Perspectives to Green Corridors in Brazil

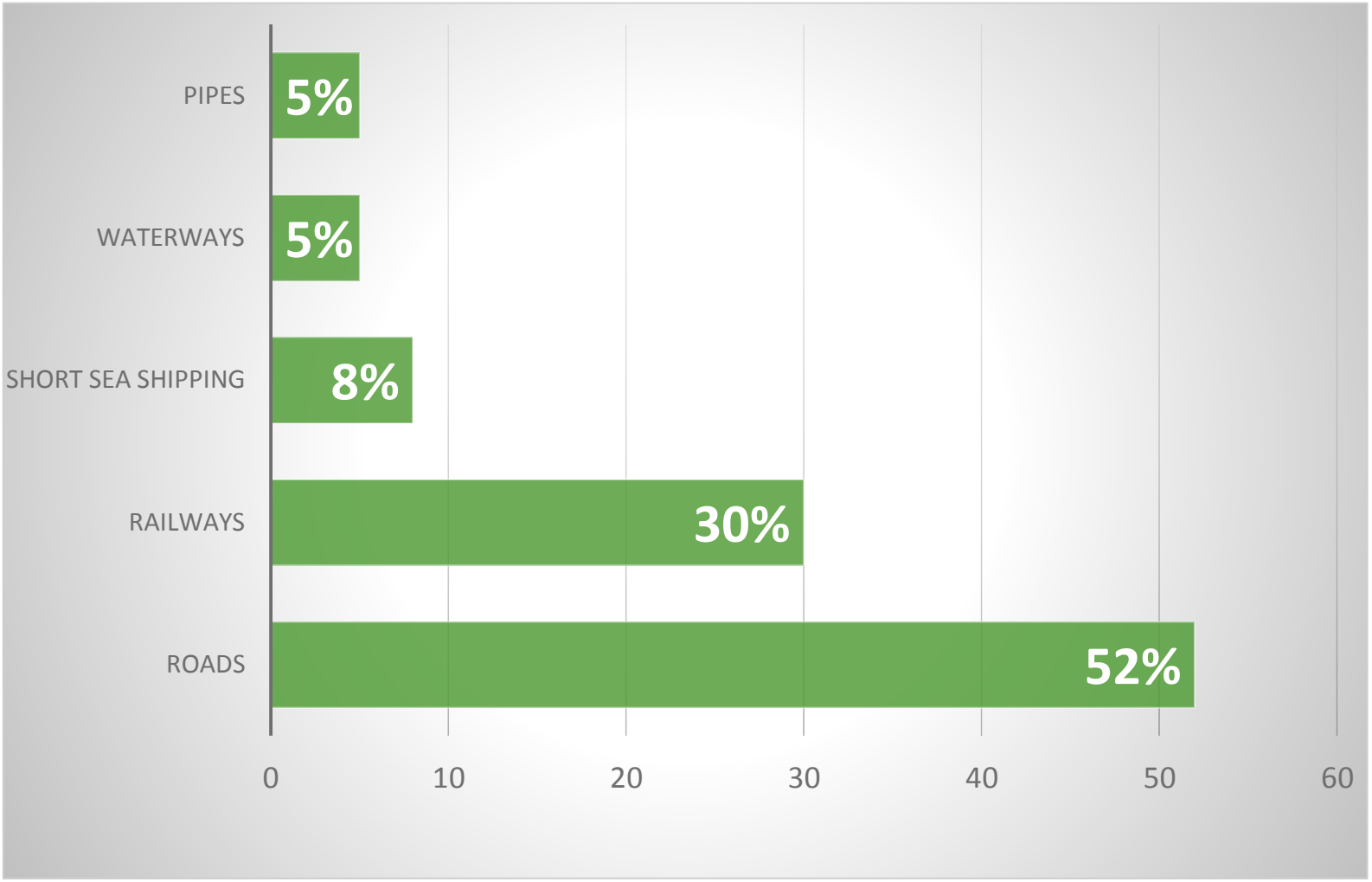
CURRENT SCENARIO

- Brazil is a large country (8.5 million Km^2)
- 200 million inhabitants
- Almost 90 % live near the east coast
- Almost 60 % GDP concentrated in the southwest (São Paulo)
- Brazilian GDP US$ 2.3 trillion
- Growing demand

