

Brazil's Priority Transportation Projects



A RESOURCE GUIDE
FOR U.S. INDUSTRY
SPONSORED BY THE U.S. TRADE AND
DEVELOPMENT AGENCY



The U.S. Trade and Development Agency

The U.S. Trade and Development Agency helps companies create U.S. jobs through the export of U.S. goods and services for priority development projects in emerging economies. USTDA links U.S. businesses to export opportunities by funding project planning activities, pilot projects and reverse trade missions while creating sustainable infrastructure and economic growth in partner countries. USTDA promotes economic growth in emerging economies by facilitating the participation of U.S. businesses in the planning and execution of priority development projects in host countries. The Agency's objectives are to help build the infrastructure for trade, match U.S. technological expertise with overseas development needs, and help create lasting business partnerships between the United States and emerging economies.

This guide was funded by the U.S. Trade and Development Agency (USTDA), an agency of the U.S. Government. The opinions, findings, conclusions, or recommendations expressed in this document are those of the author(s) and do not necessarily represent the official position or policies of USTDA. USTDA makes no representation about, nor does it accept responsibility for, the accuracy or completeness of the information contained in this guide.

TABLE OF CONTENTS

1. INTRODUCTION	8
1.1 Brazil Market Challenges and Entry Strategies	8
1.2 Brazil's Transportation Sector	9
1.2.1 New Measures Adopted for the Transportation Sector	10
1.2.2 Procedure of Expression of Interest (PMI).....	11
2. AVIATION	13
2.1 Aviation Opportunities in Brazil	13
2.2 Federal and State Airport Concessions	14
2.3 Information on Airports to be Concessioned.....	18
2.4 Additional State Airports Expected to be Concessioned	26
2.5 Private Airport and Air Hub Developments in Brazil.....	28
2.5.1 Sao Paulo Catarina Executive Airport	28
2.5.2 LATAM Airlines Group S.A.....	30
2.6 Regional Aviation Development Program (PDAR)	31
2.7 Brazil Aviation Overview and Regulatory Framework	33
3. HIGHWAYS.....	35
3.1 Highway Concession Project Opportunities.....	35
3.2 Highway Concessions	36
3.3 2016 Highway Concessions – First Round.....	38
3.3.1 Project BR-476/480 (PR/SC).....	39
3.3.2 Project BR-364/365 (GO/MG)	40
3.3.3 BR-364/060 (MT/GO).....	41
3.3.4 Project BR-163 (MT/PA).....	42
3.4 2016 Highway Concessions – Second Round.....	43
3.4.1 Project BR-101/BA	45
3.4.2 Project BR-101/SC	46
3.4.3 Project BR-262/MS.....	47
3.4.4 Project BR-267/MS.....	48
3.4.5 Project BR-280/SC	49
3.4.6 Project BR-364/RO/MT	50
3.4.7 Project BR-101/232/PE	51

3.4.8	Project BR- 262/381/MG/ES	52
3.4.9	Project BR-282/470.....	53
3.4.10	Project BR 101/493	54
3.4.11	Project BR 101/116	55
3.5	State of Sao Paulo Highway Concession Program	57
3.6	Integrated Network for the Collection of Electronic Information Project.....	58
3.7	Brazil Highway Overview and Regulatory Framework.....	60
3.8	U.S. Department of Transportation (USDOT) and Brazil's Ministry of Transport (MOT).....	61
4.	PORTS.....	62
4.1	Market Opportunities in the Port Sector	62
4.2	Vessel Traffic Management System (VTMS).....	63
4.3	Portolog Program.....	64
4.4	Dredging Projects.....	66
4.5	Port Concession Projects.....	68
4.6	Opportunities for Port Area Leasing – Step 1 for Group 1.....	69
4.7	Brazil's Port Sector Overview and Regulatory Framework	71
5.	RAILWAYS.....	72
5.1	Brazil's Railway Opportunities	72
5.2	Freight Rail Operators	73
5.3	Freight Railway Concession Program.....	74
5.4	Railway Concession Opportunities in 2016.....	75
5.4.1	Project Norte–Sul Railway (Acailandia/MA-Barcarena/PA and Palmas/TO	77
5.4.2	Project Norte-Sul Railway (Anapolis/GO-Estrela D'Oeste/SP -Tres Lagoas/MS)	78
5.4.3	Project - Lucas do Rio Verde/MT-Itatuba/PA Railway Project (Miritituba District).....	79
5.4.4	Project - Rio de Janeiro-Espirito Santo Railway	80
5.5	Freight Railway Operational Systems Standard.....	80
5.6	Overview of Freight Railway and Regulatory Framework	81
6.	MASS TRANSIT SYSTEMS.....	83
6.1	Brazil's Urban Passenger Transportation Overview	83
6.2	Passenger Rail Transportation Projects	84
6.3	Bus Public Transportation System Projects	87
6.3.1	Sao Paulo Bus Public Transportation System.....	88
6.4	Porto Alegre's Public Agency for Transportation and Circulation (EPTC).....	89
7.	FINANCING	91

