

METROPOLITAN OBSERVATORIES



Structuring and Implementation Guide



METROPOLITAN OBSERVATORIES

Structuring
and Implementation Guide

Metr**o**HUB



UN-HABITAT



METROHUB TOOLS: METROPOLITAN OBSERVATORIES STRUCTURING AND IMPLEMENTATION GUIDE

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Berlín / Alemania



EXECUTIVE SUMMARY



Barcelona / España

Currently, statistics on global urbanization processes show that more than half of the world's population lives in cities, and that by 2030 the global urban population is expected to be 5.17 billion people, compared to 4.22 billion in 2018. This urban dynamic has led to the adoption of international agreements such as the 2030 Agenda, the Paris Agreement (COP21) and the New Urban Agenda (NUA). With them, countries have made commitments to sustainable development, prioritizing the way in which cities are planned and managed.

Rethinking current models of urban development planning and management is the challenge for governments today, as this process is linked to the social and economic development of cities, which in turn is directly related to people's quality of life. This is why we need a coordinated approach oriented towards policies, regulations, programmes and projects that optimize the resources cities already have. Currently, decision making in this regard is, in most cases, based on uncertainty, due to the lack of information or to incomplete or unreliable data on demographic, physical, environmental, social, economic and cultural dynamics, and in general with regard to urban services.

In the case of metropolitan areas, decision making on sustainable development is even more complex because of the need to coordinate and integrate strategic actions to address urban development issues that exceed the jurisdictional boundaries of the cities within them. Having quality, up-to-date information allows for decisions that are consistent with the reality of the metropolis, that are quicker and more efficient, and that impact the entire metropolitan territory and its equitable development at a lower cost.

Metropolitan observatories are an essential instrument for facilitating coordination and integration in decision making on the sustainable development of territories. In particular, this is because they can be used to manage knowledge of the urban dynamics of the metropolis through the collection, analysis, socialization and monitoring of information on the territorial phenomena that affect, enhance and integrate the metropolitan area, relevant to its sustainable development.

Through the MetroHUB initiative, UN-Habitat, based on its vision of "a better quality of life for all in an urbanizing world", offers this guide to structuring and implementing metropolitan observatories to augment the efforts and capacities of government and key actors in the metropolitan territories to address the challenges of urbanization.

This guide sets out the basic concepts for understanding the need for metropolitan observatories as territorial management tools that are increasingly important in matters related to the management and planning of metropolises around the world.

Metropolitan observatories are a tool to co-generate sustainable metropolitan development with the participation of all the actors, to channel the integration and linkage of the data and the actors in the territory towards the same goal, and to strengthen metropolitan governance and sustainable development in the entire metropolitan territory. It contributes to inclusivity and equity in territorial development, facilitates the participation of all and allows decisions to be guided by policy, regulations and projects for balanced development of the metropolis. It is also a response to citizens' demands for more access to information and greater transparency in decision-making processes.

Knowledge management through metropolitan observatories should be focused on sustainable development. Environmental, economic and social sustainability in the metropolitan area is therefore its framework for action, to define the information to be managed and organized through indicators.

This document suggests using an indicators guide to help metropolitan development actors to identify and prioritize information, monitor and evaluate territorial processes and generate data and analysis to support and influence decision making for good governance and stronger citizen participation.

Metropolitan Indicator Topics

-  Urbanization
-  Employment
-  Population and demography
-  Cadastre
-  Production
-  Poverty
-  Rurality
-  Land revenue
-  Health
-  Territorial security
-  Connectivity
-  Education
-  Public space
-  Innovation
-  Culture
-  Mobility
-  Information and communication technologies
-  Public services
-  Public security
-  Natural resources
-  Gender
-  Waste

The promoters of this instrument should consider an organizational structure that will be responsible for managing data, operational resources for it to work, and a network of actors and strategic allies to access and circulate the information from official sources.

The final stage is implementation, consisting of managing the information, making the data and its georeferencing public, and promoting and fostering the participation and impact of its products and services in and on the decision making of the metropolis with regard to sustainable development.

It is important to define a route for designing and implementing the metropolitan observatory that legitimises its establishment and ensures its sustainability over time. Three fundamental stages have been established. They begin with achieving territorial consensus for the observatory's creation, based on a diagnosis approved by the metropolitan actors. Then comes the formalization of the political will to begin the next stage of design, through the structuring of the observatory's management system, information system and services system.

A metropolitan territory implementing this knowledge management instrument will mark a competitive difference in territorial governance, real-time, flexible planning, technological innovation, generation of future scenarios and multi-scale harmonization of strategies and plans.



INTRODUCTION



Singapur / Singapur

INTRODUCTION

UN-Habitat, through its MetroHUB initiative, presents this Metropolitan Observatories document as a guide to the development of tools for managing and generating metropolitan knowledge, as it is important to have timely, quality data for metropolitan development, becoming a valuable element in territorial competitiveness. It provides guidance on the steps required to organize and implement a metropolitan observatory.

The document constitutes a technical support tool that MetroHUB offers to metropolises as part of its portfolio of services to build capacities in metropolitan management and development. It is an instrument for improving the overall urbanization process within the framework of UN-Habitat's vision of "a better quality of life for all in an urbanizing world".

MetroHUB¹

MetroHUB is a multi-level initiative designed to strengthen the capacity of key players in metropolitan development to better plan, govern, finance and administrate metropolitan areas. To complement UN-Habitat's three-pronged approach, the initiative combines capacity building, planning, governance and financing with socio-environmental considerations, and promotes the design and implementation of strategic "acupuncture" projects to be done in the specific local context of a metropolitan area.

With the MetroHUB initiative, UN-Habitat supports the leading metropolitan actors in developing strategies for their metropolitan areas (or city systems) based on their specific local contexts, values, assets and priorities.

It also promotes partnerships—between cities, between rural and urban areas and between different stakeholders, as well as between different levels of government authorities.

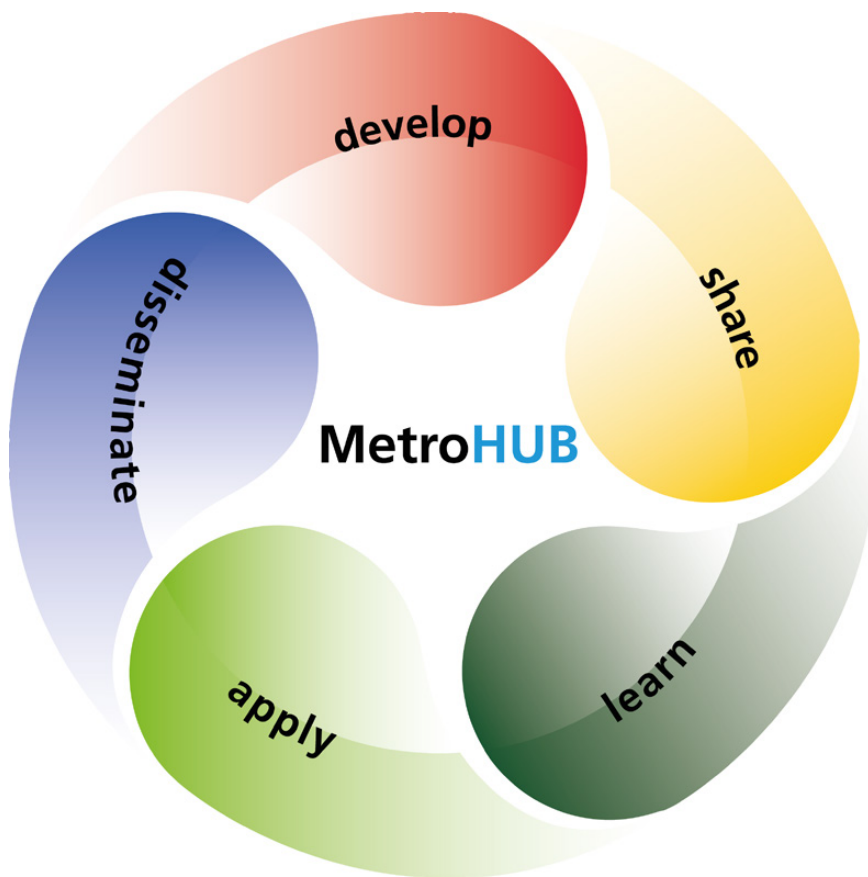
Although it is customized for metropolitan areas, MetroHUB's approach is also applicable to city systems with more than two municipalities that face common challenges that can best be addressed in a concerted (metropolitan) way, in order to provide efficient services and ensure effective management.

The MetroHUB initiative was designed to improve the ability of key actors to address the challenges in metropolitan areas.

1 MetroHUB – Supporting Metropolitan Development:
<http://urbanpolicyplatform.org/metrohub/#>

It also includes a wide range of services and activities, from technical advisory services to review of policies, plans and strategies, metropolitan profiles, support for communication and branding strategies, as well as capacity assessments, among others.

MetroHUB was conceived to “learn, share, develop, apply and communicate” information, strategies, plans and tools for sustainable metropolitan development.



UN-Habitat Strategic Plan 2020 – 2023

Based on its vision of “a better quality of life for all in an urbanizing world”, UN-Habitat focuses all its institutional efforts and those of its partners on improving national and international efforts to address the challenges of urbanization.

To this end, UN-Habitat sees urbanization as a process able to transform territories and the connection between human settlements throughout the urban-rural continuum, including small market towns, small- and medium-sized cities and major urban centres, and ensure access for all to adequate, affordable housing, basic services and infrastructure.

