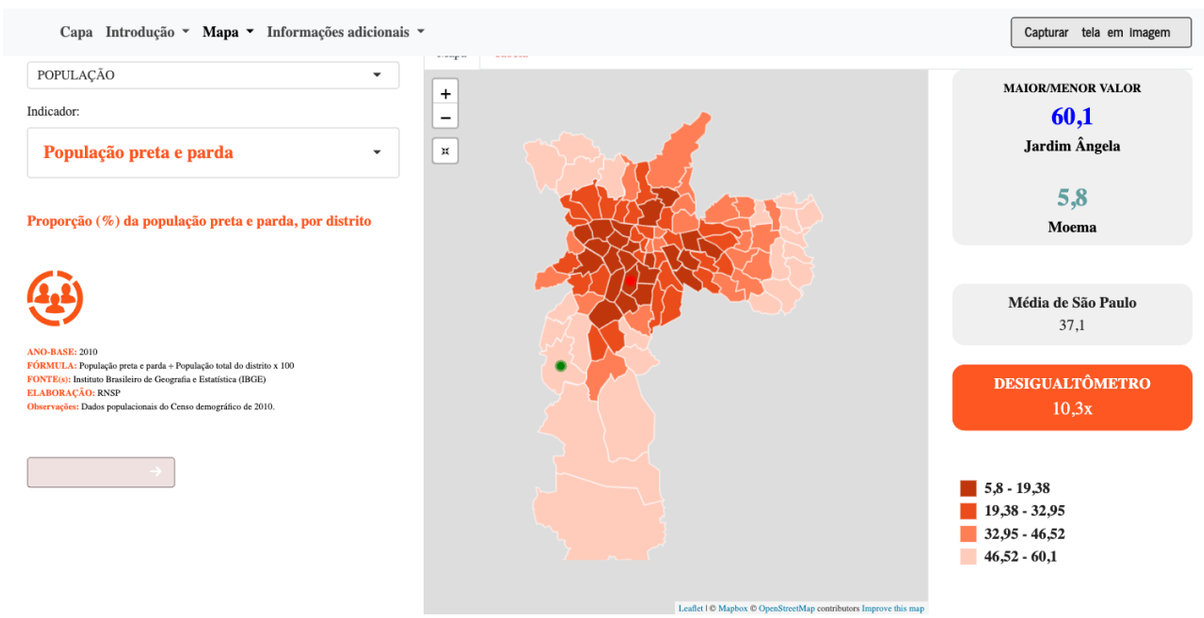
Source:
G1 SP | 2022

Median death age per district (%)



Rede Nossa São Paulo, 2020

Black population per district (%)



Rede Nossa São Paulo, 2020

São Paulo History

São Paulo: Indigenous Land

In the plateau region, where the city of São Paulo was later founded, Tupiniquin groups coexisted with Guainá and Maromomis groups without forming permanent settlements. These original groups were destroyed or enslaved to guarantee the hegemony of the colonial project.

The Colonial Village
1554 – 1850

A group of Jesuits, fleeing a conflict between native people and settlers on the coast, climbed the Serra do Mar and reached the plateau to establish the Piratininga settlement in 1554. This is considered to be the first settlement in the region, organized between the Tamanduateí and Anhangabaú rivers, which is today the center of São Paulo. The colonial town was structured on a peripheral intra-colonial economy based on commercial crops (particularly wheat). These crops, as the result of the slashing and burning of the Atlantic Forest, supplied the main colonial centers located in the northeast region. These centers produced sugar cane in the plantation system, catering to the demands of the Metropolis.

The City of the Coffee
1850 - 1930

Following a geographical shift to the Minas Gerais region spurred by the gold rush, the emergence of the coffee economy became prominent, particularly with the utilization of African labor. The construction of the city's inaugural railroad, the Santos-Jundiaí in 1867, further propelled this economic shift. Later, the railroads facilitated an industrialization process, accompanied by intensified urbanization and a series of public policies with the aim of transitioning from slave labor to wage labor and predominantly consisting of white European immigrants. During this period, the city was considerably compact, yet characterized by territorial inequalities: wealthy neighborhoods contrasted with working-class neighborhoods, surrounded by rural outskirts. A network of electric tram was gradually implemented to accommodate the growing urban population.

The Car - Centric City
1930-1980

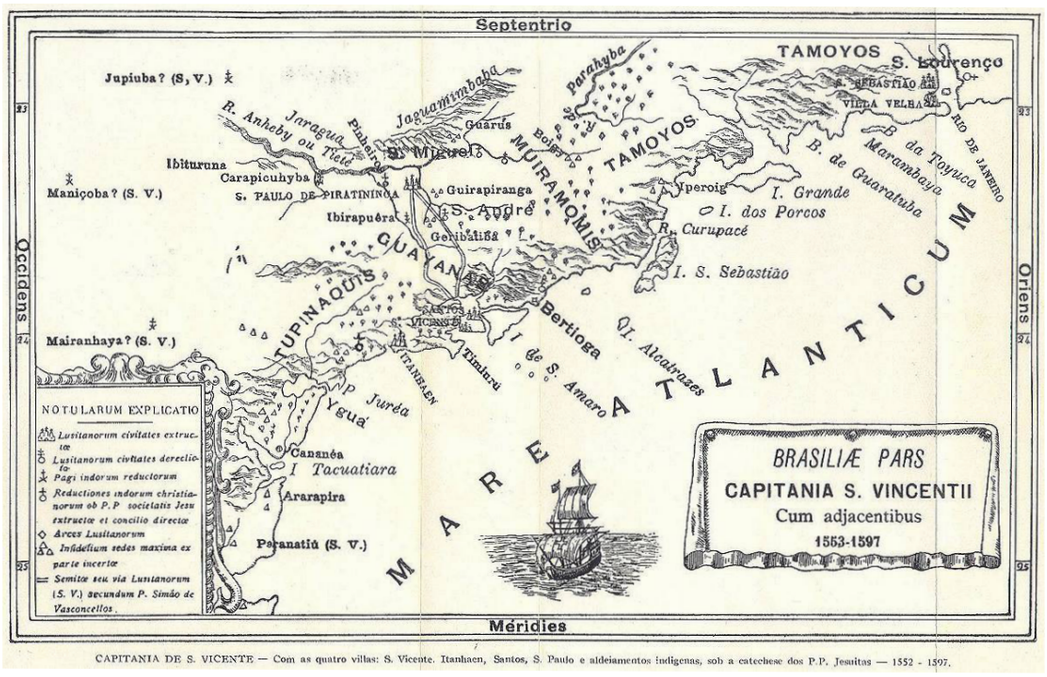
The 1929 crisis marked the transition from the coffee economy to the industrialized economy, catalyzing exponential urban growth and peripheralization. During this period, houses were often self-built on plots of land without infrastructure, reflecting a new socio-economic distinction between class and race in Brazil. This urban transformation was further intensified by constructing avenues, especially valley bottom avenues, based on Prestes Maia's Avenues Plan (1924). These transformations shaped mobility and the city's structure, prioritizing tire-based transportation such as cars and buses. This period was accompanied by the consolidation of the city as the country's main economic hub and the increase of migration flows, especially from the country's northeast.

The Macro-Metropolis
1980 - ongoing

In the face of capitalist production restructuring in the 1980s and 1990s, São Paulo's urban transformation became increasingly intricate. While urban sprawl persisted, real estate expansion zones were consolidated, intertwined with financial market mechanisms and new forms of state intervention, often influenced by patronage and clientelism. This period witnessed a surge in inequalities and environmental degradation alongside initiatives advocating for the right to the city.

Source:
O Planejamento da Desigualdade | Rolnik, R | 2022
Negros da terra: Índios e bandeirantes nas origens de São Paulo | Monteiro, J. M. | 1994
O negro no mercado de trabalho em São Paulo pós-abolição: 1912-1920 | Jacino, R. | 2013
Globalização e política urbana Na periferia do capitalismo. Territorios | Maricato, E. | 2008

1553-1597 Capitania de S. Vicente



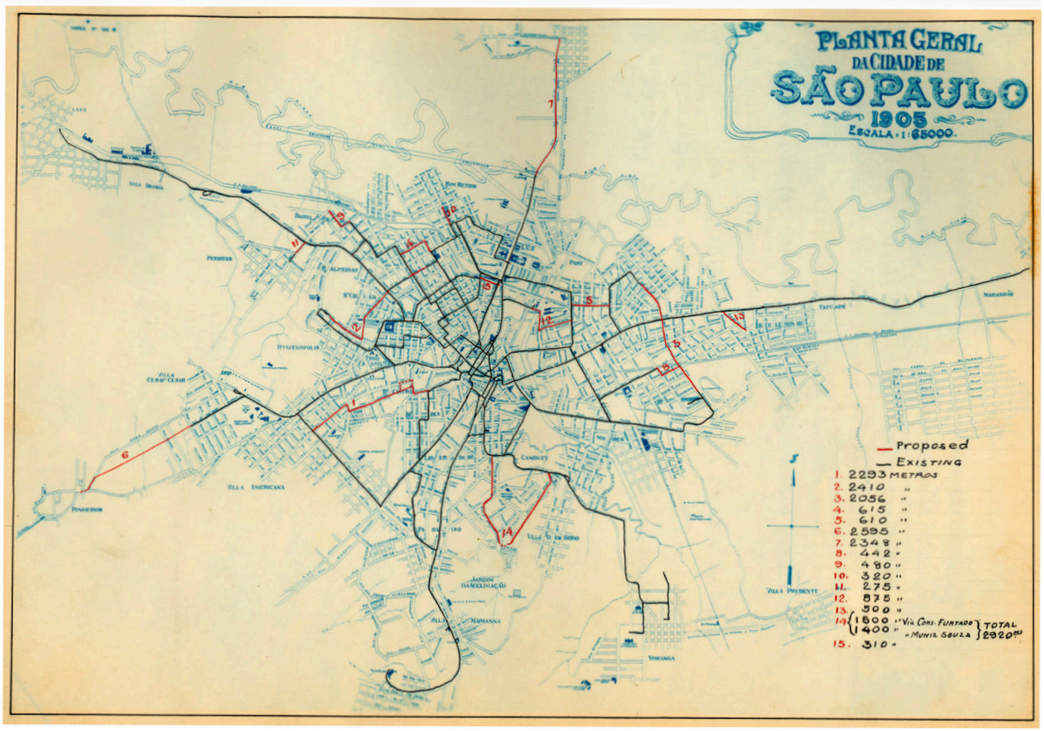
CAPITANIA DE S. VICENTE — Com as quatro villas: S. Vicente, Itanhaen, Santos, S. Paulo e aldeiamentos indigenas, sob a catechese dos P.P. Jesuitas — 1552 - 1597.

Capitanias Paulistas, Benedicto Calixto, 1927

1842 Letter from the Capital of São Paulo

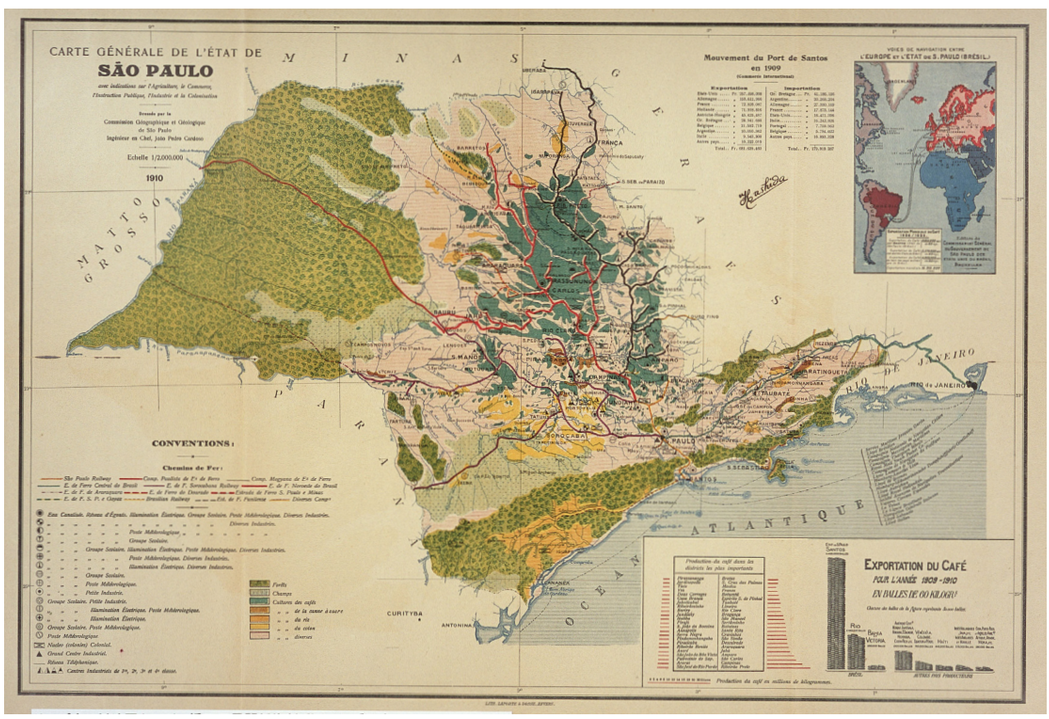
Arquivo Histórico Municipal

1905 Plan of São Paulo and Tram Lines



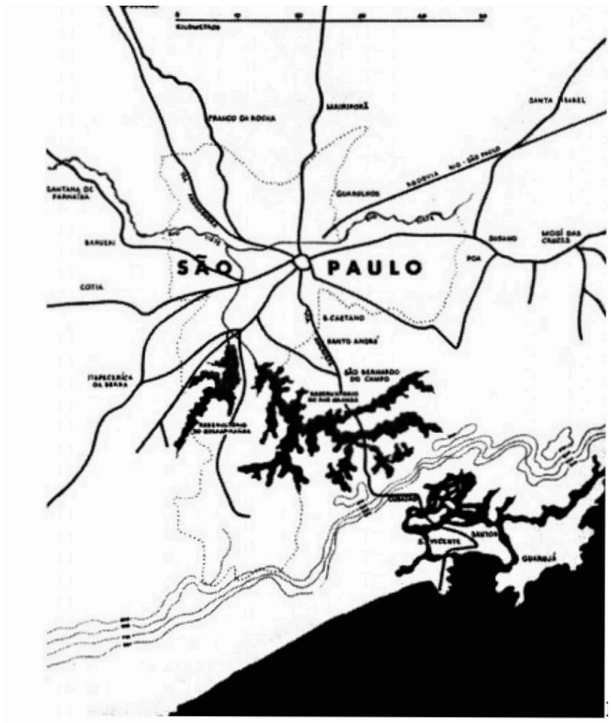
Acervo Fundação Energia e Saneamento

1910 Plan of São Paulo and Coffee Routes



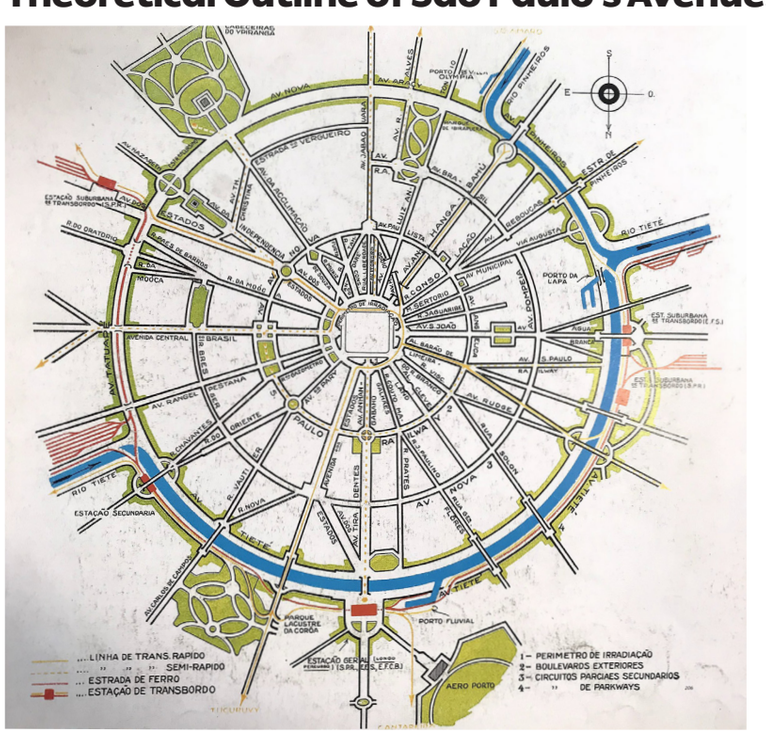
Comissão Geográfica e Geológica. Antuérpia: Lith. Laporte et Dosse, 1910.

1951 Public Improvement Plan for São Paulo



Proposal for urban roads in Robert Moses' "Public Improvement Plan for São Paulo", 1951
Anelli, 2007

Theoretical Outline of São Paulo's Avenues Plan



Benedito Lima de Toledo, 2005

Urban Transformation

Metropolitan Structuring Macro-area and the City Center

To enhance the availability of housing and employment opportunities while fostering integration among the cities in the Metropolitan Region of São Paulo, the Master Plan delineates three primary areas aimed at guiding and integrating urban, environmental, and social policies. These areas encompass crucial infrastructure systems such as railways, structural avenues, highways, and rivers.

CENTRAL SECTOR: This encompasses the historical city center and is characterized by commercial and service activities, offering significant employment prospects.

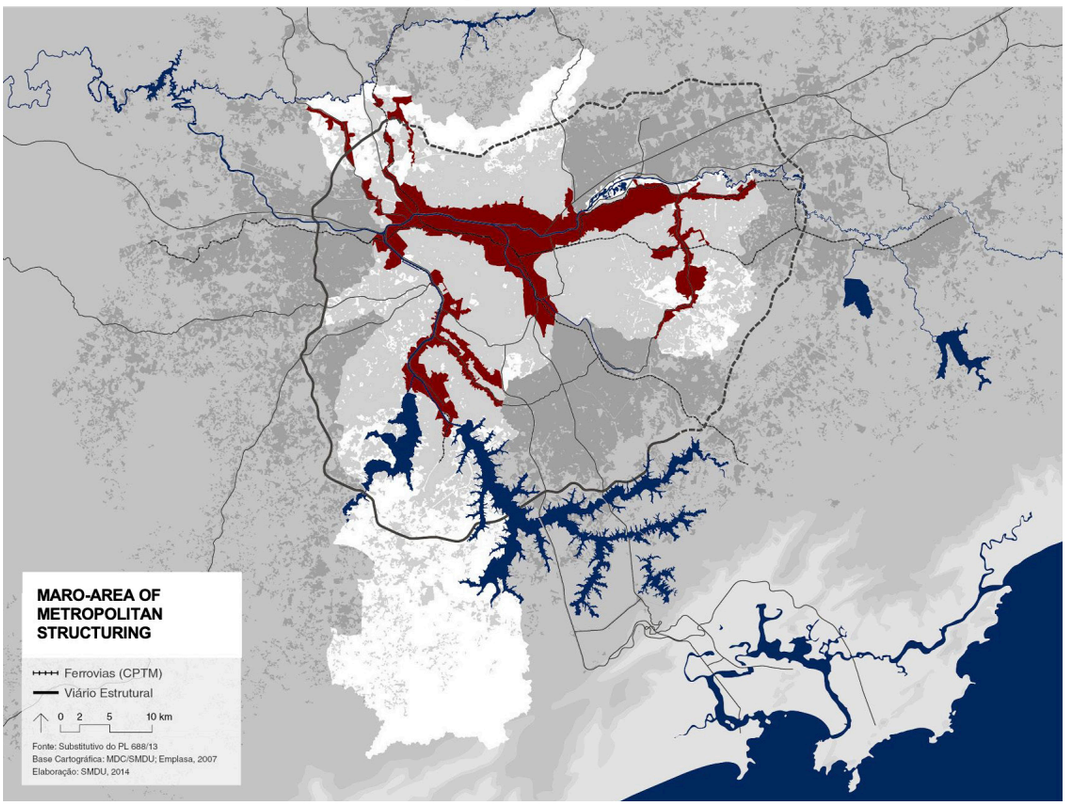
RIVER WATERFRONT AND RAILWAY SECTOR: This includes areas along the Tietê, Pinheiros, and Tamanduateí rivers, as well as the vicinity of the railway system, featuring ample vacant or underutilized land.

DEVELOPMENT AXES SECTOR: Situated along major transportation axes and arterial roads, this area is densely populated but lacks sufficient employment opportunities.

Urban Intervention Projects (PIU) have been formulated for these regions to facilitate necessary urban and ecological transformations within the metropolitan dynamic. These projects are made viable through various tools employed within a participatory planning process, including Consortium Urban Operations (OUC), Urban Intervention Areas (AIU), Urban Concessions, and Local Structuring Areas (AEL).

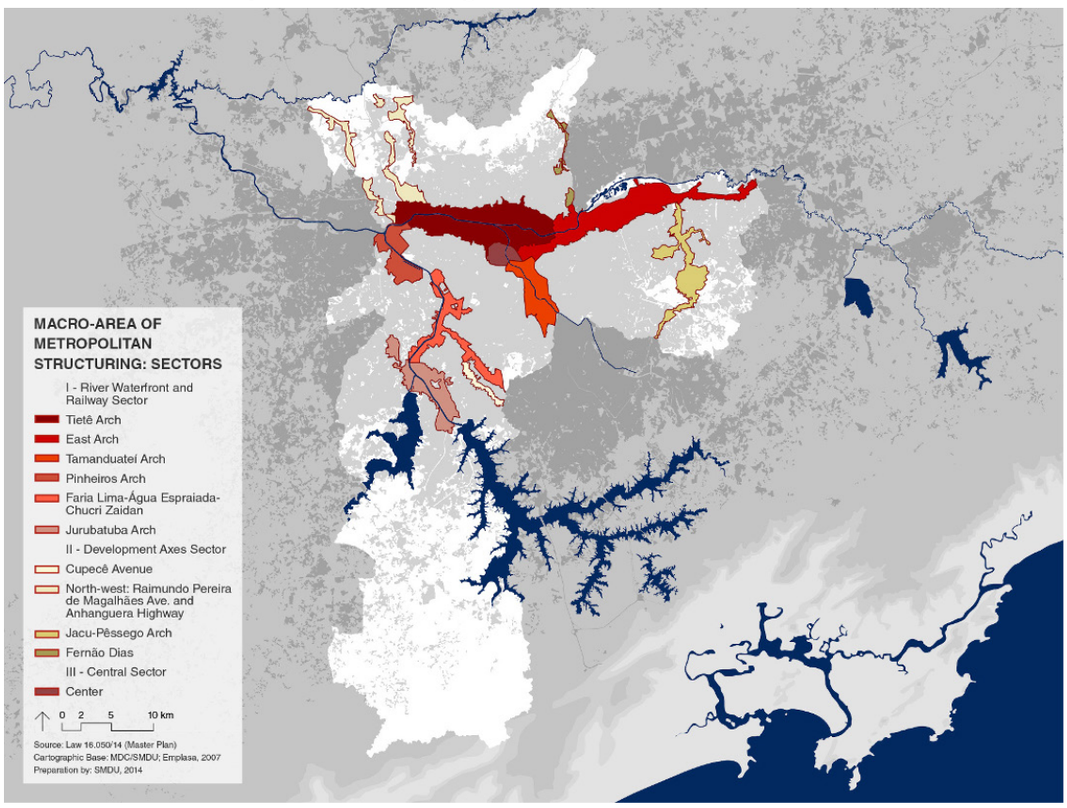
Source:
Master Plan for São Paulo (booklet) | PMSP, | 2014

Macro-area of Metropolitan Structuring



SMDU | PMSP | 2014

Macro-area of Metropolitan Structuring: Sectors



SMDU | PMSP | 2014

Urban Transformation

Structuring Axes of Urban Transformation

To minimize long commutes and facilitate proximity to workplaces, the new Master Plan advocates for a growth model centered around the public transportation system, achieved through the implementation of "Structuring Axes of Urban Transformation." This approach aims to optimize land utilization in areas highly accessible via medium and high-capacity public transportation networks, such as trains, subways, monorails, and bus corridors. Additionally, the plan introduces tools to ensure urban quality throughout this transformation and densification process. These include enhancing and expanding public spaces, promoting a blend of residential and non-residential uses, and incentivizing features like active façades and public enjoyment, fostering a more pedestrian-friendly environment.

The plan also includes the following incentives:

MIXED-USE INCENTIVES: Commercial use, services, and facilities are not counted towards development rights for up to 20% of the built area.

ACTIVE FAÇADES: Buildings with commercial use, services, and facilities on the ground level, with open access to the public, receive urban incentives.

PUBLIC ENJOYMENT: Developments with designated public use areas are eligible for urban incentives.

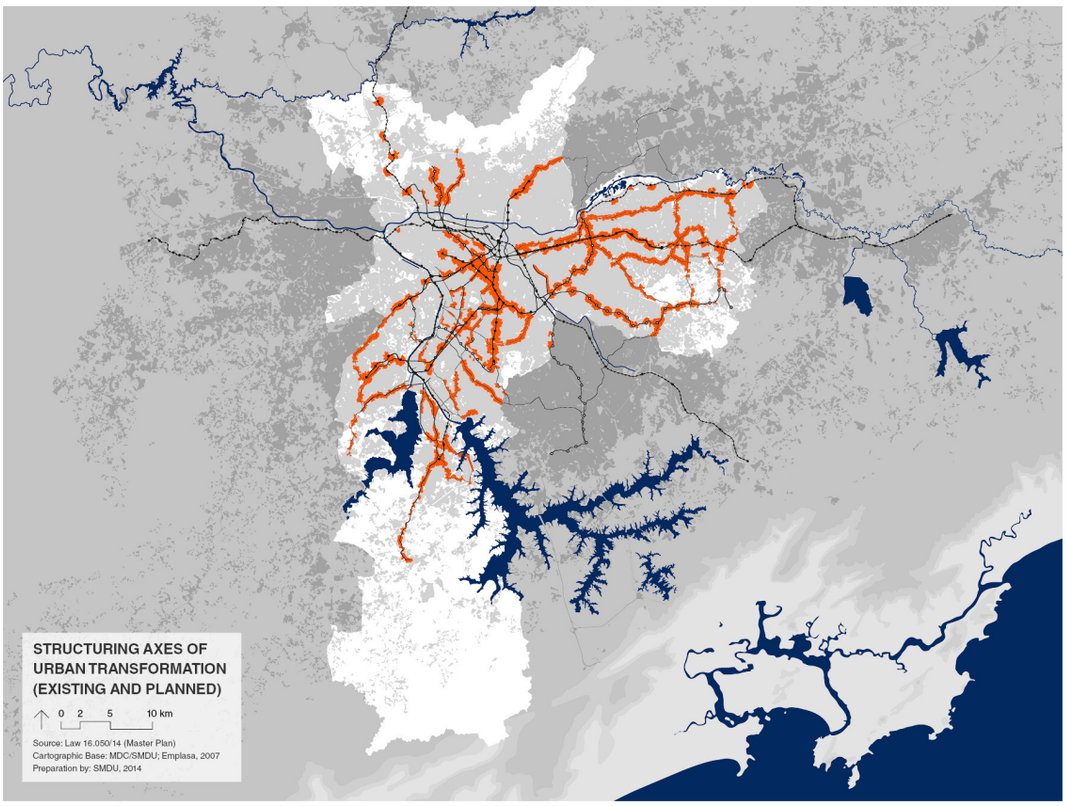
WIDE SIDEWALKS: Minimum sidewalk width of 5 meters on main streets (adjacent to bus corridors or subway/train stations) and 3 meters on other streets within the designated area.

DWELLING SHARE: Establishes a minimum quantity of dwelling units based on land area.

INCREASED FLOOR AREA RATIO: Encourages building and population densification, maximizing the utilization of existing infrastructure.

Source:
Master Plan for São Paulo (booklet) | PMSP | 2014

Map of Existing and Planned Structuring Axes

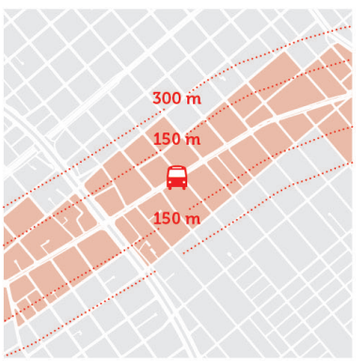


SMDU | PMSP | 2014

Diagram of Potenatial Structuring Axes Transformations

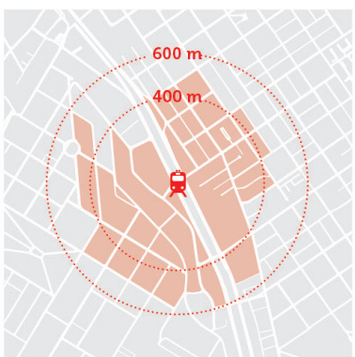
STRUCTURING AXES OF URBAN TRANSFORMATION

Defining the areas of influence



----- = Street axis

Municipal and metropolitan bus corridors on non-elevated roads



• = Access to stations

Train
Subway
Monorail
Light Rail Vehicles (LRV)
Bus corridors on elevated roads

SMDU | PMSP | 2014

Urban Transformation

Special Zones of Social Interest (ZEIS) and Favelas

In order to face the lack of adequate and well-located social housing opportunities, the new Master Plan has doubled the areas known as Special Zones of Social Interest (ZEIS), which are designated to the provision of affordable housing, particularly for families whose income is lower than 3 minimum wages. Besides establishing a minimum and permanent source of funding for social housing policies, the Master Plan has also created the "Solidarity Share": a counterpart mechanism that shows that large developments must donate 10% of the built area to affordable housing, envisioning a more balanced and plural city.

At least 30% of the resources from the Urban Development Fund (FUNDURB) will be directed at purchasing well-located land to implement social housing and subsidizing housing programs. At least 25% of the resources from CONSORTIUM URBAN OPERATIONS (OUC) and URBAN INTERVENTION AREAS (AIU) will be directed to the same purpose.

Rural Zone

The environmental dimension plays a fundamental role in the structuring and territorial ordering of the Master Plan, and it is a transversal topic to the systems and interdepartmental policies of the city. The Master Plan has defined an area of the city as a rural zone with effective mechanisms to foster its development and protection, linked to minimum and permanent financial sources, besides promoting the extension of environmental protection zones. It also establishes a new municipal fund created particularly to guarantee the expansion of green areas and free spaces in the city

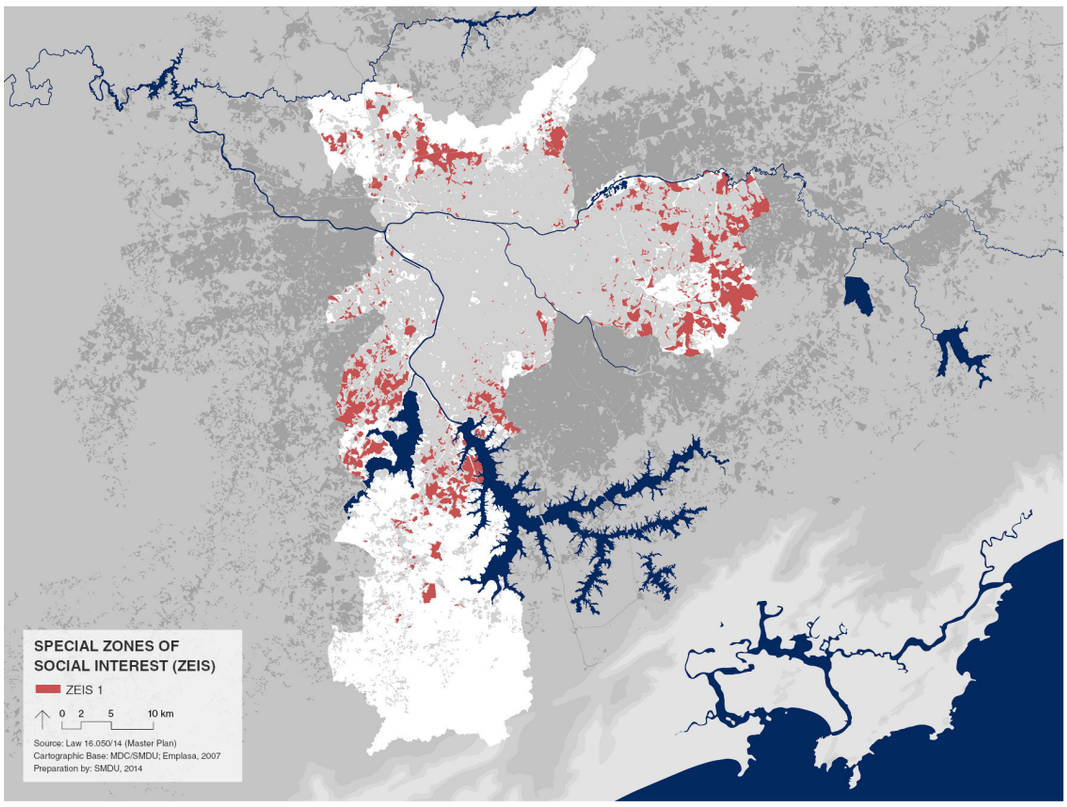
RURAL ZONE: The rural zone's primary objectives include curtailing urban sprawl, preserving natural ecosystems, and promoting sustainable practices such as organic agriculture.

PROVISION OF ENVIRONMENTAL SERVICES: This mechanism incentivizes land preservation in areas that contribute to the city's environmental quality by compensating landowners.

DEFINITION OF ENVIRONMENTAL PROTECTION AREAS: The Master Plan designates city regions crucial for providing vital ecological services. All existing and planned parks are designated as Special Zones of Environmental Protection, preventing real estate market exploitation of these areas slated for future park development.

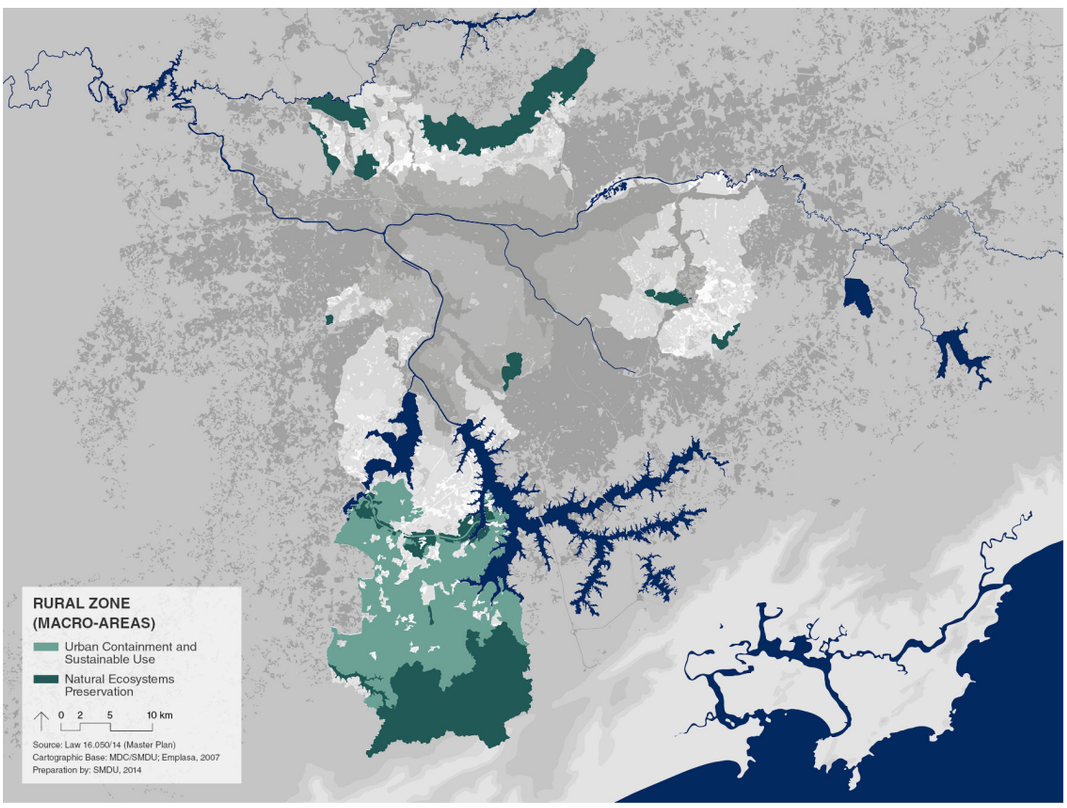
Source:
Master Plan for São Paulo (booklet) | PMSP | 2014

Map of Special Zones of Social Interest



SMDU | PMSP | 2014

Map of Rural Zone



SMDU | PMSP | 2014

Urban Transformation

Social Function of the City

The implementation of a citywide Basic Floor Area Ratio (FAR) = 1 policy signifies that any additional construction potential on land belongs to the São Paulo community, with profits directed back into urban enhancements across the city. Entrepreneurs are permitted to construct up to the Maximum Coefficient of their land but are obligated to pay an Onerous Grant, which contributes to the Urban Development Fund (FUNDURB).