Major problems for transports

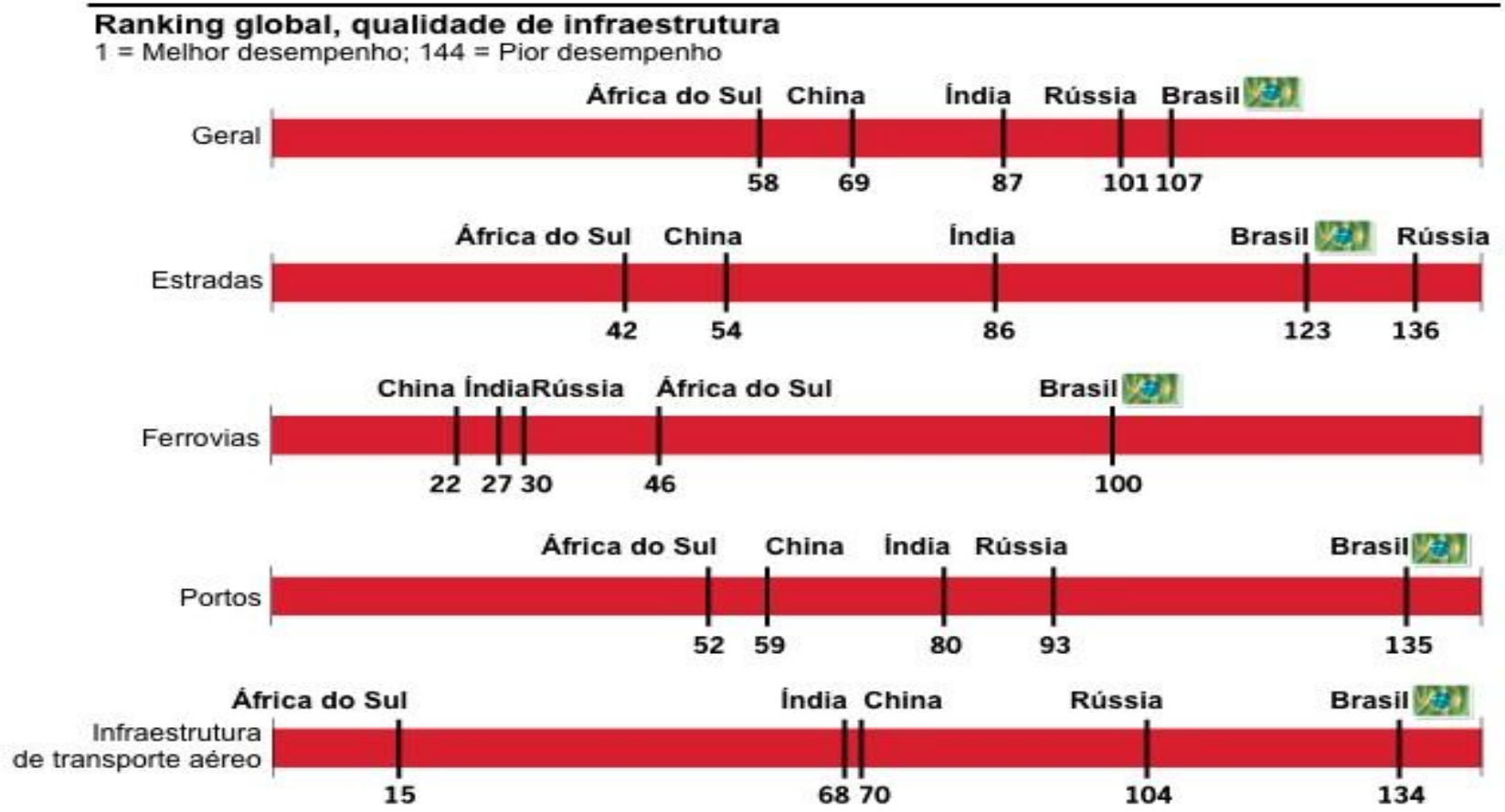
- POOR INFRASTRUCTURE
- LARGE CONCENTRATION ON ROAD MODAL
- BUREAUCRACY
- EXCESS OF TAXES
- LACK OF CLEAR RULES FOR INVESTMENTS

Transports matrix in Brazil



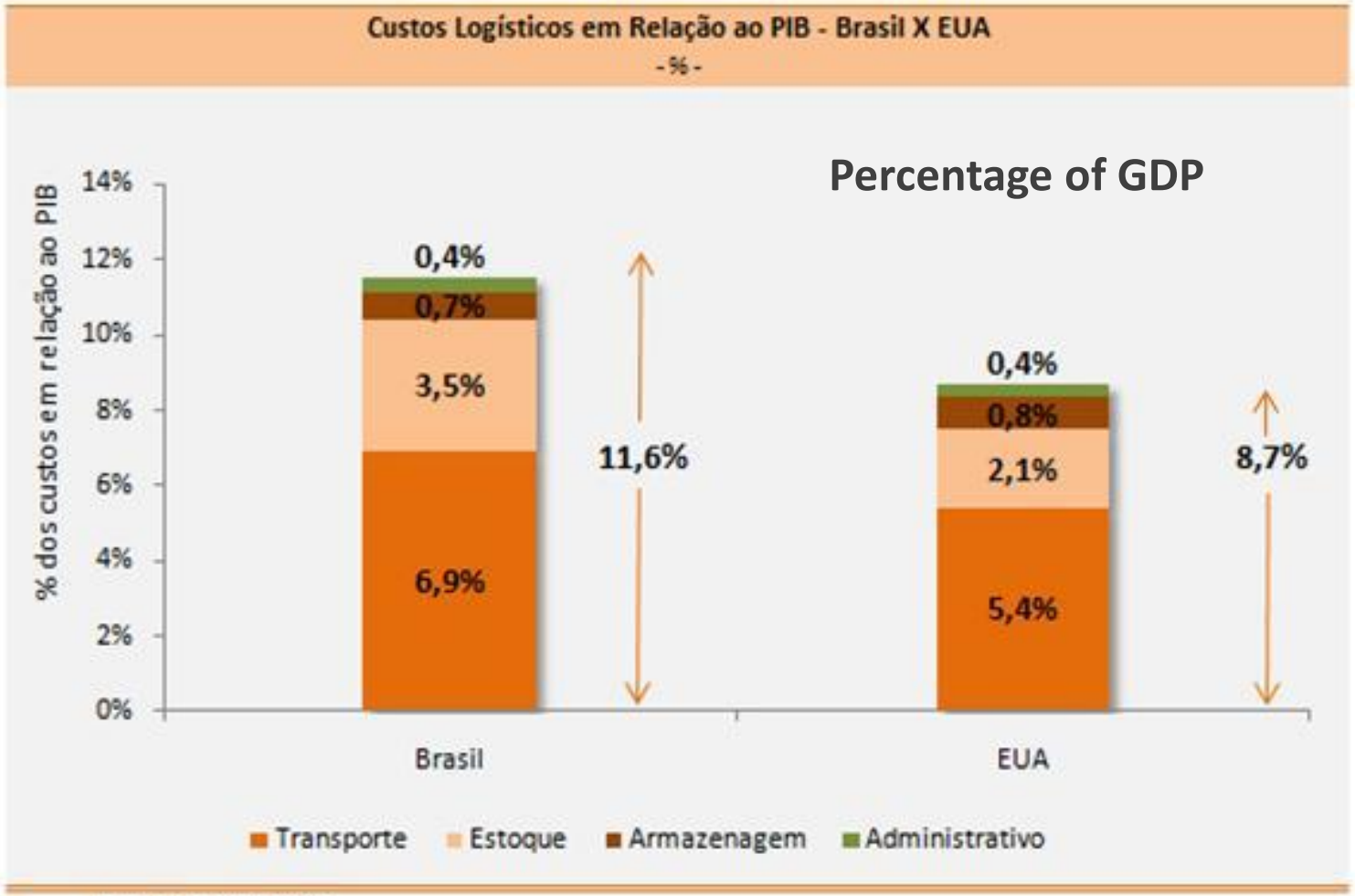
Source: Ministry of Transports (NPLT), 2011

