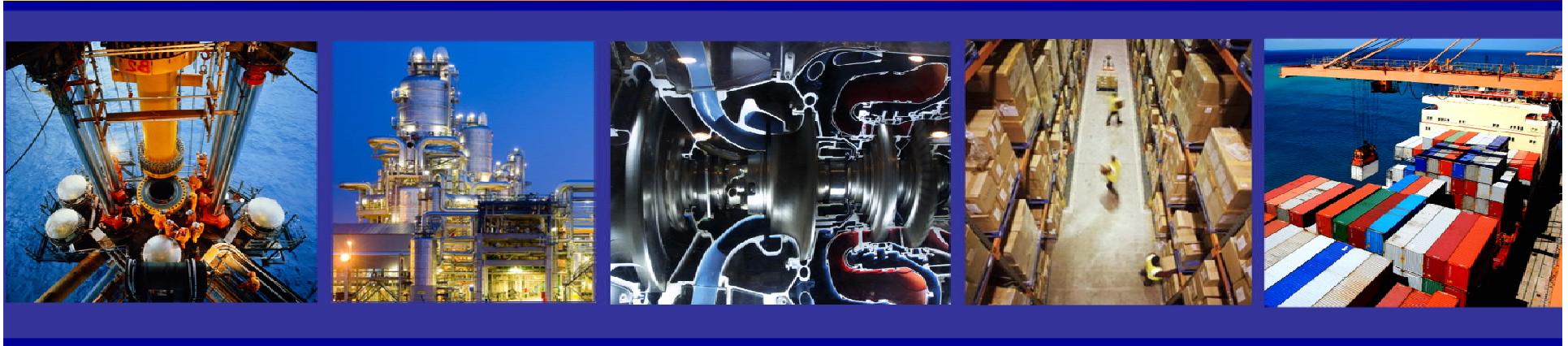


Boston Strategies International, Inc.

June 2008



Global Supply Chain Management: Brazil

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Strong growth, easy access assure stability and low cost

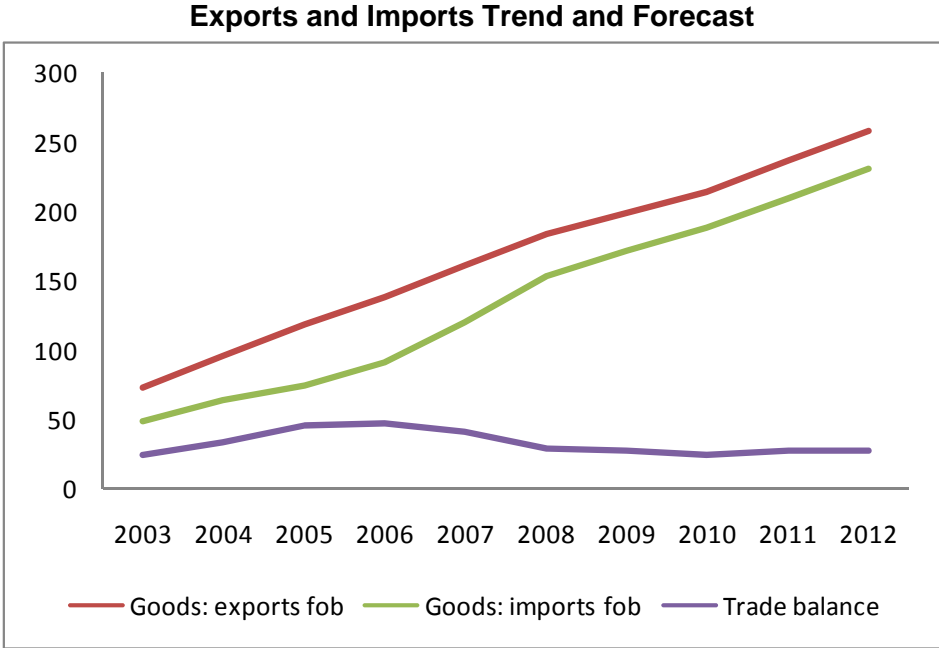
Excerpt

- Rapidly growing industrial and agricultural trade
- Plentiful access via ports along the entire coast
- Construction, development, and private operating models
- Excellent air and intermodal links



30% growth year on year

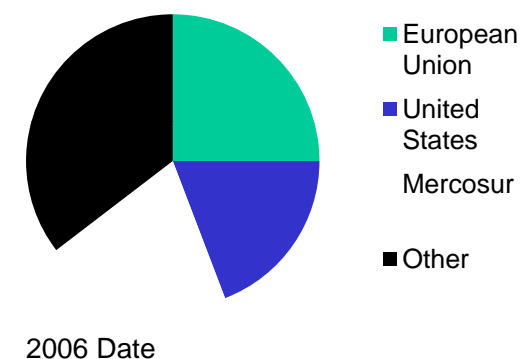
- Diversified exports and trading partners
- Increasing prices of major export commodities (e.g., iron ore, soybeans)
- Controlled inflation
- Strong financial system
- Developing infrastructure



