LOGISTICS AS A FACTOR OF REGIONAL DEVELOPMENT IN BAHIA

RAILWAY PROJECT FOR MACRO-REGIONAL INTEGRATION OF BAHIA, WITH THE SPATIAL ORGANIZATION OF HUBS AND LOGISTICS NODES AND METROPOLIS QUALIFICATION

GENERAL OBJECTIVE:

Develop the coordination space of the state of Bahia, in order to curb the process of de-industrialization of the local economy.

SPECIFIC GOALS:

1. Implement a direct interconnection between the Macro region of Salvador and the Midwest of Brazil, at the height of the municipality of Mara Rosa (GO), through a modern high capacity railroad (wide gauge; better layout, depending on the physical characteristics of the space; feasibility of cargo; and connection to the Port Complex of the Bay of All Saints, the Port of Ilhéus and the South Port).

2. Develop a Master Plan for Bahia, capable of spatially ordering the new economic dynamics (new business in the area of industry, coordination and other sectors) that will arise as a result of the rail-port interconnection between the Macro region of Salvador and the Brazilian Midwest. This project would have the function of organizing the distribution of business, using intelligent coordination systems that would be able to generate a database on economic-spatial dynamics, which would be used for the elaboration of sustainable socioeconomic development policies.

3. Develop policies to attract industrial investments, which may explore the new context of logistical, productive and spatial reorganization of the Bahian territory.

JUSTIFICATIONS

It is understood that this integrated Project may disrupt the development process of Bahia, allowing an inflection of the de-industrialization phase of the last decades, with low social indicators. Thus, it seeks to achieve a new phase of attracting investment flows in industries, services, and trade of macro-regional size, reverberating its results in the lives of people in many regions of Bahia.

This Project is designed in an integrated way in all its parts (railway, spatial organization of the coordination hub and smart metropolis) and developed in order to understand that its viability is associated within an interconnected physical and financial schedule. This means that the business chains will also be articulated, observing the temporal opportunities of each investment. Thus, opportunities are created to build complementary elements of road infrastructure and integration equipment within the Logistics Hub of the Macro-region of Salvador and other coordination nodes in Bahia, for example.

On the other hand, investors who integrate their communication technology business between the Logistics Hub and the coordination nodes of Bahia can be articulated, as well as investments in maintenance equipment and support for coordination services for transporting ports, airports and logistics equipment, etc. Large investments will also be associated with information systems and public services that can effectively improve the lives of the population, where they are strongly concentrated, such as the Metropolitan Region of Salvador and large urban centers, forming urban agglomerations and surroundings, as are the cases of Feira de Santana, Caetite-Guanambi, Ilhéus-Itabuna, Barreiras-Luís Eduardo Magalhaes and Juazeiro-Petrolina (PE).

It is a project that will offer cross-benefits, so that the investment has a transversal character. Because it will involve different sectors of the economy, social groups, executive bodies of the Government of Bahia, together with representative institutions of sectors of society and will have effects on various territorialities of Bahia. It is a strategic Project as a whole and that, as such, cannot and should not be thought or executed in a fragmented way, as it can improve the lives of more than 50% of Bahians.