A new focus for UN-Habitat

UN-Habitat promotes transformative change in cities and human settlements through knowledge, policy advice, technical assistance and collaborative action to leave no one and no place behind



Reduced spatial inequality and poverty in communities across the urban-rural continuum



Enhanced shared prosperity for cities and regions



Strengthened climate action and improved urban environment



Effective urban crises prevention and response

+ GET TO KNOW OUR STRATEGY

UN-Habitat promotes urbanization as a positive transformative force for individuals and communities, reducing inequality, discrimination and poverty. The overall objective of a draft strategic plan is therefore to advance sustainable urbanization as an engine of development and peace, to improve the living conditions of all through four domains of change:

- (A)** Reduced spatial inequality and poverty in communities across the urban-rural continuum.
- (B)** Enhanced shared prosperity for cities and regions.
- (C)** Strengthened climate action and improved urban environments.
- (D)** Effective urban crisis prevention and response.

These domains are supported by aspects concerned with social inclusion in terms of human rights, gender, children, youth and the elderly, and disability.

As a centre of excellence and innovation for sustainable urban development, UN-Habitat is presenting this guide to establishing MetroHUB Metropolitan Observatories.

These will contribute to achieving greater shared prosperity in cities and regions (change domain 2); provide guidance in establishing instruments for managing and generating metropolitan territorial knowledge; provide technical support for decision makers and key actors in the metropolitan areas and city systems to achieve balanced territorial development; promote mutual benefit among their component small- and medium-sized cities; reduce pressure on primary or core cities and achieve territorial equity; improve spatial connectivity; increase productivity; strengthen institutional coordination at all levels; achieve greater and more efficient distribution of the financial resources of different levels of government; execute more impactful projects at a lower cost, and innovate processes by freeing up undeveloped potential and making full use of local resources and assets.



CONTEXT AND CONCEPT



Shanghai / China

CONTEXT AND CONCEPT

This chapter presents the reasons behind the need to implement a metropolitan observatory in urban agglomerations, and their relationship with global development agendas such as the Montreal

Declaration, the New Urban Agenda and the 2030 Agenda. It also describes the observatory's metropolitan approach and its conceptual foundations.



Concept

Instrument for managing knowledge of metropolitan dynamics



Approach

Sustainable Development



Characteristics

Systematic, integrative, territorial, useful, dynamic, interdisciplinary, public, linking, valorising



Goals

- Strengthening of metropolitan governance
- Production of metropolitan information

Role in territorial development



- Territorial governance
- Flexible, real-time planning
- Technological innovation
- Generation of future scenarios
- Multi-scaling

The importance of metropolitan observatories

Today, more than half of the world's population lives in cities, some of which already have tens of millions of inhabitants. It is estimated that there are currently close to 500 urban agglomerations with more than one million inhabitants and, with the advance of urban and peri-urban growth, more will continue to form. This trend towards urbanization increases the complexity of spatial dynamics and calls for adaptations to metropolitan governance to improve the planning and sustainable development of metropolises.

Given the complexity of metropolitan management, it is almost obligatory to reflect on the critical and rapid processes of territorial transformation in order to approach and implement metropolitan management in a timely and effective way.

The main constraint on this reflection is the absence of data, to monitor, evaluate and analyse urban dynamics and the transformations taking place in metropolitan territory.

Urban observatories are territorial management tools that gain increasing importance in matters related to the management and planning of cities around the world. In the case of metropolitan areas, they are even more important because they integrate and link the data and the actors in the territory with the same goal: strengthening metropolitan governance and sustainable development in the entire metropolitan territory. It is therefore an instrument that contributes to inclusion and equity in territorial development because it facilitates the participation of all and allows decisions to be guided by policy, regulations and projects for balanced development of the metropolis. It is also a response to citizens' demands for more access to information and greater transparency in decision-making processes.

Given the problems and challenges related to the urban dynamics of these territories, metropolitan observatories must fulfil a function beyond that of observation associated primarily with the activities of collecting, systematizing and presenting data and information. They must contribute to territorial processes as active and relevant agents of metropolitan planning, of the enablement of civilian participation and oversight and the generation of metropolitan knowledge and culture, designing and implementing diversified and innovative strategies for knowledge management and generation and the collective construction of future scenarios for the metropolis.

This metropolitan management instrument is innovative, not only from the point of view of integrated planning and management, but also as an insight into new forms of knowledge management and the transformation of the role of the territory's actors in terms of participation in metropolitan decisions, including government, business, science and technology, and social organizations.

Other metropolises will continue forming because of the trend towards urbanization, so in the short term, governments need to readdress how they manage metropolitan territory and innovate on the way they plan, govern and finance the challenges of city metropolitanization. They must take a new approach that leaves no one and no place behind in metropolitan management, and ensures

sustainable, integrated, people-centred urban development, to be able to improve the quality of life in cities and communities, following the goals and guidelines of the New Urban Agenda and the SDGs.

Metropolitan observatories are a tool for co-generating sustainable metropolitan development with the participation of all actors.



Emirato de Dubái / Dubái

Metropolitan Observatories and Global Development Agendas

Agenda 2030³

The 2030 Agenda for Sustainable Development has identified a series of goals related to the challenges facing cities. Goal 11 aims to make cities and human settlements inclusive, safe, resilient and sustainable.

Metropolitan observatories contribute to this goal by being platforms that facilitate the participatory planning and management of metropolises.

"Goal 11.3: By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries."

Montreal Declaration on Metropolitan Areas⁴

To achieve sustainable development, metropolitan areas declared that they must apply principles of good governance and democracy that ensure citizen participation, access to information, transparency and accountability, and the importance of leveraging data for urban and metropolitan planning. Metropolitan observatories collect, organize and disseminate information, allowing the data to be used for metropolitan planning and territorial management.

"25. We recognize that urban and metropolitan planning benefits from the involvement of multiple stakeholders, as well as from the full use of disaggregated data, segregated by age, gender and territory, on sociodemographic and economic trends, etc."

³ Agenda 2030 - Sustainable Development Goals <https://www.un.org/sustainabledevelopment/>

New Urban Agenda⁵

The application of the New Urban Agenda requires a conducive environment and capacity-building on the part of governments at different levels. The challenges of urban development and the common ideal of achieving a better and more sustainable future requires new standards of planning and governance, based on territorial knowledge managed through quality information systems. Territorial observatories are established as a way to apply this in paragraph 159 of the New Urban Agenda:

"We will support the role and enhanced capacity of national, sub-national and local governments in data collection, mapping, analysis and dissemination, and in promoting evidence-based governance, building on a shared knowledge base using both globally comparable as well as locally generated data, including through censuses, household surveys, population registers, community-based monitoring processes and other relevant sources, disaggregated by income, sex, age, race, ethnicity, migration status, disability, geographic location and other characteristics relevant in national, sub-national and local contexts."

⁴ Montreal Declaration on Metropolitan Areas – 2015 http://cmm.qc.ca/fileadmin/user_upload/documents/20151007_habitat_declarationMontreal-es.pdf

⁵ Nueva Agenda Urbana <http://habitat3.org/wp-content/uploads/NUA-Spanish.pdf>

What is a Metropolitan Observatory?

It is an instrument for managing knowledge of metropolitan dynamics that facilitates the collection, analysis, socialization and monitoring of information about territorial phenomena affecting, enhancing and integrating the metropolitan area, that is relevant to its sustainable development.

Approach of a Metropolitan Observatory

The observatory's knowledge management is directed towards monitoring and analysing the level of sustainable development in the metropolitan territory, with the aim of issuing reports about the state of urbanization and its correlation with economic development, environmental protection and the inhabitants' quality of life.

Its action in collecting and analysing information is therefore based on the components and dynamics related to sustainable territorial development.

Sustainable development calls for a balance between the needs of humans to improve their economic, physical and emotional circumstances; the conservation of natural resources and ecosystems that will sustain the lives of the future inhabitants of the territory, as well as development projects for the population with limited access to the territory's goods and services.

In this context, the focus of the metropolitan observatory is sustainable development, as a centre of reference for the generation of strategic systems of continuous, reliable and precise quantitative and qualitative information about urban dynamics and their relationships to the territory's economic, social and environmental development that will assist governmental authorities in making timely decisions and offer the population a space for continuous knowledge of their reality.

There are three components of sustainable development that make it possible to identify relevant information, information sources, information classification and information analysis reports:

- Environmental sustainability
- Economic sustainability
- Social sustainability

Environmental sustainability

Metropolitan development must have the least impact on the environment and the space. The city must develop by proposing to consume the least amount of resources and energy and generate the least amount of waste and emissions.

In this regard, urbanization should also seek to restore the environment. It should therefore implement ecological organization as a strategy for

organizing the city's economic activities as well as rational use of the territory, the rural-urban balance, making the territorial vocation consistent with the productive activities and constructions of the city, the various interventions and functions planned for a given territory and balanced socio-economic development among regions.

The observatory's work should primarily focus on collecting information about:



Urbanization



Cadastre



Rurality



Territorial Security



Public space



Mobility



Public services



Natural resources



Waste

Economic sustainability

Metropolitan development in this regard should be economically viable, meaning that it should not commit more resources to development projects than are strictly necessary. At the same time, these should add an economic advantage to the metropolis and its inhabitants.

This evidently includes job creation and increased competitiveness in the territory, with the intention of generating economic equity within society. In addition, urban development should incorporate sustainable technologies into its buildings and properties and thus generate business opportunities in this field.

