

# PEDUI RMRJ





jaime lerner  
arquitetos associados

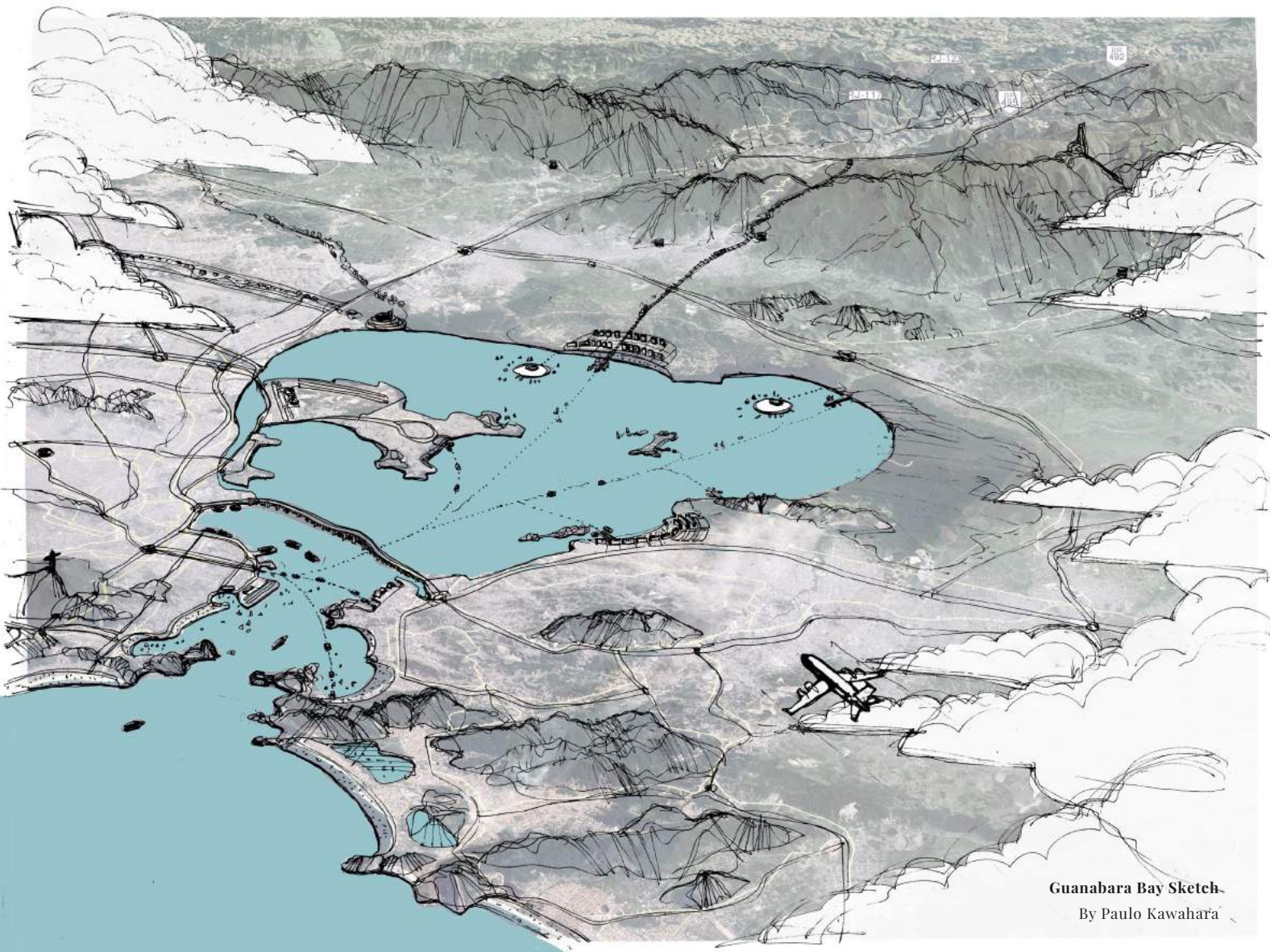


Câmara Metropolitana  
do Rio de Janeiro



**STRATEGIC PLAN FOR THE INTEGRATED URBAN DEVELOPMENT  
OF RIO DE JANEIRO'S METROPOLITAN REGION**

**Executive Summary**



**Guanabara Bay Sketch**  
By Paulo Kawahara

# The Governor's Words



The activities for the resumption of the planning and governance of the Metropolitan Region of Rio de Janeiro, dormant for at least 35 years, since the extinction of the legal management body, FUNDREM (Rio de Janeiro Metropolitan Region Development Foundation), were resumed in 2014 with the creation of the Metropolitan Chamber of Integration, together with the World Bank, which allowed for the absorption of a broad range of new knowledge, for the exchange of experiences with other countries and metropolitan regions, and for the development of previously limited and insufficient capacities for the establishment of public policies, which could then be transformed into social inclusion, inequality reduction and urban development organization in metropolitan areas.

Current configurations of the globalized world economy stimulate new urban hierarchies that establish metropolitan agglomerations as the main centers for economic production. Consequently, these areas attract skilled populations, cutting-edge economic sectors, strategic infrastructures, high technologic and innovative centers, as well as international-level events.

There is an increase in the responsibilities of metropolitan cities, which concentrate the attractiveness of such a globalization process, as well as their negative impacts such as spatial segregation, complex natural and built heritage management, and saturated infrastructures.

One must develop shared models of metropolitan organization that allow for the establishment of policies that seek to improve economic competitiveness, environmental management, socio-territorial cohesion, as well as essential public services such as mobility and transportation, sanitation, solid waste collection and disposal, and water resource management – all with collective interests in mind and without being limited to a solely municipal perspective.

Despite all of its economic and social strength, Rio de Janeiro's Metropolitan Region, used to lack institutional and territorial planning instruments and tools that could leverage its development in a planned and articulated way among its 21 municipalities, enhancing its capacity to manage sustainable economic growth and job creation.

In this sense, the Strategic Plan for the Integrated Urban Development of Rio de Janeiro's Metropolitan Region proposes a more compact, efficient, inclusive, equitable and sustainable metropolis – or a network of cities – with a diversity of institutional, economic and social activities.

The conclusion of this Plan and its delivery to society and to the House of Representatives in the form of a Bill for approval constitutes a key step resulting from this effort. Our intention is to rescue the planning of the Region and to create the instruments and tools that will allow for the leveraging of its development in a planned and articulated way, thus enhancing the desired sustainable economic growth.

Rio de Janeiro, June, 2018

*Luiz Fernando de Souza Pezão*  
Governor of the State of Rio de Janeiro

# A sense of purpose for the metropolis



Even though it has existed for decades, Rio de Janeiro's Metropolitan Region has never had a sense of purpose. An agglomerate of circumstances made it grow continually and disorderly. There were attempts by its cities, through sectorial plans or even master plans, to rectify its development model. Sadly, they did not succeed. What is worse is that, in some cases, they proposed more of the same, establishing the territory as an area with excessive concentration of opportunities in the main nucleus, surrounded by an environment fractured by social, urbanistic and economic inequalities.

The quality of life indicators that separate, for instance, Laranjeiras and Belford Roxo, among many other socio-spatial disparities in the region, point to the main challenge when planning a large, complex and still disordered metropolis such as ours: to change the model, as in the "modeling the metropolis" slogan that was once adopted. We clearly need to change for the better, and not continue to insist on the same old practice to change the living conditions of the vast majority of the population. A population that is condemned, among other misfortunes, to waste the majority of its time in long travels between home and work throughout the Brazilian metropolitan scenario.

How, what, where and when to change? In order to answer to these challenges, the unprecedented Strategic Plan for Integrated Urban Development, now delivered, focused on the metropolitan society, assuming in the first place that we will only have a just, equitable and sustainable metropolis when we establish the promotion of socio-territorial cohesion as a permanent priority. In over 300 polygons identified by the plan, nearly 2.7 million metropolitan citizens live, and that is where most notable social, urban and economic needs are found, as well as the places with the highest levels of violence.

Development is impossible without justice and peace. It is urgent to point out where one should immediately act. The essential and structuring strategies for the desired transformations deserve to be highlighted in this effort to predict the metropolitan future. One of them is to promote its polynucleation, stimulating the more equitable distribution of services in the territory. Since its emergence, sensible centralities have already emerged east and west of its main nucleus. Over the years, some of them have shown the potential to assist, among other tasks, in the reduction of the need for long and costly displacements in the region.

Another important strategy is to make railways the most cohesive and dense urban development track, continuously and cumulatively perfecting transportation services by interconnecting, in a network, the core and proposed major metropolitan

centralities. However, one must understand that real estate densification along these corridors and, especially, around the most dynamic stations, accompanied by stimuli for the diversification of uses and integration with other modalities, are indispensable policies for the development of this strategy, as well as the technologic operational improvements of the transportation system itself.

Putting together the two directives above, the plan also foresees the deployment of transversal mobility structures, finally eliminating radial logic, which was once the matrix of metropolitan territorial development and has stimulated the urban sprawl. Going from Nova Iguaçu to Caxias, or Campo Grande, without having to previously go through Rio, is an example of this desire for connectivity among the main centralities.

To reinvent the Bays, Ponds and Rivers of the region is a strategy that attempts to return characteristic and defining waterways and water courses to the metropolitan population. To deploy sanitary belts on the banks of these water bodies is the formula indicated in the plan so that, in the short and medium term, positive results can be obtained with depollution and so that this natural and symbolic heritage, once so badly treated by the adopted development model, may be better used. The Plan attempts to guide and promote new perspectives on the Bay, with margin projects in Caxias, São Gonçalo and Magé.

But what is essential, in this effort to meet with the future and to actually get there, is to be able to resume the governance of the region, ensuring the most harmonious and egalitarian development of the metropolis. This type of development take place through state policies – which are not restricted to a particular administration; optimizing the resources for the achievement of the priority action programs indicated in the plan and ensuring a political collaboration environment capable of making the necessary adjustments and alignments throughout the implementation of each of the planned actions.

This metropolis has all the tools in order for it not to be socially unequal, urbanistically unjust and economically concentrated. We merely require pact, elaborated around a sense of purpose obtained through wide and vigorous consultation of the population, celebrated by the metropolitan society and formed as a guide to a future of peace, cohesion and opportunity to all everywhere in the metropolis.

*Vicente Loureiro*

*Executive Director*

*Executive Group of Metropolitan Management*

*Metropolitan Chamber of Governmental Integration*

*We dedicate this effort to return to Metropolitan Urban Planning to the architect Maurício Nogueira Batista, the forerunner of this project during the 70's in the last century, at the extinct Foundation for the Development of Rio de Janeiro's Metropolitan Region, Fundrem.*

# Jaime Lerner



The pages presented herein summarize the rich and profound immersion in the context of Rio de Janeiro's Metropolitan Region, as a result of the attitude of the State Government in promoting the construction of a shared vision of the future, under the competent and dedicated coordination of the Metropolitan Chamber.

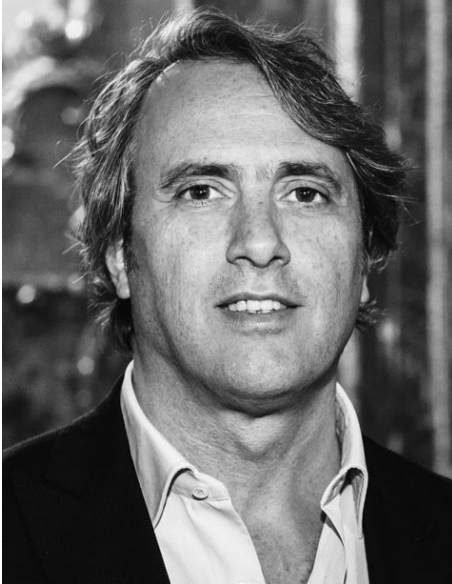
We have been fortunate to take part in this important moment in which the metropolis seeks to define this joint scenario: an instrument to catalyze the efforts of society as a whole towards an Integrated Urban Development, based on three great guidelines that appropriate the singular and superlative assets of the culture and the geography of the most enchanting quality of the Brazilian metropolis: the tracks of history; the reinvented bay; the metropolitan arch. This triad can provide a more equitable development, with new roles and paths, within a vision that welcomes diversity and celebrates integration.

Planning is a process and what we present here is only an introductory chapter, a guide to the construction of the 21st Century Metropolis that the Rio de Janeiro Metropolitan RegionRJMR wants to be and can be. I believe that innovating has to start somewhere, so let's get to it!

*Jaime Lerner*



# Willy Müller



Rio de Janeiro, again.

A plan for a regeneration!

A Plan means to collect data, to review the genealogies of the territory, to establish guidelines and, finally, to put threats and potentialities in order, going through a long stage of diagnosis, a more creative one to imagine the futures of the territory, and finally a more interactive stage for this set of ideas in order to fulfill the ultimate goal: to be useful to society.

An Urban Development Plan is a work of extraordinary dimensions, both in the physical sense and in the temporal sense. The very dimensions of analysis and levels of specific knowledge are immensely complex, ranging from strategic and theoretical approaches to the definition of territorial transformation actions, including work schedules.

But I would also like to draw attention to the interactive path of the Plan, when the role dissolves in the collective aspirations of citizens – the synthetical effort for it to be understood by the subjects of this planning: society itself. We need to work in a common language so that these first-order challenges are assumed and led from now on by citizens, by municipalities, by the Metropolitan Chamber and by civil society.

This was one of the most rewarding experiences of my life due to my role as the coordinator of this extraordinary team.

The Rio de Janeiro Metropolitan Region will have an ally in the PDUI for this necessary regeneration.

*Willy Müller*



**Piratininga Lagoon seen from the Niterói city Park**

Photography : Érika Poletto

# CONTENTS

---

## **PREFACE**

The Governor's Words – Luiz Fernando Pezão	03
A sense of purpose for the metropolis – Vicente Loureiro	04
Jaime Lerner	06
Willy Müller	07

## **PRESENTATION**

10

## **BACKGROUND**

14

### **o1 THE PARTICIPATORY CONSTRUCTION OF THE STRATEGIC PLAN**

18

### **o2 THE METROPOLIS WE HAVE**

24

#### **Overview**

24

#### **The formation of RMRJ and its environmental base**

31

#### **Economic and population dynamics**

34

#### **The expansion of the metropolis and the demands for life, work and mobility**

38

#### **The panorama of public management and metropolitan governance**

45

#### **Synthesis of the metropolitan diagnosis**

48

#### **The five macro-regions for metropolitan planning**

52

### **o3 THE METROPOLIS WE WANT**

54

#### **The new design of the metropolis**

56

#### **The vision of the future and the agenda of the strategic axes**

64

#### **Key points of the vision for the future**

70

#### **The metropolitan objectives**

74

#### **The construction of scenarios**

76

### **o4 THE METROPOLIS WE WILL MAKE**

82

#### **Highlight of the priority action programs**

84

##### **a) A Polynucleated Urban Structure**

85

##### **b) The Rails and Tracks of the Metropolis**

88

##### **c) Socio-territorial Cohesion**

96

##### **d) Valorization of Baixada Fluminense and the Metropolitan East**

97

##### **e) House Production and urban sprawl containment**

104

##### **f) The “reinvention of the bays”**

108

##### **g) The Agroecological Arch**

116

##### **h) Economic expansion**

117

##### **i) The Natural and Cultural Heritage**

118

##### **j) To govern the metropolis**

128

#### **The Metropolitan Space Reconfiguration**

130

#### **The Metropolitan Macro zoning**

132

#### **Metropolitan Interest Zones**

134

#### **The Implementation of the Plan**

136

##### **a) Key elements of the Implementation Strategies**

136

##### **b) The Implementation Instruments**

138

#### **The path until 2040**

140

## **TECHNICAL INFORMATION**

142

### **Bibliographical References**

142

### **Advisory Groups**

143

### **Quanta | Lerner Consortium**

150

### **Government of the State of Rio de Janeiro**

152

### **Annexes**

153

# Presentation

“A city is not gauged by its length and width, but by the broadness of its vision and the height of its dreams.”

Herb Caen



Serra do Mar seen from the Island of Paquetá  
Photography: Érika Polcto

---

Measure. Amplitude. Vision. High. Dreams.

Words that synthesize two years of work that sought to bring to light the urgency, the pertinence, the opportunity of getting to the heart of the reflection and debate on the future development paths of Rio de Janeiro, in its metropolitan dimension, and the questions related to its planning, management, and inter-municipal collaboration.

A measure and amplitude that, with technical support coupled with a participatory process, sought to understand and size, within the defining axes of the work, the challenges and opportunities of this territory. Challenges and opportunities that inspire a vision of shared future, a dream that enlightens and elevates the aspirations of the most iconic of the national metropolises, synonymous with Brazilianness, a destiny of desire that has been celebrated in verse, prose and music worldwide.

The resurgence of the metropolitan theme in the country's governmental agenda, after decades of anomie, gained traction with the creation of the Metropolitan Chamber of Government Integration, on the initiative of the Government of the State of Rio de Janeiro, which, supported by the Statute of the Metropolis (Law nº 13.089 / 2015), was at the forefront of this movement to lead a collaborative, participative and technical process for the elaboration of the Strategic Plan for the Integrated Urban Development of Rio de Janeiro's Metropolitan Region. It is the first study with this scope, elaborated in the history of the Rio de Janeiro metropolis, developed by the Quanta-Lerner consortium and financed by the World Bank.

The Strategic Plan for Integrated Urban Development represents a unique opportunity to “model” the metropolis in the image and likeness of its desires, potentialities and possibilities, a model that is structured methodologically in the fundamental themes of **spatial reconfiguration and centralities, sanitation and environmental resilience, housing and social facilities, mobility, appreciation of environmental, built and cultural heritage, and economic expansion and public management**. It is the guide of the paths that have been traced and must now be followed for the realization of the scenario desired by society, in which the Rio de Janeiro metropolis embraces its past and confronts its present in the search for its tomorrow. It is, therefore, a work of appropriation of legacies, realities and hopes, materialized in a unique and exuberant geography.

The content shared herein aims to reflect and disseminate the result of this intense and exciting effort, fruit of a deep immersion in the rich and challenging universe of Rio de Janeiro's Metropolitan Region. To display the mosaic that was built, tile by tile, by thousands of hands during these months of work, each offering its contribution to the composition of the set of scenarios, strategies and instruments that will guide the governmental decisions in the future years and that will be a reference for the entire society of Rio de Janeiro. The Metropolitan Plan<sup>1</sup> forms a powerful tool for regional economic, social and urban development, mobilizing a sense of metropolitan belonging for the citizens and institutions of the State of Rio de Janeiro.

To dream is the human attribute and the nourishment of our aspirations. Let us dream. Not only with tomorrow, but also with the present. The future is now; we are reaping today the correctness and errors of the past, and today we sow the future. Therefore, the desired future is the present. The proposal is that the Metropolitan Plan, presented herein, should be its instrument.

### **The dream of a metropolis moving towards new horizons**

#### **Defying its limits**

**Transporting, telling its own history and imagining what is to come**

**Nourishing the essential; allowing for us to win the race against time**

**A connected metropolis, entrepreneurial to the point of innovation**

**A metropolis where one can learn and make knowledge flourish**

**Where one can go out, share, discover**

**The metropolis imagined is the one built everyday by everyone**

**The dream of a metropolis that defies limits and enables the revealing of each individual's potential**

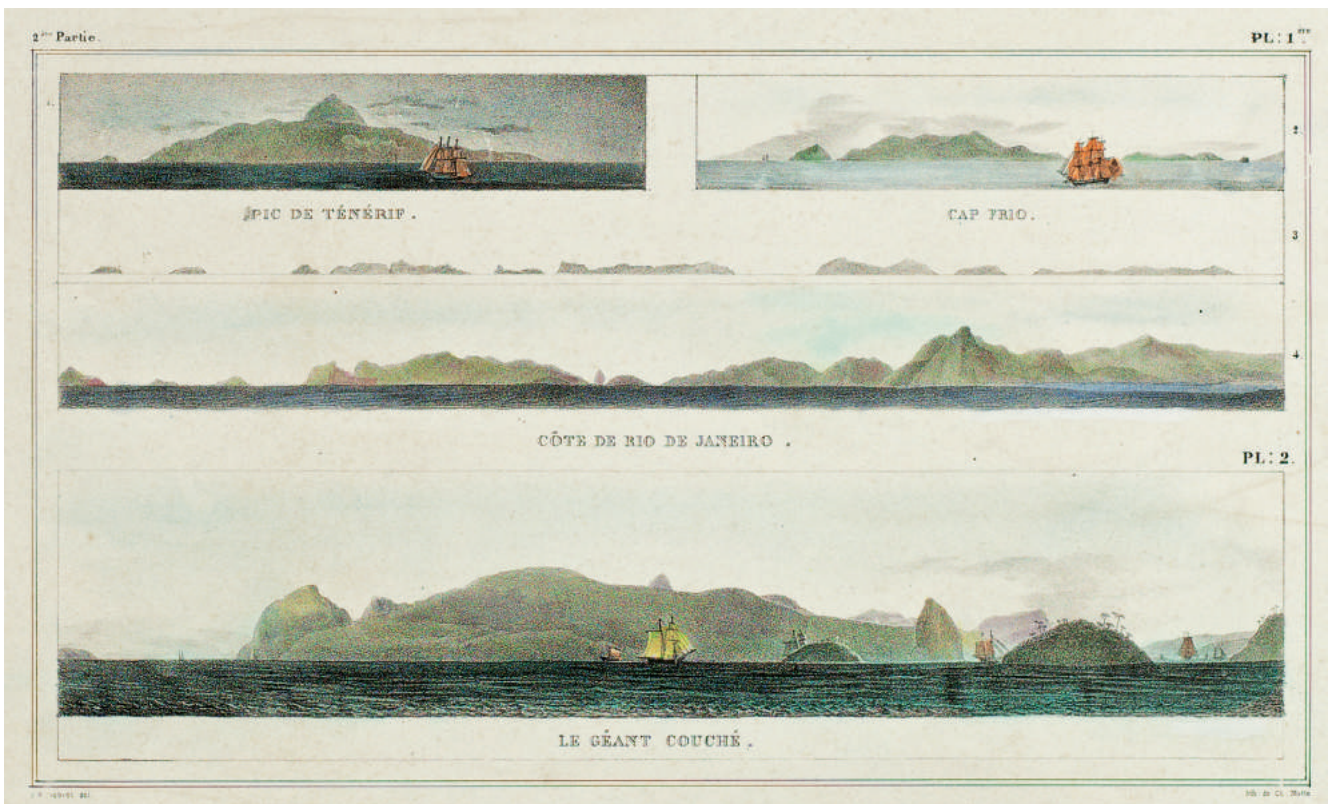
**A metropolis that shines in the world**

**A metropolis of opportunities**

**A metropolis that transmits; invents and reinvents; a meeting point**

**The dream of a metropolis where one can grow, with identity, belonging and coexistence.**

<sup>1</sup> Integrated Urban Development Plan - PDUI, according to the denomination of the Metropolitan Statute; in the RJMR, itRJMR was named the Strategic Plan of Integrated Urban Development, PEDUI, hereafter named Metropolitan Plan or by the nickname "Modeling the Metropolis".



**Rio de Janeiro shores c.1834-1839**  
Author: Jean Baptiste Debret (1768-1848)  
Collection: Instituto Moreira Salles

# B

# ackground

“Urban planning does not assure happiness. But bad urban planning definitely prevents happiness”  
Jan Gehl



Pier of Guã de Pacobaíba Station, Magé  
Photography: Érika Poletto



---

In order to build a balanced, socially just and solidary metropolis, where its inhabitants can live, reside, work and interact in a productive and light-hearted way, it is necessary to overcome a number of obstacles that concern both physical and spatial interventions and aspects relative to the valorization of reference spots and to the recovery of its population's self-esteem.

With the firm purpose of facing the challenges imposed by a historic disorderly occupation, which is incompatible with the dignity of its inhabitants, and in view of the urgent need to qualify and reduce the inequalities of the metropolitan territory, the state executive branch instituted, in August 2014, the Metropolitan Chamber of Government Integration, in order to establish the governance conditions for matters of metropolitan common interest, and to elaborate and implement the Metropolitan Plan, observing the appropriate strategies to reach a more equitable and fair territorial organization.

Since the beginning of 2013, this purpose of the State Government has been based on the judgment in the Federal Supreme Court of a Direct Action of Unconstitutionality (ADI No. 1842); whose Judgment, initially referring to Rio de Janeiro, established the intergovernmental shared competence (States and Municipalities) to deliberate on public functions of common metropolitan interest. The aforementioned Statute of the Metropolis of January 2015 also highlights, among other aspects, the importance of planning and metropolitan management, offering legal support to the interventions that take place in these territorial instances.

These two legal diplomas, of national scope, added up and provided a favorable environment for the State of Rio de Janeiro to take important steps in the construction of a new Metropolitan Governance. The creation of the Chamber and the contracting of the Metropolitan Plan allowed for studies and research to be carried out during four consecutive years of intense debate with society to materialize into concrete proposals, providing the State of Rio de Janeiro with a series of structuring actions articulated with each other to work on the RJMR.

The process of constitution of the metropolitan regions in Brazil, the definition of public functions of common interest, and the exercise of their respective planning and management, as the previous paragraphs have shown us, are subjects of absolute urgency, but still under development in the national context. We must go back to the institutionalization of the first nine metropolitan regions in 1973; to the amendments introduced by the Charter of 1988, when the attribution of its creation passed on from the Union to the States; finally arriving at the improvements currently provided by the Metropolis Statute.

In this context, it is also worth mentioning that, since the 2000s, with the enactment of the City Statute (Law 10,257/2001), the creation of the Ministry of Cities (2003), the approval of the Public Consortia Law (Law 11,107/2005) and the Participative Master Plan Campaign (2005-2006), the subject of metropolises came back to the public discourse, as the problems of many municipalities in the country could no longer be solved in isolation.

The Rio de Janeiro Metropolitan Region was established in 1974 by Complementary Law no. 20. In the following year, the state government created the Foundation for the Development of Rio de Janeiro's Metropolitan Region - FUNDREM. During its fifteen years of existence, the Foundation, in addition to promoting technical assistance agreements for the elaboration of the master plans in all the municipalities of RJMR, RJMR sought to coordinate programs and projects of local interest, as well as to enable studies and research pertinent to the solution of the region's problems. Recurring conflicts of jurisdiction between the institution and municipal administrations, however, eventually eroded the body, which gradually lost its political power since the country's redemocratization and the achievement of greater autonomy by the municipal power. In 1989, despite its significant trajectory, FUNDREM was extinguished by an initiative of the State Executive.

Starting on the extinction of FUNDREM, a hiatus was established in the exercise of integrated planning and articulation of interventions in Rio de Janeiro. Since then, no other body with specific responsibility for the planning of the metropolitan territory has been constituted.

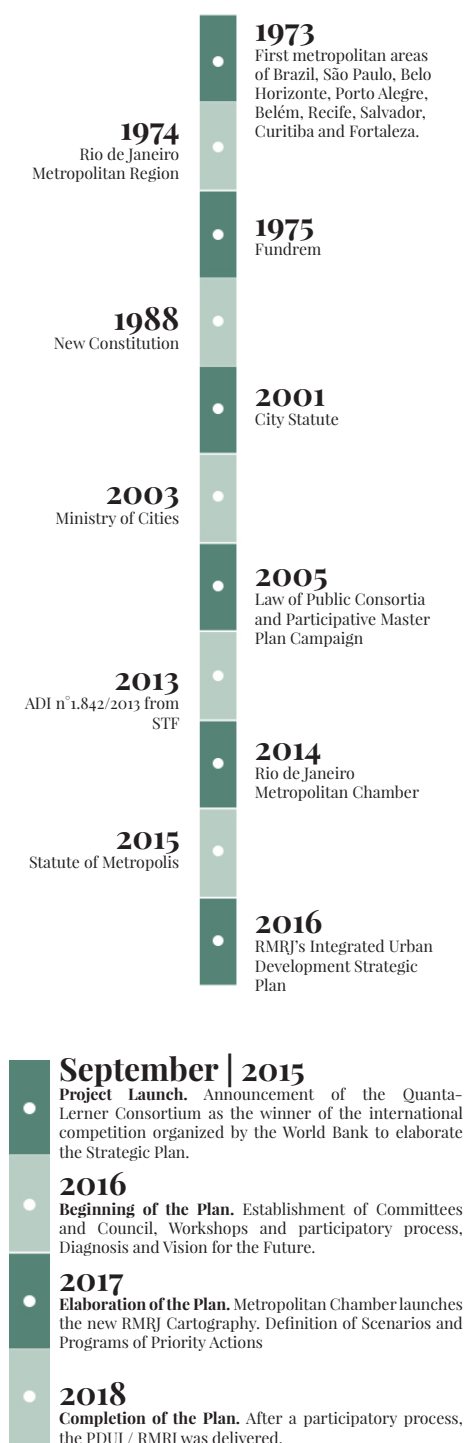
Twenty-five years elapsed until the planning of the metropolis once again assumed prominence in the agenda of the state executive branch. The debate on the exercise of public functions of common interest, which presupposes the planning of the metropolitan territory, will be resumed in 2014. The process of growth and expansion of the metropolis, together with investments in infrastructure, should be subject to shared criteria and guidance.

One must also mention sanitation services, including solid waste disposal, meso and macrodrainage of rainwater, as well as water and sewage treatment, and universal access to potable water. These services are essential for life, contributing decisively to the maintenance of health, minimizing operational costs and assuring the sustainability of the metropolitan territory on a broad spectrum.

A third public function of common interest corresponds to urban mobility, exercised through high and medium capacity modes, in which collective transportation by subway, trains, boats, BRT and VLT are the ones that best respond to the metropolitan scale.

The fourth function concerns actions of resilience towards impacts, both predictable and recurrent, caused by anthropic activities and the adverse effects of climate change. The geographical peculiarity of the metropolitan territory<sup>2</sup> bathed by two bays present in the region - Guanabara and Sepetiba - characterizes an area conducive to flooding, which tends to increase by the precipitation of summer rains, which heighten the occurrence of tragedies and lead to human, environmental and property

<sup>2</sup>"The term "recôncavo" is originally used to designate the set of lands, in the form of an arch, situated around any bay. The Recôncavo of Bahia is a striking example of this type of physical-geographical structuring."



losses.

A fifth and final function is added, providing greater agility to the achievement of those that precede it and rendering the implementation of digital communication services imperative. These services, by allowing the articulation of data and information, ensure greater efficiency in the governance of metropolitan territory, including in terms of compliance with the population's local demands. It should be noted that the structural thematic axes for the development of the Metropolitan Plan derive from these five main functions. The work of the Quanta-Lerner consortium, pursuant to the State Government's terms of reference, with the support of the World Bank, was guided by three main axes (Space Reconfiguration and Centralities, Economic Expansion, Valorization of Natural and Cultural Heritage) and three sectorial axes (Mobility, Housing and social facilities, Sanitation and Environmental Resilience). During the course of the studies, the flexible nature of the participatory methodology allowed for the inclusion of a new axis, transversal to the others – Public Management.

Simultaneously, in an attempt to fulfill the five aforementioned functions, it was necessary to carry out a detailed aerophotogrammetric survey, which allowed for the construction of a cartography of the RJMR, with the same technical specifications as those for the city of Rio de Janeiro. This work led to the preparation of the first metropolitan map, produced by the Metropolitan Chamber of Government Integration and published in August 2017, where the RJMR's geographic formation is clearly seen, in addition to the more expressive types of occupation that affect its territory.

This work led to the construction of the first metropolitan map, produced by the Metropolitan Chamber of Government Integration and published in August 2017, where the RMRJ's geographic formation is clearly seen, in addition to the more expressive types of occupation that affect its territory.

As a whole, it provides for public action that transcends the limits of Government Policy and enters the realm of State Policy, which is the necessary scope for the consistent and sustainable treatment of public functions in the metropolitan sphere.

# 01 the participatory construction of the plan

“The city is the place to exchange goods, information and affections”

Françoise Choay

---

The challenges of planning and managing a contemporary metropolis require the systematic, attentive and continuous engagement not only of the governing bodies, but also of the productive sector and civilian society; all based on a metropolitan governance that is capable of promoting a permanent effort of cooperation, articulation and dialogue.

The combination of knowledge originating from different publics and perspectives, bringing together managers, scholars and direct users of the metropolis' services, is increasingly becoming a decisive element for the formulation and appropriation of public policies around the world. As such, this premise permeated the steps of "Modeling the Metropolis", which proposes a new development model for the Region, whose foundations result from the two years of construction of the first RJMR Metropolitan Plan.

Different instances of participation were established in line with the sequence of the Elaboration of the Metropolitan Plan – Diagnosis and Future Vision stages; Scenarios; Priority Action Programs and Implementation Instruments; and an Integrated Plan –, the main challenges of which being to add diversity, density and legitimacy to the content produced by the consultants of the Fluminense Region Plan.

The scenario of the country, and, of Rio de Janeiro in particular, brought additional challenges to the engagement and participation activities. The institutional fragility and the political and economic crisis of Rio de Janeiro directly affected these activities, as well as the polarized context in the country, which put any dialogical and participatory process at risk. Finally, the renewal of practically all municipal governments in the region in 2017 required new and intense rounds of presentation and mobilization of the municipal bodies in the Plan.

At this stage, the methodology applied to the participation focused mainly on the engagement of representatives of municipal and state governments, academia, nongovernmental organizations, class entities, the private sector, specialists and members of social movements. These meeting opportunities have brought together, in a qualified manner, thousands of people directly into workshops, discussion groups (Grupos de Discussão, or GDs), seminars, expanded meetings, and public hearings. In addition, the participation process also had a strategy that was specially designed and followed through digital media, with the official page, biweekly bulletins, Twitter insertions and the Facebook page.



Municipal Strategies

Source: Quanta | Lerner Consortium (2018)



Workshops

Source: Quanta | Lerner Consortium (2018)



Workshops

Source: Quanta | Lerner Consortium (2018)



Discussion Groups

Source: Quanta | Lerner Consortium (2018)

In general, three forms of participation were established.

The first one was of a continuous and validating nature, with the **General Council of the Metropolitan Plan (Conselhão)**, comprising 172 participants, among individual and institutional representatives being tasked to monitor the different stages of the Plan. It gathered on four occasions. Subsequently, the Metropolitan Municipal Committee was established, bringing together representatives appointed by the twenty-one municipalities of the metropolis, and the Metropolitan State Committee, bringing together state-level government representatives. Both gathered on six occasions.

The second instance consisted of **regional and thematic workshops, discussion groups and meetings by segment**, which provided greater density to the results with the contribution of a network of players directly involved with the themes that structure the main work axes: spatial reconfiguration and centralities, sanitation and environmental resilience, housing and social facilities, mobility, appreciation of environmental and cultural heritage, economic expansion and public management. All municipalities were included in at least one activity.

The third stage was the **First Conference of the Rio de Janeiro Metropolitan Region**, which was preceded by ten (10) regionalized pre-conferences, attended by more than 600 participants, and the selection of 160 delegates for the Conference held in Niterói, on May 26, 2018. At that time, the priority actions of the Metropolitan Plan of Rio de Janeiro were voted on and the people who will compose the chairs of the Metropolitan Plan Follow-up Forum, the legacy of which will persist until the definitive installation of the metropolitan governance, were elected.

The **Metropolitan Council** met four times, at first when the Plan was launched, then to understand the diagnosis and validate the vision for the future, then to approve the scenarios and, finally, to validate the PAPs (Priority Action Proposals). All of these meetings were preceded by meetings of the Municipal and State Strategy Committees, always aiming at a direct action of the executive branch, which must be committed to the Plan.

The workshops for the definition of the diagnosis and vision for the future occurred during the year of 2016, focusing on the segments (municipal and state governments, business, class entities, universities, civil society, concessionaires) and the six thematic axes of the Plan (sanitation, mobility, natural and cultural heritage, housing, economic development and land use planning). Discussion groups were created for the different axes and segments and another axis, transversal to all, was enacted due to its notable presence in the discussions – the Public Management axis.

At the end of the “diagnosis and vision for the future” stage, the different groups were integrated, forming Discussion Groups for Axis Integration. From that moment onward, there was an endeavor to no longer treat the themes in a segmented way, but rather in an articulated and complementary manner. These groups continued to meet in 2017 and 2018 and built, following the definition of the scenarios, the Priority Action Proposals contained in the Metropolitan Plan.

In the process of concluding the Modeling the Metropolis project, a Decree published by the State Government defined the installation of the First Metropolitan Conference of Rio de Janeiro, which was preceded by ten pre-conferences covering the entire metropolitan territory; its main objective was to highlight the main priorities of the Plan through direct participation. The same decree also established the Metropolitan Plan Follow-up Forum, comprising 45 councilors and advisers, of whom 18 were appointed at the Conference as civilians and members of social movements, with the mission of monitoring the implementation of the Plan.



Metropolitan Conference  
Photography: André Gomes de Melo



**Metropolitan Conference**  
Photography: André Gomes de Melo





In addition to the entire process of preparing the Plan, the Metropolitan Chamber promoted Cycles of Debates, hearings and took part in various events and visits to Agencies and Entities, in addition to meeting with each of the city halls of the metropolis, seeking to disseminate the process and bring contributions to the final document. Only in the last year of the Plan, over 100 participations and local and regional representations occurred in the 21 metropolitan municipalities.

Metropolitan subjects are increasingly approaching the everyday and urgent realities of urban populations, and the engagement of social and academic institutions are essential conditions for the effective implementation of the Metropolitan Plan. The guarantee of an open and inviting process, combined with an active monitoring unit that renders the “Modeling the Metropolis” process alive and dynamic, is a wish that will come true in the following years in Rio de Janeiro. This seed has been planted.

# 02 the metropolis that we have

“The study of an urban organism is only recognized through the historical dimension, which in its intrinsic continuity merges with time through a succession of reactions and growths from an earlier state”

Saverio Muratori



---

# Overview

The RJMR has an incomparable historical-cultural legacy in the national scene. In the exploration of the built memory of this metropolis, layers of the history of the nation are unveiled, and the space displays records involving: the pre-Cabraline occupation of Brazilian colonial headquarters; the arrival of the Portuguese Royal Family; the capital of the Empire that later established itself as the capital of the Republic; the results of urban reforms such as those promoted by Pereira Passos, Carlos Sampaio and Carlos Lacerda – who reshaped the Center and expanded the possibilities of urbanization to the north, south and west; the marks of the peculiar administrative order that coincided the limits of the Federal District with those of the municipality of Rio de Janeiro, with Niterói, on the other side of Guanabara Bay, being the state capital at the time; the consequent relations of polarity that affected the territories of the municipalities adjacent to these two centralities, which shaped the occupation of Rio's suburb along with the structuring presence of the train tracks and railway stations; the Baixada Fluminense; and even the connection between Niterói and Maricá.

The present reality is marked by the overlap of assets and liabilities that determine contrasts in terms of quality of life in the various subspaces of the metropolis. There are deficits to be remedied on all fronts, accentuated by a challenging economic environment, but it is a fact that Rio de Janeiro received significant investments, as seen by the showcase of the Olympic Games held in 2016. Although they did not reach the fullness of their objectives, the legacy of much needed urban mobility works – such as the BRT and VLT systems – was the beginning of the revitalization of the port area with Porto Maravilha; important cultural ventures such as the Rio Museum of Art (MAR), the City of Arts, the Museum of Image and Sound (MIS) and the Museum of Tomorrow make up an important heritage that must also be appropriated by the metropolis.



Entrance of the Guanabara Bay seen from Santa Teresa - 1880

Photography: Marc Ferrez

Collection: Instituto Moreira Salles

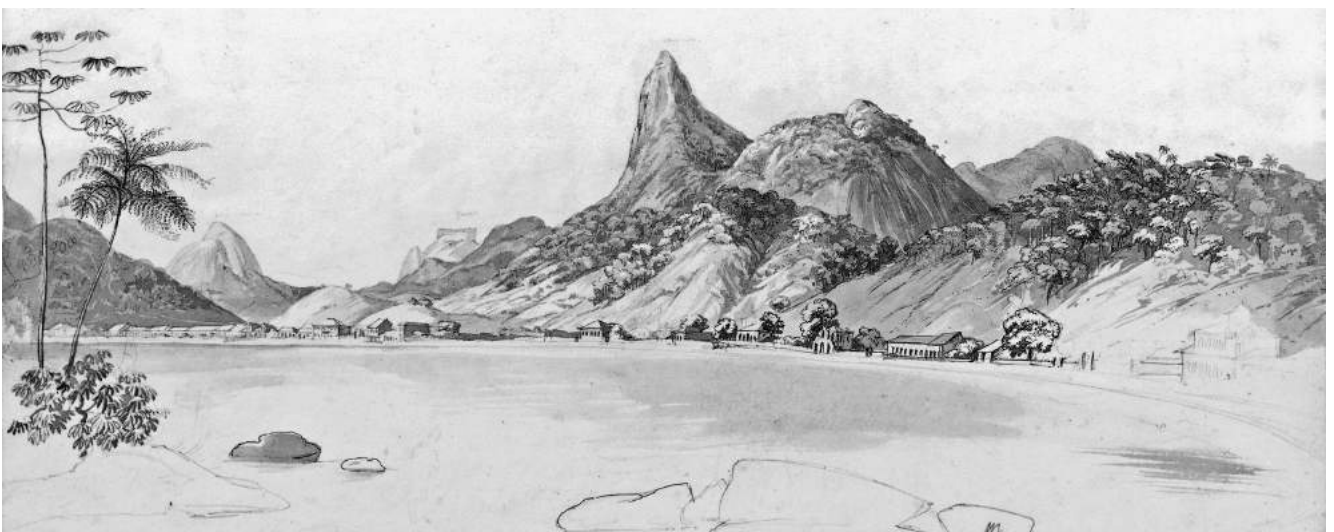


Entrance of the Guanabara Bay seen from Santa Teresa - 2017

Photography: Érika Poletto

Thus, the city of Rio de Janeiro wishes to reinforce its role as a tourist and cultural pole in the world, and ways of extending these benefits should be considered, spreading out in order to allow for access by other municipalities of the RJMR. Although the capital of the pole municipality is inherent to metropolitan relations, Rio de Janeiro presents a specific condition of hypertrophy. As a counterpoint, in the economic and infrastructure dimension, major investments are worth mentioning: the port complex of Itaguaí, the Rio de Janeiro Petrochemical Complex (COMPERJ) and its possibilities in Itaboraí, where the present limitations are considered, and the Metropolitan Arch, which promotes the connection between these potential regional centers, opening an axis of access and integration for the metropolis and new horizons for the municipalities.

One may add to this group the protagonism of the superlative natural components of the region and its geography, which, among green areas, mountains, valleys, bays, rivers, lagoons and seas, offer scenarios that definitely mark not only the identity of Rio de Janeiro, but the very image of Brazil in the world. The landscape resulting from the components of the natural and anthropic environment is an image that is also reflected in the cultural and imaginary dimension of the “Carioca” life, which brings the city and nature closer with quality of life. This connection, on the other hand, also explains the deficits in environmental sanitation that need to be solved, as well as the mismatch of the opportunities of usufruct of the environmental assets of the metropolis’ peripheral areas.