7.1	Capital Market Tools	91
7.2	The Brazilian Development Bank (BNDES)	91
7.2.1	BNDES Financing	92
7.2.2	BNDES Non-Repayable Funds	92
7.2.3	BNDES Subscription of Securities	92
7.2.4	Summary of Financial Facts (BNDES) to Support the Transportation Sector	92
7.3	Other Financial Institutions	93
7.3.1	The Export-Import Bank of the United States	93
7.3.2	Overseas Private Investment Corporation (OPIC)	93
7.3.3	International Finance Corporation (IFC)	93
7.3.4	Multilateral Development Banks	94
7.4	Additional Organizations Promoting U.S. Exports in Brazil	94
7.4.1	The U.S. Commercial Service	94
7.4.2	The Brazil-U.S. Business Council	95
	Appendix A	96
	Appendix B	107
	Web Resources	108
	Glossary	109

LIST OF FIGURES

FIGURE 1 – FEDERAL AND STATE AIRPORT CONCESSION PROJECTS FOR 2016.....	15
FIGURE 2 – PINTO MARTINS AIRPORT.....	18
FIGURE 3- PINTO MARTINS AIRPORT ANNUAL PASSENGER NUMBERS (IN MILLIONS)	18
FIGURE 4 – D. LUIS EDUARDO MAGALHAES AIRPORT	19
FIGURE 5 - MAGALHAES AIRPORT ANNUAL PASSENGER NUMBERS	19
FIGURE 6 – HERCILIO LUZ AIRPORT	20
FIGURE 7 HERCILIO LUZ AIRPORT ANNUAL PASSENGER NUMBERS	20
FIGURE 8 – SALGADO FILHO AIRPORT	21
FIGURE 9 – SALGADO FILHO AIRPORT ANNUAL PASSENGER NUMBERS (IN MILLIONS)	21
FIGURE 10 - ROLIM ADOLFO AMARO AIRPORT	23
FIGURE 11 - CAMPOS DE AMARAIS AIRPORT	23
FIGURE 12 - UBATUBA AIRPORT	24
FIGURE 13 – BRAGANCA PAULISTA AIRPORT.....	24
FIGURE 14 – ITANHAEM AIRPORT	25
FIGURE 15 –CALDAS NOVAS AIRPORT	25
FIGURE 16 - SAO PAULO CATARINA EXECUTIVE AIRPORT	28
FIGURE 17 - TAM AIRLINES	30
FIGURE 18 – REGIONAL AIRPORT DEVELOPMENT PROGRAM (IN BRAZILIAN REALES)	32
FIGURE 19 – HIGHWAYS TO BE CONCESSIONED IN 2016.....	37
FIGURE 20 – 2016 HIGHWAY CONCESSIONS (FIRST ROUND)	38
FIGURE 21 -BR-476/480 (PR/SC)	39
FIGURE 22 - BR-364/365 (GO/MG).....	40
FIGURE 23 - BR-364/060 (MT/GO)	41
FIGURE 24 - BR-163 (MT/PA).....	42
FIGURE 25 - UPCOMING HIGHWAY CONCESSIONS (2016)	44
FIGURE 26 BR-101/BA	45
FIGURE 27 - BR-101/SC.....	46
FIGURE 28 - BR-262/MS	47
FIGURE 29 - BR-267/MS	48
FIGURE 30 - BR-280/SC.....	49