The observatory's work should primarily focus on collecting information about:



Employment



Land revenues



Innovation



Production



Connectivity

Social sustainability

Metropolitan projects should seek to close the gaps in access to society's goods and services. The purpose of social sustainability in metropolitan development is therefore to respond efficiently to the social demands of the metropolis, improving

the quality of life of the population and ensuring citizen participation in the design and management of projects that provide social goods and services.

The observatory's work should primarily focus on collecting information about:



Population and demography



Education



Information and communications technologies



Poverty



Culture



Public Security



Health



Gender

Holistic integration in metropolitan development of environmental, economic and social variables means that the conditions for improving the quality of life in the metropolis are based on the environment's physical determinants and on the improvement of human living conditions. This requires economic progress and social development, leveraging the advantages of urbanization. The goals of sustainable metropolitan development are therefore: to find solutions to the allocation of physical spaces to provide goods

and services, the control of urban expansion, the convergence of mixed land uses to generate centralities, new ideas and construction design that will facilitate compatibility between the city's environmental services and the human actions typical to a metropolis, with the aim of minimizing their negative impacts on the environment and enhancing social and economic development.

Characteristics of a Metropolitan Observatory

An observatory in the service of a metropolitan territory is effective in meeting its goals when it has the following attributes:

Systemic

Allows for comparability, relationships and interconnection between components, and facilitates analysis of metropolitan phenomena from a holistic and integrative perspective.

Integrative

Has the capacity to consolidate and process data from cities within the metropolis, delivering metropolitan information disaggregated by municipality with the variable of comparability among localities and sectors.

Territorial

Contains georeferenced data, facilitating analysis of information relating to characteristics of the spatial context.

Useful

Produces quality, up-to-date information related to the challenges facing the metropolis, appropriate for use in decision making and civilian participation and oversight.

Dynamic

Has a flexible structure to respond quickly to information needs, in accordance with the metropolitan challenges and issues of the moment, carrying out monitoring and evaluation of territorial development.

Interdisciplinary

Generates information about all aspects related to urban and sustainable development.

Public

Promotes democratization of information, facilitating the accessibility to data and analysis reports by incorporating simple channels and languages to freely communicate the information.

Valorising

Information collected and organized is an attribute of the territory's competitiveness.

Linking

Facilitates the interaction of public, private and civil-society actors in the metropolitan territory with the sources of information, offering a platform for data concentration and analysis in the service of all.

Goals of a Metropolitan Observatory

The metropolitan observatory's main goal is to contribute to better metropolitan governance by producing quality information and analysis documents, for territorial planning, public-policy decision making and investment and the strengthening of citizen participation and generation of metropolitan culture.

It also meets the specific goal of providing data support and analysis to:

- Identify urban dynamics that affect or enhance metropolitan development.
- Identify metropolitan projects.
- Identify policies and regulations needed for metropolitan coordination.
- Identify territorial phenomena for territorial organization.
- Improve the competencies of citizen participation.
- Monitor metropolitan dynamics to assess sustainable territorial development.
- Disseminate advantages and joint responsibility in metropolises.

Role of a Metropolitan Observatory in Territorial Development

The metropolitan observatory serves two functions in territorial development. The first is to carry out monitoring and assessment of territorial processes. Consequently, the second is to generate data and analysis to support and influence decision making for good governance and better citizen participation.

A metropolitan territory that implements this knowledge management instrument will have a competitive edge in:

Territorial governance

Having metropolitan knowledge generates institutional consolidation and new networks of territorial government, as a consequence of the awareness of the similarity of problems and opportunities that unite them in their management of the territory, as well as the design of new forms of citizen participation and new social agents interested in the territory's planning.

Flexible, real-time planning

Ability to react immediately with policies, regulations, programmes and projects to metropolitan challenges as they occur with changing territorial processes, such as environmental processes, by having constant and systemic monitoring of the complexity of urban dynamics.

Technological innovation

Evolution and sophistication in the instruments on which government planning, decision making and citizen participation are based, owing to the need to incorporate ICTs (particularly in the field of GISs – geographic information systems), to meet the demand for information to be added, resulting from the complexity of metropolitan urban dynamics.

Generation of future scenarios

Use technology in territorial analysis and planning, building on the channelling of territorial and urban information through predictive, exploratory or normative scenarios to contribute to the metropolis' sustainable development.

Multi-scaling

To have a harmonizing mechanism for territorial, urban and sectoral proposals, especially with regard to monitoring, follow-up and flagging of the coherence between strategies and plans on different scales and levels, as well as performing a coordination task between public administrations of different territorial scope.



Santiago de Chile/ Chile



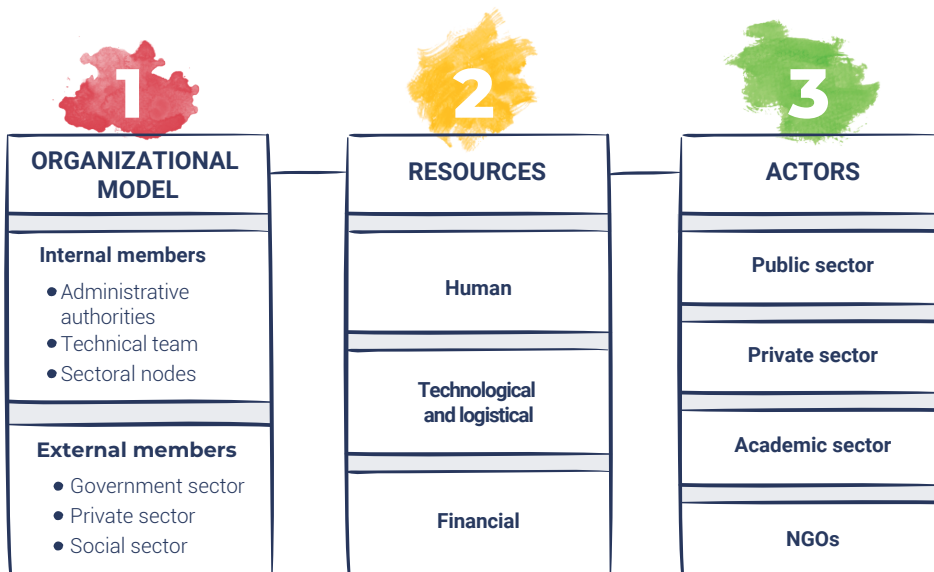
STRUCTURE



Buenos Aires / Argentina

STRUCTURE

This chapter contains the basic requirements for the operation of a metropolitan observatory, which promoters of this instrument should consider when developing the initiative.



Organizational Model

The metropolitan observatory must define a holistic organizational structure that will ensure management of the data. A holistic administrative model requires the identification of different

members and actors of the metropolitan territory, identifying functions to fulfil and responsibilities and roles to assume.

It is possible to distinguish the following types of members:

Internal members

Those with related specific functions such as data production, analysis and dissemination, like the technical group, the responsible authorities and the nodes or committees of sectoral experts.

Technical group: the professionals who are in charge of the execution and operation of the observatory, performing functions such as information management, database assembly, time series production, design and updating of indicators, comparative data analyses, etc.

Administrative authorities: they direct and define policies and strategies for operations, budgets and strategic allies; establish processes and procedures of data processing, maintenance and dissemination; coordinate actions and assign the necessary equipment and personnel.

Sectoral nodes: the committees or groups of experts on sectoral territorial development issues. They may be formed by representatives of the municipalities by areas of interest, key reporters or experts, and institutions responsible for producing and managing sectoral information.

It is important to formalize participation through protocols or conventions that specify the role, participation method and responsibilities.

External members

These are strategic allies who, while not having a specific function, do contribute to the operation and fulfilment of the metropolitan observatory's goals, such as sectoral agencies, education and research centres, representatives of the business sector, social organizations, trade unions and other adherent members interested in providing expertise, data or ICT platforms. These members should also formalize their membership in the observatory.

There should be interaction between sectoral nodes or committees and external members, establishing a collaborative route.

The holistic administrative model establishes a networked organization for the observatory, between the internal and external members. Interactive circuits are generated among the internal members (authorities, technicians and sectoral nodes) and between them and the external members, by dynamizing and channelling the information flowing into the observatory.

Resources

Human

Interdisciplinary professionals, primarily in social and economic sciences, statisticians, systems engineers, geographers, designers, etc.

Technological

Hardware, software, website, geographic information system, system of statistical bases and analyses, data storage system.

Logistical

Physical site and fixtures.

Financial

Coming from:

Government contributions: from municipalities in resources or in kind, such as technical personnel, technological tools or from other levels of government.

External member contributions: of installed capacity, such as a physical site or a technological or dissemination infrastructure. Provision of services, such as specialized reports, or specialized sectoral data, training and research.



Actors and Strategic Allies

Public Sector

Municipalities, decentralized entities of the different levels of government.

Private Sector

Trade unions, chamber of commerce, companies.

Academic Sector:

Universities, research centres and trade unions or associations of professionals.

Social Sector:

Civil organizations and NGOs.