**View of Botafogo Beach, Rio de Janeiro (1823)**

Author: Johann Moritz Rugendas

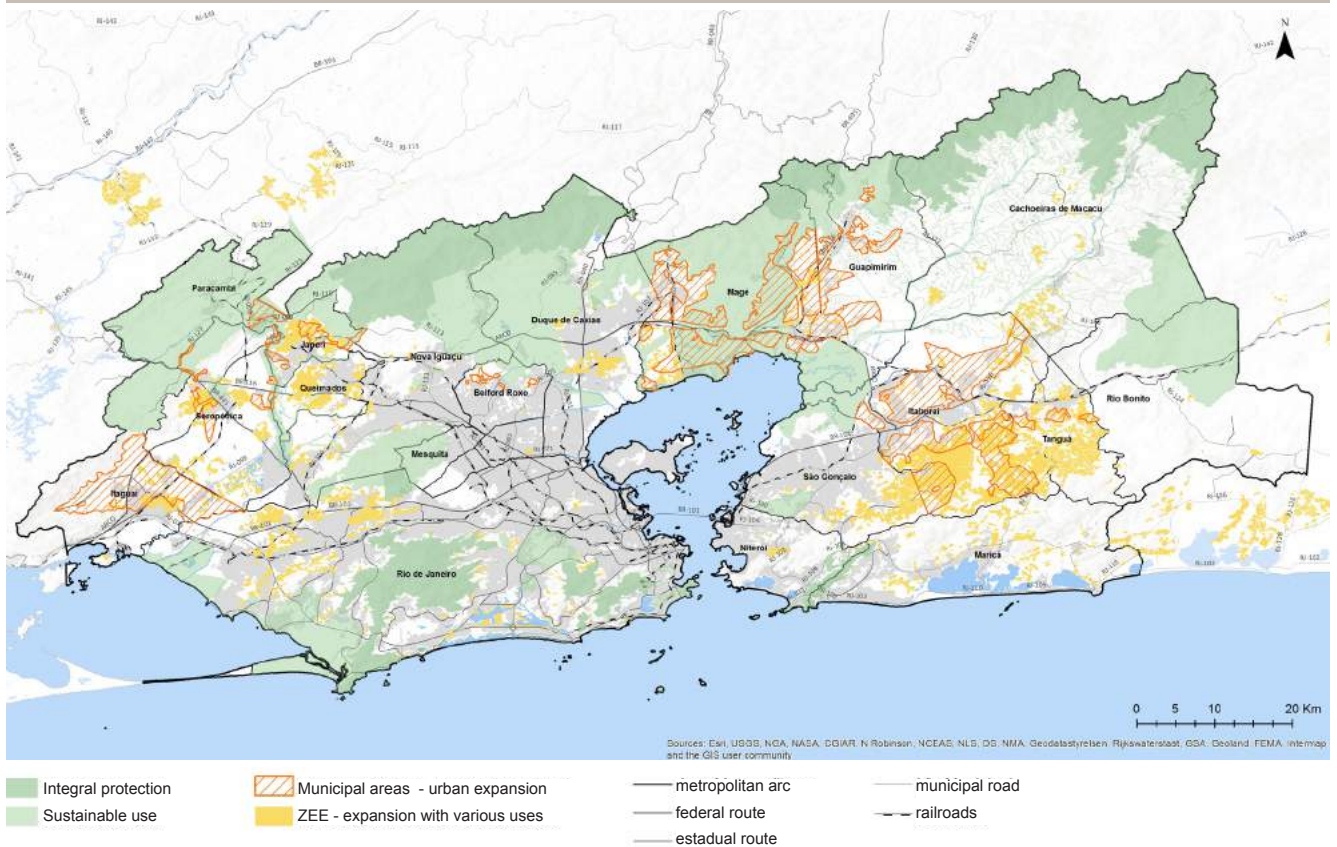
Collection: Instituto Moreira Salles

With its 21 municipalities, the RJMR is one of the most important metropolitan regions in the world, surrounded by green areas on all sides and concentrating most of the state's wealth, jobs and income.

From its territory of 6.7 million km<sup>2</sup>, there is a portion, estimated at around 26%, committed to urban activities, living with 36% of areas destined to environmental preservation present in the National Conservation Unit Register, which are added to the preservation areas protected only by municipal legislation. The configuration of this environmental heritage grants the region its uniqueness, not only for its ecological significance, but also for its landscape and scenic expression. In the rest of the territory, there are areas dedicated to agricultural and herding practices, mainly located in the north, east and west of the region, including part of the territory of the capital.

But despite these innumerable natural and social assets, the Metropolitan Region of Rio de Janeiro has lost its economic strength in recent years, and there are marked inequalities both in the center-periphery relations and in the intra-urban spaces of the more dynamic areas. A case of extreme concentration can be found in the central region of the metropolis, where the main mobility hubs converge and where the best services are located. Lack of sanitation and environmental degradation, frequent flooding, saturation of mobility axes, and a housing deficit are some of the effects generated by this model of urban expansion and socioeconomic development that ended up uniquely widening territorial, economic and social inequalities; these are some of the main obstacles to metropolitan management and planning. There is no shortage of challenges to building a cohesive, prosperous, environmentally healthy and solidary metropolis, and yet these are the aspirations that permeate the elaboration of the Plan. The main determinants and potentialities of the metropolis were analyzed in detail in regards to spatial reconfiguration and urban centralities, economic expansion, appreciation of natural and cultural heritage, mobility, housing and social facilities, sanitation and environmental resilience and public management.

The design of a lush amphitheater that basically encompasses the entire territory, formed by the Serra do Mar, a concave area penetrated by two bays - Guanabara and Sepetiba - some mountains and a set of internal hills.



Metropolitan Map of Urban Expansion  
 Source: Quanta | Lerner Consortium (2018)



Pão de Açúcar seen from the Botafogo Cove, Rio de Janeiro  
Photography: Érika Poletto



# The formation of RMRJ and its environmental base

From its original configuration in 1974, the Rio de Janeiro Metropolitan Region has undergone several modifications over the years. Successive state laws and the attributions conferred upon states in the 1988 Constitution continued to change its boundaries. Today, the RJMR is composed by the cities of Belfort Roxo, Cachoeiras de Macacu, Duque de Caxias, Guapimirim, Itaboraí, Itaguaí, Japeri, Magé, Maricá, Mesquita, Nilópolis, Niterói, Nova Iguaçu, Paracambi, Queimados, Rio Bonito, Rio de Janeiro, Seropédica, São Gonçalo, São João de Meriti and Tanguá.

If the administrative outline of the metropolis is dated in decades, the occupation of this regional space tells a centuries-long story. The formations of the Serra do Mar, Maciços Litorâneos and Gráben da Guanabara, covered by the characteristic Atlantic Forest (dense ombrophilous, semidecidual and mixed seasonal forests) together with mangroves, lagoon systems, rivers, extensive beaches and the Guanabara and Sepetiba Bays, were subjected from the beginning of colonial history in Brazil to transformations derived from territorial settlements by the Portuguese, Dutch, French, English, African slaves, and the native peoples of the pre-Cabral period. Sambaquis, military fortifications, aqueducts, ports, sugar mills, tenements, convents and churches overlapped by railroads, factories, landfills, borders, wide avenues, historic gardens, luxury condominiums and favelas – all within a territory that experienced, in a prominent position, the construction of Brazil.

The metropolitan pole is the city of Rio de Janeiro, the first capital of the country and, as mentioned, stage of multiple urban reforms that extended its territory from train tracks, in an urban expansion that left the sea for the suburb and for a region known as Baixada Fluminense. On the other side of the Bay, Niterói, which once served as the state capital, is another important centrality. Others have been formed throughout history, and their understanding has been the object of an in-depth study in the development of the work.

With extensive green areas and partially bathed by the sea, the Metropolitan Region comprises areas of protection and environmental preservation in its highest parts, with a lower strip that represents the agroecological region of the metropolis. In the lower lands and near the coast, we find the urbanized area, which suffers from frequent flooding problems, aggravated by lack of sanitation and

<sup>3</sup> Type of prehistoric kitchen middens found on the coast of Brazil

environmental degradation. Its geographic formation is completed by an extensive maritime coast, with shores and beaches, besides an extended system of lagoons that is slightly distant and parallel to the coast. Large stretches of Atlantic Forest, including the world's largest urban forest, the Tijuca Forest, are located there.

The issue of sanitation in the RJMR, as well as in the economy, is diverse and uneven. The current rates of water supply are generally satisfactory. However, in municipalities on the periphery of the metropolis and Baixada Fluminense, there are those in which the general supply networks only reach 40% of households, and more than half of the water that is captured and treated is lost along the way. The water security of the metropolis is fragile, marked by the strong dependence on the waters of the Paraíba do Sul river and by the lack of redundancy in the system, without possible alternative sources of a smaller size being explored or even inventoried.

However, the domestic sewage collection and treatment system is absolutely insufficient to provide healthy environments for Rio's inhabitants, making it clear that the adequacy of sewage is far from all targets. One may notice that the collection rates are slightly higher than treatment rates, but there are innumerable undue connections with the drainage system, which do not allow from any type of defense to the bodies of water receiving these outputs. The result is painfully visible in the environmental quality of the waters of the metropolis, whether in its rivers, lakes, lagoons or bays.

As far as solid waste is concerned, although efforts are still needed to increase collection rates, the most worrying factor is not service coverage, but rather the inadequate and irregular disposal of existing or even enclosed dumps, which still require remediation, in addition to the fact that the production of garbage is high, recycling rates are low and construction waste is practically unused.

Finally, as a result of the irregular occupation of metropolitan territory, over-densification and waterproofing of the urban fabric, and insufficiency and even lack of free spaces, the region's storm water management system is quite worrisome, with constant flooding that affects considerable portions of the population and that makes it essential to plan and carry out integrated actions in the sanitation sector that guarantee the environmental resilience of Rio

de Janeiro's Metropolitan Region. The system of free spaces and the set of conservation units are, for the RJMR, fundamental reserves of the discussion on flood control, environmental appreciation and the increase of urban resilience. Although 36% of the total territory of the metropolis is included in the set of Conservation Units registered in the National Conservation Unit Register, there are extensive areas of fragility not yet protected, either due to the lack of integration with the Register, due to the lack of georeferenced boundaries, or due to the delay in the elaboration of management plans.

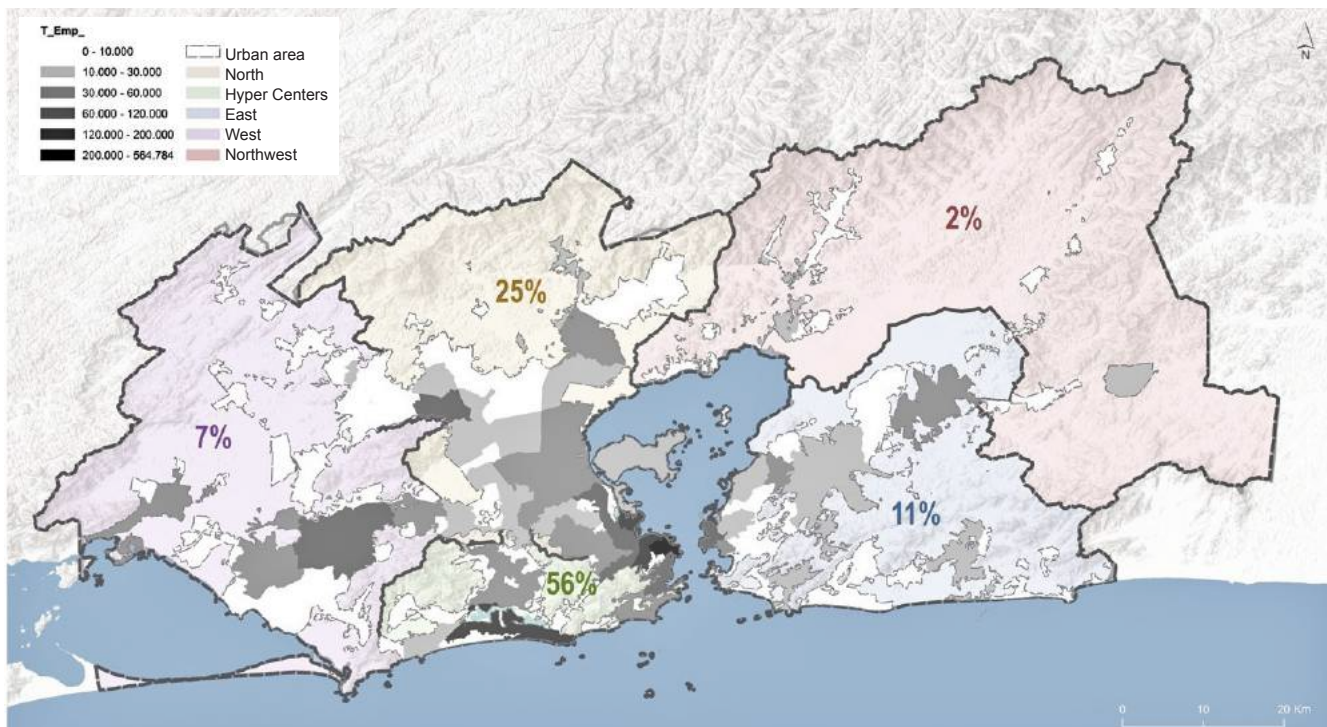
The protection of the natural heritage is added to the care for the cultural heritage, immanent riches of this Metropolis. While Rio de Janeiro and Niterói have reached a relative recognition of these assets, the other metropolitan municipalities are experiencing a lagging reality in terms of the application of heritage laws, delimitation of heritage buffer areas, registration of intangible assets and, above all, understanding of the meaning of a balanced coexistence between the present and the history; the human and the natural.

# Economic and population dynamics

In economic terms, the RJMR is the second largest metropolitan area and the second economic center of Brazil and the entire Southern Hemisphere, with a Gross Domestic Product (GDP) to the tune of BRL 405 billion, which represent about 64% of the total GDP of the State of Rio de Janeiro.

The metropolitan economy has heterogeneous characteristics, both in social terms and in relation to productivity. The regional territory includes areas with high incomes, a wide offer of services and infrastructure, which contrast with others of medium and extremely low incomes and issues in terms of services, infrastructure and security.

Three quarters of the metropolitan GDP are allocated in the city of Rio de Janeiro. If we compare the RJMR with the rest of the country, we conclude that the city of Rio de Janeiro spatially concentrates the greatest number of economic opportunities (jobs, businesses, etc.) among all Brazilian metropolitan regions.



Total Jobs in the Metropolitan Region of Rio de Janeiro  
 Source: Quanta | Lerner Consortium (2018)

To this hypertrophy of the most dynamic centralities in the metropolis space (particularly Centro, Barra da Tijuca, Niterói), one may add to the challenges of the economic field the lack of confidence of entrepreneurs in the local economy, the lack of planning, the lack of infrastructure – especially in terms of transport and sanitation – and public safety issues, which hinder the dynamism of the region's economy. In addition, the focus on a single sector for the regional economy (oil and gas) was not able to deliver the expected financial returns and, in the absence of another economic strategy, eventually created a statewide crisis. Other areas of development, such as international logistics – where we can mention important assets such as the Sepetiba and Guanabara Bays and the Galeão – Antônio Carlos Jobim International Airport – , but also health and tourism, operate far beyond their means. Thus, the metropolis suffers with the concentration of economic activities in the territory and with its functional concentration.

This concentration has yet another aggravating effect in a crisis scenario. Because of the importance of the RJMR in the state's economy, it suffers more intensely the conjunctural impacts of the economic, financial, fiscal, social and political crises that affect the country and the state. A reduced economic activity results in a series of externalities, such as the increase in violence and the wear and tear of public facilities, infrastructures and services, which in turn generate new problems for the resumption of economic growth. A broad understanding of the current framework is necessary in order to be able to modify it, finding measures capable of promoting progress in all areas of the economy in a synergistic way.



Cities of RMRJ

Source: Quanta | Lerner Consortium (2018)

In population terms, the RJMR is home to 12.4 million people (IBGE, 2017), of which 99.5% are concentrated in urban areas. More than half of these people live in the city of Rio de Janeiro.

The table below, specifying the area of each municipality and the number of its inhabitants, makes it possible to gauge the relationship between the population and the surface of the territory and also to understand the various forms of occupation of the metropolitan territorial space.

Counties	Population Projection	Area (ha)	Density (Inhab./ha)	% of population in relation to RM
Belford Roxo	494.141	7.895	62,59	4,01
Cachoeiras de Macacu	56.603	95.514	0,59	0,46
Duque de Caxias	886.917	46.711	18,99	7,19
Guapimirim	57.105	35.848	1,59	0,46
Itaboraí	230.786	42.974	5,37	1,87
Itaguaí	120.885	28.220	4,28	0,98
Japeri	100.562	8.165	12,32	0,82
Magé	236.319	39.080	6,05	1,92
Maricá	149.876	36.169	4,14	1,22
Mesquita	171.020	4.117	41,54	1,39
Nilópolis	158.319	1.936	81,77	1,28
Niterói	497.883	13.374	37,23	4,04
Nova Iguaçu	797.435	52.072	15,31	6,47
Paracambi	50.071	19.088	2,62	0,41
Queimados	144.525	7.568	19,1	1,17
Rio Bonito	57.963	45.981	1,26	0,47
Rio de Janeiro	6.498.837	119.999	54,16	52,71
São Gonçalo	1.044.058	24.850	42,01	8,47
São João de Meriti	460.541	3.513	131,09	3,74
Seropédica	83.667	26.512	3,16	0,68
Tanguá	32.703	14.308	2,29	0,27
<b>Região Metropolitana</b>	<b>12.330.216</b>	<b>673.894</b>	<b>18,3</b>	

Cities of RMRJ

Source: Metropolitan Chamber of Governmental Integration

On the other hand, it is important to emphasize the reduction in population growth rates in the region, which means a positive result if we look to the future, to the horizon of proposals that the Strategic Plan should contemplate.

The new fact of this sample is reflected in the growth of the elderly population, a phenomenon that was already observed in central countries, but that also begins to reach other parts of the world. In Brazil, shortly after World War II, from the mid 1950s to the beginning of the 1970s, the country registered an actual baby boom, coinciding with the accelerated process of urbanization and metropolization. Today, these indices are inverted, and we may find a population that reaches 60, 65 years of age, demanding public policies and services compatible with their needs and expectations.

This aspect deserves special attention, since the inclusion of the growing contingent of the elderly population requires differentiated actions and programs, which involve the qualification and specialization of health services, mobility and transportation, entertainment and leisure services. If we make a projection for the next 20 years, by the time we reach 2040, when the Strategic Plan ends, we will have about a third of adults at ages 65 and over.

At the same time, and due to advances in scientific and technological achievements, changes in habits and behavior are observed, pointing to the reduction of the size of families, the increase in the number of people living alone, the aforementioned growth of the elderly population – which makes us focus on the urban and housing issue, given the gap between the rates of population growth –, and the growth rates of real estate stocks, which shall, over the years, become even sharper. On the other hand, and depending on the pertinence and success of the strategies adopted by the Plan, we can have a more compact and comfortable spatial distribution, allowing for human settlements close to the main centralities, to the transportation corridors, served by basic infrastructure and adapted to the needs of the population.

However, if the current model of urban development persists, we will have to adapt to more serious situations than those already in place.

# The expansion of the metropolis and the demands for life, work and mobility

The population dynamics of the metropolis materializes in the built space. With housing levels that reached 4 million units in 2010, and growing by an average of 70 thousand units a year, the Rio de Janeiro metropolis expresses, in an acute way, the synthesis of the great socio-spatial inequalities that characterize Brazilian urbanization. The RJMR is characterized by the existence of small islands of high standard housing, equipped with all necessary infrastructure, in coastal areas or close to regional and subregional centers, all surrounded by low-quality housing spaces that, in the face of the fragility or even the complete absence of planning and control of public powers, expand rapidly, extensively and in a disorderly fashion to the periphery of the region, far from job offer centers. Possibly conservative numbers indicate that the growth rate of the metropolitan occupation spot occurs at an average of 32 square kilometers a year - almost equivalent to the area of a municipality such as São João de Meriti, thus hampering the provision of infrastructure and services and increasing their maintenance costs. Nevertheless, there is a housing deficit of 390 thousand units, concentrated in the lower income brackets; a little more than half a million units are located in subnormal clusters, which multiply and verticalize on unsuitable terrain and often present risks; and high urban precariousness (eg, streets without identification and/or without paving, drainage, sidewalks, open sewers) reaches more than 1 million homes.

Thus, when we look at the correlation between the demographic aspects and the urgency for decent housing, in a broad sense, we refer not only to quality in its production, but also to the need for renovation, at the very least, of more than a quarter of the existing real estate stock in the horizon of the next 20 years, coinciding with the end of the implementation of the Metropolitan Plan in 2040. Therefore, we will need to build nearly one million new housing units and, at the same time, reverse the perverse logic of urban sprawl, which also induces the absence of infrastructure services and harms its inhabitants.

When we highlight the housing theme, always understood in its broad spectrum, we do so because it is closely linked to the model of urban development that we intend to adopt for the RJMR, supported by the joint efforts of municipal and state authorities and articulated

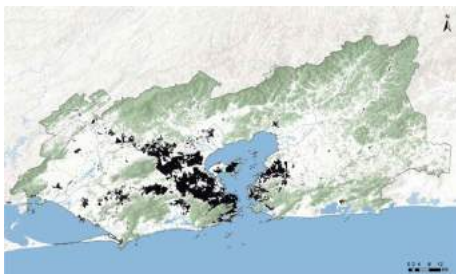




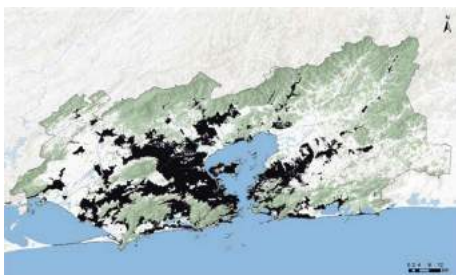
RMRJ Urban Expansion (1888)  
Source: Quanta | Lerner Consortium (2018)



RMRJ Urban Expansion (1930)  
Source: Quanta | Lerner Consortium (2018)



RMRJ Urban Expansion (1975)  
Source: Quanta | Lerner Consortium (2018)



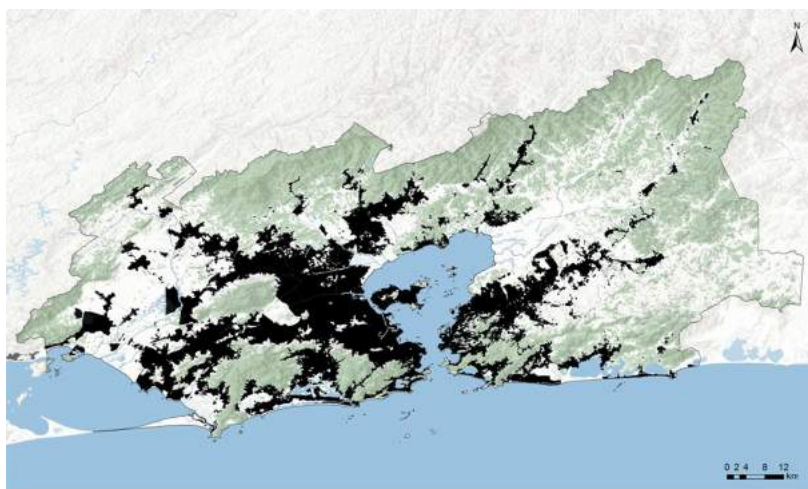
RMRJ Urban Expansion (1994)  
Source: Quanta | Lerner Consortium (2018)

with procedures of public utility companies and concessionaires, in order to obtain adequate and feasible answers.

Here we portray the process of expansion of the metropolitan urban spot, indicated in the map below, which, in the last two decades, has extended significantly, which helps to visualize the magnitude of the verified expansion process, as well as the opportunity to direct that growth force in favor of the desired metropolis design.

Most of these indiscriminate and spontaneous occupations lead to the emergence of slums, peripheral settlements, and other types of precarious and informal settlements that lead their inhabitants to distant and unequipped areas, which accentuates the absence of care and supply of drinking water through the public distribution network, collection and treatment of solid waste, collective transportation and, as a result, enhances the poor management of the metropolitan territory.

Thus, the option for decent housing, which we insist that should not be limited to four walls and a roof, extrapolates this limit, and goes beyond the expansion of stocks, leading to a more efficient use of the infrastructure already available, particularly transportation. What we want is to enable an occupation of the territory in which the balanced spatial distribution of the population allows for qualitative access not only to the infrastructure, but also to the centralities, points of concentration of services and jobs.



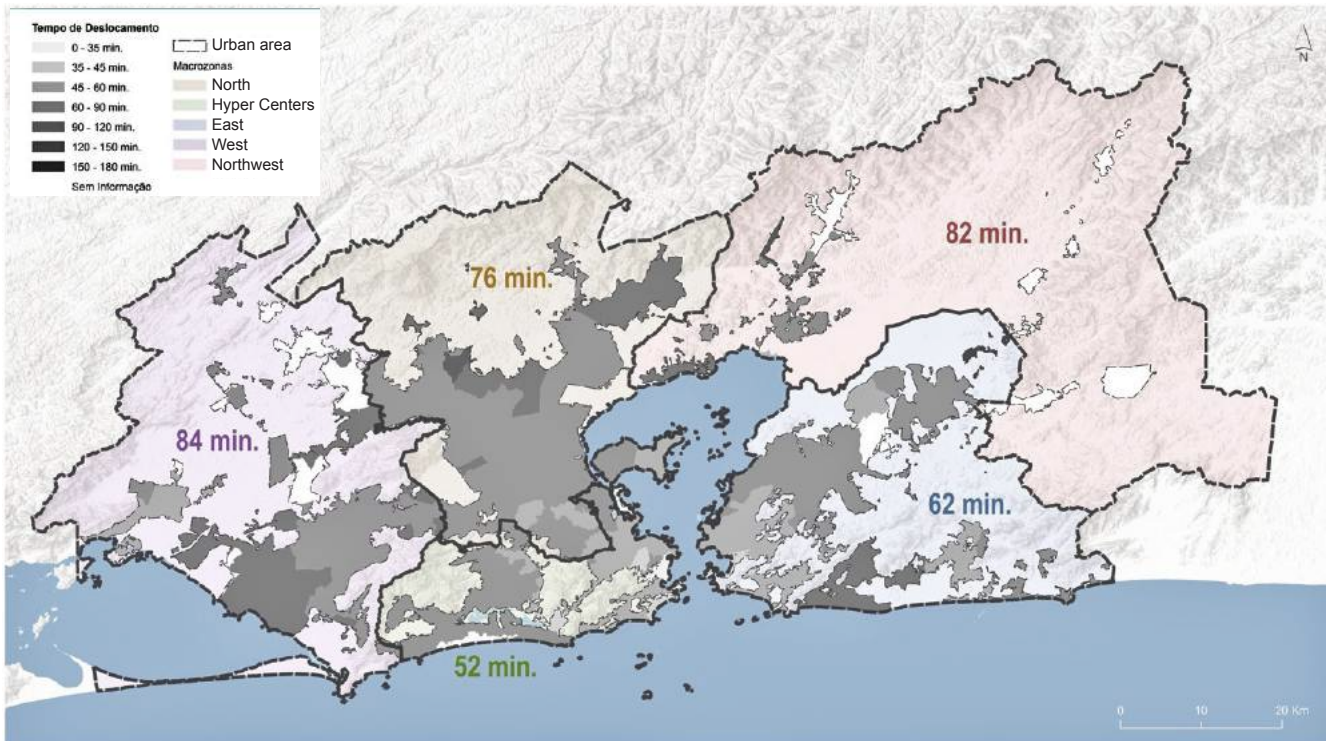
RMRJ Urban Expansion (2007)  
Source: Quanta | Lerner Consortium (2018)

This approach will help us combat another feature that we are not proud of. The RMRJ is the region of the country, where people spend more time on home-work-home courses. As seen, from our geographic configuration, stretching between sea and mountain, sung in prose and verse for its beauty, derived a shapeless expansion, generating high social and financial costs. It is estimated that two million people from the periphery will travel daily to the metropolis' hyper center, the equivalent of what happens on New Year's Eve in Copacabana, the country's biggest party. This unsustainable model, both from the social and environmental point of view and from the financial point of view, penalizes the populations of the metropolitan periphery, imposes significant costs, overloading the State, that with the adoption of the single ticket program, is impelled to raise, from time to time, the levels of subsidy. The excessive concentration of employment opportunities and services in the metropolitan nucleus - the city of Rio de Janeiro, also generates a huge expenditure, financial and time, that must be faced if we are to build a fairer and more equitable metropolis.

This inglorious record of the Rio de Janeiro metropolis is quantified in the 141 minutes (PDTU data for 2012) spent on average in these transfers. In a year, that would represent almost 36 days of a person's life that is lost in these paths, a time that is subtracted from productivity, leisure, family life, studies. And even if you had all the technical and financial resources needed to build a state-of-the-art mobility network, the displacements would still be long, since infrastructure and transportation operation are only part of the equation.

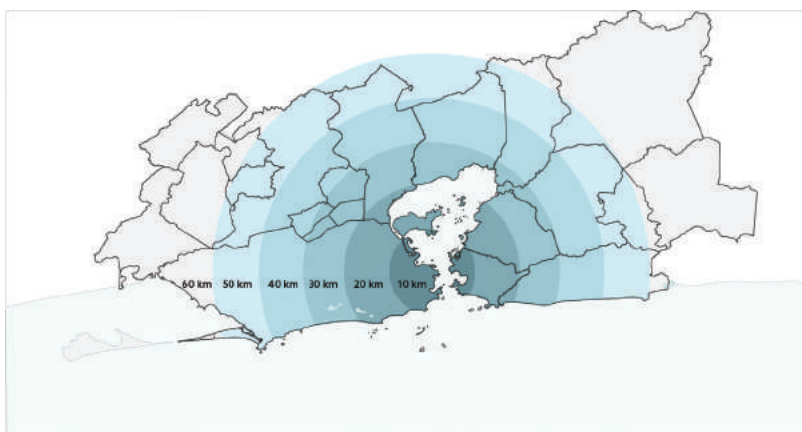
As seen, the distances to be traveled in the metropolis to meet daily demands are long, not only for geographic and infrastructure issues; but because the opportunities for work and service of public services, such as health, are distributed in space in a very unbalanced way. Despite all the investments made in recent years, the main axes of regional public transport remain saturated, and will continue, since it is not necessarily a demand for transportation that is being served, but for life. This human waste expressed in displacement times is therefore the acute symptom of a disease of the metabolism of this metropolis, of a dysfunctional urban fabric in which opportunities for employment, leisure, study, health need to be reorganized.

Following the purpose of a better understanding of metropolitan territorial dynamics, it is convenient to examine how densities behave.



Map - Average Work Round Trip Time with Collective Transportation  
 Source: Quanta | Lerner Consortium (2018)

The map and chart below illustrate how the population is distributed in the territory, demonstrating that there is a small population concentration of approximately 15% located within a radius of 10 km from Largo da Carioca, central point of Rio de Janeiro, which includes the areas of the Center of Rio, the South Zone, part of the North Zone, the Center and the South Zone of Niterói and its immediate surroundings. These areas, considered to be the best served by infrastructure, transportation and social facilities, also have high utilization rates, evaluated as the best in the metropolitan region.



Housing Density in MR  
 Source: Metropolitan Chamber of Governmental Integration

Population (Year 2010) - Radius	Inhabitants	Area (km <sup>2</sup> )	Area (ha)	Dens.(Inh b./ha)
10 km From Rio de Janeiro's Center area	1.945.899	165	16.596	117,25
10 - 20 km From Rio de Janeiro's Center area	3.302.535	508	50.853	64,94
20 - 30 km From Rio de Janeiro's Center area	3.193.084	921	92.165	34,64
30 - 40 km From Rio de Janeiro's Center area	1.861.796	1.303	130.383	14,27
40 - 50 km From Rio de Janeiro's Center area	992.333	1.404	140.192	7,07
50 - 80 km From Rio de Janeiro's Center area	652.069	2.387	238.771	2,73

Housing Density in MR  
 Source: Metropolitan Chamber of Governmental Integration

But as the radius progresses, every 10 km, one can see the drop in the standard of the installed infrastructure, the quality of the transport and the social facilities offered, at the same time that the density is also reduced. What is observed is the progressive increase in the level of the problems verified, which adds to the decline in density as the distance from the initial nucleus increases. When more expressive distances are reached, from 40 to 50 km, the density becomes even rarer, and the fragility of infrastructure services accompanies this downward trajectory. These areas are the ones that have received the largest number of precarious settlements in the last two decades and where the process of urban sprawl has deepened, as can be seen in the previous illustration. It is important to verify in the diagram that between 20 and 40 km one may find the greater challenges, the greater urban, environmental, social and economic liabilities of the metropolitan territory.

For the construction of a socially just and economically sustainable metropolis, the focus of public policies should be directed, as a priority, to the two hubs that are found 20 km away from Largo da Carioca, up to the 40 km mark, corresponding to the West Zone and the extreme west of Rio de Janeiro, where the Baixada Fluminense is located, along with the Guanabara Bay, Magé and Guapimirim, and a considerable part of the metropolitan east, consisting of São Gonçalo, Itaboraí, Maricá and Niterói. The illustration above clearly shows these challenges. It is also worth mentioning the role that the development axes, such as the Metropolitan Arch, Avenida Brasil and BR 101, assume in the areas of concentration of economic activities consecrated in the territory of RJMR, which, as such, lack stimulation and treatment compatible with their relevance.

Advancing in the understanding of these socio-territorial fragilities in the metropolitan scenario, we sought inspiration from the Lisbon Charter of

Neighborhoods and Zones of Priority Interest to select a set of variables that would help us to locate and quantify the spaces that need to receive urgent attention and priority of the state in the construction of the Plan's actions, which in the proposal stage were highlighted as areas of socio-territorial cohesion. Three indices of high recognition and amplitude were selected for this purpose: the IPEA Social Vulnerability Index; the IBGE Intra-urban Typology Index, and the UNDP Human Development Index, each with a comprehensive set of indicators that cover, in particular, infrastructure issues, socioeconomic and educational, health and longevity characteristics. For each of these indices, the worst indicators (living conditions, human development, social vulnerability) were found, which, on top of that, revealed the precarious situation in which almost 2.7 million people live - about 23% of the population of the metropolis - in an area of nearly 40 thousand hectares (forty thousand soccer fields). These are areas where the violence, trafficking and militias set the tone of daily life, rather than the offer of education, health, transportation and leisure. And also where the marginal costs of urban precariousness - clandestine connections of light, water, cable TV services, for example - are more intense. All of these realities need to be considered in the fair equation of the costs of production and reproduction of the metropolis.

The delimitation of these vulnerable territories exposes a scenario of historical inequalities to be recognized and faced by governments and metropolitan society. Parallel to the concentration of investments, both quantitative and qualitative in the nucleus, to the detriment of the whole of the metropolis over time, the configuration of the metropolitan territory follows a pattern of occupation and urban expansion resulting from the continuous exclusion of the low-income population from central areas of the city towards the peripheries and urban fringes. Combined, these

historical and political movements result in extensive outlying areas occupied by the low-income population from informal land-subdivision processes and self-built housing. This verified in the hillside slopes of the central areas, constituting a context of territorial proximity and social distance, expressed, for example, by the slums located in the South Zone.

Some figures illustrate this reality. While in the municipality of Rio the index of people living under minimum wage is 20.9%, in Baixada Fluminense it is close to 34%. In the favelas of Vigário Geral and Complexo do Alemão, 43.6% and 39.8%, respectively,

are the percentage of those living with up to half a minimum wage. The income facet, however, is only one of the variables that illustrate the contrasts of the metropolis, and even the contrasts are not homogeneous. Although vulnerable areas of the MR have common systemic deficiencies, they also retain specificities and reveal more subtle layers of inequality at the intra-municipal and local levels, pointing to the existence of a significantly heterogeneous territory to be worked on.

AREA OF SOCIO-TERRITORIAL COHESION							
CITY	AREA COMMITTED TO URBAN ACTIVITIES (HA)	AREA OF SOCIO COHESION TOTAL TERRITORY (HA)	% ZCST AREA IN THE URBAN AREA OF THE MUNICIPALITY	TOTAL POPULATION (ZCST)	AVERAGE DENSITY (INHAB./HA)	TOTAL POPULATION IN URBAN AREAS	% OF POPULATION LIVING IN ZCST
BELFORD ROXO	6.408,70	4.098,30	63,9	317.543	77,48	480.026	66,2
DUQUE DE CAXIAS	15.238,60	5.331,10	35	404.333	75,84	847.801	47,7
GUAPIMIRIM	2.716,10	539,9	19,9	17.565	32,54	51.025	34,4
ITABORAÍ	9.488,60	4.613,10	48,6	156.955	34,02	215.529	72,8
ITAGUAÍ	4.464,50	810,6	18,2	31.415	38,76	112.212	28
JAPERI	2.460,60	1.831,80	74,4	76.263	41,63	93.252	81,8
MARICÁ	8.612,60	883,3	10,3	20.802	23,55	127.172	16,4
MAGÉ	7.668,40	3.514,50	45,8	153.956	43,81	225.931	68,1
MESQUITA	1.427,60	67,3	4,7	15.739	233,97	168.153	9,4
NITERÓI	6.296,30	91,2	1,4	16.587	181,82	483.745	3,4
NOVA IGUAÇU	12.871,50	6.536,10	50,8	455.330	69,66	783.161	58,1
PARACAMBI	652,4	52,4	8	8.654	165,28	42.375	20,4
QUEIMADOS	2.787,20	1.463,90	52,5	98.729	67,44	138.346	71,4
RIO DE JANEIRO	59.344,50	2.222,20	3,7	600.862	270,39	6.281.883	9,6
SÃO JOÃO DE MERITI	3.488,30	370,2	10,6	77.563	209,49	458.957	16,9
SÃO GONÇALO	13.476,30	3.625,10	26,9	227.200	62,67	997.672	22,8
SEROPÉDICA	3.475,80	1.083,10	31,2	26.428	24,4	72.641	36,4
TANGUÁ	1.178,40	918,4	77,9	24.861	27,07	28.795	86,3
TOTAL - RM	166.360,60	38.052,40	22,9	2.692.996	70,77	11.869.710	22,69

Area of socio-territorial cohesion (ZCST)

Source: Metropolitan Chamber of Governmental Integration

# The panorama of public management and metropolitan governance

This brings us to the crucial aspect of public management and metropolitan governance, which is essential if the plan is to prosper; so that the achievement of the proposed guidelines, strategies and objectives is effectively enforced.

The difficulties in these areas are at the same level of the other challenges of the metropolis. So relevant was this finding, including from the contributions of the participatory process, that this theme ended up being included as a transversal structuring axis in the development of the works.

The metropolis we have still does not have a governance scheme that meets the criteria defined by the Federal Supreme Court. This entity, responsible for the ultimate constitutional interpretation, when analyzing the aspect of metropolitan management, deliberated on the need for inter-sedimentary sharing of decisions and initiatives in all public functions of common interest, that is, everything that implies metropolitan impact.

It was also clear that the municipalities that are part of the metropolis that we have are still unable to cooperate with each other on a regular basis, leaving competitiveness only as an activity in relation to other metropolitan regions. In the short and medium term, it is intermunicipal solidarity, with the support of the state government, that can launch a process of sustainable development, from strategic investments that allow a progressive reduction of territorial inequalities, for this is one of the most remarkable characteristics of the metropolitan territory that we live in.

The analyses conducted also point to a type municipal management that is very heterogeneous in quality, although all municipalities have access to the same management and planning instruments. It is suggested that one of the missing elements is the political will to make improvements with incremental continuity, for example, where each management period adopts priorities that are improved and expanded in the following four-year periods. Municipal tax structures are still very dependent on transfers from the state and federal spheres, and there is no incentive for municipalities to develop an additional effort to strengthen their own resources, despite the provision of platforms and courses to that end.

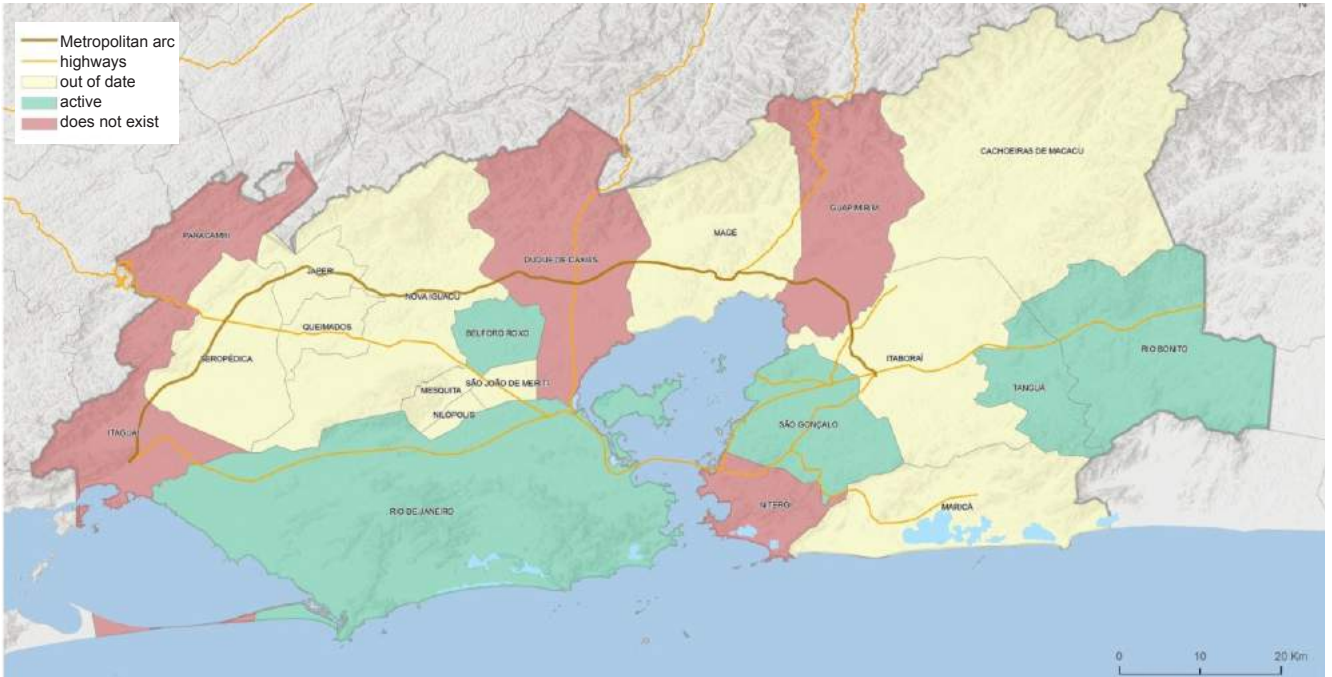
There is still no “territorialisation” of investments within the State Government that gives visibility to the programs that benefit the RJMR, which contributes to their continuous “invisibility” in the popular perception. There is plenty of good information, accessible through open portals, but there is a lack of incentives for municipal authorities to incorporate them into their analysis and decision-making processes. On the other hand, the use of digital platforms for interaction with the population is not bad, with there being an availability of these services and intentions for improvement.

Municipalities still lack basic needs that cannot be met only by traditional financing schemes, because they either do not have sufficient own resources or do not generate enough cash to be able to return resources eventually received by a repayable loan. This scenario is not very encouraging for the leveraging of additional resources, and only 3 municipalities, among 21 of the Metropolis, could move forward in this direction. The basic qualification of the municipal staff is insufficient for the efficient use of new technological tools to support urban planning, although the metropolitan region has a wide range of educational and research establishments for this purpose.

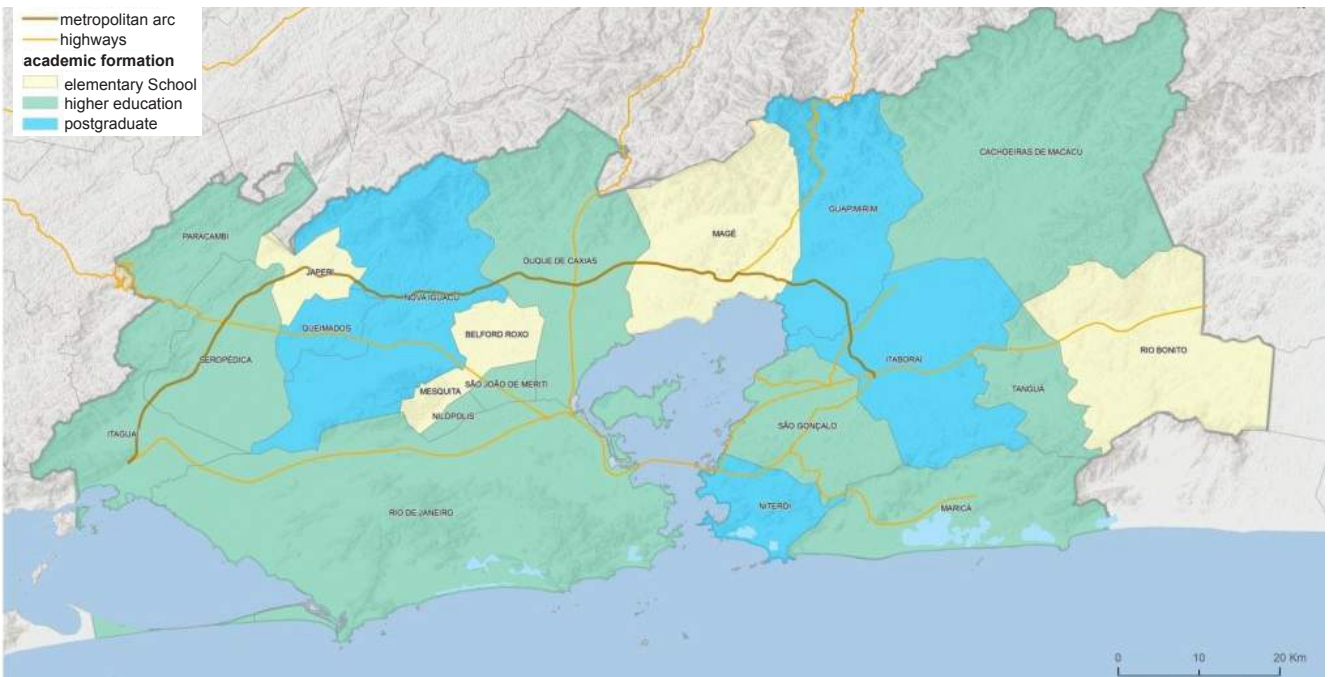
Finally, despite the great availability of intellectual and creative capital in metropolitan civil society, and occasional initiatives to achieve some aggregation, there is still no organized platform to converge this potential in the direction of the orderly solution of territorial, tax-related and socioeconomic problems, as well as the operational management of the metropolitan region.