The quality of the Brazilian infrastructure for transportation



Fonte: World Economic Forum, publicado em http://blogs.ft.com/beyond-brics/2013/04/01/chart-of-the-week-brazils-bottlenecks/#axzz2PJFF1WTQ.
Tradução: BeefPoint (www.beefpoint.com.br).

Logistics costs - Brazil X USA



Fonte: Instituto ILOS (2012)

Poor infrastructure

- Unpaved roads
- Few railways available
- Expensive freights
- Long distances (~2000Km)

The traffic - Port of Santos

The lines increases the logistic cost.

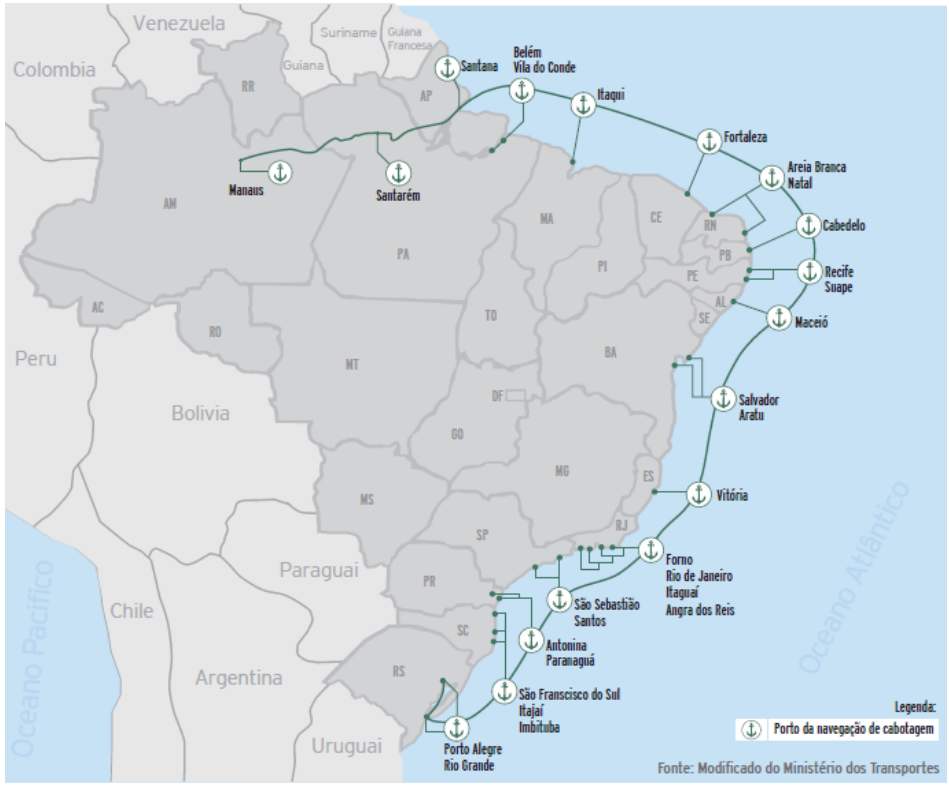
Consequences

- Ship lines
- Inefficient port operations

Bureaucracy in the national transport system

Secretary of ports, (2015)