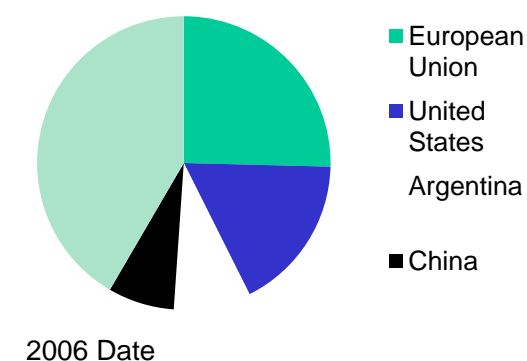
Extensive US trade, but balanced regionally

- The share of foreign trade in GDP reached 26% in 2006.
- Asia's economic growth will counterbalance US's recession.
- The EU, buyer of 1/4 of exports, will suffer from worsening credit conditions.

Main destinations of exports (% share)				
	2001	2002	2003	2004
US	24.7	25.7	23.1	21.1
Argentina	8.6	3.9	6.2	7.6
Netherlands	4.9	5.3	5.8	6.1
China	3.3	4.2	6.2	5.6



Main origins of imports (% share)				
	2001	2002	2003	2004
US	23.5	22.1	20.1	18.3
Argentina	11.2	10	9.7	8.9
Germany	8.7	9.4	8.7	8.1
China	2.4	3.3	4.4	5.9



Growth in industrial products; strong agriculture

- In 2006 US\$137.4 b in goods were exported and \$91.4 b were imported.
- Trade balance 2006: \$46 b surplus
- Exports are forecast to increase by an average of 6.7% annually from 2008 to 2012.

Principal exports (% share)				
	2001	2002	2003	2004
Transport equipment & parts	17.5	16.4	15.3	14.9
Metallurgical products	9.6	10.4	9.8	10.1
Soybeans, meal & oils	8.9	9.8	10.9	10.2
Chemical products	2.1	1.9	2.4	1.8

Principal imports (% share)				
	2001	2002	2003	2004
Machinery & electrical equipment	31.5	28.3	24.7	22.9
Chemical products	16.4	18	18.2	17.7
Transport equipment & parts	12.5	10.9	10.2	10.4
Oil & derivatives	11.3	13.2	13.6	16.4