By tracing the Plan’s preparation paths, it was possible to verify that, in order to materialize the vision of the future to be built, in order to achieve success in the strategies to be selected, the strengthening of public management capacity plays a decisive role in consolidating knowledge and gathering forces, in an effective integrated and cooperative environment that supports metropolitan governance.





Validity / Actuality of the collection of improvement contribution in the Metropolitan Region of Rio de Janeiro  
 Source: Quanta | Lerner Consortium (2018)



Academic Training of the Municipal Manager in charge of Urban Planning in the Metropolitan Region of Rio de Janeiro  
 Source: Quanta | Lerner Consortium (2018)

# METROPOLITAN DIAGNOSIS

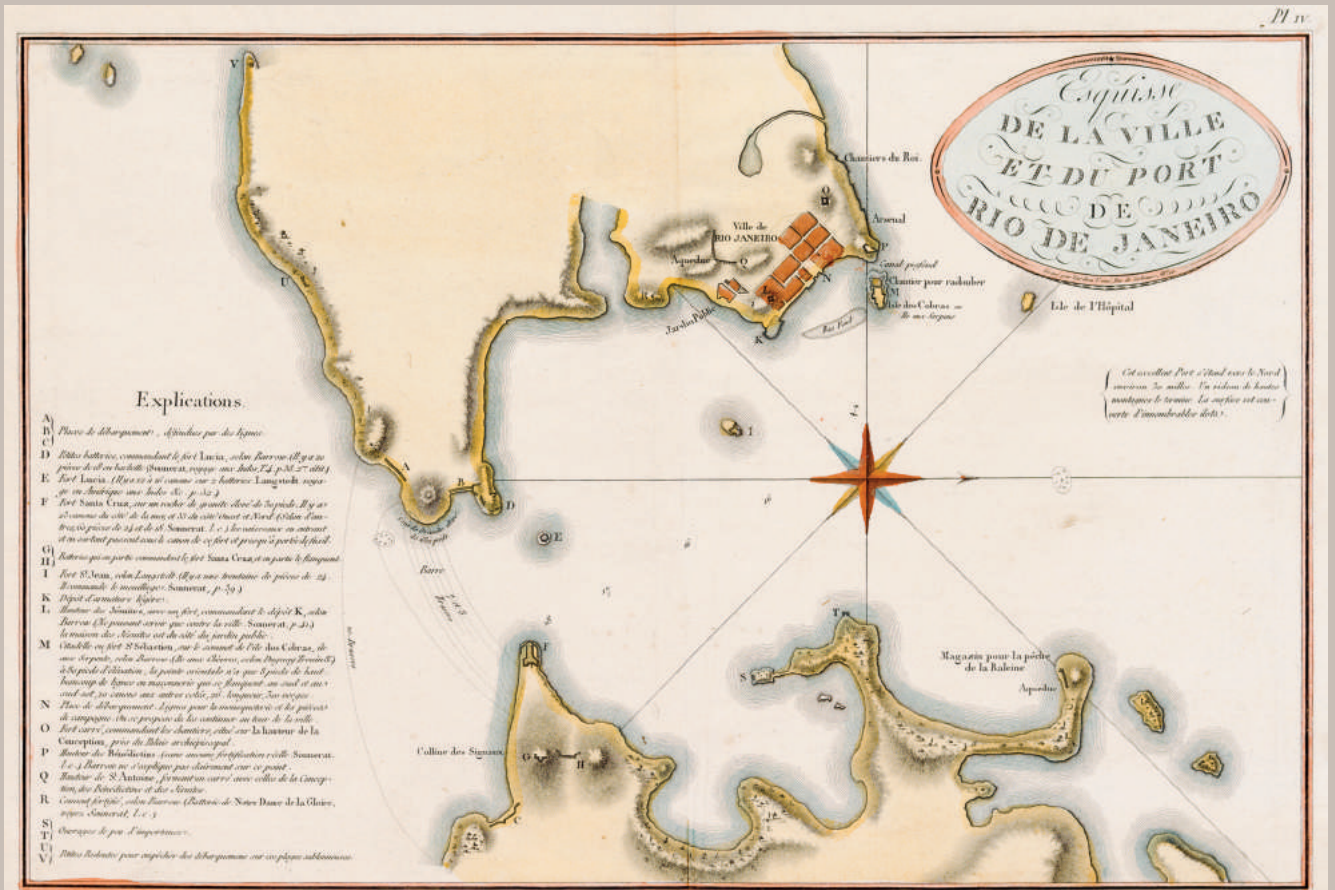
## SPATIAL RECONFIGURATION AND URBAN CENTRALITIES

- Urban sprawl, with accelerated expansion of the periphery;
- Radial transport infrastructure, privileges for individual motorized transport;
- Lack of urban infrastructure, especially in the metropolitan periphery;
- Strong concentration of jobs and income in the central and coastal region (Centro, Barra da Tijuca and Niterói);
- Different logics of territorial planning adopted by contiguous municipalities;
- Environmentally fragile areas still unprotected, without legal protection;
- Several pits resulting from the extraction of sand with negative impacts on the environment;
- Need for expansion of water resources to supply the population;
- Fragility of municipal mechanisms to control land use and occupation, contributing to the expansion of informal occupations;
- Dissociation between complementary laws of land use and occupation and master plans; directors' plans lagging in relation to legal deadlines;
- Lack of planning that guides the urban growth of the Metropolitan Region and investments in infrastructure;

- Disruption of transportation planning and management between State and Municipalities, which contributes to the lack of physical, operational and tariff integration;

## ECONOMIC EXPANSION

- Imbalance and concentration in the capital of wealth, jobs, equipment, trade, logistics, sanitation, urbanization and equipment;
- Low utilization of strategic economic assets, especially the Bays of Sepetiba and Guanabara and Galeão Airport;
- Fiscal and economic crisis and dependence on oil; there is room for new facilities in the various municipalities;
- Underutilization of logistics potential, especially in the Ports of Itaguaí, Rio de Janeiro, Maricá and Niterói and the Metropolitan Arch;
- Underutilization of opportunities related to the health complex, with potential in the existing Technological Corridor and in the Guaratiba Complex;
- Innovations below potential and little academia/business interaction;
- Low qualification of labor;
- Tourism concentrated in the capital and underutilized;
- Potential wasted in relation to the Creative Economy, with underutilized sectors;
- Underutilized agricultural potential in several RM municipalities.



Esquisse de la Ville et du Port of Rio de Janeiro

Author: Antoine François Tardieu

Collection: Instituto Moreira Salles

**APPRECIATION OF NATURAL AND CULTURAL HERITAGE**

- Lack of recognition of tangible and intangible assets (except Rio and Niterói);
- Delay in relation to the application of repossessionment laws, the delimitation of buffered areas of fallen assets,

and the registration of intangible assets;

- Registration (CNUC) is not constantly updated, lacking georeferencing;
- Need to mitigate problems related to global warming;
- Poor awareness of the population of the value of cultural heritage;

**MOBILITY**

- Excessive travel time (especially for public transport);
- Intra-regional inequality - peripheral municipalities very dependent on the most central ones (Rio and Niterói), and little connected with each other;
- A vicious cycle that needs to be broken due to the supply of jobs and better public services, transportation demands are mostly for the Center of Rio de Janeiro;
- Privileges for individual transportation, which becomes faster than the collective;
- Excessive user charges for public transportation, need for more forms of financing for the system;
- Irrationality in the territorial distribution and schedules in the bus lines (and consequent overload);
- Absence of institutional integration - internal management, transparency and social control, integration between municipalities and metropolitan integration;
- More sustainable transport solutions needed in relation to the environment;

**HOUSING AND SOCIAL FACILITIES**

- High quantitative housing deficit, with about 400 thousand housing units (10% of the 4 million households);
- Approximately 520 thousand households in subnormal clusters already identified;
- About 700 thousand housing units with some type of inadequacy (infrastructure, land, others);
- More than 1 million households are in unidentified

streets and/or without a manhole; 665 thousand in unpaved roads; about 284,000 with open sewage;

- Enlargement of the urban spot, about 30 km<sup>2</sup> per year;
- Production of recent social housing not integrated to the urban dynamics, its work opportunities, public services and infrastructure;
- Demand for simplification of standards, procedures and technical assistance for housing production;
- Absence or discontinuity in financing sources for housing policies;
- Absence of planning for specific situations: elderly, historical real estate, housing in the center;
- Absence of government programs that take advantage of the great potential represented by the housing self-construction of families, financing it, guiding it and rationalizing it.

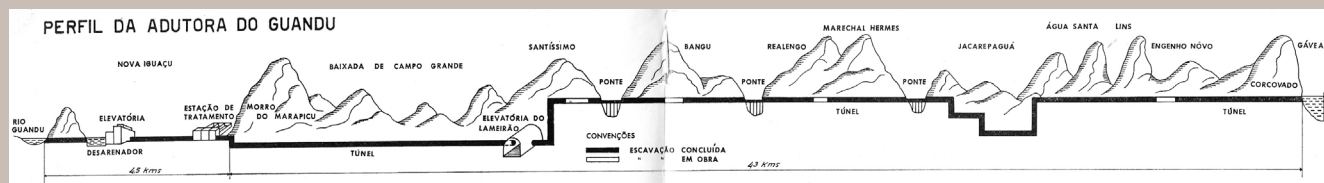
**SANITATION AND ENVIRONMENTAL RESILIENCE**

- 87% of RM households have water supply through the general network and 10% with well or spring;
- General water supply is very low (up to 40% of households) in peripheral municipalities such as Maricá, Itaboraí, Magé and Baixada Fluminense;
- Losses of water above 30% on average, reaching 50% in municipalities of Baixada Fluminense;
- Fragility of water security, excessive dependence of Paraíba do Sul river, reduced reservation;
- High water consumption per capita and inequality in the distribution of available water;

- The RJMR has a collected sewage volume of 54.7%, included in this percentage separative networks and the removal by rainwater drainage network;
- From this collected volume, 67.45 is treated, which represents 36.9% of the total volume produced in the metropolis;
- Coverage of the collection of Urban Solid Waste reaches rates higher than 90%;
- Landfills of Belford Roxo, Guapimirim, Cachoeiras de Macacu, Itaboraí, Tanguá, Rio Bonito and Maricá do not present remediation processes;
- Only 7 metropolitan municipalities (Japeri, Magé, Mesquita, Nilópolis, Niterói, Nova Iguaçu and Rio de Janeiro) have selective collection;
- There is concentration of floods in Rio de Janeiro (Mangue and Cunha channels), Baixada Fluminense (Iguaçu-Sarapuí, Estrela and Magé channels) and São Gonçalo (Alcântara, Imboaçú and Guaxindiba rivers);
- Existing macrodrainage infrastructure is not sufficient to prevent flooding;
- The municipalities to the east of the Bay of Guanabara have low rates of microdrainage care;
- Climate change brings with it the risks of intensification of extreme events and the advance of the oceans (especially in the lowlands);

**PUBLIC ADMINISTRATION**

- Absence of formal metropolitan governance, with the participation of municipalities and society;
- Inexistence of arrangements for joint action (inter-municipal consortia, interferatives, others);
- Municipalities and state act to serve their own interests, rather than acting jointly by RJMR;
- Lack of efficiency and transparency in public management, expenditures without planning or technical basis;
- Low qualification of the civil service (especially in smaller municipalities);
- Fiscal framework of the state and municipalities does not allow the necessary investments to be made;
- Municipalities with high dependence on intergovernmental transfers; need for revenue growth;
- Own collection of municipalities insufficient (improvement of real estate / multifinality registers);
- Need for a metropolitan fund and partnerships to raise funds;
- Absence of articulation of the master plan, sectorial and other plans and planning instruments;



Profile of Guandu's adductor (1965)

Source: Gastão Cruls - Appearance of Rio de Janeiro

# The five macro-regions for metropolitan planning

The range of challenges to overcome, together with the survey of the potentialities present in the territory of the metropolis, brought to the debate the definition of five planning macro-regions, presented in the map below, and which serve as a synthesis to the effort of understanding of the metropolis that we have.

The first macro-region, located in the far west, covers a potential derived from logistic activities, already established zones and poles of industrial processing, mainly linked to the Port of Itaguaí. Also worthy of note is the retro-area of the Metropolitan Arch, located around Seropédica and Itaguaí, the industrial district of Queimados, Japeri, and Seropédica, including the municipality of Paracambi. All these locations are very close to each other, the first three of which bordering each other and demonstrating an industrial and logistical development capacity worthy of particular attention.

The second macro-region comprises the northern sector of the municipality of Rio. A compact and qualified territory, it exhibits a great population density, being integrated by the suburbs of Central do Brasil, Leopoldina and, practically, the entire Baixada Fluminense. As for economic activities, this macro area, composed of Madureira, Meier, Nova Iguaçu and Duque de Caxias, as well as Nilópolis, Belford Roxo, Mesquita and São João do Meriti, exhibits booming trade, which makes it a dynamic centrality in the offer of jobs and the provision of services.

Another macro-region of relevant expression planning, defined in the Plan, corresponds to the Hypercenter of the city of Rio de Janeiro, whose potential combines research activities, technological innovation and complex services, developed, above all, by the territory of the Center and the Port of Rio de Janeiro, by the South Zone, by the North Zone, Tijuca, and Barra da Tijuca. This macro-region covers around 75% of jobs and 85% of hospital beds throughout the RJMR.

In spite of the excessive concentration, what is wanted for this macro-region is that the potential inherent to it, proper to a large metropolitan center, should prosper, at the same time that it receives investments that better qualify it, endowing it, for example, with an airport connection.

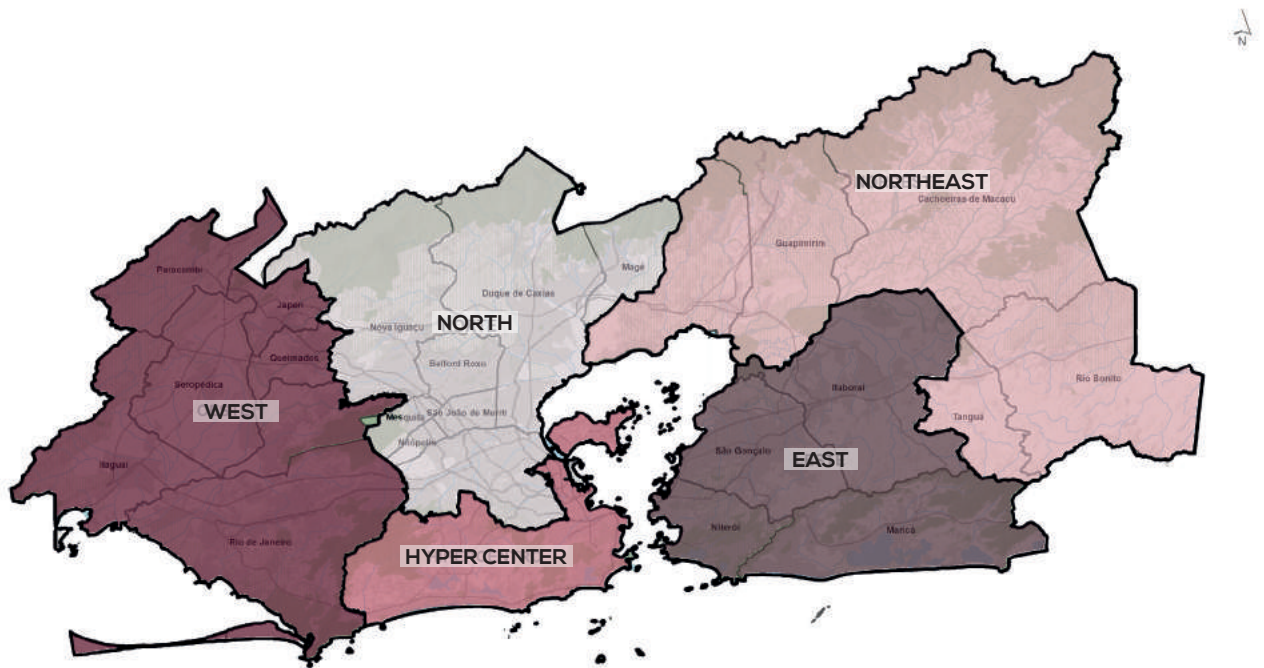
Located northeast of the RJMR, the fourth macro-region stands out from the others for its rural activities, which are expressed in food production and water security, fundamental to the maintenance of life. One of the great challenges of metropolitan cities worldwide is to ensure the proximity of food production to consumption. In the specific case of the farm properties of the metropolitan northeast, besides securing protection to the green areas and being sensitive to the protection and environmental preservation, they enable access to potable water for a population that exceeds two million inhabitants and allow for the containment of indiscriminate and random expansion, that transforms rural areas into urban ones, avoiding the damaging sprawl of the metropolis.

Viewed from the perspective of economic opportunities, rural areas, besides producing food, provide the supply of better quality products, – organic, for instance – avoiding the importation of perishables from other states of the federation; this entails logistical and operational costs (ICMS), which make them more expensive. If well used, the rural areas of the metropolitan northeast will contribute to the generation of employment and income, by preparing and distributing daily meals to municipal and state public schools, hospitals and other establishments, including those of private enterprise.

Finally, the eastern planning macro-region, which, in close connection with the petrochemical chain due to the Pré-Sal exploration and the presence of the COMPERJ refinery, added to the shipbuilding activities

(shipyards) located in Niterói and São Gonçalo, can and should be stimulated, in order to regain lost competitiveness in the supply of services and jobs for the region.

The definition of the five planning macro-regions was not only useful for the synthesis of the metropolis diagnosis, but also for the formulation of the future vision and the scenarios of the Strategic Plan, as we will see later, as it allows for the subsequent monitoring of the effectiveness and pertinence of the measures and proposals contained in the Plan.



WEST	NORTH	HYPER CENTER	EAST	NORTHEAST
Logistics, industrial processing zones and poles	Research, innovation, technology and complex services	Densification, compaction, integration and urban qualification	Metropolitan east urban service center and petrochemical supply chain	Rural development, water and food security

Map of the Planning Macroregions  
 Source: Quanta | Lerner Consortium (2018)

# 03 the metropolis we want

“The soul of a city, the life force that makes it breathe, progress and exist, resides in each of its citizens, in every man who applies it and in it exhausts the meaning of its life.”

Jaime Lerner



---

Upon better understanding the “metropolis we have”, efforts have been made to build the “metropolis we want”, the joint construction of the vision of the future and the scenarios that will allow us to “model” the future of the metropolis in the image and likeness of its desires; potentialities and possibilities and that will indicate, through the Metropolitan Plan, the ways that will later be traced for its accomplishment. In short, translating the fundamental response to any planning process - what we want to achieve, and how to get there.

During this construction, a series of concomitant strategies needed to be articulated in order to establish solid channels that would lead to a deep and systematic understanding of the aspirations of society in its different places in order to confront, correct, complement and enrich the premises that guide the conception of the studies. For the construction of the Vision for the Future, a participatory methodology was created and implemented through a series of channels of communication, consultation and participation, whose interactions fed, enriched and strengthened the technical work. Further details on the methodology of participation and communication are described in a specific section.

Another task was to coordinate, in a broad and strategic way, the knowledge accumulated in existing plans and projects, the expectations of the various sectors, in a synergistic set of mutually reinforcing initiatives and to enhance the efforts to achieve the shared dream. This concerted effort was showcased with the accompaniment and indispensable involvement of the Metropolitan Chamber of Governmental Integration of the State Government.

As a product of these two efforts, the shared ideal to be pursued by the Metropolitan Plan emerged:

**“A sustainable metropolis with universalized urban services, balanced in its structure, intelligent and efficient in its development, with a focus on fighting inequalities, integrating people, the natural and built heritage.”**

# The new design of the metropolis

The “vision” of this metropolis, the integrated structure of life, work and mobility that will guide its development in the coming decades, must be unveiled from the research conducted for the construction of the Vision of the Future. This exercise requires multiple analysis lenses, which simultaneously absorb a territorial reading, with its multiple approaches and the agenda of the six strategic work axes - Space Reconfiguration and Centralities, Economic Expansion, Appreciation of Natural and Cultural Heritage, Mobility, Housing and Social Facilities; Sanitation and Environmental Resilience, plus the transversal axis of Public Management that was added.

Naturally, these themes do not exhaust the whole problem of the metropolis, but, as defined by the Term of Reference that guided the proposal of these works, they are the most strategic and tangible subjects, including spatial considerations. The scope of the Metropolitan Plan is limited to the theme of integrated urban development. Social issues are addressed in complementary actions, inasmuch as there are proposals for the provision of urban infrastructure and implementation of social services and facilities in the areas of health, education and culture, coupled with urbanization projects and regularization of precarious settlements.

This sketch is based on the environmental characteristics of the region, the study of the geopolitical formation of the metropolis and its socioeconomic recovery, guiding spatial arrangements with differentiated characteristics. It is also shaped by the relations of centrality between metropolitan municipalities, exchanges of people, goods and services conditioned by historical ties, economic base, infrastructure and equipment supply. Without prejudice to other aspects, three elements stand out: **the Guanabara Bay; the Railways and the Metropolitan Arch.**



Guanabara Bay, Railroad/tracks and Metropolitan Arch

Source: Quanta | Lerner Consortium (2018)

In the Vision for the Future that emerges, the Bay of Guanabara emerges reinvented - past, present and future; legacy and vanguard; heritage and innovation. The locus of the metropolis' genesis is its showcase of tomorrow, the emblem of its new choices. The Bay shows the synthesis of the environmental-historical-urban relationship that led the city of Rio de Janeiro to be considered a cultural heritage of humanity by Unesco, and that now with the Plan will expand to the other municipalities that border it. It is fundamental for the sustainable development of the territory that the Metropolis “makes

peace” with its nature and its history, that it understands that its protection and valorization are not ancillary but determinant of its future possibilities. The decontamination of the Bay (which consequently involves all environmental care with the flows that feed it) materializes a paradigm shift and enables its reinvention.

The Guanabara Bay is an integrating element of the municipalities that have contact with it. Using the environmental and scenographic potential of a cleaned-up bay, strategic areas on the border of these municipalities offer interface points and the possibility of synthesis between the terrestrial and aquatic, urban and natural world, associating controlled real estate development, public spaces, leisure, social and cultural life, port activities as well as a wide range of other economic activities.

The city goes behind the rail and memory. Nowhere in Brazil is this as clear and readable as in the RJMR, particularly in the North and West Macrozones, noting that the Maricá Railroad, which established the connection with Niterói, also participated in the territorial metropolis. In the Vision for the Future, the train paths are the trail for tomorrow: “Replacing the metropolis on the rails” is a fundamental part of the solution of housing, mobility, provision of social facilities and leisure spaces in the metropolitan area. The train and its stations historically are already constitutive elements of the structure, memory and identity of the RJMR. But today this structuring element is also a great divide. A new look at these areas reveals the immense potential of turning them into active, positive spaces, in a new landscape of well-designed axes of urban growth capable of accommodating many new homes, small businesses/services in areas already served by infrastructure. It is the materialization of the ideal of integration of life, work and mobility. This is an ideal that needs to be expanded to the regions of the metropolis that are not reached by the rail network, in the form of structuring new or improved transport links.

The Metropolitan Arch is also a union of the metropolis, shortening distances, favoring regional logistics solutions and opening up new perspectives of development for the municipalities that it perpasses in strategic portions of its territories. It is also an important element of the territorial planning of the RJMR as a whole, confirming its

topography by greatly affecting the base of the Serra dos Órgãos, and establishing a physical limit to a more intensive urban use and evidencing the potentialities of other essential vocations - water , agricultural, tourist, environmental. It is configured as an immense ‘umbrella’ that spatially induces the deployment and development of large retroportuary, industrial and logistic enterprises; complemented by the radial vector towards the complexes of the Galeão Airport and the Port of Rio. Other major roads, such as Avenida Brasil, Mário Covas Highway, Presidente Dutra Highway and BR 040, and Arco Ferroviário, which connects the ports and make connections with the main regions of the country, are added to it. This expressive set emphasizes the recognition of logistics as an important economic element and grants great possibilities for the social and economic development of the peripheral municipalities, expanding the decentralized job offer in the RJMR territory.

Other territorial aspects are important to be considered in the Vision of the Future, in addition to the trinomial above. The **Sepetiba Bay** faces the challenge of balancing the expansion of port, industrial and urban activities in its surroundings with the reappraisal of its fishing communities, the recovery and environmental and cultural preservation of the islands of Madeira and Itacuruçá, Restinga de Marambaia and Guaratiba and Sepetiba beaches. The transition areas between the bottom of Guanabara Bay and Serra do Mar are also under pressure from urban expansion, as well as the Maricá region and its natural and cultural heritage, made up of mountains, lakes and beaches.

The RJMR has serious limitations with regards to water availability, and is also highly dependent on

foodstuffs produced elsewhere to meet its needs. Thus, the vision of a more sustainable future for the metropolis includes the development of strategies of valorization of the non-urban soil for the protection of its environmental resources, of its waters, and the adoption of agricultural practices appropriate to the characteristics of the region in line with contemporary techniques of organic production, in small properties, with greater added value, incorporated into the tourist supply, contributing to increase economic alternatives and food security in the Region.

At the end of this reading, the territory presents itself as a structuring perspective of the future spatial reconfiguration a succession of “arches”: the Serra do Mar Arch with its integral protection units; the Rural Arch, where, for example, measures are taken to strengthen the food security of the metropolis and to contain the expansion of the urban spot; the Metropolitan Roadway Arch; the Railway Arch of shared use by the productive sector and for mobility around the Guanabara Bay; the Ecological Arch of the Guanabara and Sepetiba Bays, and the massifs of Tijuca, Pedra Branca, Serra de Tiririca and Maricá, which have an ecological, economic and social role. Functionally, the so-called axes of economic development and service were added to the Metropolitan Arch, the Av. Brasil and the Mário Covas, Presidente Dutra and BR 040 highways.

Also from the territorial point of view, we must also consider the identification and classification of urban centralities, whose analysis was greatly enriched by the study of the Centralities of the Metropolitan Region of Rio de Janeiro<sup>3</sup>. Within this linear network of the main axes of public transportation and the major regional accessibility routes, there are nodal points – cores that, when structured, strengthen the identity of

<sup>4</sup> The configuration and trends of the urban centralities of the RJMR are extremely important for understanding the evolution of the Region. This study, developed by the Institute of Work and Society Studies, developed a Centrality Index to evaluate these relationships, analyzing five components: employment density, firm density, displacement density, enrollment density and economic activity diversity. The centralities are, therefore, areas of high concentration of economic activity, intense movement of people and economic diversity.

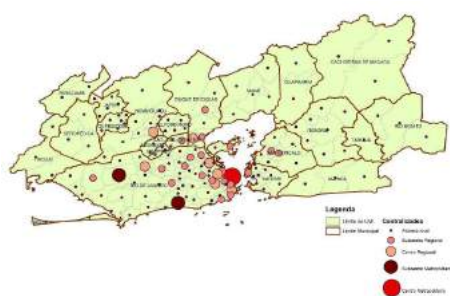
each municipality within the metropolis.

Although by its diverse characteristics there is an intricate and complex hierarchy between these centralities, each one is strengthened by belonging to the whole and by its singularities. Urban centralities of major expression are noticed, highlighting Niterói, a reference to East Macrozone of RM, and a group of centralities located at an intermediate distance between the Center of Rio de Janeiro and the periphery, and there are noteworthy urban centers of greater expression, with Niterói, Barra da Tijuca and Campo Grande standing out (within the municipality of Rio de Janeiro), as well as Duque de Caxias, Nova Iguaçu and São Gonçalo. Another group of centralities, although to a lesser extent, has great importance for the structuring of the metropolitan territory, especially Madureira, Santa Cruz, Itaguaí, Queimados, Jardim Primavera, Magé, Itaboraí and Maricá. It is necessary to consider that these centralities are inserted in an urban spot where it is possible to notice a gradient in the quality of the infrastructure, where there is greater urban quality in the Center and marked precariousness in the periphery of the metropolis. The dotted portion of subnormal clusters, pulverized throughout the MR, complements this view.

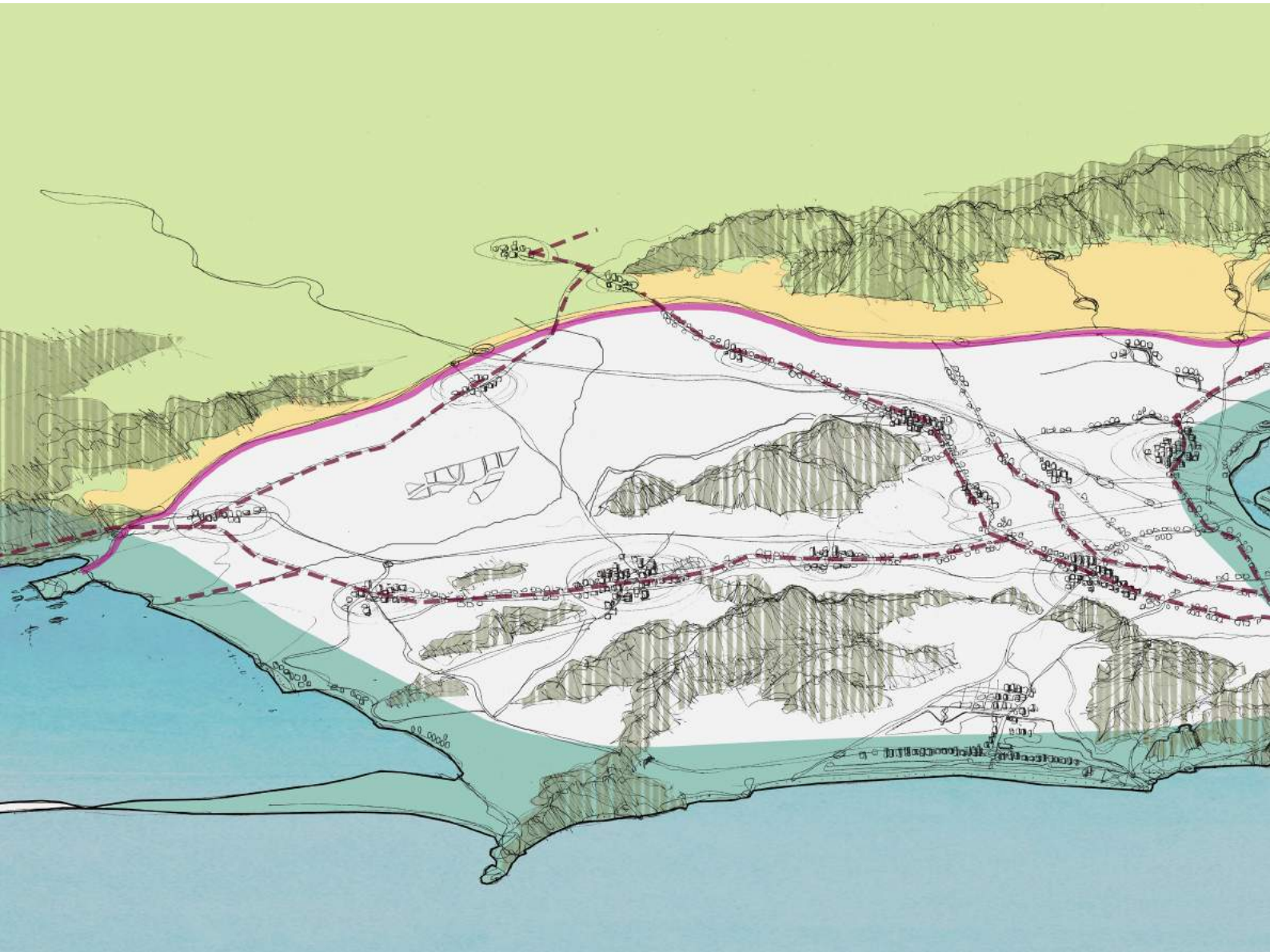
The territorial vision is complemented, in view of the possibilities of urban densification, along the medium and high capacity transport axes, with transport being an essential issue for the metropolis. A cohesive urban form, where density is worked in favor of the quality of built spaces and landscape, efficient use of the soil and infrastructures, is a fundamental aspect of metropolitan sustainability: it reduces the expansionist pressure of the urban spot, the consumption of energy and time in displacements, the idleness of fixed assets, as well as minimizing the pressure on natural resources and allowing for the conservation of the land for other purposes such as agricultural/rural and environmental protection.

It is also perceived that two narratives will intertwine in this regional mosaic: the metropolitan - the whole; and the municipal one - built for each locality and belonging to it. Enriching local narratives through reinforcements in their economic bases and management capacity, as well as through interventions that feed the self-esteem

Of its citizens - identity, tangible and intangible heritage - is

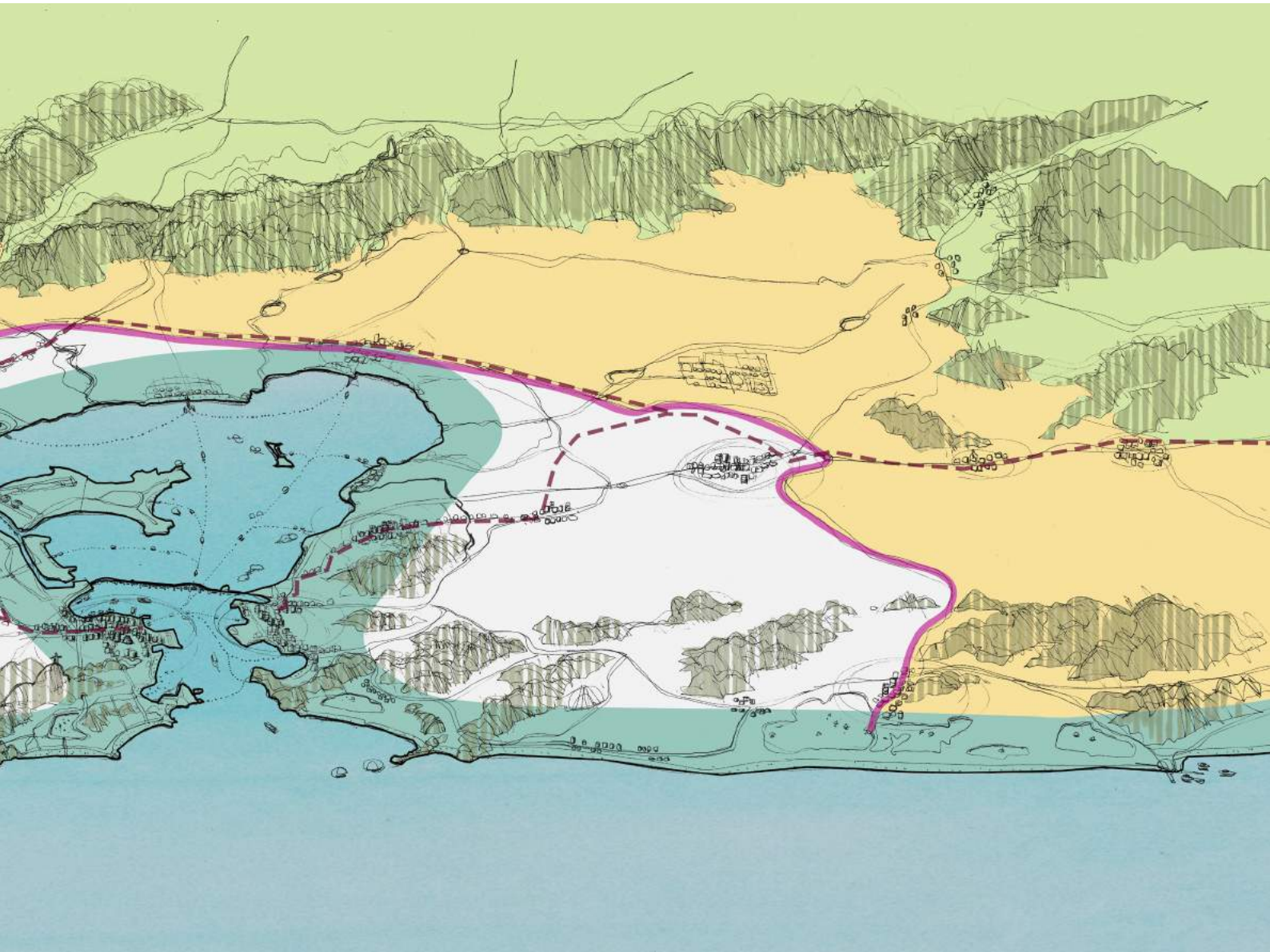


Map of Hierarchy of Centralities of the Metropolitan Region of Rio de Janeiro  
Source: IETS



**The new design of the metropolis**

Source: Quanta | Lerner Consortium (2018)



essential to build a model that better balances urban development. As seen in the analysis of the urban spot, there is a decrease in the quality of the urban infrastructure from the center to the periphery, as well as several pulverized segments/points of subnormal clusters.

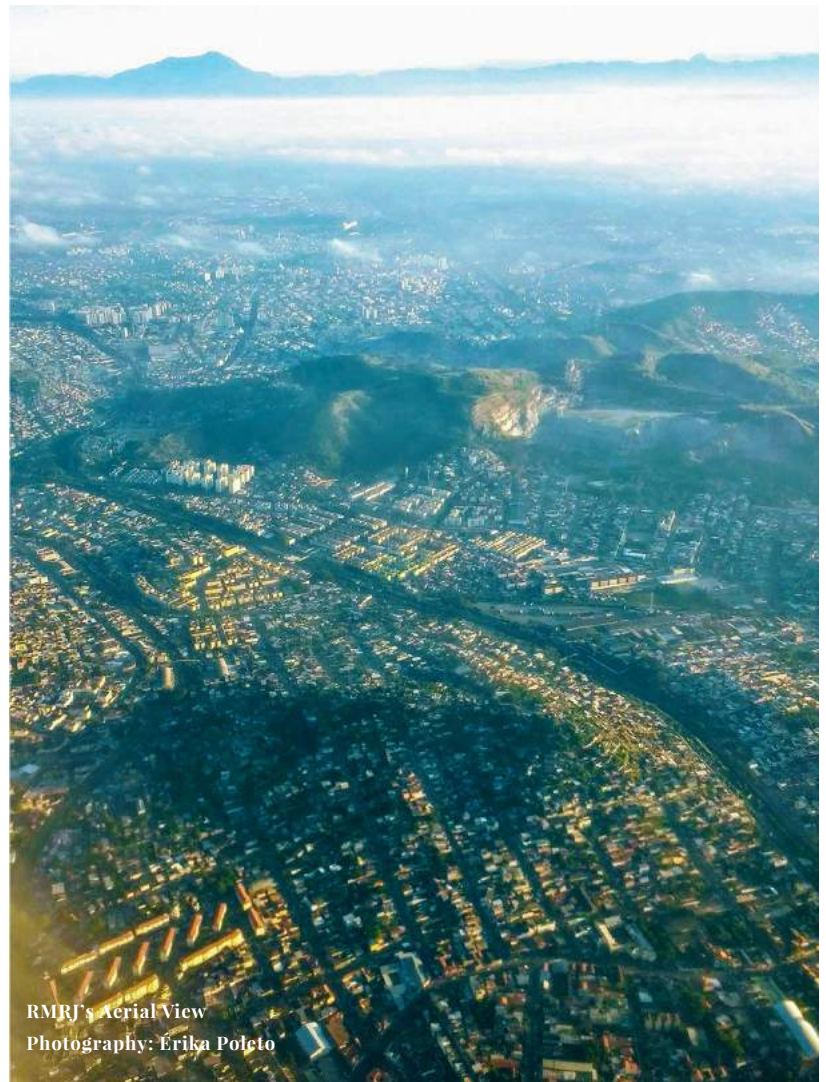
Strengthening these singularities, building a polynucleated metropolis, means providing the metropolitan centralities with the necessary conditions to reduce socioeconomic inequalities in the provision of infrastructure and social facilities; promoting higher housing densities in the structuring centers of the territory; stimulating the diversity of uses in the urban fabric, with different extracts of the population, where there can be housing, commerce, services and productive units; and meeting the demands for urban economic and social infrastructure facilities, including all aspects of housing.

The size of the public space is a major component factor of this balanced urban development. If the city is the scene of the meeting, the refuge of solidarity, this is largely because its collective spaces allow for the “mixture”, the coexistence of differences and different people; the friction that generates energy, the spark of creativity, innovation that marks the life of the city. In the regional imaginary, the great natural landscapes of the beach and the mountain, places of leisure, sports, social and cultural life in parts of its territory, integrate the perception and reality of public spaces. With such an imposing, relevant and expressive nature in the metropolitan scenario, it is important that these environments be incorporated, according to their abilities, in part to the design of the metropolis’ collective spaces, another strategy for greater sustainability and quality of life.

Finally, in summary, the territorial reorganization that uses the dynamic nuclei of its urban hierarchy to strengthen a polycentric, compact and efficient city network; that creates a densely populated urban structure in the central areas and along the axes of greater capacity passenger transport, thus promoting proximity between housing, work and mobility; that promotes mixed use, and the broad supply of urban and social infrastructure permeated by quality public spaces; that has zeal and appreciation for its environmental and cultural heritage, and that launches along innovative, creative and prosperous economic paths, cannot refrain from designing its



aspirations for the future with special attention to the areas of the metropolis – the people of the metropolis – that are in a situation of greater vulnerability and risk, lest it should fail. These almost 2.7 million metropolitan citizens – but who remain outside the fullness of citizenship – are decisive in the construction of the desired cohesive metropolis – a cohesion that has its territorial dimension, but which, without the amalgam of social cohesion, will not be sustained.

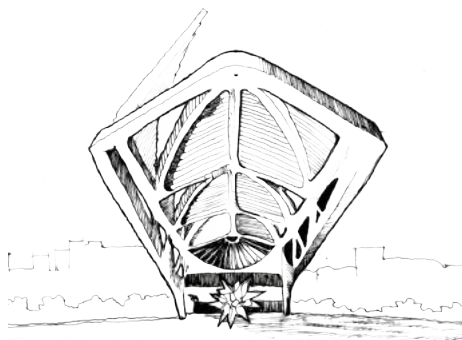


RMRJ's Aerial View  
Photography: Érika Poletto

# The vision of the future and the agenda of the strategic axes

The outlined Vision of the Future also has an agenda and developments related to the Strategic Axes that permeate the Plan.

In the **Economic Expansion** horizons to be pursued, there are many assets present in the region, which stands out as the gateway to Brazil due to its port infrastructures (Port of Rio de Janeiro, Niterói, Sepetiba Bay Complex and the Jacaré potential) and articulation, due to its strategic location between the South / Southeast / Northeast and the intersection in its territory of the main national highways. The economic diversity represented in the oil chain, international trade, research and development in specialized services such as education, health, tourism. Exploring these assets to their fullest and complementing them with the missing elements in terms of human and physical capital is the basic premise of the study. To transform the region as a whole into an international-class logistics platform; to reinvent the oil chain in its most noble uses; to strengthen the leverage of the complex of the health economy, leveraged by leading institutions such as Fiocruz and Instituto Vital Brasil, among others; to broadly and profoundly embrace the tourism industry; to rise as a metropolis of knowledge and to become entangled in a sector that has deep harmony with the spirit of Rio - the creative economy - are the ways already delineated and that the RJMR is fully capable of treading. It seeks, therefore, to develop sectors capable of spreading in the different areas of the metropolitan territory, participating in the reduction of existing social inequalities, and discovering potentials.



**Museum of Tomorrow, Rio de Janeiro**  
 Author: Lucas Roni de Lacerda

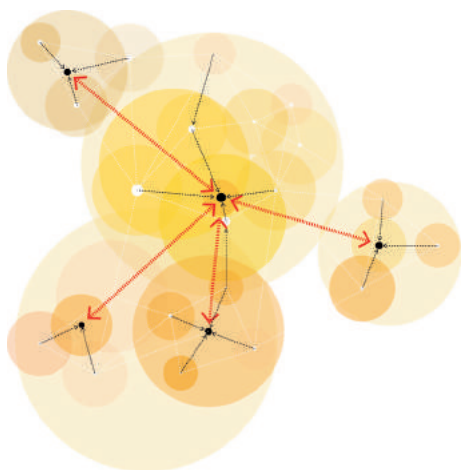
## AN ECONOMY THAT SEEMS TO BE BORN FROM THE CARIOCA'S SPIRIT

Creative Economy. A sector that in 2012 employed 90,000 workers and an uncountable number of jobs for which there are no formal records: New Year's Eve, Carnival and other seasonal activities, with bundling in dozens of economic segments. The Metropolitan Region has the potential to be consolidated, along with the Capital, as a pole of the Creative Economy:

- NATURE HISTORY ARCHITECTURE MUSIC
- FASHION LIBRARY ART CINEMA

Generation of Employment and Income, Belonging Content and Community Sense Development

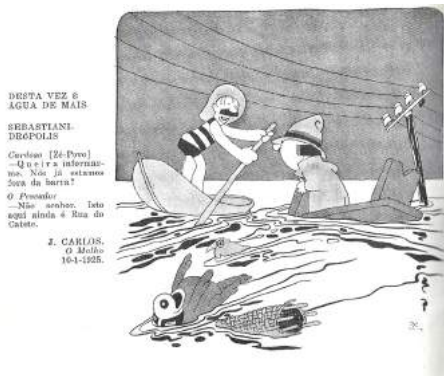




Reiterating the **Mobility** aspects, to advance in the construction of an integrated, multimodal network, adding to the existing radial network a transverse structure, including the concepts of rooting, articulation and integration, breaking the current radial logic, favoring the connection of secondary centralities among each other and with their neighborhoods. The purpose is to shorten distances, creating new alternatives, rationalizing displacements. The complementary use of different modalities - waterway, rail, subway, road - improves the mobility conditions, including non-motorized, from fundamental improvements in urban design (sidewalks, forestation, cycle paths) to create inviting spaces. More importantly, the best mobility solution is to provide housing and work united, forming an integrated network of urbanity with density and complexity of services.