Short Sea Shipping in Brazil

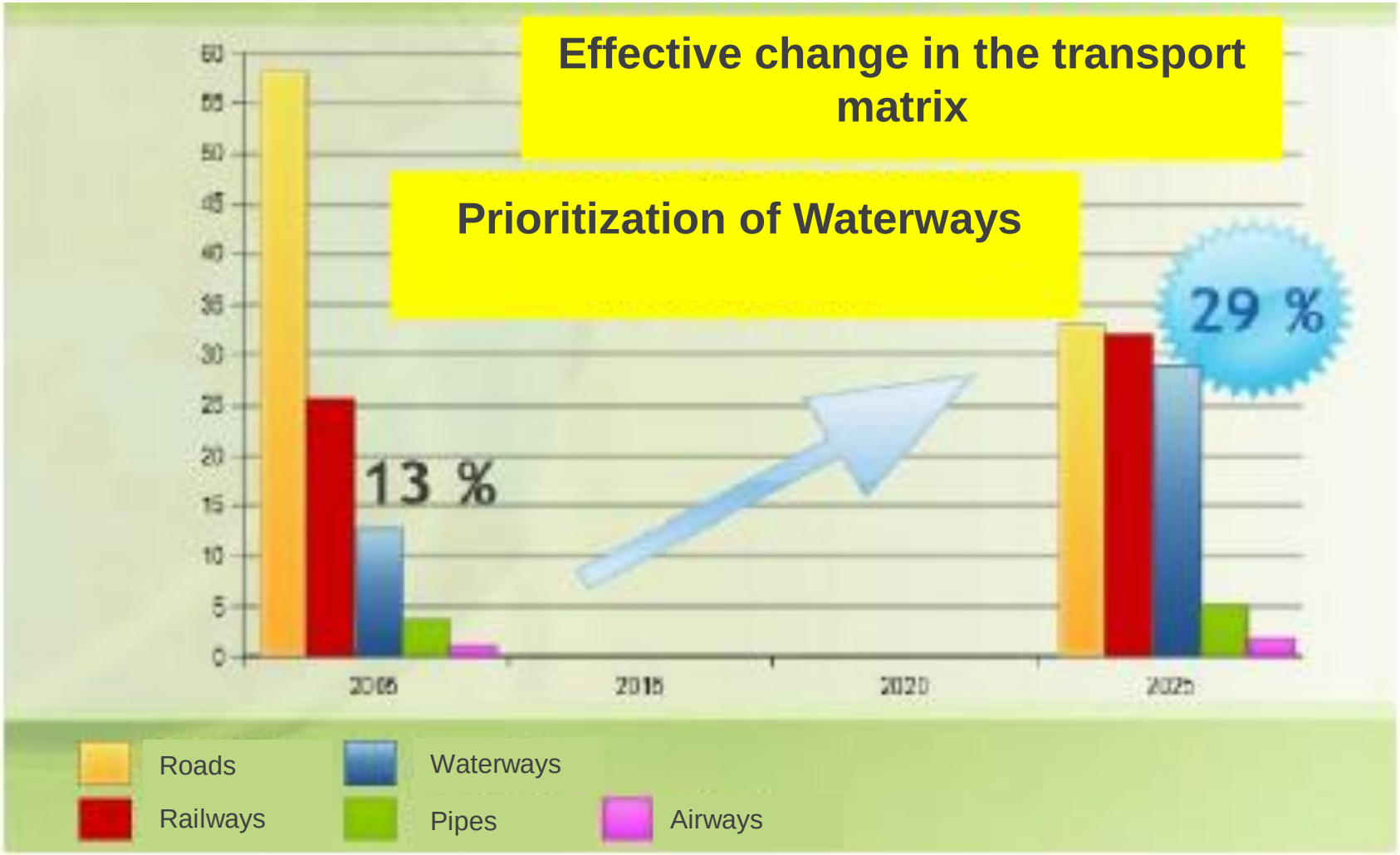


- Brazil has continental size, with excellent coast-line.
- One potential green corridor using short sea shipping.
- Its navigable coastline is 7,400 km long.