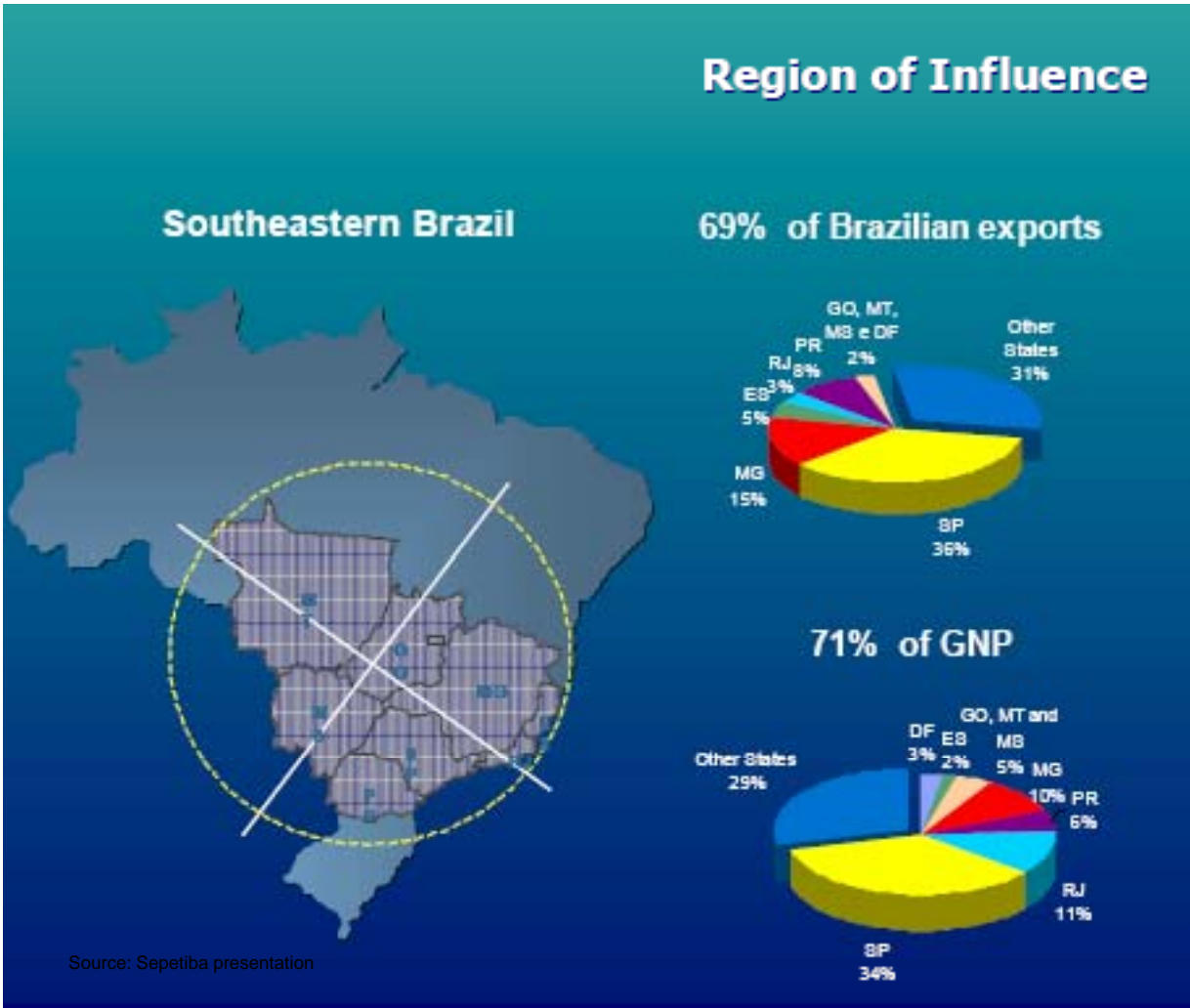


Brisk industrial growth

- Major industries
 - Aircraft
 - Steel
 - Chemicals
 - Vehicles
 - Footwear
 - Machinery
 - Cement
 - Lumber
- Greatest industry growth patterns (Jan. 07 to Jan. 08):
 - Automotive: 30%
 - Chemical products: 22.6%
 - Machinery and equipment: 10.7%
- From Dec 2007 to Jan 2008 11 out of the 14 major states showed seasonally adjusted industrial expansion
- Industry Production growth in Sao Paulo
 - 3.4% from Dec. 07 to Jan. 08
 - 15.2% greater than Dec. 2006 to Jan. 07 (the largest annual growth since Sept. 2004)



Southeastern locus of economic activity



Easy access from most any angle



Santos leads volume by 3:1

Container Unit Volume Growth by Port

PORTS	1996	2001	2006	%Growth 06/01
SANTOS	547	713	1.604	125%
STA CATARINA PORTS (Itajaí+SFS)	127	255	525	106%
RIO DE JANEIRO PORTS (RJ+SEP)	130	199	418	110%
RIO GRANDE	109	211	330	56%
PARANAGUÁ	77	162	288	78%
VITÓRIA	57	72	192	167%
MANAUS	54	62	124	100%
NORTHEAST REGION (Salvador, Suape, Pecém and Fortaleza)	89	154	371	141%
OTHERS	76	99	152	54%
BRAZIL	1.266	1.928	4.004	108%

Source: Hamburg Sud



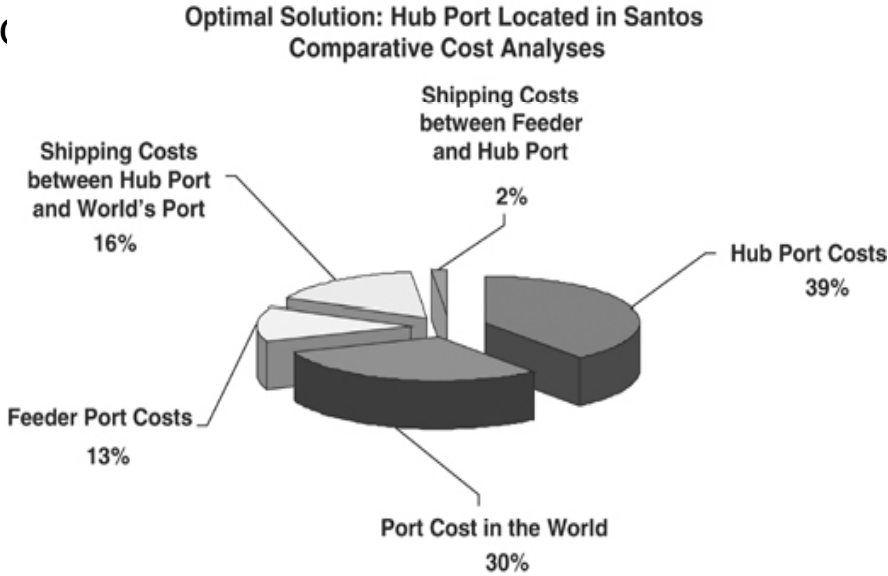
Port of Santos: center of bulk, container traffic

- 41 million tons a year, 4 thousand ships a year, 700 thousand TEU per year.
- Santos moves one-fourth of the products traded by the country within the international market in terms of value (US\$ 192 billion in 2005).
- The state of São Paulo is responsible for 38% of Brazil's Gross Domestic Product, the southern hemisphere's most dense industrialization area.