Bucaramanga / Colombia



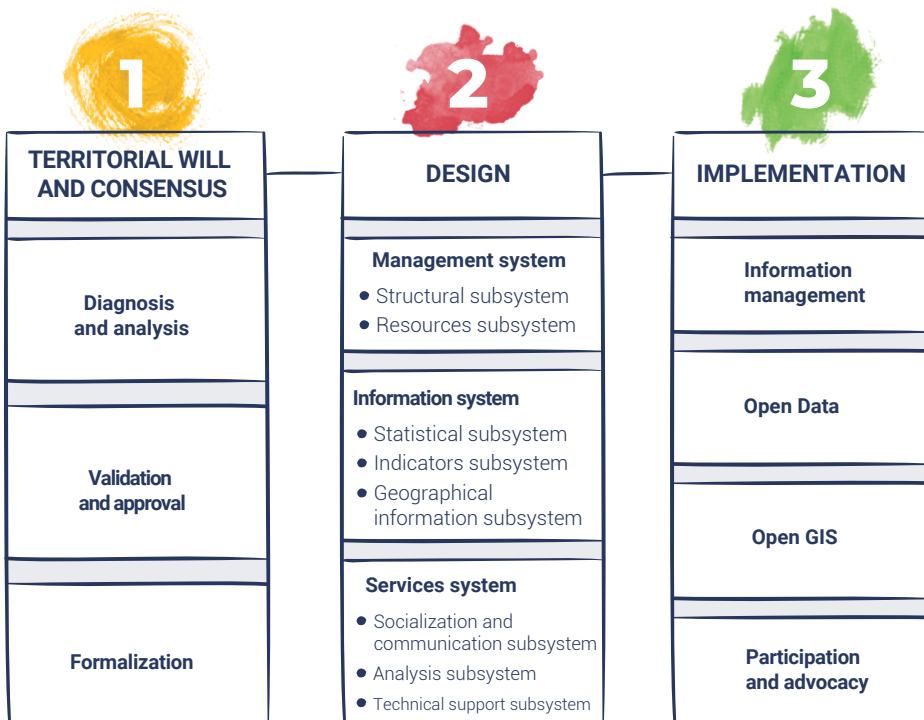
THE ROUTE



THE ROUTE

This chapter contains guidelines and steps for designing and implementing a metropolitan observatory, from the characterization, prioritization

and organization of data and its indicators to ways of managing the information, its advertising, products, services and updating.



Territorial will and consensus

The achievement of the goals of an observatory to support decision making and planning with respect to the metropolis' territorial development and the strengthening of civilian participation and oversight depends primarily on the legitimacy of its origins, and the decisiveness and political support of government and territorial actors with an awareness of the need to create it, in order to improve and technify metropolitan governance.

There are several reasons that justify the need to create an observatory, including primarily:

- Absence of territorial data
- Data dispersion and/or duplication
- Existing data unorganized and unused
- Existing data without georeferencing
- Existing unanalysed data
- Disjointed sectoral data
- Existing data with limited accessibility
- Production of unofficial data
- Duplication of institutional efforts in the management and production of information
- Information exists but is not comparable for metropolitan analysis

When one or more of these situations exists in the metropolitan territory, planning and developing policies, programmes and projects to address the challenges of sustainable development in the metropolis becomes difficult because of a lack of neutral technical bases for defining actions to deal with urban phenomena.

It is important for those promoting the creation of a metropolitan observatory to establish what limitations exist in territorial development because of a lack of metropolitan knowledge based on official data and data analyses, and this argument should be presented and validated by the decision makers in the territory. This ensures a political and administrative commitment to the observatory's implementation.

The metropolitan observatory will have a legitimate origin only insofar as its creation results from an established need, a justification of the role it will play in good governance of the metropolis and the impact it will have on sustainable development in the territory, and if it is accepted and validated by decision-making actors.

These are the steps that those promoting its creation should take to achieve the actors' will and consensus in creating the metropolitan observatory:

Diagnosis and analysis

1. Identify and analyse the limitations to territorial information on a metropolitan scale.
2. Identify difficulties and needs in metropolitan planning and decision making regarding metropolitan policies, programmes and projects.
3. Identify what the observatory's role would be in metropolitan governance.
4. Identify what the results and impact of the observatory's implementation would be on metropolitan development.
5. Prepare an executive report of the diagnosis and analysis.

Validation and approval

1. Identify potential stakeholders and those with decision-making power at the metropolitan level.
2. Present the executive report of the diagnosis and analysis.
3. Verify the political and administrative will behind the creation of the metropolitan observatory.

Formalization

1. Define the protocol for formalizing the political and administrative will of the metropolitan decision makers, for example, a meeting of minds, an agreement, regulations, minutes, etc.
2. Materialize this formalization by the signing of the document drawn up.
3. Socialize and disseminate the will to create the observatory among metropolitan citizens.



Design

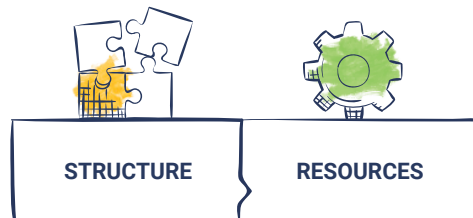
Once the promoters have the decision makers' endorsement to create the metropolitan observatory, the next stage involves designing its operation and characterizing the data that it will manage and the services it will offer.

Three systems will need to be designed:

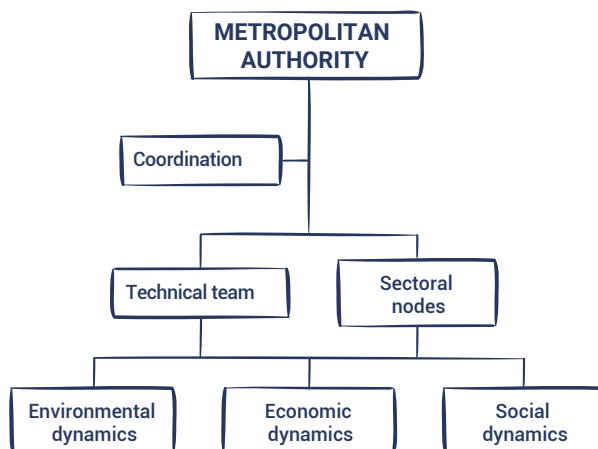
- Management system
- Information system
- Services system

Management system

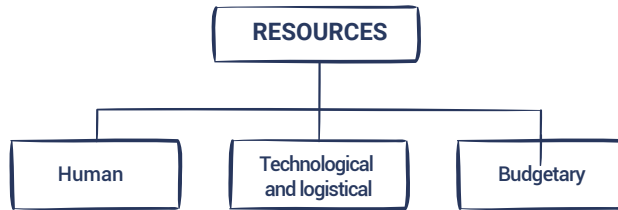
The metropolitan observatory's administrative operating model will be developed in this system, defining the structure and resources.



- 1) Structural subsystem:** the observatory should have a coordination office, a technical team and a definition of the sectoral nodes for technical support, as explained in the section on structure, all under the direction of a metropolitan authority.
- **The metropolitan authority:** this is the area where decision making in metropolitan matters takes place, for example, the metropolitan board or council, the committee of mayors, or the metropolitan institution or agency. It has political and directorial responsibilities for the observatory's vision and focus.
 - **Coordinator:** this is the official responsible for directing the management of the observatory, its processes and its procedures, fulfilling the goals, achieving the results and dynamizing the observatory's services, as well as creating the necessary alliances for the management and administration of the information.
 - **Technical team:** a group of professionals from different disciplines responsible for obtaining, organizing and analysing the data. The technical team has to generate a specialty for components of sustainable development, dedicated to each of the environmental, economic and social sustainability aspects.



2) Resources subsystem

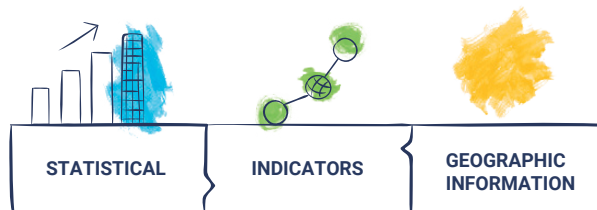


Issues such as the number of officials attached to the observatory, the physical and technological infrastructure, and the fixtures necessary for the

operation of the observatory, the budget and the sources of funding will need to be defined.

Information system

This system will be used to design the data's flow and processing route and generate metropolitan information. It is approached from three subsystems:



1) Statistical subsystem: this is where the data search occurs; the function of data management, obtention and organization is performed; measurements, counts and inventories are effected; time series are composed, and classification and monitoring is done on topics of interest to the observatory.

The observatory has to define protocols for obtaining information in accordance with the agreements established with the sources and strategic allies and information organization protocols that standardise the ways data is grouped for analysis and comparability.

This subsystem is for identifying information sources and the channels of interconnection between them. In addition, data tables are constructed to organize the information, primarily into periods of time and by city, and other types of groupings are made depending on the analysis needed, such as by gender, age, ethnicity, etc.

Type of source to consult

The group of professionals has to identify the source of the information. It may come from primary and/or secondary sources and may be obtained online (electronic information) and/or physically (on electronic or printed media, directly at the information-generating entity or by the observatory sourcing its own information through surveys or polls).

Construction of data tables

Once the information is obtained, data tables must be constructed according to the scope of the defined indicator, based on pre-set formats

containing defined letter types and sizes, as well as the naming structure for the sheets of the files. It is possible to define a model for each indicator of each sustainability component.

Table example:

Component: Sustainability (Environmental - Economic - Social)					
Topic:					
Name of indicator					
Period	City 1	City 2	City 3	City 4	Metropolitan Datum
2016					
2017					
2018					
2019					

Source: this must be filled out as follows: metropolitan observatory from (the source of the information).

Note: if clarification is needed, write a note..

Information available on: fill out the date until which the information is available.

Obtention date: fill out the date when the information was obtained.

Graph construction

Once the table is organized, the information must be graphed to offer another form of presentation. The graph type may or may not be standardised, depending on the nature of the indicator. At the top of the graph should be the indicator name and the available series of the indicator. It is important for the graph to be comprehensible for all audiences, and variables must be properly labelled.