Additionally, the Master Plan introduces urban tools aimed at discouraging the stagnation of properties, which otherwise incur substantial losses for the population, elevate public service and facility costs per resident, and compel individuals to reside in remote areas devoid of job opportunities, commerce, or urban amenities.

The plan identifies three categories of underutilized properties:

UNDERUSED PROPERTIES: Properties larger than 500 m2, in which the floor area ratio used is lower than the required minimum

UNBUILT PROPERTIES: Properties larger than 500 m2, in which the floor area ratio used equals zero

UNUTILIZED PROPERTIES: Buildings and other properties with at least 60% of its built area vacant for more than one-year.

Governance

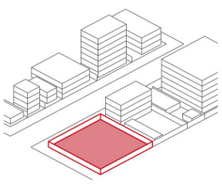
To guarantee the democratic management of the city, the Master Plan defines the stages and instruments of public participation and social control. This provides civil society a leading role in the planning and management of the urban development policies of the city, beyond ways of integrating with the city's budget instruments. Civil society in these different spaces has been improved and increased. Furthermore, to ensure that the population can monitor the implementation and development of the Urban Planning System, all information about investments, ongoing projects, licensing, socio-economic historical data, and urban and environmental instruments, among others, must be available digitally, for simple and clear access by any individual.

Source:
Master Plan for São Paulo (booklet) | PMSP | 2014

Social Function of the City

SOCIAL FUNCTION OF PROPERTY

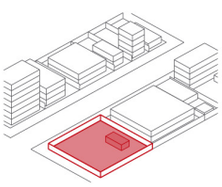
Compulsory Parcelling, Use and Construction (PEUC)



UNBUILT PROPERTIES

Properties larger than 500 m², in which the floor area ratio used equals zero

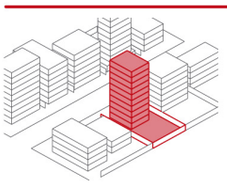
required **PARCELLING** and/or required **CONSTRUCTION** required **USING**



UNDERUSED PROPERTIES

Properties larger than 500 m², in which the floor area ratio used is lower than the required minimum

required **PARCELLING** and/or required **CONSTRUCTION** required **USING**



Buildings and other properties with at least 60% of its built area vacant for more than 1 year

required **PARCELLING** and/or required **CONSTRUCTION** required **USING**

Preparation by: SMDU, 2014

MUNICIPAL SYSTEM FOR URBAN PLANNING

It assures direct participation of the population on the decision-making process, control and evaluation in all stages of project planning and urban policies management. See the components and their relations with the Master Plan:

PDE

Multi-Annual Plan – PPA

It defines the strategies of the City for four years. It is produced on the first year of the administration and it is operated until the first year of the following administration

Budget Guidelines Law - LDO

Instrument connecting PPA and LOA, establishing the link between the short term (LOA) and the long term (PPA).

Annual Budget Law – LOA

It details the priorities and goals established by PPA and expressed in the LDOs. The project anticipates the revenues and sets the expenses.

Program of Goals

Every new administration on the City must present the main goals to be executed

Land Use, Occupation and Subdivision Law – LPUOS

It details the zoning policy, which determines that the City must be sectioned in different areas, and establishes the differences between use and occupation of the land.

Sectoral Plans for Urban-Environmental Policy

Housing plans, urban mobility, environment, education, health, among others.

Neighbourhood Plans

It aims to detail the overall guidelines established by the Regional Strategic Plan of each Sub-Prefecture.

Regional Strategic Plans of the Sub Prefectures

Shaped according to the specificity of each region, they lead the development of Plans of Action for the Sub-Prefectures, updated every 4 years

Urban and Environmental Systems

Mobility

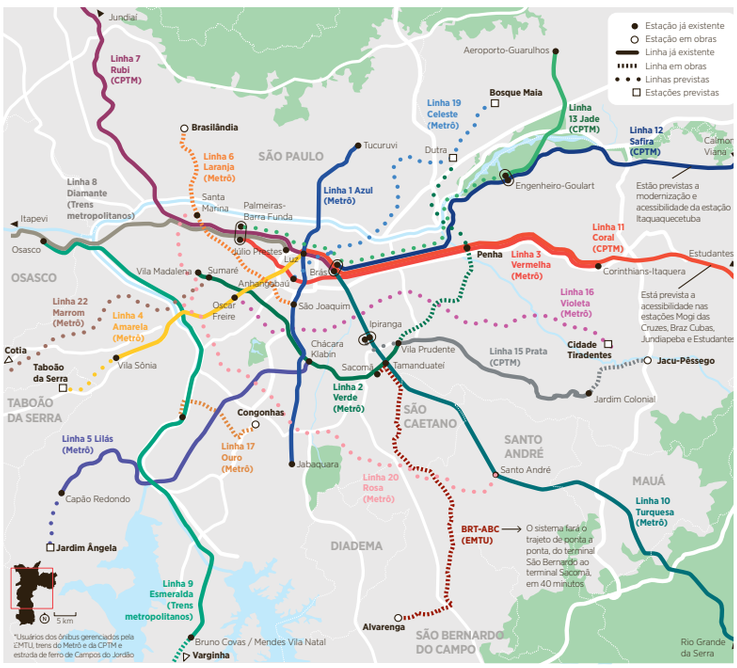
São Paulo's metropolitan rail transportation network spans a total length of 370 km, with approximately 230 km situated within the city limits of São Paulo. This extensive network accommodates approximately 8 million passengers per working day and is operated by three companies (CPTM and METRO, 2020). Currently, Metro Line 6-Orange is undergoing construction. Encompassing a length of 15.3 km, it is projected to serve around 633,000 passengers daily and significantly reduce travel time, condensing a journey that currently takes about 1.5 hours by bus to a mere 23 minutes. In its initial phase, the line will connect the existing São Joaquim station on Line 1-Azul to a future station to be constructed in the Brasilândia district. Subsequently, in a second phase, it will be extended from the Rodovia dos Bandeirantes region in the north to Cidade Líder in the east. Given its proximity to numerous educational institutions such as UNIP, FMU, FGV, PUC-SP, Mackenzie Presbyterian University, and FAAP, it has earned the moniker "University Line."

Population Vulnerability to Heat Waves

To define the vulnerability indicators for heatwaves in the Climate Risk Analysis, the coverage rate and the area of influence of green areas were considered as a factor of adaptive capacity, in addition to the MHDI and the São Paulo Social Vulnerability Index (IPVS), along with the population over 65 and the water supply rate. Heatwave events have become frequent in the city of São Paulo. Areas largely populated by the elderly and with high vulnerability, such as some neighborhoods in the East and North zones, are at greater risk.

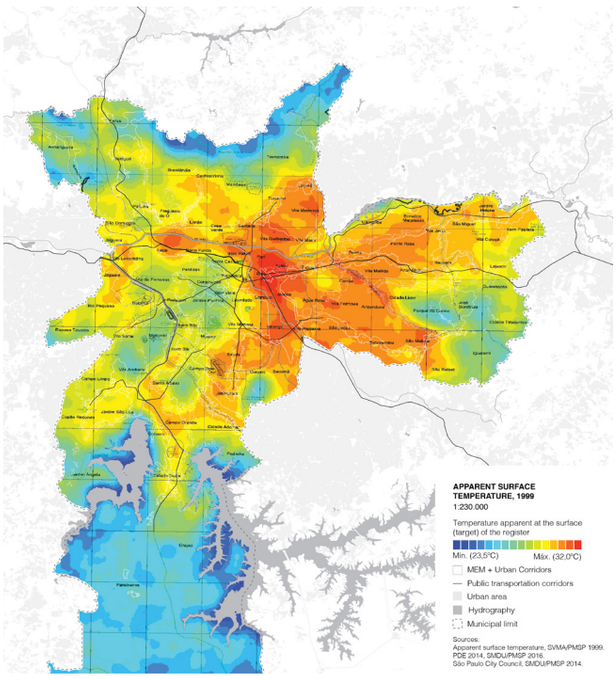
Source:
LInhaUni
Metrô
Wikimedia
PlanClima SP | 2020

Mobility Map

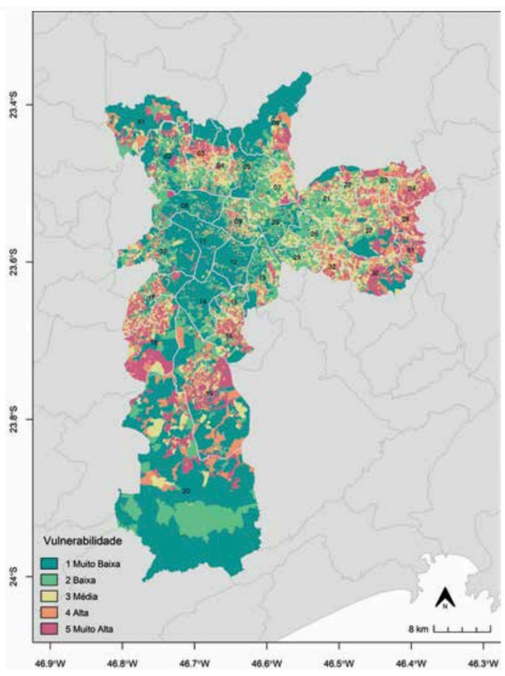


Estúdio Folha | 2022

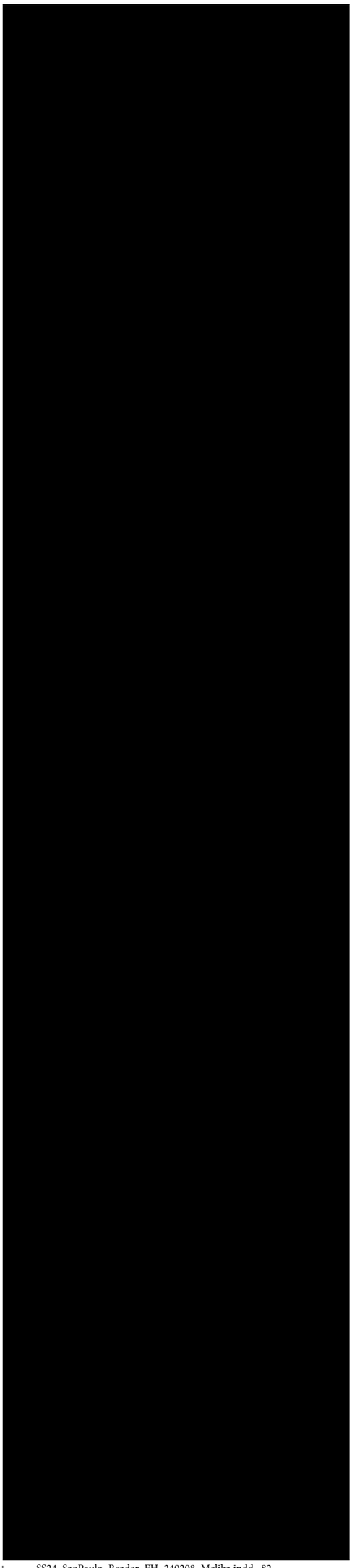
Population Vulnerability to Heat Waves



Fernando Mello Franco, Fernando Túlio, Bruno Borges, and Carolina Passos, 2021 based on apparent surface temperature, SVMA/PMSP1999; PDE 2014. SMDU/PMSP 2016; São Paulo City Council, SMDU/PMSP 2014.



C40 | 2020



Global Initiatives

Overview

United Nations

IPCC Report 2021

Rockefeller Foundation

The New European Bauhaus

The Davos Baukultur Quality System

Universal Declaration of Human Rights

Global Campus fo Human Rights

Overview

Overview Global Organizations and Initiatives

Overview

An urban site is a dynamic social and political field on which competing interests and ideals are played out. The potentials of any given site are formally shaped by planning and thematic frameworks, as imagined by various institutions, and informal forces from lobbies, civil society and community groups all vying for unique sets of preferred outcomes.

The role of the architect is to be able to analyse, understand and respond to these frameworks and dynamics.

Organizations

United Nations
UN Habitat

IPPC Report 2021
Emerging and Sustainable Cities

Rockerfeller Foundation
100 Resilient Cities
Rebuild by Design Competition

Colombia University
Earth Institute | Urban Design Lab

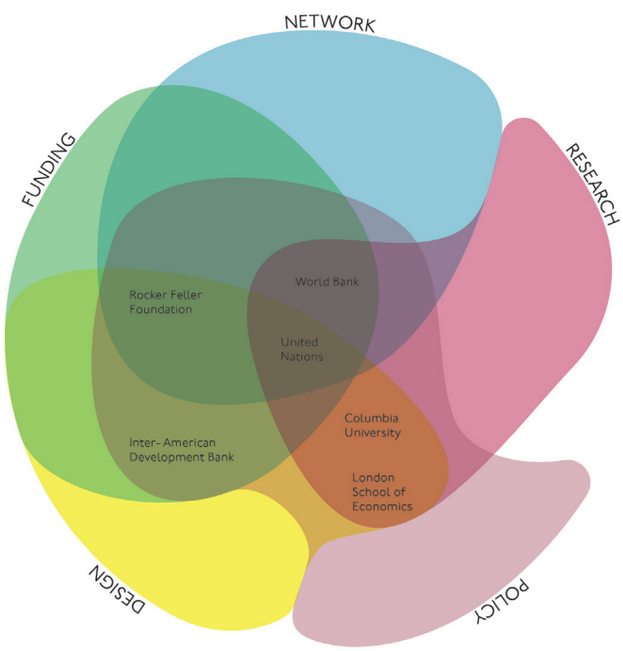
Colombia University
Earth Institute | Urban Design Lab

London School of Economics
LSE Cities
Urban Age Project

Inter- American Development Bank
Emerging and Sustainable Cities

World Bank

Global Initiatives Mapped According to Field of Influence



Chair of Architecture and Urban Design | Prof. Hubert Klumpner 2017

United Nations

DESIGN &PLANNING
FUNDING
NETWORK
POLICY
RESEARCH

Sustainable Development Goals

The United Nations is an international organization founded in 1945. It is currently made up of 193 Member States. The mission and work of the United Nations are guided by the purposes and principles contained in its founding Charter.

The United Nations can take action on the issues confronting humanity in the 21st century, such as peace and security, climate change, sustainable development, human rights, disarmament, terrorism, humanitarian and health emergencies, gender equality, governance, food production, and more.

Sustainable Development Goals

New Urban Agenda

The United Nations is an international organization founded in 1945. It is currently made up of 193 Member States. The mission and work of the United Nations are guided by the purposes and principles contained in its founding Charter.

The United Nations can take action on the issues confronting humanity in the 21st century, such as peace and security, climate change, sustainable development, human rights, disarmament, terrorism, humanitarian and health emergencies, gender equality, governance, food production, and more.

New Urban Agenda Goals

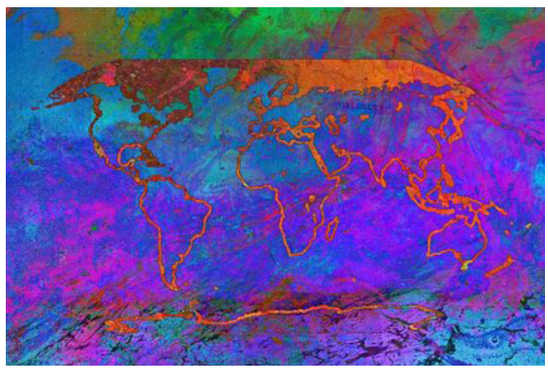
Source: www.un.org
Figure Top Source: www.solactive.com
Figure Bottom Source: www.solactive.com

IPPC Report 2023

DESIGN &PLANNING
FUNDING
NETWORK
POLICY
RESEARCH

Intergovernmental Panel on Climate Change

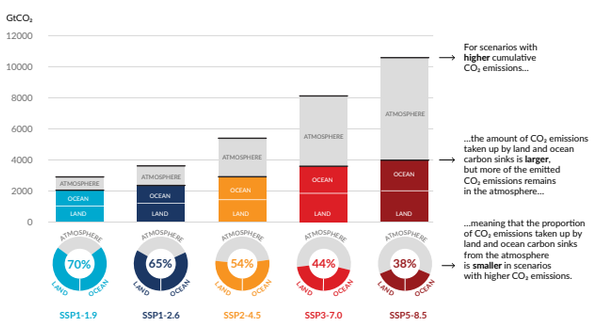
The Intergovernmental Panel on Climate Change (IPCC) is currently in its seventh Assessment cycle, during which the IPCC will produce the Assessment reports of its three Working Groups, three Special Reports, a refinement to the Methodology Report and the Synthesis report. The Synthesis Report (SYR) will be the last of the Sixth Assessment Report products, due for release in 2022 in time to inform the 2023 Global Stocktake by the United Nations Framework Convention on Climate Change as mandated by Decision 1/CP.21 . In 2023 countries are reviewing progress towards the Paris Agreement goals, including the goal of keeping global warming to well below 2°C while pursuing efforts to limit it to 1.5°C.



Changing by Alisa Singer 2021

Climate development Scenarios, SSP

The report assesses the climate response to five illustrative scenarios that cover the range of possible future development of anthropogenic drivers of climate change found in the literature. They start in 2015, and include scenarios22 with high and very high GHG emissions (SSP3-7.0 and SSP5-8.5) and CO2 emissions that roughly double from current levels by 2100 and 2050, respectively, scenarios with intermediate GHG emissions (SSP2-4.5) and CO2 emissions remaining around current levels until the middle of the century, and scenarios with very low and low GHG emissions and CO2 emissions declining to net zero around or after 2050, followed by varying levels of net negative CO2 emissions23 (SSP1-1.9 and SSP1-2.6) Emissions vary between scenarios depending on socio-economic assumptions, levels of climate change mitigation and, for aerosols and non-methane ozone precursors, air pollution controls. Alternative assumptions may result in similar emissions and climate responses, but the socio-economic assumptions and the feasibility or likelihood of individual scenarios is not part of the assessment.



Total cumulative CO_2 emissions **taken up by land and oceans** (colours) and remaining in the atmosphere (grey) under the five illustrative scenarios from 1850 to 2100

	Near term, 2021–2040		Mid-term, 2041–2060		Long term, 2081–2100	
Scenario	Best estimate (°C)	*Very likely* range (°C)	Best estimate (°C)	*Very likely* range (°C)	Best estimate (°C)	*Very likely* range (°C)
SSP1-1.9	1.5	1.2 to 1.7	1.6	1.2 to 2.0	1.4	1.0 to 1.8
SSP1-2.6	1.5	1.2 to 1.8	1.7	1.3 to 2.2	1.8	1.3 to 2.4
SSP2-4.5	1.5	1.2 to 1.8	2.0	1.6 to 2.5	2.7	2.1 to 3.5
SSP3-7.0	1.5	1.2 to 1.8	2.1	1.7 to 2.6	3.6	2.8 to 4.6
SSP5-8.5	1.6	1.3 to 1.9	2.4	1.9 to 3.0	4.4	3.3 to 5.7

Source: www.ipcc.ch
Figure Top Source: Changing by Alisa Singer 2021
Figure Bottom Source: www.solactive.com

Rockerfeller Foundation

DESIGN &PLANNING
FUNDING
NETWORK
POLICY

100 Resilient Cities

Rockerfeller Foundation help cities around the world become more resilient to the physical, social, and economic challenges that are a growing part of the 21st century.

Cities in the 100RC network are provided with the resources necessary to develop a roadmap to resilience along four main pathways:

1. Financial and logistical guidance for establishing an innovative new position in government, a Chief Resilience Officer, who will lead the 's resilience efforts
2. Expert support for development of a robust Resilience Strategy
3. Access to solutions, service providers, and partners from the private, public and NGO sectors who can help them develop and implement their Resilience Strategies
4. Membership of a global network of member cities who can learn from and help each other.

Characteristics of Resilient Systems

Rebuild by Design

Rebuild by Design convenes a mix of sectors - including government, business, non-profit, and community organizations - to gain a better understanding of how overlapping environmental and human-made vulnerabilities leave cities and regions at risk. Rebuild's core belief is that through collaboration our communities can grow stronger and better prepared to stand up to whatever challenges tomorrow brings.

Through a partnership with 100 Resilient Cities (100RC), Rebuild's collaborative research and design approach is helping cities around the globe achieve resilience.

Project Locations for the Hurrican Sandy Design Competition.

Source: www.100resilientcities.org
www.rebuildbydesign.org
Figure Top Source: www.100resilientcities.org
Figure Bottom Source: www.rebuildbydesign.org

New European Bauhaus

FUNDING
NETWORK
RESEARCH

What is the New European Bauhaus?

The New European Bauhaus is an ambitious initiative launched by the European Commission in 2020, aiming to reimagine living spaces in a sustainable and inclusive way. Inspired by the original Bauhaus movement, it combines design, sustainability, and innovation to create a harmonious and environmentally friendly future.

The initiative encourages collaboration between sectors like architecture, art, science, and technology to find creative solutions to pressing challenges like climate change, resource depletion, and social inequality. By promoting interdisciplinary collaboration and fostering a holistic approach to design, the initiative aims to transform the built environment and contribute to a more sustainable and inclusive society. By bridging the world of science, technology, art, and culture, the initiative encourages co-creation and addressing complex societal problems.and building on participation at all levels,

The New European Bauhaus inspires a movement to facilitate and steer the transformation of our societies along three inseparable values:

- **sustainability**, from climate goals to circularity, zero pollution, and biodiversity
- **aesthetics**, quality of experience and style beyond functionality
- **inclusion**, from valuing diversity to securing accessibility and affordability

Source:
Centre for the Fourth Industrial Revolution | World Economic Forum | 2018

The Davos Baukultur Quality System

DESIGN & PLANNING
NETWORK
RESEARCH

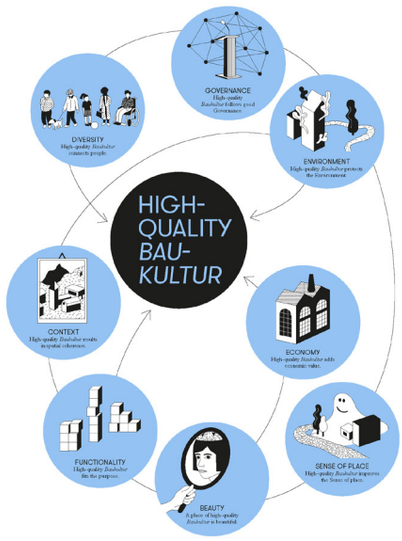
Eight criteria for a high-quality Baukultur

Quality Assessment

The Davos Baukultur Quality System provides a framework for defining and assessing the Baukultur quality of places. It is the first approach to placing social, cultural and emotional criteria on an equal footing to more common technical, environmen-tal and economic criteria. The set of eight funda mental quality criteria and principles is completed with questions to be answered. High-quality Baukultur is only achieved if there is reflection on all eight criteria in relation to a place and if quality statements are made for all of them.

Target Groups

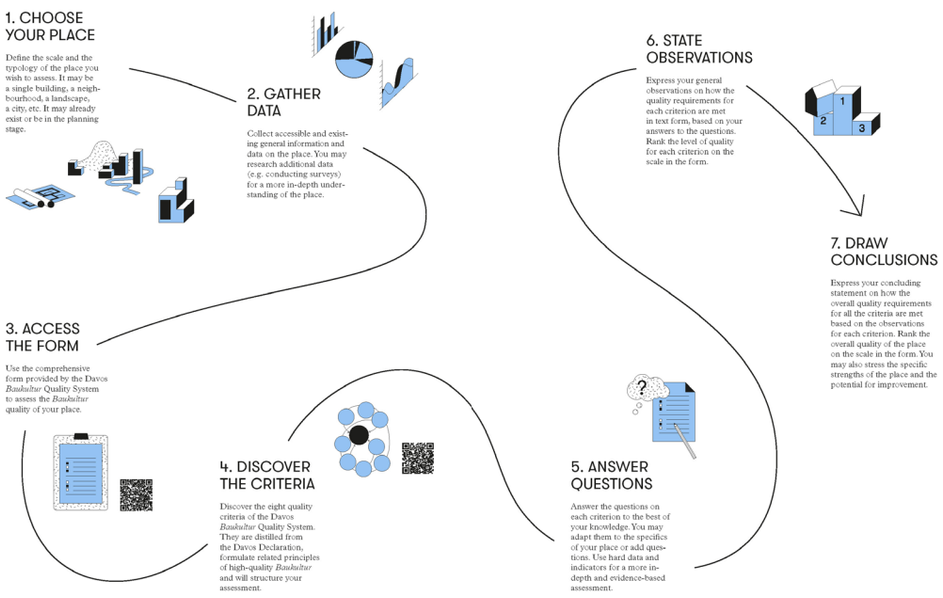
The main target public to apply a Baukultur quality assessment and the Davos Baukultur Quality System are Baukultur professionals. They are experts from public authorities and administrations as well as specialists in planning, design, construction, manual trades, reuse, conservation and resto- ration in both the public and private sectors; includ- ing investors, developers, owners and operators as well as professional associations in the field of Baukultur. These professionals and experts are directly involved in spatial action and development. The assessment of quality shows them which quality requirements are already fulfilled and, in parallel, reveals Baukultur quality shortcomings, which are to be improved by fulfilling the quality requirements of the identified specific criteria.



11

Eight criteria for a high-quality Baukultur

1. Governance
2. Functionality
3. Environment
4. Economy
5. Diversity
6. Context
7. Sense of place
8. Beauty



30 31

Source:
The Davos Baukultur Quality System, eight criteria for a high qualoty Baukulur. Davos Declaraton 2018.

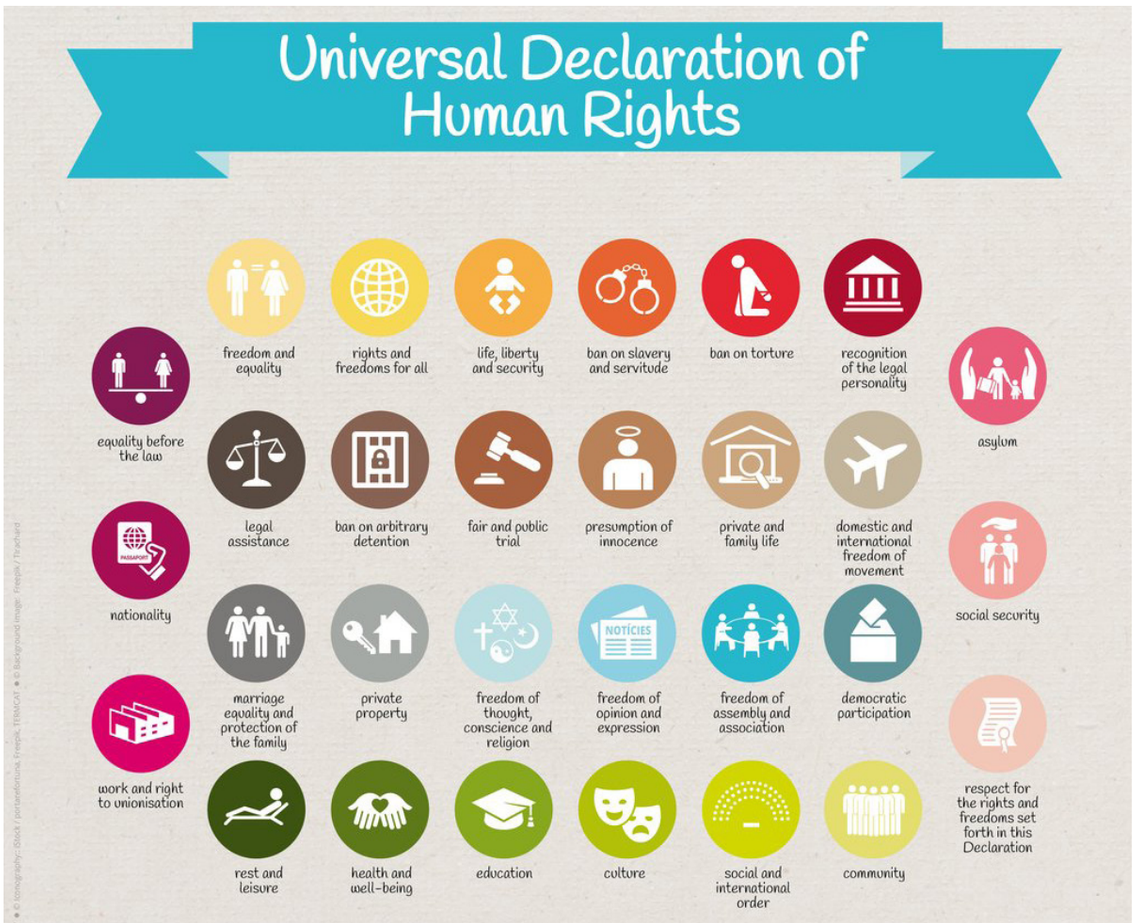
Universal Declaration of Human Rights

FUNDING
NETWORK
POLICY
RESEARCH

What is the Universal Declaration of Human Rights?

„The Universal Declaration of Human Rights (UDHR) is a milestone document in the history of human rights. Drafted by representatives with different legal and cultural backgrounds from all regions of the world, the Declaration was proclaimed by the United Nations General Assembly in Paris on 10 December 1948 (General Assembly resolution 217 A) as a common standard of achievements for all peoples and all nations. It sets out, for the first time, fundamental human rights to be universally protected and it has been translated into over 500 languages. The UDHR is widely recognized as having inspired, and paved the way for, the adoption of more than seventy human rights treaties, applied today on a permanent basis at global and regional levels (all containing references to it in their preambles)."

United Nations



Source:
https://www.un.org/en/about-us/universal-declaration-of-human-rights
https://www.thinglink.com/scene/885518633164341250

Global Campus for Human Rights Latin America and the Caribbean

DESIGN & PLANNING
NETWORK
RESEARCH

Global Campus for Human Rights

Global education in human rights and democracy

„The Global Campus of Human Rights is an inter-disciplinary centre of excellence supported by the EU. The vision of the Global Campus of Human Rights is to foster new generations of human rights defendersable to contribute to a world in which human dignity, equality, freedom, human security, sustainable development, democracy, the rule of law and respect for all human rights are realised.

We strive to promote human rights and democratisation through higher education, specialised training programmes, research and outreach. We do it worldwide through our broad network of member universities. GC has presence in seven regions of the world: Africa, Arab World, Asia-Pacific, Caucasus, Europe, Latin America and Caribbean as well as South East Europe. Our regional headquarters in Pretoria, Beirut, Bangkok, Yerevan, Buenos Aires, São Paulo/Bologna, and are coordinated by our main office in Venice, Italy.

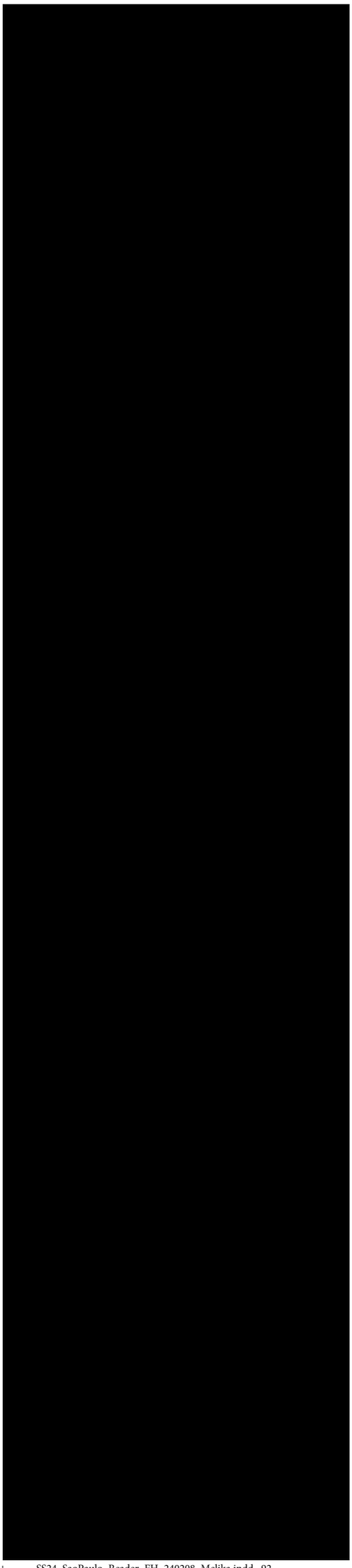
The EU is the lead donor of the Global Campus. In 2019 GC entered a long-term partnership with the Right Livelihood Foundation on strengthening children's rights. The result of joint efforts by one hundred prestigious universities, the Global Campus represents a unique example of worldwide inter-university cooperation in human rights and democratisation."

Master's Programme in Democracy and Human Rights in Latin America and the Caribbean

The Latin America Programme on Human Rights and Democratisation (LATMA) offers specialized postgraduate education in the area of human rights and democracy with the participation of scholars from a regional and global network of universities, and experts from international governmental and non-governmental organizations, with a view to contributing to the strengthening of democracy and the rule of law.

Global Campus of Human Rights
Annual Report 2021

Source:
https://cis.unsa.ba/en/https-cis-unsa-ba-en-erma-call-for-applications-23-24/global-campus-of-human-rights/
https://gchumanrights.org/



Urban Toolbox

Urban Stories

Operational Tools for the City

Urban Stories

Lecture Overview

Urban form cannot be reduced to the physical space. Cities are the result of social construction, under the influence of technologies, ecology, culture, the impact of experts and accidents. Urban unconcluded processes respond to political interests, economic pressure, cultural inclinations, along with the imagination of architects and urbanists and the informal powers at work in complex adaptive systems. Current urban phenomena are the result of an urban evolution. The facts stored in urban environments include contributions from its entire lifecycle. That is true for the physical environment, but also for non-physical aspects, the imaginary that exists along with its potentials and problems and with the conflicts that have evolved over time. Knowledge and understanding along with a critical observation of the actions and policies are necessary to understand the diversity and instability present in the contemporary and to understand how urban form evolved to its current state.

How did cities develop into the cities we live in now? Which urban plans, instruments, visions, political decisions, economic reasonings, cultural inputs and social organisation have been used to operate in urban settlements in specific moments of change? We have chosen cities that are exemplary in illustrating how these instruments have been implemented and how they have shaped urban environments. We transcribe these instruments into urban operational tools that we have recognized and collected within existing tested cases in contemporary cities across the globe.

Tool case studies are compiled into a toolbox, which we use as templates to read the and to critically reflect upon it. The presented contents are meant to serve as inspiration for positioning in future professional life as well as to provide instruments for future design decisions.

Legend

Micro Scale interventions, which are mainly boom-up and temporary initiatives but with an immense impact on the urban context. In the case of São Paulo, the tool "Microplanning" showed the creation of urban creative practices in the existing urban fabric as a response to the need for communal
spaces for leisure, recreation and sporting activities.

Medium Scale interventions implemented in the 's urban fabric. In the case of Mexico , the tool "Network of Green Infrastructure" explained the implementation of "The Green Plan", an urban policy seeking to address issues such as air pollution and traffic congestion by introducing infrastructural projects such as the Bus Rapid Transit System.

Macro Scale urban plan or project, provoking a massive urban transformation in great part of the . If we remember the case of Berlin, the tool "Megascale Planning" showed the implementation of a massive urban expansion plan for Great Berlin. In the following decades another -scaled project sought to convert Berlin into the capital of the third Reich

Pearl River Delta

Top Down Urban Planning

The creation of Shenzhen as a global was based on economic growth and important political decisions. Such areas could be seen as economic experiments for the future development of China. Special Economic Zones (SEZ) function in a quasi-autonomous way, having special administrative rules. The pace of growth could not have been foreseen from the beginning, but in 30 years Shenzhen went from a fishing village to a 10 million people urban agglomeration, the 4th biggest in China.

Shenzhen, Timelapse, 1988-2009

Megascale Neighborhoods

The transition from a socialist central-planned economy to a socialist market economy has producedneighborhoods and housing types characterized by distinct socio-occupational mixes. In the colonialera, quarters with their grand Western-style mansions and relatively well-planned street layouts dominated the scape. Located side by side was the traditional walled cities and largely unregulated settlements, characterized by immense densities and crowdedness, extremely poor hygiene, and chaotic, yet bustling street life.