FIGURE 31 - BR-364/RO/MT	50
FIGURE 32 - BR-101/232/PE	51
FIGURE 33 - BR-262/381/MG/ES	52
FIGURE 34 - BR-282/470.....	53
FIGURE 35 - BR-101/493.....	54
FIGURE 36 - BR-101/116.....	55
FIGURE 37 - NUMBER OF VEHICLE FLEET IN BRAZIL (IN MILLIONS)	60
FIGURE 38 - DREDGING PROJECTS AT BRAZILIAN PORTS.....	66
FIGURE 39 - BRAZILIAN GOVERNMENT PORT FACILITY LEASING.....	68
FIGURE 40 - PUBLIC PORTS/TERMINALS FOR PRIVATE USE (MILLION TONS).....	71
FIGURE 41 - MRS FREIGHT TRAIN.....	73
FIGURE 42 - BRAZIL RAILWAYS MAP.....	74
FIGURE 43 – 2016 FREIGHT RAILWAY CORRIDORS FOR PRIVATE CONCESSION	76
FIGURE 44 – ACAILANDIA/MA-BARCARENA/PA	77
FIGURE 45 - ANAPOLIS/GO-ESTRELA D'OESTE/SP	78
FIGURE 46 - LUCAS DO RIO VERDE-ITAITUBA	79
FIGURE 48 - RIO DE JANEIRO-ESPIRITO SANTO RAILWAY	80
FIGURE 49 – CURITIBA ARTICULATED BUS	87

1. INTRODUCTION

1.1 Brazil Market Challenges and Entry Strategies

Conducting business in Brazil requires a thorough knowledge of the local environment and a corresponding strategy. U.S. companies seeking to invest in Brazil should take the time to learn about potential costs such as those related to distribution, Government procedures, employee benefits, environmental laws and the tax structure. The local public procurement process in particular can be difficult for outsiders to navigate. The Brazilian Government is the country's biggest buyer of goods and services, and a likely consumer of U.S. exports, so it is important to develop an understanding of the procurement system. U.S. exporters may find themselves at a competitive disadvantage in Brazil if they do not maintain a presence on the ground, such as established partnerships with Brazilian companies or some type of local subsidiary.

U.S. companies will have to pay tariffs, and they will face complex customs and legal systems. There are also local content regulations in place for foreign companies that manufacture equipment in the country, requiring that a minimum percentage (varying depending on the type of equipment) of domestic content (materials and parts) are made in Brazil rather than imported.

Even among all of these challenges, partnering with the right Brazilian company could help in managing some of these burdens. Success in Brazil's business culture relies heavily upon developing strong personal relationships. In most cases, U.S. firms need to develop a local presence and they should invest time in developing relationships by making frequent visits to Brazil. The U.S. Commercial Service suggests that U.S. businesses meet one-on-one with potential partners, and even offers a slate of services such as the [Gold Key Matching Service](#), which facilitates meetings with pre-screened potential clients or partners.

U.S. companies should also consider working through a qualified representative or distributor when developing new business in the Brazilian market. Some firms may need to establish an office or joint venture in Brazil (depending on the type of business) as it is difficult for U.S. companies to participate in the public sector procurement process at the federal or state levels without a Brazilian partner or a physical presence in-country.

The Brazilian Government's procurement rules apply to purchases made by public entities including state-owned companies. Brazil has an open competition process for major Government procurements. The Government may not make a distinction between domestic and foreign-owned companies during the tendering process; however, when two equally qualified vendors are considered, the law's implementing regulations allow for a preference to Brazilian goods and services.