For the organization, classification and storage of the information, it is recommended that both the table and the graph be included in an Excel file or other type of file as follows: a spreadsheet named with an assigned nomenclature that includes the data table together with the details of the source, note, information available on, and obtention date, and a spreadsheet named "graph" that includes the graph available as an image.

2) Indicator subsystem: this subsystem identifies the variables of analysis of the metropolitan issues, which must be measured qualitatively or quantitatively, for the purpose of evaluating present conditions of the urban dynamics of metropolitan interest, in order to diagnose, compare with standards, define goals, or establish thresholds, as well as prepare forecasts. Its function is to attract the attention of those who have to make decisions to prevent or minimize metropolitan conflicts.

Therefore, this subsystem is the heart of the observatory because this set of indicators facilitates monitoring of the sustainable development level of the metropolis; identifies the advances in territorial transformations that the territory is experiencing from a supra-municipal perspective, as well as its initial state and its evolution over a period of time and identifies the sectors requiring more metropolitan action to achieve equity in development. They are the central source for decision making in governance, planning and metropolitan investment.

The indicators are an ideal tool for conducting monitoring through systematic collection of data obtained through measurements or observations in series of time. In the metropolitan case, it is essential that the data analysed be associated with a particular space. It should include a comprehensive approach to the metropolitan territory, to serve the objective of achieving the goals of sustainable development in the metropolis.

First Step – identifying metropolitan challenges

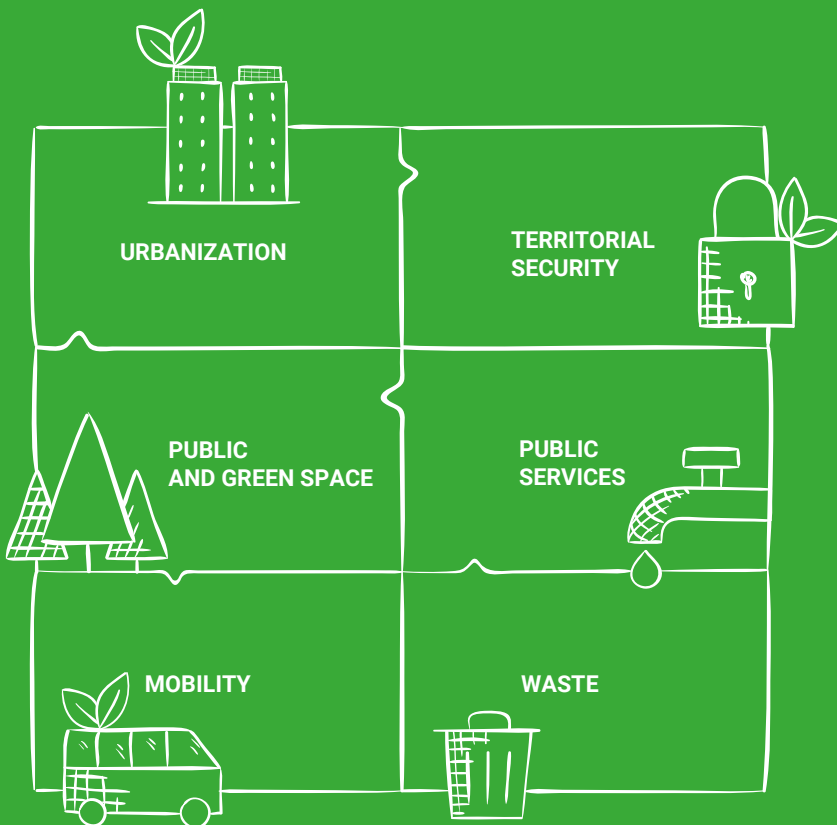
Being part of the direct observation of the territory in order to prepare a preliminary diagnosis on the areas where the greatest metropolitan problem or challenge is occurring, either because this is a conflict or because there is a need to leverage the advantages of urbanization, is in fact a potentiality of the metropolis, where the variables that we want to observe are determined from that issue of interest. Below is a guide to metropolitan issues and associated indicators, to steer the work of metropolitan observatories in identifying, prioritizing and classifying indicators, in accordance with the approach of sustainable development and its components:



METROPOLITAN ENVIRONMENTAL SUSTAINABILITY

This component analyses the challenges of the metropolis to establish a balance between the relationships generated by the dynamics of urbanization according to the natural base supporting the territory, balancing the different impacts and the different phenomena arising from this process. The challenges to address are: the burdens imposed through the implementation of various housing modalities on the land; risk management; waste management; conservation of areas with environmental services and the availability of public space, as well as managing basic resources that provide access to water, electrification and other services essential to quality of life, in terms of the form and cost of delivering the service and the burden on the natural environment from the generation of infrastructure for mobility and connectivity of the metropolitan population.

Environmental sustainability topics





SUSTAINABLE URBANIZATION

Built space + Available Land + Habitational Status

This formula is tied to the permanent phenomenon of constructing buildings, houses and infrastructure on the natural-based platform that the land consists of, opening up a panorama for reflection on occupancy, urban expansion, the city model, housing density and the territory's load capacity.

• **Associated indicators**

QUALITY OF SOCIAL HOUSING (SH)

1. Percentage of SH projects by housing typology.
2. Percentage of SH projects that have some kind of equipment.
3. Percentage of SH projects that have a formal park.
4. Percentage of SH projects positioned for natural ventilation.
5. Percentage of SH projects where the homes have to keep a light on during the day.

CHARACTERISTICS OF THE MARKET AND THE HOUSING SUPPLY

1. Average future inhabitants per project.
2. Average future vehicles per project.
3. Average floors per project.
4. Homes with a quantitative urban-rural housing deficit.
5. Homes with a qualitative housing deficit.

URBAN PRECARITY

1. Number of precarious settlements.
2. Population in precarious settlements.
3. Urban precarity index in precarious settlements.
4. Urban precarity index in precarious neighbourhoods.



TERRITORIAL SECURITY

Risk Management + Appropriacy of Local Climate Reality.

This the relationship has to do with an analysis of the components of the risk management cycle (knowledge + management + prevention – threat, vulnerability), and the establishment of a balance sheet considering the context of climate, hydrometeorology and topography, as well as stability and quality of urban bearing soils.

- **Associated indicators**

1. Percentage affected by threat of mass removal in precarious settlements.
2. Population of precarious settlements potentially affected by associated disasters and phenomena of mass removal.
3. Percentage affected by flood threat in precarious settlements.
4. Population of precarious settlements potentially affected by associated disasters and flooding.
5. Percentage impact of disasters associated with mass removal phenomena, landslides or flooding in settlements and neighbourhoods.
6. Population affected by disasters related to mass removal phenomena, landslides and flooding.
7. Percentage of communities in settlements and neighbourhoods trained in disaster management.



METROPOLITAN PUBLIC AND GREEN SPACE

Amount of Space + Population + Special Characteristics

This relationship is directed at establishing the real balance between the public dimension of space in the city, the volume of users and the various categories of activity with regard to potentialities, vocations, usages, transformations and basic complements of the urbanization process.

- **Associated indicators**

1. Index of public space by municipality
2. Hectares of metropolitan tree concentration
3. Index of urban forest per inhabitant
4. Hectares of metropolitan protected areas
5. Protected area per inhabitant index
6. Hectares corresponding to ravines and gullies with metropolitan urban influence
7. Hectares of planned metropolitan parks
8. Index of planned public space per planned metropolitan parks



PUBLIC SERVICES

Public Services + Inhabitants + Coverage and Quality

This is the relationship between the inhabitants of the metropolitan territory compared to consumption and access to public services, considering not just the amount of the service provided, but also the quality of goods and services provided to the community.

• Associated indicators

WATER

1. Subscribers to the metropolitan drinking water service
2. Coverage of the metropolitan drinking water service and by municipality
3. Average monthly water consumption per capita
4. Total water consumption
5. Infrastructure

ELECTRICITY

1. Metropolitan electricity service subscribers
2. Electricity service coverage by municipality
3. Average monthly consumption of urban electricity by user type
4. Annual urban residential energy consumption
5. Total urban electricity consumption
6. Equipment

GAS

1. Annual urban residential gas consumption
2. Total natural gas consumption
3. Equipment



SUSTAINABLE MOBILITY

Automotive Vehicle Park + Public Transport + Urban Flows

This formula has to do with the possibility of determining the urban metabolism related to movement in the city and determining the balance in displacement, speed, location, traffic flow, coverage and quality of the individual's experience regarding these aspects and their relationship with the different actors that interact around sustainable mobility.