BAHIA MACRO-REGIONAL INTEGRATION RAILWAY

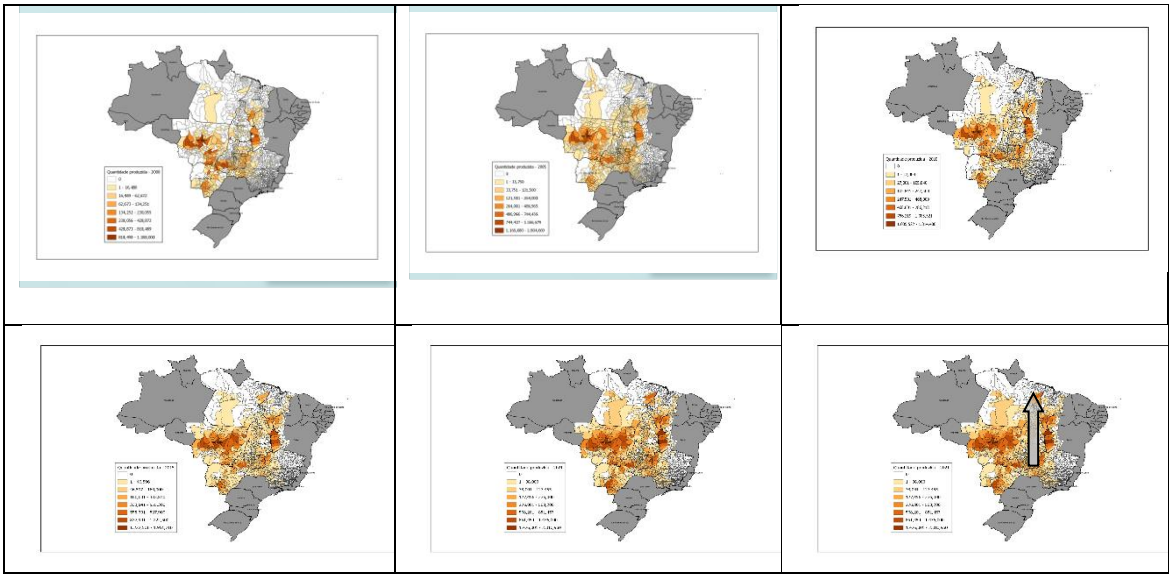
In studies carried out by SEI, approximately 13 years ago, with the intention of making the Macro region of Salvador into a logistical HUB of strategic importance, it was clear that one condition would be indispensable: that this region make possible an articulation rail transport with the Brazilian Southeast. At that time, the intention would be to increase the flows of goods from the complementary production of the Bahian economies and the southeastern region.

After more than a decade, some important transformations happened in Brazil, which favored the conditions of integration of Bahia not only with the South/ Southeast/Northeast, but specifically with the Midwest region of the country.

There was a strong growth in grain production in the countryside of Brazil, both in terms of production density and increased productivity, as well as a territorial

expansion of this production northward to Matopiba, northern Mato Grosso and Pará (see Figure 11).

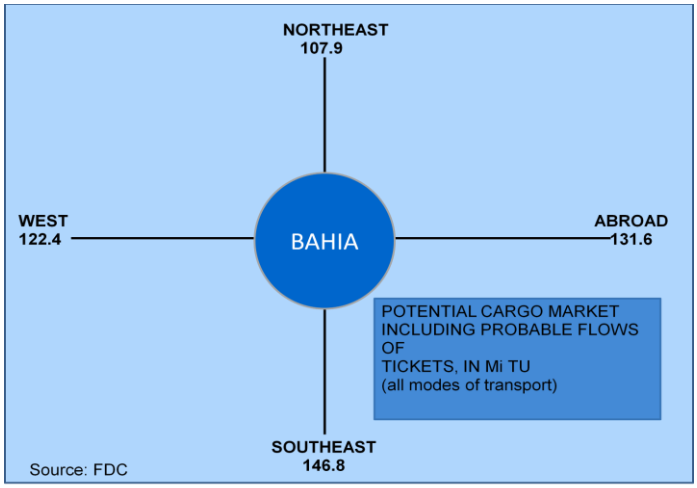
Figure 1 - Increased productivity in the MATOPIBA region.



Source: Own creation.

Recent studies conducted by the Dom Cabral Foundation have shown that Bahia has a promising market potential for transit and origin and destination cargoes in Bahia (Figure 2). Thus, the state becomes an important strategic alternative for imports and exports from a vast region of the Brazilian Midwest.

Figure 2 - Bahian potential for the cargo market.



Source: Fundação Dom Cabral.

This means that Bahia may have, in relation to Brazil, a cargo for all types of cargo in 2035, standing out as an alternative of flow through its ports of cargo coming from the Midwest, Northeast and Southeast, as shown in the following sketch (Figure 3).

Figure 3 - Bahia as an alternative for cargo flow.



Source: Own creation.

This stretch of railroad (Salvador-Mara Rosa) will be the basis for attracting cargo flows and future investments in the Salvador Macro region and coordination nodes in Bahia, located along the route, with emphasis on Jequié, Ilhéus, Caetité/Guanambi and Correntina.

LOGISTICS HUB OF THE MACRO-REGION OF SALVADOR

The port and environmental conditions in Bahia of All Saints make this location very competitive to the strengthening of its port complex, compared to other ports in Brazil, as they offer: great accessibility (depth of channels), strategic location to other markets (protected waters, intermediate position between the North and South of the Brazilian coast) and tidal and wind regimes favorable to maritime conditions. This offers us competitive conditions to become a center of attraction and distribution of cargo, whether for exports from the Midwest of grains and ores of Bahia (3rd state producing ores), as well as due to the possibility of attracting flows of imports of industrialized products, with emphasis on China, and distribution to part of the southeast, Midwest and northeast.