The vision for the future recognizes the structural axes of mobility that led to the occupation of the territory of the RJMR - the already outstanding railroads, later complemented by the subway lines -, but also the road axes, emphasizing the most important ones; the Avenida Brasil, which extends on the eastern side of the MR by the Mário Covas Highway, the Washington Luiz and Presidente Dutra highways, and the Metropolitan Arch. These structuring axes are predominantly radial and are directed towards the center region of the metropolis, where there is a greater concentration of employment and income. More recently, new axes have been deployed in the MR, oriented to the Barra da Tijuca region, located in the West Zone, where there is greater real estate, commerce and services dynamics, which includes the Yellow Line, destined to the use of automobiles; the BRT Transoeste, Transcarioca and Transolímpica routes, and Line 4 Subway.

These predominantly radial metropolitan axes should be complemented by new transverse axes, forming a better articulated and more complete mobility network, along which, in appropriate situations, urban densification can be promoted by providing an occupation with mixed use of housing, commerce and services, accompanied by the expansion of the supply of public equipment and services, seeking to break the logic of the radial movement towards the central region of the metropolis.



Comic on flooding in Rio de Janeiro(1925)

Author: J. Carlos

Source: Gastão Cruis | Appearance of Rio de Janeiro

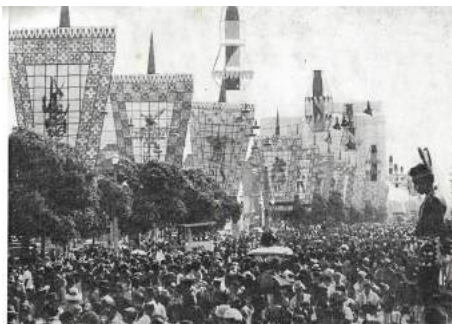
In the area of Sanitation and Resilience, the Vision of the Future is directly linked to the appreciation of the environment, the territory that surrounds the urban areas of the metropolis, the qualification of the bays of Guanabara and Sepetiba; the protection of water resources, and investments in environmental resilience. The reflection on the waters, their paths and their uses are decisive in this axis.

The desire of a resilient metropolis goes through structural drainage measures, from the macro to the micro scale, the solution of which necessarily passes through the conditions of each river basin, especially in a scenario of climate change. Large population groups suffer periodically from recurrent problems of floods and landslides, causing damage to individual and collective heritage as well as to public health. These losses erode the resources of the region and negatively affect their capacity for resilience.

Coupled with adequate territorial planning strategies, investments in drainage are fundamental to the healthy future of the metropolis. It also goes through measures that strengthen regional water security, noting the relationship between land use versus availability, and the consequent need to protect areas of springs, such as the Guapiaçu River; seeking alternative reserves for the industrial supply; and to deploy programs that reduce physical losses in the water network and raise awareness of consumption. One can not truly speak about sustainability without a consistent performance in other aspects of sanitation. Thus, for example, the dream of a Clean Bay requires clean rivers, which require investments in sewage collection and treatment, as well as adequate collection and disposal of solid waste; and environmental education.



São Francisco Xavier Church, Niterói  
Photography: Érika Poletto

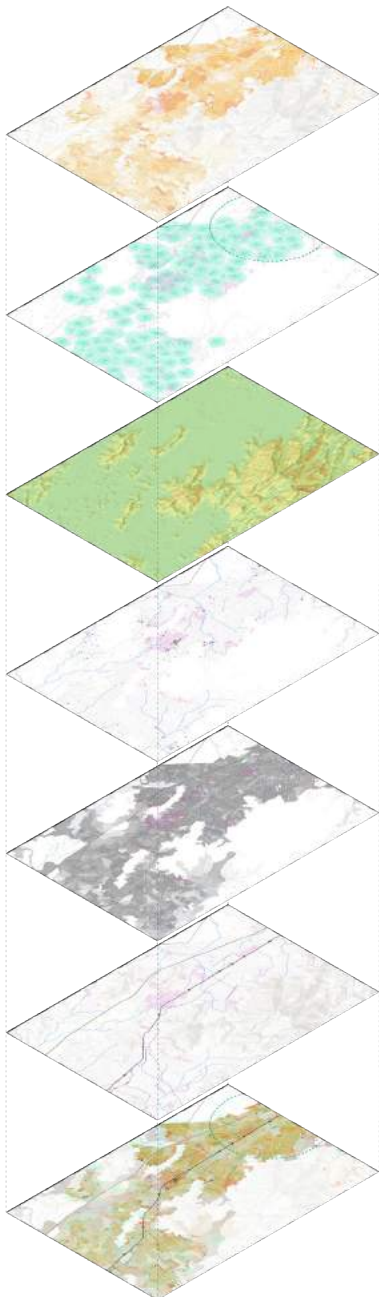


Carnaval of the IV Centenary of Rio de Janeiro  
Source: Gastão Cruls | Appearance of Rio de Janeiro

The unique territory of the RJMR tells the story of remarkable encounters between exuberant natural settings and individuals who at this address chose to deposit their dreams and let their talents flourish. The metropolitan **Natural and Cultural Heritage Appreciation** approach seeks to identify and recover the unique experiences that have occurred there in the various fields of knowledge and that have been expressed, throughout history and in the present, in a remarkable way, in the various facets of human ingenuity - in art and architecture; in music and dance; in cinema and theater; in the law, in the economy, in medicine... while at the same time preserving the riches of its natural environment.

They understand the future of this metropolis of coexistence and the economic value of its green areas as areas of environmental services; the ecological connectivity established among the forest remnants of the metropolis, with an increase in the vegetation cover of the Atlantic Forest; protection of springs and soil; and financial sustainability and respect for the frontiers of Conservation Units, a sustainability that also needs to be sought for the maintenance of material and immaterial cultural assets.

In this vision of the future the local specificities are valued as elements of identity and prosperity. The municipality of Magé will be strengthened as an environmental, cultural and tourist center of the metropolis, to form a triad with Rio de Janeiro and Niterói. The coastal landscapes of the Bays of Guanabara and Sepetiba balance in harmony port activities, economic development and environmental and cultural uses. Also integrating this panorama of desire is the sustainability and respect for the island and lagoon complex that makes up the metropolis; the maintenance and enhancement of cultural landscapes that include ruins of historical importance and significant free spaces; and the revitalization of landscapes surrounding suburban train stations, in order to enhance the history of land occupation, to the detriment of the homogenization and disqualification of the landscape.



Multicriteria analysis matrix  
Source: Quanta | Lerner Consortium (2018)

As for the component of **Housing and Social Facilities**, it reiterates two strategies that, at their heart, meet two guiding assumptions in the vision of the future: to take the “city” - understood by the full offer of attributes of urbanity - to where there is only housing, and to take housing to where there is city; and to form a metropolis without periphery, understood as a cohesive and solidary territory, in which socio-economic and environmental vulnerabilities are gradually healed.

The first of the strategies aims to offer the infrastructure associated with public social assistance equipment, as well as job and income opportunities in precarious settlements; so that all reach a minimum level of urban planning and environmental quality, taking into account the dimensions of public and institutional security, availability and regularity of operation of infrastructure networks, accessibility and proximity to localities of daily consumption items; allowing the progressive reduction of inequality in RJMR. Concurrent to the success of these strategies is the implementation, by the municipal governments and with decisive support from the State, of the urbanistic instruments of the Statute of the City in the viabilization of the great and strategic urban and housing interventions.

The second strategy emphasizes investing in the production of housing in urbanized locations, endowed with social facilities, promoting greater densities in areas where there is more availability of infrastructure and mobility. To do so, a wide range of formats and productive processes - such as rent, progressive construction, improvement or complementation of existing units - must be used, considering the characteristics of demographic growth, which stabilizes in the long term; of the income profile of the population, which concentrates the deficit in the most vulnerable layers; and family composition, whose prospects are to reduce the number of inhabitants per household. From this perspective, the public power starts acting as a responsible and conscious facilitator of the initiatives of individuals and companies that aim at the production of housing, rationalizing urban norms and bureaucratic procedures, besides providing systematic technical assistance for self-construction by groups of smaller technical and financial resources.



Finally, if sustainability is to be equated with faces that reflect economic, social, environmental and **Management** issues, it is the latter’s essential mission to lead the process of “making it happen”. With the materialization of the Future Vision of the metropolis, efficient public management and representative, committed and solid governance are essential, capable of acting strategically in the achievement of short, medium and long-term scenarios. The Metropolitan Chamber is a prime agent in this process, a stage of political, technical and administrative articulation. Forums for the construction of convergences, such as Councils, where they are present, each in its specifics, the political, technical and Organized Civil Society spheres, must be organized. Special regimes can be created to responsibly minimize bureaucratic hurdles. On the other hand, the strengthening of the critical mass (socioeconomic, technical, and administrative) in municipalities is also necessary. The RJMR of the future is one in which each municipality, with autonomy and solidarity, works together for the balanced development of the metropolis. As a starting point, the equation of Metropolitan Governance and the approval of the Plan strategic steps for the effective implementation of the proposals and actions of the metropolis that we will have.

It is also important to note that all key points and key points of the future vision are perfectly in line with the 17 Sustainable Development Objectives (ODS).  
Sustainable Development Objectives (ODS)

Sustainable Development Objectives (ODS)  
Source: UN

# Key points of the future vision

In summary, in a very objective itemization, the metropolis we want has as guiding purposes the future vision of the following key points, which will serve to subsidize the Priority Action Programs of the Plan, such as:

1. Deployment of a **development model** that seeks to promote the spatial distribution of productive activities and the economic inclusion of the low income population, in order to achieve greater social cohesion and territorial balance in the Metropolitan Region of Rio de Janeiro;
2. Consolidation of a **network of urban centralities** capable of ensuring the polynucleation of the Metropolitan Region of Rio de Janeiro, valuing the periphery, overcoming the extreme concentration of economic activities and public facilities in the hypercenter, reducing territorial inequalities;
3. Promotion of the **economic potentiality** of all metropolitan territory, valuing the productive chain of oil and gas; the tourist assets related to the natural, cultural and historical heritage; the creative economy; investments from health; among other assets, in order to generate development throughout the Metropolitan Region of Rio de Janeiro;
4. More equitable and balanced distribution of **health, education, culture, leisure, security and employment and income opportunities**, now concentrated in the metropolitan region, avoiding the displacement of the population in search of work and social assistance, combating diseconomies caused by the region's hypercentricity;
5. Containment of the **sprawling and precarious urban expansion** of the Metropolitan Region of Rio de Janeiro, avoiding the replacement of rural areas of the periphery by precarious settlements, directing urban growth to areas of the metropolitan region equipped with infrastructure and transportation systems, promoting the occupation of urban voids and the density of these areas;
6. **Deployment** of a mobility infrastructure capable of ensuring transversality and connecting centralities of the same region and its surroundings, including multifunctional projects in the Baixada Fluminense and Metropolitan East, as well as to increase investments in collective and active transportation to the detriment of large road works and individual motorized transportation;
7. Production of **housing units** able to meet the existing quantitative and qualitative housing deficit, to be located in areas that already have infrastructure and equipment, and promotion of urbanization and land regularization of precarious settlements (irregular subdivisions, subnormal settlements, set of degraded housing, among others );
8. **Deployment** of infrastructure and improvement of **environmental sanitation management**, in order to guarantee regular water supply throughout the Metropolitan Region of Rio de Janeiro, collection and treatment of sanitary sewage (considering the dry weather system); implementation of rainwater management infrastructure, adequate collection and disposal of all solid waste, focusing on integrated projects and measures presided over by the sustainability bias;
9. Valorization of the **natural environment** of the Metropolitan Region of Rio de Janeiro, achieving the decontamination of water resources, including the Guanabara and Sepetiba bays and lagoon systems, maintenance of environmental preservation areas; the creation of new environmental conservation units and the sustainable development of peri-urban and rural areas;



10. Provide the Rio de Janeiro Metropolitan Region with an adequate level of **resilience** to achieve water security in water supply, control of floods caused by extreme weather events, mitigation of slope risk in inhabited areas; collection and treatment of sanitary sewers and adequate disposal of solid waste, avoiding diseases related to lack of basic sanitation and pollution of water bodies;

11. Value the full and integrated management of tangible and intangible **cultural heritage**; cultural landscape; of forms of expression; the ways of creating, doing and living; cultural, artistic, scientific and technological creations; works of art; objects; documents; among other means, in order to promote the socioeconomic development of the population of the Metropolitan Region of Rio de Janeiro;

12. Reinvent **Guanabara Bay** by promoting its recovery and preservation of the environment and its surroundings, the rescue and preservation of historical heritage, traditional communities and the cultural values present on its shore, taking advantage of its assets to promote the development and integration of the Metropolitan Region of Rio de Janeiro;

13. Constitute the **Metropolitan Governance of the Metropolitan Region of Rio de Janeiro**, prioritizing cooperation between the Municipalities, the State and the Union, valuing the planning and alignment of plans and programs, seeking greater convergence and efficiency in public spending, enabling the increase of revenues and obtaining resources for the development of the entire region;

14. Incorporate the participation of organized **civil society** in the metropolitan management process, including decisions on planning, formulation, budgeting, implementation, monitoring, evaluation and review of public policies of interest to the population of the Metropolitan Region of Rio de Janeiro;

15. Encourage the construction of a **metropolitan identity**, the first stage of a closer judgment of belonging to the Metropolitan Region of Rio de Janeiro, promoting knowledge and recognition of the region, as a common entity for its inhabitants.



Sunset on Paqueta Island  
Photography: Érika Poletto



# The metropolitan objectives

The synthesis of the following Metropolitan Objectives also emerged, taking into account the contributions of the participatory construction process

OM-1	STRENGTHENING AND DIVERSIFICATION OF THE ECONOMIC BASIS	1.1. Strengthen existing production chains (oil and gas, and research, development and innovation)
		1.2. Diversify the economic base
		1.3. Structure a metropolitan policy of integrated economic development
		1.4. Align production with sustainable development models
		1.5. Produce internally new technologies (especially those linked to the health complex and sustainable development)
OM-2	GENERATION OF JOBS AND ECONOMIC ACTIVITIES IN ORDER TO SPATIALLY BALANCE THE METROPOLIS	2.1. Provide production, communication and logistics infrastructures throughout the Metropolis
		2.2. Create a policy of qualification of the workforce (in particular of research, development and innovation, and production)
		2.3. Reducing income inequality in the Metropolis by reducing the imbalance in the employment supply versus housing location
		2.4. Raise the tax revenue of the state and municipalities (and guarantee stability) due to the greater and more diversified economic production
		2.5. Encourage the emergence of industrial and technological zones in municipalities with lower economic density
		2.6. Increase agricultural production, contributing to income generation and food security of the Metropolis
OM-3	DEVELOPMENT OF COMPETENCES AND RELATIONS THAT ENCOURAGE INNOVATIVE PRODUCTION BASES	3.1. Provide the necessary infrastructure and legislation to generate innovation
		3.2. Attract a skilled workforce, capable of generating innovation
		3.3. Adapt labor to new technologies from the 4th industrial revolution
		3.4. Consolidate the RMRJ brand as a pole of knowledge capable of attracting economic activities of all kinds
OM-4	EXPANSION OF THE CAPACITY OF MUNICIPALITIES TO IMPLEMENT AN INTEGRATED HOUSING POLICY	4.1. Promote housing projects of social interest (priority in strategic points of the territory, establishing new partnerships between the State and municipalities)
		4.2. Rationalize and simplify the norms of management and urban control
		4.3. Manage georeferenced data
		4.4. Organize and maintain, together with local governments, an updated basis for a system for launching, storing and retrieving urban management data
OM-5	CREATION OF NEW MODALITIES OF HOUSING INTERVENTIONS IN THE TERRITORY	5.1. Requalify old commercial, industrial and other buildings that have lost use or were abandoned, located in strategic points of the territory, for use in housing projects of social interest
		5.2. Create a minimum level of urban adaptation and environmental quality among the neighborhoods of the RJMR, complementing the infrastructure and social facilities, and implementing parallel measures for the compulsory use of idle land existing in the beneficiary localities
		5.3. Raise the quality of urban infrastructure, increasing the density of urban areas occupancy in strategic points of the territory
		5.4. Implement new housing developments of social interest in already consolidated neighborhoods, encouraging alternatives that contemplate social rental and housing for families with the elderly
		5.5. Produce urban and socially integrated housing projects that include, in addition to housing for different income brackets, generating facilities for work and income
		5.6. Offer housing for all, through measures such as incentive technical assistance for self-construction by groups of lower resources
		5.7. Assistance to families at risk, either eliminating the risks or offering the same alternatives of relocation, which may occur through the reactivation of urbanization programs and land regularization of informal settlements
OM-6	GENERATION OF NEW SOURCES OF RESOURCE FOR HOUSING PROGRAMS	6.1. Promote good conditions for obtaining housing for those interested in obtaining housing financing
		6.2. Offer budget resources for housing funds of social interest
		6.3. Take advantage of the value added - arising from the actions of the public sector - to benefit social housing investments and social facilities, applying the instruments of the City Statute
		6.4. Induce the occupation of empty lots, by means of Progressive Territorial Tax on these lots
OM-7	REDUCTION OF THE RADIAL STRUCTURE OF METROPOLITAN DISPLACEMENTS	7.1. Reduce average travel time
		7.2. Reduce average travel distance
		7.3. Promote the development of new regions, through a hierarchical network of centralities
		7.4. Obtain a shared management of the transport system
OM-8	OPTIMIZATION OF RESOURCES IN MOBILITY	8.1. Reduce investments in "large" road infrastructure works
		8.2. Increase efficiency in the operation of public transport
		8.3. Reduce transportation costs for the user
		8.4. Obtain new ways of financing public transport

OM-9	REORIENTATION OF THE USE OF MOTORIZED INDIVIDUAL TRANSPORT	9.1. Consolidate the existing modal split, with priority to public and non-motorized transportation		
		9.2. Expand modal integration through pedestrian and cyclist routes		
		9.3. Expand investments in low- and medium-capacity transport		
		9.4. Reduce emissions of pollutants		
OM-10	IMPROVEMENT OF THE DISPLACEMENT QUALITY	10.1. Improve travel safety		
		10.2. Provide access by all of society		
		10.3. Stimulate the use of active transport modes		
OM-11	CREATION OF CONDITIONS FOR A COMPREHENSIVE ENVIRONMENTAL SANITATION AND THE INTEGRATION OF NATURAL AND BUILT ENVIRONMENT, WITH A FOCUS ON ITS REVITALIZATION AND VALORIZATION	11.1. Improve water supply and sewage systems, seeking to universalize them		
		11.2. Reduce losses of the water supply system, and encourage the sustainable use of water with reduced consumption		
		11.3. Reduce the expected deficit for the water supply sector, seeking new water sources		
		11.4. To improve the distribution coverage of the sanitary sewage network, seeking solutions for the effective operation of its networks and avoiding unplanned launches crossed with drainage networks		
		11.5. To improve the environmental quality of the receiving water body, in complement to the control of the treatment process, by fomenting measures that control the final product of sewage treatment		
		11.6. To avoid flooding, improving the Rainwater Management System, integrating drainage solutions to the free spaces, creating opportunities for biodiversity enhancement and urban revitalization		
		11.7. Ensure the correct operation of the urban cleaning and solid waste management system, with adequate final destination		
		11.8. Integrate the natural and built environment of the Metropolis, prioritizing multisectoral solutions		
		OM-12	ACHIEVING RESILIENCE AND ENVIRONMENTAL SUSTAINABILITY	12.1. Combating the water insecurity of the Metropolis
				12.2. Reduce solid waste generation and increase the amount of recycling activities
12.3. To solve failures of the systems of exhaustion already implanted				
12.4. Protect and enable areas with Environmental Potentials				
12.5. Possible structure to control the risks related to Environmental Resilience				
12.6. Generate connectivity of environmental fragments				
OM-13	GUARANTEE THE INTEGRITY AND COEXISTENCE OF THE NATURAL AND CULTURAL HERITAGE OF RMRJ	13.1. Identify and recognize the assets of the Metropolis, and manage them in an integrated manner		
		13.2. Raise the awareness of the population about the importance of assets, the role of each generation as a faithful depositary of the assets		
OM-14	CONCILIATE THE DYNAMICS RELEVANT TO THE FULL METROPOLITAN DEVELOPMENT AND THE CONDITIONS OF PRESERVATION AND VALUATION OF NATURAL AND CULTURAL HERITAGE	14.1. Make the elements of Natural and Cultural Heritage references for planning and metropolitan territorial planning		
		14.2. Assign economic value to built heritage		
		14.3. Value and value the economic potential of metropolitan natural and cultural assets		
OM-15	PROMOTION OF THE USE OF NATURAL AND CULTURAL HERITAGE BY THE POPULATION OF RMRJ	15.1. To socioeconomically develop traditional communities, with the use of assets for this purpose		
		15.2. Making property assets part of people's daily lives		
OM-16	DEVELOPMENT OF A COLLABORATIVE NETWORK AMONG THE MUNICIPALITIES OF RMRJ	16.1. Establish formal metropolitan governance		
		16.2. Strengthen the metropolitan agency		
		16.3. Generate metropolitan integrated planning capability		
		16.4. Align the PDUI with municipal, state, and federal investment programs		
		16.5. Integrate metropolitan guidelines and urban planning and sectoral policy instruments at the federal, state and municipal levels		
OM-17	IMPROVEMENT OF THE AUTONOMY (FISCAL AND MANAGEMENT) OF EACH MUNICIPALITY OF RMRJ	17.1. Promote sustainable bases for leveraging financial resources and their efficient use		
		17.2. Ensure equity in decisions taken by municipalities in the metropolitan area		
		17.3. Provide planning capacity for each municipality in the metropolis		
OM-18	EXPANDING THE QUALITY OF LIFE FOR THE METROPOLITAN CITIZEN	18.1. Provide better services to the population		
		18.2. Expand the adoption of integrated public policies and the efficiency of public spending		
OM-19	INCLUSÃO DA SOCIEDADINCLUSION OF CIVIL SOCIETY ORGANIZED IN THE METROPOLITAN DEVELOPMENT DECISION-MAKING PROCESS (INCLUDING THE FORMULATION, IMPLEMENTATION AND COST OF PUBLIC POLICIES)	19.1. Integrate organized civil society with metropolitan and municipal planning		
		19.2. Integrate planning process feedback by periodic evaluations with citizen monitoring		
OM-20	GUARANTEE THE ACCOMPANYING OF THE CITIZEN IN THE PROCESS OF EVALUATIONS OF THE IMPLEMENTATION OF THE PDUI	20.1. Provide spaces and tools that allow dialogue between the public power and society		
		20.2. Expand and disseminate transparency in the metropolitan agenda of decisions		
OM-21	GUARANTEE SPACES OF PARTICIPATION (PRESENT AND WEB) AND MAINTAIN TRANSPARENCY OF EXPENSES AND SHARES	21.1. Promote georeferenced information management and public access		
		21.2. Elaborate (metropolitan) indicators of monitoring and accountability		
OM-22	PROMOTION OF A RATIONAL GROWTH STRUCTURE MAXIMIZING THE USE OF AVAILABLE INFRASTRUCTURE	22.1. Contain urban sprawl		
		22.2. To promote a more compact and efficient urban structure		
		22.3. Balancing the distribution of uses, functions and equipment in the metropolitan scope		

# The construction of scenarios

		GROWTH RATE OF ECONOMIC EXPANSION			
		BAD (-)	TENDENTIAL (-)	PROBABLE (+)	TARGET (+)
PUBLIC MANAGEMENT SPENT	+	BEST MANAGEMENT PREVENTS RETROCESS	SOME QUALITY GAIN	GOOD WITH EFFICIENCY	GREAT WITH EFFICIENCY
	0	POSSIBLE RETROCESS	KEEPS GROWTH OR SOCIAL RETROCESS (INERTIA)	GOOD WITH QUALITY OF EXPENSES	GREAT WITH HIGH COSTS
	-	RECESSION WITH GREATER GAP OF INEQUALITY	SOME QUALITY AND OPPORTUNITIES LOSSES	IMPROVEMENTS WITH DISEQUILIBRIUMS AND INNECESSARIES COSTS	INEFFICIENCY WITH INNECESSARY GROWTH

Short-term scenario  
Source: Quanta | Lerner Consortium

		GROWTH RATE OF ECONOMIC EXPANSION			
		BAD (-)	TENDENTIAL (-)	PROBABLE (+)	TARGET (+)
PUBLIC MANAGEMENT SPENT	+	BEST MANAGEMENT PREVENTS RETROCESS	SOME QUALITY GAIN	GOOD WITH EFFICIENCY	GREAT WITH EFFICIENCY
	0	POSSIBLE RETROCESS	KEEPS GROWTH OR SOCIAL RETROCESS (INERTIA)	GOOD WITH QUALITY OF EXPENSES	GREAT WITH HIGH COSTS
	-	RECESSION WITH GREATER GAP OF INEQUALITY	SOME QUALITY AND OPPORTUNITIES LOSSES	IMPROVEMENTS WITH DISEQUILIBRIUMS AND INNECESSARIES COSTS	INEFFICIENCY WITH INNECESSARY GROWTH

Medium-term scenario  
Source: Quanta | Lerner Consortium

		GROWTH RATE OF ECONOMIC EXPANSION			
		BAD (-)	TENDENTIAL (-)	PROBABLE (+)	TARGET (+)
GESTÃO PÚBLICA QUALIDADE DO GASTO	+	BEST MANAGEMENT PREVENTS RETROCESS	SOME QUALITY GAIN	GOOD WITH EFFICIENCY	GREAT WITH EFFICIENCY
	0	POSSIBLE RETROCESS	KEEPS GROWTH OR SOCIAL RETROCESS (INERTIA)	GOOD WITH QUALITY OF EXPENSES	GREAT WITH HIGH COSTS
	-	RECESSION WITH GREATER GAP OF INEQUALITY	SOME QUALITY AND OPPORTUNITIES LOSSES	IMPROVEMENTS WITH DISEQUILIBRIUMS AND INNECESSARIES COSTS	INEFFICIENCY WITH INNECESSARY GROWTH

Long-term scenario  
Source: Quanta | Lerner Consortium

From the maturation of the vision of the future, in its various dimensions, derived the need to construct scenarios that pointed out the ways to evaluate and eventually through. This strategic step in the elaboration of the Plan was embodied in short (4 years), medium (12 years) and long-term (25 years) scenarios, which have two important variables as guidelines: the pace of economic growth that can be seen in the future (poor, trend, likely and target) and the quality of public management. These scenarios were fed by the key points and objectives of the plan, built from the metropolis we have, in order to shape the metropolis we want from which, in turn, we derive strategies and proposals for action to reach the metropolis we will make.

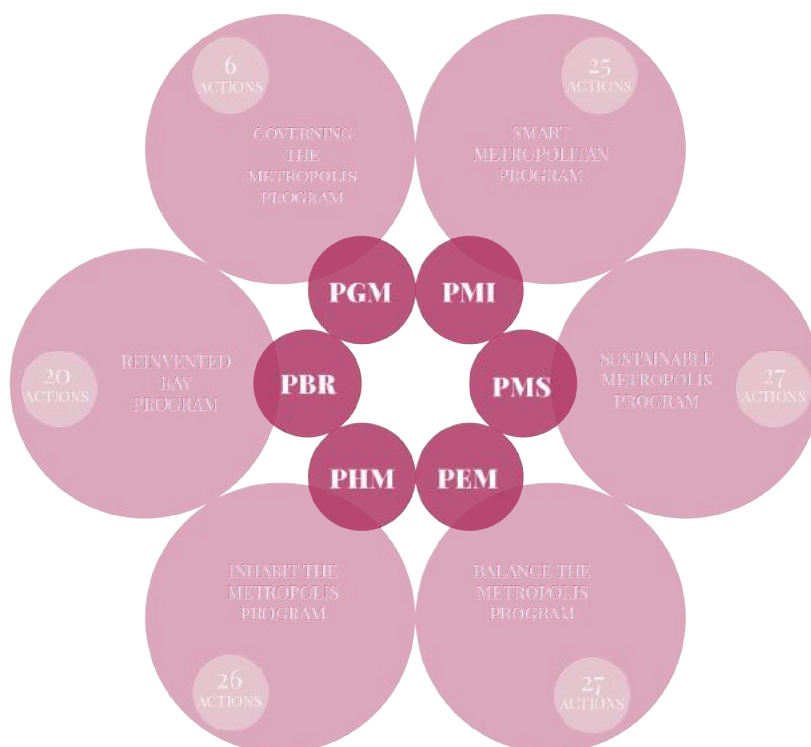
It should be noted that at the outset, the outlook for action was not very optimistic, given the fiscal crisis that hit the State of Rio de Janeiro, advising caution in the selection of scenarios, making them less ambitious but feasible .

From the ensuing discussions, two points of convergence could be highlighted: that the success of the selected strategies will be conditioned by the strengthening of the governance capacity of both local and sectoral organizations; and that governance plays a decisive role in consolidating knowledge and building forces in an effective environment of integration and mutual support. Thus, in a short-term scenario where limited financial resources are available, strengthening governance, which requires above all human resources, planning and management, can be the foundation of the initial action.

As a whole, the analysis and prospecting exercises carried out pointed to the strong need for a spatial reconfiguration of the metropolis from a new macro-zoning that takes into account the heterogeneities of this territory, and a set of priority actions within all the strategic axes involved in the Plan. These elements have given rise to transversal programs covering several multifunctional projects for the development of the entire RJMR.

These activities are capable of articulating proposals that complement each other and create territorial synergies that are of strategic importance for the development of the metropolis.

The six Priority Actions Programs, which include 131 initiatives, The six Priority Action Programs, which include 131 initiatives, were organized by thematic areas and bring together the main measures for the implementation of the Strategic Plan for the Integrated Urban Development of Rio de Janeiro’s Metropolitan Region; representing a multi-sectoral articulation effort around key points considered strategic and relevant for the development of the RJMR. The Programs are called: Balance the Metropolis Program - PEM; Inhabit the Metropolis Program - PHM; Smart Metropolis Program - PMI; Sustainable Metropolis Program - PMS; Reinvented Bay Program - PBR; Governing the Metropolis Program - PGM. In general, the PAPs seek to correspond to the metropolis that we want formulated in the participatory process of elaboration of the Plan, with a view to consecrating the metropolitan objectives, reaching the desired vision of future in shared effort in the metropolis that we will do.



Priority Action Programs  
Source: Quanta | Lerner Consortium



**Transportation - Road Infrastructure**

Source: Quanta | Lerner Consortium (2018)



**Transportation - Integrated passenger transport network**

Source: Quanta | Lerner Consortium (2018)



**Transportation - Macronetwork**

Source: Quanta | Lerner Consortium (2018)





**Natural environments**

Source: Quanta | Lerner Consortium (2018)



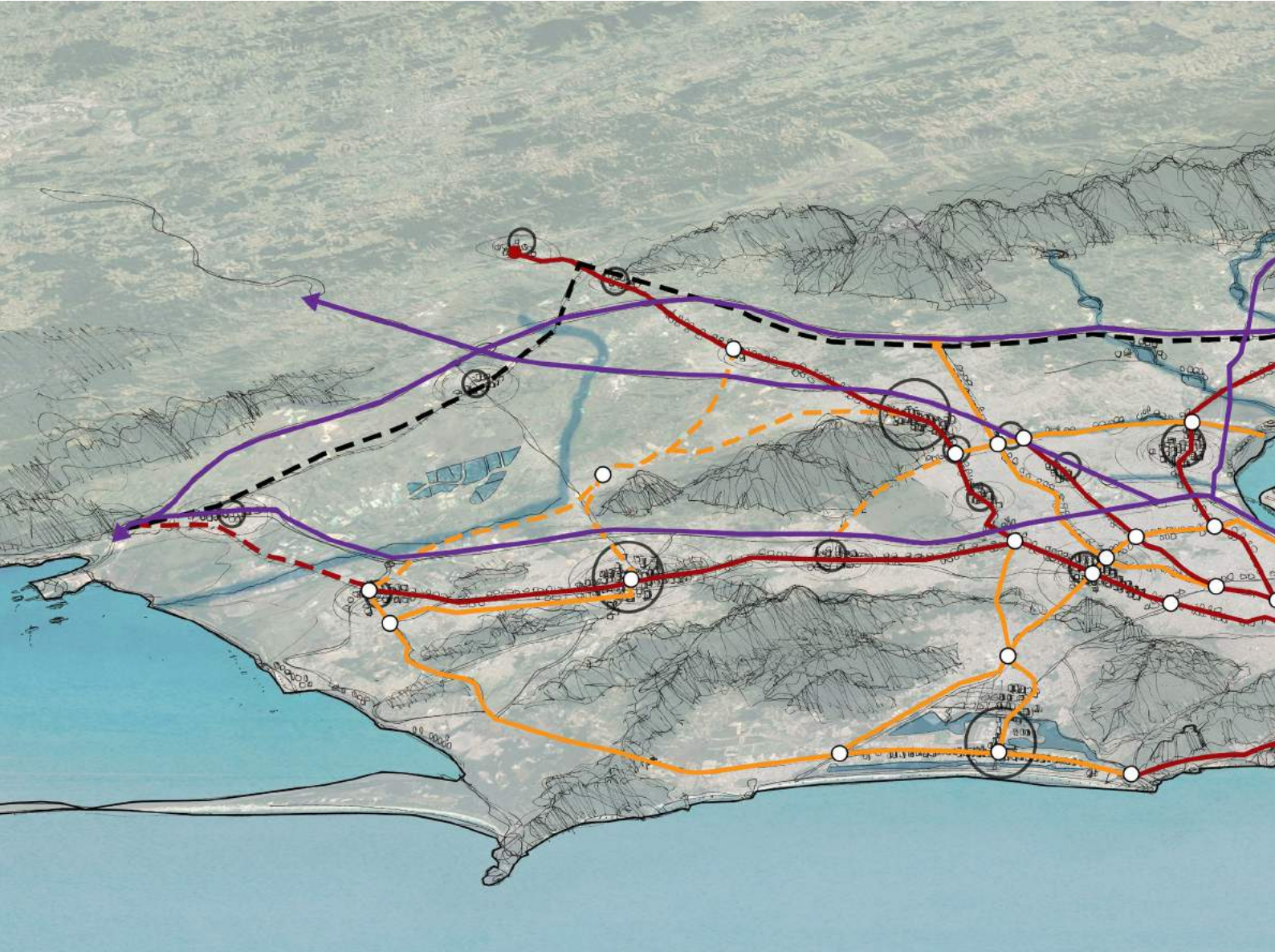
**Sanitation and environmental resilience**

Source: Quanta | Lerner Consortium (2018)



**Centralities**

Source: Quanta | Lerner Consortium (2018)



**Vision of the Future**

Source: Quanta | Lerner Consortium (2018)



# 04 the metropolis we'll make

“It is necessary to find the right balance between controlling the spatial experience and a freedom to allow things to happen.”

Alvaro Siza



---

No matter how rich the diagnoses are, however rich the processes of participation, no matter how consistent the vision of the future and the scenarios elaborated, the ultimate proof of the success of a plan is the process of “making it happen” regarding its intentions. To innovate is to start - not necessarily because one has to create something “unprecedented”, but because the materialization of expectations, the synergies of the creative process, are nourished by the concreteness of doing.

The Metropolitan Plan is bold in proposing its actions, not because of childish enthusiasm, but because of the conviction that, despite the challenging contingencies that the state of Rio de Janeiro faces, the strength of the assets present in the region, the relevance of the dream built, and the immanent awareness of the collaborative process that has been established, are able to prevail in a medium and long term scenario.

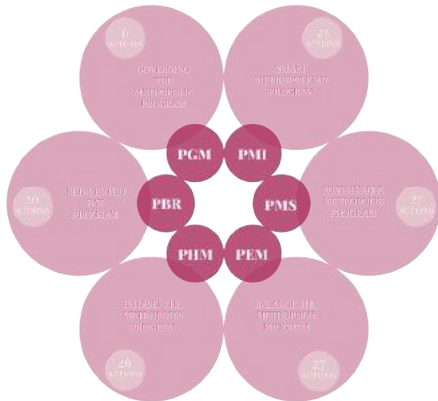
As mentioned, there are more than 130 initiatives, organized in the six Priority Action Programs, all linked to the territory from the defined Planning Macro-Regions. This set of actions feeds and is fed by the strategy of Metropolitan Space Reconfiguration and its Macrozonas and Metropolitan Interest Zones, each with a specific content. There is also an entire road map for the implementation of the Plan, which consists of strategies, instruments, complementary programs and next steps.

Thus, some of the most emblematic proposals, with a strong symbolic appeal, multisectoral character and great territorial scope, will be highlighted, recalling that the complete documents that indicate the set of actions proposed in the Metropolitan Plan are available for consultation on the website of the metropolis. It should be remembered that, in the prioritization of actions, the participation of civil society, which may be half of the Conferences, was complementary to the definitions of the technical level.

The Priority Action Programs are connected to the structuring and transversal axes of the work, which formed the analytical framework of the Plan. They are organized into six strands, namely: Governing the Metropolis Program; Smart Metropolis Program; Sustainable Metropolis Program; Balance the Metropolis Program; and Reinvented Bay Program. Each of them highlights its respective set of areas of action and defined actions.

As a whole, the implementation of the initiatives, programs and actions of the Plan should positively impact the entire Rio de Janeiro Metropolitan Region, especially benefiting the middle and low income population and the residents of the periphery, in order to guarantee universal access to housing and social and urban infrastructure, reducing inequalities and widening the territorial balance, improving the quality of life of all inhabitants of the metropolis.

# HIGHLIGHTS OF THE PRIORITY ACTION PROGRAMS



Priority Actions Programs  
Source: Quanta | Lerner Consortium

## SMART METROPOLIS PROGRAM (PMI)

- Logistics and industry
- Research and innovation
- Creative economy
- Cultural heritage
- Environmental heritage
- Tourism and culture

## SUSTAINABLE METROPOLIS PROGRAM (PMS)

- Support to rural activities
- Collection and treatment of sanitary sewage
- Environmental preservation and connectivity
- Recovery of bays and ponds
- Promote water security

## BALANCE THE METROPOLIS PROGRAM (PEM)

- Strengthening of peripheral centralities
- Multifunctional projects on transverse axes
- Mobility between the center of the periphery and its surroundings
- Generation of employment and social facilities
- Containment of urban sprawl

## INHABIT THE METROPOLIS PROGRAM (PHM)

- Basic sanitation and drainage
- Urbanization and land regularization
- Density around the railways
- Parks and active transportation
- Metropolitan arch: control of the environment

## REINVENTED BAY PROGRAM (PBR)

- Sanitary sewage belt
- Revitalization of ports and cultural landscapes
- Water transport concession
- Environmental protection and connectivity
- Coastal Preservation and Management of the Bay

## GOVERNING THE METROPOLIS PROGRAM (PGM)

- Public administration
- Metropolitan governance

## A | A polynucleated urban structure

The creation of a polynucleated urban structure in the Rio de Janeiro Metropolitan Region is a fundamental premise of the Plan and should reinvigorate the city, based on a new development model, a world trend that proposes the consolidation of a network of centralities capable of overcoming an extreme concentration of economic activities, investments and public equipment in the central region of the metropolis, in order to reduce territorial inequalities and, with that, to improve the quality of life of the population. It is worth mentioning that Metropolitan Hypercenter Macrozone concentrates more than 60% of the jobs, about 50% of the health equipment of medium and high complexity, and received almost all of the last large amount of public investments in Rio de Janeiro, in the scope of the great events held in the city, with the Olympics ahead. In understanding the Plan, it is necessary to combat the diseconomies generated by the hypercentrality of the metropolitan nucleus, which overload the limited metropolitan mobility system and, on the other hand, encourage the informal and disorderly growth of the periphery, in regions that do not have the necessary investments in urban infrastructure and social facilities.

In order to define a network of centralities for the RJMR, a set of factors were considered: (i) the study prepared by Sebrae / IETS<sup>1</sup>, which established levels of importance for the existing urban network, using data referring to economic and educational activity; (ii) the geographical distribution of the centralities equitably in the RJMR, promoting the autonomy of each of the metropolitan regions, confirming the centralities indicated in the Planing Macro-zones; (iii) the possibility of grouping centralities by region, reinforcing the connections between them and seeking complementarity and cooperation between them; and

(iv) relationship and support to economic development proposals. To achieve the purposes of structuring and territorial balance, the Plan proposes to reinforce a set of urban centralities in order to form, in the medium term, a qualified urban network, with availability of commerce, services, public and social facilities, as well as parks and leisure areas.

Following the analysis provided, the PDUI concluded by supporting the strengthening of a group of larger urban centralities, namely Campo Grande, Niterói, São Gonçalo, Nova Iguaçu and Duque de Caxias; has promised to strengthen Madureira, in the suburb of Rio de Janeiro, and a second group of centers that form an arc farther from the central region, composed of Santa Cruz, Itaguaí, Seropédica, Queimados, Jardim Primavera, Magé, Itaboraí and Maricá. In spite of the reasons that led to the proposal for its strengthening, all these centralities will contribute to the metropolitan balance and to the autonomy of the regions, as can be seen in the map of centralities to be followed.

When observing the role of these centralities, it is verified that Madureira has great importance in the metropolitan structure due to its location, availability of means of transportation, and the possibility of performing an urban articulation function between the North Zone, Barra da Tijuca and Baixada Fluminense. In the vector that follows from the Center towards the West Zone (Taquara, Realengo, Bangu, Campo Grande and Santa Cruz) it is proposed the strengthening of the centrality of Campo Grande, which has great dynamism, strengthening its relations with Barra da Tijuca, Bangu, Santa Cruz and Itaguaí. In the Baixada Fluminense, it is proposed to strengthen the centralities of Nova Iguaçu and Duque de Caxias, which has leadership in the region, involving the municipalities of Nilópolis, Mesquita, São João do Meriti and Belford Roxo. In East Macrozone of the metropolis, it is proposed the strengthening and articulation between the centralities of Niterói and São Gonçalo / Alcântara, at first, but

also with Itaboraí, an axis strongly dependent on the implementation of Line 3 Subway. Still in the eastern part of the metropolis, support for the centrality of Maricá aims to support the marked growth of this portion of the metropolitan territory. The centralities of Magé and Jardim Primavera would have as their main function the articulation of urban areas located in the Northwest and North portion of the metropolitan territory, as well as to support the propositions related to the valorization of the Guanabara Bay in that region. The centralities of Queimados, Seropédica and Itaguaí, in turn, play a structuring role at the border of West Macrozone.

Aiming at strengthening the selected centralities, the Plan proposes to provide the centralities with better urban conditions, with particular attention to: (i) generation of employment and income opportunities and business expansion and distribution of taxes; (ii) implementation of urban infrastructure and urban qualification; (iii) implementation of medium and high complexity social facilities in the areas of health, education, culture and leisure; (iv) expansion of urban and housing density; (v) stimulating the diversification of land use (housing, commerce, services and productive units) and income statements of the population; (vi) expansion of the articulation of neighboring centralities among themselves, with their immediate surroundings and with their region.