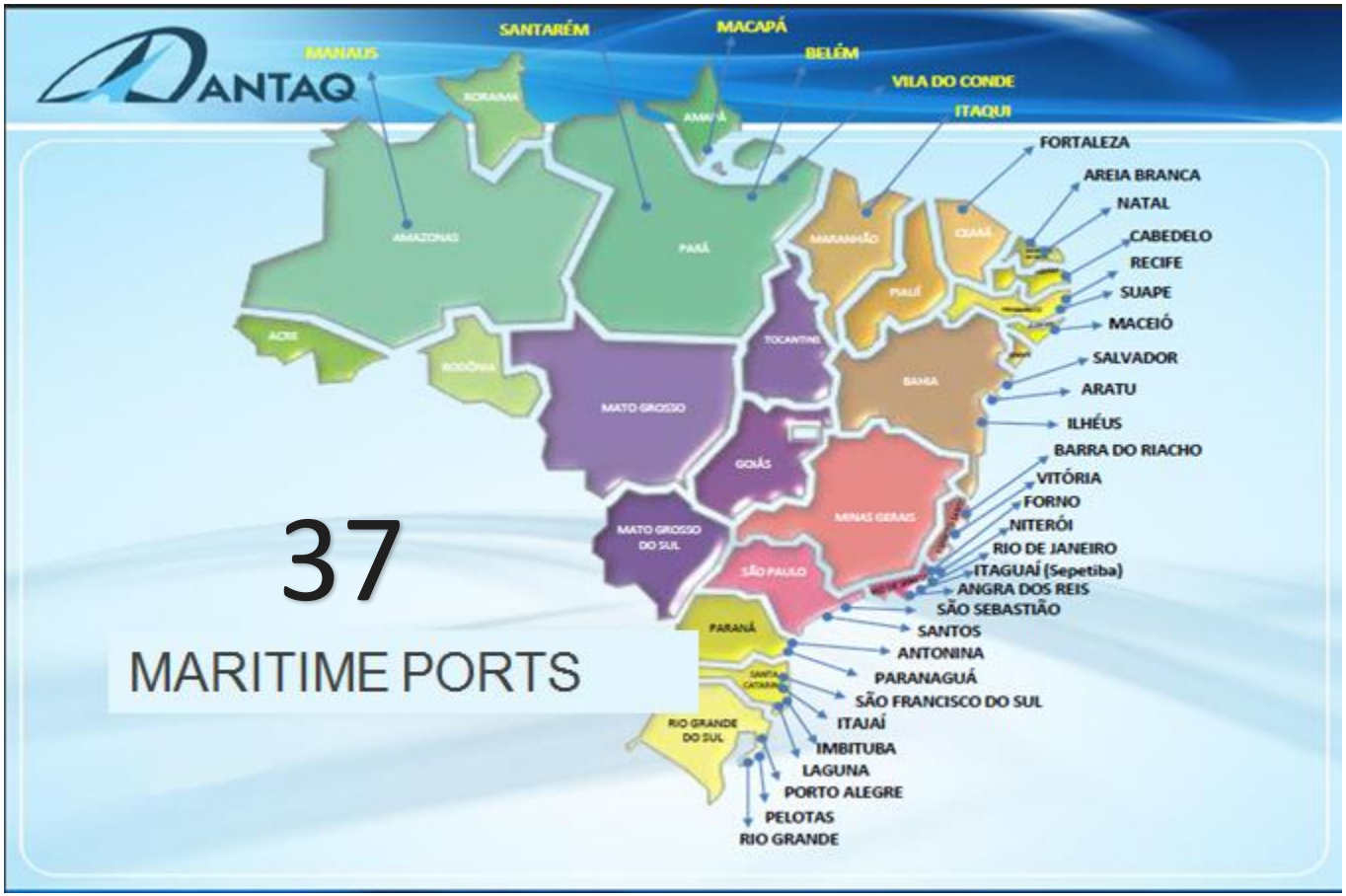
Green Corridors to Brazil

- Could our main Intermodal Transport Systems (Short Sea Shipping + Highways) be a green Corridor?
- Cargo Movement by relatively long distances.
- Multimodal Corridors.
- Enviromentally-friendly.
- Safe.
- Avoid traffic congestion.

National Plan of Transport Logistic



Brazilian Ports



The Port of Santos is the largest in Brazil. It handles approximately 2.2 million TEUs annually, out of 5.9 million TEU that are handled in the country.

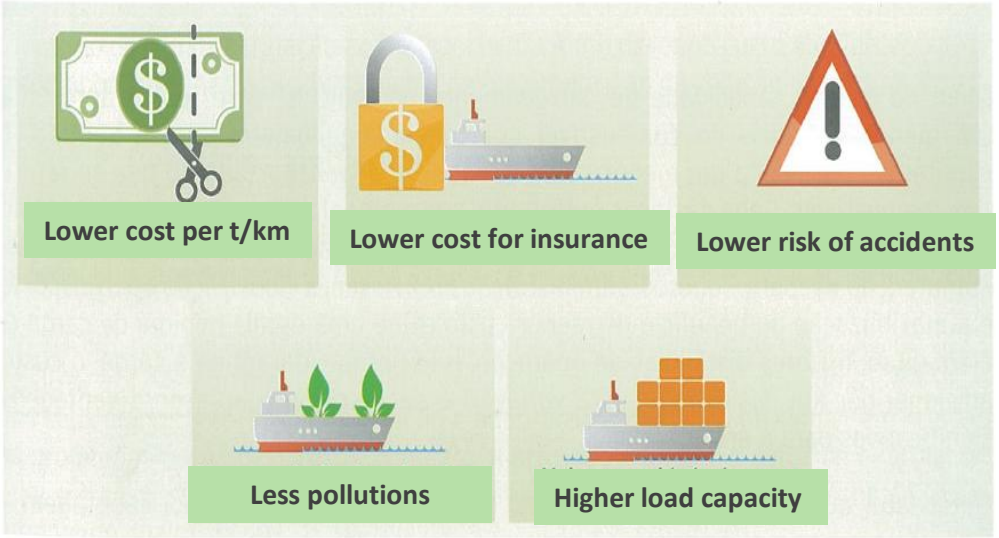
Port of Santos - Channel

- It should be made investments in terminals, strengthening the pier for docking of bigger vessels.
- Depth
- Dredging
- Slums
- Houses and Buildings.

Green Corridors to Brazil

SSS

- Large distances, and corroborates the sustainability issue for lower carbon dioxide emissions, when compared to road transport.