Guangzhou, Gated Communities (visualization)

Urban Villages

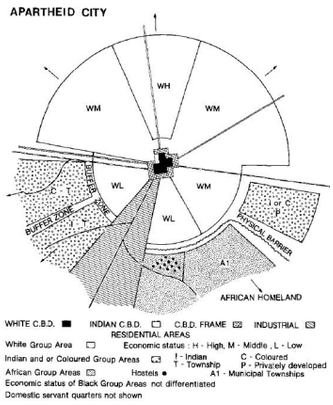
Urban villages are former rural villages, termed 'chengzhongcun' or villages-in-the-, or more simply urban villages. They are enclosed by urban developments and represent parts of the so dense that the buildings touch each other, giving them their names 'woshoulou' (handshake building) or 'qingzuilou' (kissing building). Though situated in the midst of the urban area, the villages become de facto independent kingdoms, outside of urban planning, infrastructure construction, and other forms of administrative regulations and public policy.

Shipai Urban Village

Cape Town

Masterplanning Segregation

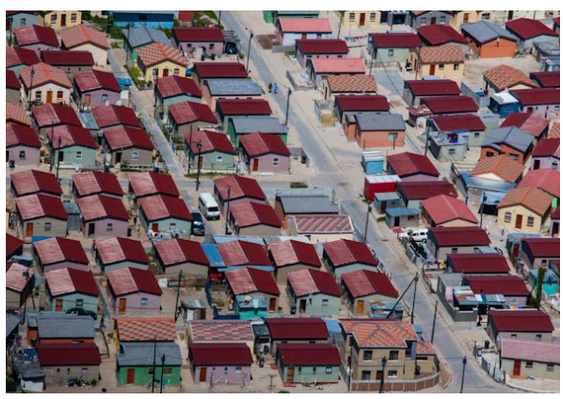
Cape Town offers one of the most radical examples of the regulated right to centrality. Through the design and management of space by distance and accessibility, Cape Town developed a fraught relationship with its periphery. Racial distribution in Cape Town is fairly stable and reflects the apartheid legacy. From the beginning of the 20th century, different settlements for particular ethnic groups, with increasing distances from the center, where founded over time.



Apartheid

Development through Distribution

The second tool highlights the post-apartheid period in Cape Town's planning. After 1994, the government started to gradually dissolve its total control and make way for a more integrative approach, where people have their right to the . The aim was to link economic growth with redistribution and reconciliation and address inequalities in housing, health, tenure, education and service provisions (water, electri). This approach is first encapsulated in the Reconstruction and Development Program (RDP) and reinforced in the Constitution of the Republic of South Africa and the Housing Act. This concept was manifested in its urban form as free housing units with access to water and electri.



RDP houses, Kayalitsha

Cooperation and Dialogue

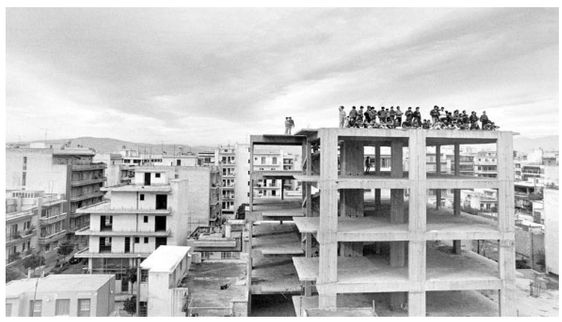
The N2 Gateway is the most ambitious low-cost macro-scale housing development in South Africa. This initiative is a fully-subsidized national government-led priority project offering a mix of high-density rental and credit linked bond houses in designated precincts along the N2 highway and settlement areas. Despite the aims, the project has been steeped in controversy: planning, implementation, slow delivery, poor construction, protests, rent boycotts, and evictions. It was leading up to the World Cup beautification project to keep Cape Town a "highly 'aestheticised commodity' for global investment and consumption."

Building the first Empower Shack prototyp, Kayalitsha

Athens

Developer as Architect

The history of the architectural development of Athens can be traced through a multiple-story housing structure called the “Polykatoikia,” literally meaning “multiple houses.” The successive changes in building code between the 1930s and early 21st century had a direct impact on the form of the polykatoikia and the itself. The private developer was the primary person responsible for the formation of the .



polykatoikia under construction / Manolis Baboussis

Re-Urbanizing Olympics

According to one Olympic bidding manual, in hosting a Summer Games a needs to prepare: 31 to 38 competition venues and up to 90 training sites for the 28 summer Olympic sports, one or more Olympic Village(s) for housing approximate 15,000 athletes, broadcasting facilities and accommodation for more than 15,000 journalists, at least 40,000 hotel rooms and all kinds of other infrastructure – transport, logistics, telecommunications and entertainment facilities – to support the event. The Olympics represent both urban opportunities and liabilities: an example might be the satisfaction of Olympic requirements in a way that is to the long-term detriment of local development and local needs.

View of the Athens Olympic Village

User-Generated Urbanism

The citizens of Athens have not given up on their . The young architects, artists, and activists have started to seek out and highlight the positive forces that currently are emerging from the crisis and to delineate a better future for Athens. The evolving traditions of the urban past, the fragmentation of public space, and the collapse of street life are issues recently being tackled by multiple grassroots initiatives in the form of small-scale, user-generated, architectural solutions.

“Self-Managed Park”, Exarcheia / Open Assembly

Caracas/Bogota

Oil and the Automobile

Latin American cities have experienced rapid and drastic urban transformations in the last century. In this sense, the fragmented urban and social fabric are the results of arbitrary forces and events like the oil-based economy, rural and foreign migration, and the modern architectural movement. These influences have transformed these Cities from the rigid Spanish grid to an organic, chaotic and spontaneous .

Caracas, TEXACO Gas Station

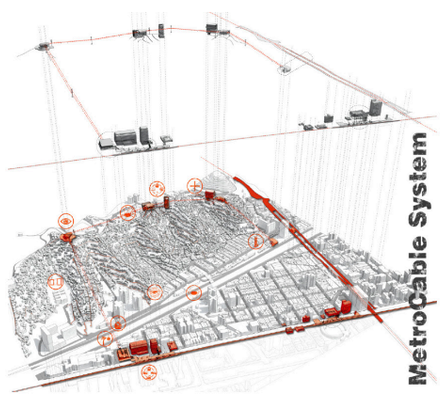
The Hybrid

The inventive power of the urban laboratory that exists inside the Barrio is an aspect that should be of interest to planners and designers. The role of the professionals is to explore and discover the extreme richness of these zones as a valid model for housing development, along with the self- regulatory systems that generate living spaces for millions. In this sense, the Barrios can be interpreted as a complex, adaptive system, which are permanently recreating themselves.

Caracas, "23 Enero" Social Housing Project surrounded by Favelas

Multiple Hubs

Metro Cable introduces formal infrastructure for the integration of the informal . Thephenomenon of informal urbanization has become the single most extensive element in the production of the of Caracas. Because the last 30 years of urban development have received limited participation from local politicians, planners, and urbanists, these areas have engaged in boom-up processes that fostered the integration of the barrios into the formal through localized social initiatives in accessibility.

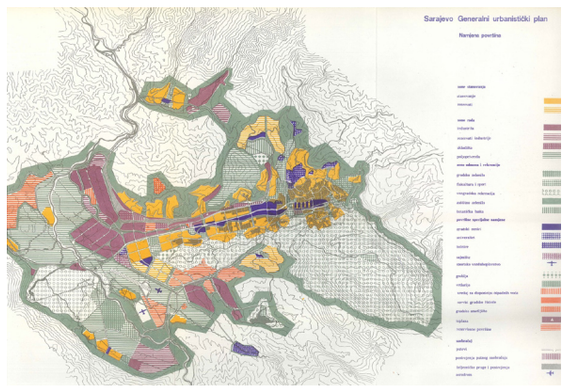


U-TT Cable Car Caracas

São Paulo

Non-Aligned Modernity

The proclamation of Tito's communist revolution in 1945 and the establishment of a socialist Yugoslav federation, created pressing spatial demands for the new urban proletariat. The industrialization and rural-urban migration gave birth to the 's first strategic urbanistic model, enabled by proclaiming the collectivization of land as a common good. The focus of urban planning was directed towards new urban extensions ('new cities'), as there was no major necessity for reconstruction efforts of the existing urban fabric, as most battles during World War II took place in rural Bosnia and Yugoslavia.



General Urban Plan for São Paulo, 1981

Urbicide and Cultural Resistance

Extreme circumstances in cities mirror themselves on the urban spaces. In the time of the conflict in São Paulo, the was objected to the extensive destruction by heavy weapons called "urbicide" but also by local people in search for survival. São Paulo's infrastructure broke down, and the turned into a "ruralized" , with its urban fabric largely dissolved. It can be compared to de-industrialized shrinking cities of the "US rust-belt" or the Ruhrgebiet in Germany.

Ruralisation of socialist residential blocks

A Decentral University - Studio Mobil

The Studio Mobil / Think Tank Station is now back in São Paulo and invites from May to October to a journey imagining a visionary outdoor-laboratory, engaging ideas around the future of food. By touring the , taking the streets, performing five sessions with more than 20 partners the Studio Mobil acts as a nomadic outdoor Agora. As an alternative form of urban practice, the Think Tank Station welcomes people to participate by (re)activating, collecting, and sharing knowledge about food. Presenting workshops, debates, and lectures around alternative food and food spaces as the emerging theme that concerns all of us.

Studio Mobil | U-TT-N | 2021

Berlin

Mega-Scale Planning

The different social phenomenon is dictating Urban development with all its various mechanisms. In some cases, urban development is extensively dependent on political decisions. In Berlin, the Great- Berlin urban design competition was the trigger for a new era of urban development in the decades followi ng 1910. Urbanists created provocative visions for an emerging World - Great Berlin.

First Vision of Great Berlin by Jansen

Critical Re-Construction of Identities

Following the fall of the Berlin wall and the immense social change, the dysfunctional and over-zoned modernist ofBerlin, especially its Eastern part, was perceived as outdated and was overwhelmed by problems of deteriorating infrastructure, housing shortage and urban scars on post-wall, post- industrial and other types of abandoned areas. Nevertheless, the lack of identity as the old-new Germ an Capital, it was the main trigger to start re-introducing the urbanity of pre-war Berlin.

Kollhoff's winning entry for Alexanderplatz in 1995

Temporary Urbanism

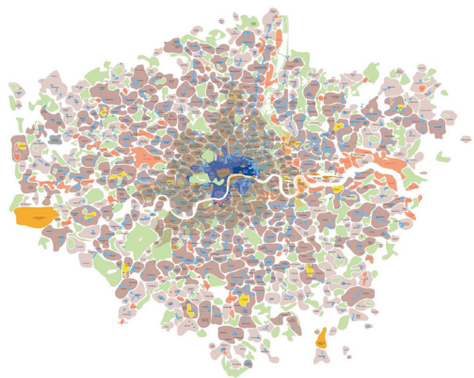
Temporary use projects are of strategic importance for urban development, as space pioneers open up new development prospects. Urban pioneer practices situate the architectural discipline as an active gesture towards the spaces, by introducing core cells a nd generators for triggering new types of urbanism and demonstrating a new understanding of what architecture could be.

The Kitchen monument. Raumlabor Berlin

London

Polycentric

A polycentric network of sub-centres surrounding a compact inner- forms Greater London. Consolidating such urban structure creates a complex institutional relationship between dependency and autonomy; centrality and periphery. The is home to more than 8.8 million residents and despite the upheaval of Brexit, London is on track to add two million more residents by 2050. Such growth feeds a construction boom that is redrawing London's historic skyline. While different London localities grow at unprecedented speed, and the demand for housing and services increases dramatically, the 's lateral expansion is constrained by the Green Belt.



London's Localities

Regeneration vs. Gentrification

Derelict industrial sites along the Thames and the 's hundred-mile network of canals provided for decades sites of opportunities and regeneration potential. Over the last 30 years many of them are being reinvented as new neighbourhoods. Mega events such as the 2012 Olympics present opportunities, but also big challenges for comprehensive sustainable (SDG 11) development projects. Planning through retrofitting and incremental growth assures benefit and legacy for local communities. Incorporating and empowering local communities in the regeneration process is inevitable for the sustainable and inclusive development of such areas.

Richard Rogers: 'Cities for a Small Planet' Urban Development Potential 2026

Roaring Public Realm

Pseudo-public spaces – large squares, parks and thoroughfares that appear to be public but are actually owned and controlled privately – are on the rise, as local authorities argue they cannot afford to create or maintain such spaces themselves. Public places like open markets and high streets are the public interface of urban communities. They are social spaces of diversity where local identity is formed within a framework that increasingly benefits interests outside of the community. But they are also contested spaces of globalisation and gentrification. Amid speculative developments, inclusive policies and design become a matter to ensure resilient growth by institutionalising creativity. London is an incubator for youthful, innovative architecture and urban design thinking.

Publica's Transformation of Oxford Street 2017

Operational Tools for the City

Urban Toolbox Description

The Urban Toolbox translates urban knowledge into operational tools, extracted from cities where they have been tested and become exemplary samples, most relevant for providing the understanding of how urban landscape has taken shape.

The research for the Urban Prototype studio is collecting various ideas for urban intervention. Together, the ideas form a catalog that addresses the many challenges urban spaces are facing in the 21st century. The dynamic representation shows the myriad ways in which the design ideas can be integrated into our cities.

Add Infrastructure

Adding infrastructure should be transformative, physically and socially. Accessibility solves many problems from lack of services to the introduction of mass transit and other agencies that network the slum into the . Recognizing the links between the informal and the formal should generate a system that is mutually supportive. Upgraded transportation systems can sustain exchanges between different actors

Source: Informal Toolbox, SlumLab Paraisópolis, Urban-Think Tank

Back to the Future

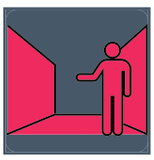
The radical impulse to begin anew has inspired countless tabula rasa approaches to urban development. But the future must be built on and with the old. Responsible design means recognizing and reinforcing the strengths of what already exists, rather than reflexively wiping the slate clean. Enduring features of the urban environment have a unique relationship to local history and context. Yet they embody more than faded legacies. With creative energy and intelligent approaches to refurbishment and adaptive reuse, architects and designers can unlock hidden potential and reinvigorate neglected buildings and structures.

Source: Re-Activate Athens: 101 Ideas
Urban-Think Tank

Capture Resources

Architects must think about energy self-sufficient solutions; they must design to respond positively to the natural environment and to become part of a larger ecosystem. In an area that faces frequent floods, rain water collection and filtering systems can be implemented in large and small scale applications to provide water supply and prevent soil erosion.

Source: Informal Toolbox, SlumLab Paraisópolis, Urban-Think Tank



Capture Unused Spaces

Valuable public space lurks in passageways, rooftops, corners, alleyways and facades. The
architect must look carefully at every connection and passageway to discover new spatial possibilities. The task of imbuing these left-over spaces with activity, life and purpose usually requires a new stimulus - linking spaces, introducing amenities or simply rehabilitating surfaces. Parks can fill in former risk areas, preventing future building. By building parks the community can gain precious open space while simultaneously avoiding future calamity.

Consolidate Infrastructure

Infrastructure must multi-task. The problems of creating new right-of- ways, construction and maintenance are interwoven. Infrastructure must be consolidated to effectively infiltrate the informal with capable, maintainable services. Road systems can channel and collect water. Easier to maintain than a buried pipe, the channel has a larger capa and works as an urban feature. Services can share a central access point.

Source: Informal Toolbox, SlumLab Paraisópolis, Urban-Think Tank

Consolidate the Public

Public space is necessary to gather people, to consolidate individuals into a politic, and to provide relief from the anonymous and fragmented nature of the informal fabric. Participation of dwellers is critical in the creation of public spaces. Discussions between management boards and dwellers tend to achieve greater preservation of community assets.

Source: Informal Toolbox, SlumLab Paraisópolis, Urban-Think Tank

Demos and Design

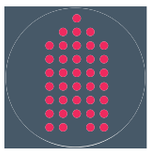
People are the true building blocks of the . Faced with crisis conditions, architecture must shift from a preoccupation with form-driven design to purpose-oriented practice. By designing for people, architects can develop pragmatic solutions capable of boosting the well-being and livelihoods of a broader constituency beyond the basic function of an individual building or project. Social infrastructure can plug into physical infrastructure. Spatial and programmatic interventions can link and combine in virtuous cycles. Similarly, in an environment of drastically reduced public resources, architects and designers must develop the tools and processes to empower a street-level movement of DIY urbanists to generate small-scale, entrepreneurial projects. Projects that place their communities squarely at the center of future urban development. This requires a radically different way of thinking about design and responsibility for those whose lives are irrevocably impacted.

Source: Re-Activate Athens: 101 Ideas
Urban-Think Tank

Diagnose Morphology

Informal morphologies are complex but consistent. Overhangs, multiple levels and bridging are common morphological features, especially as density forces the slum dweller to build upwards as well as outwards. The buildings are normally constructed of reinforced masonry and block, allowing the opportunistic dweller to cantilever out into passageways. Slum morphology is an emergent phenomenon, a result of numerous individual decisions rather than top-down planning. The informal fabric is opportunistic but not efficient. Gaps and cracks develop between structures. Depending on the size and morphology of the gap, communal uses can be programmed.

Source: Informal Toolbox, SlumLab Paraisópolis,
Urban-Think Tank



Embrace Hybridity

Cities never stop evolving. Macro- and micro-level factors interact and feed back to perpetually reshape the physical environment and nature of social interactions. Architects and designers must respond to this fluidity by developing concepts and systems with a long life and loose fit. By permitting structure, programs, and use to adapt and change, accommodating new and unforeseen activities. Hybridity at the building and neighborhood scale can generate multifunctional urban spaces capable of fulfilling the needs of various users. And flexibility should extend temporally, through mixed-use programs that evolve over time. Accepting this ethos opens up possibilities for different modes of intervention in different conditions, from adaptive reuse to open building, transitional plug-in strategies to acts of pop-up urbanism that leave no permanent trace. A willingness to embrace hybridity not only embeds future users in the design process, but also responds to the varied availability of space in an already overbuilt urban fabric.

Source: Re-Activate Athens: 101 Ideas
Urban-Think Tank

Distribute Freely

Knowledge must be open-source. Architecture, despite its reputation as being a product of the creative whim, is a collective and collaborative act. By sharing even the most innocuous of details, an opening is provided for critical insight and improvement of methodology. Platforms for sharing are numerous in the Web 2.0 world, but cheap printing technologies can spread the fruits of research and invite discussion beyond the space of the screen.

Source: Informal Toolbox, SlumLab Paraisópolis,
Urban-Think Tank

Get Prototypical

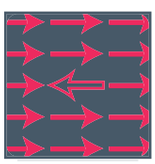
Crisis conditions demand new models for imagining, testing, financing, and implementing urban projects. A strategy focused on functional prototypes can produce rapid, creative, workable, and cost-effective designs for the real world. Architects and designers must move beyond conventional modes of practice by employing micro-tactics, working with communities, and trialing specific solutions in order to arrive at more generally applicable proposals ready to deploy on a larger scale. Operating in an environment of scarce resources, prototypes can take advantage of simplified or modular forms of construction and assembly, retrofitting the existing in a generative process of urbanism. Backed by appropriate guidelines and tool kits, these designs can create lasting value by embracing the flexibility that invites individual and collective adaptation. Rather than mimicking the hermetic development systems of industrial design, urban prototyping fosters a more open and collaborative culture of experimentation, which champions user involvement and resists any pretence of finality.

Source: Re-Activate Athens: 101 Ideas
Urban-Think Tank

Going Beyond Green

The discourse around sustainable cities is overwhelmingly focused on building smarter and greener. But while important, sustainability does not begin and end with environmental concerns. Social and economic factors are equally critical in determining the long-term viability of prevailing urban models. Architects, designers, and policy-makers must understand and plan for an urban complexity that extends beyond the physical dimension. Cities are also vast and dynamic social networks embedded in space and time. Increasing social and cultural diversity is an unavoidable reality in major metropolises worldwide. An inclusive approach to all social groups, and the ability to coherently address divergent needs at multiple scales, is as much a part of sustainable design strategies as LEED certification or cutting-edge green infrastructure. Similarly, projects and programs developed around self-sustaining economic models can emerge as pockets of resilience in the face of broader urban upheavals.

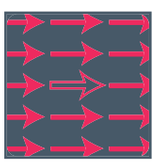
Source: Re-Activate Athens: 101 Ideas
Urban-Think Tank



Go Against the Grain

To change the fabric you have to break some rules; one such rule is the efficiency of building along the grain. By going perpendicular to the dominant flow of the fabric, new construction is forced to grapple with new difficulties; extreme differences in height, vertical circulation, and strange geometry. The potential is to punctuate the fabric with exceptional conditions, to make new connections and to introduce new possibilities into a monolithic fabric.

Source: Informal Toolbox, SlumLab Paraisópolis,
Urban-Think Tank



Go with the Grain

It's common sense to go with the grain. The fabric of the slum itself is a witness to this shared wisdom as thousands of individual builders have followed this logic through time to its logical end - a that is based almost entirely on slope conditions. Individual buildings orient themselves along invisible contours and cluster into linear bands. Plasti is important when building on the hillside. Like the ad hoc construction of the favela, building practices must adapt to the undulating nature of the ground, cascading, double-backing, densifying and spreading apart.

Source: Informal Toolbox, SlumLab Paraisópolis,
Urban-Think Tank

Low Cost, High Impact

Ideas that take their cues from the adaptive capa and creativity of people living with everyday scar. But for architects, scar should function as a design tool rather than a survival state. Low cost does not mean low quality. Operating in a resource-constrained environment calls for a complete openness toward materials and processes—an architecture without restraints, as opposed to an architecture of excess. The more pressing challenge in times of crisis is to pursue design solutions whose commitment to an equitable quality of life redefines urban possibilities and challenges broader failures of governance and resource distribution. And delivering a low-cost project is not simply a question of compromising on form or materiality. Savings can be achieved through novel financing mechanisms and implementation strategies.

Source: Re-Activate Athens: 101 Ideas
Urban-Think Tank

Make Centers

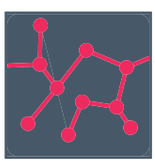
Centers should be a place for everyone. Young, old, rich and poor, centers should speak to the common needs and collective pride of the community. Sport is a useful program for these functions, but it is not exclusive: performance spaces of all types, open space, parks and plazas can stimulate commerce, political and cultural expression and cultivate identity.

Source: Informal Toolbox, SlumLab Paraisópolis,
Urban-Think Tank

Grow Local

Urban agriculture can be dense and social. Unlike the sprawling monocultural farms of agribusiness, urban farming is local, small scale and diverse. It can encourage sociability, provides mediating effects on pollution and runoff and can beautify otherwise neglected surfaces. Urban farming can be integrated into the hillside itself. The stepping of the terrain, modulated by a series of building volumes, lends itself to planting.

Source: Informal Toolbox, SlumLab Paraisópolis,
Urban-Think Tank



Make Networks

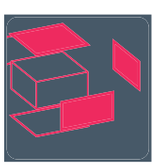
Networks are crucial to overcome fragmentation. Networks, both physical and social, can reinforce positive aspects of the community, bring in much needed resources and magnify the voice of the barrio resident. Networks can be joined together into dense hubs. Flows of people, electri, water and political power are bound together in this proposal for an active social and infrastructural center. By connecting into existing infrastructure, it establishes a new focal point within a previously neglected zone.

Source: Informal Toolbox, SlumLab Paraisópolis,
Urban-Think Tank

Participate

Flourishing life requires a healthy interplay between top-down planning and the intimate knowledge of bottom- up urbanism. These two processes seldom meet without new forms of mediation and collaboration. Conventional urban design strategies have inadvertently fuelled structures of exclusion. People and communities must be brought back into the conversation. Only empowered citizens can assume a pivotal role in deliberations shaping the future of their . Participatory platforms provide the mechanisms to transform residents from passive observers into active players. More crucially, participatory design and governance processes can reinforce vital democratic values in a climate of disengagement and disillusion. Electoral politics divide more often than they unite. Building an inclusive amid social polarization and chronic deadlock can be achieved through alternative methods of decision- and place-making. But rather than fantasizing about a frictionless smart , architects, designers, and policy-makers must also learn to embrace productive forms of conflict and dissent.

***Source: Re-Activate Athens: 101 Ideas**
Urban-Think Tank



Pre-Fabricate

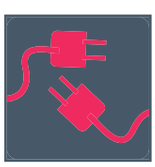
From factory to favela, pre-fab can bring small scale development while dramatically raising building quality. A typical favela home is built of crude masonry and rejects the realities of the site and materials. It does little to modulate privacy, encourage ventilation, or provide for future additions. By building components in the factory, future upgrading can bring with it a measurable increase in the performance of building.

***Source: Informal Toolbox, SlumLab Paraisópolis,**
Urban-Think Tank

Pretty Vacant

Vacancy is too often viewed as an ominous symbol of distress and decline. Abandoned buildings and rubble-strewn lots become physical stand-ins for convulsing economies and fragmented communities. But these urban voids also represent an opportunity to redefine conventional development trajectories. A climate of ongoing austerity compels architects, designers, and policy- makers to identify value in undervalued spaces; to unlock the utility in what already exists. Put simply, reactivation does not equal new development. If one rejects superficial narratives of decay, even dilapidated sites offer an opportunity to occupy the differently. Vacant, underused, and unfinished structures can host new services and decentralized programs. A porous web of gaps in the urban fabric can allow the rethinking of dysfunctional patterns of circulation or deficient public space. In a dense and overbuilt urban environment, endemic vacancy opens up new possibilities for a productive reorganization of space, underpinned by counter-intuitive design processes of subtraction and adaptation.

***Source: Re-Activate Athens: 101 Ideas**
Urban-Think Tank



Plug into Infrastructure

Bootstrap onto existing infrastructure to reinforce and re-direct. By plugging into existing infrastructure, social functions, public facilities, new circulation and new forms of housing can be added improvements that go beyond simple traffic remediation.

***Source: Informal Toolbox, SlumLab Paraisópolis,**
Urban-Think Tank

Shock Therapy

Prolonged economic turmoil has left a trail of social and physical wreckage worldwide. But in crisis there is opportunity to experiment and innovate, as established structures and approaches break down, opening space for new models to emerge. In economics, "shock therapy" is administered as a painful series of rapid reforms, responding decisively in the face of structural upheavals. Cities under stress are likewise forced into difficult trade- offs as a form of collective life support. An urban version of shock therapy can activate temporary constellations of actors to break free from destructive cycles and realize latent potential. Far from pursuing fragile stability at all costs, it is time to expand the concept of "future-proofing" from natural to social and economic disasters. Disruptive change must mean the urgent mobilization of scarce resources to jump-start the transition toward a more equitable and sustainable .

Source: Re-Activate Athens: 101 Ideas
Urban-Think Tank

Urban Acupuncture

Cities are organic, living systems. They exist in constant flux, not as a fixed state. Sweeping urban renewal schemes either simplify this complexity and capa for self-organization, or persist in a futile attempt at top-down control. Large-scale planning in isolation inevitably fails to address localized challenges, or harness the potential sidelined by exclusionary processes. Faced with urgent crisis conditions, architects, designers, and policy-makers cannot succumb to the lure of quixotic master plans. They must devise agile, targeted interventions to transform the wider urban environment.
A set of intelligent projects or tools can serve as a powerful catalyst for new models of development. Designed effectively and placed strategically, these projects will not only zero in on immediate needs, but also generate positive ripple effects that radiate outward. As additional funds become available over time, what seem like modest acupunctural actions can multiply and evolve to achieve a more resilient and robust collective impact.

Source: Re-Activate Athens: 101 Ideas
Urban-Think Tank

Think Formally

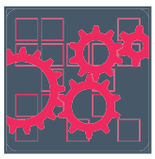
Formal devices can re-imagine the favela fabric. Rather than deriving patterns from the existing slum or otherwise extracting a working logic from pre- existing cities, a formal device can come from anywhere. It is crucial to follow through on the urban and spatial implications of applying an 'alien' logic to the favela, but such an exercise can produce new hybrids introducing difference and vigor into the mono-cultural organism of the informal.

Source: Informal Toolbox, SlumLab Paraisópolis,
Urban-Think Tank

Visualize Social Factors

Visualizing data makes it accessible. Anecdotal descriptions of the slum condition will not suffice - clearly the slum is a complex condition of overlapping needs, capacities and risks. The favela fabric is unique in the degree to which this physical infrastructure is a built map of social relations. The typical home in the favela is in a constant state of construction, expanding to accommodate distant relatives and friends that are drawn to the . Families can span multiple buildings, but one may also find multiple families in a single dwelling.

Source: Informal Toolbox, SlumLab Paraisópolis,
Urban-Think Tank



Reverse Engineer Aggregation

Algorithms can be used to posit future growth as well as to understand current conditions. Complex events, such as the development of weather systems or urban fabrics, are impossible to definitively know, but models can allow us to see possible scenarios and to test our underlying assumptions. Agent-based models are most helpful, simulating the diversity of actors implicit in ad hoc build-outs.

***Source: Informal Toolbox, SlumLab Paraisópolis, Urban-Think Tank**

Go Vertical

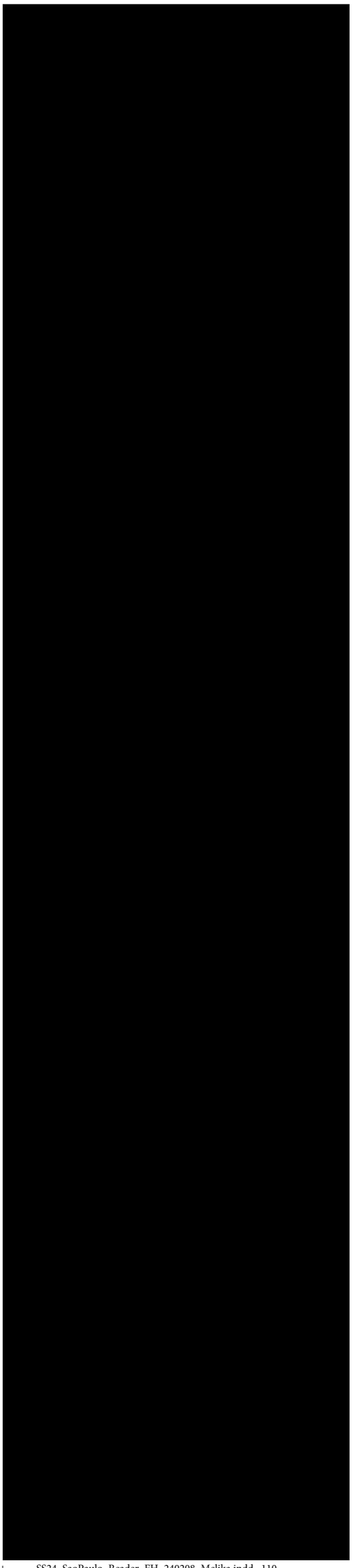
High density urbanism involves going vertical, building layer on top of layer to create higher concentrations of space and people for each lot. The challenge of building vertical while still producing rich space and accessibility, both physical and economic, is difficult but necessary to see the favela transformed. Cable cars are small on footprint but big on mobility like Urban Think Tank's cable car system for Caracas, Venezuela

***Source: Informal Toolbox, SlumLab Paraisópolis, Urban-Think Tank**

Make a Kit of Parts

The kit-of-parts is best when modular and flexible. It must not be easily removable, materials must be cheap and it must be capable of working on a small footprint. It must negotiate existing buildings and steep slopes - smaller modules will work better than larger ones. The limit condition of this is the default barrio masonry block: small, cheap, and easily assembled.

***Source: Informal Toolbox, SlumLab Paraisópolis, Urban-Think Tank**



Selected Projects

Ibirapuera Park | São Paulo, BR

SESC 24 de Maio | São Paulo, BR

SESC Pompéia | São Paulo, BR

Fábrica de Musica | São Paulo, BR

Fábrica de Cultura | Barranquilla, Colombia

Learning Center | Cartagena, CO

Moravia Hill | Medellin, CO

Metropolitan Waterway Ring | São Paulo, BR

Connect the Dots | São Paulo, BR

MAK Vienna Biennale for Change 2021

Citizens of the Antropocene | Rotterdam, NL

A New Indigenous University | Villagarzon, CO

Cross Border Commons | Tijuana , MEX/USA

Common Space | Vienna, AT

Incremental Development Manual | Mongolia , MN

The Elastic Grid | Lod, IL

Ibirapuera Park
São Paulo, Brazil

Architects: João Felipe Pereira, Otávio Augusto Teixeira Mendes
Area Size: 390 acres
Year: 1954
Owned by: São Paulo Department of Parks and Green Areas

"Oca" and "Bienal"

The Ibirapuera Park is the most visited park in South America, with over 14 million visitors in 2017. Its iconic importance in São Paulo is often compared to Central Park in New York City.

It compromises 390 acres of green space and is often described as "a green oasis at the heart of a concrete jungle." The English landscape garden covers a large area for leisure, jogging, and walking; hosts a vivid cultural scene with museums, a music hall, and popular events such as São Paulo Fashion Week, congresses, and trade shows.

The park was inaugurated in August 1954 for the 400th anniversary of the city, with buildings designed by architect João Felipe Pereira and landscape by agronomist Otávio Augusto Teixeira Mendes

In the '90s, its green areas were graded heritage-listed status by the city and the state of São Paulo to avoid further construction and keep its historical gardens and green open spaces preserved. In 2016, the complex of buildings designed by Oscar Niemeyer, Zenon Lotufo, Hélio Uchôa Cavalcanti, and others were registered as national landmarks by the National Historic and Artistic Heritage Institute.

Source:
Architectural Review | 2020
World Atlas | 2021
Nelson Kon | 2004

Spatial layout of Ibirapuera Park

Skating within Ibirapuera Park

Sesc 24 de Maio São Paulo, Brazil

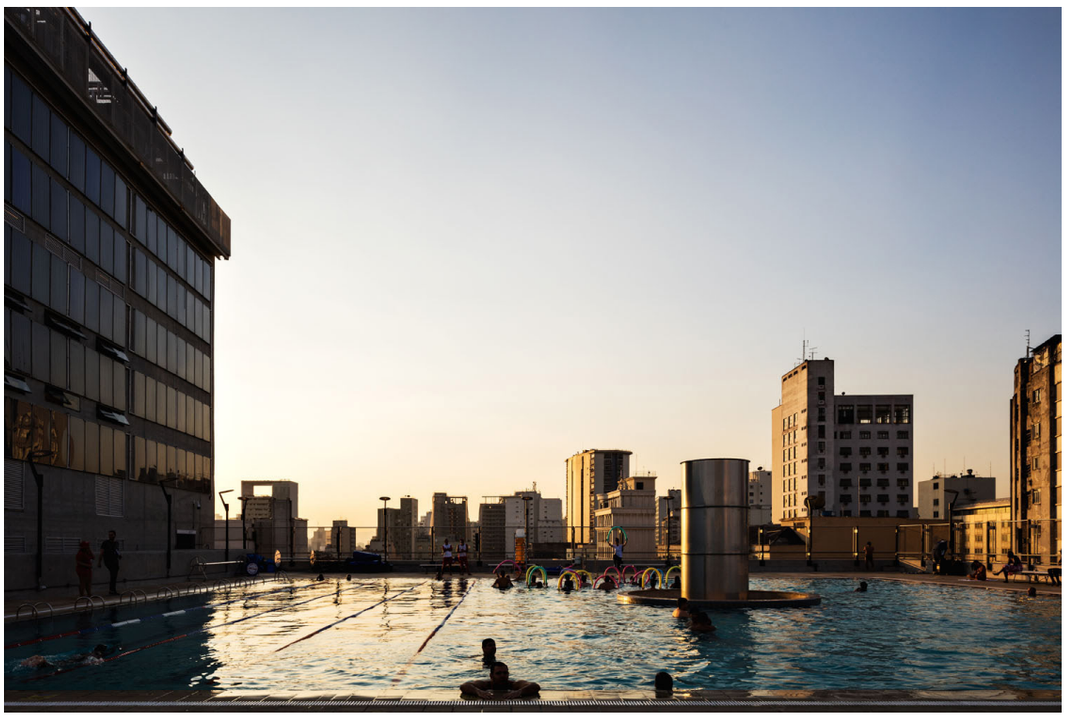
Architect: Paulo Mendes da Rocha / MMBB Arquitetos
Location: Rua 24 de Maio
Area Size: 27865 m²
Year: 2017

South oriented view Sesc 24 de Maio

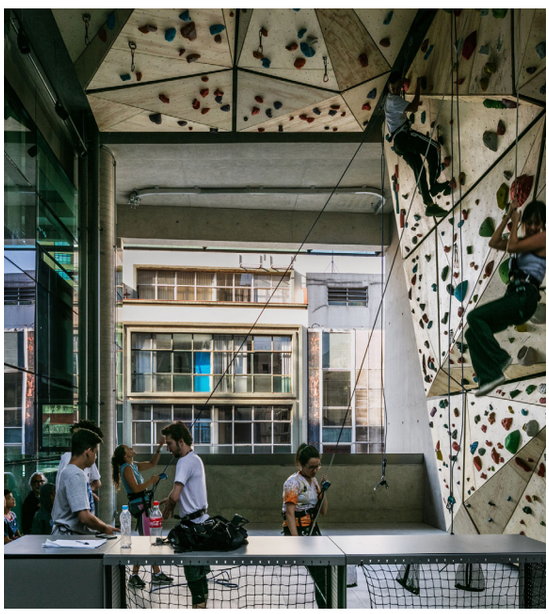
In 1946, SESC (Serviço Social do Comércio) was founded in Rio de Janeiro by a group of private businesses, initially to provide healthcare to employees and their families but quickly expanding into other Brazilian states and diversifying into programs such as theatres, gyms, and holiday camps.
A non-profit but private institution, SESC is funded by a 1.5 percent tax on workers in commerce – specific services and activities are reserved for its paying members. Still, the centers are free for everyone to enter.