In order to make it possible to strengthen the selected centralities, the Plan includes actions that, for example, seek to promote the revision and alignment of Municipal Master Plans with the metropolitan guidelines; promote fiscal incentives and support entrepreneurship for the development of economic activities; review sectoral plans of social areas such as health and education to promote decentralization of equipment; providing public areas

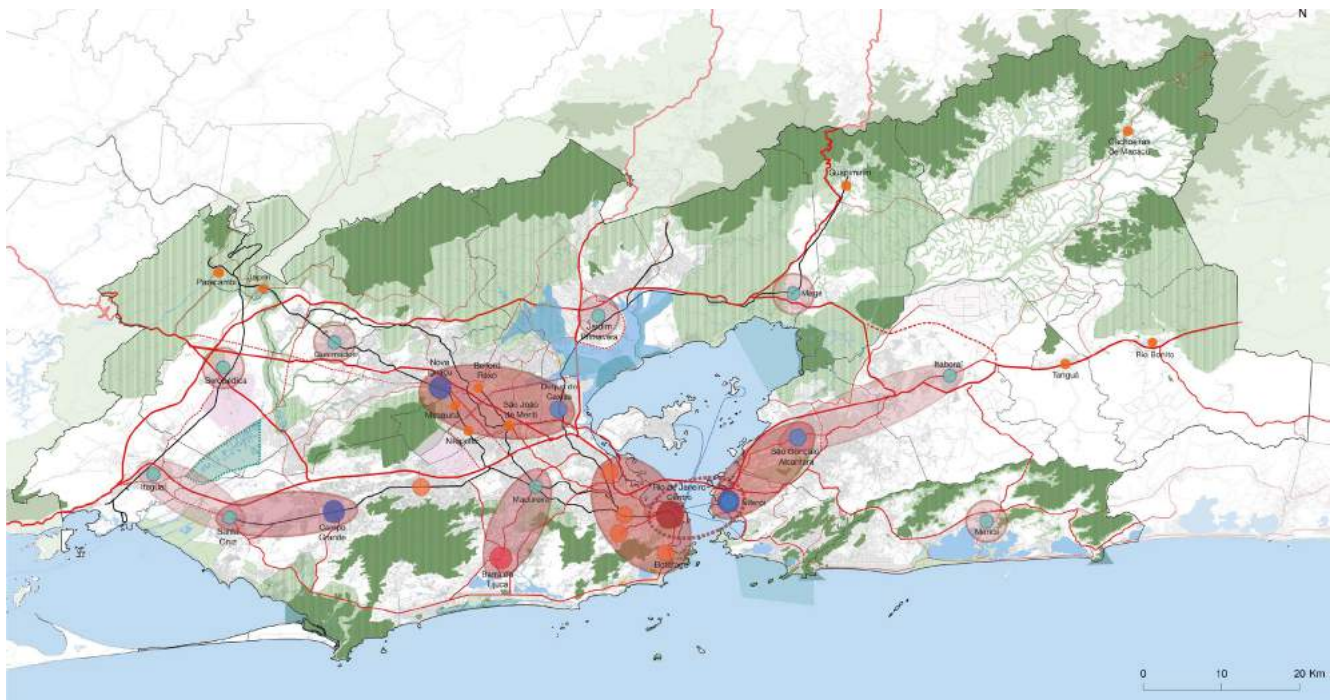
for the implementation of social facilities and housing projects; promote housing projects of social interest and popular market in urban centralities; promote the use of urban voids, with the support of instruments of the City and Metropolitan Statutes; support the implementation of collective transport projects and transversal axes that favor the connection of the centralities supported by the Plan and the neighboring districts; support the upgrading and upgrading of the railway system, the railway stations and its urban environment.

As a result of the urban polinucleation of the metropolis, the reduction of the territorial inequalities in the Metropolitan Region and the reduction of the dependence of the municipalities in relation to the Center of Rio de Janeiro and the necessity of the displacements toward the Hypercenter are expected; both in terms of the number of trips and distance traveled, mainly by the lower income population. The provision of social facilities, for example, should significantly reduce the high percentage of commuting to study and health services that, according to the RJMR diagnosis, reach about 50% of the daily trips made by urban trains. The polynucleation is expected to promote economic and social inclusion of a significant population contingent of the Metropolitan Region, expanding the possibilities of access to employment and income opportunities.

It is important to emphasize that, although it is not included in the group of centralities to be strengthened, the PDUI recognizes the historical and economic importance of the Center of Rio de Janeiro and its articulations with the South Zone (Rio district), East Zone (Niterói), North Zone, through suburban and suburban train systems, Ilha do Fundão and the Ilha do Governador (airport/university) and contiguous areas formed by the Port area and surroundings,



strengthened by the works of urban revitalization (Porto Maravilha). The Plan includes a series of actions aimed at the development of the Central region, including support for the implementation of housing and social projects, and a development project around Central do Brasil; based on the Development Oriented Transport methodology, "T.O.D.". Still in the municipality of Rio de Janeiro, the Plan identifies the growing importance of the centrality of Barra da Tijuca, which has had great economic dynamism in the last decades, mainly due to the real estate and service sectors.



- |                         |                           |                    |
|-------------------------|---------------------------|--------------------|
| centralities            | centralities to reinforce | connection vectors |
| ● centralities level 01 | ● centralities level 05   | —                  |
| ● centralities level 02 | ● centralities level 06   |                    |
| ● centralities level 03 | ● centralities level 07   |                    |
| ● centralities level 04 |                           |                    |

Centralities map  
Source: Quanta | Lerner Consortium (2018)

## B | The rails and tracks of the Metropolis

The Metropolitan Plan recognizes the Rails and Tracks of the Metropolitan Region, which led to occupation of the territory, especially the railway axes in the North and West of the metropolis, formed by the suburban trains, later complemented by the subway lines; but also the main roads, the most important being Avenida Brasil, which runs along the metropolitan East side of the Mário Covas Highway, and the Washington Luiz and Presidente Dutra highways. These structuring axes are predominantly radial and are directed towards the center region of the metropolis, where there is a greater concentration of employment and income. More recently, new axes have been deployed in the Barra da Tijuca region, also located in Hypercenter Macrozone, where there is a greater dynamics of real estate, commerce and services, which includes the Yellow Line, destined to the use of automobiles; and the BRT Transoeste, Transcarioca and Transolímpica roads, as well as the Line 4 Subway. In recent years, the Metropolitan Arch has been built, whose main role is to favor transportation and logistics.

The Plan's diagnosis revealed that there is a low urban density along the old rail lines, and also noted the demand for investments to qualify and expand the capacity of this mode, which has already carried a much larger number of passengers per day in the past, as well as pointing out the need to complement the rail passenger transport system, including the subway lines. At the same time as it supports investments in transversal mobility axes, the Plan includes support for the qualification and complementation of the radial railway axes, in order to encourage urban and housing densification along these routes; whose passenger stations, inducing urban nuclei that have developed over time, each with its own history and culture, must be preserved and valued.

The railway axes to be qualified correspond to the Deodoro – Santa Cruz, Japeri, Belford Roxo and Saracuruna branches. The first line of suburban trains, Dom Pedro II (Central do Brasil), followed by the Rio do Ouro Railway, and the Leopoldina Railway, the Melhoramentos do Brasil Railway, later incorporated into the D Pedro II (Central do Brasil) Railway. The main compliments of the metro-rail system



Nova Iguaçu Station  
Photography: Érika Poletto



Nilópolis Station  
Photography: Érika Poletto



Duque de Caxias Station  
Photography: Érika Poletto

provided in the PDUI are: Line 3 Subway, which plays a structural role in the East Macrozone of MR, planned to be built in two stages, the first from Niterói to Alcântara, where there is already a demand for passengers, and the second from Alcântara to Itaboraí; the Railway Arch, adapted for mixed use of passengers, connecting the Center of Rio de Janeiro to Itaboraí (COMPERJ), bypassing the Guanabara Bay, allowing access to the municipalities along this route; the VLTs for Inhomirim and Guapimirim, from the Railway Arch; the VLT to Maricá, from Metro Line 3, from Alcântara Station; the extension of the railroad from Santa Cruz to Itaguaí, complementing the access to the Metropolitan Arch; the extension of the Pavuna pre-subway, taking advantage of the railway bed preserved in the region. In addition to these axes, for the use of logistics, it is expected to connect the Rail Arch in the West direction, enabling access to the Port of Itaguaí.

In addition to the existing metropolitan axes, which are predominantly radial, the Metropolitan Plan foresees new transversal axes, forming a road network and/or public transportation corridors, seeking to break the logic of the movement directed to the center of the metropolis. Among the proposed transversal axes is Interbase 1, along the Sarapuí River, which strengthens the connection between Duque de Caxias and Nova Iguaçu and approaches several municipalities of the Baixada Fluminense, linking the access to the Guanabara Bay in Gramacho; and major radial axes, Washington Luís and Presidente Dutra highways, Via Light and, eventually, Avenida Brasil. Another important transverse axis in this region is formed by RJ 105, in its route between Jardim Primavera, in Duque de Caxias and Nova Iguaçu, extending to Campo Grande, in Rio de Janeiro, making it possible to extend the articulation of the Baixada Fluminense with West Macrozone and the metropolitan axis of Avenida Brasil. In West Macrozone, in turn, also stands out the Alcântara Hub, in São Gonçalo, which extends from Itaoca Beach, on the border of Guanabara Bay, to RJ 106; next to Tribobó, crossing RJ 104 and Line 3 of the subway, in Alcântara, also incorporating the final section of the VLT that should extend from Maricá to Line 3 of the Subway.

The Plan evaluates the locations where these mobility axes intersect, forming nodal points, as well as being important transshipment sites for the public transportation systems; are strategic for the location of urban and community equipment and may, according to the

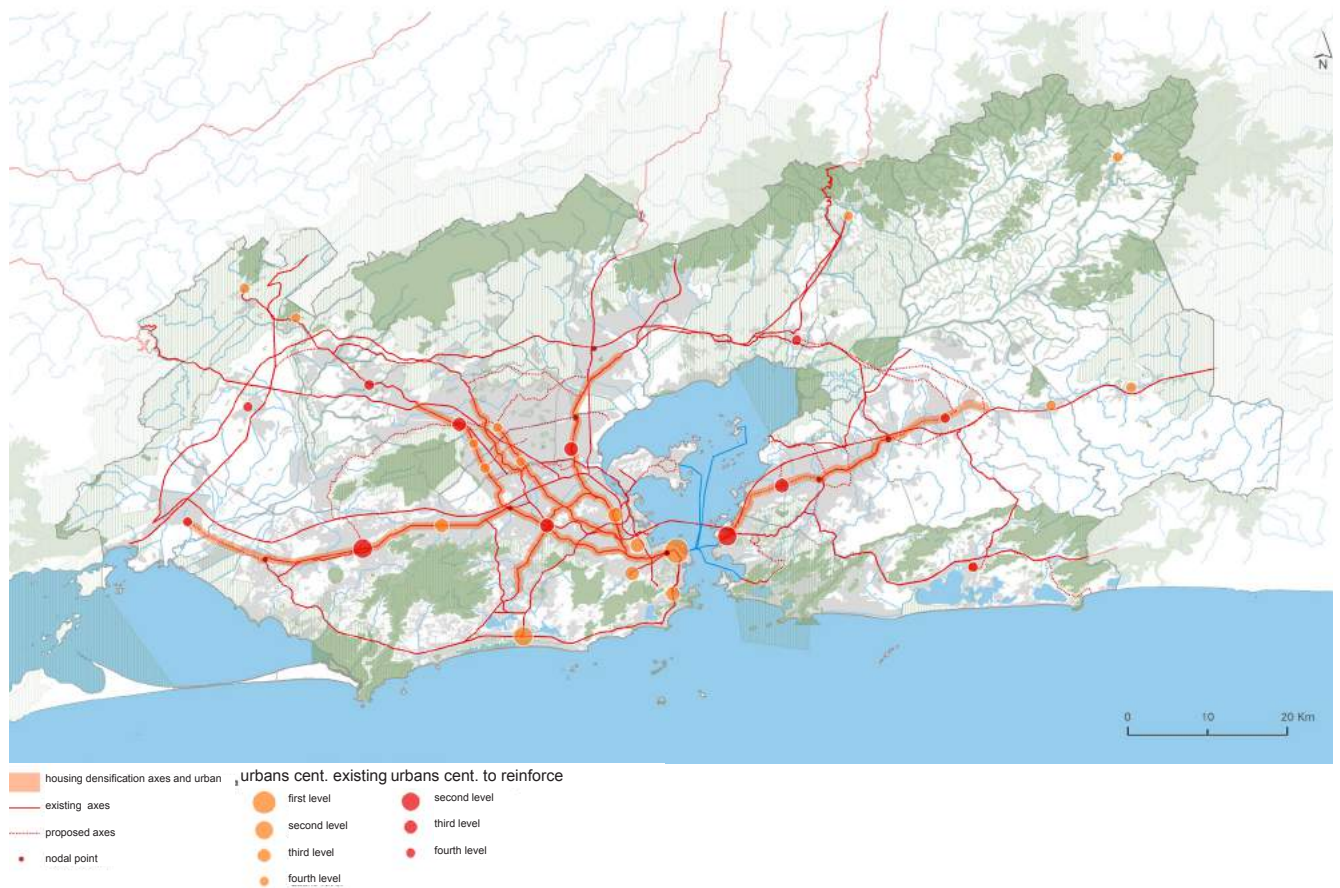
potential of each place, be strengthened in the urban context. Within this linear network of the main axes of public transport of greater capacity and the great regional accessibility routes, nodal points can characterize structured nuclei that strengthen the identity of each municipality within the metropolis.

Considered the Rails and Tracks of the Metropolitan Region, the Plan prioritized the support of urban and housing densification along the existing suburban rail system, including the L3 Subway and the BRT line connecting Madureira to Barra da Tijuca. The urban and housing densification proposed along the Rails and Tracks, along the same lines as the urban centralities to be reinforced, should be provided in the Municipal Master Plans, in order to ensure a spatial continuity of urban policies, while also promoting the diversification of uses in the most favorable sections. In addition, housing projects of social interest and popular market should be promoted using urban voids and public lands. The upgrading and re-qualification of the railway stations and their urban environment will be fundamental for the housing densification along the metropolitan axes.

The urban and housing densification proposed to occur along the Railways and Trails considers the demographic projections for the MRI, which indicate an initial period of population growth, which will last approximately until the year 2025, and a progressive stabilization of the metropolitan population, which, by 2040, should be very close to the current one. However, there is a significant increase in the number of households, due to a change in the profile of families, as well as the need to overcome the current metropolitan qualitative deficit. Encouragement for densification and urban diversification along the lines of mobility should be further elaborated in more detailed studies and specific plans, in order to identify the areas in which such a recommendation can be applied, because it finds more favorable conditions; considering social and housing issues, public facilities and infrastructure, environmental aspects, property configuration, interest in the formal market, among others.

In the process of urban and housing densification along the axes, the PDUI predicts that the methodology of D.O.T.S., Urban Development Oriented to Transport; considering the planning strategy that relates land use and land use with the implementation or improvements of collective transport, promoting adequate densities in the marginal

areas of the axes or modal high or medium capacity transport stations in order to increase the population's access to employment and income opportunities, public services and equipment.



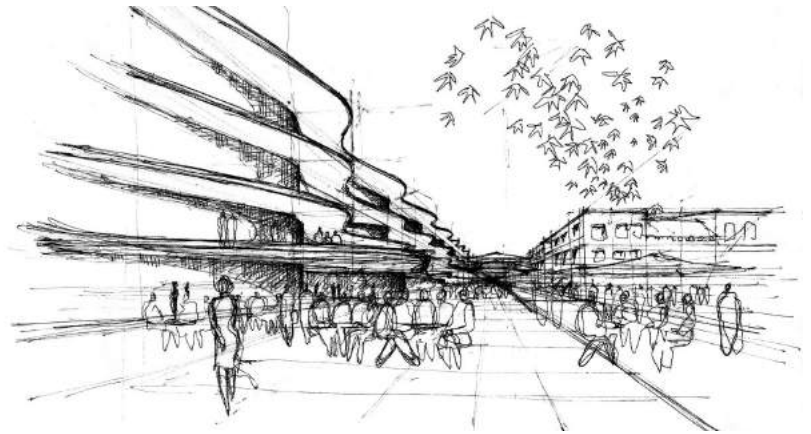
Map of Radial and Transversal Axes  
 Source: Quanta | Lerner Consortium (2018)



Suburban Train - Stations and Business Environment  
Source: Quanta | Lerner Consortium (2018)



Suburban Train - Stations and Business Environment  
Source: Quanta | Lerner Consortium (2018)



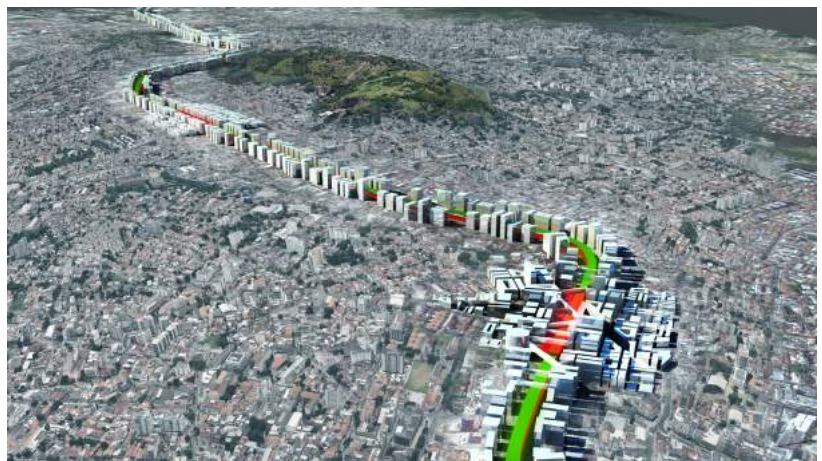
Sung in verse and prose, the suburban train is a substantive part of the identity of the Rio metropolis, the stations and their immediate surroundings give material and symbolic reality to each neighborhood of the city of Rio de Janeiro and also to the municipalities of the state of Rio de Janeiro.



Surroundings of Belford Roxo and D. de Caxias Station  
Source: Quanta | Lerner Consortium (2018)



Suburban Train - Stations and Business Environment  
Fonte: Consórcio Quanta | Lerner (2018)



Suburban Train - New Stations  
Source: Quanta | Lerner Consortium (2018)



**Preserve the urban scale and commercial and service uses characteristic of the surroundings of the stations.**

**Broaden and diversify.**



**Commercial Street Qualification**

Accessibility, landscaping,

Ordering of travelling merchants, loading and unloading

Multi-modal transport integration



**Use of Airspace**

Social facilities, Services and leisure areas



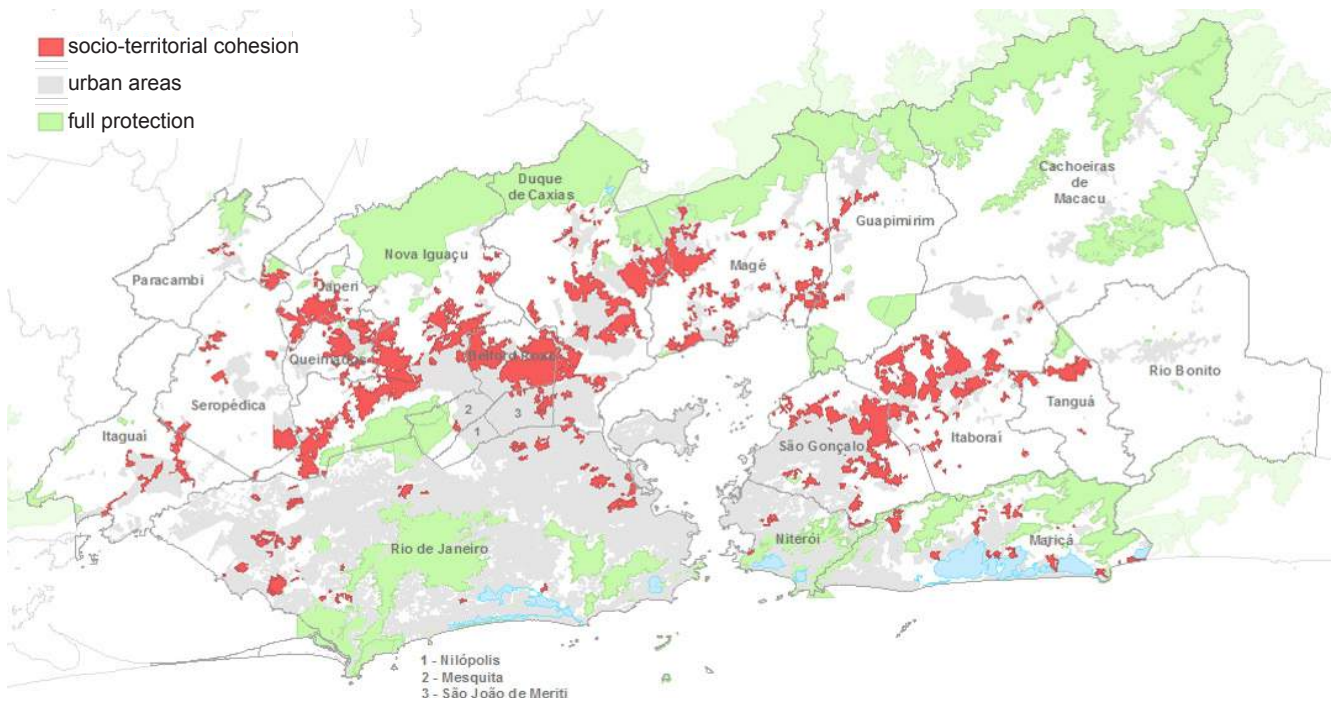
Suburban Train – New Stations  
Source: Quanta | Lerner Consortium (2018)

## C | Socio-territorial cohesion

On another front, in order to promote the reduction of economic and social inequalities, the Plan provides for support to urban and land regularization programs, associated with the implementation of social programs, precarious settlements located mainly in the metropolitan suburbs, and subnormal settlements, located throughout the Metropolitan Region. The Plan aims to guarantee the full integration of these settlements into the already qualified urban fabric,

as well as to promote the improvement of the quality of life and the social indicators of the population that lives there.

To reveal the importance of these measures, a Socio-Territorial Cohesion Macrozone (MST) was defined based on the worst levels of three important composite indicators - Social Vulnerability Index, Intra-urban Typology and Human Development Index. This Macrozone indicates the most vulnerable socio-territorial areas in the metropolitan region, with territories that are concentrated in the periphery of the MRI and located approximately 2.7 million inhabitants distributed among the 18 municipalities of



Socio-Territorial Cohesion Map  
 Source: Metropolitan Chamber of Governmental Integration

the 21 that compose the metropolis. The macrozoning presented by PDUI also establishes Qualification Macrozone, which points to an extensive spot where urban indicators are more precarious than those of the central core of the metropolis and its coastal region, indicating the need for investments in urban and social infrastructure.

The favoring of the peripheral regions of the metropolis goes through the implementation of improvements in urban infrastructure, including sanitation, drainage, paving, leisure areas, linear parks, afforestation, fiber optic networks, electricity, mainly the railways, and the deployment of new medium and high capacity modes, favoring the transversal connections of the metropolis. It also includes the deployment of high quality and medium and high quality social services and facilities, mainly in the areas of education, health, culture, sports and leisure, favoring the population of the peripheral regions of the metropolis, qualifying the urban environment.

## D | Valorization of the Baixada Fluminense and the Metropolitan East

The valorization of the metropolitan periphery is highlighted in the Baixada Fluminense and Metropolitan East regions, with the upgrading of the railway axes and the implementation of line 3 subway, respectively, complemented by the multifunctional projects associated with the transversal axes of the Sarapuí and Alcântara rivers connected to waterfronts in the Guanabara Bay.

The multifunctional Transverse Intermediate Axis I project extends from the Gramacho waterfront in the Guanabara Bay to the Campo de Gericinó and Nova Iguaçu, passing through the municipalities of the

Baixada Fluminense located along the Sarapuí River. In this section, there is a plan to implement a set of works and services that includes: a macro-drainage and recovery system of continuous dams along the Sarapuí River, to avoid floods in the region; the implementation of river parks and recreational areas in flood areas; the implementation of the region's road and connectivity system, joining BR 040 to Via Light; the implementation of a medium capacity collective transportation system, integrating the localities of the region and the Baía de Guanabara, in an integrated way to the means of transportation already existent, especially the railway extensions; the urbanization of precarious settlements and the construction of social housing for the resettlement of low-income families in the region; projects of a real estate and commercial nature aiming to take advantage of the valorization of the region, based on the methodology of T.O.D. - Development-Driven Transport; and the valorization of the urban centralities of the region, such as Gramacho (Railway Station), Vilar dos Teles, Belford Roxo, São João de Meriti, Edson Passos, Nilópolis, Mesquita and Jardim Primavera.

The multifunctional project of the Alcântara Transversal Axis extends from Itaoca waterfront in Guanabara Bay, continues until RJ 106, crossing the Line 3 Subway, which should be the main means of transport between the municipalities of Itaboraí, São Gonçalo and Niterói. The Alcântara Axis is adopted as a route of the VLT designed to connect the Line 3 Subway with the municipality of Maricá, the main transverse axis of the Metropolitan East. In this region, there is a plan to build an auxiliary canal so that the Alcântara may bypass the APA-Guapimirim mangrove, directing rainwater to drain the Imboaçú river, a work that will relieve the flooding of the Alcântara River basin. The spill channel will act as a "physical limit" for the advancement of the urban spot in the direction of Itaoca.

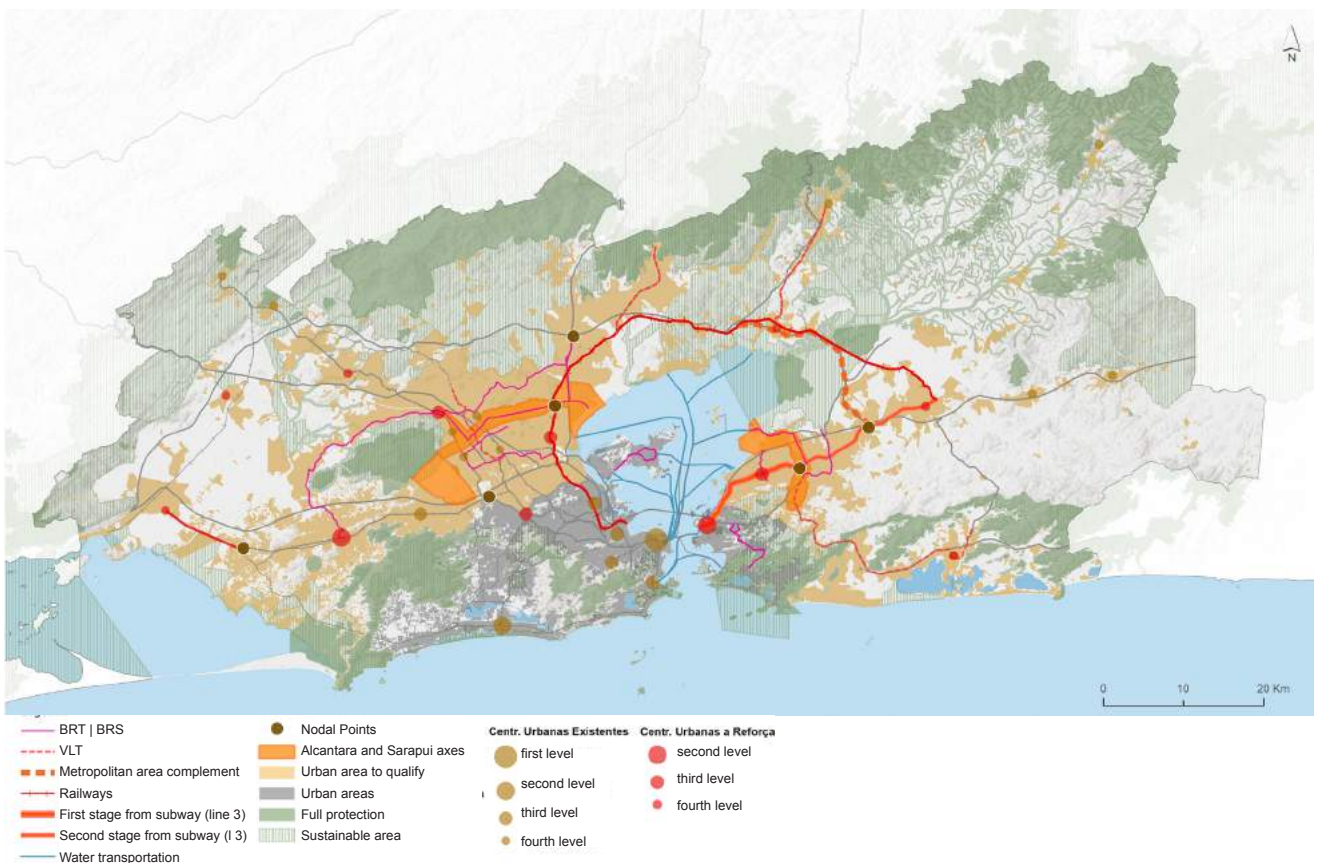
The multifunctional project also foresees: deployment

of local road system, leisure area and fluvial park, densification of the land occupation in the surrounding areas, with emphasis on housing; to take advantage of the urban value in the region by means of Onerous Grant of the Right to Build based on the methodology of T.O.D .; and valorization of the urban centrality of Alcântara.

To the Transversal Hubs of Sarapuí and Alcântara are added other projects that aim at the valorization of these two regions. In the Baixada Fluminense, a set of macrodrainage works will reduce frequent flood spots in the region and will allow the use and partial incorporation of large urban voids such as Campo da Bomba; Cidade dos Meninos and Campo de Gericinó, areas that, besides fulfilling environmental function, should be used for the deployment of parks and leisure areas, economic and real estate development projects, deployment of public and social facilities. In the Metropolitan East, macrodrainage projects will also favor residents of areas constantly flooded, valuing, besides the area of the Alcântara river, the basins of the Imboáçu and Guaxindiba rivers. Macrodrainage works will also enable the implementation of multiple use projects, taking advantage of rainwater reservoirs and river channels for the implementation of environmental parks and industrial uses.

The appreciation of the Baixada Fluminense and the Metropolitan East should also occur with the implementation of a series of new public transport lines organized in transversal axes. In the Baixada Fluminense, it was planned to connect the centrality of Jardim Primavera and the Duque de Caxias Center with the center of Nova Iguaçu, using existing routes such as RJ 105. From Nova Iguaçu, it was promoted the extension of the transversal axis to Campo Grande (Rio de Janeiro), through the former Rio São Paulo Road. Already in the Metropolitan East, it is planned to implement Metro Line 3, a radial structure that organizes the entire region, and should be implemented in two stages, first from Niterói to Alcântara and then from Alcântara to the municipality of Itaboraí, where it is located the COMPERJ. Public transportation lines were also designed in the new cross-links, associated with the backbone of the Subway, taking advantage of its potential, and creating connections with the Guanabara Bay and with the neighborhoods and municipalities of the region, highlighting the system on rails to the municipality of Maricá. These actions are part of the Balance the Metropolis Program.

Contemplating the preservation of natural heritage and the demands of a social character in the regions of the Baixada Fluminense and the Metropolitan East, it is also proposed to establish the typology of historical parks in places where significant ruins survive in the middle of unused spaces, as well as urban renewal around the train stations. Environmental initiatives also include the creation of a mosaic of conservation units in the region of the municipalities of Maricá, São Gonçalo and Niterói, and the creation of a regional development plan for Guapiaçu, in Cachoeiras de Macacu.



Priority Actions Programs - Balance the Metropolis (PAP - EM)  
 Source: Quanta | Lerner Consortium (2018)

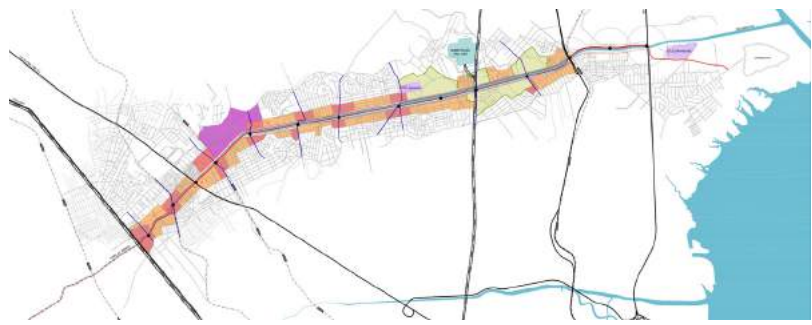
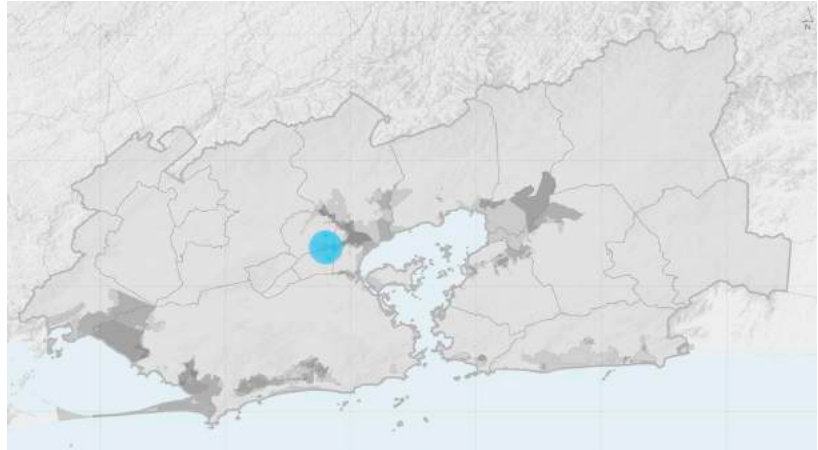
**Environment:** linear park with drainage and environmental technologies - 'frontage' for the Sarapuí River

**Mobility:** transverse and longitudinal connections

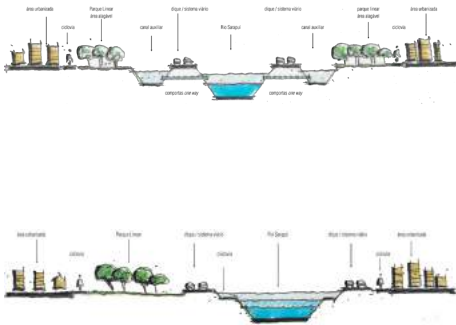
**Housing:** new development area - urban redevelopment

**Centralities:** mixed use with trade, services and integrated transport

**Instruments:** Consortium Urban Operation, Land Readjustment, Constructive Potential, tax incentives..



Sarapuí / Transbaixada Environmental Axis  
Source: Quanta | Lerner Consortium (2018)



Use for park during periods of drought.

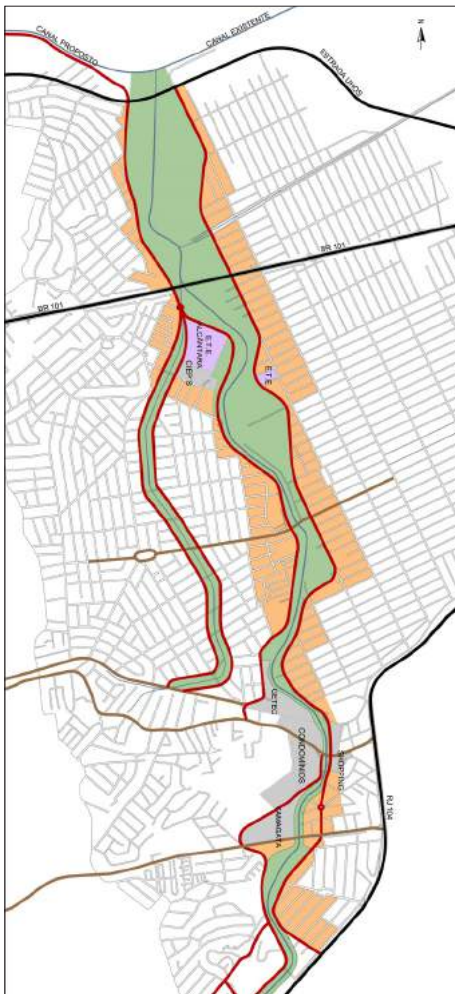
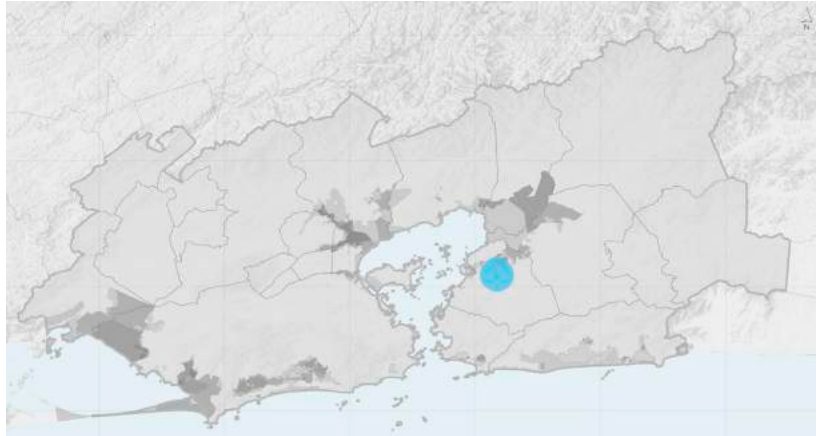


Use for flooding during flood periods.



Sarapuí / Transbaixada Environmental Axis  
Source: Quanta | Lerner Consortium (2018)

Proposal that involves different times, different neighborhoods, different economies and a set of works that aim to create new qualified urban environments. It foresees the deployment of extravasor channel parallel to Urros Road for the macrodrainage of the region and creation of a great environmental axis that extends from the Alcântara River to Island of Itaoca, going through the old Embankment of S. Gonçalo, where it provides for the creation of a park for the community.



- 01 Alcântara River
- 02 Spill Channel
- 03 Alcântara Environmental Park
- 04 Ilha de Itaoca
- 05 Praia das Pedrinhas
- 06 Barge Station
- 07 Subway Line 3

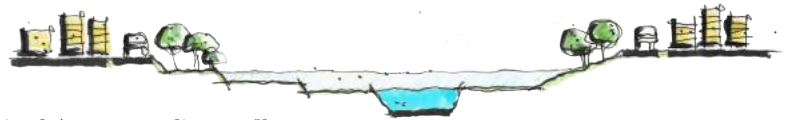
Environmental Axis - Rio Alcântara  
Source: Quanta | Lerner Consortium (2018)



**Environment:** linear park with drainage and environmental technologies - 'front' for the Alcântara River

**Mobility:** transverse and longitudinal connections

**Housing:** new area of urban development  
leisure / identity / belonging / sport / health



Rio Alcântara - Outline Profile  
Source: Quanta | Lerner Consortium (2018)



Spill Channel - Schematic Profile  
Source: Quanta | Lerner Consortium (2018)



Environmental Axis - Rio Alcântara  
Source: Quanta | Lerner Consortium (2018)

## E | Production of houses and containment of urban sprawling

Despite promoting investments in the metropolitan periphery, the Plan seeks to contain the expansion of the urban spot, which has expanded rapidly and significantly. It is reiterated that this increase occurs most often through irregular occupations, in areas without urban and social infrastructure, many of them in areas with fragility or environmental restriction, subject to frequent floods that expose the population to a series of scratches. This unbridled urban growth places a demand for infrastructure that municipalities can not meet, but at the same time allow it to occur without using its authority to control land use and occupation. The informal occupation of the periphery also advances and consumes areas that could be used for rural production and the environmental appreciation of the metropolis.

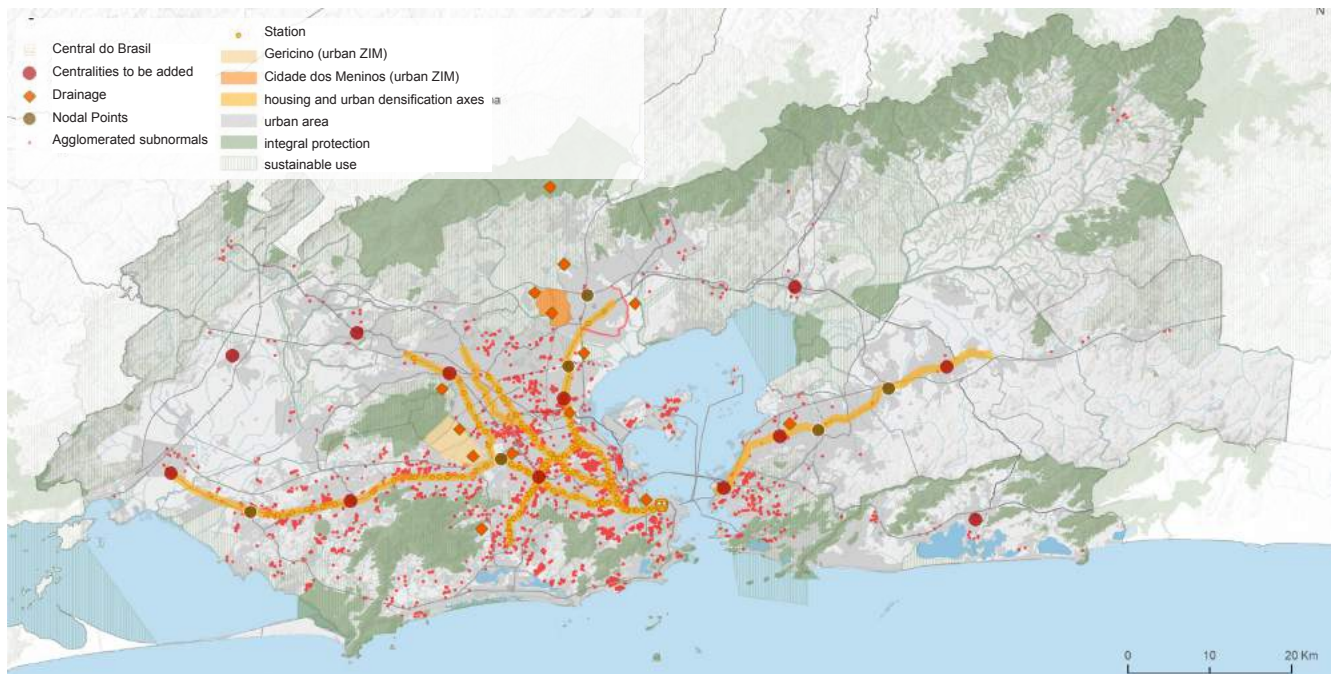
It is emphasized that the containment of urban sprawl should occur with the support of a new policy of housing production, popular market and social interest; qualified and conducive to the most efficient use of the urban and social infrastructure already available in the Metropolitan Region, particularly medium and high capacity transport, as well as access to urban centralities, points of concentration of services and jobs. It is reiterated that this proposal should occur with the occupation of urban voids, considering the environmental vocations of these areas, using instruments provided for in the Bylaws of the City and the Metropolis, as well as promoting the use of public lands from the three spheres of government , currently without adequate uses by the population. The use of these instruments will allow to face the restrictions imposed on housing programs due to the high cost of urban land in the better located areas. The Metropolitan Plan will promote the construction of a wide range of housing types, programs and production processes, inspired by the formal and informal markets which present alternatives and arrangements much richer and varied than those traditionally adopted in housing policies. The need for this strategy stems from the size of the challenge to be faced where, even with the reduction of the population growth rate, the demand for new housing in the Region over the next twenty years has reached about 1 million units, partly corresponding to housing with a household

income of up to 2 minimum wages, for which direct support from government programs is essential. The accelerated increase in the proportion of the elderly in the population also requires that part of the housing supply contemplate the special needs of this range.

Thus, the Plan stimulates various forms of housing production, including low-income housing, resettlement of families at risk, housing for social rent, adapted housing for the elderly, self-management projects with technical assistance, in the center region of the metropolis, a project in the vicinity of railway stations and centralities of the metropolitan periphery, among other initiatives.

For the PDUI, the promotion of improvements in the quality of housing in the Metropolitan Region also

involves investments in infrastructure and urban services, covering aspects of basic sanitation, ensuring water supply and water security of the metropolis; the collection and treatment of sewage, the collection and proper disposal of solid waste, the implementation of drainage works to prevent flooding in urban areas, the implementation of squares, parks and leisure areas, afforestation of roads and public spaces, the valorization of active transport (bicycles and walks), in short, the conditions of the housing environment that guarantee a better quality of life for the citizens. This includes expanding population resilience, particularly in lowland areas, increasingly subject to the rigors of the weather, imposed by climate change. Proposals for housing production and regularization of precarious settlements are presented in the Inhabit the Metropolis Program.