Recently, studies conducted by Dom Cabral Foundation show that there is feasibility of rail connections of this Macro region with other regions of Brazil and with other regions of the world.

There are planned investments, without spatial articulation, such as: recovery of the FCA/VLI Center Line, connecting Salvador to Juazeiro, for the disposal of copper ore and other minerals and the construction of a new line from Sento Sé

to Campo Formoso, for the disposal of iron ore; this same company raised the possibility of building a steel mill, a cement factory and a smart city in the Macro region of Salvador; there are also investments announced for the repositioning (or transformation into a port terminal) of the old Enseada Shipyard project, in Maragogipe. All this extends the potential of the port activities of the Bay of All Saints, formed by its Port Complex, such as Temadre, Port of Aratu, Port Terminal of Cotegipe, Ford terminals, USIBA, Dow Química, Port of Salvador and the Regasification Terminal.

These factors are now being reinforced with BYD's possible investments for the manufacture of electric cars and batteries, production of green hydrogen, etc. There would even be conditions to use Ford's port for export and import. We also have the possibility of building the Salvador – Itaparica Island bridge, which generates another development vector for the south of the Macro region.

According to studies carried out by SEI and SEDUR, this is a Macro region located around the Bay of All Saints, which may have its limits to the south with the city of Valença, to the west with Feira de Santana and Santo Antônio de Jesus and to the north with Camaçari and Alagoinhas. And that concentrates 30% of Bahia's population and the strongest infrastructure investments in the state. In addition, it is a consumer market with high capacity, compared to Bahia and other northeastern states.

All these questions suggest initiatives that can define a Masterplan to design the spatial organization of the macro-region. From the definition of the use and occupation of selected areas, with emphasis on the structuring aspects and that have the capacity to articulate the main flows of people and sectors of the economy (trade, services, industry, institutional, residential); the elements of road interconnection infrastructure (road, rail, maritime and river); the areas of urban expansion; the functions of cities; connectivity, intelligent management systems, information and etc.

Finally, it is about organizing the space so that it enhances the capacity of this Macro region of Salvador to attract flows and transform Bahia into a new and important kneecap for the development of Brazil. A new route as expansion of the Southeast and also making its potential can be used to expand its flows into the interior of the state, creating coordination nodes in important cities, such as Juazeiro, Barreiras, Caetité/Guanambi, Jequié (with repercussions in Vitória da Conquista) and Ilhéus/Itabuna.

This is a project that has the capacity to face the process of de-industrialization of Bahia, through the attraction of new investments in industry, coordination services, services for the company, personal services and health and education equipment. All of them with the capacity to generate income, employment and increase the collection capacity of the public sector.

Salvador Expanded

Within the Macro-region of Salvador stands out a great continuous stain of urban and metropolitan occupation, which we can consider as the Extended Salvador. It is an area characterized by a high density of human occupation, with a strong supply of infrastructure, with a large presence of companies in commerce, services, industry and public institutions that represent the political and economic center of Bahia.

Its formation occurred from the expansion and conurbation of Salvador in the direction of the neighboring municipalities of Lauro de Freitas, Shore of Camaçari, Simoes Filho, Candeias, Itaparica, and Vera Cruz that function as if it were a single city and that presents an intense movement of people, services, and products in an intra-urban and intra-metropolitan dimension.

With such characteristics is a metropolitan occupation that is articulated with greater intensity with all the spaces of the Macro region of Salvador, but also with all the regions of Bahia. This intense mobility of capital and social demands requires specific integration attention that will be reflected with great emphasis on the entire Bahian economy, in addition to having a strong impact on people's quality of life and on the positive formation of a business environment.

Some aspects deserve special attention in this area:

1. Need to integrate information systems in the areas of health and mobility in the municipalities of the Metropolitan Region of Salvador, to offer information to the user public and to municipal and state managers, collaborating in the production of public policies.

2. Offer via mobile phone to allow the user public to make queries about the services offered and how they are linked to the transport system. Thus, allowing the place of residence can be related to the alternative routes. It can also be seen the travel time and integration between public or private transport, in addition to parking conditions.

3. Availability of information on the alternatives for offering medical services closest to the residence, with information on queues, opening hours, availability of doctors, results of exams, etc.

4. Capture information from users through their records in the system, the purpose of using the services, frequency and location.