A model of leasing and development

- In 2003 70% of the port was leased to investors.
- **Roads:** Anchieta-Imigrantes System (ECOVIAS), Piaçaguera-Guarujá, BR-101 - Rio / Santos, and SP-55 - Rod. Padre Manoel da Nóbrega
- **Railways:** M.R.S. Logística S/A (MRS), Ferrovias Bandeirantes S/A (FERROBAN), and Ferronorte S/A (FERRONORTE)
- **Waterways:** Tietê-Paraná
- Equipped with productive terminals specialized in solid and liquid bulk cargo and

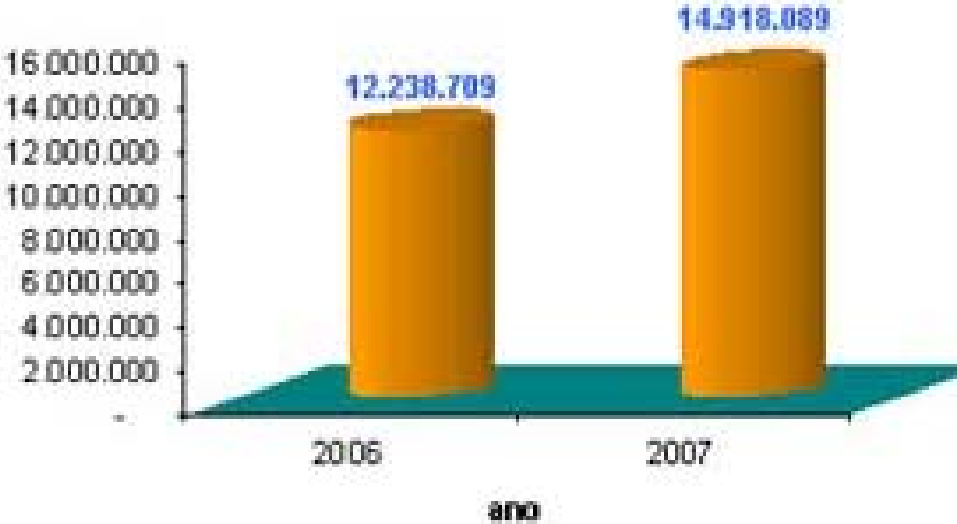


CONTAINER TRAFFIC (TEUs, 000s)			
RANK	PORT	COUNTRY	TEUs
1	Singapore	Singapore	23,192
2	Hong Kong	China	22,427
3	Shanghai	China	18,084
4	Shenzhen	China	16,197
5	Busan	South Korea	11,843
6	Kaohsiung	Taiwan	9,471
7	Rotterdam	Netherlands	9,287
8	Hamburg	Germany	8,088
9	Dubai	United Arab Emirates	7,619
10	Los Angeles	United States	7,485
11	Long Beach	United States	6,710
12	Antwerp	Belgium	6,462
13	Qingdao	China	6,307
14	Port Klang	Malaysia	5,544
15	Ningbo	China	5,208
16	Tianjin	China	4,801
17	New York/New Jersey	United States	4,785
18	Guangzhou	China	4,685
19	Tanjung Palesas	Indonesia	4,177
20	Laem Chabang	Thailand	3,834
21	Bremen/Bremerhaven	Germany	3,736
22	Tokyo	Japan	3,593
23	Katmen	China	3,342
24	Tanjung Priok	Indonesia	3,282
25	Algeciras	Spain	3,180
26	Giola Tauro	Italy	3,161
27	Yokohama	Japan	2,873
28	Jeddah	Saudi Arabia	2,836
29	Felixstowe	United Kingdom	2,700
30	Jawaharlal Nehru	Saudi Arabia	2,667
31	Manila	Philippines	2,665
32	Dalian	China	2,665
33	Salalah	Oman	2,492
34	Nagoya	Japan	2,491
35	Colombo	Sri Lanka	2,455
36	Valencia	Spain	2,410
37	Oakland	United States	2,273
38	Santos	Brazil	2,268
39	Kobe	Japan	2,262
40	Le Havre	France	2,119
41	Keelung	Taiwan	2,091
42	Seattle	United States	2,068
43	Barcelona	Spain	2,071
44	Tacoma	United States	2,066
45	Charleston	United States	1,987
46	Hampton Roads	United States	1,982
47	Khor Fakkan	United Arab Emirates	1,930
48	Ho Chi Minh	Vietnam	1,911
49	Savannah	United States	1,902
50	Melbourne	Australia	1,863



Construction at the Port of Paranagua

Total Container Movement (Until May, 2007).