• **Associated indicators**

AUTOMOTIVE VEHICLE PARK

1. Percentage of share of the automotive vehicle park by vehicle type
2. Historic growth of the automotive vehicle park
3. Percentage increase of the automotive vehicle park according to vehicle's service

PUBLIC TRANSPORT

1. Equipment and infrastructure

COLLECTIVE TRANSPORT

1. Annual transport capacity of collective transport
2. Historical behaviour of public-service collective transport fare prices
3. Monthly validations recorded in collective transport
4. Fares recorded and validated monthly in urban transport
5. Passengers transported per kilometre travelled – IPK

MASS TRANSPORT

1. Annual transport capacity of the integrated mass transport system
2. Historical behaviour of public transport service fares

3. Distance, speed and average trip time per route
4. Monthly validations recorded
5. INDIVIDUAL TRANSPORT
6. Individual transport annual transporting capacity.
7. Historical behaviour of individual public transport service fare prices

ACCIDENT RATE

1. Accident rate according to severity
2. Accident rate according to accident typology
3. Accident by vehicle type

MOBILITY IN EDUCATION

1. Student mobility between municipalities of the metropolis (relationship between residence and place of study)

LABOUR MOBILITY

1. Mobility of people in work between municipalities of the metropolis (relationship between residence and place of work)

NON-MOTORIZED MOBILITY

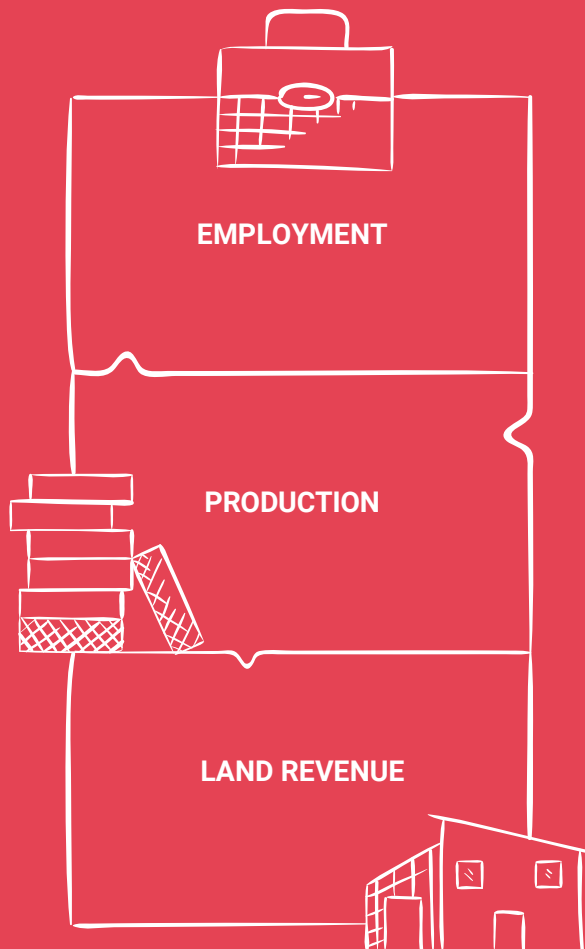
1. Kilometres of cycle routes
2. Bicycle per inhabitant index
3. index of bicycle as means of transport
4. Kilometres of pavements



METROPOLITAN ECONOMIC SUSTAINABILITY

This relates to the consideration and balanced reconciliation of economic well-being and the responsible treatment of natural resources in the urban setting. It requires evaluating the capacity and ability of metropolitan management to create and ensure lasting, solid well-being over time, in terms of investment, jobs, equity and quality of urban life for its present and future population, through an economy that provides maximum protection for natural resources and environmental services available in the metropolis.

Topics of Metropolitan Economic Sustainability





METROPOLITAN EMPLOYMENT

Population + Occupational Structure

Employment is a key element in the success of a society and the well-being of its urban members. Its dynamics characterized by its formal and informal content affects the levels of sustainability of local and metropolitan populations, since it is there where the generation of jobs and income and the capitalization of assets at the individual or collective level, as well as the distribution livelihoods and the ability of metropolitan citizens to realize their human rights

- **Associated indicators**

POPULATION VOLUME

1. Working-age population
2. Economically active population
3. Economically inactive population
4. Overall participation rate

OCCUPATIONAL STRUCTURE

1. Employed
2. Employment rate
3. Underemployed rate
4. Informality rate
5. Employed according to branches of activity
6. Employed according to occupational position
7. Proportion of employed with social security
8. Proportion of employed with contract
9. Average time in current job
10. Employed according to company size
11. Employed according to workplace
12. Average time unemployed of those currently employed
13. Self-employed according to form of work

14. Percentage of self-employed by forms of work performed

UNEMPLOYMENT

1. Unemployed
2. Unemployment rate
3. Inactivity rate
4. Rate of retirees
5. Rate of applicants
6. Economic burden index
7. Dependency rate
8. Average time spent unemployed
9. Average job search time

INCOME

1. Per capita income
2. Percentage of people in extreme poverty
3. Percentage of people in poverty
4. Poverty and extreme poverty line
5. Gini coefficient
6. Average income of the employed
7. Average income by occupational position



METROPOLITAN ECONOMIC PRODUCTION

Productivity + Business Development

The particularities of the economic structure or base of a territory are determined by the number of companies established, the economic branches in which they perform their activities, and the size of them, which, as a whole, support and manage the productive economic environment that will, in turn, allow for a sustainable improvement of different factors, not only economic but also social, of its metropolitan inhabitants at the family, neighbourhood, district and city levels.

• **Associated indicators**

PRODUCTION

1. Departmental GDP
2. Municipal GDP
3. Metropolitan GDP
4. Consumer price index

BUSINESS DYNAMICS

1. Total active companies
2. Total new companies
3. Total companies formed and capital invested
4. Business classification by size
5. Total registered companies classified by age of business
6. Legal classification of registered companies
7. Total companies cancelled
8. Business classification by economic sector
9. Proportion of industry and trade tax returns according to economic sectors
10. Distribution of amount of industry and trade tax according to economic sectors

PRODUCTIVITY/COMPETITIVENESS

1. Metropolis' share in the gross national product
2. Metropolis' share in the national net investment
3. Investment attractiveness index
4. Global competitiveness index

MATERIAL WELL-BEING

1. Internet access index
2. Household utilities coverage index
3. Housing tenure by type



Urban development + Land value

The direct relationship between urban development with its attributes and the value of the land. The income that arises in the metropolis as a product of the economic activity of urban construction, as well as the consumption of urban built space by citizens, constitutes the objectification, in economic and price terms, of the value that economic actors explicitly attribute or implicitly to each territorial location according to the preferences of the citizens in the choices of residential and productive areas in the metropolis, which exert pressure and direct impacts of different degrees on the sustainability of the metropolitan territory.

• **Associated indicators**

CONSTRUCTION

1. Average cost per square metre of informal land
2. Average cost per square metre of formal land

RESIDENTIAL BUILT SPACE

1. Supply of new housing in the metropolis
2. Number of new housing projects in the metropolis by socio-economic strata
3. New housing supply average area by socio-economic strata
4. Percentage concentration of new urban housing supply in the metropolis by municipalities according to socio-economic strata
5. Percentage distribution of new urban housing supply compared to the metropolitan total in socio-economic strata
6. Minimum, medium and maximum heights of the new housing supply in the metropolis
7. Informal housing supply average area
8. Average cost per square metre of formal new urban housing by socio-economic strata
9. New housing unit average price by socio-economic strata in the metropolitan area.
10. Average cost per square metre of informal urban housing

11. Informal housing unit average price in the metropolis
12. Average rental cost per square metre of informal urban housing
13. Informal housing average rental payment
14. Informal housing rental profitability per square metre
15. Average rental cost per square metre of formal urban housing
16. Formal housing average rental payment
17. Formal housing rental profitability per square metre

URBAN REGULATION

1. Area licenced for construction per year in the metropolis
2. Area licenced for construction according to designated use
3. Percentage distribution of the area licenced by municipality according to designated uses
4. Percentage distribution of the area licenced in the metropolis according to designated use
5. Area licenced for housing construction
6. Area licenced for housing construction by type
7. Percentage distribution of the area licenced in the metropolis by housing type
8. Percentage distribution of the area licenced in each municipality by housing type
9. Units licenced for housing construction
10. Units licenced for housing construction by housing type
11. Percentage distribution of units licenced by housing type compared to the metropolis
12. Percentage distribution of licenced units by housing type by municipalities
13. Average area licenced per housing unit



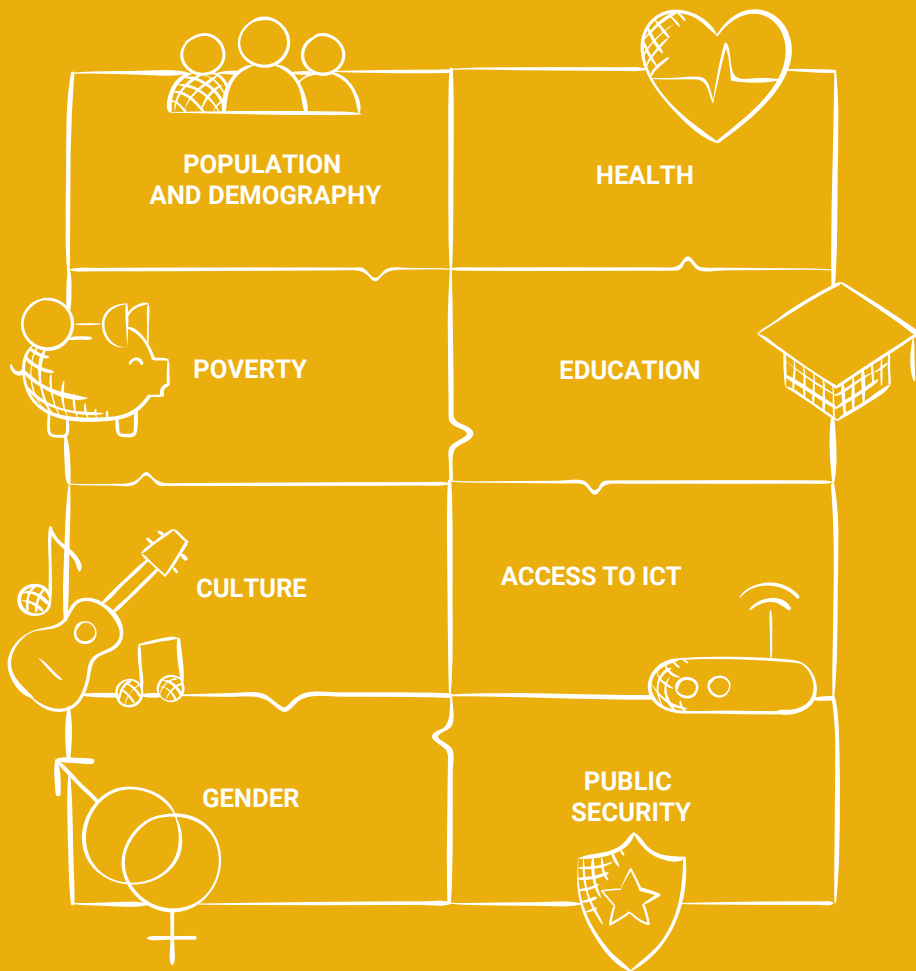
Minato / Japón



METROPOLITAN SOCIAL SUSTAINABILITY

This refers to metropolitan challenges related to maintaining an adequate standard of living for the population and satisfactory levels of education and health, guaranteed equity between men and women, the promotion of cultural creation and diversity, and solidarity among people and communities, to achieve more equitable urban scenarios with access to rights and opportunities.