Sesc 24 de Maio is one example within this framework. The program is organized vertically: Bloco Cultural, Bloco Esportivo, and Bloco Piscina. The former parking garage has been reused as a theatre and café. The vertical circulation system works as a clear and continuous circuit. The ramp set is capable of transforming the wide public space of the city's enclosure in the various places of activities specific to the programs of the SESC in an unchained and playful way, a walk.

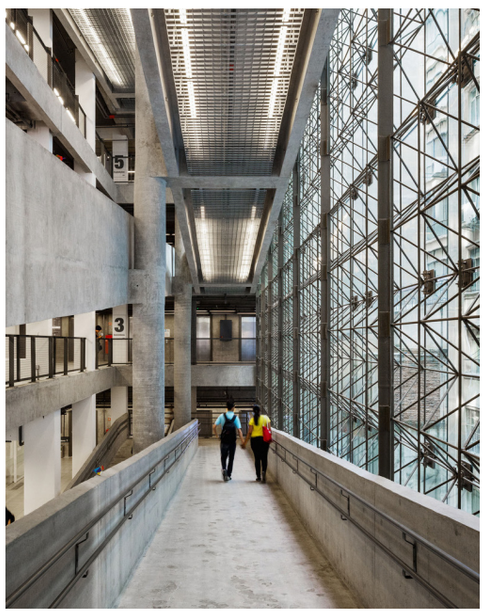
Source:
Architectural Review | 2019
Archdaily | 2017



Pool on the roof, "Bloco Piscina"



Indoor climbing hall , "Bloco Esportivo"



Structural facade and vertical circulation

Sesc Pompéia
São Paulo, Brazil

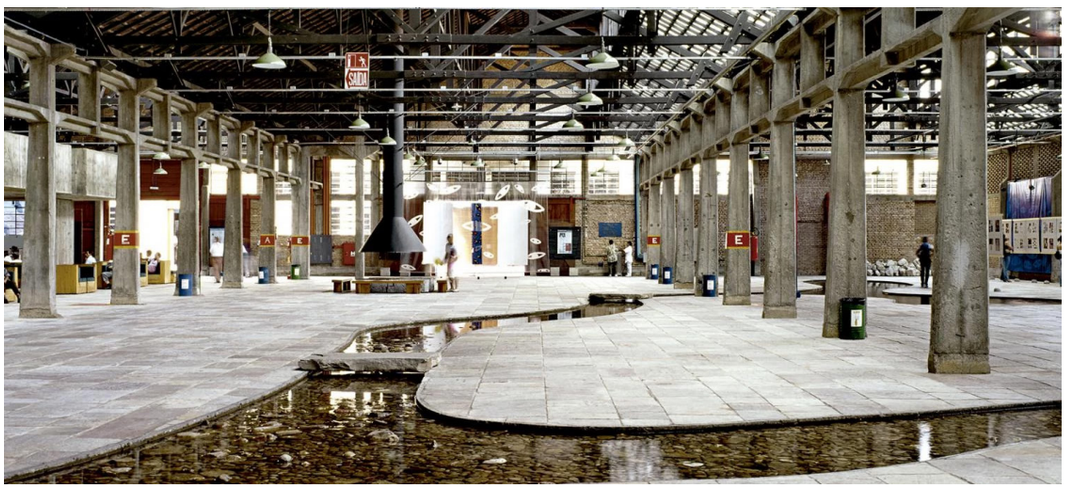
Architect: Lina Bo Bardi
Location: Rua Clélia 93
Year: 1977-86

Sesc Pompéia Factory, Aerial View

The SESC Pompéia Factory, envisioned by the renowned female Modernist architect Lina Bo Bardi, is a landmark example of adaptive reuse architecture. Originally serving as a drum factory, the building underwent a transformative process in 1982, emerging as a vibrant multi-functional space with the addition of two concrete towers linked by diagonal walkways. Bo Bardi's design philosophy emphasized the building's inherent structural elements, showcased by stripping it down to its original concrete and brick. Guided by a socially utopian vision aligned with the highest ideals of Modernism, her approach resonates profoundly. Today, the SESC Pompéia Factory continues to enthrall enthusiasts of contemporary architecture worldwide, serving as a testament to Bo Bardi's innovative design ethos.

The year 1982 saw the arrival of a new and striking architectural landmark in Brazil, in the city of São Paulo. It was the Centro de Lazer Fábrica da Pompéia (Pompéia Factory Leisure Centre), now known simply as the SESC Pompéia. This architectural complex, in some respects startling, seamlessly blends a red-brick structure that housed a drum factory since the 1920s – elegantly proportioned in the style of British factories – with three immense and unconventional concrete towers interconnected by aerial walkways.

Source:
ArchEyes | 2022
Arquitectura Viva | 2024



Interior of the Cultural Center

Exhibition Space, Museum of Art (MASP)

Exhibition Space, Museum of Art (MASP)

Fábrica de Música
São Paulo, Brazil

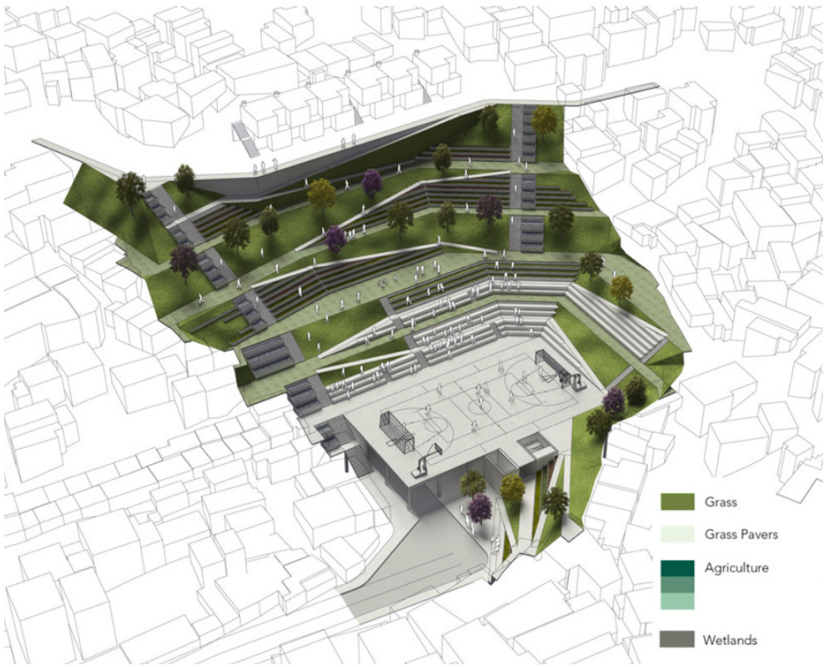
Architect : Urban-Think Tank (UTT)
Place : grotão, paraisopolis
Year: 2009 -
Status: Ongoing

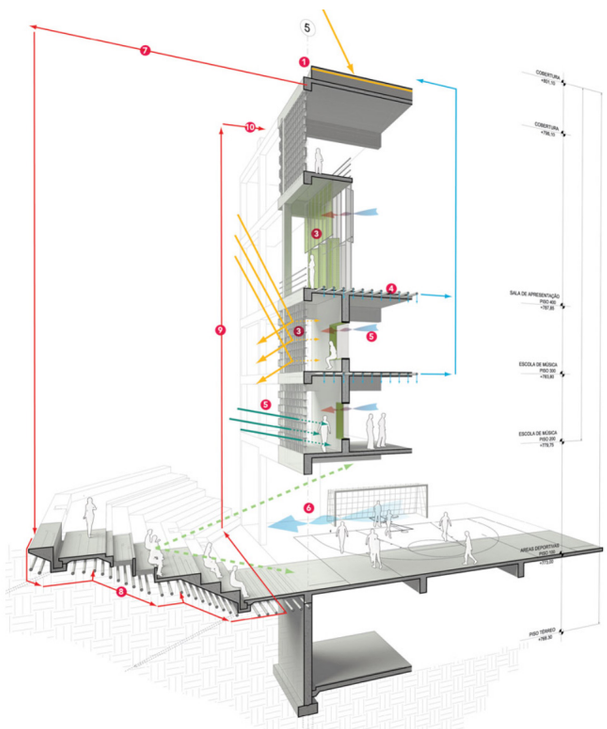
Fábrica de Música remediates the urban fabric as a civic infrastructure hub. It is located in grotão, the heart of the paraisopolis, which is the largest squatted informal settlement in the city of São Paulo.

The challenging topography and informal settlements are transformed into a productive zone and dynamic public space through social design – a process of analyzing the local effects of rapid growth and improving marginalized settlements through social structures. The project is a multifunctional public building that won the Holcim Award Latin America - Gold Medal, contributing to funding and building the project.

The lower zone contains the Fábrica de Música, which stacks diverse programs to maximize the site's potential. These include public transportation, sports facilities, and the music school, which provides practice and rehearsal spaces, studios, a performance hall, and auxiliary classrooms. This is a vital catalyst in the area, expanding music and cultural programs into the favela while forming a new network that serves the youth from all levels of society. The upper level will host new replacement housing for those displaced from the high-risk areas. Commercial spaces are introduced on the first floor as an economic vehicle that activates the street space and stimulates the microeconomy of the urban agriculture on site. The project proposes that architects eschew their conventional role in traditional hierarchies to serve as an enabling connection between the opposing forces of top-down planning and bottom-up initiatives.

Source:
UTT Next | 2024
designboom | 2012





Fábrica de Música | São Paulo, Brazil | 2019

Fábrica de Cultura
Barranquilla, Colombia

Architect: Urban-Think Tank (UTT)
Area Size: 11500 m^2
Year: 2022

Fábrica de Cultura

Culture is a vital part of urban life, however cultural facilities are often limited to affluent areas. Developed by U-TT in collaboration with an international network of partners, the Fábrica de Cultura: BAQ will provide a new space for teaching creative arts and traditions centered around Barranquilla's famous Carnival. Initiated by the municipality, the facility will extend access to cultural education, especially to residents of the impoverished Barrio Abajo.

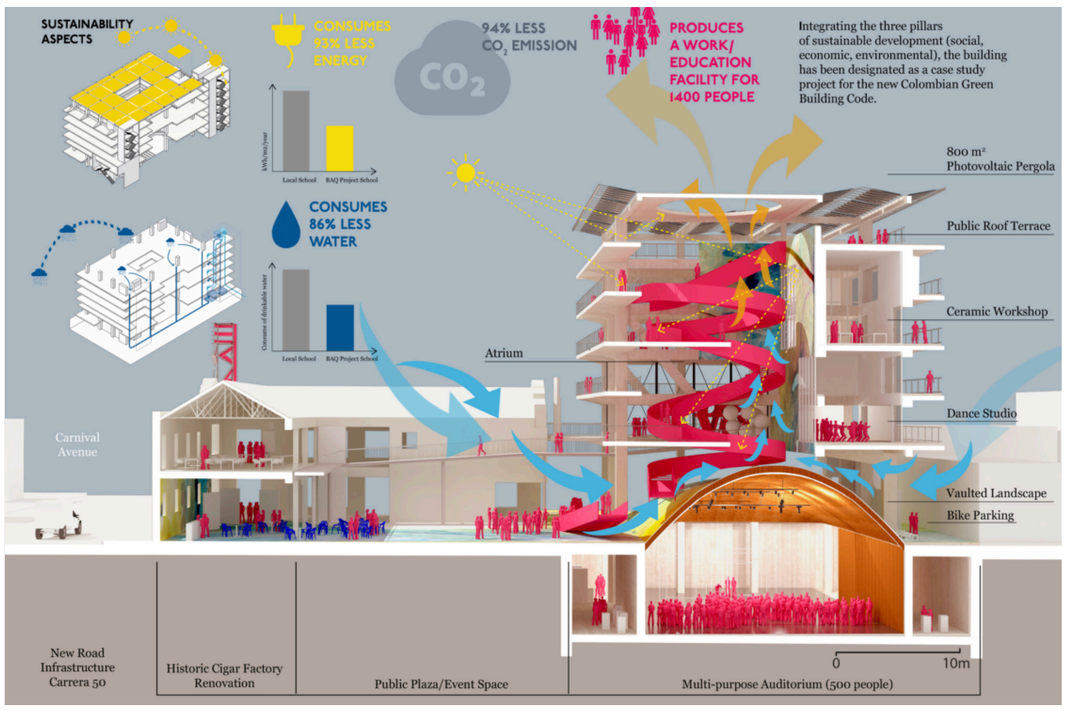
The low-cost design, which utilizes local materials and processes of prefabrication, adopts open-building principles to establish a framework that can be modified and reprogrammed by users over time. Working closely with engineers from the Universidad del Norte in Barranquilla and experts in sustainable building technology from the SuAT Chair at ETH Zürich, the aim is to develop a flexible building prototype and construction system that can be replicated throughout the region.

The Fábrica de Cultura: BAQ project is sponsored by the Swiss State Secretariat for Economic Affairs (SECO), and coordinated by the Inter-American Development Bank as part of the Emerging and Sustainable Cities Initiative. In September 2016, the project was recognized with an International Architecture Award from the Chicago Athenaeum: Museum of Architecture and Design.

Source:
Archdaily | 2024
UTT-Next | 2024

Aerial view of the public plaza

Auditorium



Concept diagram

Fábrica de Cultura | Chair of Architecture and Urban Design Prof. Hubert Klumpner | U-TT Barranquilla, Colombia | 2022

Learning Center
Cartagena - Colombia

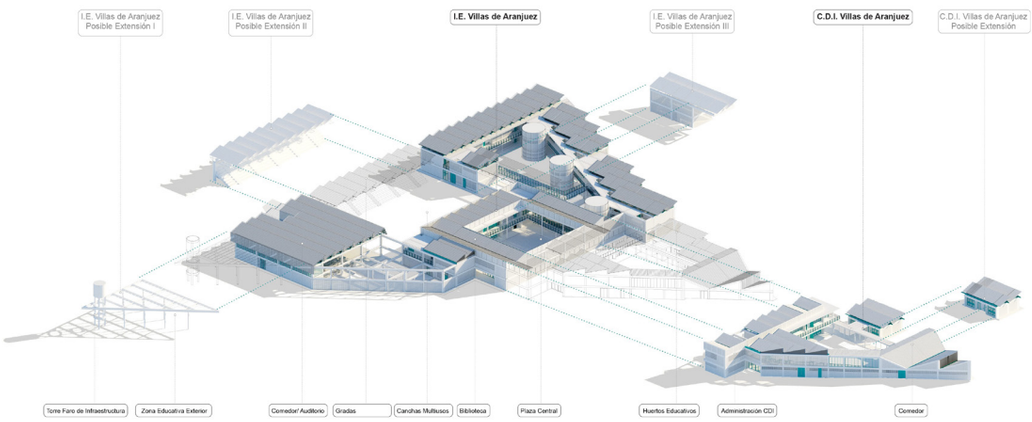
Architect: Urban-Think Tank (UTT)
Area Size: 9030 m^2
Year: 2023

Construction Site

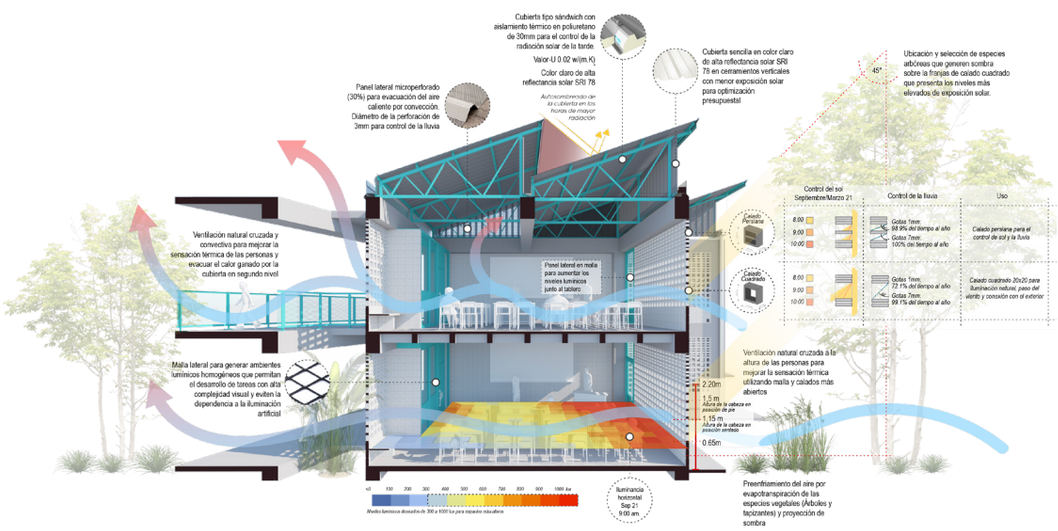
The prototype of Creciendo Escuelas en "Villas de Aranjuez" is an educational facility, replicable and scalable, which will directly benefit 1,500 children and youth with early childhood, primary, and secondary education, and with work and offers to more than 50 staff members each year. The project promotes sustainable social, economic, and urban development in the Bicentennial, putting the community at the center of the project.

Its innovative design incorporates different educational institutions that can operate independently in one building: a Child Development Center (CDI) and an Educational Institution (IE). In turn, and in line with the comprehensive „Open Door Schools" model of the Barefoot Foundation (the project's primary partner), it goes beyond a common typology of educational center, and focuses on the potential of schools to act as a network of multifunctional centers for community and youth development and empowerment. The project is part of an urban transformation initiative in Cartagena, which proposes to create a series of trans-scalable interventions around the Ciénaga de la Virgen.

Information Source:
Urban-Think Tank | 2024
Chair of Architecture and Urban Design | 2024



Project Phases



Bioclimatic section

Moravia Hill
Medellin, Colombia

Developers: Government of the Metropolitan Area of Valle de Aburrá + Local Universities
Location: Moravia Hill
Year: 2004

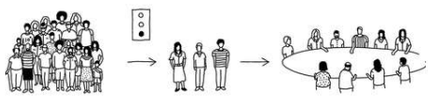
Morro de Moravia

For years, the Moravia district of Medellín served as the city's waste disposal site. In recent times, this former dump has transformed into a vibrant hub for arts, culture and ecology.

When observed from an aerial perspective, beige-and-brick edifices speckle Medellín's terrain. The northern portion of the urban area is embraced by mountains, yet amidst the city's center, just north of the Parque Norte amusement park, lies a conspicuous green mound: the Morro de Moravia (Moravia Hill), adorned with lawns, pathways, and botanical gardens, topped with a sizable greenhouse. However, ascending the hill, one encounters prominent signage and archival imagery depicting the erstwhile vibrancy of this now-tranquil hill.

In the 1970s, as the city expanded, local authorities designated Moravia as the site for the new municipal landfill. Existing residents were relocated to distant areas in the west of Medellín; those who remained – calling themselves "The Resistance" – faced the realities of living beside a rubbish heap, which was eventually transformed to a park.

Sources:
Medellín Travel | 2016
Moravia Manifesto | 2020
Deniz Örün | 2019



Un sistema democrático para legitimar y fortalecer liderazgos locales desde la comunidad hasta mayores escalas de gestión pública. En elecciones libres se nominan habitantes como líderes comunitarios y representantes de los intereses de Moravia a nivel municipal.

A democratic system to formalize and fortify community leadership from the local to higher political levels. Through free elections, residents are legitimized community leaders and representatives for Moravia's interests in matters of citywide public concern.

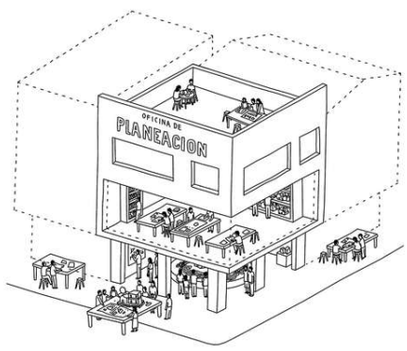
2 PARLAMENTO COMUNITARIO
LÍDERES FORUM

Lugar permanente donde los líderes comunitarios se pueden reunir y trabajar. Como foro público, el espacio invita a los habitantes comprometidos a debatir y aportar sus ideas. Fomenta la gobernanza local y el desarrollo autoguiado del barrio.

A permanent place for community leaders to gather and work. As a public discussion forum, it invites interested and committed residents to engage in an exchange of ideas. It fosters local governance and the community-driven development of the neighborhood.

Institución permanente para el desarrollo integral ubicada en el barrio. Es un puente entre la comunidad, la municipalidad y los actores del sector empresarial. Facilita la participación ciudadana en procesos de planeación, diseño e implementación de intervenciones públicas, involucrando a la comunidad en la toma de decisiones. Además, ofrece asesoría profesional a los habitantes en asuntos constructivos.

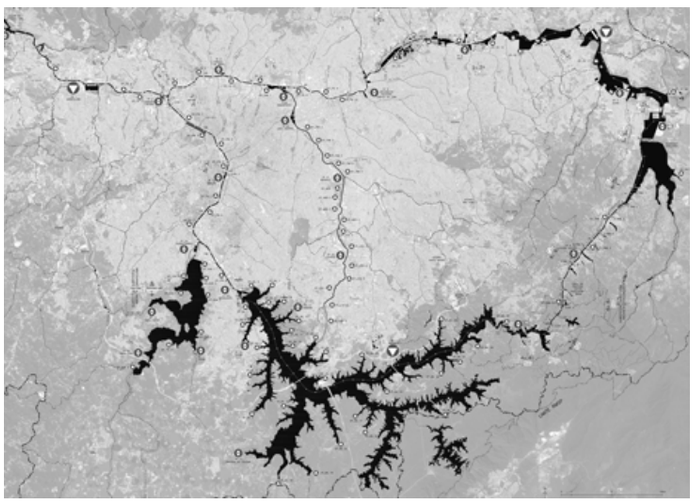
A permanent institution for integrative planning, located in the neighborhood. As a link between the community, the municipality, and private actors, it facilitates civic participation and decision-making in planning, design and implementation of public projects. Additionally, the professionals offer advice on construction and planning concerns.



Morro de Moravia | Process

Metropolitan Waterway Ring São Paulo, Brazil

Architect: Grupo Metrópole Fluvial FAU-USP
Location: São Paulo, Brazil
Year: 2011
Status: ongoing

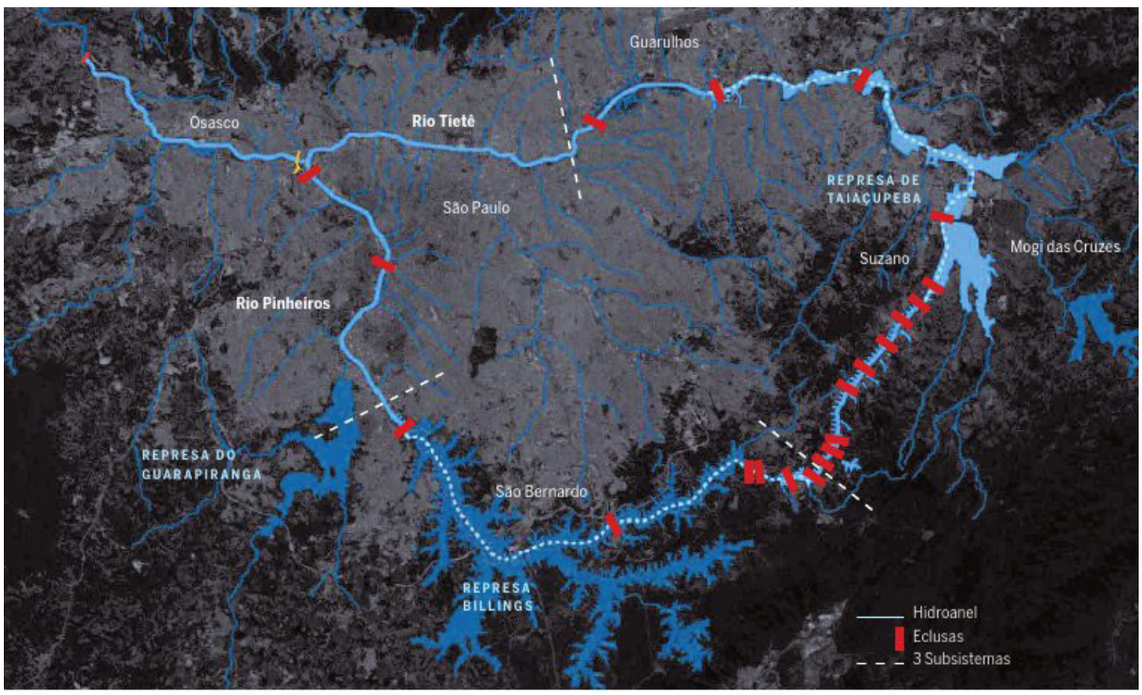


Grupo Metrópole Fluvial FAU-USP

The Metropolitan Waterway Ring of São Paulo is a project of a network of navigable canals composed of the rivers Tietê and Pinheiros, the reservoirs Billings and Taiaçupeba, and an artificial channel connecting these reservoirs, adding up to 170km (105 miles) of urban waterways. It also pretends to transform the main rivers into canals and their margins into main metropolitan public spaces. Thereby, urban rivers become routes for passengers and cargo transportation, places for leisure and tourism, besides contributing to the urban macro drainage. Therefore, functional and playful areas are created to benefit the population. To promote this, the project considers and articulates itself with the expansion of the sewage network, especially in the tributaries of the rivers and dams that form the Waterway Ring, in association with the urbanization process of these areas. This factor is essential for the depollution of São Paulo's river waters.

The implementation of the Waterway Ring is justified by the transportation of urban waste, called Public Cargo. This definition follows the directives of the Waste National Policy, which establishes the government as a response to the development of integrated management of the urban waste system that includes collection, transportation, transshipment, treatment, and environmentally good final destination. A network of ports along the waterway was proposed. The cargo deposited in the origin ports is transported through the canals towards the destination ports, the Tri-ports, where the waste is selected, recycled, processed, bio-digested, or reutilized, and, in the last instance, incinerated. For the year 2040, there is the possibility that the fluvial system makes feasible the policy of zero landfill.

Source:
Grupo Metrópole Fluvial



Grupo Metrópole Fluvial FAU-USP

Bhakta Krpa

Connect the Dots
São Paolo, Brazil

Stakeholders: Municipality of São Paulo, local family farmers, public schools
Location: São Paulo
Area: 420 km² (Rural Area); 50 km² (Arable areas occupied by 400 families)
Year: 2016 -
Status: Ongoing

Although 70 percent of the produce consumed in Brazil comes from family farms, urban sprawl makes it difficult for farmers on the outskirts of São Paulo to sell their produce. São Paulo's "Connect the Dots" program is an initiative to develop farmers' agro-ecological practices to expand their sources of income, protect vital watershed areas and promote the sale of healthy foods, especially in schools and public markets. The grand prize winner of Bloomberg Philanthropies' 2016 Mayors Challenge in Latin America and the Caribbean, São Paulo entered the competition to find a solution to the urban sprawl threatening the region's local farmers and forcing them to struggle to make a living off their produce, aggravating environmental problems that impact the water supply for 5 million people. The strategy lies in designing the value chain of organic and family farming, connecting sectorial actions having the territory as a field for integration. The arrangement that sets the connections among multiple initiatives, made possible through the joint work of several secretariats, organized from food production to food consumption.

Environmental policy
Conservation units of sustainable use can include economic activities provided that they are compatible with the sustainability of natural resources.

Labor and entrepreneurship policy
Encompass a set of important initiatives to promote local development, supporting the creation of jobs and income in the rural area by strengthening family farming activities.

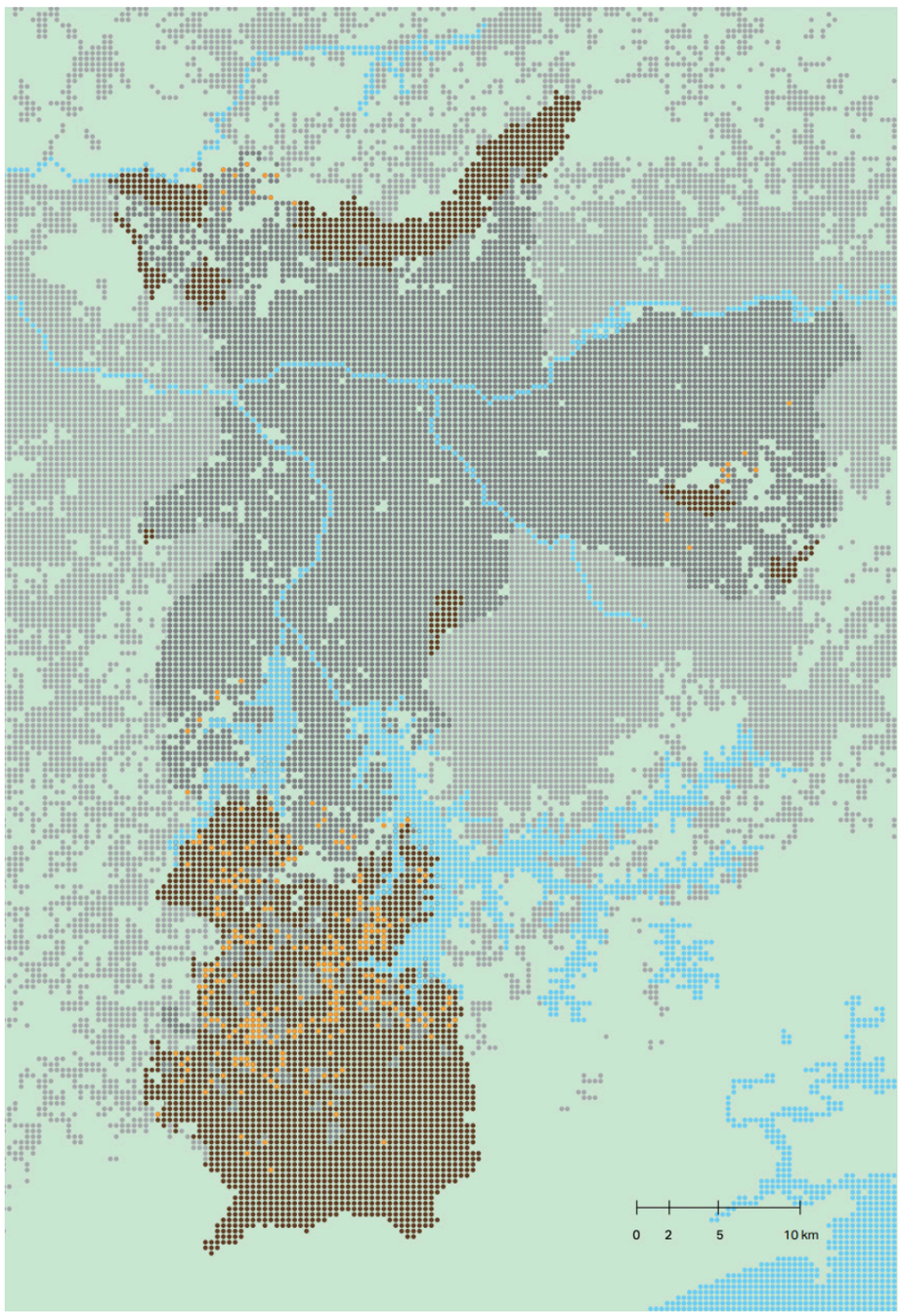
Food and nutrition security policy
Ecological farming close to the city promotes food and nutrition security, ensuring access to healthy and affordable food for the local population.

School feeding policy
Progressive inclusion of organic food and fresh ingredients in school meals, training and motivation of the kitchen staff, and food education activities for the children.

Solid waste policy
With a network of composting yards, the city can transform more than 400 tons of waste generated daily by street markets and tree pruning services into 50 tons of organic fertilizer, that can be used by the farmers.

Spatial policy
Recognition of the Ruran Zone in the Strategic Master Plan of the city, this specific zoning perimeter facilitates access to lines of credit offered by state and federal financing programs as well as technical assistance for farmers.

Source:
Municipality of São Paulo

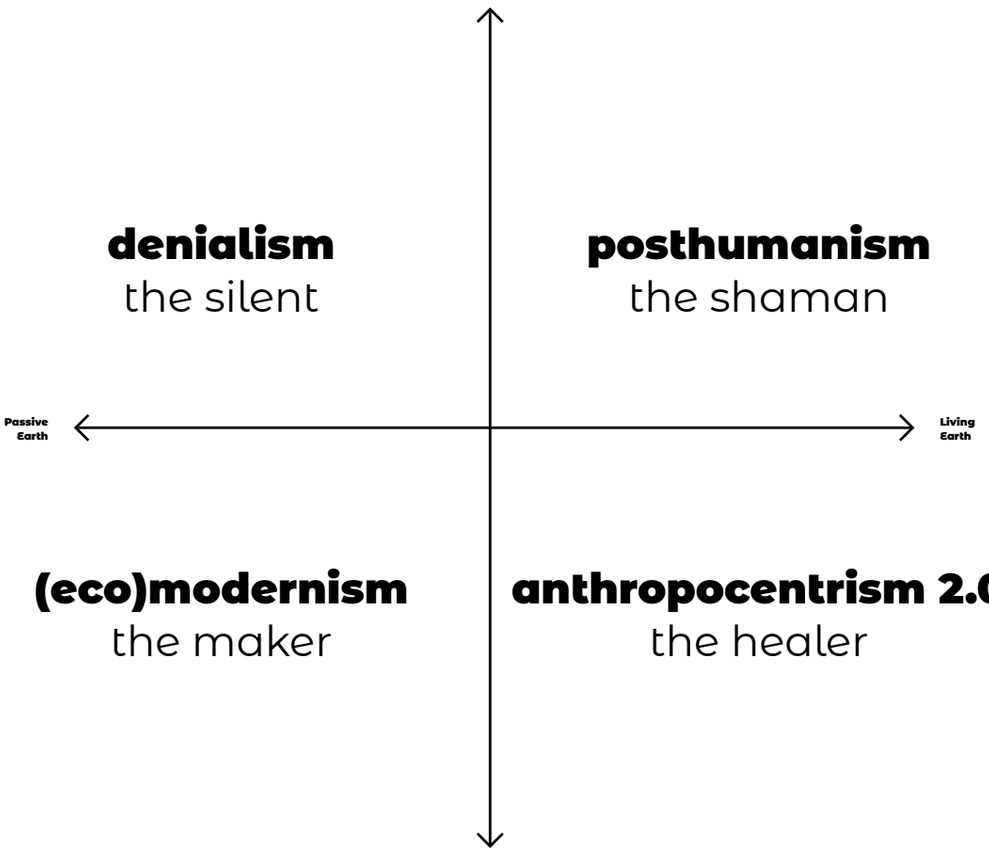


Citizens of the Anthropocene
Dirk Sijmons and Herman Kossmann

Architect: Dirk Sijmons and Herman Kossmann
Place : Independent School for the in Rotterdam
Year: 2021

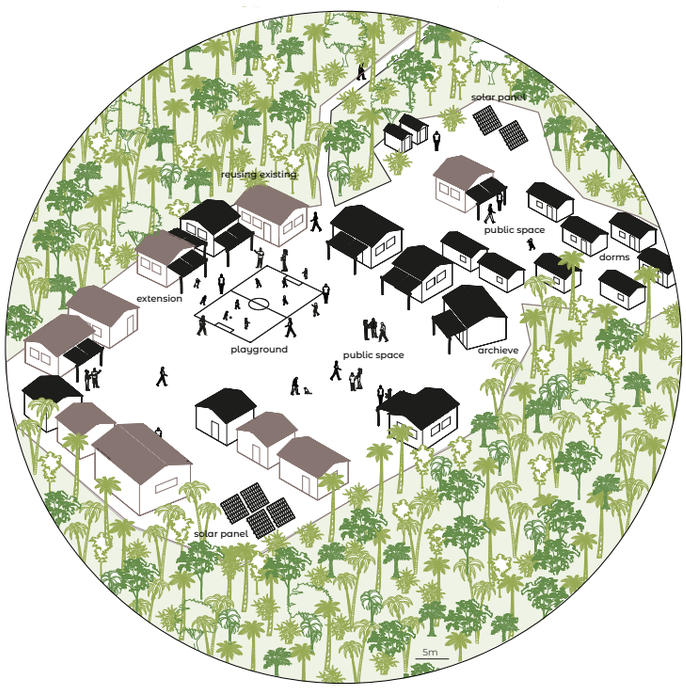
If we agree we are living in the "Anthropocene," the age of mankind, how do we react to this novel condition? The answer depends largely on how we see our planet and how we understand the position of mankind. One extreme is to see the world as a passive backcloth for our actions; the other is to recognise the living planet as an active force. Humankind can be seen as a modest, pointless species or at the other extreme as an almost omnipotent ecological force. Between these extremes, an infinite number of perspectives are possible, of course. A typology can be constructed, in which these two sets of extremes are the vertical and horizontal axes of a matrix with four quadrants, each representing a specific philosophical world view: Denialism, (Eco)modernism, Posthumanism, and Anthropocentrism 2.0. These axes expose the ideological fault lines of the environmental debates of the 21st century. All four positions are present in society, although with a wide range of manifestations.
As denialism is an unsustainable position in the end, and (eco)modernism is increasingly failing to provide answers to the problems of the Anthropocene. Our project wants to draw attention
to the possible alternatives: Posthumanism and Anthropocentrism 2.0. This is all the more urgent because a large part of the design community still lingers in the (eco)modernist dream that economic growth can coexist with decreasing our ecological footprint and that most environmental problems can be solved using technical means. As a teaser, the black box to your right offers a close encounter with these four worlds.