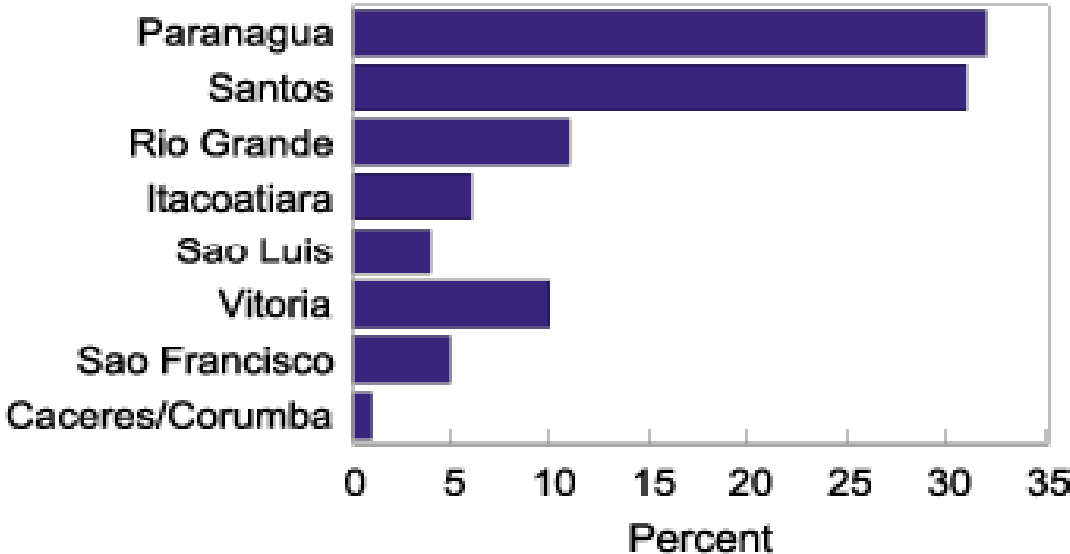


(Source: Paranagua Port Authority)

- Plans to spend 2.7 billion Reals (\$1.3 billion) by the end of 2010 to dredge, expand and repair existing port facilities

Agriculture will benefit from Paranagua's expansion

Soybean Exports by Port During February 2002 to January 2003



Source: Verdonk



Multipurpose port at Sepetiba

- 500 Km radius are located industrial and commercial corporations that contribute to the formation of some 70% of Brazilian GNP
- Port of Sepetiba will be Latin America's largest and Southern Atlantic's first harbor to be a major cargo Hubport, technically capable to handle over 20 million tons per year
- Multiple purpose wharf - (under construction) - for containers; 14.5m deep capacity to handle 1,000,000 TEUs/year
- Coal Terminal
Depth of 15m. Capable of handling up to 7,000,000 tons/year
- Ore Terminal
Depth of 18.5m. Able to handle 15,000,000 tons/year