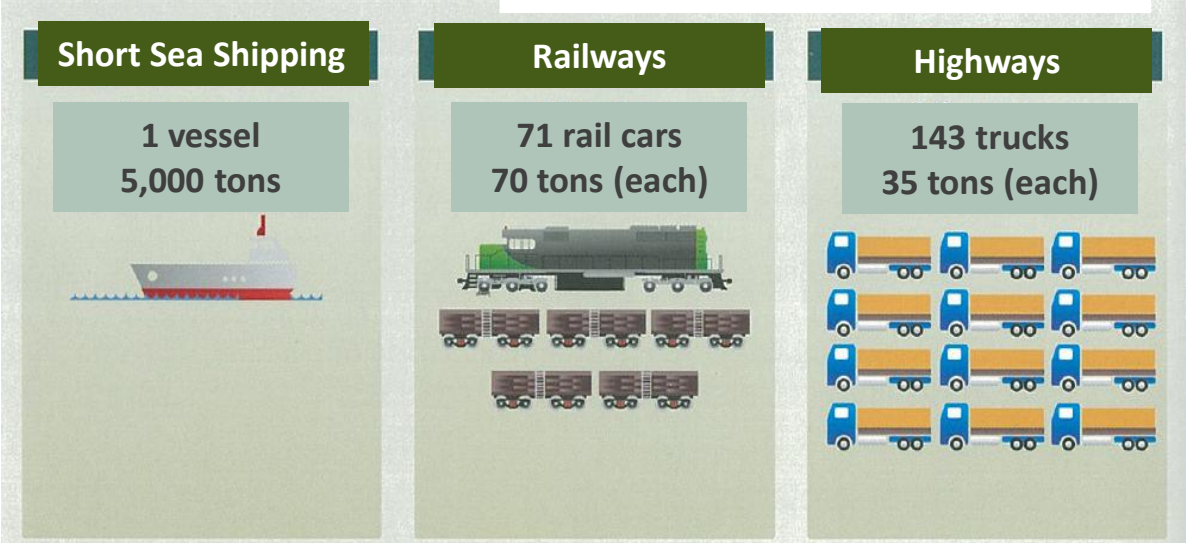


Green Corridors to Brazil

Type of Freight	Quantity Transported (t)		Variation 2014 / 2013
	1° Semester 2013	1° Semester 2014	
FUELS AND MINERAL OILS	52.460.866	53.560.192	2,10%
BAUXITE	6.628.207	5.828.286	-12,07%
CONTAINERS	4.206.707	4.492.857	6,80%
STEEL PRODUCTS	984.417	1.024.386	4,06%
OTHER KIND OF PRODUCTS	4.610.557	5.132.847	
TOTAL	68.890.754	70.038.570	1,67%

SSS

- To invest in a logistically sustainable system that minimize greenhouse gas emissions.



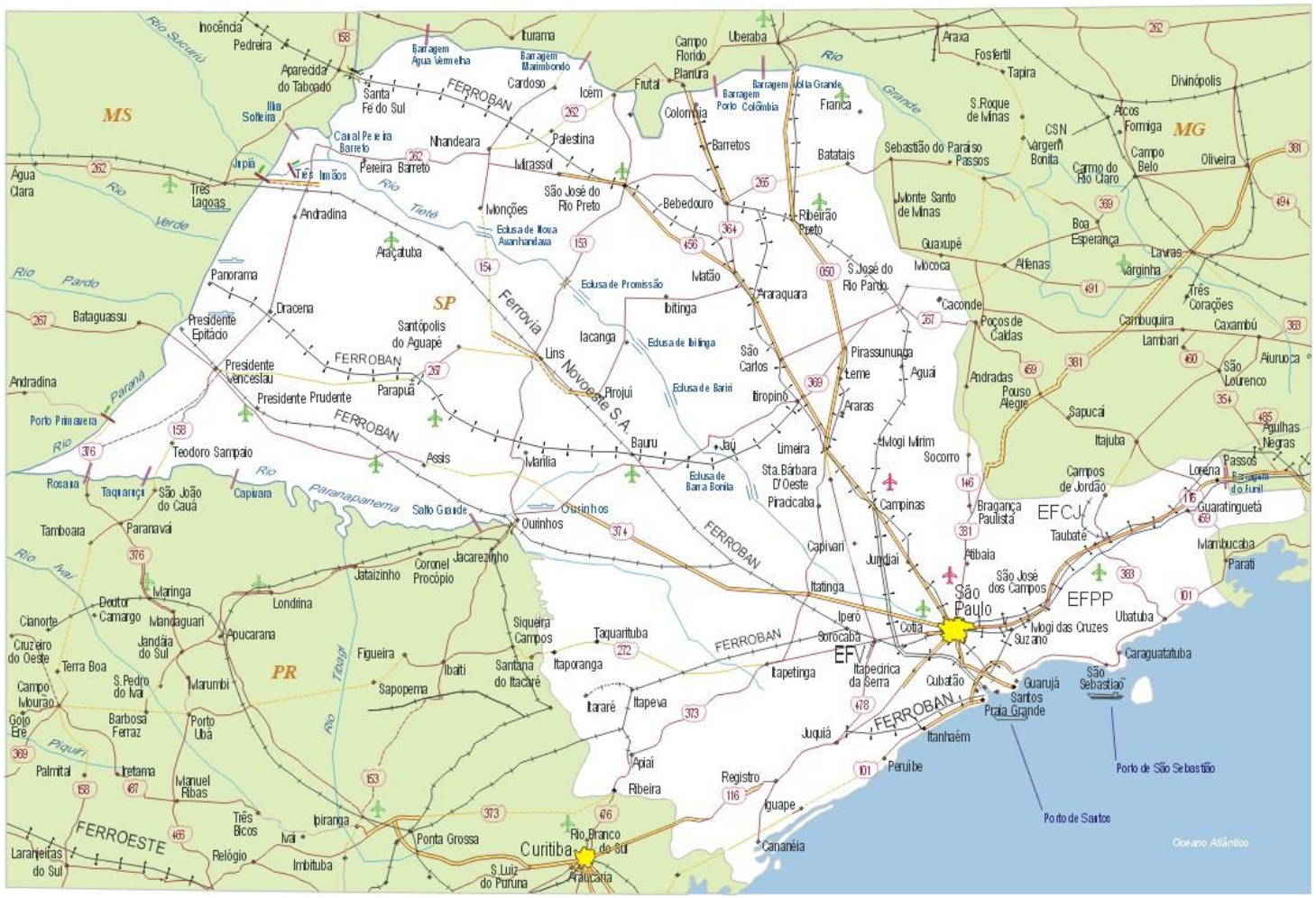
Integration of maritime shipping with other modals of transport is essential to a green transport system.