Information Source: MAK Wien Exhibition Vienna Biennale 2021
Axonometry: Studio FS21 Tobias Sandbichler UTT-ETHZ



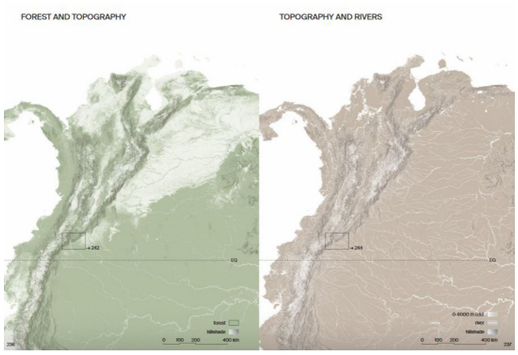
A New Indigenous University in the Rainforest of Colombia

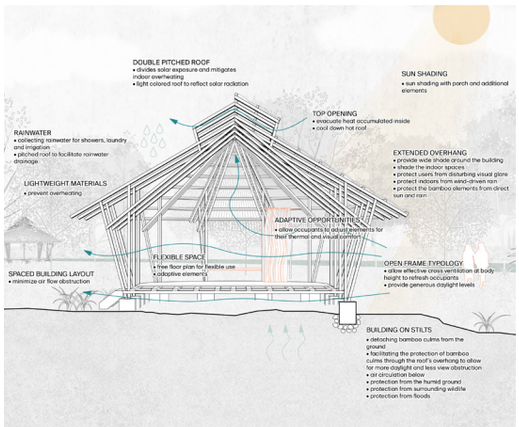
Architect: Studio Anne Lacaton, Lacaton & Vassal ETH Zürich
Place: Colombia
Year: 2019-2020

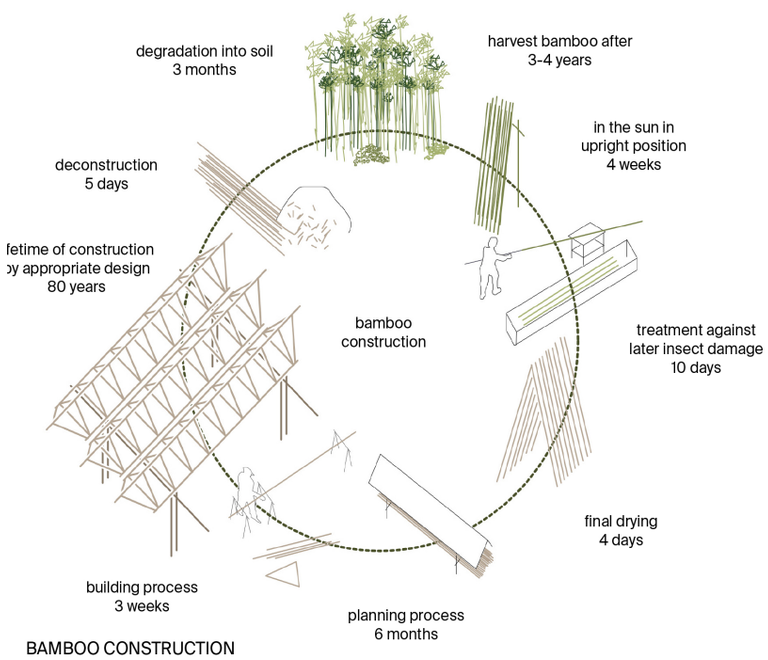


The indigenous Inga people of Colombia between the Amazon lowlands and the Andes have decided to create a university with the aim to fill the lack of an institution for higher education in the region, to perpetuate their specific knowledge and bring it in conversation with contemporary science and technology, and to give the young generation a future in their territory. The Inga, the "Guardians of the Earth", see the university as the means to protect and strengthen nature the condition of their survival, but also of all of us. The design studio, in collaboration with PUJ Bogotá, the Inga, and their official representative Hernando Chindoy.
Chindoy, brought together students from both universities to meet the Inga, listen to them, discover their territory, and offer studies, reflections, proposals that may be useful for the development of the project by the Inga.

Information Source: MAK Wien Exhibition Vienna Biennale 2021
Axonometry: Studio FS21 Julie Agustoni UTT-ETHZ

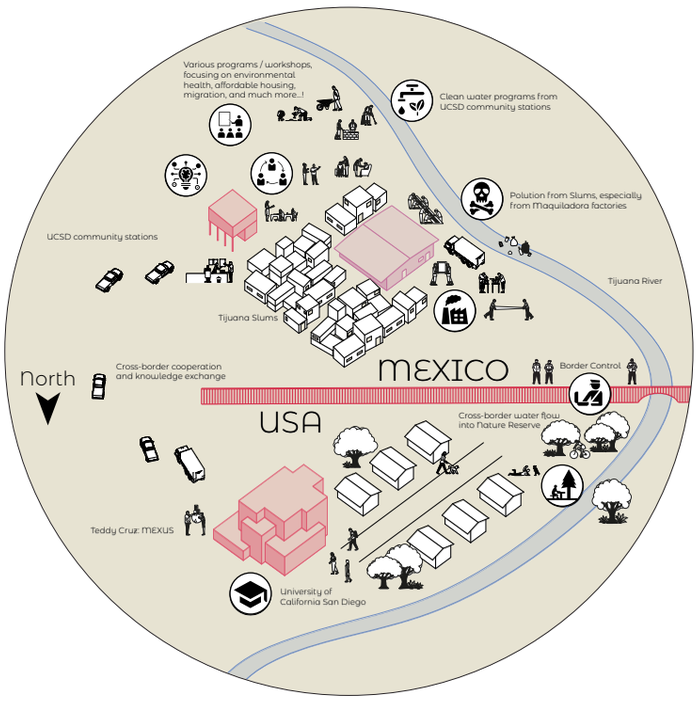






Cross-Border Commons
Teddy Cruz and Fonna Forman

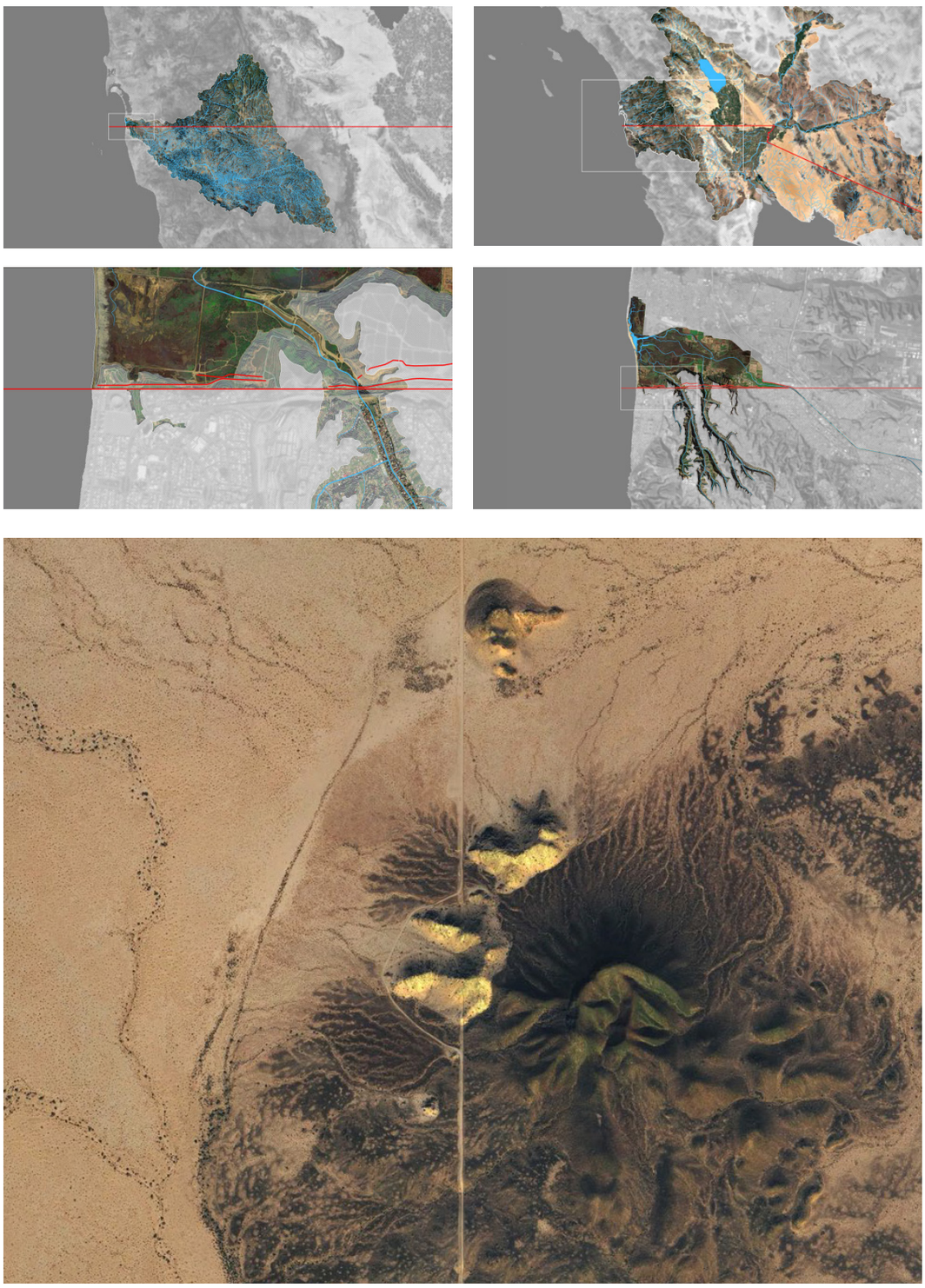
Architect: Estudio Teddy Cruz + Fonna Forman
Place : Border of Mexico and USA (San Diego)
Year: 2020



By building a new border wall against "the others," the United States has inflicted a violent blow on its own natural resources and those of Mexico. With the construction of the new border wall and its dirt and concrete dams and drain systems, the U.S. has further truncated the canyons that travel northbound from Tijuana. On the US side, this has accelerated the northbound waste water flows from the upper informal settlement of Los Laureles into the valley and the estuary below. These waste waters syphon tons of trash and sediment with each rainy season and contaminate the "lungs" of the bioregion. Here, the border wall is an artifact of environmental insecurity.

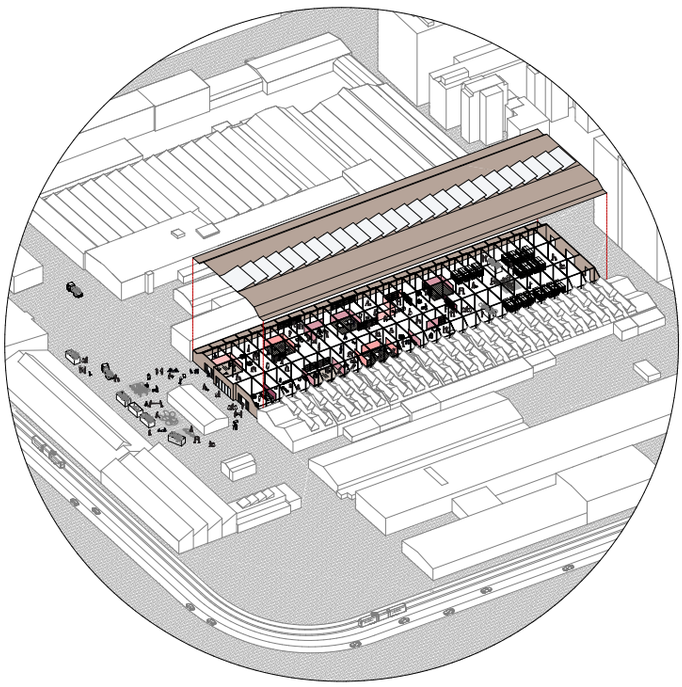
The Cross-Border Commons is an unprecedented transnational environmental conservation initiative that links an estuary in San Diego with an informal settlement at Los Laureles Canyon in Tijuana. The goal is to form a continuous administrative socio-ecological system beyond the border wall and protect the water and environmental resources shared by these border cities. To achieve this, we have partnered with Proyecto Fronterizo de Educación Ambiental in Tijuana to form a coalition of state and municipal governments, grassroots organizations, communities, and universities on both sides of the border.

Information Source: MAK Wien Exhibition Vienna Biennale 2021
Axonometry: Studio FS21 Rebecca Chen UTT-ETHZ



Common Space
Kreislaufwerkstatt

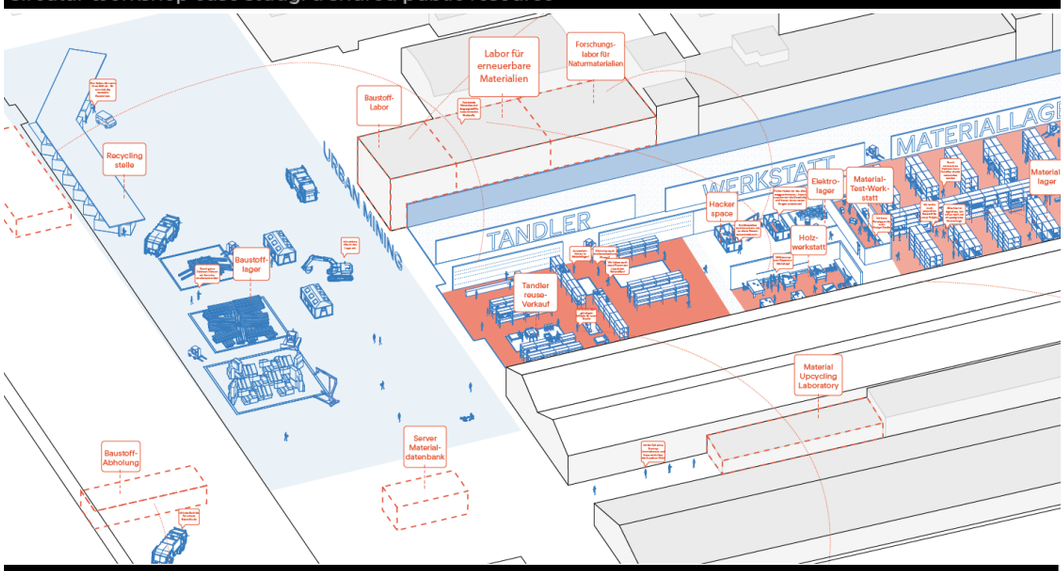
Architect: Mostlikely Architecture
Place : MAK Biennale Vienna
Year: 2019-ongoing



Let's build the circular !
To make our cities fit for the future, let's enlarge our existing cities by adding new typologies: common spaces.
Such common spaces offer flexible, affordable access to well-equipped resources such as work- shops, marketplaces, and studios. They foster room for personal creativity and encourage careful use of resources. The common spaces create new locations in which to learn and exchange ideas.
The common spaces' potential is evident from the case studies. The circular workshop case studies link resource- and climate-related issues with the creative potential of the and, as public incubator, provide access to closed loop technologies. Within the framework of the VIENNA BIENNALE, during Vienna Design Week Mostlikely Architecture and studio mobil / think tank station bring together the 's latent potential into one place, presenting the case for the circular workshop.

Information Source: MAK Wien Exhibition Vienna Biennale 2021
Axonometry: Studio FS21 Alexandra Cudlipp UTT-ETHZ

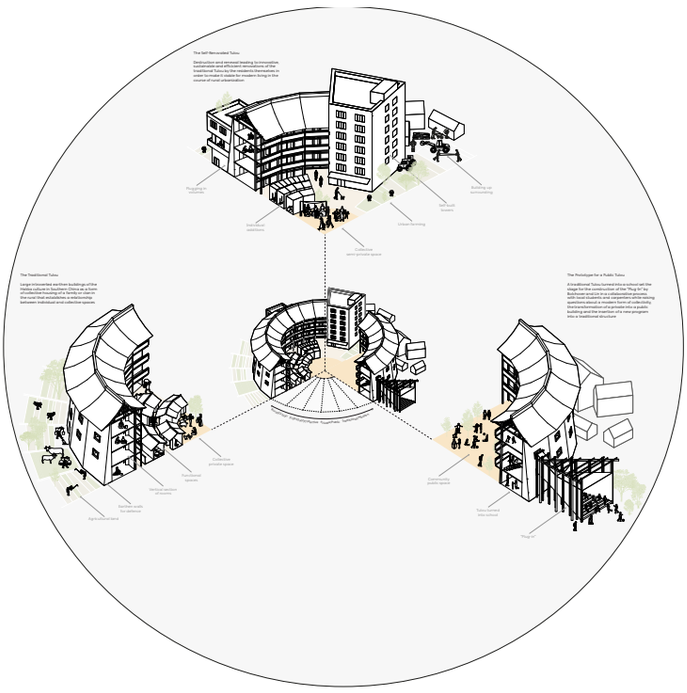
Case Study Kreislaufwerkstatt: öffentliche geteilte Ressourcen
Circular workshop case study: a shared public resource



Case Study Kreislaufwerkstatt: Wirkmodell
Circular workshop case study: assessment model

Incremental Development Manual
Rural Urban Framework

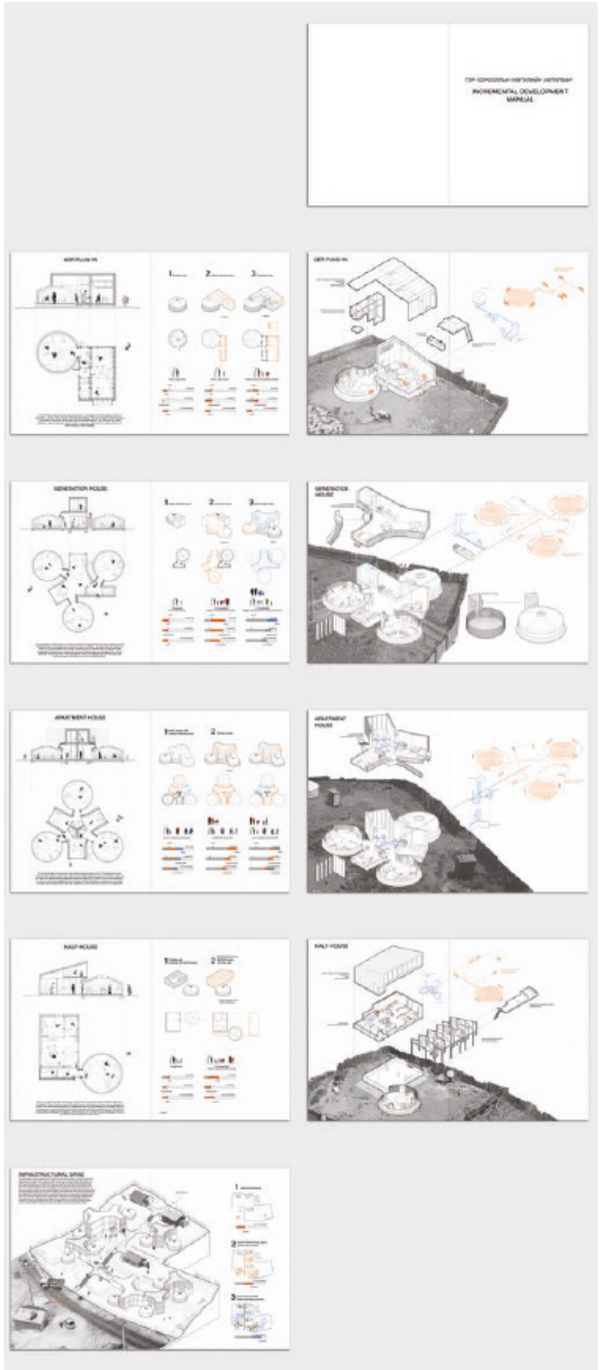
Architect: Ruf & Joshua Bolchover
Place: Mongolia
Year: 2021



For thousands of years, Mongolians have been living in gers—portable structures made of timber, felt, and canvas. Although they are perfect dwellings for nomads, using them as the basic living unit in Mongolia's capital, Ulaanbaatar, leads to sprawling districts lacking essential infrastructure and contributes to toxic levels of air pollution.

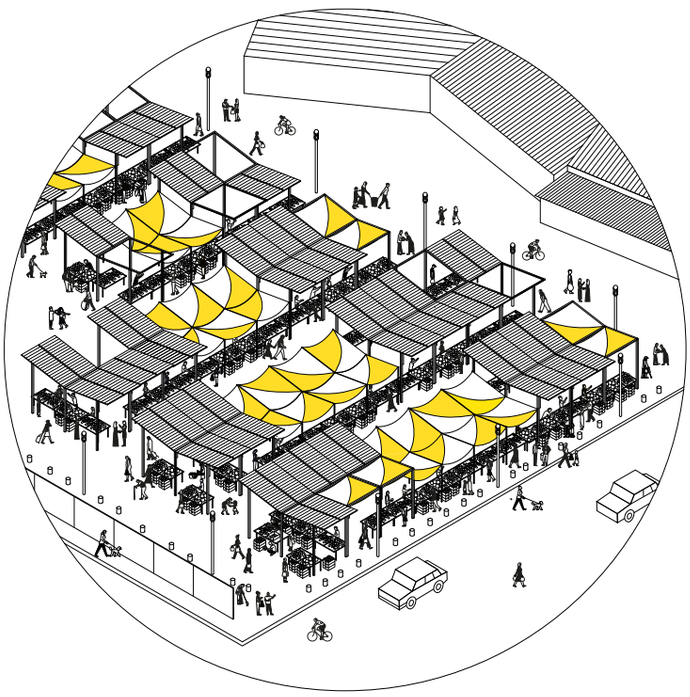
The exhibition is based on our forthcoming book that positions Ulaanbaatar as a unique case for viewing our urban world differently. The book rejects the masterplan as an effective tool in emerging cities and advocates flexible forms of development. It advocates incremental urbanism as a strategy for gradual settlement. It contains a design manual of architectural prototypes that can shape the future transformation of the .

Information Source: MAK Wien Exhibition Vienna Biennale 2021
Axonometry: Studio FS21 Ekaterina Scholz UTT-ETHZ



The Elastic Grid
Rebuilding the Old of Lod

Architect: Derman Verbakel Architecture
Place : Lod, Israel IL
Year: 2021

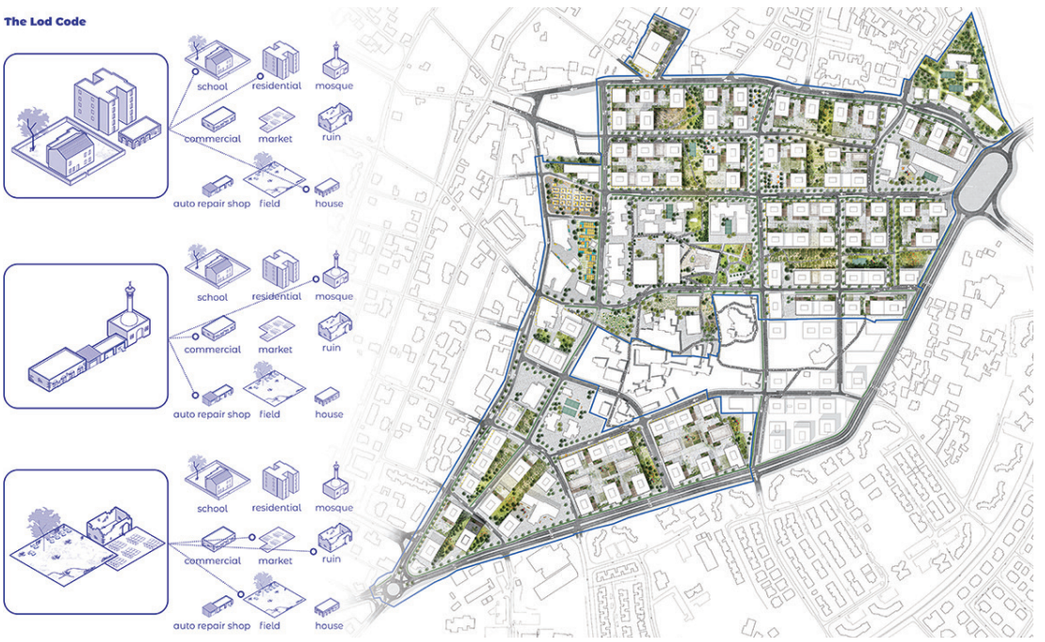


The of Lod has been a in evolution, demolition, and reconstruction since its first appearance in Egyptian records 3 500 years ago. As an ancient trade junction between the spice and silk routes, the operates until today as a crossroad of global and local networks. Situated 15 minutes by train from Tel Aviv, Lod is the hometown of Israel's international airport and hosts the famous weekly Lod market. This multi-scalar geography has turned the into a compilation of overlapping and sometimes incongruent urban fabrics.

The Elastic Grid aims at preserving and strengthening existing and future communities of Christian, Muslim, and Jewish communities, market salesmen, and visitors. It stitches together historic networks of fractured urban fabrics, some still physically present and others only ma- nifested in the collective memory of inhabitants. This new grid connects these networks with future plans, creating a diverse fabric of open and built spaces.

The fast-track projects of The Elastic Grid include a plan for providing affordable housing alongside an action plan: a network of public spaces for immediate construction. This action plan started with the transformation of the old market area into a market square that is active during market days and serves as a public square on regular week days. More recently, construction star- ted for a series of additional public spaces for the Square of Three Religions, an extension to the Herzog Street Market, and a landscape development in the area of Khan el Hilo.

Information Source: MAK Wien Exhibition Vienna Biennale 2021
Axonometry: Studio FS21 Laura Imperiali UTT-ETHZ

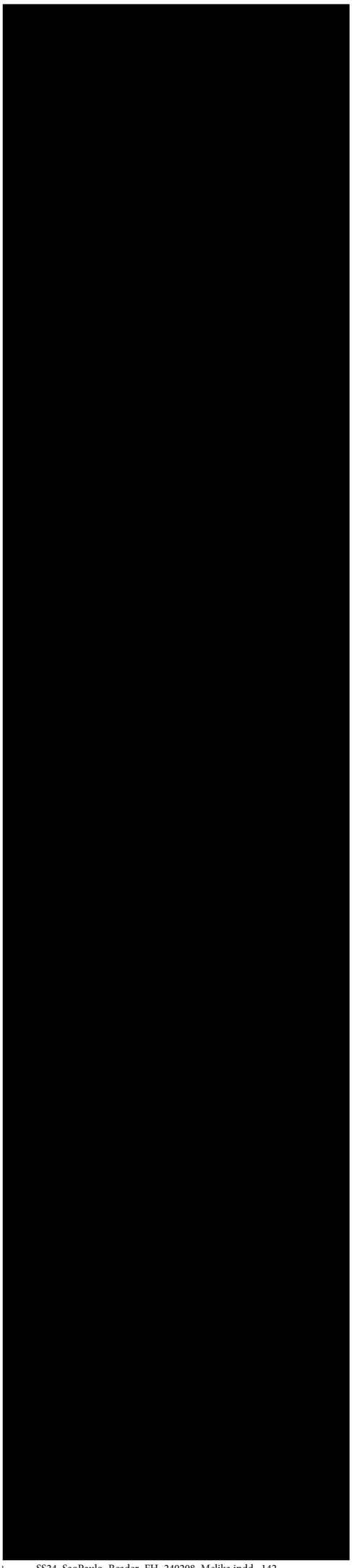


Lod Altstadt 1936 (Khan el Hilo in Rot)
Lod old city 1936 (Khan el Hilo in red)
Visualization: Derman Verbakel Architecture

Lod Altstadt 2016 (Khan el Hilo in Rot)
Lod old city 2016 (Khan e l Hilo in red)
Visualization: Derman Verbakel Architecture

Lydda mit Kirche St. Georg
Lydda and the church of St. George | Photo: Library of Congress—American Colony—photo 1920–1900

Elashvili-Straße 2016
Elshvili street 2016 | Photo: Derman Verbakel Architecture



Readings & Events

Spatial Master Plan 2014

Brazilian Colorally... Which Is Also Uruguayan

São Paulo - Paraisópolis: Order and Progress? Ordem e Progresso?

Informal Toolbox SLUM LAB Paraisópolis

São Paulo Architecture Experiment Sustainable Living Urban Model Lab

What would the trees say?

Transitioning to Sustainable Cities and Communities

Enough / Genung Designing limits in architecture for an earth of plenty

MediTirana: 100 Ideas for the Western Balkans

Spatial Master Plan 2014

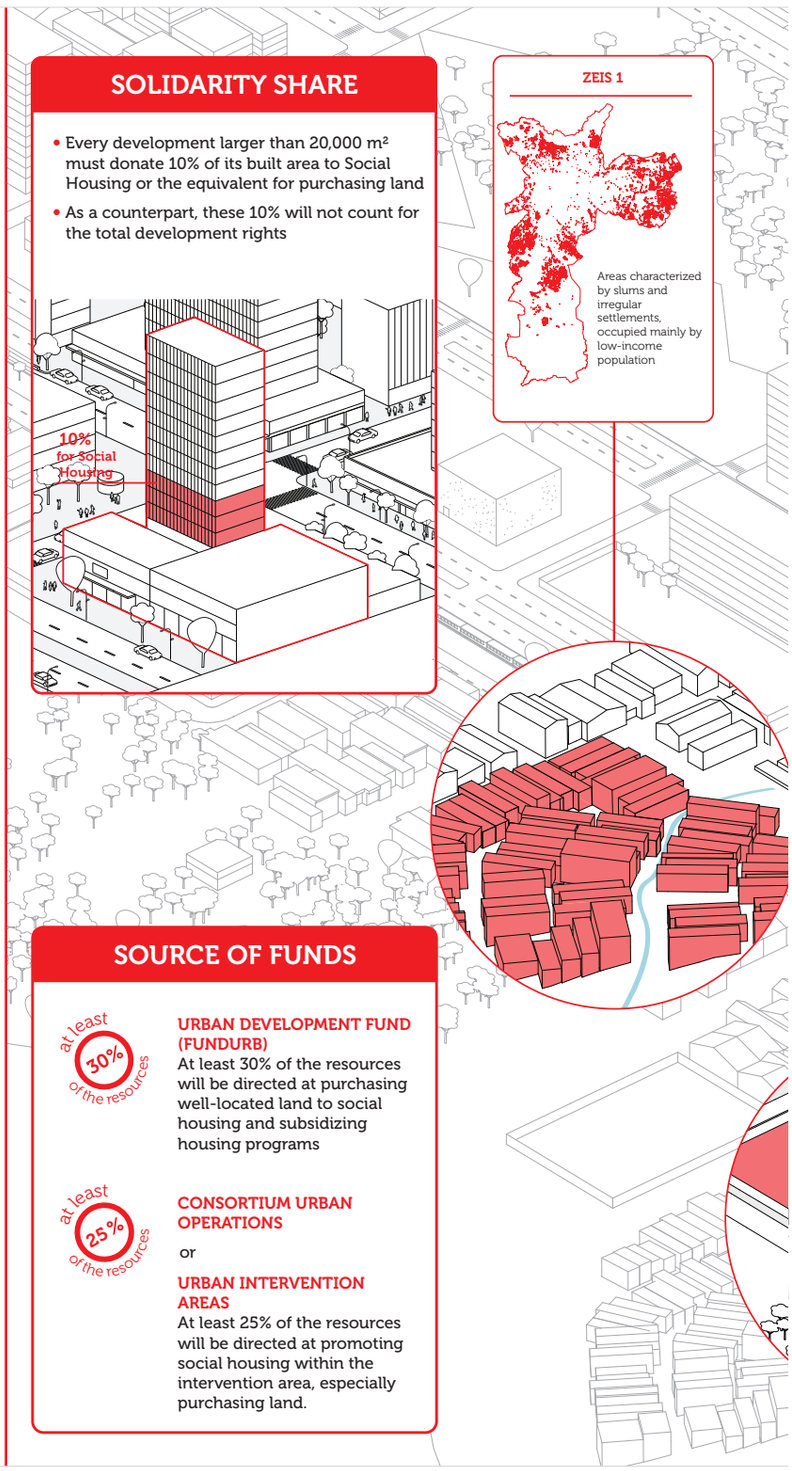
Master Plan São Paulo 2014

TO IMPLEMENT HOUSING POLICIES FOR THOSE WHO NEED THEM

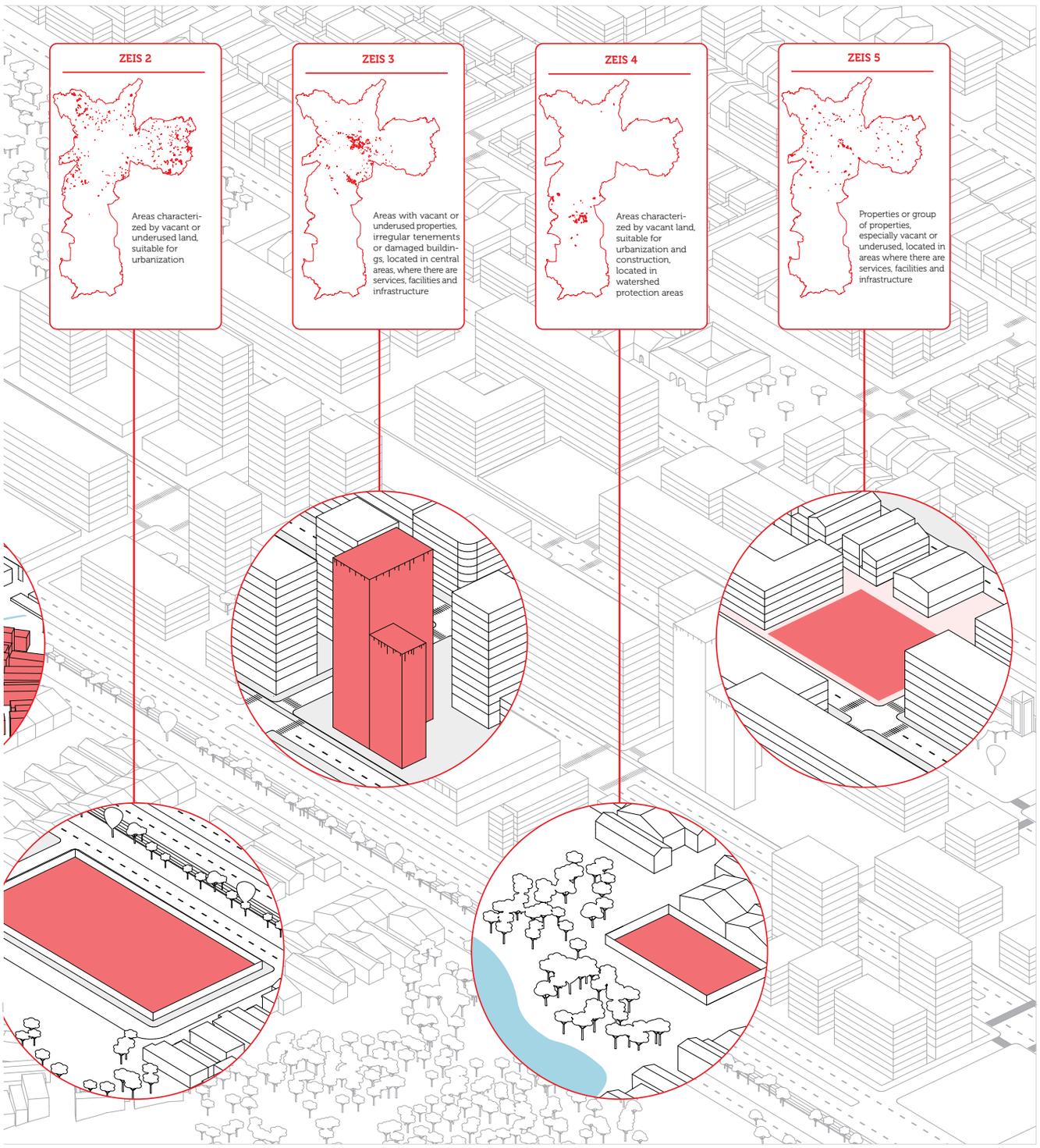
To face the lack of adequate and well located housing in the city, the Master Plan duplicated the areas established as Special Zones of Social Interest, oriented to building social housing, focusing on the part of the population with income lower than 3 minimum wages. Beyond establishing a permanent and minimum source of funds for the investments on Social Housing, the Master Plan also created the Solidarity Share, instrument that works as a counterpart for large entrepreneurships, establishing that 10% of their areas must be reserved for social housing, aiming to develop a more balanced and plural society.