Priority Actions Programs - Inhabit the Metropolis (PAP - HM)  
 Source: Quanta | Lerner Consortium (2018)



Entry view of the Guabará Bay  
Photography: Érika Poletto

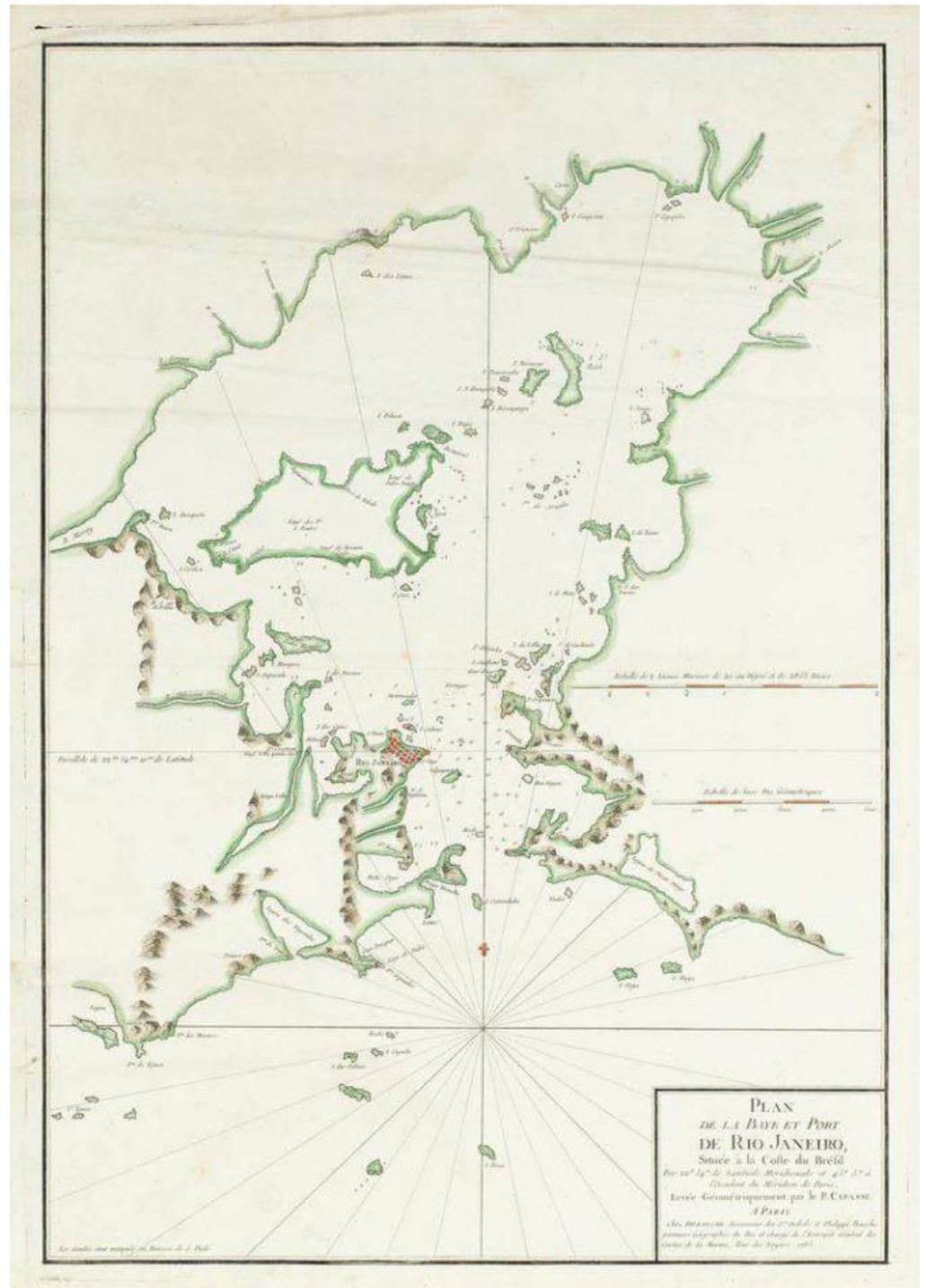


## F | The “reinvention” of the bays

Reinventing the bays of Guanabara and Sepetiba, especially Guanabara Bay, which is in the heart of the Metropolitan Region, with greater urban occupation around it, is one of the priority programs of the PDUI and should contribute to the recovery of environmental and natural heritage, and for the economic and social development of the entire region. Recovering and valuing the bays has a symbolic meaning, which returns and re-signifies their spaces for the population, currently so far removed from this environmental and cultural heritage. At the same time it recovers one of the most important potentialities of the Metropolitan Region for the economic and social development. Its historical trajectory and natural condition under ports - Rio, Sepetiba - participates in the economic future of the metropolis as a channel of communication with the globalized economy, pursuing the incorporation of new technologies and investments.

A broad set of actions is planned to favor the bays of Guanabara and Sepetiba aiming at the coexistence between different interests in the coastal fronts, with a structural focus in the recovery and preservation of the natural and cultural patrimony. Grow, but in a respectful way to the past, the present and the future. Its environmental recovery should occur from the depollution of its waters, counting on the deployment of a sanitary belt along the rivers and of the bays themselves, in order to collect sewage released clandestinely in the drainage networks, allowing its treatment, drastically reducing the high level of pollution in which they are. The bet on this recovery makes it possible to rescue its role as a powerful marine habitat, saving ecosystems, including the dolphin community, a great symbol of the bays of Guanabara and Sepetiba and the city of Rio de Janeiro.

Clean and recovered, it will certainly see its use for recreation, tourism and metropolitan integration enhanced, which is associated with the appreciation of the environmental and cultural heritage of its surroundings. The Guanabara Bay, for example, has a great environmental potential in all its surroundings, especially in the bottom of the *recôncavo*, less antropizada region, that extends of Itaoca, in the municipality of São Gonçalo, until Gramacho, in Duque de Caxias, passing through municipalities of Magé, Itaboraí and Guapimirim.



**Plan de la Baye et Port de Rio Janeiro, Située à la Coste du Brésil**  
Author: Jean Claude Dezauche  
Collection: Instituto Moreira Salles

The territories surrounding Guanabara Bay should benefit from the valorization of the Environmental Conservation Units located there, especially the Guanabara Ecological Station (ESEC), Guapimirim and Suruí Environmental Protection Areas (APAs), among other units of conservation, as well as the expansion of the environmentally preserved area, including the creation of the Guapimirim Environmental Park. The environmental appreciation will also occur through the implementation of corridors and environmental mosaics that should promote the connection of the bays with other ecosystems, extending to the Serra do Mar.

Environmental actions enhance the landscape around Guanabara Bay and Sepetiba and are complemented by the recovery of the historical patrimony in this region, mainly in the municipalities of Magé and São Gonçalo. The Plan foresees investments for the appreciation of the Cultural Landscapes of Guia de Pacobaíba, Piedade, Suruí, Estrela and Vila de Inhomirim, which have a significant collection and should boost tourism and economic activities, benefiting the local population. It also provides actions to value all island system, especially the islands of Paquetá and Brocoió.

The recovery of the heritage includes the piers and historical moorings of Pacobaíba and Piedade, and adds to the appreciation of other existing assets, including those used by traditional communities of fishermen, who should also receive attention and priority. The Plan includes the implementation of new infrastructures that support the creation of waterway transportation lines, to be defined in consonance with the private sector. This is one of the ways to enhance the Guanabara Bay, to enable integration between municipalities in the Metropolitan Region and promote intrametropolitan tourism, national and international, including tourist routes associated with historical and cultural heritage. The infrastructure to be deployed in Guanabara Bay will also stimulate the use of waters

for marinas and the practice of nautical sports, noting that this splendid water mirror has been the scene of international yachting regattas, and that; in clubs installed in its border emerged world champions of this sport modality.

The Bay of Sepetiba also participates in this context, seeking a strategy that combines in a balanced way its environmental and scenic potential with the expansion of economic activities and the other possibilities of occupation of the territory in its surroundings. The proposal here is based, therefore, on the conservation of the areas of environmental fragility - mangroves and restinga of Marambaia, on the permanence of the urban and social scale of the islands of Madeira and Itacuruçá, on the requalification of the beaches of Sepetiba and Guaratiba, and on the disciplined development of port activities and related dynamics.

The recovery - or reinvention - of Guanabara Bay also has as its objective the “construction of urban fronts directed to the water lines; with the creation of scenarios and urban occupations that foster a sense of belonging by the population and contribute to the creation of tourist and transportation routes; for the permanence of communities and traditional economic activities; for the requalification of old areas and neighborhoods; and for the implementation of “acupuncture” - recovery of beaches, creation of waterfronts and parks, among other initiatives. Two regions around the Guanabara Bay are specially treated to become waterfronts, the borders of Duque de Caxias, next to Gramacho, and that of São Gonçalo in Itaoca, fronts associated with the Transversal Shafts of the Sarapuí River (Baixada Fluminense) and the Alcântara River (Metropolitan East). And also, within the reading of Cultural Landscapes, a key concept for the valorization of the metropolis heritage, the recovery of beaches in the municipality of Magé, the Esperança Beach near the pier Mauá, those near the port and the pier of Piedade; the Pedrinhas Beach



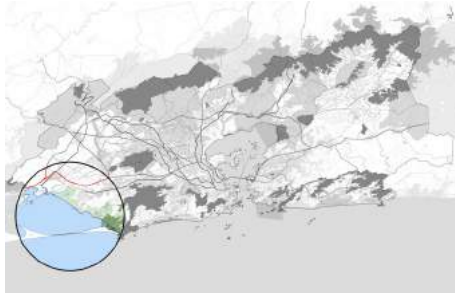
in São Gonçalo, and the beaches of the Paquetá, Governador and Fundão islands.

The Gramacho Waterfront valorization project and the implementation of the Gramacho Embankment Park aim to improve the quality of life of low-income residents of the town and of the inhabitants of Duque de Caxias and Baixada Fluminense, as a result of the total reconversion of the use of that area. The project is based on three aspects: social inclusion, recovery and environmental preservation and urbanization qualification and housing densification. It is planned to use a territorial belt near the bay for housing use, in addition to the implementation of an environmental park in the old landfill of Gramacho, and a pier that allows access to waterway transport.

No less significant is the Itaca Waterfront project in São Gonçalo, which implies the use of the berth existing on the site, originally built for the use of COMPERJ, which allows the implementation of projects for the economic use of the region, where it is foreseen the Cidade da Pesca, an important infrastructure for the exploitation of marine resources. The appreciation of Itaoca also includes the preservation of the local historical heritage, the creation of an environmental park where the Itaoca dump is located. The locality should be valued as a port of integration of the communities of Guanabara Bay, especially with the islands of Paquetá and Governador, role already exercised precariously.



Guanabara Bay  
Photography: Érika Poletto



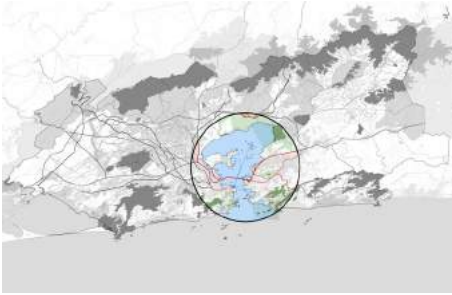
## Sepetiba Bay



- 01 Itacuruçá Island
- 02 Madeira Island
- 03 Sepetiba Beach
- 04 Pedra de Guaratiba
- 05 Restinga
-  Port



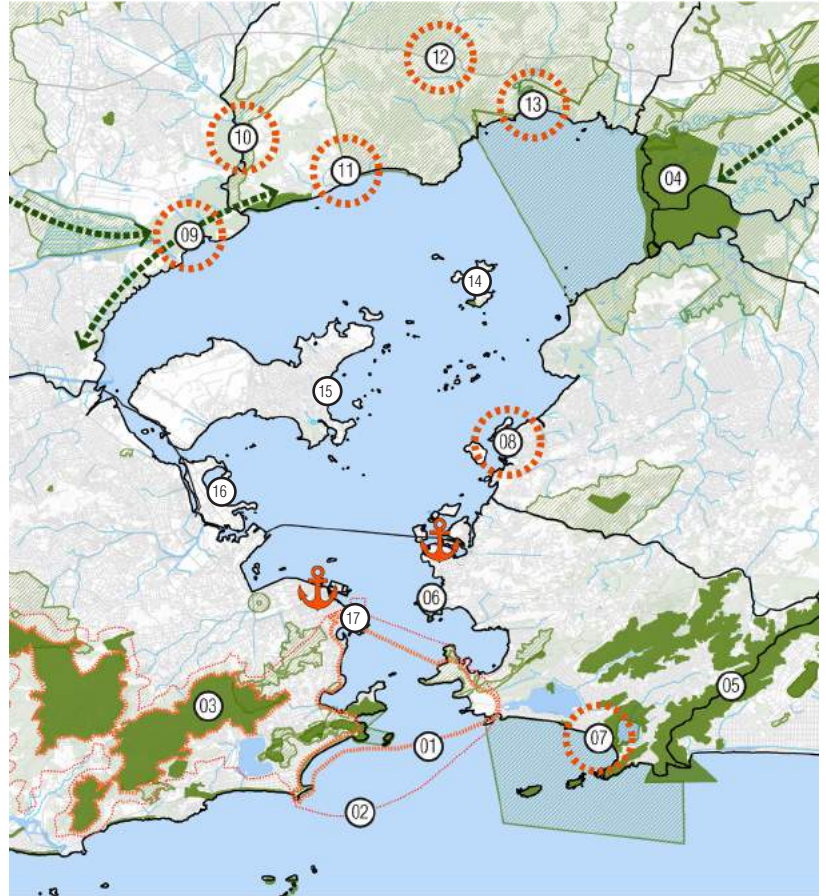
Itaguaí Port seen from Madeira Island  
Photography: Érika Poletto



Guia de Pacobaíba Station, Pacobaíba, Magé  
Photography: Isabel Sanchez

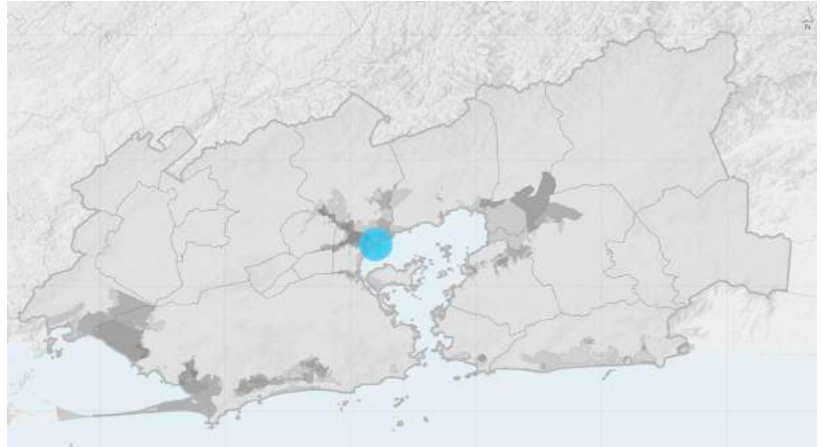


Main Church of São Nicolau do Suruí, Magé  
Photography: Érika Poletto



- 01 Unesco Site
- 02 Unesco Buffer Zone
- 03 Tijuca National Park
- 04 Guanabara Ecological Station
- 05 Serra da Tiririca State Park
- 06 APAU from Niterói
- 07 Itaipu Cultural Landscape
- 08 Itaoca Cultural Landscape
- 09 Fundo da Baía Cultural Landscape
- 10 Estrela Cultural Landscape
- 11 Pacobaíba Cultural Landscape
- 12 Suruí Cultural Landscape
- 13 Piedade Cultural Landscape
- 14 Paqueta Island
- 15 Governador Island
- 16 Fundão Island
- 17 Porto Maravilha
- 🚢 Ports





Gramacho Metropolitan Park  
Source: Quanta | Lerner Consortium (2018)



**Legenda**

- Gramacho Metropolitan Park
- transportation + commerce + institucional integration
- buildable area
- institucional area
- ..... PPA boundarie
- road system / conection

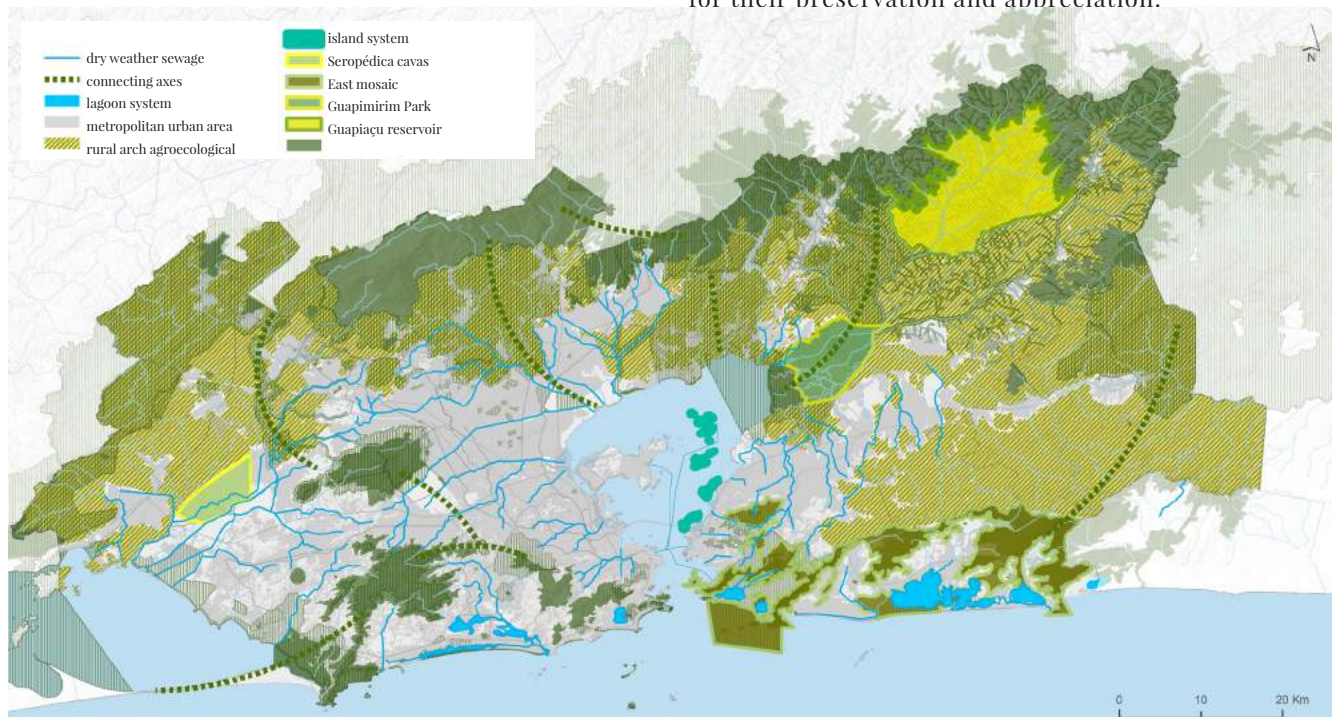
Gramacho Metropolitan Park  
Source: Quanta | Lerner Consortium (2018)



## G | The Agroecological Arc

With the objective of promoting the sustainable development of the metropolis and containing the expansion of the urban spot, the Plan values the rural areas around the MR, the so-called Rural Arch (Agroecological), where qualified agricultural production activities should be supported, in order to meet RM's own market, including official purchases for schools and hospitals, now supplied by products imported from other states. But also, receiving technical advice to achieve the quality of production required to adopt a stamp of provenance, which makes it possible to increase the added value of products and attract consumers from other locations. For this Arch, rural tourism activities are also planned, exploring the Circuit of Waters and the possible deployment of small reservoirs taking advantage of the water resources that spring from the Serra do Mar.

The Agroecological Rural Arch is also complemented with measures to protect springs and areas of environmental preservation around the MR environment and, in particular, promoting the development of the region of the Guapiaçu river basin, aiming to guarantee the water supply of the Metropolitan East. The actions of an environmental nature are located in the Sustainable Metropolis Program. The reading of macro aspects of the territory is also reflected in proposals related to the natural and cultural heritage that complement the maximum objective of containment of the spreading through directives applicable to various stretches of territory: the establishment of an environmental connectivity network between fragments of existing vegetation - with the creation of new conservation units, elaboration and implementation of management plans, new urban river linear parks along permanent preservation areas, water bodies and mobility corridors - and the delimitation of cultural landscapes with parameters for their preservation and appreciation.

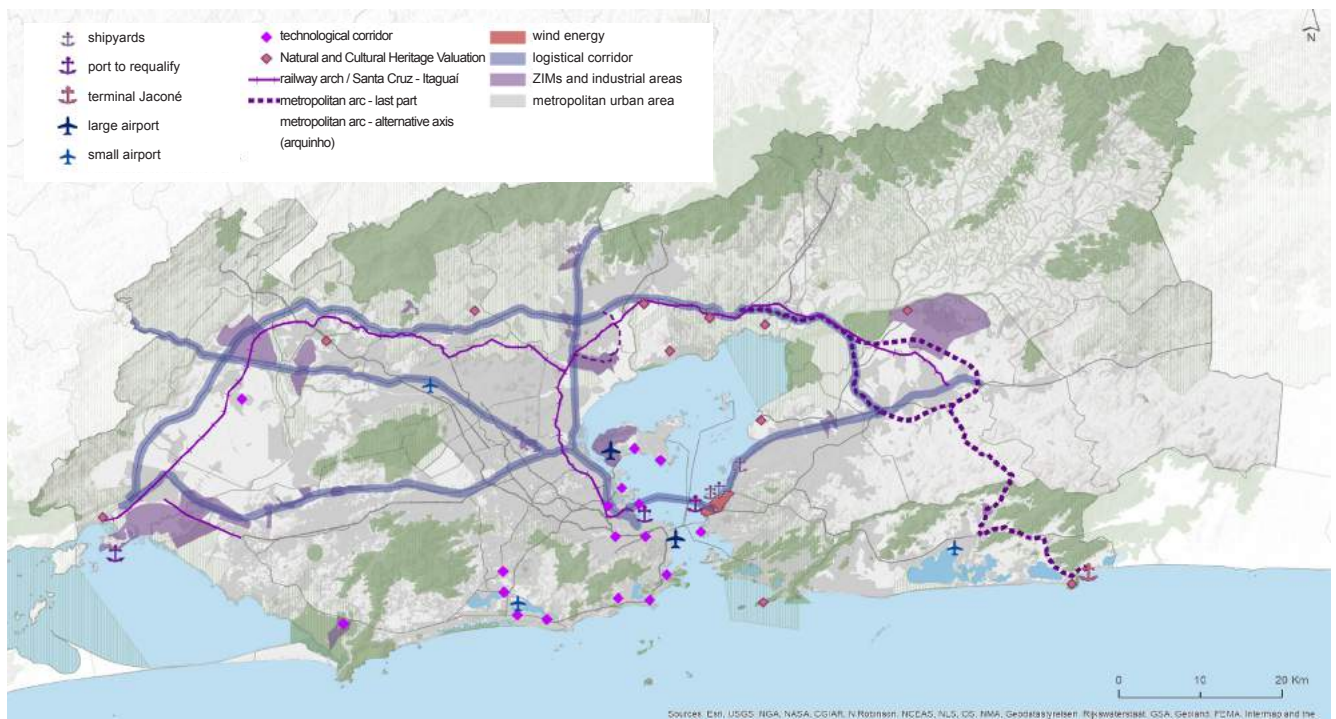


Priority Actions Program - Sustainable Metropolis  
 Source: Quanta | Lerner Consortium (2018)

## H | Economic expansion

The valorization of the metropolis of Rio de Janeiro is directly related to the creation of jobs and income opportunities in the vicinity of these centralities, following the logic of a polynucleated metropolis. In this sense, it should be emphasized that the PDUI is committed to the strategic function of the Metropolitan Arc, and supports the implementation of economic activities in its surroundings, including benefits for existing industrial districts, located next to the Arc but also close to the other service axes of the metropolis, namely, Av. Brasil and the Mario Covas Highway, and BR 040 and Presidente Dutra Highways. In addition, the PDUI includes complementing the infrastructure needed to expand the RJMR's role as a gateway to Brazil and South America, which should boost logistical and industrial activities in the metropolitan periphery, particularly along the Metropolitan Arch. Dredging

works are planned for the ports, the implementation of Terminal 2, the extension of the Metropolitan Arch to the municipality of Maricá, the implementation of the Railway Arch, expansion of Galeão Airport, implementation of the access road of Campos Elísios among other measures that seek to reinvigorate the economy of RM, reducing the dependency of a single sector, creating new opportunities for employment and income, in a decentralized manner. At the same time, the Plan supports the development of the central core of the metropolis, which is seen as an international center for research, development and innovation; and should take advantage of the oil and gas, health, defense, shipbuilding and clean energy sectors and sustainable technologies, expanding convergence and synergy among institutions (including public universities), attracting human capital of international relevance to the Metropolitan Region . These actions make up the Smart Metropolis Program.



Priority Actions Program - Smart Metropolis  
 Source: Quanta | Lerner Consortium (2018)

## I | The natural and cultural heritage

The contributions that the field of natural and cultural patrimony have to offer to the cuts chosen as priorities for the Strategic Plan were exposed throughout the chapters above. It is important, however, to emphasize, not only the transversality of the subject matter but also its determinative character for the actions that are carried out from this planning exercise.

The Plan's proposals on the theme create instruments that allow action in the territory in case of conflicts and opportunities involving natural and cultural assets. After joining the extensive inventory methodologies and macro-territorial approach and analysis of recurrent situations in the metropolis, we sought to propose how the wealth of heritage can not only be preserved, but also used as an economic, social and environmental and historical asset; be taken as a beacon for actions on the natural and built environment, as well as for human activities.

Thus, there are proposals related to the increase of the vegetation cover of the region, in view of favorable conjunctures of the use of existing soil to biodiversity corridors, and the preservation and recovery of its waters and soils; assumptions that are present in the proposals of the Water Path and the Agroecological Arch.

Others emphasize the delimitation of cultural landscapes of the metropolis, and are present in the requalification of the railway axes and their surroundings; in the recovery of beaches, piers, harbors and ruins along the bays; in the proposals of creation of narratives, scripts and events, of professionalization and financing, in order to give visibility to this immense and profitable collection of places, history, art, people, knowledge and actions that are part of this metropolis; opening new horizons of social development and participating in the redesign of the occupation of the metropolis.

Looking at the territory as a system of cultural landscapes, while addressing a still relatively embryonic concept in Brazil from the point of view of its management instruments, offers great potential; with Rio de Janeiro as the Brazilian cultural landscape par excellence



- and the fact that it was the first Brazilian landscape in this category recognized by UNESCO corroborates the institutional capacity of the region to succeed in such a public policy modality.

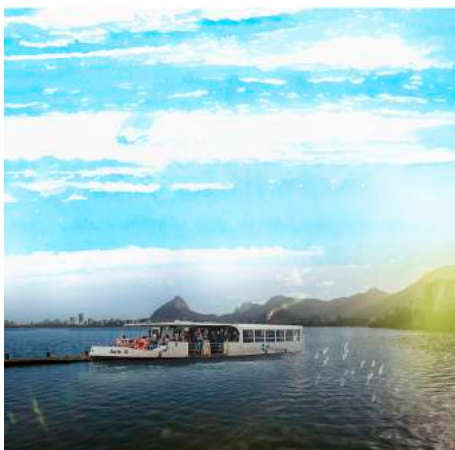
In thinking of the metropolis of the next decades, we can not ignore, beyond the irreplaceable value of natural resources, the condition of equilibrium and equality in which we must position man before all species and the continuous making of human civilization; which inexorably walks in cycles and only with historical consciousness can be considered truly evolving.



*Grabén* da Guanabara  
Photography: Felipe Guerra



The set of piers, berths and old ports scattered over the water bodies of the metropolis-bays, ponds and rivers-, when restored and requalified, can serve the fishing communities, the tourist use and the practice of nautical sports, as well as approaching neighborhoods.



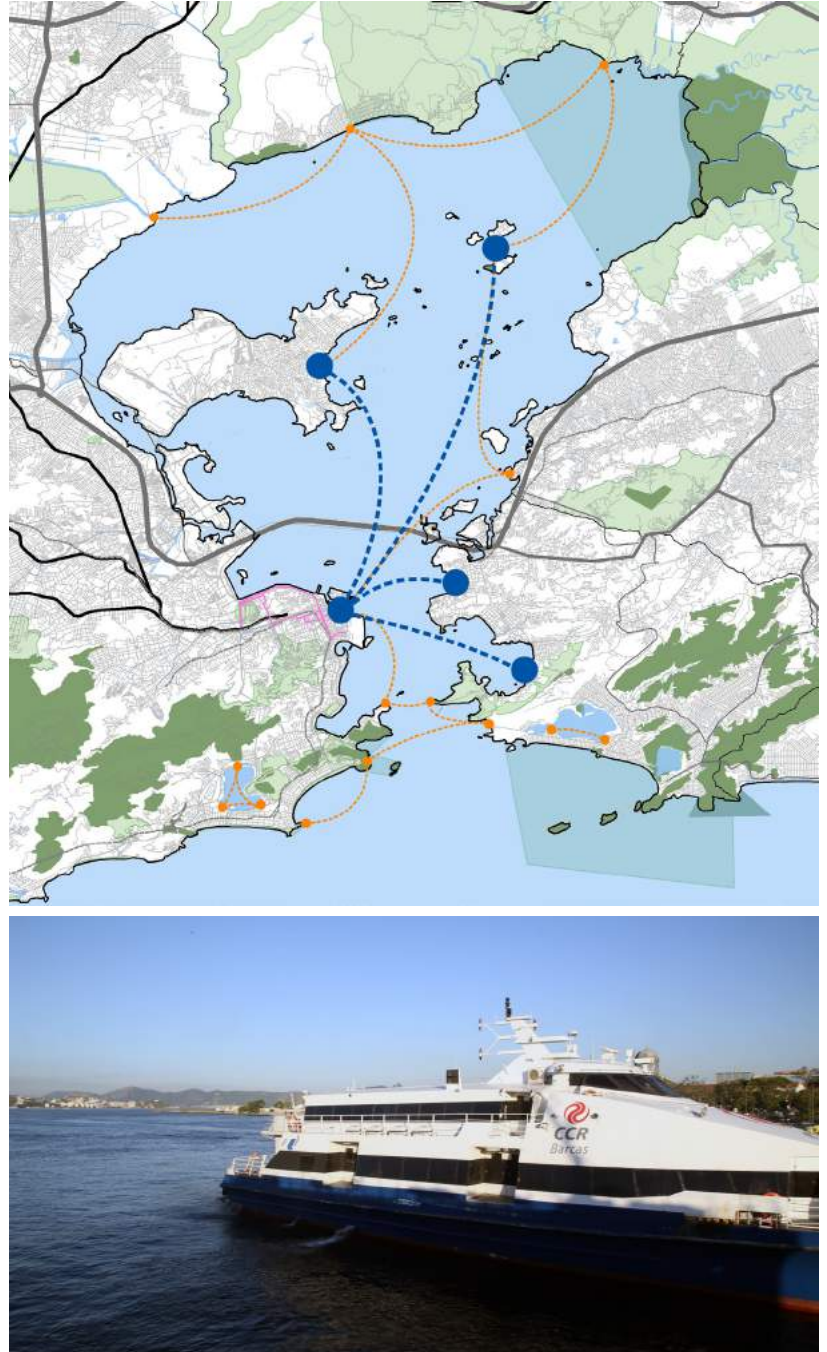
Water and Connectivity  
Source: Quanta | Lerner Consortium (2018)



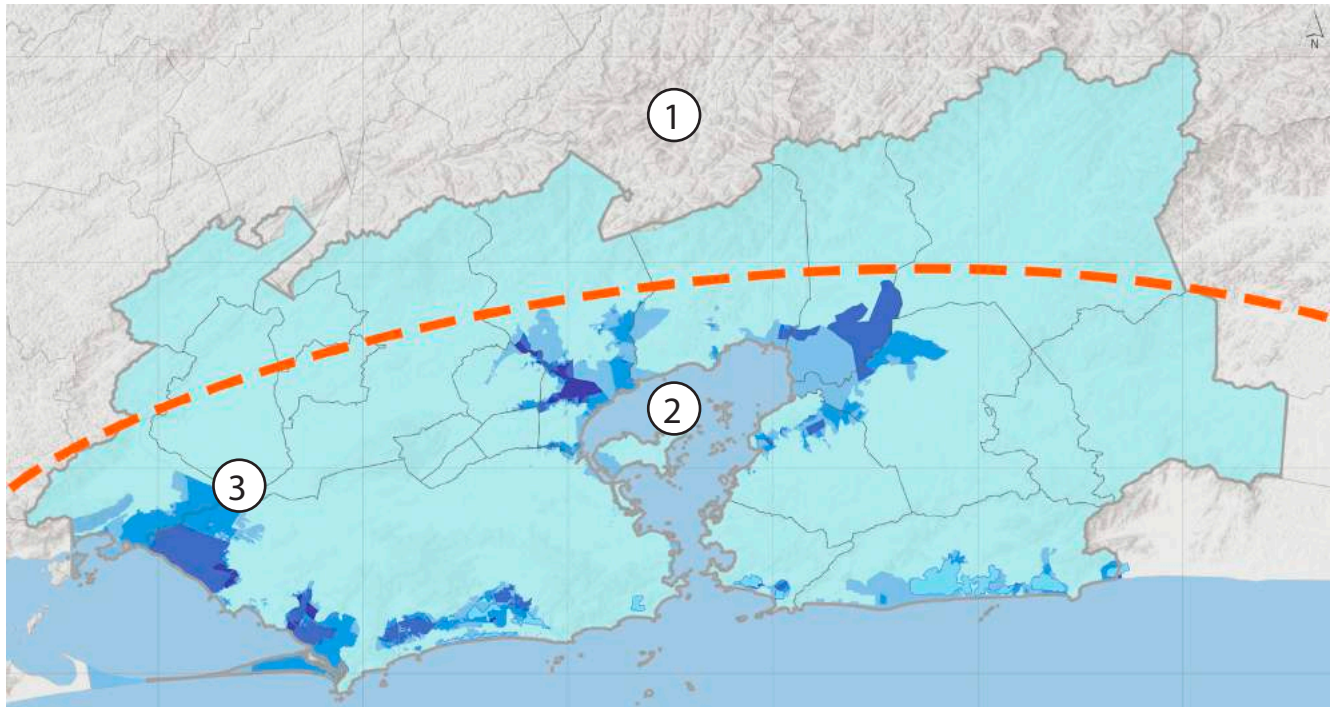
Ponta d'Areia, Niterói  
Photography: Érika Poletto



Water and Connectivity  
Source: Quanta | Lerner Consortium (2018)



Rio-Niterói Barges  
Source: Quanta | Lerner Consortium (2018)



Multifunctional Projects with Water  
 Source: Quanta | Lerner Consortium (2018)

- 01**  
**Serra do Mar**
- 02**  
**Guanabara Bay**
- 03**  
**Cavas De Seropédica**

**Multifunctional Projects with Water**

The Hydrographic Basins of the Metropolitan Region of Rio de Janeiro are the mechanism of flow of rivers and rainwater, and should be thought of as a complex gear that directs the waters on routes that descend from the Serra do Mar; travel through the water bodies of the Baixada and go to the Bay of Guanabara, to the Bay of Sepetiba, to the sea.

The Multifunctional Projects With Water aim to contribute to the best use of these waters, incorporating solutions of drainage and containment of floods to the transformation of the territory, proposing new uses and contributing with integrated solutions; in this way, the drawing with the water is the result of macrodraining associated to the territorial development of the Region.

**Macrodrainage and Resilience:**

**Porto Estrela Environmental Park**

Part of the municipality of Magé surrounds the Bay of Guanabara in the floodplain of the rivers Saracuruna, Estrela and tributaries where a vast floodplain makes human occupation impossible.

However, in the middle of the Rivers in a higher quota stretch are the ruins of Porto Estrela, one of the several stops of the Royal Road through which it drained the production of the Gold Cycle.

In the surroundings of this complex, there are urban areas that suffer with recurrent floods, hindering their development.

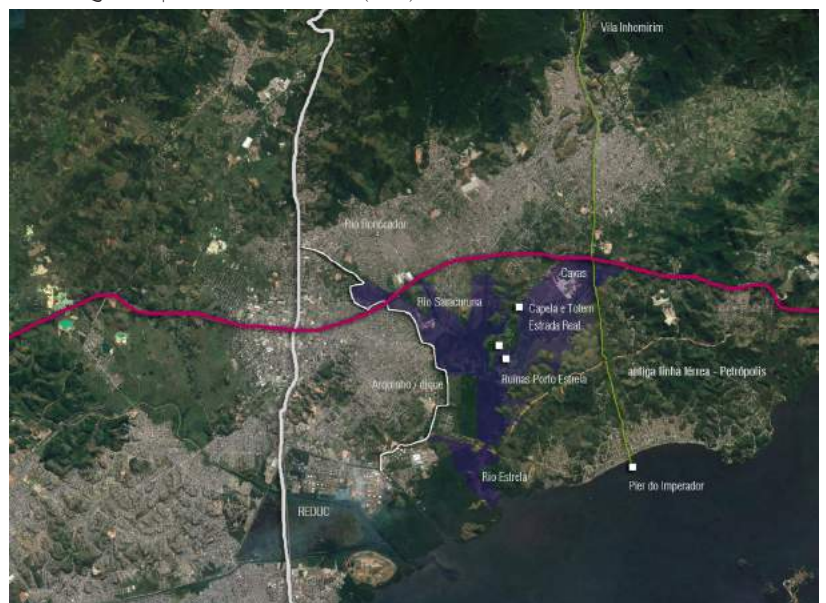
The creation of an APA with the structuring of a dam to contain the floods and the mapping of a historical-environmental circuit could contribute in a multifunctional way with the development of the municipality and region, attracting visitors and tourists.



Porto Estrela Environmental Park  
Source: Quanta | Lerner Consortium (2018)



Porto Estrela Environmental Park  
Source: Quanta | Lerner Consortium (2018)

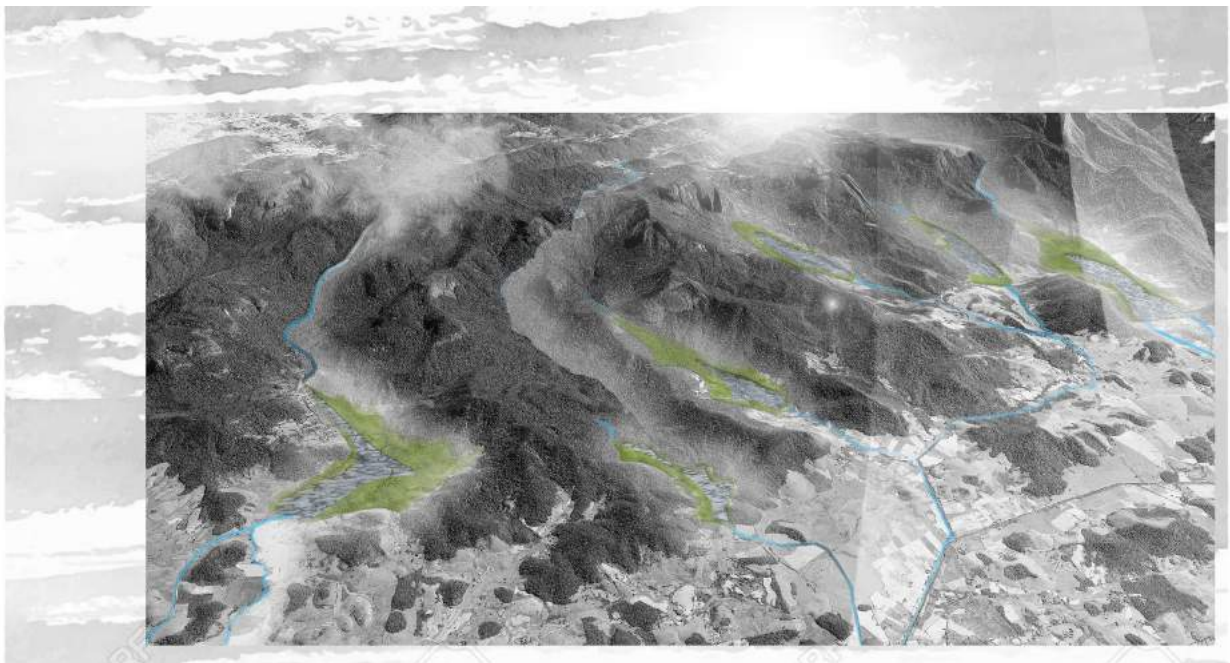


Porto Estrela Environmental Park  
Source: Quanta | Lerner Consortium (2018)

**Serra do Mar: Water as Heritage**

Some springs may have more complex projects to use to their full potential as a hydromineral resort.

Sports, leisure equipment with water and hiking trails can characterize these tourist destinations in the Serra do Mar.



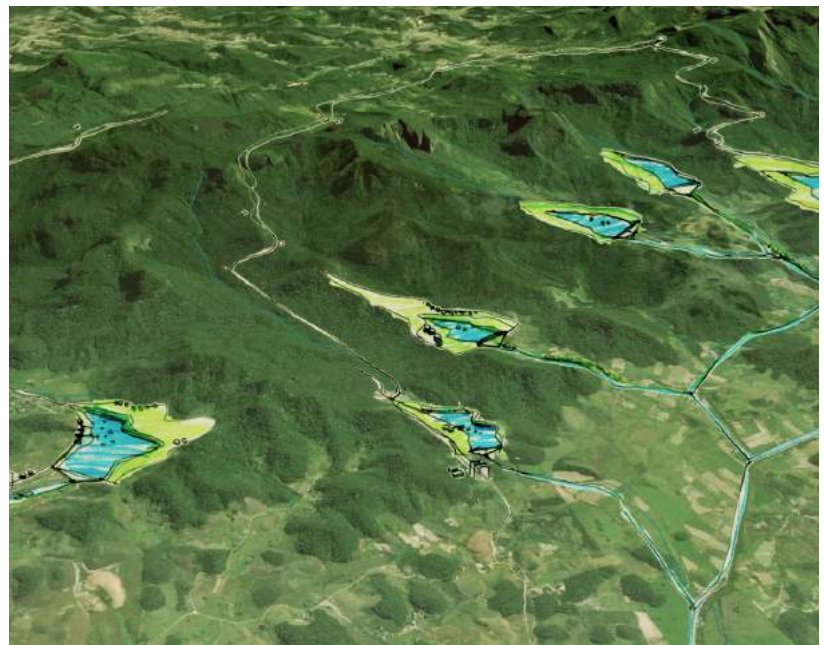
Springs in Serra do Mar  
Source: Quanta | Lerner Consortium (2018)

Tracks and back roads connect this network of small points of interest along the Serra do Mar hillside and can be requalified with information boards and warehouses.

To promote the elaboration and implementation of a regional development plan for the Circuit of Waters taking advantage of rivers, streams and waterfalls, stimulating economic activities - tourism and rural leisure, inns, agroecological agriculture.



Transcarioca Track  
Source: Transcarioca Track(2018)



Springs in Serra do Mar  
Source: Quanta | Lerner Consortium (2018)

**Cavas de Seropédica:**

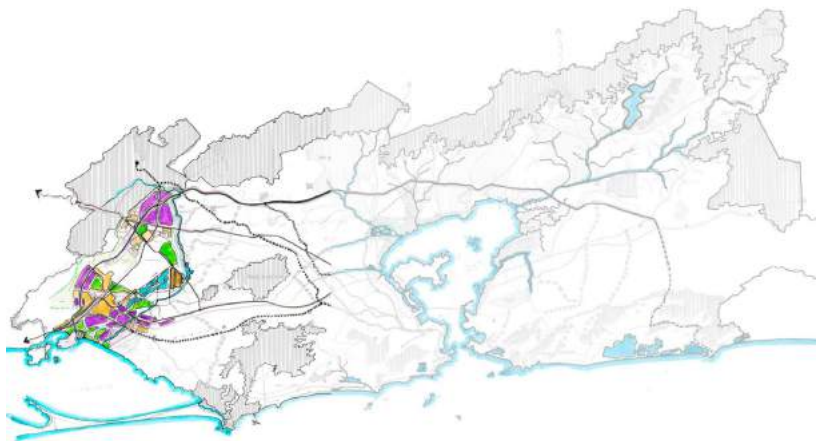
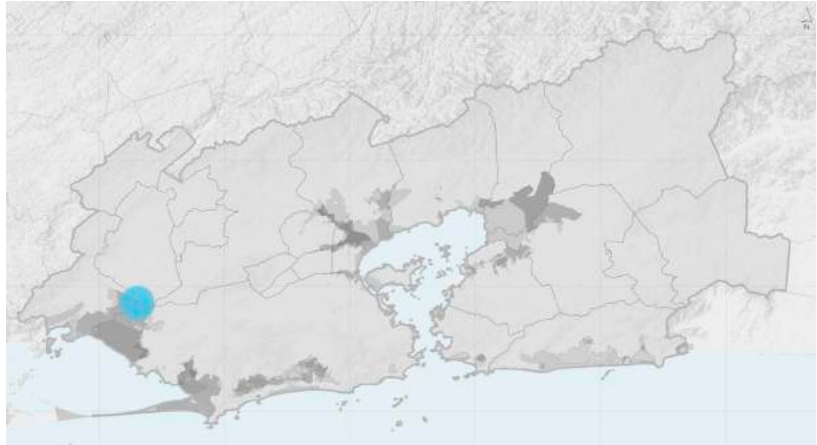
**Dams and the Supply of Industry**

The proposal foresees other uses that contribute to the enhancement of this new landscape.