Multimodal Corridors

- Investments in information technology and reducing bureaucracy for port operations are essential.
- Having fast terminals to short sea operations are major challenges for a sustainable green corridor system.

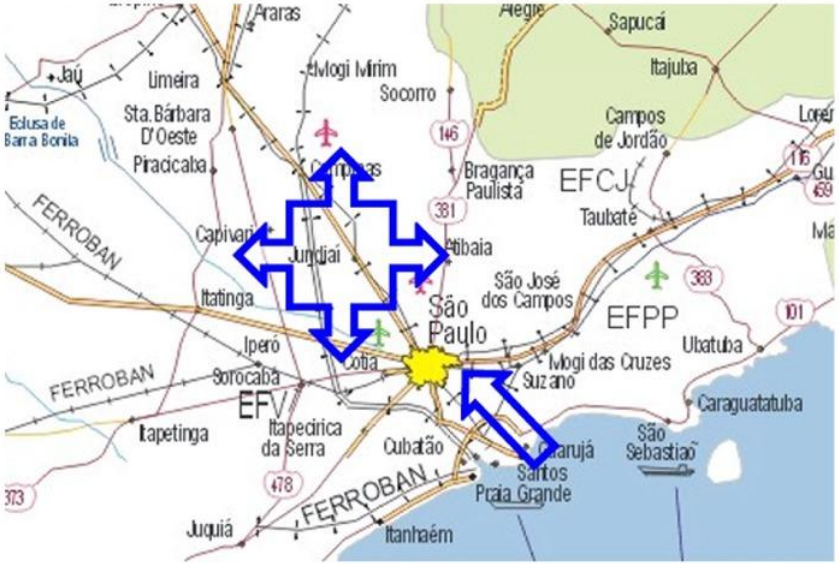
Multimodal Corridors

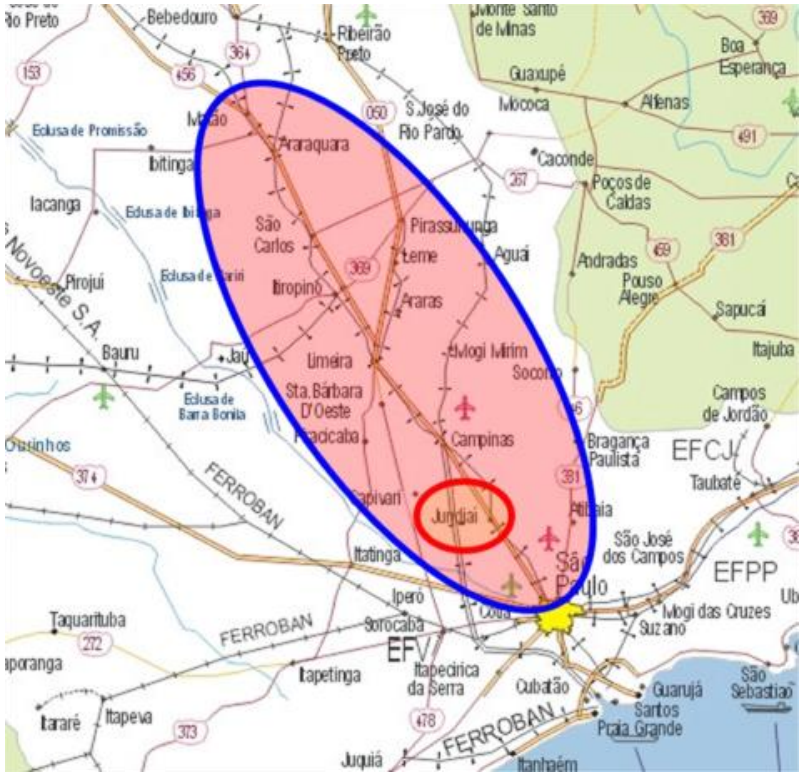
Example: ICT - Inland Container Terminals