Brazil uses least-cost procurement methods and price is the overriding factor in selecting suppliers. However, the law allows for the consideration of non-price factors, giving preferences to certain goods produced in Brazil, and stipulating local content requirements for fiscal benefits eligibility. Additionally, nearly all bids require establishment of a local representative for any foreign company participating in the process. Foreign competition in Brazil's transportation sector is strong, with a solid presence of European and Asian companies. Therefore, U.S. should be prepared to compete in that environment.

1.2 Brazil's Transportation Sector

If you want full access to this guide, please fill out the request form at:
https://build.export.gov/brazil/infrastructure_form_requestguide/index.asp



2. AVIATION

2.1 Aviation Opportunities in Brazil

The Brazilian Government's June 2015 decision to concession airports in Florianopolis, Fortaleza, Porto Alegre and Salvador offers U.S. companies the opportunity for market entry.

LATAM Airlines' plan to develop a hub in the Northeast will likely require a substantial amount of airport technologies. Other aviation programs such as the Regional Aviation Development Program (PDAR), include the improvement and modernization of 270 regional airports, poses additional opportunities for U.S. exports.

Because new private airport operators are not bound by traditional public tendering procedures, U.S. companies may engage directly in an effort to feature their products and services. Given the challenging timelines in their concession investment contracts, operators are concerned with timely delivery of products and services.

U.S. businesses should expect private operators to take a long-term view on the technologies they select in that they value quality, and do not let price serve as the sole criterion. Private airport operators typically have a solid understanding of leading aviation technologies.

Current and future concessionaires will need to work with international suppliers of ICT services and systems that support airport applications, in order to improve their respective airports.

There is great opportunity in Brazil's aviation sector and the key for U.S. firms is to engage early in the process. They should make contact with potential private operators (consortiums) that will need aviation services and technologies to fulfill their contractual obligations with the state and federal Governments.

- 2.2 Federal and State Airport Concessions**
- 2.3 Information on Airports to be Concessioned**
- 2.4 Additional State Airports Expected to be Concessioned**
- 2.5 Private Airport and Air Hub Developments in Brazil**
- 2.6 Regional Aviation Development Program (PDAR)**
- 2.7 Brazil Aviation Overview and Regulatory Framework**

If you want full access to sections 2.2 to 2.7, please fill out the request form at:
https://build.export.gov/brazil/infrastructure_form_requestguide/index.asp



3. HIGHWAYS

3.1 Highway Concession Project Opportunities

In June 2015, the Brazilian Government selected 15 highway corridors as candidates for concession. U.S. companies may benefit from these concessions, especially in terms of supplying ITS systems and heavy duty construction equipment. The Government may announce additional concessions in 2016 and U.S. companies should follow this process closely to determine how they can become involved.

New highway operators are not bound by tedious public tendering procedures, allowing U.S. companies to engage directly with concessionaires, as well as those competing for new contracts in 2016. U.S. companies should keep in mind that highway operators face strict timelines, and will require rapid delivery of products and services.

One benefit for U.S. companies is that highway operators are not procuring solely based on low cost; they are looking to acquire quality, dependable highway technology such as ITS and ICT systems to support revenue collection operations. Additionally, the Brazilian Government selected standards from the National Transportation Communications for Intelligent Transportation Systems Protocol (NTCIP) for implementing ITS systems in the country. The type of equipment and services required by each highway concession project varies and that information will not be available until the official bidding begins.

The following provides a list of features, equipment and systems that will most likely be required for the highway concession projects.