5. Reinforcement of the work of public managers and researchers in the analysis of the database generated by the application, crossing the information and generating knowledge about the Health and Mobility area to give subsidies to the formulation of public policies.

6. (.)Possibility of evaluating the behavior of the health system, from the incidence of diseases, its relations with inhabited space, on the relationship of supply and spatial demands, on the best distribution of equipment, etc.

7. Analysis of the source and destination flows of trips, the necessary lines, the identification of the locations of the most demanded equipment, the associations between travel demands with the use and occupation of metropolitan land, etc.

8. Expansion of the subway transport system, both in the direction of the municipalities of Simoes Filho, Camaçari and Lauro de Freitas, as for the expansion of Line 1 of the Salvador Metro, from Lapa Station to Barra. In addition, enable the integration of the Subway with the municipal and intercity road systems.

9. Studies on the feasibility of rail passenger systems, articulating Salvador-Feira de Santana and other municipalities in the region.

NEXT PHASES OF SURVEYS, STUDIES AND SPECIFIC PROJECTS

1. Complementation of the rail network requalification project with the ports

Three new phases of work with prospects to be contracted soon to deepen technical analysis and offer greater assurance to investors:

Product 1: Competitiveness and capacity studies of the port complexes of Ilhéus and the Metropolitan Region of Salvador.

Output 2: Assessment study of investment needs in the main rail accesses to the two port complexes.

Output 3: Presentation of an integrated strategic coordination plan for the formation of a railway network with emphasis on: suggestions for the use of existing roads; implementation of short lines; coordination integration platforms, based on containerize and non-containerize loads; feasibility of increasing port capacities; and main terminals to be prioritized.

2. Deepening of the Intelligent Metropolis Project

Steps to be understood project formulation, execution, evaluation and continuous training of users.

1. Project Formulation: considering that it is the political convergence of groups of city halls and secretariats of the State Executive, it is important to

conceive the strategies to bring all these political agents together, from the conviction of their advantages and possible disadvantages for each case.
2. Technologies: identify the technological advances used and evaluated in other realities, with emphasis on the case of cities in South Korea and China.
3. Infrastructure: identification of the required equipment, systems, tools and administrative procedures.
4. Monitoring: practices for monitoring the process, considering the management structure, with the responsibilities of functions and the hierarchy of the institutions involved in the process.
5. Strengthening data teams: processes to reinforce quality, promptness, reliability and responsibility in data administration, maintenance of databases, software and hardware, application operation and system security.
6. Continuous training of servers: continuous strengthening of the various servers and outsourced in the feeding of the information system.
7. Special qualification of public policy makers to analyze information: continuing education of health area managers, SEI, SEDUR, SEINFRA, AGERBA, etc., to foster interpretations and cross-sectional analysis of information and transform it into public policies.
8. Use of the SEIColab Collaborative Platform – Think Bahia Project: seek the participation of managers and researchers in Discussion Rounds of the Think Bahia Project, initially to design the Intelligent Metropolis project and, later, to guide the formulations of public policies and projects for Bahia in the themes explored in its system.
9. Listen to the experiences of other Brazilian capitals, such as Vitória, Recife and São Luiz, from Maranhao, as well as the experiences of cities in Argentina (La Plata and Mendoza), South Korea and China, through the exchange of SEI with the Academy of Macroeconomic Sciences of Shandong.

With this we can create a very important system to offer and improve the quality of life of the inhabitants, especially low-income users of the health, education and transportation system of the Metropolis. Improving the quality of the formulation of public policies in the Metropolitan Region of Salvador, being able to expand experiences to other locations in Bahia.

3. Analysis of the matrix of inputs and products of the Midwest, Southeast and Northeast regions of Brazil.

The objective of this study is to analyze the flows of products and services of imports and exports from these regions and identify those flows that may be attracted by the Railway Project for the integration of the Macro region of Salvador with the region of the Brazilian Midwest. In addition, it seeks to understand which economic sectors can be attracted to densify the Hub and

coordination nodes, both in industrial, service and trade investments, as well as in infrastructure elements and equipment to generate jobs compatible with the new characteristics of regional development.

This force of attraction of investments of the Macro region of Salvador may generate the decentralization of the development of the other regions of Bahia, with emphasis on the possible logistical nodes that may be developed around the large cities of Bahia, such as Feira de Santana, Vitória da Conquista, Jaquie, Ilhéus-Itabuna, Caetité-Guanambi, Barreiras, in addition to Juazeiro-Petrolina, in Pernambuco.