Multimodal Corridors

ICT - Inland Container Terminals / Jundiaí





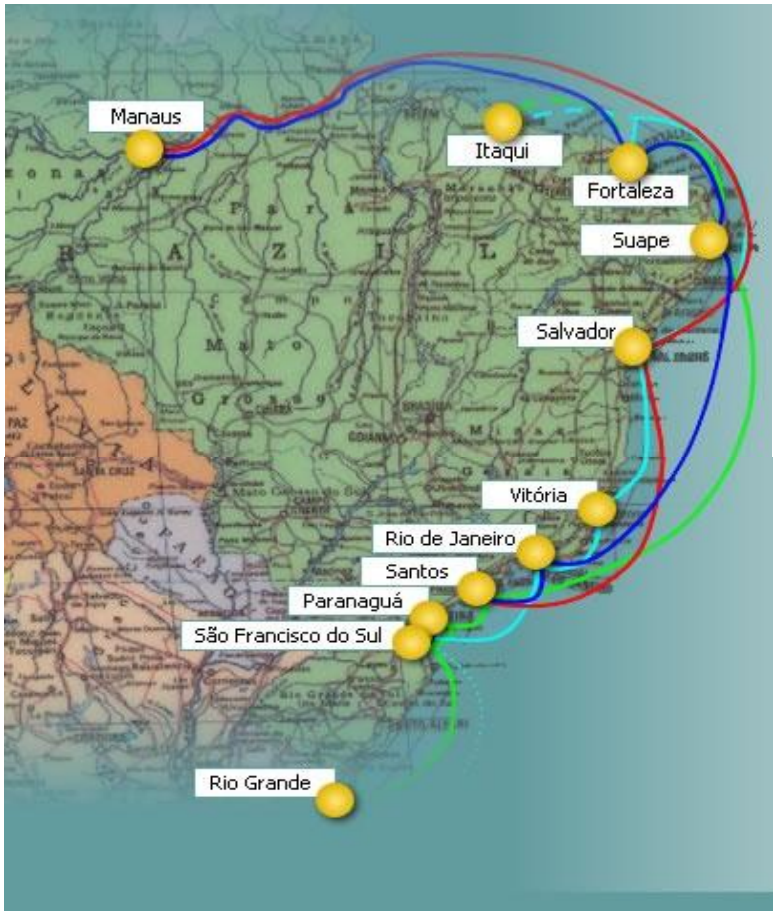
Multimodal Corridors - Jundiaí

Green Project

- The trucks should only be used for short distances and door-to-door delivery.

Multimodal Corridors
Beltway Integration

Green Corridors to Brazil



SSS

- Sustainable Transport Solutions.
- Less Greenhouse Gas.
- Less CO_2, NO_x, SO_2, $PM_{10, 25}$.

“PROPOSAL FOR A MARITIME GREEN CORRIDOR FOR BRAZIL"

- Project funded by CNPq;
- Coordinator: Prof. Dr. Rui Carlos Botter
  - Professor of exclusive dedication of the Department of Naval Architecture and Ocean Engineering from the Polytechnic School of the University of São Paulo - POLI / USP.
- This project has the institutional support of CISB - Swedish-Brazilian Center for Research and Innovation and the partnership with Lindholmen Science Park and his team of experts located in the city of Gothenburg, Sweden.

“PROPOSAL FOR A MARITIME GREEN CORRIDOR FOR BRAZIL"

- Specific objectives are:
  - To identify sustainable technologies applied to the Maritime Transportation and Port Operation;
  - To identify the logistical bottlenecks of the corridor that, when eliminated, improve the sustainability indicators;
  - To establish indicators and benchmarking for green corridors;
  - To identify technology gaps and to recommend areas of research, development and innovation aiming the improvement of the corridor sustainability indexes;
  - To enable a Regulatory Evaluation and New Propositions: Currently, what prevents the implementation of the Green Corridor concept in Brazil and what do we need to change?
  - To disseminate results in workshops, seminars, conferences and articles.

“PROPOSAL FOR A MARITIME GREEN CORRIDOR FOR BRAZIL"

- The project development will be as the following approach:
  - Definition of Performance Indicators for corridors in Brazil, with broad-based discussion on international indicators for this segment;
  - Evaluation of existing green corridors in Europe and their indicators;
  - Definition of technology and its details applied to ships, terminals, equipment, information systems, among other conditions necessary for the establishment of green corridors;
  - Policy, rules and conditions definitions that are necessary for the implementation of corridors in Brazil
  - Definition of Brazilian green corridor;

CISB AT A GLANCE

A non-profit Research and Innovation Association

focused on implementing Research,

Technology and Innovation partnerships by:

- Exchanging technology and innovation with Sweden and Europe;
- Stimulating innovation locally and all around Brazil;
- Fostering synergy between Sweden, Brazil and others countries.

Main office in São Bernardo do Campo, SP

Synergy between Sweden & Brazil

CISB Work Package

- Mapping stakeholders
- Project Dissemination
- Mapping funding opportunities

Mapping stakeholders

Actions

- Identification of stakeholders within the sector (Government, Academia and Industry)
- International missions articulation
- Analysis of connections
- Overview of aspects related to innovation
- Integration of key partners in the collaboration



Project Dissemination

CISB as a platform for project dissemination

- Newsletter (4 per year)
- Press releases
- Workshop SWE BR Collaboration Opportunities in Maritime Logistics
- International Workshop on Green Corridors

Caso não consiga visualizar este e-mail, clique aqui.

CISB | CENTRO DE PESQUISA E INOVAÇÃO SUECO-BRASILEIRO

Boletim CISB/Newsletter CISB n.19 | Junho/June, 2015

ENTREVISTA ESPECIAL / SPECIAL INTERVIEW

Laços mais estreitos

O entrevistado desta edição é o engenheiro aeronáutico Petter Krus, da Linköping University, o primeiro professor sueco a participar do programa *Chair for Swedish Aeronautical Professor in Brazil* no âmbito do INNOVAIR. Confira »

Closer ties

In this edition, we have interviewed aeronautical engineer Petter Krus, from Linköping University, the first Swedish professor to have participated in the programme *Chair for Swedish Aeronautical Professor in Brazil* within the scope of INNOVAIR. Check it out »

Mapping of funding opportunities

Actions	Identification of funding Institutions
	Mapping of call for projects and other types of funding possibilities
	Dissemination of opportunities to project partners
	Integration of key partners in the collaboration

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