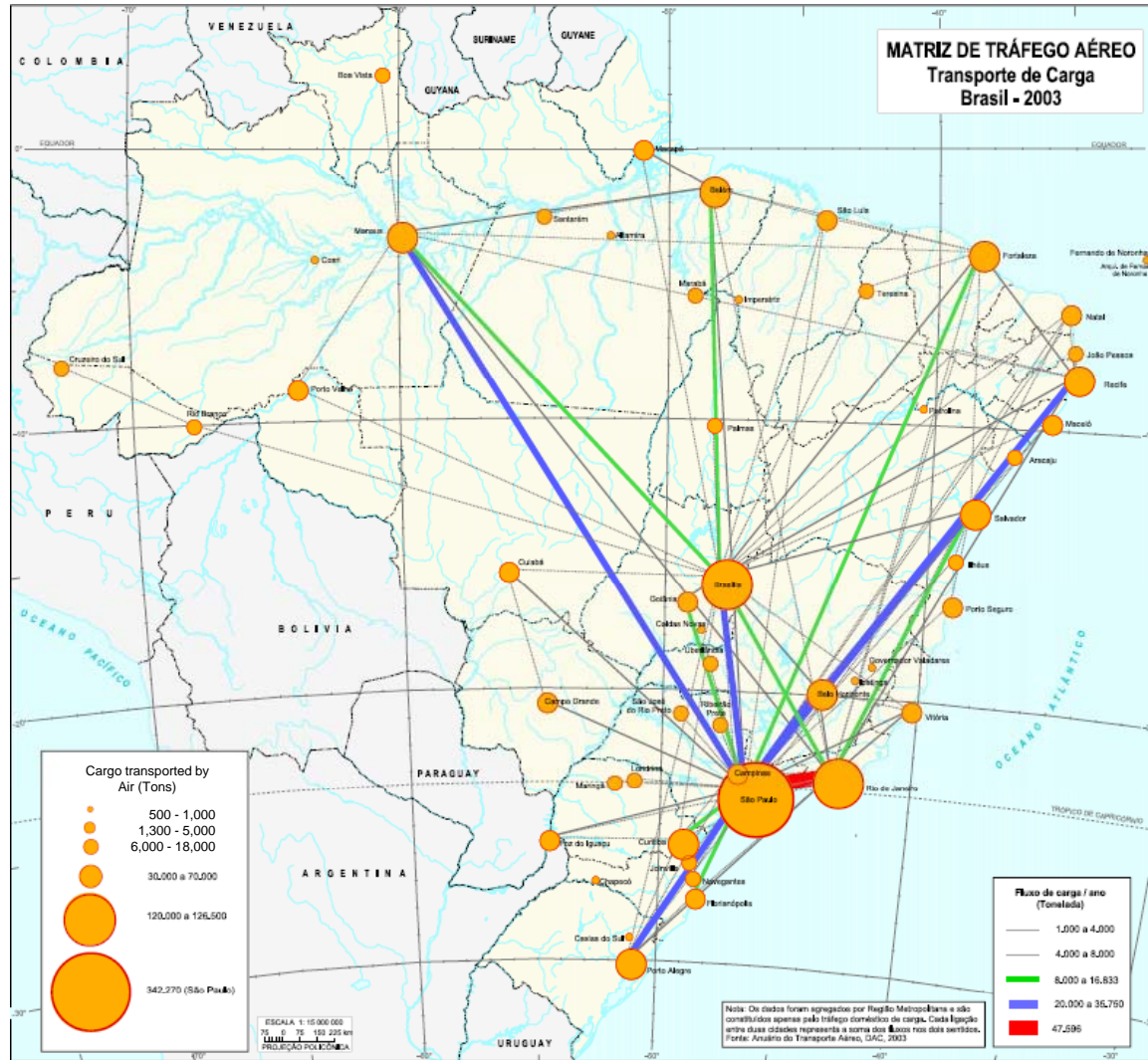


Bulk movements through Vitória

- The most difficult port for ships to access in all of Brazil. The Bay of Vitória is extremely narrow, with stones and mountains that complicate the access by freighters and maritime cruisers to the docks. Ships, cars, and people all compete for space. There are restrictions on traffic, limiting the use of the port. Today the port is mostly used by cruise ships and for the repair of ships and oil platforms.
- The Port of Tubarão, close to Port of Victoria, was designed in the 1960s by Companhia Vale do Rio Doce when the Port of Vitória began showing signs of saturation. It has far easier access to the sea. From its opening in 1966, its capacity has gradually increased, reaching 80 million tonnes / year in the last decade. Although originally created to export iron ore, in recent years it has added silos for storing grains and soybean meal. The port is located at one end of Camburi Beach.