Topics of Metropolitan Social Sustainability





POPULATION AND DEMOGRAPHY

1. Urban area of the metropolis and by municipality
2. Rural area of the metropolis and by municipality
3. Territorial area by land uses
4. Urban density
5. Urban metropolitan area
6. Rural density
7. Rural metropolitan area
8. Population projections according to sex and single ages
9. Estimates and projections of metropolitan population and by municipality
10. Homeless people
11. Births by area and sex according to municipality of occurrence
12. Population with disabilities
13. Gross birth rate
14. Fertility rate
15. Percentage of population with disabilities by age group
16. Percentage of population with disabilities by disability type



HEALTH

1. Public health enrolees
2. Public health-care provider institutions
3. Mortality by groups of age and sex
4. Maternal mortality ratio
5. Percentage of institutional care during childbirth
6. Health centres by territorial sector



POVERTY AND INEQUALITY

1. Proportion of population with unmet basic needs (UBN)
2. Percentage of people in poverty
3. Percentage of people living in extreme poverty
4. Poverty index by territorial sector



EDUCATION

1. Education coverage
2. Net education coverage by education level
3. Graduates in higher education by academic level, training level and programme methodology
4. School rankings
5. University academic classification
6. Children and adolescents enrolled in public and private educational institutions by educational level
7. Adults enrolled in public and private educational institutions by academic year
8. Educational centres by territorial sector



ICT'S

1. Internet use
2. Computer use
3. Dedicated Internet subscribers by bandwidth
4. Dedicated Internet subscribers
5. Internet access in public spaces and public institutions



SECURITY

1. Empty urban space in the metropolis
2. Territorial sectors with more conflict and crime
3. Street lighting and public space
4. Security plans with a territorial approach
5. Crime rate by territorial sector
6. Urban design projects to improve security



Nairobi / Kenia

These topics and indicators of sustainability components are an example of the variables to be observed in problems of metropolitan development. Each metropolitan observatory should perform the exercise of focusing attention on the territory's problems and/or conflicts, and its opportunities, as a mechanism for selecting the variables to analyse and focus the identification of indicators on the subjects of interest to which the interventions will be directed, and avoid generating indicators on issues that are not a priority in terms of metropolitan challenges. This will reduce the risk of it being an observatory of everything, but with no utility.

Second step - sources of information and territorialization of data

Once the topics and variables to be observed are chosen, the potential sources of information and the availability of data must be checked. This is by no means a simple task. They are not always available in public institutions because, if administrative records of the data exist, they will need to be organized; otherwise, ways to obtain the information will need to be devised, using inventories, counts, measurements, field surveys, etc. It must also be identified whether this data is able to be specialized, i.e. to geo-reference it to the place from where it is obtained because then the information can be related to the territory.

This exercise allows us to rule out indicators where there is definitely no source of information. It provides the opportunity to modify them or generate new ones, and also to prioritize, by the time of implementation, the indicators that fulfil the requirements of having a source of official information and available data.

Below is an indicator prioritization table. It provides an easy way to prioritize indicators when they meet the requirements of having an official source and available data as a first option, an official source with administrative records as a second prioritization option, and an official source and data survey as a third prioritization option.

It should be remembered that the data the observatory valorises is precisely the third prioritization option: the data which does not exist but is possible to obtain through surveys, counts, inventories etc. This is the so-called primary source. It is in this data that the observatory must make a strategic effort to obtain the information because it constitutes a valorizable asset for the observatory, particularly for the observatory's services.

Therefore, when prioritizing indicators, the third option should not be ruled out. On the contrary, attention should be focused on these indicators and a strategic plan should be drawn up to obtain that information.

INDICATOR PRIORITIZATION TABLE								
Indicator	Source		Data			Authorized		
	Official	Informal	Available	Administrative Record	Survey	1	2	3
Indicator 1	X		X			X		
Indicator 2	X			X			X	
Indicator 3	X				X			X
Indicator 4								
Indicator 5								

Attributes of the indicators

The indicators to be established using a data sheet must:

- Be objective
- Have an official source of information
- Be comprehensible and easy to use
- Take into account temporal and spatial dimensions
- Be comparable
- Be a source for detecting early warning scenarios in sustainable development
- **Description:** explanation of what the indicator is, what it indicates about the process, and the rationale as to why it is being considered at the observatory.
- **Geographic coverage:** this is defined based on the type of indicator and the place where it is obtained. Municipal, departmental or metropolitan
- **Start date:** first date on which the data was collected
- **Periodicity of data collection:** period of time in which the data was obtained.
- **Last update of data:** date when the data was last collected

The basic components of a data sheet are:

- **Subject:** the metropolitan issue of which the indicator forms part
- **Indicator:** this field contains the name of the indicator
- **Indicator type:** specifies whether the indicator is quantitative or qualitative
- **Presentation of the indicator:** specifies whether the indicator is in the form of a map, table, graph or other visual resource
- **Data collection methodology:** this field briefly describes the methodology used by the source to collect the data
- **Type of standard or reference value:** the reference value or standard that is established to be able to compare the indicator's value
- **Information source:** the source of the data, i.e., bibliographic, oral or digital.

- **Complementary information:** this field adds details used to contextualize the indicator, or to expand on its description.

The following is an example of an indicator's data sheet:

DATA SHEET	
1. Object of study	The component of sustainable development to which the indicator is related: environmental / economic / social sustainability
2. Unit of analysis	The sector to which the indicator belongs must be filled out (sub-topic of the sustainability component)
2.1. Analytical core	Enter the subsector to which the indicator belongs
3. Name of indicator	Enter the name given to the indicator; it must have the same name throughout the process (data table, folders, sheets, website)
4. What it means / definition	Display a specific definition of what the indicator measures
5. Why it is important to measure it	Define the arguments and the context in which the indicator is measured
6. Unit of measurement	Display the abbreviation for the indicator's unit of measurement, e.g. unit, percentage, etc.
7. Formula	Mathematical expression by which the indicator is calculated (formula)
8. Variables	Describe the variables comprised in the formula
9. Geographic coverage / disaggregation	Geographic level down to which information can be obtained from available data. It describes whether there is national, departmental or metropolitan information and/or from the municipalities within the metropolitan area, i.e. disaggregation from other territories are not described
10. Available series	Enter the date until which the information is available
11. Regularity of the information	Refers to how often the indicator is measured, e.g. monthly, semi-annually, annually, etc.
12. Limitations and/or restrictions	If required, it specifies the limitations and/or restrictions that the indicator's measurement has
13. Source/responsible persons	This must be filled out as follows: metropolitan observatory from (the source of the information)
14. Path/link	For primary source indicators, this is the entity generating the information (e.g. town hall, secretariat, etc.), and for secondary sources, it describes the path (step by step) taken to reach the source database, as well as the direct link
15. Obtention method	Construction of the metropolitan observatory's own instrument, based on information gathered by the source
16. Current value	Shows the updated datum of the indicator with its unit of measurement
17. Source type	To be filled out as applicable below: primary, one that is collected directly at the source, e.g. town halls, trade unions, secretariats, surveys, etc.); secondary: information collected through web pages

3. Geographic information subsystem: Once the indicators have been defined, their information can be mapped to be integrated into the GIS and contribute to improving the management and monitoring of the metropolitan area's sustainable

development. Information of the three components of sustainable development should be integrated into the GIS to obtain a comprehensive and holistic observation of metropolitan phenomena.



Services system

This system will be used to design the services offered by the observatory to the territory and its actors.

1. Socialization and dissemination of the metropolitan information
2. Production of documents for analysis of metropolitan phenomena
3. Technical support for territorial planning and decision making on public policy and metropolitan investment
4. Training
5. Generation of specialized data

1. Socialization and dissemination of information:

This is the observatory's fundamental service to contribute to the consolidation of metropolitan knowledge. The most suitable medium for dissemination with wide coverage and free access is a web page, which serves as a means of storing the information and as an instrument for democratizing the information because it is easy to give open access to it and update it.

The web page also makes it possible to link the information with geo-referenced maps, and categorize and classify the information according to metropolitan dynamics of current interest. The general public can interact with the information, using it to flag territorial transformations to direct the attention of the observatories towards new phenomena that need observing. The information is available for the promotion of territorial research and there can be interaction between the sectoral nodes and the technical team of the observatory to streamline flows of information and feedback.