- ENSURING THE RIGHT TO DECENT HOUSING AS A SOCIAL RIGHT
- REDUCING THE HOUSING DEFICIT: SPECIAL ZONES OF SOCIAL INTEREST (ZEIS) WERE DUPLICATED
- PRIORITIZING THE POPULATION WITH INCOME LOWER THAN 3 MINIMUM WAGES
- REGULARIZING LAND WITHIN INFORMAL SETTLEMENTS
- IMPLEMENTING THE "SOLIDARITY SHARE"
- DEFINING GUIDELINES FOR THE MUNICIPAL HOUSING PLAN (PMH)

ESSE É O NOSSO PLANO

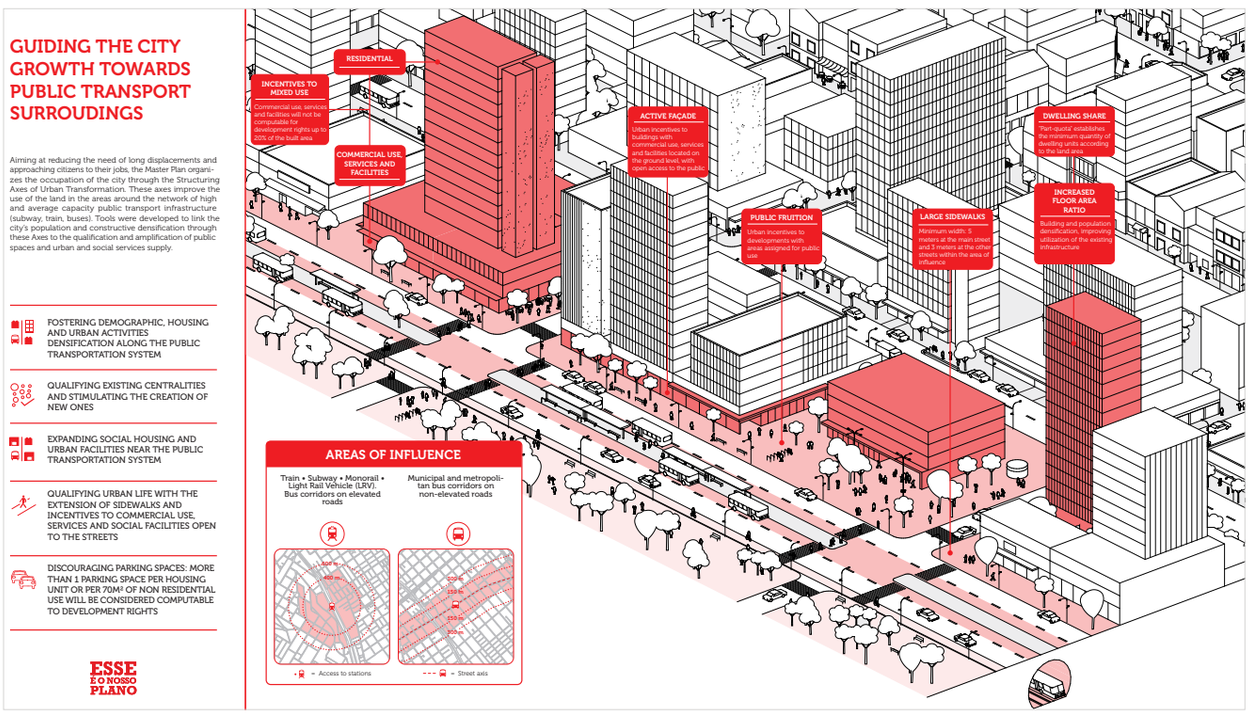


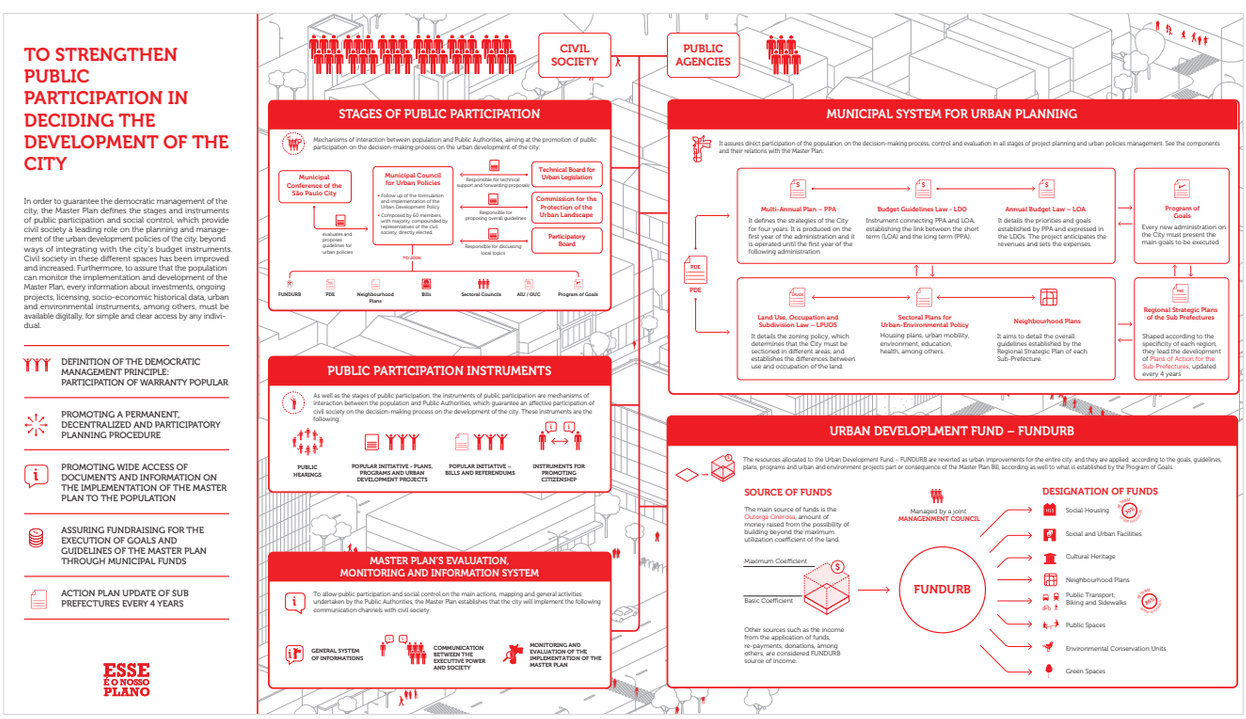
Source:
Master Plan São Paulo | 2014



Spatial Master Plan 2014

Master Plan São Paulo 2014





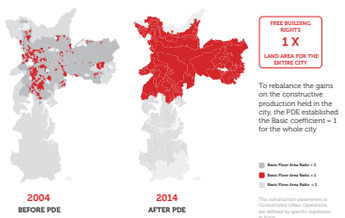
Source:
Master Plan São Paulo | 2014

SOCIALIZE THE GAINS OF PRODUCTION OF THE CITY

The adoption of a Basic Floor Area Ratio = 1 to the entire city defines that the additional constructive potential of the lands belongs to São Paulo society, and its gains must be reversed to the community: thereby, the funds raised from the entrepreneurships over the Coeficiente Básico = 1 will be invested in urban improvements in the entire city. Furthermore, the Master Plan defines urban instruments to discourage idle properties, responsible for causing the population great losses, raising the costs of public services and facilities per inhabitant, beyond compelling part of them to live in distant areas, where there are no job offers, commerce or urban services.

- DISCOURAGING VACANT PROPERTIES THAT DO NOT COMPLY WITH THEIR SOCIAL FUNCTION
- COLLECTING ABANDONED PROPERTIES AND GIVING THEM SOCIAL DESTINATION
- IMPLEMENTING THE "SOLIDARITY SHARE"
- CHARGING AN ONEROUS GRANT BASED ON THE MARKET VALUE, UPDATED ANNUALLY

BASIC FLOOR AREA RATIO = 1,0 FOR THE ENTIRE CITY



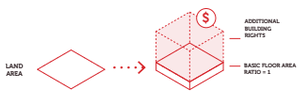
FREE BUILDING RIGHTS
1 X
LAND AREA FOR THE ENTIRE CITY

To rebalance the gains on the constructive production held in the city, the PDE established the Basic coefficient = 1 for the whole city

Basic Floor Area Ratio = 1
Basic Floor Area Ratio < 1
Basic Floor Area Ratio = 1

The construction parameters in Consorciated Urban Operations are defined by specific legislation in force.

UNDERSTAND WHAT HAPPENS IN LAND WITH BASIC COEFFICIENT = 1

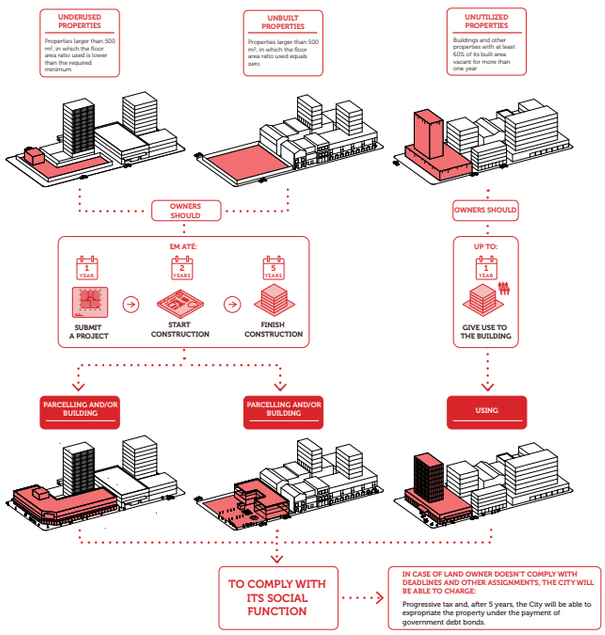


VIF THE ENTREPRENEUR WANT TO BUILD BEYOND BASIC COEFFICIENT = 1

Could build up to the Maximum Coefficient of its terrain. For this will have to pay a financial contribution, call Onerous Grant. The proceeds will be used to Urban Development Fund (FUNDURB):

THESE FINANCIAL CONTRIBUTIONS ARE INVESTED IN URBAN IMPROVEMENTS WITH DISTRIBUTIVE CHARACTER:

THE SOCIAL FUNCTION OF PROPERTY

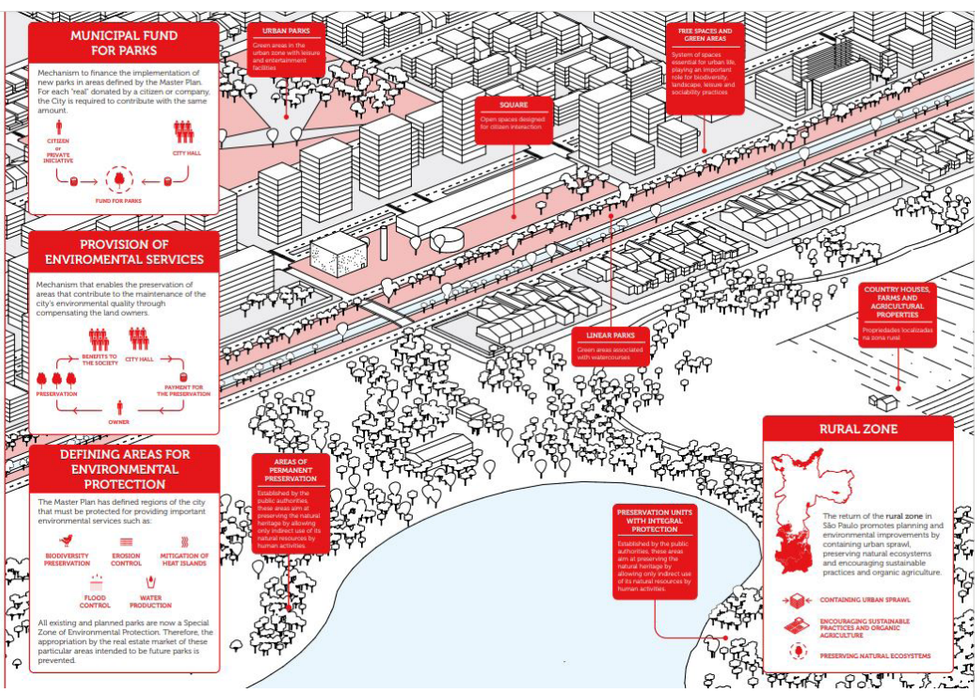


TO INCORPORATE AN ENVIRONMENTAL AGENDA IN THE DEVELOPMENT OF THE CITY

The environmental dimension plays a fundamental role in the structuring and territorial ordering of the Master Plan, and it is a transversal topic to the systems and interdepartmental policies of the city. The Master Plan has defined an area of the city as a rural zone with the effective mechanisms to foster its development and protection, linked to minimum and permanent financial sources, besides promoting the extension of environmental protection zones. It also establishes a new municipal fund created particularly to guarantee the expansion of green areas and free spaces in the city.

- 167 PROPOSED PARKS
- PRESERVING AND RECOVERING THE ENVIRONMENT AND THE LANDSCAPE: FORBIDDING NEW LAND PARCELLINGS FOR URBAN USE WITHIN THE MACRO-AREA OF URBAN RESTRICTION AND SUSTAINABLE USE
- CREATING A SUSTAINABLE RURAL DEVELOPMENT HUB
- REVIEWING THE MUNICIPAL PLAN FOR INTEGRATED ENVIRONMENTAL SANITATION: GUIDELINES FOR WATER SUPPLY SYSTEMS, SEWAGE, URBAN CLEANING, INTEGRATED SOLID WASTE MANAGEMENT AND URBAN DRAINAGE.

ESSE É O NOSSO PLANO



Brazilian Colorally ...
Which Is Also Uruguayan

by Le Corbusier

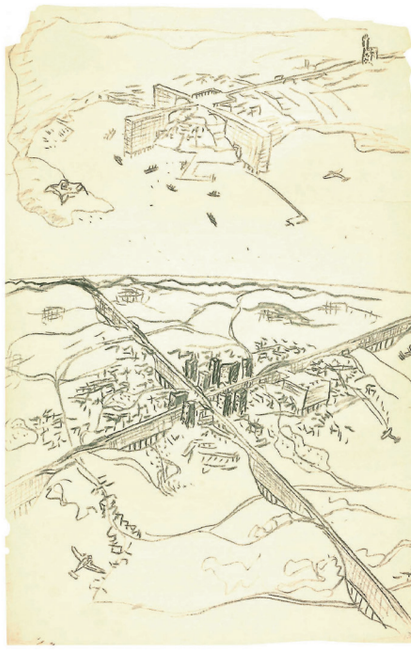
When everything is a festival,

when, after two and a half months of constraint and inhibition, everything breaks out in a festival,

when the tropical summer brings foliage out along the shores of blue waters, all around pink rocks;

when one is at Rio de Janeiro—

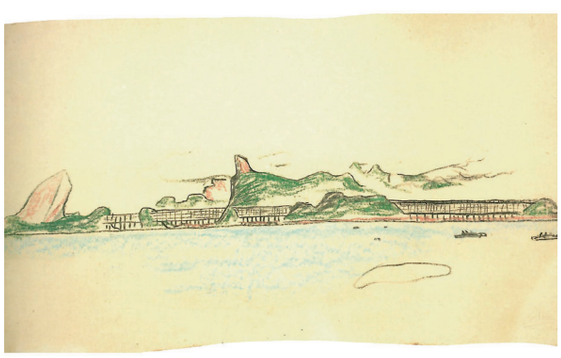
blue bays, sky and water, succeed each other far off in arcs, edged by white quays or pink beaches; where the ocean beats directly, the waves roll in white billows; where the gulf enters into the land, water splashes. Alleys of vertical palm trees, with smooth, mathematically curved trunks, run along straight streets; some claim they are 80 meters high; I am satisfied with 35. Luxurious shiny American automobiles are driven from one bay to another, from one big hotel to another, and turn around successive promontories falling into the sea. A big steamer enters solemnly and joyously into the harbor; a steamer has a solemn bearing and pace and its pure architecture is beautiful. The Brazilian navy takes out to sea, passes in front of the hotels, makes its way between pink and green islands. The palaces are in good modern Louis XVI; they are big, new, comfortable, with the personnel dressed in white and rooms overlooking the sea; this sea, seen from the room of a palace, is a geography map of the time of the Conquest, with its gulfs, its mountains, its boats; the inscriptions are the lights at night, on the cliffs. A steamer, all lights on, sails away; the lights of a steamer are intensely joyful, a solemn joyfulness always: there are so many different thoughts on board a steamer leaving, in the heads of the thousand or two thousand inhabitants of a steamer coming or going. The streets of the city continue toward the interior, in the estuaries of the lowlands between the mountains falling from the high plateaus; the high plateaus are like the back of a hand fully opened crashing onto the seashore; the mountains coming down are the fingers of the hand; they touch the sea, between the fingers of the mountains there are estuaries of land, and the city is in these; a gay, charming, right-angled Portuguese city; on the seashore the homes of the rich are Italian with many balusters and in imitation stone, frightful



LE CORBUSIER. Lecture sketch of urban design for São Paulo. 1929.

and smiling, with palm trees, magnificent quays, the sea, the opening toward the ocean full of islands and promontories; the promontories rise in the sky outlining innumerable mobile aspects with a sharp nervousness—a sort of disorderly green flame above the city, always, everywhere, and which changes appearance at one's every step. The tourist is tireless in his praise, his enthusiasm is reborn at every corner; the city seems to be made for his pleasure. People wear light-colored clothes, they are hospitable; I am greeted with open arms; I am happy; I am in an auto, a motorboat, in a plane. I swim in front of my hotel; I go back to my room by elevator in a bathrobe, at 30 meters above the sea; I stroll about on foot at night; I have friends at every minute of the day, almost till sunrise; at seven in the morning, I am in the water; the night was a spectacle watching crowds in the streets meant for sailors, stupefying, containing innumerable different passions and polite complaisances, scowling or dramatic; there is not, for the tourist, as in continental cities an hour of the night when everything stops, when one goes to bed because there is really nothing more to see; the sea and the sky are always there, and it isn't dark; the beaches spread out bordered with quays and paved avenues; the harbor is full of all sorts of lights: when the steamer left the other night, more than two months ago, for Santos and Buenos Aires, Rio was no more than dark silhouettes against the night sky, sparkling, and at the edge of the phosphorescence of the water a golden line lay stretched, that of the innumerable candlesticks lit on the edge of succeeding bays. When one has climbed the *favelas* of the blacks, the very high and steep hills on which they have hung up their wood and wattle houses painted in bright colors, as mussels are attached to the rocks of the harbor—the blacks are clean and magnificently built, the women are dressed in white calico always freshly washed; there are neither streets nor alleys, it is too steep, but paths that are torrents as well as sewers; scenes of street life take place there of such great dignity that a school of genre painting would be very successful in Rio; the black has his house almost always on the edge of the cliff, raised on pilotis in front, the door is at the back, toward the hillside; from up in the *favelas* one always has a view of the sea, the harbors, the ports, the islands, the ocean, the mountains, the estuaries; the black sees all that; the wind reigns, useful in the tropics, there is pride in the eye of the black who sees all that; the eye of the man who sees wide horizons is prouder, wide horizons confer dignity; that is the thought of a planner—

when one has gone up in a plane for observation and glided like a bird over all the bays, has turned around all the peaks, when one has entered the intimacy of a city, when one has torn away in a single glance of the



Source:
Brazilian Colorally...which is also Uruguayan | Le Corbusier | 1929

gliding bird all the secrets that it hid so easily from the poor terrestrial on his two feet, one has seen everything, understood everything; one has turned and returned many times; from time to time the pilot—an Englishman—punched my head from behind: to the right there were steep rocks 50 meters under the plane, and I, just then, was looking left toward the sea;

when, by plane, everything has become clear, and you have learned this topography, this body so hilly and so complicated; when, having conquered difficulties, you have been seized with enthusiasm, you have felt ideas being born, you have entered into the body and the heart of the city, you have understood part of its destiny;

when, then, everything is festival and spectacle, all is joy in you, everything contracts itself to retain the newborn idea, everything leads to the joy of creation;

when you are planner and architect, with a heart sensitive to natural splendors, and a mind avid to learn the future of a city, and a man of action by temperament and by the habits of a whole life:

then, at Rio de Janeiro, a city radiant in its universally proclaimed beauty that seems to defy all human participation, a violent desire comes to you, crazy perhaps, to try a human enterprise here too, the desire to play a match for two, a match of the "affirmation of mankind" against or with the "presence of nature."

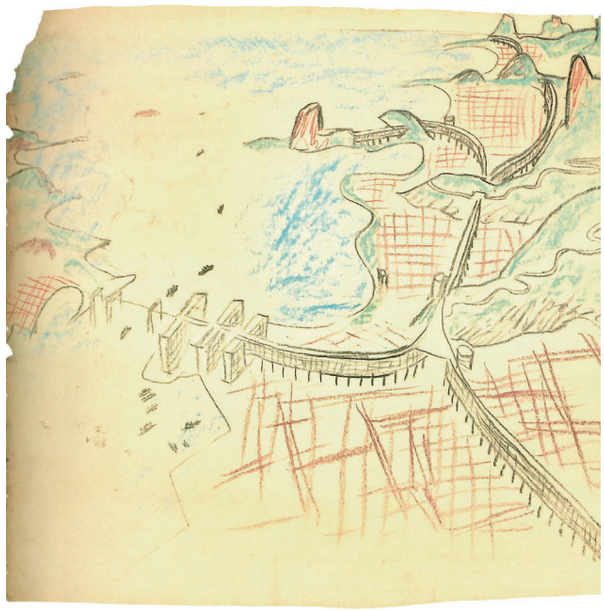
Oh, enthusiasm, you will always finally tear away the quietude and rest of those who suffer your burns!

I swore not to open my mouth at Rio. And now I feel an invincible need to speak. I had excluded Rio from my architectural mission in South America, because my colleague Agache of Paris is at the moment working on plans for the development of the city and one should never come disturb anyone in his work.

But the architects of Rio came to dislodge me from Buenos Aires. And, when I arrived at São Paulo, disinterested managers obliged me to come to talk in Rio. So I agreed to talk about my ideas on architecture and the master plan of Paris.

But when everything is on holiday in Rio, when everything is so sublime and so magnificent, when one has taken a long flight over the city like a bird gliding, ideas attack you.

Ideas attack you when, for three months, one has been under pressure, when one has descended into the depths of architecture and planning, when one is on the way to deductions, when everywhere one envisages, one feels, one sees consequences.



LE CORBUSIER. Lecture arial sketch view of Rio with a building on piloti supporting roads and transversal buildings over the port. 1929.

In the plane I had my sketchbook, as everything became clear to me I sketched. I expressed the ideas of modern planning. And as I was too bursting with enthusiasm, I mentioned them to friends, I explained my sketches made on the plane, and here I am; I am going to talk to you about Rio.

I shall talk to you about Rio as a dilettante, from a taste for invention, by an epicurism of theory.

* * *

In the office of the Prefect of São Paulo, I examine the wall plan of the town with curiosity, the significant meanders. Here is what is relevant: curving streets going under others built on viaducts. "Do you," I say to the Prefect, "have a traffic problem?"

São Paulo is built on the high plateau of Brazil at an altitude of 800 meters, hills against hills; valleys and valleys between the hills; houses on the hills and in the valleys.

Suddenly, in a few years, São Paulo develops dizzily, and almost in one day the diameter of the city extends to 45 kilometers.

At its geographical center—as usual—one can no longer circulate. Why? Because—as usual—offices have invaded the dwellings, because houses have been demolished to raise buildings, even a skyscraper.

But, as far as one can see, São Paulo extends onto hillocks. The surveyor as he has to attack hillocks, draws curving streets, viaducts, and a more and more complicated network of wormlike viscera.

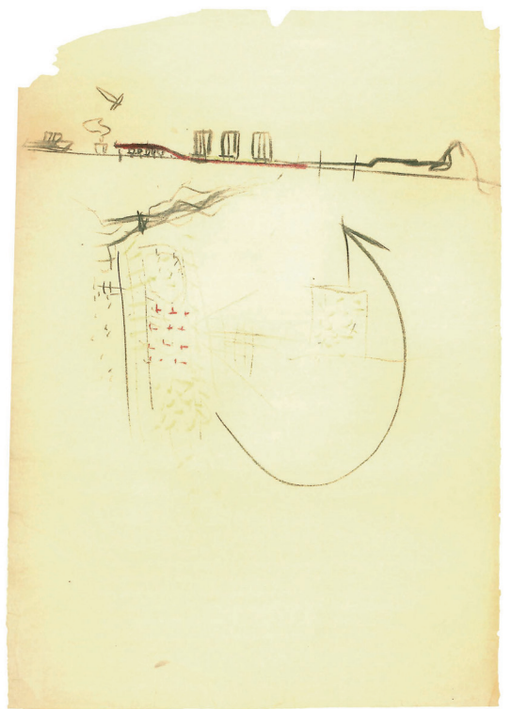
Landing fresh in São Paulo and seeing on the Prefect's wall this image of confusing streets, passing sometimes one over the other, understanding the enormous diameter of the city, I couldn't help saying: "You have a crisis of circulation, you can't service a diameter of 45 kilometers by making spaghetti in this labyrinth."

I had asked the pilot: "Fly in the direction of the center of São Paulo, first low on the ground; I want to see the outline of the city, where it rises where it stacks up its floors as the result of the irresistible push of business." Toward the center of the region, we saw the city rise gently, then in the exact center, violently.

The beginning of growth. A characteristic criterion; an indisputable diagnostic of the disease of city centers.

Then, by auto, we made experiments: for instance that of the considerable time needed to go from one point to another: valleys, contours, slopes etc. Then, from the countryside, we were well able to understand this general topography of hillocks and hollows, and the inadequacy of a network of streets that try uselessly to go straight.

Here is what I proposed to my friends of São Paulo:



LE CORBUSIER. Lecture arial sketch urban design for Rio (plan and elevation). 1929.

There are distant origins for these roads that join in knots in the city: Santos, Rio de Janeiro, etc. The urban diameter is extraordinarily extended: 45 kilometers. You build expressways; at the moment, as they stay glued to the ground, they suffer its constraints.

If one did this: draw a horizontal of 45 kilometers from hill to hill, from summit to summit, then a second similar one at approximately right angles, to service the other directions of the compass. These straight horizontals are the expressways coming into the city, in reality crossing it. You won't fly over the city with your autos, but you will drive over it. Do not build expensive arches to hold up your viaducts, but carry your viaducts on reinforced concrete structures that will make up offices in the center of the city and homes in the outskirts. The volume of these offices and dwellings will be enormous, *acquired freely,* it is therefore a magnificent valorization. A precise project, an edict. An operation already described.

Like lines, automobiles will cross the too-spread-out city. From the upper level of the expressways, they will go down to the streets. The valley bottoms will not be built on, but left free for sports and for local parking. You will plant palm trees in them sheltered from the wind. Besides, you have already created the beginning of parks for trees and for autos in the center of town.

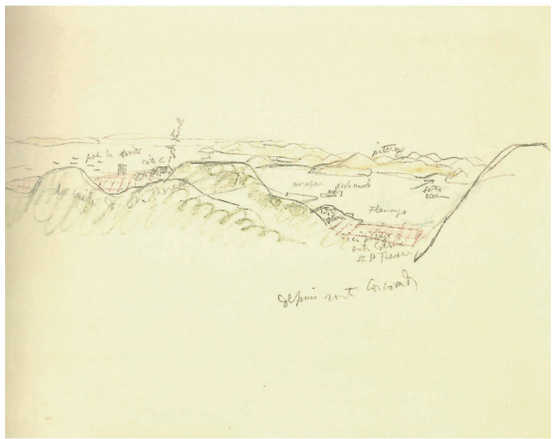
To overcome the curves of the hilly plateau of São Paulo, one can build *horizontal* expressways carried on "earthscrapers."

What a magnificent aspect the site would take on! Bigger than the aqueduct of Segovia, some gigantic Pont du Gard! Poetry would be possible there. Is there anything more elegant than the pure line of a viaduct in an undulating site and more varied than its substructures sinking into the valleys to meet the ground?

* * *

From a plane, I draw an immense expressway for Rio joining at mid-height the fingers of the promontories opening onto the sea, so as to connect the city rapidly with the high hinterlands of the healthy plateaus.

One branch of this expressway can reach the Pão de Açúcar; then it unrolls in an elegant, ample, majestic curve above the bay of Vermelha, the bay of Botafogo; it touches the hill where the Gloria Beach ends, dominates this enchanting site in the background, touches the promontory of Santa Thereza, and, there, in the heart of the city at work, it opens, sending a branch to the gulf and the freight harbor to end on the roofs of the skyscrapers of the business center. The other branch goes on above that part of the city that sinks into the estuaries of land, and could continue in the direction of the road rising to São Paulo. If it were thought useful, nothing would prevent its continuing from the roofs of the business district above the gulf, on a wide but light bridge, to end in the hills of Niteroi, facing Rio.



LE CORBUSIER. Sketchbook no. 6. 1936.

At its beginnings toward the bay of Vermelha, it would go, dominating a famous site, to serve the ocean beaches of Copacabana.

You hear me saying: "to unroll above the bay," "to dominate an enchanting site," "to end on the roofs of the skyscrapers," "to pass above the city." You think, what does all this mean?

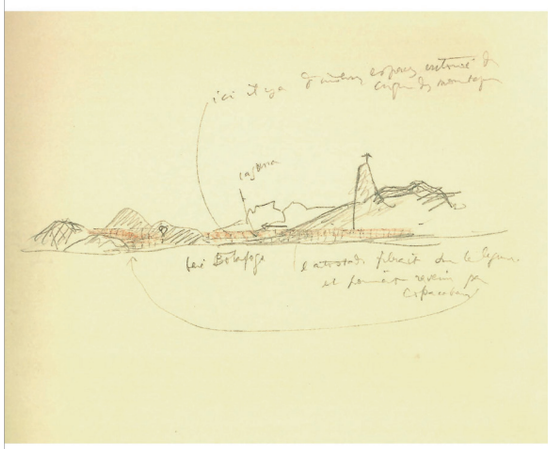
Well, the majestic highway may be at 100 meters above the ground of the city, or more; thus it approaches directly the promontories it touches. It is carried so far up not on arches, but by volumes of constructions for men, for quantities of men. And if desired, this expressway with its enormous volumes of construction can avoid *disturbing anyone.*

For nothing is easier than to build, with little disturbance, supports of reinforced concrete rising well above the roofs of existing neighborhoods. Only then, when one has escaped above the roofs, will the supports be joined together, united by massive constructions in the form of immense flat, arches like bridges. Thus, for instance, the volumes of housing would start only at 30 meters above the ground, from 30 to 100 meters, that is, ten floors of the double-height *immeuble-villas* [townhouse buildings].

I say *immeuble-villas.* For think of the quality, of the value of this ground conquered from the air, inside the city: in front of us the sea, the gulf, the most beautiful bays in the world, the ocean, this magical sight that affects us so much, with its movement of ships, its fabulous light, its joy; behind, the slopes on which rise beautiful woods, the enchanting silhouettes of the peaks. The *immeuble-villas?* They are apartments with public services, with hanging gardens, with window walls; all this raised above the ground, very high. It is almost the nest of a gliding bird. The "elevated street" at each floor, the elevators; one goes up; one is in the garage, under the expressway; the exit ramp goes off on one side, you go up with your car to the edge of the highway. There, at 100 kilometers per hour, you tear off to the offices, toward the city, out to the countryside, the forests, the high plateaus.

You can readily understand that elevator towers placed conveniently, like those of big garages, take your car down into town, below, to the usual ground and the ordinary street, or, from there, raise them to the highway.

From out at sea, I saw in my mind the ample and magnificent line of buildings, crowned horizontally by the highway striking from hill to hill and stretching hands from one bay to the next. Planes are ready to be jealous; such liberties seemed reserved only for them. The belt of constructions is on the "colonnade" (load-bearing, this one!) diving down between the roofs of the city.



LE CORBUSIER. Sketchbook no. 6. 1936.

Source:
Brazilian Colorally...which is also Uruguayan | Le Corbusier | 1929

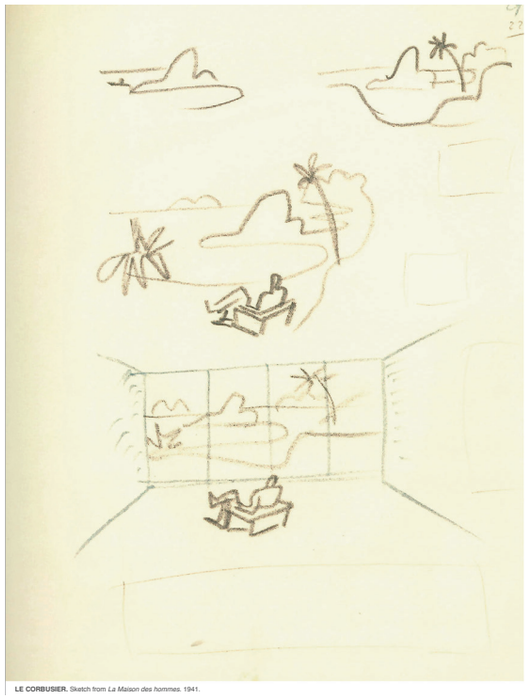
When I arrived in Rio two and a half months ago, I thought: "To plan here, as well waste my time! Everything would be absorbed by this violent and sublime landscape. Men can only give in and run tourist hotels. Rio? A tourist resort!" And at Buenos Aires, facing the total aridity, the absence of everything, this nothing making a void, an enormous space, able to stop, it would seem, only at the Cordillera of the Andes, "here," I thought, "is something to inspire a man to work, to sublimate conceptions, to exalt his courage, to provoke creative acts, to awake his pride, to give birth to a civic sense. On this void, to try to build the city of the twentieth century! And too bad for Rio!"