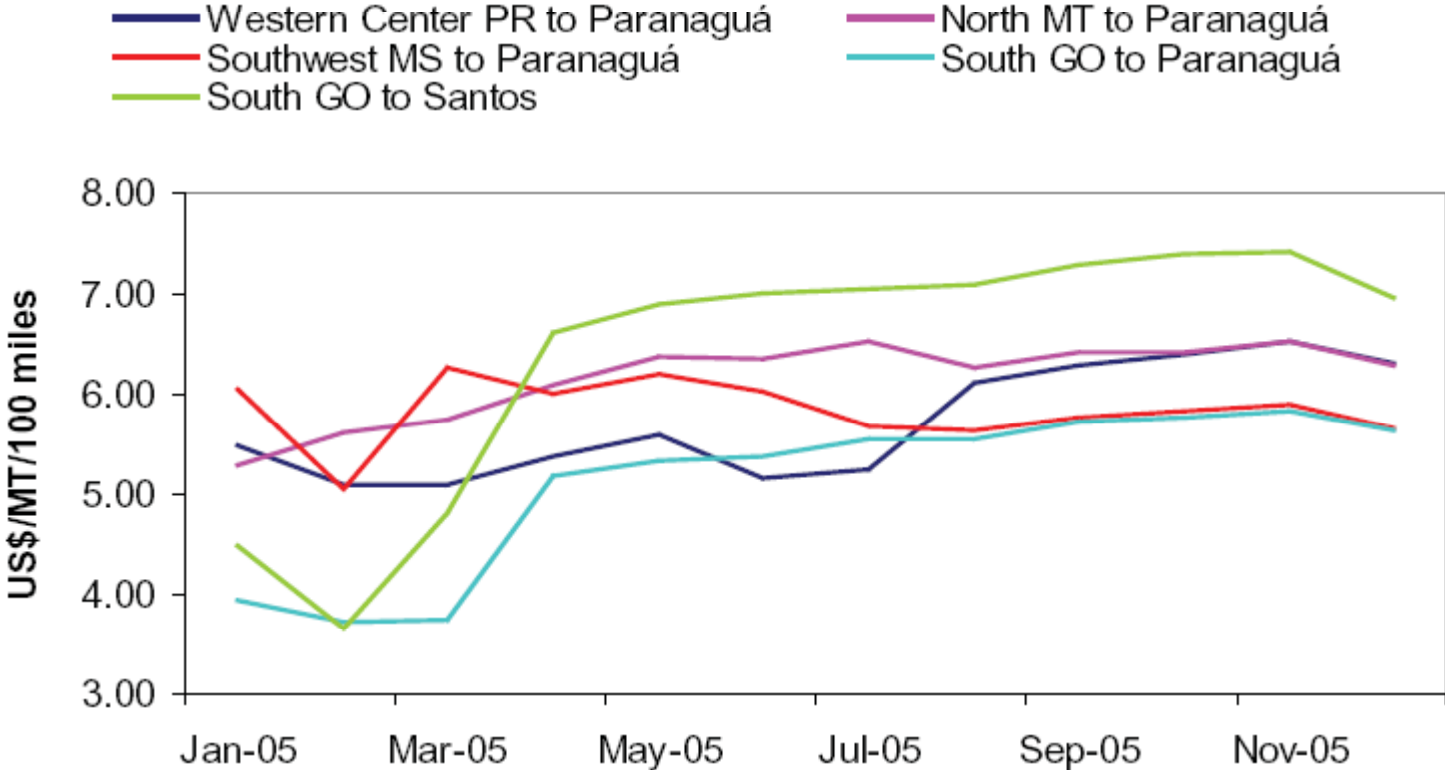


Air Cargo connects the interior



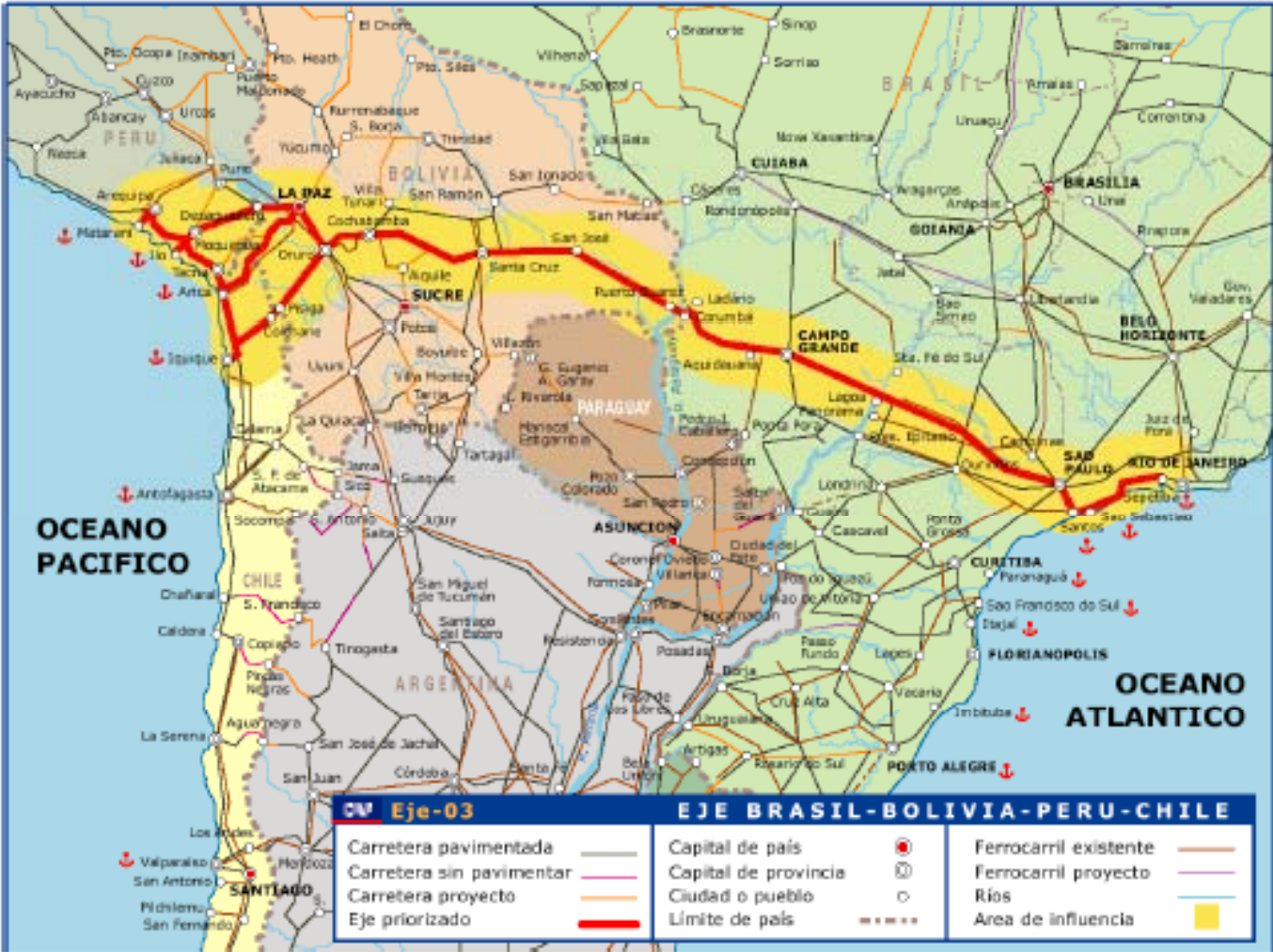
Truck Rates are under control

Truck rates for selected Brazilian soybean export transportation routes



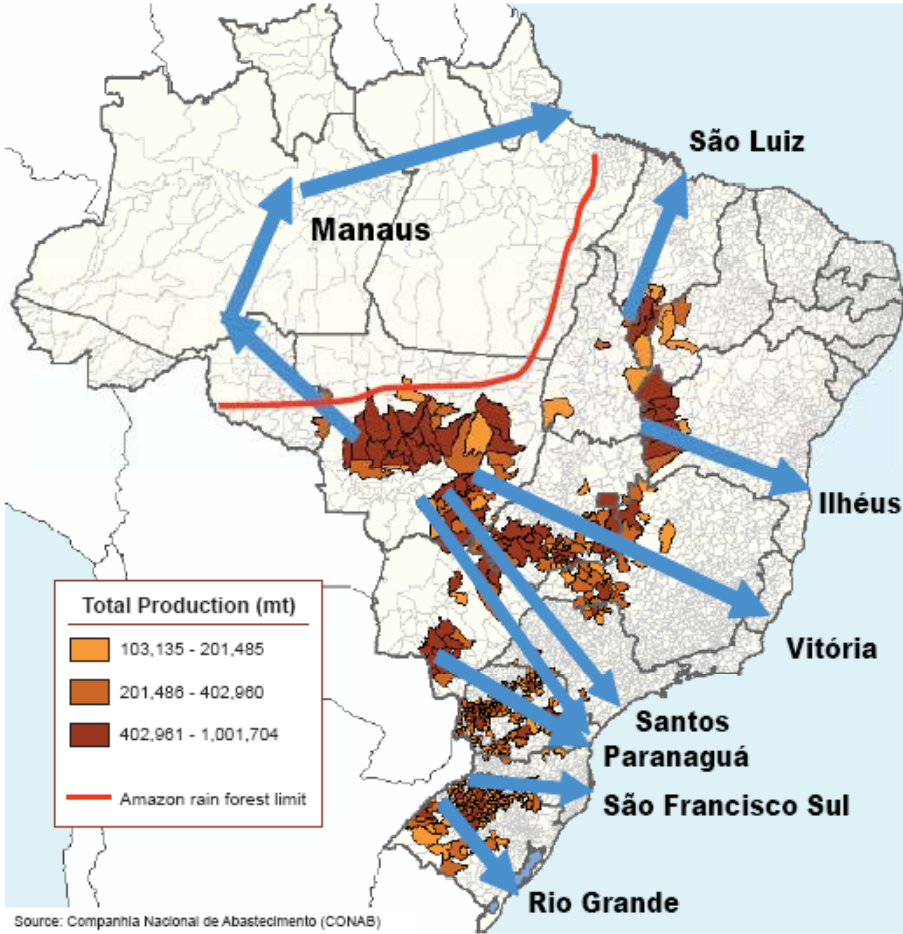
Source: ESALQ/ USP (University of São Paulo, Brazil) and USDA/AMS

Gateway across South America



Example: Soybean

Main soybean export routes

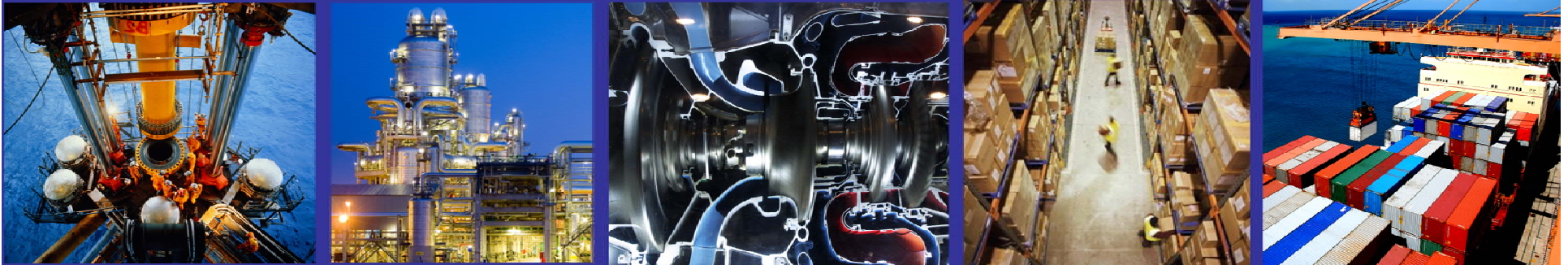


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Boston Strategies International is a global management consulting firm that helps market leaders achieve competitive advantage through supply chain management through:

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- **Supplier Enablement** that facilitates global growth and local content requirements
- **Supply Chain Optimization** that reduces project and life cycle costs



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