At one end is the UFRJ Rural Campus, which can attract students from the region with new courses focused on port, nautical and environmental technologies.

The requalification of the Jardins District allows the integration of the cavas to its landscape with uses of leisure and recreation. One of its edges accompanies the Guandú River and may be transformed by the creation of a linear park for the residents to use - a water front.

At the western end, the urban expansion of Itaguaí can be consolidated in an integrated way with the dams, taking advantage of this landscape and possible uses such as parks, leisure, recreation and public facilities.



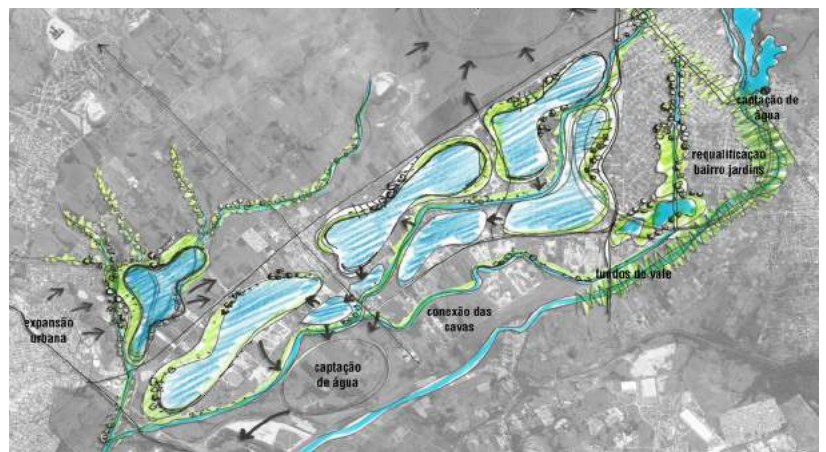
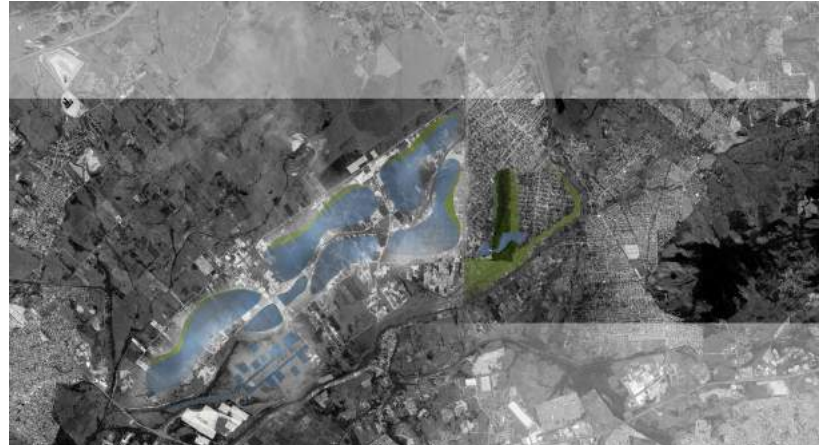
Cavas De Seropédica  
Source: Quanta | Lerner Consortium (2018)



The main objective of transforming Seropédica sand extraction tanks into large dams is to supply the industrial and logistic complex of the Port of Sepetiba.

The project foresees the interconnection of the existing cavas to generate large perennial volumes of water, considering the outlying water table and water courses such as the Guandú River and the Guarda River.

The water collection plant may occupy a space within the territory destined to the expansion of industry and logistics.



- 01** Rio-São Paulo Road
- 02** UFRJ-Rural Campus
- 03** Guandu River collection site
- 04** New access to UFRJ
- 05** Urban Park
- 06** Cavas Connection
- 07** Jardins District
- 08** Guandu River Park
- 09** Fundos de Vale
- 10** Water Collection for Industry

Cavas De Seropédica  
Source: Quanta | Lerner Consortium (2018)

## J | To govern the metropolis

The concern with public management led the Plan to include a set of proposals and actions aimed at facilitating a Metropolitan Governance formally instituted in a State Complementary Law, and it is necessary to promote the strengthening of the metropolitan body that may be created and to build an integrated planning capacity. Continuously improving this Metropolitan Governance will require the commitment of all political agents to efficient decision-making schemes and initiatives.

In this sense, it is pertinent to promote institutional arrangements that lead to greater metropolitan dynamism, including the formation of public consortia, in order to encourage inter-municipal cooperation. The Plan proposes to encourage municipalities to institute and use innovative urban planning instruments and ensure greater equity in municipal decisions with a metropolitan impact. In the metropolitan scenario it is important to make possible the integration between the metropolitan guidelines and the sectorial policies and budgets of all spheres of government that affect the RJMR territory.

Public policies will need resources to promote sustainable bases for the leverage of additional resources and their efficient use, by innovating and reinforcing tax and financial strategies including the elaboration, in the long term, of a multifinality technical record. Other guidelines include: articulating the permanent funding of the Metropolitan Fund to finance investments of metropolitan interest as defined in the PDUI strategies; reduce the excessive reliance on municipal transfers of current transfers; encourage partnerships with the private sector, including partnerships with cooperatives, community organizations and other organized civil society entities, through PPPs or other arrangements; stimulate the expansion of the adoption of integrated public policies in the territory, to increase the efficiency of public spending.

For a good implementation of the Metropolitan Plan, it is essential to promote the more efficient integration of organized civil society into the metropolitan and municipal planning process, establishing channels of institutional participation and attracting the cooperation

of institutions with a focus on public management, always taking advantage of the new information and communication technologies. Improved information management requires differentiated professional and functional training of municipal and state servants, so as to contribute to better information management, within a Unified Metropolitan Information System, with a georeferenced base and public access, which will provide support for metropolitan governance decisions, providing an information culture that, among other results, will support the process of monitoring and evaluating the results of the RJMR evolution and the implementation of the PDUI.

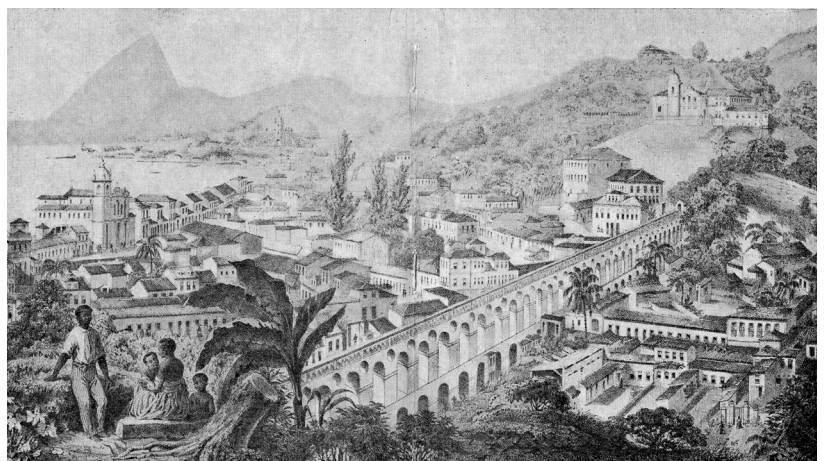
# The metropolitan space reconfiguration

The Metropolitan Plan was conceived in a perspective that foresees the spatial reconfiguration of the whole territory, considering all the knowledge accumulated in the previous steps of the elaboration of the Plan. Such reconfiguration is the synthesis of the identified aspirations and challenges materialized in the territory, considering the reading made for the macro-regions of Planning (MDP West, Hypercenter, North, Northeast and East). In addition to the MDPs, this strategy includes the Proposal for Space Reconfiguration, the Priority Actions Program, Metropolitan Macrozonning, and Metropolitan Areas of Interest, which are briefly presented below.

- The **Proposal of Spatial Reconfiguration (PRE)** has in its bullet references to contain the spreading of the urban spot; increase, qualify and diversify urban occupation; strengthen secondary, tertiary and territorial structuring; value the environment and rural activities of the metropolis; qualify already urbanized spaces lacking infrastructure; implement areas of economic and industrial activities; among other aspects. The PRE seeks to contemplate, in an integrated way, the guiding elements of territorial occupation, considering the proposals presented in the participatory process of the Plan, the diagnoses and analyzes of the structuring axes.
- **Metropolitan Macrozonning (MZM)**, an important urban development instrument guaranteed by the Metropolis Statute, seeks to establish the guiding elements of metropolitan territorial planning, considering the principles that underpin the proposal of Spatial Reconfiguration. In it, Metropolitan Macrozones is identified and general guidelines are outlined for land use and occupation, as well as the main metropolitan axes, which receive specific treatment. The Metropolitan Macrozonning presented is a proposal for the planning of large portions of the territory that should be debated and agreed upon with the municipalities that make up the RJMR, with the articulation of the Metropolitan Governance, in order to guide the revisions of the Municipal Master Plans from the guidelines of common interest. It should be emphasized that municipalities, by orientation of the Metropolis Statute, should adapt their planning instruments to common metropolitan interests and functions.

- The **Metropolitan Interest Zones (ZIMs)** point to certain territories where metropolitan interest must prevail over local propositions, and indicates actions to be promoted by the metropolitan body, preferably with the participation of municipalities. ZIMs are classified in Environmental, Urban, Economic and Social, according to their most relevant characteristics, and are linked to one or more actions that deal with the implementation of integrated proposals, intended for that territory. The ZIMs mention the Actions related to their territorial development, and presuppose the possibility of shared application of the urban planning instruments foreseen in the City Statute (Federal Law 10.257 / 2001), in articulated form with the municipalities.

Finally, the Metropolitan Space Reconfiguration (REM), with short, medium and long-term horizons, consolidates the reconfiguration process proposed by the Metropolitan Plan, taking into account the specificities of each Planning Macro-region (MDPs), the conclusions indicated in the Proposals for Spatial Reconfiguration (PRE), the territorial implications foreseen in Metropolitan Macrozonning (MZ), and the characteristics and proposals for Metropolitan Areas of Interest (ZIMs).



**Rio's Panorama in 1854**

Source: Gastão Cruis | Appearance of Rio de Janeiro

# The metropolitan macrozoning

The Macrozoning defined by the Plan is a fundamental element within the strategy of spatial reconfiguration of the metropolis, consecrating the main guidelines for land use and occupation and for the planning of the metropolitan territory. In this sense, this instrument draws guidelines for large territorial portions, based on their urban, environmental, social and regional characteristics. This instrument seeks to meet the premises and key points of the Plan, including the promotion of an urban polinucleation; the containment of urban sprawl; the densification of urban areas along centralities and axes of mobility; the qualification of urban areas with greater precarious infrastructure and social facilities; the preservation of environmental areas; rural and agroecological development; and the promotion of economic development.

Metropolitan Macrozoning should guide the necessary adjustments in the municipal zoning, as recommended in the Statute of the Metropolis, which establishes the period of two years for municipal plans to conform to the guidelines of the Metropolitan Plan. The definition of different macrozones aims to agree the pattern of land use and occupation for the whole RM, from a joint view of the territory. Its objectives are the identification and characterization of the areas with common purposes of the metropolitan region, according to its predominant function proposed in the Plan. The characteristics of zoning and its limits should be debated and agreed upon within the scope of Metropolitan Governance.

The proposed Metropolitan Macrozoning is composed of the following macrozones:

## **Preservation Macrozone (MPR)**

Characterized by all the areas of integral protection of the National System of Conservation Units (SNUC), these are areas of great environmental value to be fully protected. In these UCs, the uses indicated in the sector legislation and in the respective Management Plans will be allowed.

## **Consolidation Microzone (MCO)**

It is composed of the densest areas from the point of view of housing and/or with a greater concentration of urban infrastructure, equipment and services; which has already reached a basic level of urbanization, but which still requires urbanistic qualification in some regions, with special attention to subnormal clusters.

## **Qualification Macrozone (MQU)**

It is characterized by incomplete infrastructure, equipment and urban services, and there may be deficiencies in trade and services. In this macrozone is intended to stimulate qualified occupation of the territory, expanding existing urbanization and employment opportunities.

## **Agroecological and Containment Macrozona (MAC)**

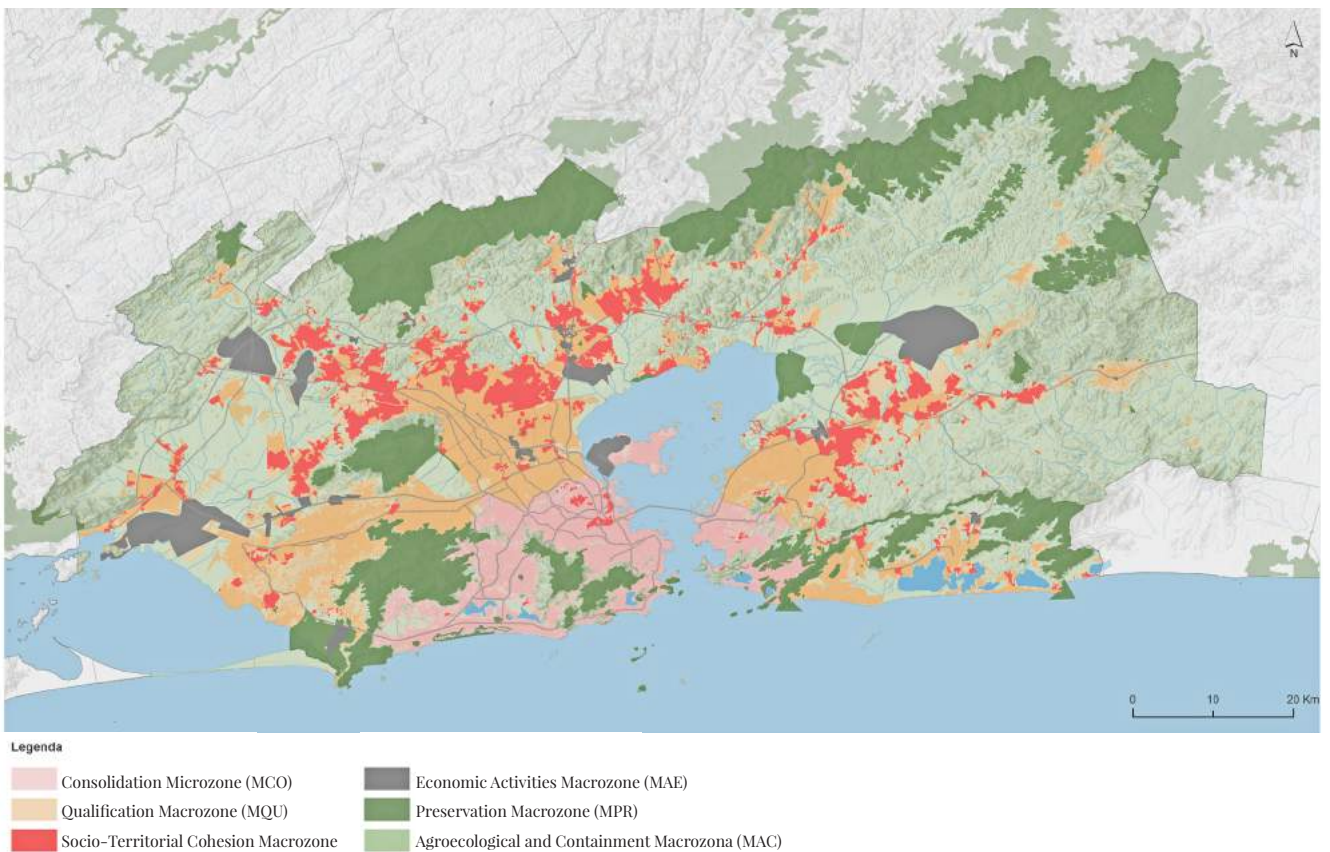
This macrozone is predominantly composed of very low density urban areas, rural areas, transition areas adjacent to environmental conservation units, and other areas where it is intended to discourage and even restrict urban occupation. Rural areas will be predominantly used for activities related to rural production, such as agriculture, livestock and forestry, and complementary activities, such as rural tourism and agribusiness.

**Economic Activities Macrozone (MAE)**

These are the areas characterized by predominantly industrial and medium-size and large-scale services, logistics facilities and other major economic structures, which are recognized as important for the Metropolitan Region.

**Socio-Territorial Cohesion Macrozone**

Territorial Cohesion Macrozone was defined as taking into account the worst levels of three important composite indicators (Social Vulnerability Index, Intra-urban Typology and Human Development Index) with the objective of identifying the most vulnerable areas in the socio-territorial aspects of the metropolitan region.

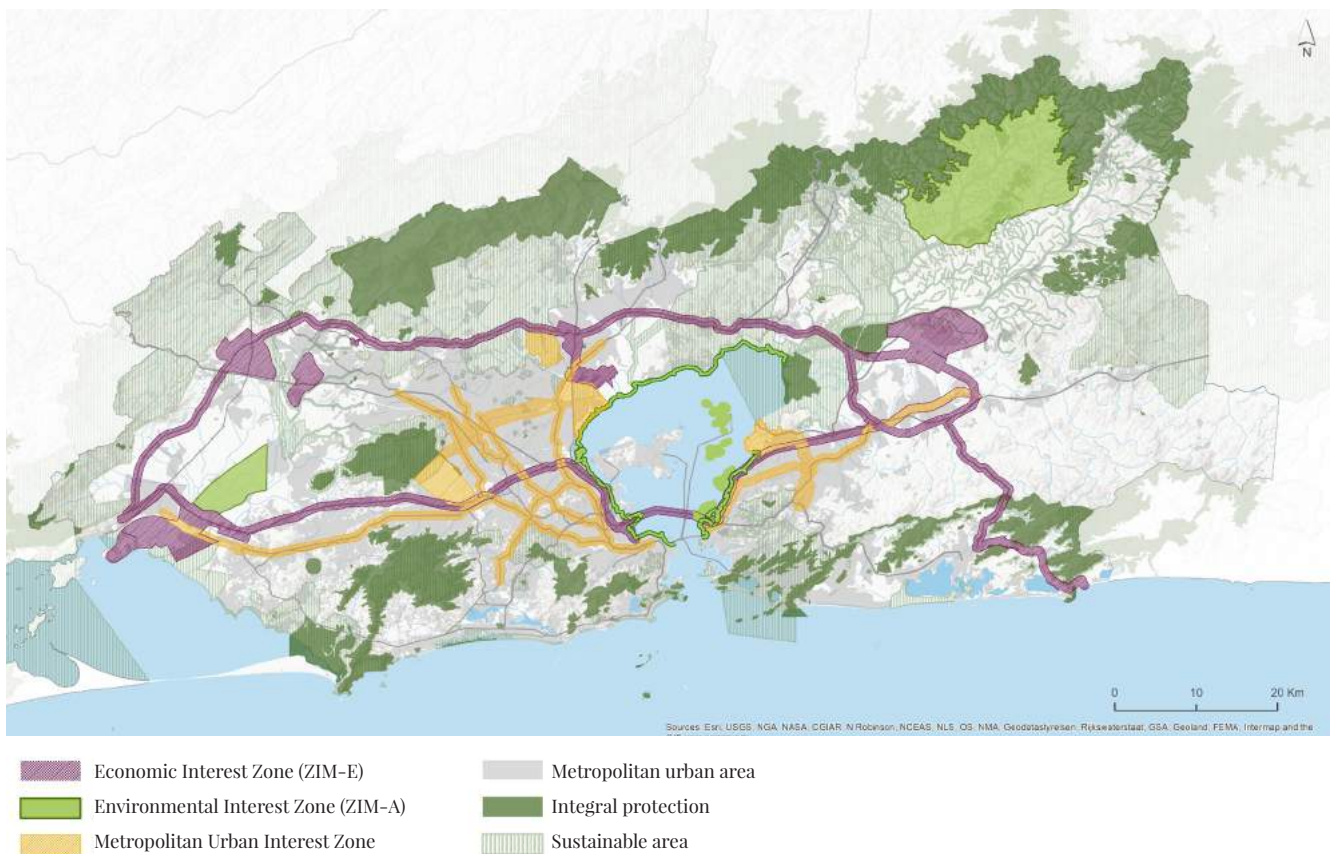


Map of Metropolitan Macrozoning  
 Source: Quanta | Lerner Consortium (2018)

# Metropolitan Interest Zones

In order to implement its initiatives, programs and actions, the Metropolitan Plan established Metropolitan Interest Zones (ZIMs) aimed at signaling, for all agents and institutions, the importance of these areas for the public functions of common interest of the metropolis; which must surpass local interests. It is evaluated that in order to achieve the intended results in the Plan, the support of all the metropolitan actors, especially the representatives of the municipalities, is essential. The creation of the ZIMs opens an opportunity for the joint action of the public and private agents to reach a real metropolitan citizenship.

The ZIMs is organized in Environmental Interest Zone (ZIM-A), Economic Interest Zone (ZIM-E) and Metropolitan Urban Interest Zone (ZIM-U), according to their most relevant features, and are



Map of Metropolitan Interest Zones (ZIM)  
Source: Quanta | Lerner Consortium (2018)



General Table of ZIMs
ZIM A1 - Seropédica Pits
ZIM A2 - Guapiaçú Spring
ZIM A3 - Island System of the Guanabara Bay
ZIM A4 - Guanabara Bay Waterfront
ZIM A5 - Riverbank for deployment of Sanitary Belt
ZIM A6 - Ponds and their banks for implantation of Sanitary Belt
ZIM E1 - Metropolitan Arch
ZIM E2 - Avenida Brasil / Rodovia Mário
ZIM E3 - Itaguaí / Santa Cruz Economic Interest Zone
ZIM E4 - Seropédica Economic Interest Zone
ZIM E5 - Queimados Economic Interest Zone
ZIM E6 - Economic Interest Zone Duque de Caxias
ZIM E7 - Itaboraí Economic Interest Zone
ZIM E8 - Economic Interest Zone - Intermodal Pole of Queimados
ZIM U1 - Sarapuí Transversal Axis
ZIM U2 - Caxias Waterfront
ZIM U3 - Alcantara Transversal Axis
ZIM U4 - Itaoca Waterfront
ZIM U5 - Axes of Urban and Housing
ZIM U6 - Santa Cruz - Itaguaí Axis
ZIM U7 - Gericinó
ZIM U8 - Cidade dos Meninos
ZIM U9 - Pavuna Area
ZIM U10 - Node Points
ZIM U11 - Control de Póvil

Metropolitan Interest Zones (ZIM)  
 Source: Quanta | Lerner Consortium (2018)

linked to one or more actions that deal with the implementation of integrated proposals, intended for that territory. They follow their respective vocations and include important railway, road and port structures, economic anchors, areas of great environmental relevance, expressive urban voids and areas aimed at environmental recovery.

The Metropolitan Interest Zones serve to underline the metropolitan interest in the development of actions in certain territorial portions. They may involve one or more municipalities, but it is emphasized that, in the territories defined as ZIMs, it is intended that metropolitan interest prevails over local propositions and overlaps with other urban areas, whether municipal or even metropolitan. They also presuppose the possibility of applying the urban planning instruments provided for in the Statute of Cities (Federal Law 10,257 / 2001), in a coordinated way with the municipalities; or in the interfederative format, according to the Statute of the Metropolis (Federal Law 13.089 / 2015), as one of the instruments to be used in its integrated development of certain territories.

In the ZIMs outlined, it is envisaged, in a coordinated way with the municipalities, that a specific urban zoning can be adopted, with the objective of supporting territorial development projects, so as to enable actions contemplated in the Plan; such as integrated projects, where capital gains are expected to be achieved through joint urban operations.

ZIMs are areas where it is strategic that the decision on the territory should always be made by more than one federative entity, especially by more than one municipality. Therefore, elements such as areas and axes of metropolitan connection are important, since giving them the same “urban treatment” of recovery contributes to the harmonization of the territory by avoiding competition or widening inequalities.

# The Implementation of the Plan

*Development is not simply a matter of increasing the supply of goods or the accumulation of capital, it has a meaning, it is a set of responses to a project of self-transformation of a human collective; when the social project prioritizes the effective improvement of the living conditions of this population, the growth metamorphoses in development.*

Celso Furtado

## Key elements of the Implementation Strategies

Traced the paths of the metropolis that we will make, considering all the priority action programs and the metropolitan spatial reconfiguration, steps must be followed for its implementation.

For the development of these implementation strategies, three elements are fundamental: the established scenarios, short, medium and long term; the investment capacity of the municipalities of RJMR and the State of Rio de Janeiro; and the integrated actions, organized in the PAPs.

The Scenarios had the mission of valuing the premises defined for the Plan, the Vision of the Future and the Metropolitan Objectives, as well as the main guidelines of the Structuring Axes and the participatory process that took place during its elaboration.

It is strategic to give traction to the Plan that prioritized actions that present the best cost-benefit ratio; which have great recognition and meet the basic needs of the population; and that can serve as examples and have the potential to leverage other similar initiatives, creating positive cycles over time and in the territory; and that they can be carried out with resources that can be mobilized in the short, medium and long term. The Plan uses the “change to make” strategy, that is, actions that seek to deliver tangible and / or emblematic

results that can mobilize more resources and social and business support; translating into greater economic, social and environmental sustainability for the metropolis.

The Priority Action Programs - PAPs represent strength ideas that encompass a set of priorities that contemplate and integrate proposals from the structuring and participatory processes. The programs, organized territorially or by thematic areas are emblematic and fundamental for the development of the metropolis, promoting greater synergy among actions, creating positive marks in the territory, and enabling more expressive results.

In the short term, it is strategic to invest in Metropolitan Governance and Public Management, since they are fundamental arenas for the equation of priority actions and for establishing the possible pace of implementation of the plan in all scenarios.

It is essential to formalize the arrangement of Metropolitan Governance in order to establish an institutional framework that will enable a stable process of decision-making, shared management and solidary financing of metropolitan projects. In this context, the Metropolitan Plan itself must also be approved, giving the instrument a force of law that will be relevant in its implementation process.

In a scenario of great budgetary constraint, Metropolitan Governance should encourage projects carried out in inter-financial partnerships that can articulate resources of municipalities, state and Union; stimulate public-private partnerships (PPP), exploring innovative instruments in the financial perspective

and in the use of urban and economic dynamism; support the structuring of public administrations to attract private investment; promote the use of municipal, state and federal real estate assets for the composition of public interest funds and projects; and to adopt new sustainable paradigms of financing projects, works and services, using resources of taxes and cross subsidies collected in the sector itself (like sanitation and mobility).

The Metropolitan Governance has the crucial role of the master of this process, stimulating cooperation between all levels of government; promoting the modernization and efficient use of territorial, urban, environmental and financial planning instruments, also contributing with inputs and training; fostering and maintaining the interest and the adhesion of the society to the metropolitan project; promoting and articulating partnerships and initiatives with the forces of society; encouraging the modernization of instruments for planning in all axes of the Plan; valuing and stimulating local initiatives, which lead to the exercise of citizenship and the valorization of the metropolis.

The implementation of the Plan will advance to the extent that Metropolitan Governance is able to develop a spirit of solidarity and cooperation among municipalities, state and Union; agree on a common funding strategy for metropolitan priorities; avoid that smaller municipalities become hostages of the priorities of the state and / or the municipality-polo; align sectoral policies with metropolitan priorities; define a protocol that links the actions of the autonomous entities to the decisions of the participatory planning process; support the development of projects and raise awareness of the Union to finance PDUI Programs and Actions; build a sense of metropolitan citizenship and mobilize society for its initiatives; and provide institutional security and mobilize private investment; among others.

To the Government of the State of Rio de Janeiro it is pertinent to improve management in order to overcome fiscal, financial and political crises, restoring investor confidence, enabling the recovery of investment capacity; the realization of inter-financial partnerships and the resumption of project financing through national and international financial organizations and agents. The Federal Government is responsible for the availability of resources for metropolitan projects aligned with the policies of the urban development area.

It should be emphasized that the Metropolitan Governance and Public Management initiatives that will be carried out in the short term will dictate the choice of priority actions and the pace of implementation of the Metropolitan Plan in the following medium and long-term stages, as well as the foreseen results.

In the main line of improvement of public management, it is also worth mentioning the revision of the master plans and internal studies for a greater / better funding of own resources; public servants' training; and the battle for structural, administrative, fiscal and legislative reforms at all levels of government.

## The Implementation Instruments

The Advisory Council, formed by organized civil society, is the forum par excellence of social participation within metropolitan governance, ensuring both the participation of the population in the planning and decision-making processes and in the monitoring of its execution.

The Financial Mechanisms cover strategies for strengthening the municipalities' investment capacity, through the improvement of their collection

mechanisms; expansion of intergovernmental transfers, mainly for the provision of social policies; the search for alternative revenues, through the use of Statute mechanisms, specific charges for services rendered (for example, contribution of improvement), and mechanisms of cross subsidies, such as urban tolls. Also, mechanisms for attracting added value and partnerships with the private sector, such as the Consortium Urban Operations. Also, the contracting of loans and loans to national public banks and international organizations.

IT Management deals with the need to integrate municipal and state data through an information system. In the short term, seek the full operationalization of the Metropolitan Geospatial Information System of Rio de Janeiro - SIMGeo; of the Performance Management System; the use of ETL's Software and the BIM system, as well as the Updating of the Cadastral Real Estate Base, accompanied by a compatible hardware structure. In the medium term, strengthening connectivity, increasing citizen engagement, better communication, central cloud storage, and investment in human resources, all contribute to smarter cities.

The steps for implementing the Plan also include a set of Complementary Programs in the fields of communication, training and monitoring and evaluation.

In the Communication front, whose short-term objectives are to raise the awareness of the social players of which metropolis is the one in which they live; to awaken the sense of belonging to this region so that urban planning can take place, in fact, with the participation and engagement of social players; and to provide transparency and visibility to the implementation process of the Metropolitan Plan. Thus, the Social Communication Program of the Metropolitan Plan embraces the premises of the defense of the metropolis, of permanent dialogue, of

the engagement of the players, of the transparency of the process, of open information and of the equalization of the message.

Capacity building is a fundamental strategy in the process of implementing the Metropolitan Plan, which will bring together players and diverse contexts, and must occur continuously. Its priority target public are municipal and state public servants who work in institutional management, and representatives of the various sectors that will integrate the Metropolitan Governance Advisory Council. In the short term, its main objectives are to identify available human resources and refer them to courses aligned with the Priority Action Programs; and identify contingents that will need additional support to complete at least formal first-level education and then be directed to supplementary, vocational or non-vocational courses. In the medium and long term, the focus will be on the sharing of high level training servers, for the constitution of public consortia, according to themes that demand this type of specialized training. Other servants could be gradually trained, so that all municipalities will have trained technical teams for the good resolution of the challenges in the direction of the implementation of the Metropolitan Plan.

Finally, in front of Monitoring and Evaluation (M & A), we highlight three objectives: to create the Metropolitan Information System, which will have the attribution of the collection; treatment and storage of physical-territorial, demographic, economic-financial, urban, social, cultural and environmental information to support the planning and execution of metropolitan interests; and to establish a permanent M & E core / team in the Metropolitan Agency and three, to enable and promote social control, with the participation of representatives of society. The Monitoring and Evaluation Plan, M & E Model for Implementation of Processes, Outcomes and Impacts, as regulated by the American Evaluation Association (AEA), should

be developed to monitor and evaluate what has been diagnosed and planned. Such monitoring will be implemented and monitored in the timeline, through indicators and their respective short, medium and long term goals, focusing on the achievement of results and impacts.

It is configured so the sum of all these important fronts, a robust framework to ensure the implementation of sustained and sustainable manner, consistent, transparent and participatory, making PDUI an effective instrument for the transformation of metropolitan reality: more than a strategic plan, a solid and responsible process of planning and management of the Rio de Janeiro metropolis.

# The path to 2040

*The city is an archive made of stone, memory and at the same time, design. She is the mother of history.*

Robert Auzelle

The initiative of the Government of the State of Rio de Janeiro, through the Metropolitan Chamber, financed by the World Bank, represents a milestone in the resumption of metropolitan planning, with the elaboration of the first Plan of this metropolis so emblematic in the national scenario. Having gone through the last decades without any compass to guide metropolitan policies, and in a context of great political and economic difficulties, the delivery of the Metropolitan Plan assumes an even greater symbolism for the 21 municipalities that compose the region, as well as for the society of Rio de Janeiro. However, despite the significant efforts made so far to build it, the road to reach the metropolis we want in 2040, to the materialization of the vision of the future, laboriously and enthusiastically constructed by so many players, and, of course, generates expectations, will depend, above all, on the steps we take from now on.

The first, and perhaps the main one, will be the structuring of metropolitan governance. The role of the Plan as a powerful instrument for the economic, social and urban recovery of the whole region, in the short, medium and long term horizons, must be emphasized, but, above all else; as a mobilizer of the sense of metropolitan belonging of the citizens and of their institutions, guiding governmental decisions and of the society of Rio de Janeiro in the years to come.

Another fundamental step will be to ensure the institutionalization of the participation of municipalities, not only in forums and meetings, but financially and technically contributing to the debate and actions that will give effectiveness to metropolitan governance. To meet this and other issues, the Plan has in its body a set of Implementation Instruments that aim to guarantee the execution of actions and the feeding of an information, monitoring and evaluation system, wide publicity of its actions, and transfer of knowledge. Extremely important is also to make civil society, whose participation of representatives was crucial during the process of drafting the Plan; to take broad ownership of its content and internalize its role as a metropolitan citizen in supporting and monitoring the actions of the plan, understanding that sometimes in the prioritization process,

actions that do not necessarily directly benefit the municipality or even its daily life are more important and necessary for the improvement of the quality of life of the metropolis as a whole.

To think that all the challenges presented here will be solved and all the opportunities developed up to 2040 may seem impractical, given the financial and institutional situation, not only of the State Government, but of many of the municipalities of the Metropolitan Region of Rio de Janeiro. However, this does not prevent all those responsible for the management of that territory from beginning to do their part, reviewing their collection instruments and restructuring public accounts; based on the commitment of good management linked to the appropriate use of collective resources focused on planning, monitoring and evaluation of the policies to be implemented, in an intra and intergovernmental partnership work, as well as with the productive sector and civil society.

The dream outlined here is grand, but it is certainly not a dream. Effective metropolitan governance, broadening the dialogue and ensuring the participation of local public managers will allow what has always seemed impossible to be placed within the reach of metropolitan society. The first steps to 2040 have already been given. The Plan is ready to be debated in future Metropolitan Governance in the State Legislative Assembly, becoming a legal instrument to guide the initiatives in the territory of RJMR; to be embraced not only by the rulers, but throughout society, whose improvement in the quality of life is the main reason for this work.

Coming to the encounter of what prevailed throughout the whole process, Italo Calvino expresses himself in *Cidades Invisíveis*:

*Marco Polo describes a bridge, stone by stone.*

*“But which is the stone that supports the bridge?” asks Kublai Khan.*

*“The bridge is not supported by this or that stone,” replies Marco, “but by the curve of the arch they form.*

*Kublai Khan remains silent reflecting, then adds: “Why talk about stones?” Only the arch matters.” “Without the stones, the arch does not exist.”*

The articulation of the rocks, side by side, forming a curve that draws an arch, composed in its cradle by the objectives of the Strategic Urban Development Plan of the Metropolitan Region of Rio de Janeiro, which we share with Rio de Janeiro society, stimulated creativity and innovation, building a solidarity bridge between citizens and its metropolis. We are certain that the long path that has been followed so far, by generating a feeling of mutual responsibility, has allowed and will allow us to go through the remaining steps to be overcome.

Winston Churchill had already said that the pessimist sees difficulty at every opportunity; the optimist sees opportunity in every difficulty. History, from time to time, places us where there are possibilities of inflection. The Metropolitan Region of Rio de Janeiro may be in one of these moments, a moment that is not unprecedented, since historical circumstances have already forced its reinvention. We already have a trajectory to follow.

- BRASIL.** Agenda 21. Brasília: Senado Federal, Subsecretaria de Edições Técnicas, 1997.
- BRASIL.** Agenda Habitat. Brasília: Senado Federal, Subsecretaria de Edições Técnicas, 1998.
- BRASIL.** Constituição da República Federativa do Brasil 1988. Brasília: Senado Federal, Subsecretaria de Edições Técnicas, 2000.
- BRASIL.** Estatuto da cidade: Lei n. 10.257 de 2001. Brasília: Câmara dos Deputados, Coordenação de Publicações, 2002.
- BRASIL.** Estatuto das Metrôpoles: Lei n. 13.089 de 2015. Brasília: Câmara dos Deputados, Coordenação de Publicações, 2015.
- BRASIL – STF – Acórdão ADI 1842 – Brasília:** Supremo Tribunal Federal, 2014
- ESTADO do RIO de JANEIRO.** Plano do Arco Metropolitano do Rio de Janeiro, Governo do Estado Rio de Janeiro, 2007.
- ESTADO do RIO de JANEIRO.** Plano Estadual de Habitação de Interesse Social (PEHIS) - Governo do Estado Rio de Janeiro, 2012.
- ESTADO do RIO de JANEIRO.** Termos de Referência para a Reestruturação Urbana de Áreas no Entorno da Estação de Queimados – TOD Queimados, Governo do Estado Rio de Janeiro, 2013.
- ESTADO do RIO de JANEIRO.** Plano Diretor de Transporte Urbano da Região Metropolitana do Rio de Janeiro – PDTU/RMRJ, Governo do Estado Rio de Janeiro, 2012/2013
- ESTADO do RIO de JANEIRO.** Plano Estratégico de Logística e Cargas – PELC - RJ 2045 , Governo do Estado Rio de Janeiro, 2017.
- MUNICÍPIOS DA REGIÃO METROPOLITANA DO RIO DE JANEIRO – Planos Diretores Municipais – 2002/2012**
- IBGE.** Demographic Census. Rio de Janeiro, 1960.
- IBGE.** Demographic Census. Rio de Janeiro, 2010.

The rest of the bibliographical references are included in the previous products of this plan

All illustrations used are from the Quanta / Lerner Consortium



Advisory Council

- Abel Alves Rochinha
- Abrahão Roberto Kauffmann
- Aercio Barbosa de Oliveira
- Afonso Henriques Monnerat Alves da Cruz
- Agnaldo Fernandes
- Alberto Lodi
- Aldair Alves de Sousa
- Alexandre de Bonis
- Alexandre Gomes Diniz
- Alexandre José Siqueira Campos
- Alfredo Sirkis
- Ana Carolina Pinto de Nigris
- Ana Maria Horta Veloso
- Anderson Bácia Zanon
- André Corrêa
- André Soares Bianche
- Ângela M. Gabriella Rossi
- Ângelo Monteiro Pinto
- Anibal Sabrosa Gomes da Costa
- Antonio José Almeida Bastos
- Antonio Luiz Barboza Correia
- Antônio Luiz Vidaurre Franco
- Armando Carlos de Pina Filho
- Armando Ivo de Carvalho Abreu
- Armando Strozenberg
- Arnaldo Barcellos Neto
- Aspásia Camargo
- Augusto da Cunha Raupp
- Axel Graef
- Bartíria Perpétua Lima da Costa
- Bernardo Rossi
- Carlos Antonio Marcos Pascoal
- Carlos Fernando Andrade
- Carlos Ivan Simonsen Leal
- Carlos Minc
- Carlos Moraes Costa
- Celso Athayde
- César Mastrangelo
- Cezar Vasquez
- Clarisse Cunha Linke
- Cláudio Martins Ribeiro de Jesus
- Comte Bittencourt
- Daniel Marques
- Delmo Ernesto Morani
- Demetris Basile Anastassakis
- Denis Gustavo Macedo
- Dora Alcântara
- Dr. Sadinoel
- Édison Carlos
- Edite Beloch
- Edivaldo Souza Cabral
- Edma Aparecida Duarte Gaspar
- Edson Watanabe
- Eduardo Cardoso
- Eduardo Eugenio Gouvêa Vieira
- Elizabeth Cristina da Rocha Lima
- Elkin Dario Monsalve
- Elvio Gaspar
- Ephim Shluger
- Estefani Bordim
- Flávio Medrano de Almada
- Flávio Vilela Ahmed
- Francisco da Silva Negreiros Filho
- Geiza Rocha
- Gênesis Pereira Torres
- Georgia Pessoa
- Giovanni Guidone
- Haroldo Mattos de Lemos
- Hélio Vanderlei
- Humberto Luiz Nunes de Lemos
- Israel Klabin
- Itamar Silva
- Jerônimo de Moraes Neto
- Jessé Souza
- João Alberto Thadeu Cruz Galvani
- João Batista Dias (i.m.)
- João Paulo Rio Tinto de Matos
- Joaquim Andrade
- Jorge Gama de Barros
- Jorge Luiz de Melo
- Jorge Luiz Vieira da Silva
- Josafá Carlos de Siqueira, S.J.
- José Bismarck Vianna de Souza
- José Gustavo de Souza Costa
- José Iran Peixoto Junior
- José Luís Alqueres
- José Luiz Natal Chaves
- José Marcelo Zacchi
- José Miguel da Silva (Miguel do Pó)
- José Paim
- Jose Raymundo Martins Romeo
- José Simões de Belmont Pessôa
- Julio Cesar Oliveira Antunes
- Leonardo da Cunha e Silva Espíndola Dias
- Lúcia Léa Guimarães Tavares
- Luís Antônio Lindau
- Luiz Augusto da Rocha
- Luiz Cesar de Queiroz Ribeiro
- Luiz Edmundo Horta Barbosa da Costa Leite
- Luiz Euler Carvalho de Melo
- Luiz Fernando Santos Reis
- Luiz Martins
- Luiz Paulo Correa da Rocha
- Manuel Thedim
- Márcia Vera de Vasconcellos
- Marcio João de Andrade Fortes
- Márcio Roberto de Moraes e Silva
- Marco Antônio de Araújo Fireman
- Marco Antônio Vaz Capute
- Marco Tulio Moraes da Costa
- Marcus de Almeida Lima
- Maria da Conceição Gomes Lopes Ribeiro
- Maria Silvia Bastos Marques
- Maria Teresa Fernandes Serra
- Mário Moscateli
- Mauro Osório da Silva
- Mozart Vitor Serra
- Murilo Portugal Filho
- Nelmo Coelho Linhares
- Nilo Ovídio Lima Passos
- Nilton Caldeira da Fonseca Filho
- Nireu Cavalcante
- Noêmia de Oliveira Figueiredo
- Odílio de Jesus Ferreira
- Olimpio Alves dos Santos
- Ondemar Ferreira Dias Junior
- Orlando Santos Diniz
- Pablo Cerdeira
- Padre Bruno
- Paulo Cezar Martins Ribeiro
- Paulo Ferrais
- Paulo Gadelha
- Paulo Manoel Lenz Cesar Protasio
- Paulo Pereira de Gusmão
- Pedricto Rocha
- Pedro Celestino da Silva Pereira Filho
- Pedro da Luz Moreira
- Pedro Jonsson

**Advisory Council**

- |  |                                       |
|--|---------------------------------------|
| Raymundo de Oliveira                     | Sávio Renato Bittencourt Soares Silva |
| Rayne Ferretti Moraes                    | Semeão Curado                         |
| Regina Amélia Costa Oliveira             | Sérgio Besserman Vianna               |
| Rejane Dutra da Silva Fernandes          | Sergio Magalhães                      |
| Reynaldo Barros                          | Sergio Marcolini                      |
| Roberto Dantas Guerra                    | Sidney Luiz de Matos Mello            |
| Roberto Leher                            | Silvio Carvalho                       |
| Rodrigo Goulart de Oliveira Vieira       | Sônia Antunes                         |
| Rodrigo Henriques                        | Tatiana Vaz Carius                    |
| Rodrigo Mascarenhas                      | Teresa Serra                          |
| Rodrigo P. de Padúa Lopes (i.m.)         | Thereza Carvalho                      |
| Rogério de Aragão Bastos do Valle (i.m.) | Thereza Lobo                          |
| Rogério Frota Melzi                      | Valber de Carvalho                    |
| Ronaldo Jorge Brito de Alcantara         | Verena Vicentini Andreatta            |
| Rosângela Bello                          | Vicente Giffoni                       |
| Rosiska Darcy                            | Waldeck Carneiro                      |
| Rubem Cesar Fernandes                    | Washington Menezes Fajardo            |
| Rubens Andrade                           | Willian Alberto de Aquino Pereira     |
| Ruy Garcia Marques                       | Wilson Silva Beserra                  |
| Ruy Rocha Veloso                         | Yara Valverde Pagani                  |
| Samuel Crespi                            |                                       |