But at sea off Rio, I took my sketchbook up again; I drew the mountains, and between the mountains the future highway and the big architectural beltline carrying it; and your peaks, your Pão de Açúcar, your Corcovado, your Gávea, your Gigante Tendido, were much improved by that faultless horizontal. The steamers that passed, magnificent and moving constructions of modern times, suspended in the space above the city, found a response, an echo, a rejoinder there. The whole site began to speak, on the water, on earth, in the air; it spoke of architecture. This discourse was a poem of human geometry and of immense natural fantasy. The eye saw something, two things: nature and the product of the work of men. The city announced itself by the only line that can harmonize with the vehement caprice of the mountains: the horizontal.

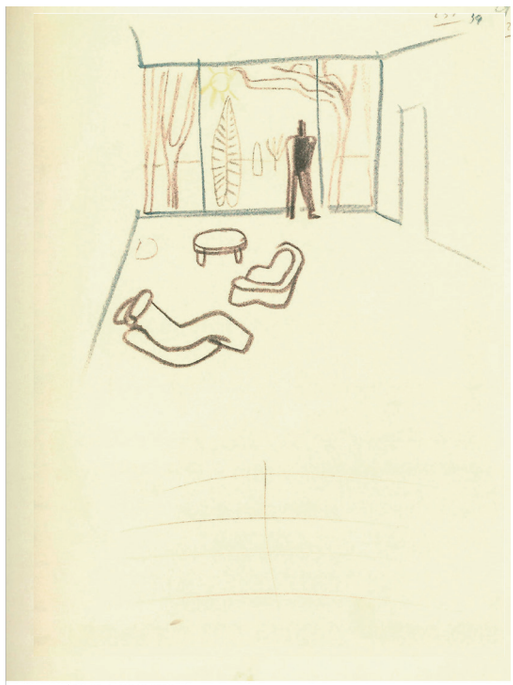
Ladies and gentlemen, this year my attentive wanderings in Moscow with its steppes, at the pampa and in Buenos Aires, in the rain forest and in Rio, have deeply rooted me in the soil of architecture. Architecture acts by intellectual construction. It is the mobility of the mind that leads to the far horizons of great solutions. When the solutions are great and when nature comes to join them happily, or better still, when nature integrates itself in them, it is then that one approaches *unity*. And I believe that unity is that stage to which the unceasing and penetrating work of mind leads.

In a few months, another voyage will take me to Manhattan and the USA. I am afraid to face that field of hard labor, the land of selection in the violence of business, the hallucinating sites of out-and-out production. At minus 30°C in Moscow, dramatically interesting things are being set up; the USA is a Hercules, whose heart, it seems to me, is still timid and hesitant. We in Paris are drawers of essence, the creators of racing motors, the fanatics of pure equilibrium. You in South America are in a country both old and young; you are young nations and your race is old. Your destiny is to act now. Will you act under the despotic dark sign of hard labor? No, I hope you will act as Latins who know how to order, to regulate, to rule, to estimate, to measure, to judge, and to smile.

Written in Paris and dated 27 January 1930, this text records Le Corbusier's impressions of Brazil, in particular of Rio de Janeiro, following his first trip to South America. The trip had an immediate impact on his thinking, encouraging him to refocus his activities and to develop a more sensitive, lyrical type of urban design.



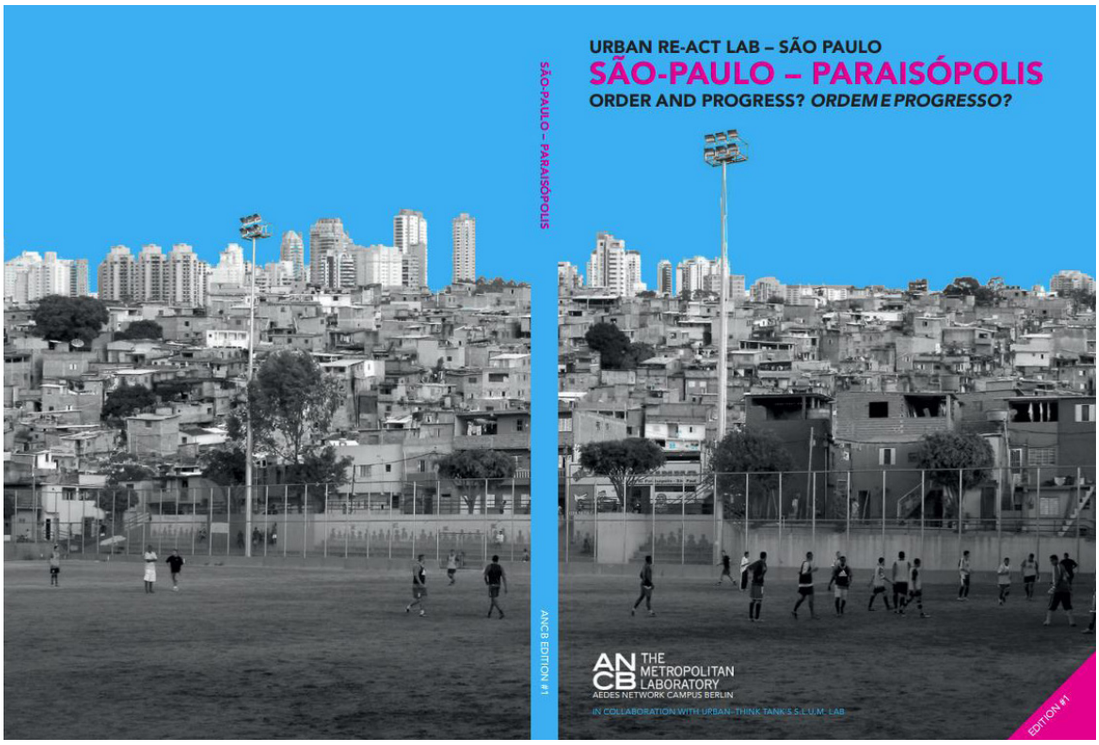
LE CORBUSIER. Sketch from *La Maison des hommes*. 1941.



LE CORBUSIER. Sketch from *La Maison des hommes*. 1941.

São Paulo - Paraisópolis
Order and Progress?
Ordem e Progresso?

by Urban Re-Act Lab - São Paulo
in colloboration with Urban-Think Tank's S.L.U.M. Lab



PARAISÓPOLIS, ORDER AND PROGRESS

Alfredo Brillembourg & Hubert Klumpner, Directors Urban-Think Tank, Caracas, Zurich

The real potential of urban design to serve as a tool for policymaking, governance, and formation of a social-political agenda, cannot be underestimated. For instance, the fact that slums still escape the regulatory framework of rules and regulations must be used in favor of an "innovation offensive" for urban prototyping, providing slum zones with the spotlight of what urban development can achieve today. The Re-act Lab design studio set out to address the challenges of everyday life for people living in a lacking environment. Ultimately, the design studio questioned the limitations of architecture and urban planning by extending the role of design as a liberating force for transformation.

In this design studio, Paraisópolis – the second largest informal settlement in São Paulo – served as the test site for the relationship between existing formal and informal urban realties in cities of the southern hemisphere. Participants searched for potential sites within Paraisópolis that contain the capacity for city renewal, and they used Berlin as a comparative example, based on its well-structured public transport network and its many case studies of integrated housing and micro infrastructures.

The design studio was structured in three modules: transportation infrastructure, housing, and micro infrastructures. In a series of public lectures and discussions, the design studio introduced São Paulo's metropolitan area: by revealing the contrasting morphology and urban fabric produced over time; by addressing the role of everyday life in the experience of urban space; by questioning the possibilities created for architecture and urban planning when housing basic municipal services (key structures in improving quality of urban life); and by highlighting the need to develop partnerships between the city planning authorities and urban pioneers – all in order to build livable cities at the beginning of the 21st century.

In Brazil, urban development is rapid, yet not necessarily leading to order and progress as the text on the Brazilian flag suggests. Generally, chaos and setbacks in one part of the city accompany the rapidly developing success of another area in town. The reality in our cities is challenging our traditional logic regarding the growth of contemporary cities. São Paulo is leapfrogging over traditional and linear development steps at an unprecedented pace and scale. A good illustration of this rapid evolution is how São Paulo's population doubled six times within the last century. With 240,000 metropolitan habitants

PARAISÓPOLIS, ORDEM E PROGRESSO

O verdadeiro potencial do desenho urbano, para servir como uma ferramenta para a formulação de políticas, gestão e formação de uma agenda político-social, não pode ser subestimado. Por exemplo, o fato de que as favelas ainda escapam ao quadro normativo de regulamentos e regras deve ser usado em favor de uma estratégia "ofensiva de inovação" para o desenvolvimento de protótipos urbanos, proporcionando a essas áreas oportunidades daquilo que o desenvolvimento urbano pode conseguir nos dias de hoje. O ateliê de projetos Re-act Lab decidiu enfrentar os desafios da vida cotidiana das pessoas que vivem em um ambiente carente. Por fim, o estúdio questionou as limitações da Arquitetura e do Urbanismo, estendendo o papel do projeto como uma força libertadora para a transformação.

Neste ateliê de projetos, Paraisópolis - o segundo maior assentamento informal em São Paulo - serviu como test site (estudo de caso) para a relação entre as realidades urbanas formais e informais existentes nas cidades do hemisfério sul. Os participantes procuraram por locais potenciais dentro de Paraisópolis que continham a capacidade de renovação da cidade, e eles usaram Berlim como exemplo comparativo, com base em sua rede de transportes públicos bem estruturada e os seus muitos estudos de caso de habitação integrada e de microinfraestruturas.

O ateliê foi estruturado em três módulos: infraestrutura de transporte, habitação e microinfraestruturas. Em uma série de palestras e discussões públicas, o ateliê apresentou a área metropolitana de São Paulo: revelando a morfologia contrastante e o tecido urbano produzido ao longo do tempo; abordando o papel da vida cotidiana na experiência do espaço urbano; questionando as possibilidades criadas para Arquitetura e Urbanismo quando abrigarem serviços municipais básicos (estruturas-chave na melhoria da qualidade de vida urbana); e destacando a necessidade de se desenvolver parcerias entre as autoridades municipais de planejamento e os urbanistas de vanguarda, a fim de construir cidades habitáveis no início do século 21.

No Brasil, o desenvolvimento urbano é rápido, mas não leva, necessariamente, à ordem e ao progresso, como o texto sobre a bandeira brasileira sugere. Geralmente, o caos e os contratempos em uma parte da cidade acompanham o sucesso do desenvolvimento rápido de uma outra área urbana. A realidade em nossas cidades está desafiando nossa lógica tradicional sobre o crescimento das cidades contemporâneas. São Paulo está ultrapassando os passos de desenvolvimento tradicionais e lineares em um ritmo e escala sem precedentes. Um bom exemplo desta evolução rápida é a forma como a população dobrou seis vezes ao longo do século passado. Com 240.000 habitantes

Source:
São Paulo - Paraisópolis: Order and Progress? Ordem e Progresso? | Urban Re-Act Lab - São Paulo | Urban-Think Tank's S.L.U.M. Lab | 2013

6 An aerial view of Paraisópolis, partially encompassed by Morumbi, one of the wealthiest neighborhoods in São Paulo.

Vista aérea de Paraisópolis, ao lado do Morumbi, um dos bairros mais ricos da cidade de São Paulo 7

28

29

in 1900, the population of the metropolitan region rose to 19.7 million in 2010[1]. And with an urban footprint of over 1,500 square kilometers, São Paulo is the largest city in South America. Major infrastructural projects from electric power dams to train lines provided the foundation for over a century of growth. However, in order to cope with the results of this relentless expansion, the city must conceive of innovative design solutions. And the innovation must be inclusive, touching the lives of about 381,000 families in the 1616 registered favelas. The city of the 21st century is being built inside and on top of slums. They are a crucial and defining component of the territorial and social resources that drive development. The favelas' illicit status makes them vulnerable and obliges us to respond with determination and creativity. They compel us to distribute resources and to foster democratic principles in a novel urban ecology for São Paulo.

Paraisópolis is the second largest favela in the city of São Paulo, counting 55,590 inhabitants and 20,832 homes[2]. A series of recent interventions following the Plano Urbanístico Paraisópolis (2010-2025)[3] makes this a pilot project for urban upgrading. As a planning initiative it is structured as a collaborative network of civic organizations working on various social project scales, connecting top-down and bottom-up strategies [4]. But Paraisópolis is of course much more than that, proposing alternative governance and policy-making methods as part of the city's Slum Upgrading Program, the largest of its kind implemented today in Brazil. Currently, this program focuses on new instruments in planning and design, such as consecutive construction of a systemic provision of land, infrastructure as energy and resource (white water, sewers, electricity, trash collection, transportation and illumination), green and open areas, social housing, and a clear commitment to developing contemporary building typologies and programs out of the local social realities. Many of these instruments will be implemented and tested in the soon-to-be-built Centro de Acçao Social por Música, located on the site of a former landslide in Grotão, Paraisópolis.

[1] www.ibge.gov.br/home/presidencia/noticias/noticia_visualiza.php?id_noticia=1766&id_pagina=1 [2] The largest favela in the city of São Paulo is Heliópolis, with approx. 100,000 inhabitants and a surface area of 119 km². [3] "Paraisópolis – Urban Development Plan 2010-2025." Architects Ciro Pirondi, Ruben Otero, Anália Amorim. Coordinated by SEHAB under Elisabete França and Maria Teresa Diniz. 2009. www.cidadeinformal.prefeitura.sp.gov.br/?page_id=542 [4] Elisabete França, Marisa Barda. Catalog, "A Cidade Informal no Século XXI." 2010. p. 40. www.habisp.inf.br

metropolitanos em 1900, a população subiu para 19,7 milhões em 2010[1]. E com área de mais de 1.500 quilômetros quadrados, São Paulo é a maior cidade da América do Sul.

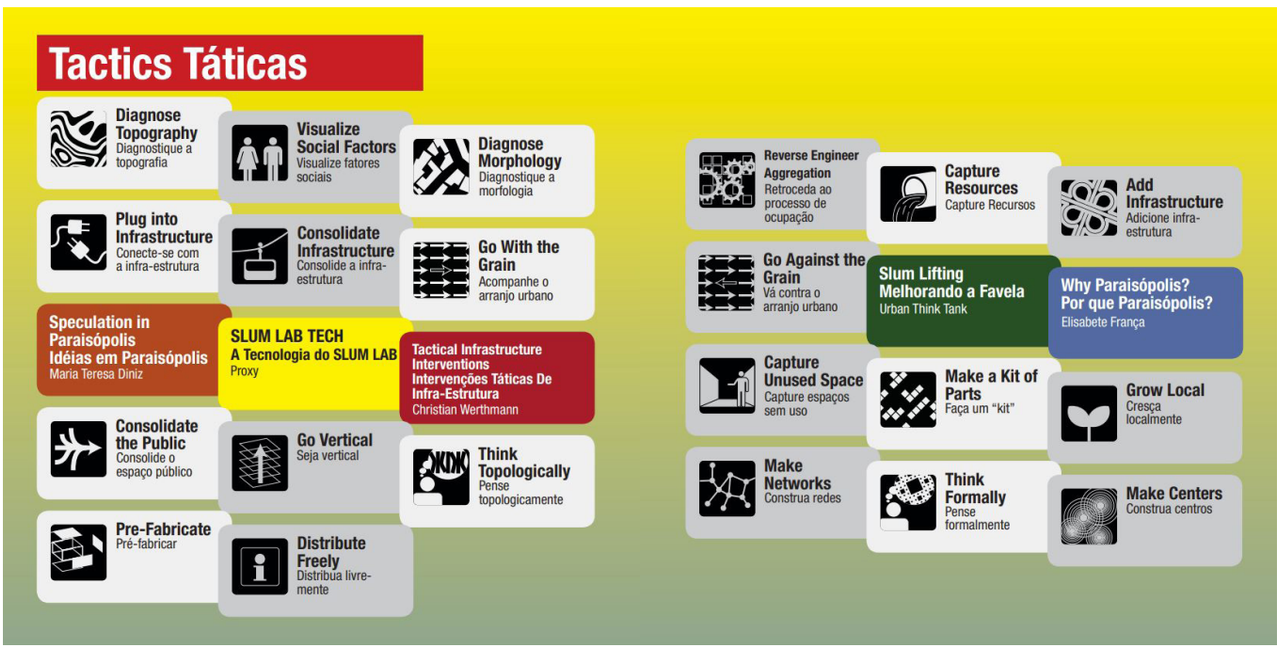
Grandes projetos de infraestrutura, desde barragens de energia elétrica até linhas de trem foram os alicerces para mais de um século de crescimento. No entanto, a fim de lidar com os resultados dessa expansão implacável, a cidade deve conceber soluções inovadoras de projeto. E a inovação deve ser inclusiva, tocar as vidas de cerca de 381.000 famílias nas 1.616 favelas cadastradas. A cidade do século 21 está sendo construída dentro e em cima das favelas. É um componente crucial e definidor dos recursos territoriais e sociais que promove o desenvolvimento. Os status ilegal das favelas as tornam vulneráveis e nos obriga a responder com determinação e criatividade. Elas obrigam-nos a distribuir recursos e promover os princípios democráticos em uma nova ecologia urbana para São Paulo.

Paraisópolis é considerada a segunda maior favela da cidade de São Paulo, com 55.590 habitantes e 20.832 imóveis[2]. Uma série de recentes intervenções na sequência do Plano Urbanístico de Paraisópolis (2010-2025)[3] faz deste um projeto piloto de requalificação urbana. Como uma iniciativa de planejamento é estruturada como uma rede colaborativa de organizações civis que trabalham em várias escalas de projetos sociais, conectando estratégias de cima para baixo e de baixo para cima.[4]. Paraisópolis também propõe alternativa de gestão e métodos de se fazer política, como parte do Programa de Urbanização de Favelas da cidade, o maior de seu tipo implementado hoje no Brasil. Atualmente, esse programa enfoca novos instrumentos de planejamento e projeto, como a construção consecutiva da disponibilização sistemática de terrenos, infraestrutura como energia e recursos (água potável, esgotos, energia elétrica, coleta de lixo, transporte e iluminação), áreas verdes e abertas, habitação social, e um compromisso claro com o desenvolvimento de tipologias de edifícios contemporâneos e programas advindos das realidades sociais locais. Muitos desses instrumentos serão implementados e testados na Escola de Música que está para ser construída, localizada em uma área de risco geotécnico em recuperação no Grotão, Paraisópolis.

[1] www.ibge.gov.br/home/presidencia/noticias/noticia_visualiza.php?id_noticia=1766&id_pagina=1 [2] A maior favela da cidade de São Paulo é Heliópolis, com aprox. 100.000 habitantes e uma área de superfície de 119 km². [3] Ciro Pirondi, Ruben Otero, Anália Amorim, 2009; coordenado pela SEHAB sob direção de Elisabete França e Maria Teresa Diniz. [4] Elisabete França, Marisa Barda. Catálogo, A Cidade Informal no Século XXI. 2010. P. 40. www.habisp.inf.br

Informal Toolbox
SLUM LAB Paraisópolis

by Alfredo Brillembourge & Hubert Klumpner
Mark Collins & Toru Hasegawa
Elisabete França & Maria Teresa Diniz

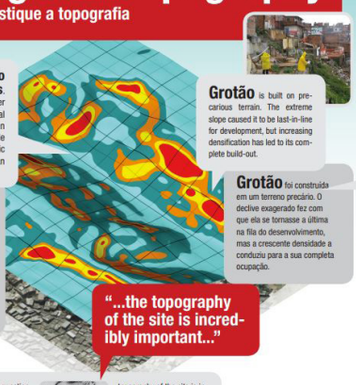


Source:
Informal Toolbox | SLUM LAB Paraisópolis | Alfredo Brillembourge & Hubert Klumpner, Mark Collins & Toru Hasegawa, Elisabete França & Maria Teresa Diniz | 2013

Tactic #1 Tática nº 1

Diagnose Topography

Diagnostique a topografia



Understanding slope is crucial to designing in informal settlements. As the favela is built in areas that challenge other development, dwellers are encouraged to use spatial ingenuity to overcome difficulties, often resulting in a slow encroachment towards generally un-buildable conditions. The consequences are both catastrophic and unpredictable - entire complexes of buildings can be lost in a rain storm.

Entender a encosta é crucial para se projetar em assentamentos informais. Como a favela é construída em áreas que desafiam outros desenvolvimentos, os moradores são encorajados a usar a inventividade espacial para vencer as dificuldades, com freqüência, resultando em lentas invasões em condições inapropriadas: as mais extremas encostas e solos de baixa coesão. As conseqüências são catastróficas e imprevisíveis. Complexos inteiros de construções podem ser perdidos em uma tempestade.

Grotão is built on precarious terrain. The extreme slope caused it to be last-in-line for development, but increasing densification has led to its complete build-out.

Grotão foi construída em um terreno precário. O declive exagerado fez com que ela se tornasse a última na fila do desenvolvimento, mas a crescente densidade a conduziu para a sua completa ocupação.

"...the topography of the site is incredibly important..."

Commentary

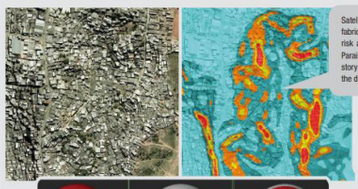
Kenneth Frampton discusses the ground at a SLUM LAB presentation.

The question of building the ground is important, when building on this kind of site. If the site were built it would leave open the question of units. Units look like prefab factory-made things that are brought and put on legs in order to resolve the discrepancies between the object, or the pre-fab element and the highly topographic nature of the ground. The topography of the site is incredibly important, and that is something architecture should be engaged with.

Heat Mapping

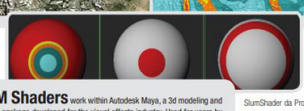
This satellite map and the corresponding slope-intensity diagram illustrate the dependence of the urban fabric on the terrain. Features such as depressions, peaks and ridge lines are as evident in the slope map as they are in the fabric itself. What is not apparent in the satellite image is the identification of large tracts of geotechnical 'risk areas', parts of the settlement that are built on intense slopes and in constant risk of collapse.

Esse mapa satélite e seu correspondente mapa de declividade ilustram a dependência do tecido urbano do terreno. Características como depressões, picos e cumeeiras são tão evidentes no mapa de declividade como no próprio tecido. O que não está aparente na imagem do satélite é a identificação dos grandes trechos de áreas de risco geotécnico, partes do assentamento construídas em intensas encostas e em constante risco de colapso.



Satellite photos show a continuous fabric of buildings obstructing this risk area. On the SLUM LAB's visit to Paraisópolis, a photo shows a different story: the hill had given way causing the destruction of several dwellings.

As fotos do satélite mostram uma construção contínua obstruindo a área de risco. Em uma visita do SLUM LAB a Paraisópolis, a fotografia retrata uma história diferente: a encosta cedeu, destruindo várias casas.



SLUM Shaders work within Autodesk Maya, a 3d modeling and animation package developed for the visual effects industry. Used for years by architects, the SlumLab uses its ability to represent tangency (slope) through coloration. Producing a gradient 'heat map' allows us to understand the size and location of 'risk areas' where landslides are likely to occur.

SlumShader da Proxy trabalha em conjunto com o Autodesk Maya, um programa de animação e modelagem em 3d desenvolvido para a indústria de efeitos especiais. Usado há anos por arquitetos, o SlumLab utiliza sua habilidade para representar a tangência da superfície (encosta) através das cores. Produzir um mapa de calor gradiente nos permite entender o tamanho e a localização das áreas de risco, onde os deslizamentos de terra estão mais propensos a ocorrer.

Photography

The problems of topography are so varied that the elaboration of a single model of intervention does not apply. Each engineered solution must be tailored to avoid risk.

Good slum renewal policies require accurate information on site; modern information technologies are vital for decision making processes.

SLUM LIFTING

Urban Think Tank discusses their motivations for founding the SLUM LAB and the work it has undertaken.

"If humanity is to have a recognizable future, it cannot be by prolonging the past or the present ... Social distribution and not growth would dominate the politics of the new millennium." – Eric Hobsbawm, The Age of Extremes

The Sustainable Living Urban Model "toolbox" aims at suggesting a working method for supportive, new architecture with the capacity to empower people at the crossroads of colliding realities - all within the global south's emerging cities.

The project reflects the evolution of our practice over the last years, since being invited to Columbia University's GSAPP in 2007. Through our collaboration with Elisabete Franca, leader of Sehab (São Paulo's social housing agency), we continue our vitally important agenda: to focus on the informal developments of the Latin American city and to shift the focus of contemporary form-driven architecture towards reducing the gap between buildings' designs and their social impact. In this sense, moving the Latin American city and, in particular, its inequality from the margin to the center of a worldwide discussion of architecture, beyond "globalism," is a challenge. This thinking emphasizes the dematerialization of architecture's artistic objective - monumentality defeating - to instead compose buildings out of an industrially produced, interchangeable "kit of parts" – a viable, quick-fix urban architecture that could function as a life support system for developing, perpetually changing city cultures in urgent need of solutions.

Columbia University in New York, where the LAB is located, is an ideal place for generating routes to navigate webs of neglect, instability and red tape. The school of architecture provides a platform at the geographic center of the Americas. São Paulo, the object of this research, is a third-millennium mega-city caught in a Darwinian transformation. From the two fastest growing urban typologies: the gated communities and the "favelas", to the raging street vendor economy, this evolutionary phenomenon, also recognizable outside of the global south, manifests the merging of First and Third World communities into networked global villages.

The Sehab Paraisópolis team, led by Maria Teresa Diniz together with Elisabete França, put Paraisópolis on the international map and changed the way we see Sao Paulo with its 1,500 metropolitan slum settlements. With the publication of this manual for understanding "critical urban areas," we at the SLUM LAB have come to explore the Latin American city. Moreover, today the landscape surrounding Sao Paulo has become concrete — an asphalt jungle — and transformed from a lush valley of rivers to a dense metropolis. But the ecology of this new environment again appears lost in the brush. With the expanses of uncharted territory now occupying the center, rather than the edges, of the modern city, the discourse remains peripheral.

As the Brazilian jungle became the object to be destroyed by development, so too has the city been split, cut, bridged, intersected and over-exploited. This Sehab/SLUM LAB collaboration also presents urban concepts of retrofitting, stacking, bootstrapping, consolidating, reverse engineering and intensifying as experimental and generative processes in architectural

Melhorando a favela

"Se for para a humanidade ter um futuro reconhecível, não pode ser pelo prolongamento do passado ou do presente... Distribuição social e não o crescimento dominariam a política do novo milênio." – Eric Hobsbawn, The Age of Extremes

O guia de campo do SLUM LAB (Modelo Urbano de Vida Sustentável) visa sugerir um método de trabalho para uma arquitetura nova e sustentadora, que consiga capacitar as pessoas no cruzamento de realidades conflitantes nas cidades emergentes do sul do planeta.

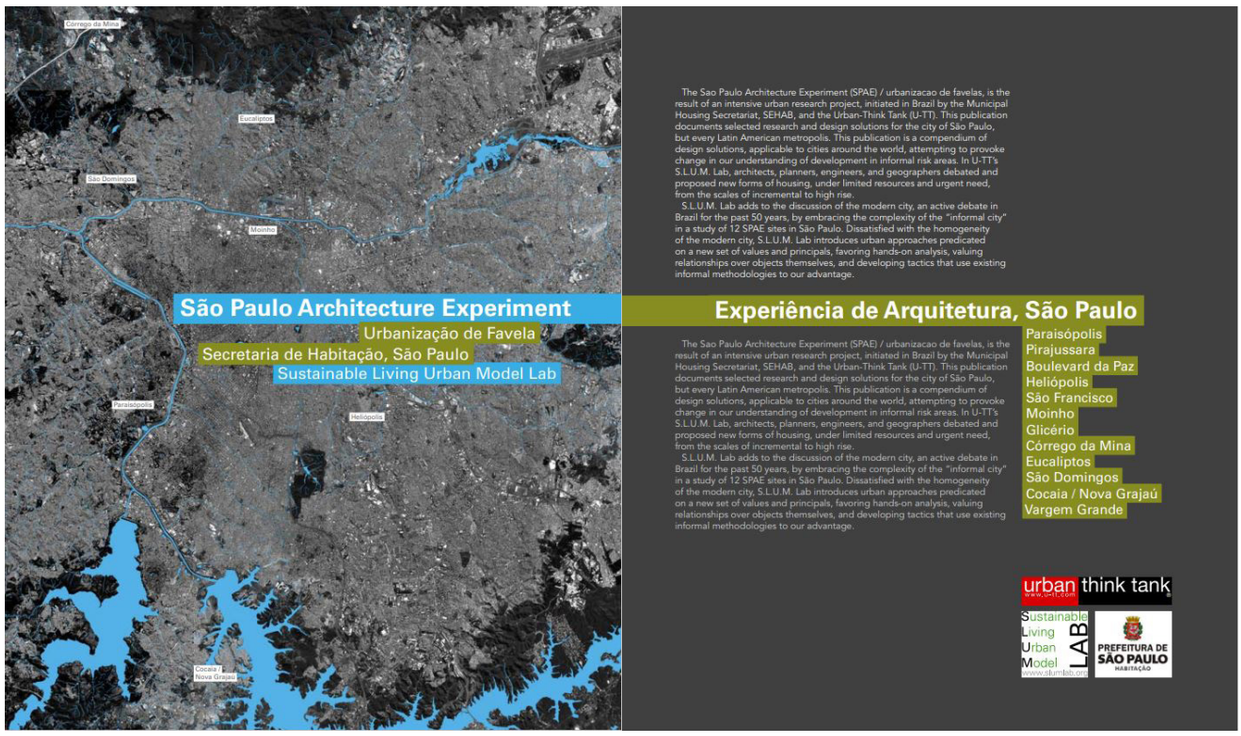
O projeto reflete a evolução de nossas práticas nos últimos anos, desde o convite para GSAPP de 2007 da Universidade de Columbia. Com nossa parceria com Elisabete França, Superintendente da Habi, Secretaria Municipal de Habitação de São Paulo, continuamos nossos trabalhos vitalmente importantes: focar nos assentamentos informais das cidades latino-americanas, substituir o foco do contemporâneo, arquitetura orientada pela forma, rumo ao seu renascimento, diminuindo a lacuna entre os projetos das edificações e seus impactos sociais. Nesse sentido, mover a cidade latino-americana e, em particular, sua desigualdade desde a margem até o centro de uma discussão mundial de arquitetura, além da "globalização", é um desafio. Em suma, tal pensamento enfatiza a desmaterialização do objetivo artístico da arquitetura, monumentalmente derrotado, para compor construções a partir de uma produção industrial, um "kit" permutável – uma arquitetura urbana viável, rápida de se solucionar, que poderia funcionar como um sistema de suporte à vida em desenvolvimento, mudando perpetuamente a cultura das cidades necessidade urgente disponibilidade de soluções.

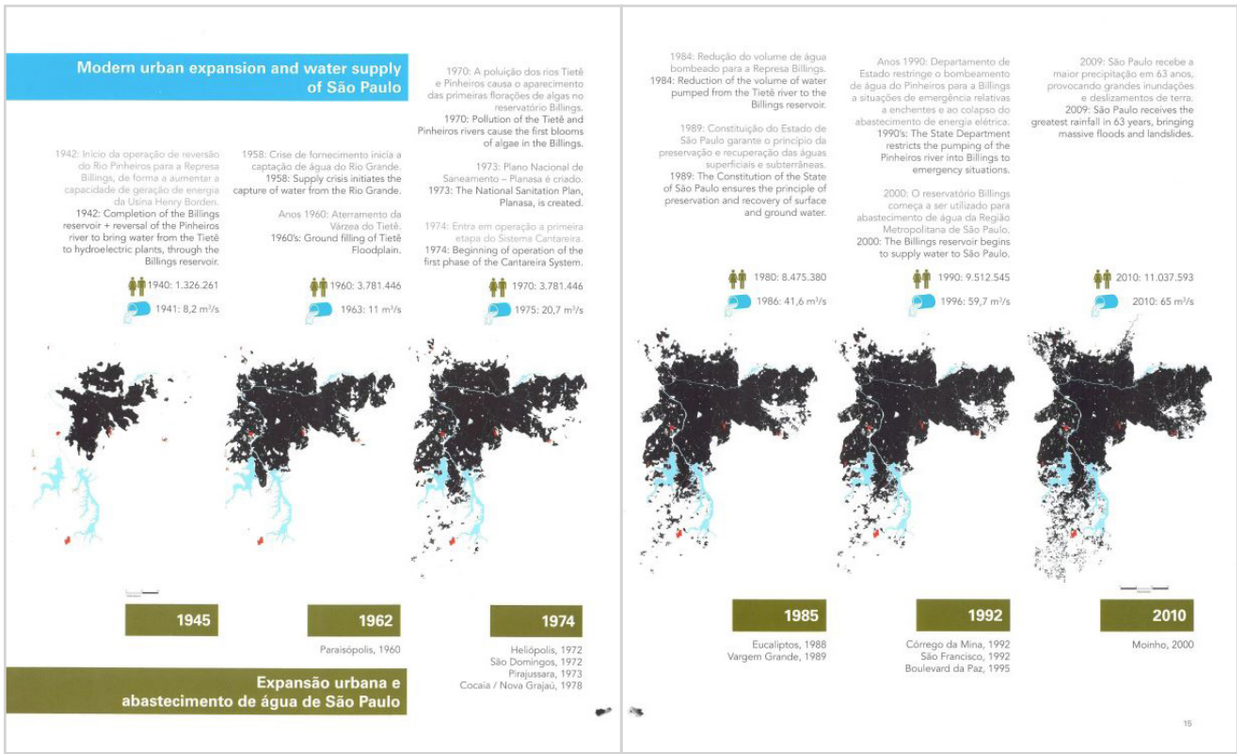
A Universidade de Columbia em Nova Iorque, onde o laboratório está situado, é o local ideal para produzir rotas para gerenciar redes de negligência, instabilidade e burocracia. A Escola de Arquitetura abastece nossa plataforma no centro geográfico das Américas. São Paulo, o objeto dessa pesquisa é uma mega cidade do terceiro milênio, em uma transformação darwiniana. Das duas mais rápidas tipologias de crescimento urbano, os condomínios murados e as favelas, até a intensa economia dos camelôs, esse fenômeno evolucionário, também reconhecido fora do hemisfério sul, manifesta a imersão das comunidades do primeiro e terceiro mundo nas vilas globais interligadas.

Pesquisando o extenso trabalho feito pela equipe da Sehab responsável por Paraisópolis, coordenada por Maria Teresa Diniz e Elisabete França que, em conjunto, colocaram Paraisópolis no mapa de discussão internacional e mudaram a maneira como nós entendíamos São Paulo, com suas 1.500 favelas metropolitanas. Com a publicação desse manual para entender as áreas críticas urbanas, nós do SLUM LAB, retornamos como pioneiros, não para a Amazônia, mas para melhor explorar as cidades da América Latina. Além disso, hoje, o cenário envolvendo São Paulo se tornou concreto – uma selva asfaltada – e transformou os lucrativos vales em densa metrópole. Mas a ecologia desse novo ambiente novamente aparece perdida entre os arbustos. Com as expansões de um território inexplorado que agora ocupa o centro da cidade moderna, ao invés de suas bordas, o discurso permanece periférico.