ITS Systems Needed

- Implementation of digital monitoring system through CCTV-IVA for 100% highway coverage
- Radio and digital systems for the dissemination of highways conditions (events, closures, weather, etc.)
- Transmission of highway related information to control center
- Implementation of digital systems for managing highway projects such as information exchange between operator and highway users, highway assistance programs for all users (ambulance, towing, repair services)
- Access to highway information 24/7 through Wi-Fi
- Implementation of weigh-in-motion systems
- Implementation of traffic management and control centers
- Implementation/upgrade of electronic toll collection systems (ETC)
- Implementation of variable message sign systems
- Implementation of a “point to point” toll collection system
- ICT equipment such as servers, computers, software and hardware to support the operation and maintenance of the highways

Because highway operators are private entities, they can engage directly with foreign firms, bypassing the federal and state procurement processes, which translates into a less bureaucratic environment for U.S. companies. Some highway operators have import/export licenses that allow them to introduce technologies and equipment based on their demands, thus reducing the need for intermediary services or local agents. This dynamic facilitates the operators' ability to acquire equipment directly from foreign companies.

The key for U.S. firms is to engage early by making contact with private highway operators (consortia) who will require technologies and services to fulfill their contractual obligations with the state and federal Governments.

3.2 Highway Concessions

3.3 2016 Highway Concessions – First Round

3.4 2016 Highway Concessions – Second Round

3.5 State of Sao Paulo Highway Concession Program

3.6 Integrated Network for the Collection of Electronic Information Project

3.7 Brazil Highway Overview and Regulatory Framework

3.8 U.S. Department of Transportation (USDOT) and Brazil's Ministry of Transport (MOT)

If you want full access to sections 3.2 to 3.8, please fill out the request form at:
https://build.export.gov/brazil/infrastructure_form_requestguide/index.asp



4. PORTS

4.1 Market Opportunities in the Port Sector

Through recent investments, Brazil is making great strides to expand and enhance its port sector. The rapid growth at Brazil's production centers drive the need to invest in additional infrastructure expansion. U.S. companies may benefit from these projects in terms of supplying advanced technologies, professional services and civil works in terms of dredging. It is evident that the local Brazilian market on its own cannot supply all of the necessary services and technologies that the port sector needs, representing market entry opportunity for U.S. companies.

Over the next five years, Brazil's port infrastructure will receive an unprecedented flow of new investment, creating a unique window of opportunity for international investors, including U.S. companies. What's driving the investment is the growth of exports such as agriculture and mining commodities, including soy beans and iron ore. As a result of the PIL program, private sector companies will likely invest \$12 billion in Brazil's ports and corresponding terminals.

Brazil has limited experience in deploying advanced port technologies, such as terminal operation and management systems, ICT systems for port operations, Vessel Traffic Management Systems (VTMS), communications and radar technologies, security systems, RFID and OCR systems. As U.S. companies have an excellent track record with feasibility studies, engineering designs and technology, this project may pose an opportunity for them to enter and thrive in the market of Brazil's port sector.

The national dredging program (PND2) expects investments of \$1.8 billion, which U.S. companies may capitalize on. The port security market will likely grow. Brazil has not faced as many threats of terrorism as other countries, which means that until now, it was not highly focused on port security. As globalization continues to make our world more inter-connected, there will be stricter screening and security processes that all international shipments must pass through. There will be enhanced integration of general port security which is likely to require significant investment on security systems including features such as X-ray machines, cargo screening equipment, CCTV systems, OCR and RFID.

Technologies and Services Required in Port Concession Projects:

- Terminal operation and management systems
- ICT systems for port operations
- Vessel Traffic Management Systems (VTMS)
- Communications and radar technologies
- Security systems
- RFID and OCR systems
- Dredging operations

4.2 Vessel Traffic Management System (VTMS)

4.3 Portolog Program

4.4 Dredging Projects

4.5 Port Concession Projects

4.6 Opportunities for Port Area Leasing: Step 1 for Group 1

4.7 Brazil's Port Sector Overview and Regulatory Framework

If you want full access to sections 4.2 to 4.7, please fill out the request form at:
https://build.export.gov/brazil/infrastructure_form_requestguide/index.asp



5. RAILWAYS

5.1 Brazil's Railway Opportunities

Brazil's rail technology market will develop dynamically over the next five to ten years. As the volume of raw materials for export grows, so will the demand to expand rail lines and connect them with the ports. If the Government continues investing in rail infrastructure, the private sector will likely commit to its share of investments. In addition to the agriculture sector, mining companies are big stakeholders in the rail sector and will likely push for development.