**State Committee**

Afonso Henriques Monnerat Alves da Cruz	Leonardo da Cunha e Silva Espíndola Dias
Alberto Fabrício Caruso	Leonardo Daemon
Alberto Junqueira	Letícia Borges Amado
Aline Freitas Silva	Lúcia Léa Guimarães Tavares
André Aguiar	Madlene Maria Provençano do Outeiro
André Corrêa	Manoel Vieira
André Luiz Felisberto França	Marcelo Hess
Angela Nobrega Fonti	Márcio Muniz
Ângelo Monteiro Pinto	Marcio Vieira Muniz
Antônio Gusmão	Marco Antônio Vaz Capute
Arthur Vieira Bastos	Marcos Antonio Santos
Áttila de Q França	Marcos Thimoteo Dominguez
Augusto da Cunha Raupp	Marcus de Almeida Lima
Bruno Costa	Maria Angélica de Albuquerque Pinheiro
Castello Branco	Maria da Conceição Gomes Lopes Ribeiro
Cesar J Campos	Maria Georgina Muniz Washington
César Mastrangelo	Maria Paula Martins
Cinthia Avellar Martins	Maria Silvia Muylaert
Cláudia Uchôa	Marlus Newton Oliveira
Delmo Ernesto Morani	Mauricio Quintal
Delmo Pinho	Mônica de Souza Araújo
Denise Rambaldi	Nea Cristina Mariozz
Dina Lerner	Nelson Teixeira
Edson Falcão	Newton Leão Duarte
Elisabeth Mayumi Sone de Ribeiro	Nilton Costa
Elizabeth Paiva	Olga Campista
Eloísa Elena Torres	Patricia Figueiredo de Castro
Eva Doris Rosental	Paulo César Melo de Sá
Fabiana R. Gomes	Paulo Henrique de Barros Maçulo
Fabio Odilon Alves Gomes	Paulo Henrique Maçulo
Fernando Antônio Vecchi Alzuguir	Paulo Vicente Guimarães
Flávia Teixeira	Pedro Paulo Novellino do Rosário
Flávio de Carvalho Filho	Pedro Spadale
Flavio Silveira	Priscilla Formoso da Cunha
Francisco Dornelles	Raul de Oliveira Teixeira
Guido Gelli	Renato Bravo
Gustavo de Oliveira Barbosa	Rodrigo Goulart de Oliveira Vieira
Haidine da Silva Barros Duarte	Rodrigo Mascarenhas
Henrique Futuro	Rodrigo Werner
Heraldo Magioli Mendes	Rogério de Gama Azambuja
Ivoneide da Silva Verissimo	Ronaldo Certan
Izabel C. Gonçalves Souza Amaral	Ruy Garcia Marques
João Alberto Thadeu Cruz Galvani	Sérgio Figueiró
João Batista Dias (i.m.)	Sergio Marcolini
Jorge Cunha	Sergio Muros
Jorge Gama de Barros	Sidney Suzano de França Miranda Filho
Jorge Luiz Ferreira Briard	Sílvia S do Amaral
José Beraldo Soares	Stella Procópio da Rocha
José Fernando Moraes Alves	Tatiana Vaz Carius
José Iran Peixoto Junior	Thadeu Galvani
José Luis David	Victor Zveibil
José Maria de Mesquita Jr.	Wilson Duarte
Julio Mirilli	Wilson F. Giozza
Larissa Ferreira da Costa	

**Municipal Committee**

Adeilton Oliveira	Flávio Fernando Soares Pereira
Adyr Ferreira Motta Filho	Flávio Gonçalves
Alan Lopes Nobrega	Freddy Moises
Alessandro Persio Clementino	Gabriel Poppe
Alexander Duarte da Silva	Gabriela Ribeiro de Castro
Alexandre Alverca	Gabrielle Guimarães
Alexandre B Fernandes	Geison Ribeiro
Alexandre Gomes Diniz	Giovanna Guiotti Testa Victer
Alexandre M. Marinho	Gisele Dornelles Pires
Aline da Silva de Moraes	Gláucia Alves Macedo
Allan Medeiros Pessoa	Glória Denise de Menezes Torres
Allan Tavares Perfeito	Heiner Nolden
Ana Carolina Menescal	Hélio Vanderlei
André Luiz Cardoso	Henrique Cabral Marques
André Soares Bianche	Henrique Fonseca
Antônio Augusto Verissimo	Hosana V Bittencourt
Antônio Carlos da Silva Oscar Júnior	Humberto Magalhães Viana
Antônio Carlos Velloso de Mello	Irinaldo Cabral da Silva
Antonio Luiz Barboza Correia	Isaac Gonçalves
Apolo Tardin Baliane	Isabela Resende
Axel Graef	Ismael F. França
Badiá Gabriel	Jander Panisset da Silveira
Bruno de Oliveira Paes Leme	Jocélio P Oliveira
Bruno Lecini	Jorge Luiz Pinto da Silva
Caio Benites Rangel	Jorge Soares Braga
Carla Salles Monteiro Silva	José Augusto Venda
Carlos Maiolino	José Carlos Leal Nogueira
Carlos Noberto N de Azevedo	José Fernando Soares
Carlos Soutinho de Mello	José Luiz Natal Chaves
Carmem Lúcia K S Motta	José Luiz Rangel
Carolina Machado	José Renato da Gama Barandier Jr.
Cel Macedo	José Tomaz Ribeiro
Cesar Augusto Werneck	Karla Maghelly Corrêa
Cesar Mariano	Kelson Senra
Chen Kuang	Laís de Andrade Costelha
Cintia Ferreira	Layla Maria Barreto Mosqueira
Claudia Grangeiro	Lelio Macaria
Claudia Muricy	Leticia Fonti
Cleiton Monteiro	Lidia Valles
Cristiane Chaché	Lidiane Duarte Fernandes Machado
Daniel Mancebo	Lucas Duarte
Daniela Engel A. Javoski	Luciane Moutinho
Daniela Tavares	Luis Valverde
Danielle Mozer	Luiz Edmundo Horta Barbosa da Costa Leite
David Moreira	Luiz Fernando Guimarães
Delcio Viot Junior	Luiz Fernando Leite Zarvoli
Denis Gustavo Macedo	Luiz Henrique Brito Pereira
Denis Gustavo Ribeiro de Machado	Luiz Miguel Stumbo Filho
Domingos Borges	Luiz Renato Vergara
Edmilson Barbosa	Luiz Roberto Arueira da Silva
Edmilson Valentim	Luney Martins de Almeida
Eduardo Carvalho Sécio	Marcelo A S Garcia
Elaine Carneiro Rosa	Marcelo Fonseca Soares
Elielson Teixeira da Silva	Marcio Wixak Vieira da Motta
Eliton Silva	Marcos Serra Araujo
Erika Alcantara	Maria Cristina Contreiras Padilha
Erika Brum Palma Pereira	Maria Gabriela Bessa da Silva
Evandro De O. Coelho	Marília Sorrini Peres Ortiz
Evanildo Barreto	Mario Marques
Fabiana Loiola Dias	Marisa Valente
Fabiana Scherer	Maristela Leite do Carmo
Fábio Lima Peixoto	Martha Fernanda da Conceição S. Eduardo A. de Souza
Fábio Luiz Lima	Max Aguiar Alves
Fabricao Pinheiro Silveira	Mônica Bahia Schlee
Fagner Moutinho	Nair Paulo Cabral
Fátima Valéria Gonçalves Lino da Costa	Nicholas de Souza Borges
Felipe Peixoto	Nilton Caldeira da Fonseca Filho
Fernando Gomes Cid	Paloma Martins Mendonça
Fernando Gonzalez dos Santos	

**Municipal Committee**

- |                                 |                                 |
|---------------------------------|---------------------------------|
| Paula Serrano                   | Rodrigo Henriques               |
| Paulo G Prata                   | Rodrigo Ramos Xavier            |
| Paulo José Affonso Vianna       | Rogério de Oliveira Ferolla     |
| Paulo José Cardim De Nantes     | Ronaldo Grana Barbosa           |
| Paulo Roberto de Souza Gondim   | Rosângela S Borges              |
| Paulo Roberto Monteiro Lima     | Rubens Moreira                  |
| Paulo Sérgio Alves de Aguiar    | Rubens Rodrigues Borborema      |
| Paulo Vianna                    | Ruth Jurberg                    |
| Poliana Borges França           | Samir de Menezes Costa          |
| Priscila Soares                 | Sandro Caldas                   |
| Rafael M Saramago               | Sergio Henrique Mantovani       |
| Rafael Nishimoto                | Simone Costa                    |
| Rafael Viana                    | Stefan Augusto A S Gomes        |
| Rafaelle Barbosa da Silva       | Sydnei Menezes                  |
| Raquel F de Lima                | Ursula D M Rodrigues            |
| Raquel Lima de Magalhães Bastos | Vasco Acioli                    |
| Rebeca Costa Bittencourt        | Verena Vicentini Andreatta      |
| Renata Vasconcellos             | Vicente de Paula A Rodrigues    |
| Renato Araujo de Barros         | Vinícius Felizardo              |
| Renato da C Barbosa             | Vinícius Moro                   |
| Renato Dirk                     | Vinícius Oliveira de Araújo     |
| Renato Machado Ferreira         | Viviane B C da Silva            |
| Rene Antonio Silva Coutinho     | Viviany Barreto Nogueira Borges |
| Ricardo Harduim                 | Waldelino Pinheiro Júnior       |
| Ricardo Lemos                   | Washington Menezes Fajardo      |
| Ricardo Pelegueiro              | Wendel Andrei                   |
| Rita Rocha                      | Wilson Pereira J Sobrinho       |

**Delegates**

- |                              |                                 |
|------------------------------|---------------------------------|
| Adauri Souza                 | Denia Santane (S)               |
| Ademir Dorigo                | Diego Lopes                     |
| Adriano Luis Naval de Lima   | Douglas Almeida                 |
| Adyr Ferreira da Motta Filho | Eduardo Fonseca                 |
| Ágata Mello                  | Eduardo Lima                    |
| Ailton Carvalho              | Elielson Teixeira da Silva      |
| Alcir Martinazzo             | Eloisa Helena Barcelos Freire   |
| Almir Antonio dos Santos     | Esdras da Silva                 |
| Ana Paula Martins            | Evanildo Baneto                 |
| Ananias Ferreira (S)         | Fabiana da Silva                |
| Anderson Oriente             | Fábio Marinho Ferreira (S)      |
| André Barros Pereira         | Fátima Guimarães (S)            |
| André Bianche                | Felipe Salles                   |
| Andre Luiz David             | Fernando Nicholas Dias          |
| Andressa Dias                | Fernando Ramos Pereira          |
| Andressa Ferreira            | Filipe Carvalho                 |
| Angela Soledade (S)          | Francisco Jorge Duarte da Silva |
| Antonio Almeida Filho        | Frederico Araujo                |
| Antonio Augusto Veríssimo    | Genésio Pinto Neto              |
| Antonio Carlos da Silva      | Geysiane Xavier                 |
| Antonio Oscar                | Gilvoneick de Souza José        |
| Antonio Vidaurre             | Giordano Roncono                |
| Artur Messias da Silveira    | Gisele Dornelles Pires          |
| Ary Gabriel Girota de Souza  | Gregório Jório Santana          |
| Baltazar Morgado (S)         | Guilherme Antunes (S)           |
| Bartíria da Costa            | Gustavo Ferreira                |
| C. Rosário                   | Gustavo Henrique                |
| Carlos Alberto Fares         | Harryson de Paula               |
| Carlos E. Santos (S)         | Helenil Diniz Henriques         |
| Carlos Ernesto Moises        | Heloisa Gonçalves               |
| Carlos Leandro               | Henrique Lagoeiro               |
| Carlos Pereira da Silva      | Henrique Rabelo                 |
| Carmem Lucia Motta           | Henrique Silveira               |
| Caroline Rodrigues           | Hermanio Guimarães (S)          |
| Charles Gomes de Oliveira    | Hermes Braga                    |
| Clair Pessanha               | Irismar Santos                  |
| Clara Monção Ramos (S)       | Iuri Moura                      |
| Daniel Ferreira da Silva     | Jamerson Carvalho (S)           |
| Deborah Pimentel             | Jandira Neto                    |
| Deborah Pimentel             | Jandira Rosa                    |
| Demettré Basile Anastassakis | Jeferson Azevedo (S)            |

Delegates

João Carlos Grilo Carcetti	Patricia Alves da Silva
João Ferreira de Oliveira	Paulo Bidegain
João Pedro Martins	Paulo Cesar Faria Machado
João Xavier	Paulo Vitor Del Rey
Jocelio P. Oliveira	Pedro Carlos Costa
Jorge Luiz Correia Borges	Pedro Pereira de Araujo
José Carlos Nogueira	Priscila Grimberg
José Eduardo de Souza Prates	Rafael Machado Quaresma
José Luiz Teixeira	Rafaela Albergaria
José Roberto Salles	Raquel Cruz
Kate Gralato Ferreira (S)	Raquel Ferreira Lima
Leandro Damasceno	Renato Souza
Leandro Teixeira Guimarães	Ricardo Nobre
Leticia Ribeiro (S)	Riyuzo Ikeda Junior
Luciano Fernandes	Roberto Rodrigues
Luisa Fenizola	Robson Borges
Luiz Quaresma (S)	Rolf Dilringer
Luiz Valverde	Romulo Moraes
Luney Martins de Almeida	Rosangela Pereira Santana
Luney Martins de Almeida (S)	Rui Dias
Marcia Monaco	Ruth Jubert
Marcia Roiffe	Sandro Caldas (S)
Marcia Vasconcelos	Sérgio Henrique Montovani
Marcio Ferreira de Souza	Sidney Campos Neves
Marcio Mundim	Silvia Neto
Marcio Rufino Silva	Silvio José Nunes
Marco Manhães	Solange Brito
Marcos Vinícius Gomes de Moura	Sonia de Pontes Leandro
Maria de Fátima Silva	Thiago Alexandrino
Maria do Carmo da Silva Miranda (Chocolate)	Thiago Quintanilha
Maria Gabriela Bessa	Turmena
Maria Helena Costa	Valério oliveira Junior
Maria Isabel Tostes	Vania Lucia Santos (S)
Maria José de Almeida	Vanusa Rodrigues da Silva (S)
Maria Marta Gameiro (S)	Verônica Silva Conceição (S)
Marília Sorrini Peres Ortiz (S)	Vicente Rodrigues (S)
Marinaldo dos Santos Lima	Vitor Hugo Kaczmarkiewicz
Milena Fernando (S)	Vitor Mihessen
Mirian Rodrigues Dos Santos	Viviany Barreto Nogueira Borges
Nair Paulo Cabral	Waldemira Zarigoni Jacob
Nivaldo Santos	Wanderlei Noé de Carvalho
Omar Kirchmeyer de Lima	Yasmim Monteiro
Oscarina Souza Siqueira	Zoraide Gomes (“Cris dos Prazeres”)

**Follow up Forum**

**Class Entities**

Brazilian Bar Association (OAB - São Gonçalo) | Marco Manhães  
 Union of Workers in Sanitation and Environment Companies of Rio de Janeiro and Region (SINTSAMA-RJ) | Roberto Rodrigues  
 Trade Union of Workers in the Water Purification and Distribution Industries and Sewerage Services of Niterói (STIPDAENIT) | Ary Gabriel de Souza

**Universities**

Universidade Federal do Rio de Janeiro - Post-graduation Program in Urban Planning | Maria Helena Costa  
 Universidade Federal Fluminense - Post-Graduation Program in Sociology and Law (UFF-PPGSD) | Priscila Grimberg  
 Universidade Federal Rural do Rio de Janeiro/GPNC | Rosangela Pereira de Sant'Anna

**Civil Society Organizations**

Associação Casa Fluminense | Henrique Silveira  
 Federação de Órgãos para Assistência Social e Educacional- FASE (RJ) | Caroline Rodrigues da Silva  
 Instituto de Estudos da Religião - ISER | Rafaela Albergoria

**Social Movements**

National Confederation of Residents' Associations - CONAM | Batéria da Costa  
 Federation of Maricá Residents Associations - FAMMAR | Ademir Dorigo  
 Federation of Residents' Associations of the Municipality of Guapimirim - FAMMUG | Renato Souza  
 Federation of Urban and Rural Residents Associations of Japeri | Esdras da Silva  
 Niterói Transparency Forum | Antonio Oscar Vieira  
 GOMEIA - Duque de Caxias | José Eduardo de Souza Prates  
 Pro-Sanitation Movement | Paulo Cesar Faria Machado  
 Pró-São Gonçalo | Ágata Mello  
 Recycling - New York | Chris of Pleasures  
 Agenda 21 de Magé / RJ (S) | Nair Paulo Cabral  
 Association of Residents of Praça Cruzeiro - Rio Bonito (S) | Waldemira Zarigoni Jacob  
 Associação Mobiliza Japeri (S) | Patrícia Alves da Silva  
 Federation of Neighborhood Associations of Nova Iguaçu - MAB / Brazilian Union of Women - UBM - Nova Iguaçu (S) | Irismar Santos  
 Mídia Kaps Digital - MPS (S) | Carlos Alberto Paiva da Silva  
 Environmental Education Network of São Gonçalo (S) | Luis César do Rosário  
 Reading Network of Duque de Caxias (S) | Maria do Carmo da Silva Miranda

**Key Staff**

**Willy Müller** | *General Coordinator*  
**Jaime Lerner** | *Specialist in Urban Planning*  
**Roberto Smith** | *Specialist in Economics*  
**Alberto Maia da Rocha Paranhos** | *Specialist in Public Administration*  
**Rômulo Dante Orrico Filho** | *Transportation Specialist*  
**Paulo Canedo de Magalhães** | *Specialist in Sanitation*

**Coordination**

**Alexandre Weber Aragão Veloso** | *Technical Coordination*  
**André Sales Sousa** | *Technical Coordination of the support team*  
**Cid Blanco Junior** | *Project Director*  
**Jaime Lerner** | *Strategy Coordinator*  
**José de Ribamar Sousa** | *Management Coordinator*  
**Marina Cabreira Bastos** | *Administrative and Institutional Coordinator*  
**Taco Roorda** | *Technical Coordination*  
**Willy Müller** | *Coordenador Geral*

**Specialists Responsible for the Structuring Axes**

**Alberto Maia da Rocha Paranhos** | *Public administration*  
**Paulo Canedo de Magalhães** | *Basic Sanitation*  
**Ricardo Duarte Pontual** | *Housing*  
**Riley Rodrigues de Oliveira** | *Economics*  
**Rômulo Dante Orrico Filho** | *Transportation*  
**Taco Roorda** | *Territory Planning*  
**Valéria Figueiredo Bechara Elias** | *Historical and Cultural Heritage*

**Specialists in complementary areas**

**Gustavo Brasileiro Coelho** | *Engineering and Infrastructure*  
**Ivo Freire** | *Development, Urban and Regional Planning*  
**José Wilton Ferreira do Nascimento** | *Planning, Environmental Studies and Sustainable Development*  
**Kelson Senra** | *Urban Development*  
**Lyvia Cleide Moura Chaves** | *Geoprocessing*  
**Nerêo Cardoso de Mattos Júnior** | *Urban Law*  
**Paula Lemos Azem** | *Monitoring and Evaluation*  
**Pedro Daniel Strozemberg** | *Participation Mechanisms*  
**Rita Fernandes** | *Communication*

**Technical Team**

**Aline Pires Veról** | *Sanitation Technical Support*  
**André Sales Sousa** | *Technical Support in Architecture and Urbanism*  
**Anna Beatriz Ribeiro da Cruz Franco** | *Sanitation Technical Support*  
**Antonio Krishnamurti Beleño de Oliveira** | *Sanitation Technical Support*  
**Ariadne dos Santos Daher** | *Support in Development, Spatial Reconfiguration and Centralities*  
**Augusto Rodrigues** | *Research Support*  
**Barbara Schlösser** | *Support in Development, Spatial Reconfiguration and Centralities*  
**Bruna Peres Battemarco** | *Sanitation Technical Support*  
**Carlos Cruz** | *Support in Social Media and Event Coverage*  
**Carolinne Rodrigues** | *Support in Social Media and Event Coverage*  
**Cícero Matos Arrais** | *Sanitation Technical Support*  
**Danielle Schappo** | *Support in Development, Spatial Reconfiguration and Centralities*  
**Debora Ciociola** | *Support in Architecture and Urbanism*  
**Edgard Reis Santana** | *Support in Geoprocessing Technical Design*



**Technical Team**

Érika Poletto | *Support for Valuation of Natural and Cultural Heritage and Photography*  
 Fabiana Moro Martins | *Research Support*  
 Felipe Guerra | *Support in Architecture and Urbanism*  
 Fernando Antonio Canalli | *Support in Architecture and Urbanism*  
 Francis Martins Miranda | *Sanitation Technical Support*  
 Gianna de Rossi | *Research Support*  
 Guilherme Leiva | *Technical Support in Mobility*  
 Guilherme Szczerbacki Besserman Vianna | *Technical Support in Economics*  
 Helena Mendonça | *Technical Support in Participation and Mobilization*  
 Ianic Bigate Lourenço | *Sanitation Technical Support*  
 Ígor Godeiro de Oliveira Maranhão | *Technical Support in Mobility*  
 Ígor Pantoja | *Technical Support in Participation and Mobilization*  
 Isabel Sanchez | *Support for Valuation of Natural and Cultural Heritage*  
 Jeniffer Cristina da Costa | *Technical Drawing Support*  
 João Antônio de S. e Silva | *Technical Support in Participation and Mobilization*  
 José Brandão de Paiva Neto | *Technical Support in Mobility*  
 Lucas Roni de Lacerda | *Support in Project Development*  
 Máira Sales Sousa | *Legal Advise*  
 Marcelo Gomes Miguez | *Sanitation Technical Support*  
 Marina Benício Baptista Suhett | *Technical Support in Housing*  
 Marina Schulman | *Support in Architecture and Urbanism*  
 Matheus Martins de Sousa | *Sanitation Technical Support*  
 Mila Lo Bianco | *Technical Support in Participation and Mobilization*  
 Nicolau Costta | *Event Production Technical Support*  
 Osvaldo Moura Rezende | *Sanitation Technical Support*  
 Paulo Kawahara | *Support in Development, Spatial Reconfiguration and Centralities*  
 Pedro Geaquinto | *Technical Support in Geo Processing*  
 Renata Alves Moreira | *Administrative support*  
 Rodrigo Walker | *Event Production Technical Support*

**Technical Studies**

Barbara Bravo | *Monitoring and Evaluation*  
 Cláudio A. G. Egler | *Social Services*  
 Kaizô I. Beltrão | *Demographic Projection*  
 Luciana Guilherme | *Participatory Economics*  
 Marcos Vargas | *Health Economics*  
 Paulo Carneiro | *Natural patrimony*  
 Sonoe S. Pinheiro | *Demographic Projection*  
 Teresa C. F. Cosentino | *Mechanism and Financing*  
 Verônica Machado | *Mechanism and Evaluation*

**Government of the State**

**Luiz Fernando Pezão** | *Governor*  
**Francisco Dornelles** | *Deputy Governor*

**State Secretary of Government**

**Afonso Henriques Monnerat Alves da Cruz** | *Secretary*  
**Vicente de Paula Loureiro** | *Executive Director of the Metropolitan Chamber of Governmental Integration*

**Coordination**

Executive Group of Metropolitan Management

**Paulo César Silva Costa** | *Architect and urbanist*  
**Luiz Firmino Martins Pereira** | *Architect and Urbanist* | *DSc. In Geography.*  
**Gerard Andres Fischgold** | *Architect and urbanist*  
**Afonso Junqueira Accorsi** | *Architect and urbanist*

**Technical staff**

Executive Group of Metropolitan Management

**Ana Paula Sant'Anna Masiero** | *Civil engineering*  
**Antônio J.Z. Andrade** | *Engineer*  
**Bruno Jorge Vaz Sasson** | *Cartographic Engineer*  
**Carmem Lúcia Petráglio** | *Civil engineering*  
**Christiane Lemos Ammon** | *Architect and Urbanist*  
**Jeley Willekems Trigueiro Filho** | *Planning Technician*  
**José Carlos de Souza** | *Administrator*  
**Juliana Vasconcellos** | *Geographer* | *MSc in Geography*  
**Márcia da Costa Ribeiro Campos** | *Architect and Urbanist*  
**Marcus Galvão Fernandes de Vasconcelos** | *Journalist*  
**Maria Auxiliadora Ziza Nascimento** | *Regional Supervisor*  
**Milton de Mello Bastos** | *Architect and urbanist*  
**Nelson Caldeira** | *Administrator*  
**Pedro Motta Lima Cascon** | *Architect and urbanist*  
**Solange Maria de Freitas Bezerra** | *Social Worker*  
**Vera Lúcia Sanches França e Leite** | *Architect and Urbanist* | *Dsc in Architecture and Urbanism*  
**Wagner Azeredo Fortunato** | *Architect and urbanist*  
**Waldir Perez** | *Geographer*

**Consultants**

Executive Group of Metropolitan Management

**Paulo Aguiar** | *Architect and urbanist*  
**Victor Zveibil** | *Environmental and Social Sustainability*

**PRIORITY ACTION PROGRAMS**

**Actions Program - Smart Metropolis**

**Actions Program - Sustainable Metropolis**

**Actions Program - Balance the Metropolis**

**Actions Program - Inhabit the Metropolis**

**Actions Program - Reinvented Bay**

**Actions Program - Governing the Metropolis**

**Priority actions chosen at pre-conferences and at the First Metropolitan Conference**

# Priority Action Programs

SMART METROPOLIS	
<b>MI01</b>	Encourage actions to consolidate the RMRJ Technological Corridor, which concentrates teaching, research, development and innovation facilities
<b>MI02</b>	Adoption of specific legislation and development of Economic and Social Development Plan - PDES aimed at encouraging the installation of productive chain industries of interest to RJMR
<b>MI03</b>	Technological innovation projects aimed at the 4th Industrial Revolution
<b>MI04</b>	Technological innovation projects focused on Sustainable Development
<b>MI05</b>	Creation of a seal of origin, in order to encourage sustainable development, urban agriculture and the preservation of the environment
<b>MI06</b>	To strengthen the RJMR as a national and international center of creative economy
<b>MI07</b>	Scholarship programs related to higher value-added economic sectors, through partnerships with the productive sector
<b>MI08</b>	Higher education courses in secondary centers
<b>MI09</b>	Integrated management of cultural heritage through the creation of a single register for cultural goods
<b>MI10</b>	Creation of funding lines for actions of cultural heritage interest
<b>MI11</b>	Creation of programs and the use of urbanistic instruments with the objective of restoring and preserving the cultural, material and intangible heritage of RJMR
<b>MI12</b>	Creation of a heritage interest approval
<b>MI13</b>	Stimulate the deployment of fiber optics for the entire RJMR
<b>MI14</b>	Encourage the creation of a unique calendar of RJMR cultural and tourist events
<b>MI15</b>	Institutional actions aiming at the valorization and preservation of the natural, cultural and historical heritage of RJMR, based on the creation of new Cultural Landscapes delimitations and the definition of parameters for their valorization
<b>MI16</b>	Creation of the Brazilian cultural landscape approval for relevant sets of RJMR
<b>MI17</b>	Expansion of tourism throughout the RJMR
<b>MI18</b>	Qualification of critical infrastructures (highway, railroad, ports, airports and pipelines), increasing the connections by land, increasing the capacity of circulation of goods
<b>MI19</b>	Increase the supply of logistic support areas, with the creation of retro areas and other improvements to qualify these logistic structures, to reduce costs of storage of cargo within the metropolitan territory and increase the competitiveness of the sector
<b>MI20</b>	Expansion of the offer of international maritime and especially aerial connections to win the market as Brazil's "international gateway"
<b>MI21</b>	Creation and implementation of a real-time information system for RJMR
<b>MI22</b>	Encourage the preservation of the natural, cultural, landscape and biological attributes of the Itaoca area in São Gonçalo
<b>MI23</b>	Creation of historical parks in the surroundings of assets of equity interest
<b>MI24</b>	Requalification of the stations of the suburban rail system and urban redevelopment of its surroundings, valuing the landscape and cultural landscape
<b>MI25</b>	Initial deployment of an offshore energy technology research and innovation center

SUSTAINABLE METROPOLIS	
<b>MS01</b>	Sustainable development of the RJMR periurban territory - Rural Arch (Agroecological)
<b>MS02</b>	Use of the sources of the Guapi-Macacu and Guapiaçu sub-basins, aiming at agricultural production, economic development and potable water supply for the inhabitants of the Metropolitan East in the framework of a Regional Development Plan
<b>MS03</b>	Deployment of sanitary belt (and drainage network when necessary) in places without sanitary sewage network as a transition solution to an absolute separator system, adopting a strategy of gradualism
<b>MS04</b>	Deployment of sanitary belt in locations with absolute separator system currently decharacterized, with interconnection between sewage and drainage, in order to intercept the drainage networks and route effluents for treatment before discharge in the receiving body
<b>MS05</b>	Use existing Sewage Treatment Stations - ETEs and evaluate the need to implement new ETEs
<b>MS06</b>	Creation and qualification of the Conservation Units and elaboration of the management plans of the conservation units, as well as the implementation of the management plans in force
<b>MS07</b>	Protect areas with environmental fragility located around the urban spot of RJMR
<b>MS08</b>	Elaboration and implementation of a coastal management plan and economic ecological zoning for the bays of the metropolis aiming at environmental preservation
<b>MS09</b>	Deployment of an environmental connectivity network from the connection of existing vegetation fragments and plant restoration
<b>MS10</b>	Creation of a new conservation unit mosaic in the region of Niterói, Maricá and São Gonçalo
<b>MS11</b>	Encourage the connection of forest fragments by supporting the creation of Private Reserves of Natural Heritage and other means of environmental preservation on rural properties
<b>MS12</b>	Deployment of small water reservoirs near Serra do Mar
<b>MS13</b>	Creation of an environmental park in the Guapimirim River Basin
<b>MS14</b>	Environmental recovery and use of the water resources of Cavas de Seropédica
<b>MS15</b>	Carry out a study of sites with potential for the deployment of future Solid Waste Treatment Plants - CTRs and for the disposal of dumps
<b>MS16</b>	Energy utilization of solid waste tailings
<b>MS17</b>	Recycling of construction waste - RCC and the articulated management of municipalities for RCCs
<b>MS18</b>	Conservation, reforestation, agricultural and industrial pollution control and basic sanitation activities for the RJMR water resources basins
<b>MS19</b>	Promote monitoring and evaluation and encourage resilient actions for the sectors of water supply, sanitary sewage, solid waste management and rainwater management
<b>MS20</b>	Elaboration or review of municipal and state risk reduction plans
<b>MS21</b>	Development and implementation of a specific conservation and environmental recovery plan for the RJMR lagoon system
<b>MS22</b>	Creation of a program to reduce physical losses of water
<b>MS23</b>	Seek alternative initiatives to increase water availability for RJMR water supply
<b>MS24</b>	Use of an additional part of the Lajes Reservoir volume as a strategic reserve
<b>MS25</b>	Conducting studies on the adoption of the polluter pays concept
<b>MS26</b>	Realization of environmental education programs
<b>MS27</b>	Remediation of contaminated areas of RJMR

<b>BALANCE THE METROPOLIS</b>	
<b>EMo1</b>	Strengthen proposed urban centralities by integrating municipal master plans and sectoral plans with the PDUI
<b>EMo2</b>	Investments in infrastructure, urban qualification and mobility in the centralities to be strengthened
<b>EMo3</b>	Deployment of social facilities in urban centralities to be strengthened
<b>EMo4</b>	Availability of areas for the implementation of regional public facilities in areas of housing densification and precarious areas
<b>EMo5</b>	Deployment of businesses in secondary centralities
<b>EMo6</b>	Creative economy activities related to the low income population
<b>EMo7</b>	Alcântara Transversal Hub - implementation of a multifunctional project in the Alcântara River basin and mitigation of floods in the region
<b>EMo8</b>	Sarapuí Transversal Hub - implementation of multifunctional project and flood mitigation in the Iguaçu and Sarapuí Rivers Basin
<b>EMo9</b>	Use the Interbaixada road, a transverse axis projected next to the Sarapuí river, in the Baixada Fluminense, for collective transportation
<b>EM10</b>	Creation and / or adaptation of transversal articulation axes for collective transport along the urban qualification works of the Rio Alcântara, in São Gonçalo
<b>EM11</b>	Encourage the creation and / or adaptation of transversal articulation axes for collective transport and active transport - establish the connection of centralities to be reinforced and their environment
<b>EM12</b>	Support the implementation of Line 3 of the Subway, Section 1, between São Gonçalo and Niterói and, in a second phase, Section 2, between São Gonçalo and Itaboraí
<b>EM13</b>	Encourage the creation and / or extension of mobility axes, even if radial, with priority for the implementation of public transportation and connectivity of centralities of the same planning macro-region, expanding subway lines and deploying BRT lines, to optimize the existing network, safeguarding in the project premises of discouragement to individual transport
<b>EM14</b>	Encourage the adaptation and utilization of the existing rail axis around Guanabara Bay, as well as plan the use of the future Railroad Arch for the purpose of passengers, strengthening the collective transportation to locations benefiting from that region
<b>EM15</b>	Create collective public transport lines for linkage between the urban centralities to reinforce foreseen in the PDUI
<b>EM16</b>	General reorganization of the public transport network in order to increase its efficiency
<b>EM17</b>	Lines of water transportation in the Guanabara Bay to meet local and regional demands
<b>EM18</b>	Creation of a body responsible for public transportation in the RJMR, as an essential part of the institutionality of metropolitan governance
<b>EM19</b>	Creation of continuous funding sources for public transport in RJMR
<b>EM20</b>	Occupancy of urban voids, mainly along the main axes of mobility
<b>EM21</b>	Creation of integrated urban and land regularization programs, associated to social projects
<b>EM22</b>	Programs focused on public policies for elementary education in territories with indicators below the RJMR average
<b>EM23</b>	Realization of educational and cultural programs targeting young people living in socially vulnerable territories
<b>EM24</b>	Encourage the creation of fluvial linear parks in urban areas along permanent preservation areas, water bodies and mobility corridors
<b>EM25</b>	Adequacy of investments and public policies with interests and the metropolitan scale
<b>EM26</b>	Programs using the family health strategy, with the objective of promoting health through attention to individuals as a form of prevention
<b>EM27</b>	Articulate urban and land regularization policies with social policies

<b>INHABIT THE METROPOLIS</b>	
<b>HM01</b>	Improvement of the water supply of the Imunana Laranjal system and other isolated water supply systems in its coverage region
<b>HM02</b>	Improvement of the water supply of the Guandu System and other isolated supply systems in its catchment region
<b>HM03</b>	Rationalization of the use of drinking water through a wide program of awareness and participation of the population
<b>HM04</b>	Deployment of selective collection systems, as well as the destination of solid waste to recycling plants and cooperatives
<b>HM05</b>	Implementation of reverse logistics systems for products and packaging
<b>HM06</b>	Deployment or expansion of community waste collection
<b>HM07</b>	Improvement of management of solid waste management activities
<b>HM08</b>	Urban mobility along mobility axes, the centralities to be reinforced and the nodal points, favoring areas with urban infrastructure
<b>HM09</b>	Mitigation of flooding in urban areas through the implementation of macrodrainage infrastructure
<b>HM10</b>	Mitigation of flooding in urban areas through the implementation of macrodrainage infrastructure and multifunctional projects associated with these interventions
<b>HM11</b>	Studies for flood mitigation in urban areas in the Macacu and Caceribu Rivers Basins
<b>HM12</b>	Improvement of management of solid waste management activities
<b>HM13</b>	Urbanization and land regularization in favela
<b>HM14</b>	Recovery of degraded housing complexes
<b>HM15</b>	Production of housing of social interest through self-management programs and technical assistance
<b>HM16</b>	Simplification and compatibilization of the legislation and the urban norms and municipal edilices regarding the use and occupation of the soil
<b>HM17</b>	Production of HIS units - housing of social interest (from 0 to 3 SM) and HMP - housing of popular market (from 3 to 5 SM) in priority areas with infrastructure and diversification of uses, either in urban voids or denser localities
<b>HM18</b>	Production of HIS units - housing of social interest - aiming at the resettlement of families for risk mitigation
<b>HM19</b>	Production of housing units of social interest - HIS to meet specific demands identified as: HIS for social leasing; HIS for seniors, and HIS in historic and / or old real estate without proper use or conservation
<b>HM20</b>	Creation of a register of public and private lands dedicated to housing of social interest and deployment of social facilities
<b>HM21</b>	Creation of a housing information and social services system, linked to the metropolitan information system
<b>HM22</b>	Creation of metropolitan policies in state and municipal housing agencies aiming to work in the production of housing and in the urbanization of areas of special social interest
<b>HM23</b>	Requalification of the existing railroad tracks and the deployment of integration stations that are strategic for optimization of the collective transportation system, promoting the local development
<b>HM24</b>	Deployment of Active Transport and Practices Related to Transport-Driven Development - TODs
<b>HM25</b>	Deployment of a valorization project of Central do Brasil and the region of its surroundings
<b>HM26</b>	Deployment and revitalization of green spaces in urban and public and private spaces, especially in areas with high urban and urban density

<b>REINVENTED BAY</b>	
<b>BR01</b>	Elaboration and implementation of a coastal management plan and economic ecological zoning for the Guanabara Bay aiming at its environmental preservation
<b>BR02</b>	Deployment of sanitary belt (and drainage network when necessary) in places without sanitary sewage network as a transition solution to an absolute separator system, adopting a strategy of gradualism
<b>BR03</b>	Deployment of sanitary belt in locations with absolute separator system currently decharacterized, with interconnection between sewage and drainage, in order to intercept the drainage networks and route effluents for treatment before discharge in the receiving body
<b>BR04</b>	Deployment of an interceptor belt in the border of Guanabara Bay in order to intercept the drainage lines of its watershed, directing effluents for treatment
<b>BR05</b>	Preserve the Guanabara Bay Waterfront due to its metropolitan interest
<b>BR06</b>	To articulate the valorization and revitalization of the Guanabara Bay border by supporting municipalities
<b>BR07</b>	Valorization of urban occupations and traditional communities on the shores of Guanabara Bay, supporting their economic and social development
<b>BR08</b>	Elaboration and implementation of a valorization project of the Duque de Caxias Waterfront and the Gramacho Embankment Park
<b>BR09</b>	Development and implementation of the Valorization Project for the Itaoca Waterfront, São Gonçalo
<b>BR10</b>	Creation of new public fishing terminals in Guanabara Bay for artisanal fishing
<b>BR11</b>	Review of the Cidade da Pesca Project, aiming to update and reconcile it with the Itaoca Preservation Project
<b>BR12</b>	Revitalization of the cultural and environmental landscapes of the districts of Magé
<b>BR13</b>	appreciation and revitalization of the Guanabara Bay Island System
<b>BR14</b>	Waterways in Guanabara Bay to meet local and regional demands
<b>BR15</b>	Encourage and promote tourism activities related to the Guanabara Bay
<b>BR16</b>	Encourage the adaptation and utilization of the existing rail axis around Guanabara Bay, as well as plan the use of the future Railroad Arch for the purpose of passengers, strengthening the collective transportation to locations benefiting from that region
<b>BR17</b>	Use existing Sewage Treatment Stations - ETEs and evaluate the need to implement new ETEs
<b>BR18</b>	Creation of an environmental park in the Guapimirim River Basin
<b>BR19</b>	Deployment of an environmental connectivity network from the connection of existing vegetation fragments and plant restoration
<b>BR20</b>	Initial deployment of an offshore energy technology research and innovation center
<b>TO GOVERN THE METROPOLIS</b>	
<b>GM01</b>	Articulate the formal governance institution in RJMR
<b>GM02</b>	Promote the strengthening of the Metropolitan Agency and build an integrated planning capacity
<b>GM03</b>	Promote sustainable bases for leveraging financial resources and their efficient use
<b>GM04</b>	Stimulate the expansion of the adoption of integrated public policies
<b>GM05</b>	Promote the more efficient integration of organized civil society into the metropolitan and municipal planning process
<b>GM06</b>	Promote information management, through a Unified Metropolitan Information System



<b>Priority actions chosen at pre-conferences (in italics, actions selected at the First Metropolitan Conference)</b>	
<b>SMART METROPOLIS</b>	
<b>MI05</b>	Creation of a seal of origin, in order to encourage sustainable development, urban agriculture and the preservation of the environment
<b>MI18</b>	Qualification of critical infrastructures (highway, railroad, ports, airports and pipelines), increasing the connections by land, increasing the capacity of circulation of goods
<b>MI23</b>	Encourage the creation of historical parks in the vicinity of assets of heritage interest with priority for the Vila Iguassu Historical Park, the Historic Park of Queimados and the Historical Park of the São Boaventura Convent
<b>MI24</b>	Encourage the requalification of the stations of the suburban railway system and the urban requalification of its surroundings, valuing the landscape and cultural landscape
<b>SUSTAINABLE METROPOLIS</b>	
<b>MS01</b>	<b>Encourage the sustainable development of the RJMR periurban territory - Rural Arch (Agroecological)</b>
<b>MS02</b>	Encourage the use of sources of the Guapi-Macacu and Guapiacu sub-basins, aiming at agricultural production, economic development and potable water supply for the inhabitants of the Metropolitan East in the framework of a Regional Development Plan
<b>MS03</b>	<b>Encourage the implementation of dry weather networks in places without sanitary sewage network as a transition solution to an absolute separator system, adopting a strategy of gradualism</b>
<b>MS05</b>	<b>Encourage the use of existing Sewage Treatment Plants - ETEs and evaluate the need to implement new ETEs</b>
<b>MS08</b>	Support the elaboration and implementation of a coastal management plan and economic ecological zoning for the bays of the metropolis aiming at environmental preservation
<b>MS15</b>	Support the execution of a study of sites with potential for the deployment of future Solid Waste Treatment Plants - CTRs and for the disposal of dumps
<b>MS18</b>	<b>Encourage and support activities of conservation, reforestation, control of agricultural and industrial pollution and basic sanitation for the basins of the water resources sources of RJMR</b>
<b>MS19</b>	Promote monitoring and evaluation and encourage resilient actions for the sectors of water supply, sanitary sewage, solid waste management and rainwater management
<b>BALANCE THE METROPOLIS</b>	
<b>EM01</b>	<b>Encourage the strengthening of proposed urban centralities through the integration of the municipal sectorial master plans and plans with the PDUI, considering: Campo Grande, Niterói (second level); Duque de Caxias, Madureira, Nova Iguaçu and São Gonçalo (third level); Itaboraí, Itaguaí, Magé, Queimados, Maricá and Seropédica (fourth level)</b>
<b>EM06</b>	Encourage creative economy activities related to the low income population
<b>EM08</b>	Sarapuí Transversal Axis - encourage the implementation of a multifunctional project and the mitigation of floods in the Iguaçu and Sarapuí Rivers Basin
<b>EM09</b>	To stimulate the use of the Interbaixada road, a transversal axis projected next to the Sarapuí river, in the Baixada Fluminense, for the collective transport, connecting Nova Iguaçu and Duque de Caxias and other municipalities of Baixada Fluminense
<b>EM12</b>	<b>Support the implementation of Line 3 of the Subway, Section 1, between São Gonçalo and Niterói and, in a second phase, Section 2, between São Gonçalo and Itaboraí</b>
<b>EM14</b>	<b>Encourage the adaptation and utilization of the existing rail axis around Guanabara Bay, as well as plan the use of the future Railroad Arch for the purpose of passengers, strengthening the collective transportation to locations benefiting from that region</b>
<b>EM17</b>	<b>Support the concession of the operation of water transport lines in Guanabara Bay to meet local and regional demands, such as Duque de Caxias, Magé, São Gonçalo and Paquetá (Rio de Janeiro)</b>
<b>EM21</b>	<b>Encourage the creation of integrated urban and land regularization programs, associated to social projects, aimed at irregular / illegal settlements and / or precarious settlements with low social and urban indicators, located in regions of the periphery of the metropolis, whose environmental and functional characteristics justify these interventions</b>
<b>INHABIT THE METROPOLIS</b>	
<b>HM04</b>	<b>Encourage deployment of selective collection systems, as well as the destination of solid waste to recycling plants and cooperatives</b>
<b>HM08</b>	Encourage urban densification along mobility axes, centralities to be reinforced and nodal points in areas with urban infrastructure
<b>HM10</b>	Encourage flood mitigation in urban areas through the implementation of macro-drainage infrastructure and multifunctional projects associated with these interventions
<b>HM13</b>	<b>Encourage urbanization and land regularization in favelas</b>
<b>HM14</b>	Encourage the recovery of degraded housing complexes
<b>HM22</b>	Encourage the creation of metropolitan policies in state and municipal housing agencies aiming to work in the production of housing and in the urbanization of areas of special social interest
<b>HM24</b>	Encourage deployment of Active Transport and Practices Related to Transport-Driven Development - TODs
<b>REINVENTED BAY</b>	
<b>BR08</b>	Encourage elaboration and implementation of a valorization project of the Duque de Caxias Waterfront and the Gramacho Embankment Park
<b>BR09</b>	Encourage development and implementation of the Valorization Project for the Itaoca Waterfront, São Gonçalo
<b>TO GOVERN THE METROPOLIS</b>	
<b>GM01</b>	Articulate the formal governance institution in RJMR





jaime lerner  
arquitetos associados



Câmara Metropolitana  
do Rio de Janeiro