2. Production of analysis documents:

This service is complementary to the generation of metropolitan information. It brings an added value to the information inasmuch as it presents a comprehensive study of a metropolitan phenomenon, incorporating indicators of the observatory's different components, generating intersectoral diagnosis of a set of problems and identifying potential actions to intervene positively in the phenomenon under study. It is the holistic observation of a phenomenon of metropolitan development.

3. Technical support:

The observatory generates timely, specific and integrative information to provide technical support in the development of planning instruments, policies, regulations or projects on a metropolitan scale in order to address problems or to take advantage of opportunities in the metropolitan territory.

4. Training:

Building on the information generated and the functional exercise of observing the metropolis' territorial development, the observatory develops expertise on metropolitan knowledge, allowing it to offer training and knowledge management programmes to strengthen metropolitan culture.

5. Specialised data:

The fact that it is a container of information that can be used for comparison, interrelation and territorialization to a high degree constitutes an opportunity to generate specialized data for the territory's economic and competitive development. It gives the observatory the opportunity to provide sectoral information to actors interested in improving its planning processes and developing institutional and economic strategies.

Implementation

The implementation phase takes place with the implementation of the systems of management, information and services that were designed.

- Commencement of data management tasks to produce information in accordance with the indicators
- Implementation of the website
- Construction of maps for integration into the GIS
- Production of documents for analysis of metropolitan phenomena
- Participation in territorial planning processes
- Participation in decision-making scenarios with an impact at the metropolitan level
- Inclusion of a mechanism for monitoring the indicators for their innovation and updating
- Evaluation and monitoring of fulfilment of the goals of the metropolitan observatory





INFORMATION



Taichung / Taiwan

INFORMATION

This chapter will explain methodologies for the management of information from primary and secondary sources. Information, as we said earlier, is the centre and heart of the metropolitan

observatory and it is therefore the most sensitive issue of its operation. Data quality is the legitimacy factor of the information produced by the observatory and of its consolidation.

Quality characteristics of the data managed by the observatory

- **Accessibility:** The data can easily be made public or acquired
- **Timeliness:** The data correspond to a limited time and are regularly updated to maintain a time series, available on demand
- **Credibility:** The data come from specialized organizations
- **Accuracy:** The data provided are accurate
- **Consistency:** The data are verifiable
- **Integrative:** The data format has a clear content; they are accurate
- **Readability:** They are clear and understandable because the description of the data, the classification and the content are easy to understand

The information produced by the observatory must comply with the following parameters:

- **Time:** The information should be available as needed, updated to the date of use, provided as often as required, and may represent the past, present and future.
- **Form:** It must be provided in a way that is easy to understand, be detailed, ordered on the basis of certain criteria, and presentable in different formats, e.g., paper, digital media, etc.
- **Content:** It must be provided without errors, be relevant to what is being analysed, be complete and not partial, be concise, and it may be internal or external, with a broad, centred approach, and must show performance.

Information sources

Sources of information can be classified into two categories: direct or primary, and indirect or secondary.

- Sources of direct information are those where the data that institutions or individuals obtain directly are recorded because they are responsible for the issue, phenomenon or fact generating the data.
- Institutional sources of direct information include town halls, sectoral entities, trade unions, etc.
- The metropolitan observatory can become a primary source of information when it directly conducts surveys and carries out monitoring and inventories related to metropolitan dynamics, on which there is often no data.
- Indirect or secondary sources of information are those that know of a fact or phenomenon through a third party. Accordingly, government institutions that are sources of direct information at any given time can also be indirect sources, and the media (spoken, written or visual) is a secondary source of information. In this case, validation with other sources is required to corroborate the information.
- Information networks: To manage data and generate flows of information it is necessary to establish alliances with public and private institutions and civil society organizations, thereby generating a network of strategic allies for the collection of periodic data, through arrangements or agreements for the exchange of information and fulfilment of responsibilities.



GOOD PRACTICES

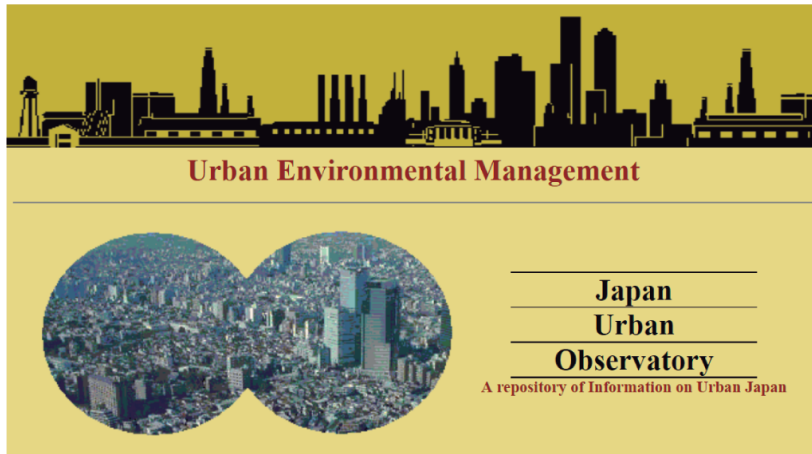


Sídney / Australia

GOOD PRACTICES

Japan's Urban Observatory

<http://www.gdrc.org/uem/observatory/>



EJEMPLO DE BUENA PRÁCTICA

Este observatorio es un ejemplo en **DIVERSIFICACIÓN DE SERVICIOS**, va más allá de recopilar, sistematizar y difundir información territorial, presta servicios adicionales en asuntos de:

- Investigación y Desarrollo
- Educación y Entrenamiento
- Desarrollo de políticas y programas

INDICATOR TOPICS

- Capacity building
- Energy resources
- Sustainable transport
- Urban governance
- Environmental impact assessment
- Ecotourism
- Urban waste management
- Water resources

Chilean Ministry of Housing's Urban Observatory

<https://www.observatoriourbano.cl/>

OBSERVATORIO URBANO
MINISTERIO DE VIVIENDA Y URBANISMO

MENU

Bienvenido al Observatorio Urbano, el sitio web con estadísticas e investigación del Minvu



Indicadores Urbanos

Indicadores urbanos cuantitativos, en tres escalas territoriales: nacional, regional y comunal.



Estadísticas Habitacionales

Serie estadísticas relacionadas a la política habitacional, el mercado inmobiliario y las viviendas en Chile.



Estudios y Publicaciones

Publicaciones sobre temas de Vivienda y Urbanismo, elaboradas por la Comisión de Estudios Habitacionales y Urbanos del Minvu.



Geoportal IDE Minvu

Información georreferenciada de los planes y programas Minvu, disponibles en un Catálogo de Información y un Visor de Mapas.

Geoportal IDE Minvu

¡Descubre tu ciudad!



Planificación Territorial



Barrios



Cicloviás



Parques



Gestión de Riesgo de Desastres



Subsidios



Campamentos



Espacios Públicos



Pavimentos Participativos



Patrimonio



Condominios Sociales



IDE Chile

EXAMPLE OF GOOD PRACTICE

This observatory is an example of **GEOREFERENCED DATA** in the service of its citizenry.

- Environment.
- Society.
- Transport.
- Housing.
- Public investment and management.
- Citizen perception.

INDICATOR TOPICS

- Demography.
- Construction and land use.
- Services and infrastructure.

**Observatory of Urban and Territorial Phenomena
National University of Tucumán – Argentina**

http://www.observatoriofau.org



EXAMPLE OF GOOD PRACTICE

This observatory, headed by the academic sector, is an example of the **LINKING ROLE** between actors and data that it can play in the territory.

INDICATOR TOPICS

- Instruments
- Habitat, housing and public policies
- Gender and human rights
- Landscape and territory
- Mobility
- Land market
- Urban environmental indicators
- GIS applications
- Territorial transformations / territorial organization
- Metropolitan management



Florence / Italia



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METROPOLITAN OBSERVATORIES

Structuring and Implementation Guide

HOW CAN METROPOLISES IMPROVE THEIR TERRITORIAL PLANNING AND MANAGEMENT PROCESSES ?

UN-Habitat, through its MetroHUB initiative, presents this "Metropolitan Observatories" document as a guide to the development of instruments for managing and generating metropolitan knowledge, as technical support to build capacities in the planning and management of metropolitan development, and as a tool to improve the overall process of urbanization within the framework of its vision of "a better quality of life for all in an urbanizing world".

Metropolitan observatories contribute to the co-generation of sustainable metropolitan development through the production of quality information, analysis documents and monitoring of metropolitan dynamics to assess progress in sustainable territorial development.

Metropolitan observatories strengthen metropolitan planning and governance by facilitating the identification of:

- Urban dynamics that affect or enhance metropolitan development

- Metropolitan projects for equity in territorial development
- Policies and regulations needed for metropolitan coordination
- Identify territorial phenomena for territorial organization

In this MetroHUB guide, you will find the conceptualization and characterization of a metropolitan observatory, the basic elements of its structure, the qualities of the information it produces, the approach, topics and sources of its indicators and a route for its design and implementation.

A metropolitan territory implementing this knowledge management instrument will mark a competitive difference in territorial governance, real-time, flexible planning, technological innovation, generation of future scenarios and multi-scale harmonization of strategies and plans.

MetroHUB

For more information contact:

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Urban Practices Branch, Global Solutions Division

UN-Habitat Policy, Legislation and Governance Section (PLGS)

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