The concession of new rail corridors will create a market for products such as:

- Rolling stock;
- Train control systems;
- Signaling and communication systems;
- Track material and equipment;
- Installation of track systems;
- Track inspection systems;
- New freight wagons; and
- Rail maintenance equipment and locomotive spare parts.

The after-sales market (refurbishment, maintenance and repair of rolling stock, renewal and maintenance of infrastructure) is also expected to surge as the freight rail sector grows with more lines, and subsequently requires maintenance. Global leaders in the railway business have already made significant investments in Brazil's manufacturing plans, as they expect a high rate of return.

U.S. companies providing rail equipment and services such as GE, EMD, Progress Rail, RailPro and Harsco, have established manufacturing plants and/or offices in Brazil. U.S. companies should be able to compete in this market, notwithstanding the fact that these U.S. manufactures have to adhere to Brazilian "local content" regulations that require a minimum percentage of domestic content (materials and parts) to be made in Brazil, rather than imported.

5.2 Freight Rail Operators

5.3 Freight Railway Concession Program

5.4 Railway Concession Opportunities in 2016

5.5 Freight Railway Operational Systems Standard

5.6 Overview of Freight Railway and Regulatory Framework

If you want full access to sections 5.2 to 5.6, please fill out the request form at:
https://build.export.gov/brazil/infrastructure_form_requestguide/index.asp



6. MASS TRANSIT SYSTEMS

6.1 Brazil's Urban Passenger Transportation Overview

As urban populations in Brazil continue to grow, so does the demand for transportation options, posing a tremendous challenge for federal, state and municipal governments. The Ministry of Cities is an autonomous federal agency that works to establish strategies, direction and priorities supporting the development of Brazil's cities. One of the Ministry's largest federal programs involves public transportation initiatives such as metros, Bus Rapid Transit (BRT), mass transit and traffic improvement.

Public transportation agencies such as SPTrans in Sao Paulo and the Public Agency for Transportation and Circulation (EPTC) in Porto Alegre are planning to implement Advanced Public Transportation Systems (APTS) for their bus fleet, and associated control centers for bus management operations. There is strong interest in incorporating ITS and ICT in public transportation systems, as state and municipal transportation agencies seek solutions for improving the safety and efficiency of existing systems.

6.2 Passenger Rail Transportation Projects

6.3 Bus Public Transportation System Project

6.4 Porto Alegre's Public Agency for Transportation and Circulation (EPTC)

If you want full access to sections 6.2 to 6.4, please fill out the request form at:
https://build.export.gov/brazil/infrastructure_form_requestguide/index.asp



FINANCING

7. FINANCING

The main sources of infrastructure funding in Brazil are financing on the capital markets, including infrastructure debentures and credit lines from the Brazilian Development Bank (BNDES). This section of the report provides information released by the Brazilian Government on the various sources and mechanisms for financing transportation infrastructure.

7.1 Capital Market Tools

The Brazilian Government has developed new capital market tools to incentivize foreign investors to fund local transportation infrastructure projects. Infrastructure debentures (Debentures de Infraestrutura) were created in 2010, offering non-resident investors an exemption from corporate income tax and financial transactions tax.

Non-resident investors can also enter the market through infrastructure-linked investment funds (Fundos de Investimento em Direitos Creditorios – FIDCs). With this funding mechanism, non-resident investors are exempt from income tax and financial transaction taxes for investments in funds allocating at least 85% of the fund’s assets to Infrastructure Debentures.

7.2 The Brazilian Development Bank (BNDES)

7.3 Other Financial Institutions

7.4 Additional Organizations Promoting U.S. Exports in Brazil

If you want full access to sections 7.2 to 7.4, please fill out the request form at:
https://build.export.gov/brazil/infrastructure_form_requestguide/index.asp