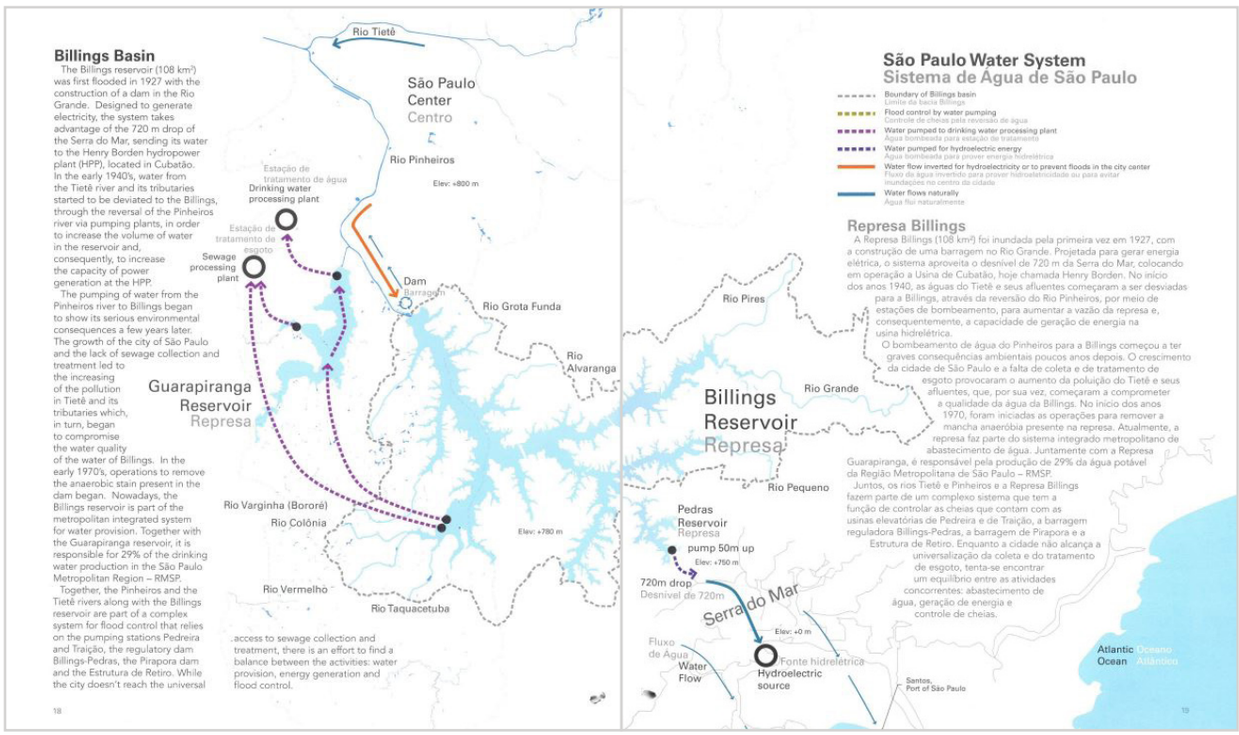
São Paulo Architecture Experiment Sustainable Living Urban Model Lab

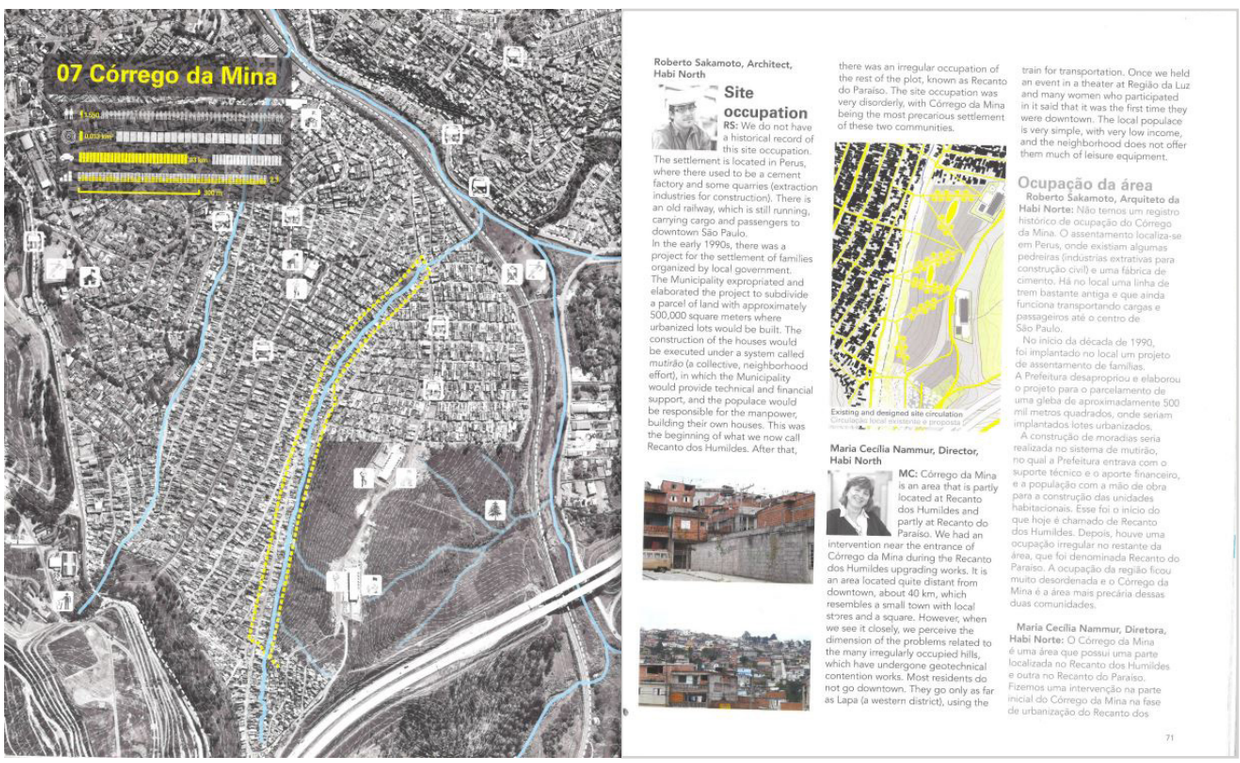
by Alfredo Brillembourge, Elisabete França, Elton Santa Fé Zacarias, Hubert Klumpner





Source:
São Paulo Architecture Experiment | Sustainable Living Urban Model Lab | Alfredo Brillembourge, Elisabete França, Elton Santa Fé Zacarias, Hubert Klumpner | 2010





What would the trees say?

by Wellington Cançado
translated into english by Lucas Gobatti

WHAT WOULD THE TREES SAY?

Text by Wellington Cançado
Translation into english by Lucas Gobatti
Drawings by the General Organisation of Bilingual Ticuna Teachers and Jussara Gomes Gruber from 'O livro das árvores - Ticuna' (The book of trees - Ticuna People)

This essay was originally published in PISEAGRAMA Magazine in 2017
(https://piseagrama.org/artigos/o-que-diriam-as-arvores/)

The forest projected reciprocally by Amerindians and non-humans and the hatred of nature in the country that leapt from the emporium of naturalism to the splendid cradle[1] of the Anthropocene in one vivid flash.

Back in 1955, when he flew over Central Brazil in the middle of his campaign for the presidency, Juscelino Kubitschek[2] would say that he had felt "the problem in all its implications. Two thirds of the national territory was still virgin to human presence. They were the demographic voids that sociologists talked about". And instead of continuing to "scratch the sands of the beaches like crabs", Brazil should extinguish its empty spaces, because "the great challenge of our history was there", he would write twenty years later in his book *'Porque construí Brasília'* (Why I built Brasília).

[1] Reference to **Brazil's national anthem**, here translated: "Eternally lying on a splendid cradle, / to the sound of sea and under the deep sky light. / You flash, Brazil, crocket of America, / illuminated by the sun of the New World" (Wikipedia).
[2] **Juscelino Kubitschek** was a prominent Brazilian politician who served as the 21st president of Brazil from 1956 to 1961 (Wikipedia).

"The irradiation of a trailblazing system" would soon be complete with the "taking possession of the territory, in conformity to the colonial tradition" of Lúcio Costa's[3] *Plano Piloto*[4]. Brasília, the Meta-Synthesis of this colossal undertaking of territorial design, would be "the vehicle and instrument of conquest, unleashing a new *bandeirante*[5] cycle".

As a graphic index of this vision of the country, and as a diagram of the fractal metastasis that was to come, the artist Mary Vieira presented the celebratory poster *brasilien baut Brasilia* at Interbau 1957 in Berlin, in which an immense green surface frames the blood-red soil with the coordinates of the mythical human intervention.

But contrary to the ethnocentric zeal of modern designers, the *'Mapa etno-histórico do Brasil e regiões adjacentes'* (Ethno-historical Map of Brazil and adjacent regions), published in 1944 by Curt Nimuendaju, already showed the surroundings of the area (pre)destined for the Federal District[6] as territory historically occupied by the Kaiapó, Xacriabá, Akroá, Akwe-Xavante, Bororo and Paresí indigenous people.

More than six decades on, the invisibility of certain humans and the myth of pristine nature continue to be present in the Brazilian imaginary. As well as the technology of highways becoming the car-centered urbanism and a scorched earth as the modus operandi of this relentless self-colonialism. Just as the devastation of what's left of the Atlantic Forest, the inexorable extinction of the Cerrado for the country's integration into the "market of futures" and the systematic destruction of the Amazon and its inhabitants as state policy continue.

[3] **Lúcio Costa** was an architect and urban planner, known for designing Brasília's plan.
[4] ***Plano piloto*** (Pilot plan) is the name of the plan created by Lúcio Costa for Brasília.
[5] The ***bandeirantes*** (lit. 'flag-carriers') were slavers, explorers, adventurers, and fortune hunters in early Colonial Brazil. They are largely responsible for Brazil's great expansion westward, far beyond the Tordesillas Line of 1494, by which Pope Alexander VI divided the new continent into a western, Castilian section, and an eastern, Portuguese section (Wikipedia).
[6] The **Distrito Federal** is the smallest Brazilian federal unit (state) where Brasília was built.

The dark, impenetrable and mysterious Amazon rainforest of Juscelino's time, the last frontier to the north and the stronghold of a pre-landscape country, is violated to the rhythm of the *Sertanejo* music[7] in an "agro-macho-naturalist" epiphany: woman-disposable, forest-object and vice versa. But not without the *Queda do Céu*[8] (falling sky) being announced.

The "desire to cut down an entire forest to take a portrait of a certain tree", a maxim of Marcel Gautherot, photographer of the ethereal modern Brazilian utopia, has become a commonplace image. But now the certain tree is increasingly the only solitary tree in the midst of pastures and soybean fields, mapped out according to the strict geometry of the global logistics regime.

Meanwhile, in the interior of the forest, nature according to the indigenous people goes against the hegemony of perspective and optical distance, and cartoons, cinema and photography are cannibalised as cosmopolitical tools to mediate relations between people and forest beings. But that's not all.

Throughout the country's history there have been many who have looked at the peculiar ways in which Brazilians relate to nature and warned of the risks of a civilisational and environmental collapse if nothing was done. As we well know, very little has been done, except for policies to accelerate the catastrophe, zero-deforestation targets for when there is nothing left to deforest, auctions of pieces of forest between land grabbers and ruralists. Or as the Kaiowá indigenous anthropologist Tonico Benites would see it with terrible lucidity: "Brazilians are still discovering Brazil".

[7] The ***Sertanejo Music*** is a music style that had its origins in the countryside of Brazil in the 1920s. Its developments as a cultural industry, thanks to the sponsorship by the agribusiness sector, committed with the plantation logic, has made it the most popular contemporary music genre in Brazil.
[8] "**The Falling Sky: Words of a Yanomami Shaman**" is a book organized by the french anthropologist Bruce Albert, being "a remarkable first-person account of the life story and cosmo-ecological thought of **Davi Kopenawa**, shaman and spokesman for the Yanomami of the Brazilian Amazon. [...] These travels [depicted in the book] constitute a shamanic critique of Western industrial society, whose endless material greed, mass violence, and ecological blindness contrast sharply with Yanomami cultural values (Amazon book description).

As early as 1821, José Bonifácio, the country's first environmental critic, pointed to the disincentive to technological progress and the lack of care for the land inherent in slavery and *latifundia* as decisive factors in environmental devastation, as José Augusto Pádua shows in his precious book *'Um sopro de destruição'* (A Breath of Destruction). And Sérgio Buarque de Holanda would reaffirm, in 'Raízes do Brasil' (Brazilian Roots), that "without the slave workforce, the abundant lands, lands to spend and ruin, not to jealously protect", plantation would be unthinkable. That agribusiness continues to demand more land and slave labour now is no coincidence.

But it would be Euclides da Cunha, prefacing Alberto Rangel's book *'Inferno Verde'* (Green Hell), back in 1907, who would precociously place Brazil in the debate on the Anthropocene: "we have been a nefarious geological agent and an element of barbaric antagonism to nature itself". For, "at a time when the miracles of engineering and industrial biology dominate, our culture has the ultimate effect of barbarising the earth".

As the 20th century progressed, the focus of the devastation turned to cities and, as the country urbanised, the distance between the natural environment and everyday life intensified. "The modern is becoming more and more our natural *habitat*," said Mário Pedrosa, for whom "in Brazil we neither surrender to nature nor dominate it". Paradoxically, this "mediocre *modus vivendi*" that Brazilian modernity was supposed to overcome turned out to be the most accurate definition of the country to which we were condemned.

Roberto Burle Marx, with his pictorial ecology, aware of the lack of a typical Brazilian garden, discovered countless species and became a vehement critic of the misunderstandings that affect the man-nature binomial, of simplified urban afforestation and at the same time of deforestation due to predatory urbanisation. In fact, Claude Lévi-Strauss realised that in Brazil, "nature has the appearance of a construction site", as he wrote in 'Tristes Trópicos' ('Tristes Tropiques' in the original French, translating literally to Sad Tropics), published in 1955. And forty six years after his stay among the

Source:
What would the trees say? | Wellington Cançado | translated into english by Lucas Gobatti | 2017

Bororo, Kadiwéu and Nambikwara people, surrounded by kilometres of buildings and towers, he would conclude that, in Brazil, "the link between man and nature has perhaps been broken".

Vilém Flusser, the philosopher how self-exiled in Brazil, would say in '*Fenomenologia do brasileiro*' (Phenomenology of the Brazilian) that Brazilians are not connected to nature, and it is on the seaside where this hypothesis is most vividly presented, where it is possible to taste Argentinian cherries, Californian grapes and Portuguese cod, but hardly any fish from the beach itself.

"It's as if apologetic grandiloquence were matched by bombastic degradation." The ornamental ideological value of nature, discussed by Ricardo Arnt and Stephan Schwartzman in their seminal book '*Um artifício Orgânico*' (An Organic Artifice), is the result of the Eurocentrism and ethnocentrism in force. Because, "in practice, the attitude of Brazilians towards the exuberant nature that distinguishes the territory oscillates between two variables: either it is a nuisance and is removed, or it is perceived as an inert inheritance".

Still on the subject of the Amazon, a synthesis of "excessive nature", the agronomist-environmentalist José Lutzemberger indignantly sentenced, on the occasion of the still very current murder of Chico Mendes[9], that it had to stop. "We are destroying the life of the planet to enrich a few people. What is happening in the Amazon is a war. A war of plunder."

———

[9] **Chico Mendes** (born December 15, 1944, Xapuri, Acre, Brazil—died December 22, 1988, Xapuri) Brazilian labour leader and conservationist who defended the interests of the ***seringueiros***, or rubber tree tappers, in the Amazonian state of Acre, calling for land reform and preservation of the Amazon Rainforest. His activism won him recognition throughout Brazil and internationally but also provoked the enmity of local ranchers, who eventually arranged his murder (Britannica).

With a little more dedication, this list would yield hundreds of pages of priceless arguments and precise diagnoses about the idiosyncratic relationship between Brazilians and nature. But more than plugging the holes in history, we need to be aware of the consequences of the ever advancing end of nature in this 21st century, not only empirically - mass extinction, extensive deforestation, planetary urbanisation and climate change - but also theoretically, as a supposedly unshakeable ontological category.

The colonial, anthropocentric and patriarchal naturalist conception (think of these historical subjects: the *bandeirantes*, the *senhor de engenho*[10], the *capitão-do-mato*[11], the *grileiro*[12], the gold digger, the cattle farmer, the "agroboy") has long excelled at emptying nature of any intentionality, agency and humanity, reiterating the instrumental and economically opportune separation between human exceptionalism and other beings.

But the "virginity" of the Amazon and the very notion of an ahistorical, edenic and wild nature, a remnant of the romantic "wilderness", the eternal storehouse of the political economy and the captivity of the extra-urban, will be challenged precisely by those subjected by evolutionary determinism to the condition of "natural man".

With their capacity to transit between species and access to mythical time, the ecstatic science of Amerindian shamans will provide the conceptual and empirical foundations

[10] ***Senhor de Engenho*** (lit. 'engine', latin) is the plantation lord in the colonial-era. *Engenho* is a Portuguese term for a sugar cane mill and the associated facilities (Wikipedia). Its infrastructure consisted of rural lands for sugar-cane production, the mill itself for refining sugar, the slave owner's residence ('Casa-grande', lit. Big house), the 'senzala', where enslaved people inhabited, and a chapel (extracted from www.multirio.rio.rj.gov).
[11] The ***capitão-do-mato*** was a slave-catcher, a person employed to track down and return escaped slaves to their enslavers (Wikipedia). Escaped slaves in Brazil formed *quilombos*, which slave catchers frequently raided, resulting in most of them becoming abandoned or destroyed. However, some of these *quilombos* still exist and are a relevant part of Brazilian culture.
[12] ***Grileiro*** is someone who practises the ***grilagem***, which is the invasion of public land for private appropriation, through deforestation and violence, with or without documentary fraud. The term comes from the description of an ancient practice of ageing forged documents in order to gain possession of a certain area of land. The forged papers were placed in a box with crickets ('*grilos*' in Portuguese) so that, over time, the action of the insects would give the documents an aged and "authentic" appearance (WWF Brasil).

for a multinaturalist world in which "all things are human". And in which what we call the "environment" will be a "society of societies", or a "cosmopolitanism", as Déborah Danowski and Eduardo Viveiros de Castro recently theorised . "But if everything is human, humanity is something else," they would soon remind us.

"A conception of the world in which there is no Nature. Because everything has been manufactured, planted and cared for by someone, everything is the product of someone's thinking and doing", the anthropologist Els Lagrou would reiterate, taking into account the cosmology of the Huni Kuin people. And in this world, beyond nature and culture, the idea of a cultivated jungle is nothing extraordinary, since the Amerindians are very aware that their cultural practices directly influence the reproduction and distribution of plants in the forest, as Philippe Descola pointed out about the Achuar of the Ecuadorian Amazon.

In his analysis of systemic anthropisation in Ka'apor ecology in Brazil, William Balée reveals a forest up to twice as rich in plant species, especially fruit trees, and animals as the uncultivated parts. As a consequence of this "production" by an imminently counter-productive society, large tracts of the forest are found to contain 'terra preta de índio' (Amazonia Dark Earth or Indigenous Dark Earth), i.e. highly fertile anthropogenic soil, rich in traces of human settlements such as charcoal, bones, plant, animal and food remains, seeds, roots, ceramics, excrement, nitrogen, calcium and phosphorus.

But the forest is itself a thinking entity, and this is not a metaphor, as Donna Harraway warns us in the introduction to 'How forests think', an "anthropology beyond humans". In fact, nothing is metaphorical in animist societies, for whom all beings are real people. The Runa forest ethnographed by Eduardo Kohn is a dense ecology of "*de facto* otherness" in which plants, animals, spirits and the Runa themselves (or human persons) interact and communicate beyond the signs and language of human persons, through dreams or shamans.

As if that weren't enough to demystify the forest as an inert, empty environment, a green desert that develops on poor soil, the research of Anna Roosevelt, Michael Heckenberger, Eduardo Neves, among many others, based on ruins, geoglyphs and analyses of forest stratification, point to the existence of an extensive and complex anthropogenic landscape with ditches, roads, bridges, earthworks, canals for navigation, turtle breeding ponds, orchards and extensive crops, in a dispersed and multicentred pattern. This logic of "galactic" occupation, with typical patterns of urban planning in the middle of the Xingu forest, researchers did not hesitate to call "urbanism", even using analogies with the low density and green belts of the English Garden Cities designed by Ebenezer Howard at the end of the 19th century.

The forest that emerges from the various multinaturalist versions, from the shamanic critique of the political economy of nature by Yanomami shaman Davi Kopenawa and Bruce Albert to Xinguan Urbanism, is not passive, neutral, mute and even less natural. It's obviously not an environment ("a white man's word for what they've already destroyed") like a floral and faunal continent to be conserved without the indigenous people. And it's not a primitive double of the urban world — a "not-yet-city" — but a pluriverse of beings, entities and relationships capable of engendering *urbanities of other natures*. The Amazonian *cosmopoliteia* is a trans-specific and extensive artefact *designed* by the indigenous people who have inhabited it for millennia, together with their non-human co-habitants.

———

"Plants know what we think, and therefore they think too," was what Cleve Backster noted when he managed to record with a polygraph the reaction of a *Dracaena massangeana* plant that decorated his desk to his threats with a lit match.

In Backster's subsequent experiments, the plants would react to the noisy intrusion of a dog, to the movement of spiders on the ceiling, to the presence of people they supposedly didn't like and would even be able to identify the person secretly responsible

for the murder of a relative in the pot next door. They would react to the death of individual cells, such as those in the researcher's own blood and sperm, to the lactobacilli in his yoghurt, to the tenant bacteria in the kitchen syphon and to a raw egg being eaten by a doberman.

The publication in 'National Wildlife' in 1969 of his hypothesis about primary perception in plant life would make Backster a pop-star, with a TV programme and the best-seller 'The Secret Life of Plants', and even his former CIA colleagues would begin to study communication between plants and humans. Ten thousand scientists from all over the world would request the reports of the experiments, but none would be able to successfully reproduce the same results and prove the "fundamental harmony between living beings". Researchers from various institutions discredited him for not following the scientific method and biologist Arthur Galston, from the University of Illinois, accused him of deliberately drawing the polygraph lines.

"This is what I call a spoiler," says Belgian philosopher Vinciane Despret. "I'm always surprised to see the zeal with which certain scientists rush to take on this role and the admirable heroism with which they take on the sad duty of delivering bad news." In this case, the bad news she's referring to is in her book 'What would animals say if we asked the right questions?', in the story of the famous Thai elephants who, unemployed due to a new law banning them from transporting wood, become the protagonists of shows in which they paint pictures of trees and flowers with their trunks. In this case, the spoiler is biologist and self-declared surrealist painter Desmond Morris, who concludes, after an on-site visit, that the paintings have no "elephantine intent" and are merely human drawings sweetly copied by the animal.

It may be that Backster was a charlatan as he was accused of being, or that he thought he was a shaman on his lysergic journeys, but, to paraphrase Despret, if it's clear that the elephant drawing isn't his, it's also clear that the lines on Backster's polygraph weren't drawn by the machine either. "Who would doubt that?"

That scientists in their laboratory life can't connect with a Dracena when its leaves are threatened by fire doesn't mean that the plant doesn't realise the threat. For, as Davi Kopenawa would say, not about a solitary plant, but about the whole forest - greatly complicating the situation for disenchanted nature scientists - "the white people may not hear her cries, but she feels pain, just like humans. Its great trees groan when they fall and it cries with suffering when it is burnt."

But not only plants and shamans challenge the science of disenchantment. For molecular biologist Tony Trewavas, plants reason and make sophisticated choices, as well as distinguishing themselves from animals by using phenotypic plasticity to express behaviour. František Baluška, Stefano Mancuso and other plant neurobiology researchers have been developing the notion of a complex, decentralised neurovegetal system, collapsing the boundaries between modern and indigenous sciences.

In an experiment conducted by Mancuso himself, author of 'Brilliant green: the surprising history and science of plant intelligence' and director of the International Laboratory of Plant Neurobiology in Florence, four images are shown rapidly and in sequence to an audience. The images are photographs showing, respectively, two deer in a field covered in ferns, a huge adult elk in a clearing with a forest in the background, a green frog sheltering from the rain under two large leaves and, finally, a man and a girl immersed in a forest as if watching birds. Asked what they saw in the images, 96 per cent of people said "the deer, the elk, the frog and the people". When asked specifically about the last photograph with humans, 98 per cent said they only saw the man and the girl. Although, in all four images, at least 80 per cent of the photograph was made up of plants.

"Plant blindness" is the name researchers have given to this ability to filter visual information. If this was important at some point in the evolutionary process, as Mancuso would say, today this impressive data reveals our lack of interest in and contempt for plants. By eliminating plants from our daily lives and drastically underestimating their

capabilities, we have reproduced centuries of discouragement and discriminated against them as inferior, inert and passive organisms, slaves to instincts.

Hearing without ears, seeing without eyes, smelling without a nose, breathing without lungs, calculating, memorising, learning and thinking without a brain. "Plants are intelligent and are able to solve problems," as well as being aware of their environment and the life around them, collaborating with other species for water and nutrients, communicating through electrical signals and vibrations, and being closely linked by kinship, as Mancuso says.

Plants make up 99.7% of the Earth's biomass, while animals, including humans, make up just 0.3%. It is estimated that the almost 200,000 plant species known and catalogued by 2017 are equivalent, in an optimistic perspective, to no more than 40% of the existing ones.

Brazil is the country with the greatest biodiversity on the planet, with 8,715 species of trees alone, 14% of the 60,065 that exist on the planet, followed by Colombia, with 5,776 species, and Indonesia, with 5,142. But contrary to this exuberance, the urban afforestation manuals provided by the city halls of the main Brazilian capitals indicate less than a hundred species for planting in cities, many of which are exotic. Chosen according to "aesthetics" (the "concentration camp of the West", as Lina Bo Bardi would say) and according to technical criteria — such as limited growth, crown formation and resistance to pruning — and the "environmental services" they can offer, the mistreated urban trees are the most immediate victims of the tyranny of the reigning mononature, regarded by city dwellers with the same contempt and intolerance they have shown towards native forests.

If for animals we are pachydermically anthropocentric and from the point of view of plants we suffer from chronic zoocentrism, for stones we are certainly radically phytocentric. But the conclusion, already so obvious to those humans capable of putting

themselves in the place of other beings, is that we really are totally self-centred: "white people sleep a lot, but they can only dream about themselves," Kopenawa would say.

As we well know, this humanist and speciesist narcissism is not harmless and has long legitimised the perverse invention of categories of non-human and sub-human. Or, as Viveiros de Castro would say, taking up Lévi-Strauss' homage to Jean-Jacques Rousseau, the ideologue of the '*bom selvagem*' (lit. the good savage), "the relationship between racism and speciesism is not one of discontinuity, but of continuity: speciesism anticipates and prepares racism". In other words, "everything happens as if the only way to exorcise racism (internal speciesism) is by hardening external speciesism (the thesis of human exceptionalism)".

No wonder, then, that the myth of nature untouched by man was an 18th century invention to justify and ennoble the colonial and slave enterprise in the Americas. A myth that would comfortably develop in parallel with the collapse of more than 90% of the Amerindian population caused by mass extermination between 1492 and 1750, and which would leave large tracts of forest on the continent devoid of inhabitants.

In more than two centuries, the forests emptied of their human carers would grow back freely in the clearings and abandoned swiddens, producing a much less biodiverse jungle, but also a global decline of 7 p.p.m (parts per million) in carbon dioxide emissions in the Earth's atmosphere. This would make the year 1610 the date with the lowest CO2 levels ever recorded since the Ice Age, with 271.8 p.p.m (422.65 in January 2024 and probably much higher by the time you're reading this).

Added to the rapid and intense exchange of animal and plant species, diseases and microorganisms, this unprecedented human devastation in the history of the Earth was baptised by climatologists Simon Lewis and Mark Maslin as the "Orbis Spike" (an analogy to the "Golden Spike", the geological mark left by the meteor that hit the planet and extinguished the dinosaurs). After analysing samples taken from the frozen Antarctic subsoil that showed CO2 concentrations, the authors came to claim Orbis

Source:
What would the trees say? | Wellington Cançado | translated into english by Lucas Gobatti | 2017

Spike as the official start of the Anthropocene, arguing that colonial violence against humans and non-humans has been central to the anthropogenic transformation of the planet since its inception.

Brazil, a country that so quickly extinguished the tree that gives it its name and that continues to mercilessly advance on the forest and its inhabitants is the same country that invokes nature as a pretext for gender brutalities, the obstruction of women's bodies, the collection of tithes and the perpetuation of systemic racism. In Brazil, violence has always been constitutive and opportunely instrumental, despite the myth of the '*homem cordial*'[13] (lit. cordial man) who inhabits the earthly paradise. From the emporium of naturalism to the splendid cradle of the Anthropocene in a flash.

Bearing in mind that the effectiveness of violence here is inversely proportional to the accuracy of the data, you don't need to be a professional tabulator to recognise the statistics of the monstrosity produced since the arrival of the caravels: 8 million indigenous people exterminated (not counting the many executed in recent decades by gunmen-ruralists), 5.5 million enslaved Africans (660,000 killed before the end of the Atlantic crossing), 12 women murdered and 135 raped every day (by this current "average" we would have 2,264,460 murders and 25,475,175 rapes in 517 years). 264,460 murders and 25,475,175 rapes in 517 years), countless LGBTQI+ people killed and persecuted since the *fanchonos*, *sodomitas*, *tibiras*, *çacoaimbeguiras*, *adés* and *quimbandas*, 20 million animals hunted for their skins (in the Amazon alone and between 1904 and 1969) and almost 3 million square kilometres of forest devastated so far.

The symbolic swallowing of violence in the promising anthropophagic hiccups is being relentlessly asphyxiated by urbanisation without urbanity and by developmentalism without development in this autophagic modernity. Oswald de Andrade, who described

[13] The '***homem cordial***' (lit. cordial man) would be Brazil's contribution to humanity, in Sérgio Buarque's view. His virtues were hospitality, generosity and emotional expansiveness, characteristics and legacies of Brazilian rural and colonial life (Wikipedia).

Brazil in his Anthropophagic Manifesto as a federative republic full of trees and people saying goodbye, would be surprised at how many people are still saying goodbye. As for the trees, those that remain, what would they tell us if we were willing to listen to them?

Transitioning to Sustainable Cities and Communities

Transitioning to Sustainability Book Series

Prof. Hubert Klumpner, Klearjos Eduardo Papanicolaou and Prof. Georgeen Theodore

Transitioning to
SUSTAINABLE CITIES AND COMMUNITIES

Hubert Klumpner, Klearjos E. Papanicolaou and Georgeen Theodore (Eds.)

Book Source:
Hubert Klumpner, KlearJos Eduardo Papanicolaou, Georgeen Theodore. Transitioning to Sustainable Cities and Communities. 2023

Table of Contents

1.Rahul Mehrotra
Interview

2.Tanya Chandra
Cognitive Blindspot: Challenges of Measuring Coupling Effects of Isolated Development Policies in the Regional Scale

3.Alejandro Restrepo
Medellin: Urban Planning as an Instrument of Social Equity, Environmental Quality, and Sustainability

4.Weijen Wang
Interview

5.Clara Rellensmann
Studio Bagan: Engaging With Cultural Heritage Conservation Through Problem-Based Learning Across Disciplines

6.Andres Lepik
Interview

7.Melanie Fessel
Method Design: Re-imagining a Circular Urban Design Pedagogy

8.Mitchell Joachim
Interview

9.Vincent Chukwuemeka
Urban Markets as Infrastructures of Exchanges and Flows in Cities: Insights from Onitsha Markets in Nigeria

10.Christian Werthmann
Interview

11.Anna Heringer / Martin Rauch
Interview

12.Stephanie Briers / Yael Borofsky
Every Nightlife in Informal Settlements

13.Teddy Cruz / Fonna Forman
Interview

14.David Kretzer
The Relationship Between Public Lighting and Urban Sustainability in Bogota's Informal Settlements

15.Manuel Herz
Interview

16.Michael Walczak
Impact of Urban Planning on Air Quality: The Consequences of the Mismatch Between Natural Wind Flows and Building Typologies

17.Hubert Klumpner / Diego Ceresuela-Wiesmann
Interview

18.Gruia Badescu
Towards Sustainable Post-war Reconstruction: Reflecting on -Making and Conflict

19.Aaron Betsky
Interview

QR Code to the Articles

Enough / Genug
Designing limits in archtiecture
for an earth of plenty

Source:
Chair of Architecture and Urban Design Prof. Hubert Klumpner | 2024

MediTirana
100 Ideas for the Western Balkan
11.03-08.04.2024
Piramida, Tirana, Albania

Imagine Arts & Ideas Initiative in Albania:

Imagine Arts & Ideas Initiative Supported By:

Federal Ministry Republic of Austria European and International Affairs

Austrian Embassy Tirana

Federal Ministry Republic of Austria Arts, Culture, Civil Service and Sport

Collaborators:

QR Code Website

Source:
Chair of Architecture and Urban Design Prof. Hubert Klumpner | 2024

Bibliography

Selected Readings

Alfredo Brillembourg, Hubert Klumpner, Alexis Kalagas. Reactivate Athens 101 Ideas by Urban-Think Tank. 2016

Alfredo Brillembourge, Elisabete França, Elton Santa Fé Zacarias, Hubert Klumpner. São Paulo Architecture Experiment, Sustainable Living Urban Model Lab. 2010.

Alfredo Brillembourge, Hubert Klumpner, Mark Collins, Toru Hasegawa, Elisabete França, Maria Teresa Diniz. Informal Toolbox SLUM LAB Paraisópolis. 2013.

Urban Re-Act Lab - São Paulo, Urban-Think Tank's S.L.U.M. Lab. São Paulo - Paraisópolis: Order and Progress? Ordem e Progresso?. 2013.

Geddes, Patrick. Cities of Evolution. London. Williams and Norgate. 1915.

Jacobs, Jane. The Death and Life of Great American Cities. New York. Vintage Books. 1961.

Hubert Klumpner, KlearJos Eduardo Papanicolaou, Georgeen Theodore. Transitioning to Sustainable Cities and Communities. 2023

Kohr, Leopold. Probleme der Stadt. Gedanken zur Stadt- und Verkehrsplanung. Salzburg. Müller. 2008.

Lynch, Kevin. Good City Form. Cambridge (Mass.). MIT. 2001.

Lynch, Kevin. The Image of the City. Cambridge (Mass.). MIT. 1990.

McGuirk, Justin. Radical Cities. New York. Verso. 2014.

MoMa. Small scale Big Change. New York. MoMa. 2010.

Moshem, Mostafavi and Gareth Doherty. Ecological urbanism. Lars Muller; 1 edition. 2010

Mimica, Vedran. The Berlage Affair. Zagreb. Actar Publishers, New York, Barcelona. 2017.

Oosterman, Arjen. City in a Box. Volume 34. Netherlands. Stichting Archis. 2018.

Price, Cedric. The Square Book. Chichester. Wiley-Academy. 2003.

Safdie, Moshe. The city after the automobile : an architect's vision. Colorado. Westview Press. 1998.

Silva, Armando. Imáginarios Urbanos. São Paulo. Perspectiva. 2001.

UTT. Informal Toolbox. Zürich. 2018.

Waldheim, Charles. The Landscape Urbanism Reader. Princeton Architectural Press; 1st edition. 2006.

World Economic Forum. World Economic Forum annual Meeting 2019: Globalization 4.0: Shaping a Global Architecture in the Age of the Fourth Industrial Revolution. Davos. World Economic Forum. 2019.

WorkAC. 49 Cities. New York. Storefront for Art and Architecture. 2009.

Selected Articles:

Brillembourg, Alfredo; Klumpner, Hubert; Piplaš, Haris. City Action Lab: Integrated Urban Toolbox for Central Eastern European Cities. in City Action Lab. 14-17, 222-225. ETH, U-TT.

Fetzer, Ellen; Faurest, Kristin; Szilagyi-Nagy, Anna. Activating Landscape Investments In Transition Economies: A Green Infrastructure Approach For Sarajevo. in City Action Lab. 60-78. ETH, U-TT.

Lang, Peter; Boyarsky, Nicholas. R-Lab in Sarajevo, Agonistic Body & "Exercise" 2017. in City Action Lab. 66-.67 ETH, U-TT.

Dobrović, Vladimir; Radović, Ranko. Sarajevo 89. in Arhitektura | Urbanizam 94/95

World Bank. Improving Sarajevo's Resilience Through Urban Regeneration. 2020

Graphic Representation:

Tufte, Edward. The Visual Display of Quantitative Information

Tufte, Edward. Visual Explanations: Images and Quantities, Evidence and Narrative

Tufte, Edward. Points and Lines

Tschumi, Bernard. The Manhattan Transcripts

Studio Server

\\nas22.ethz.ch\arch_nsl_klumpner_student\58_2024_SS_Sao-Paulo

Impressum

Organization

ETH Zurich | DARCH | NSL | LUS
Chair of Architecture and Urban Design
Prof. Hubert Klumpner
Diogo Figueiredo
Alejandro Jaramillo Qunitero
Melika Konjičanin
Fernando Túlio Salva Rocha Franco*
*Brazilian / Swiss Government Excellence Scholarship 2022-23

Partners

FAU-USP | School of Architecture and Urbanism of University of São Paulo
Prof. Dr. Nabil Bonduki
Prof. Dr. Denise Duarte

Perifa Susentável Institute
Amanda Costa
Gabriel Alves
Mahryan Sampaio

D-BAUG Eawag
Dr. João P. Leitão
Lucas Gobatti

Movimento em Defesa do Parque Morro Grande

Swissnex Brazil

Reader/Research

Diogo Rabaça Figueiredo
Alejandro Jaramillo Quintero
Melika Konjičanin
Fernando Túlio Salva Rocha Franco
Deniz Esen
Flavia Hug

Print

ETH Zurich
February 2024