

## Brazil & Japan - Work Group



# PPI

INVESTMENT  
PARTNERSHIPS  
PROGRAM

# CRESCER

Investment . Infrastructure . Employment



Aug 31, 2017

## WHAT IS THE PPI?

The logo consists of the letters 'PPI' in a bold, white, sans-serif font. The first 'P' and the first 'I' have a yellow-to-white gradient fill, while the second 'I' is solid white. The letters are set against a solid green rectangular background.

**INVESTMENT  
PARTNERSHIPS  
PROGRAM**

The **Investment Partnerships Program (PPI)** was launched in May 2016, aiming at coordinating and supervising concessions and privatizations projects in the Federal level in Brazil

**PPI's Special Secretariat** works on the support to Ministries and Regulatory Agencies in planning, modeling and monitoring the portfolio of projects

PPI's chief goals are: (i) to extend **transparency, participation and governance** to a solid portfolio of projects, (ii) to encourage **competitiveness** among potentially interested parties and (iii) to improve the **quality of services** provided to the Brazilian population.



**AUCTIONS AND  
RENEWALS CARRIED OUT**

## AUCTIONS AND RENEWALS CARRIED OUT

PPI Projects:

**146**

**49**

Auctioned/renewed

**BRL 23,9 billion**

Planned investments



Airports

**4**

Concessions



Port Terminals

**7**

**3** Biddings

**4** Renewals



Oil and Gas

**1**

Concession for exploring areas with Marginal Fields accumulations



Power

**1**

Renewal  
Power generation plants  
(PCH Pery)

**1**

Power Distribution  
(CELG-D)

**35**

Transmission Lots

**31** Acquired

**4** Without proposal



## RESULTS OF AUCTIONS

Type of Project	Grant / Bonus (BRL)			Investments (BRL)
	Estimated	Obtained	Average Premium	
Airport concessions	3.01 bi	3.72 bi	23%	6.61 bi
Port Terminals	15.0 mi	69.4 mi	360%	1.11 bi
Oil and Gas Concession	0.45 mi	7.98 mi	1669%	9.10 mi
Privatization of Power (Distribution)	1.71 bi	2.19 bi	28%	3.40 bi
Extension of Generation Power Plant	-	-	-	128.4 mi
	<b>4.7 bi</b>	<b>5.9 bi</b>		<b>11.26 bi</b>
Sector	Discount (BRL)			Investments (BRL)
	Planned RAP	RAP Obtained	Average discount	
Power Transmission Concession	2.63 bi	1.67 bi	36%	12.73 bi
	<b>2.6 bi</b>	<b>1.7 bi</b>		<b>12.7 bi</b>



**ONGOING AUCTIONS AND  
RENEWALS**

## PROJETO CRESCER – IN PROGRESS

**97**  
Projects



Highways

**8**

4 Biddings  
4 Studies



Railways

**8**

5 Renewals  
3 Biddings



Electric Power

**23**

UHE - 4 Biddings  
1 Extension  
11 Transmission Lots  
6 Distributors  
1 Privatization



Oil and gas

**6**

3 Pre-salt sharing  
2 Exploration and Production  
1 Marginal accumulation



Mining

**4**

Concession to exploitation of Mining areas



Airports

**18**

14 Concessions  
4 Shareholding sell



Port Terminals

**25**

7 Renewals/ Rebalancing  
17 Biddings  
1 Expansion



COMAER

**1**

Public-Private Partnership (PPP)



Lottery

**1**

Concession of the right to exploit



Currency House

**1**

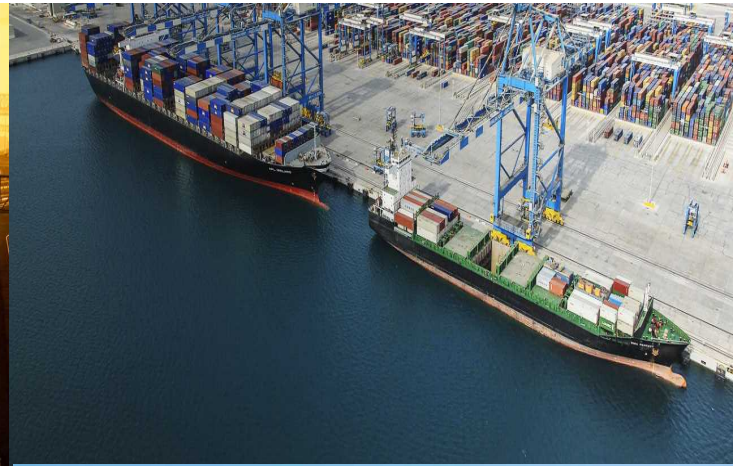
Privatization



Supply

**2**

CEASAMINAS  
CASEMG  
Privatization



# Highways, Railways, Ports & Airports

Estimated investments:  
7,2 bi





# Logistics projects interconnecting important poles and cargo flow

## LOGISTICS

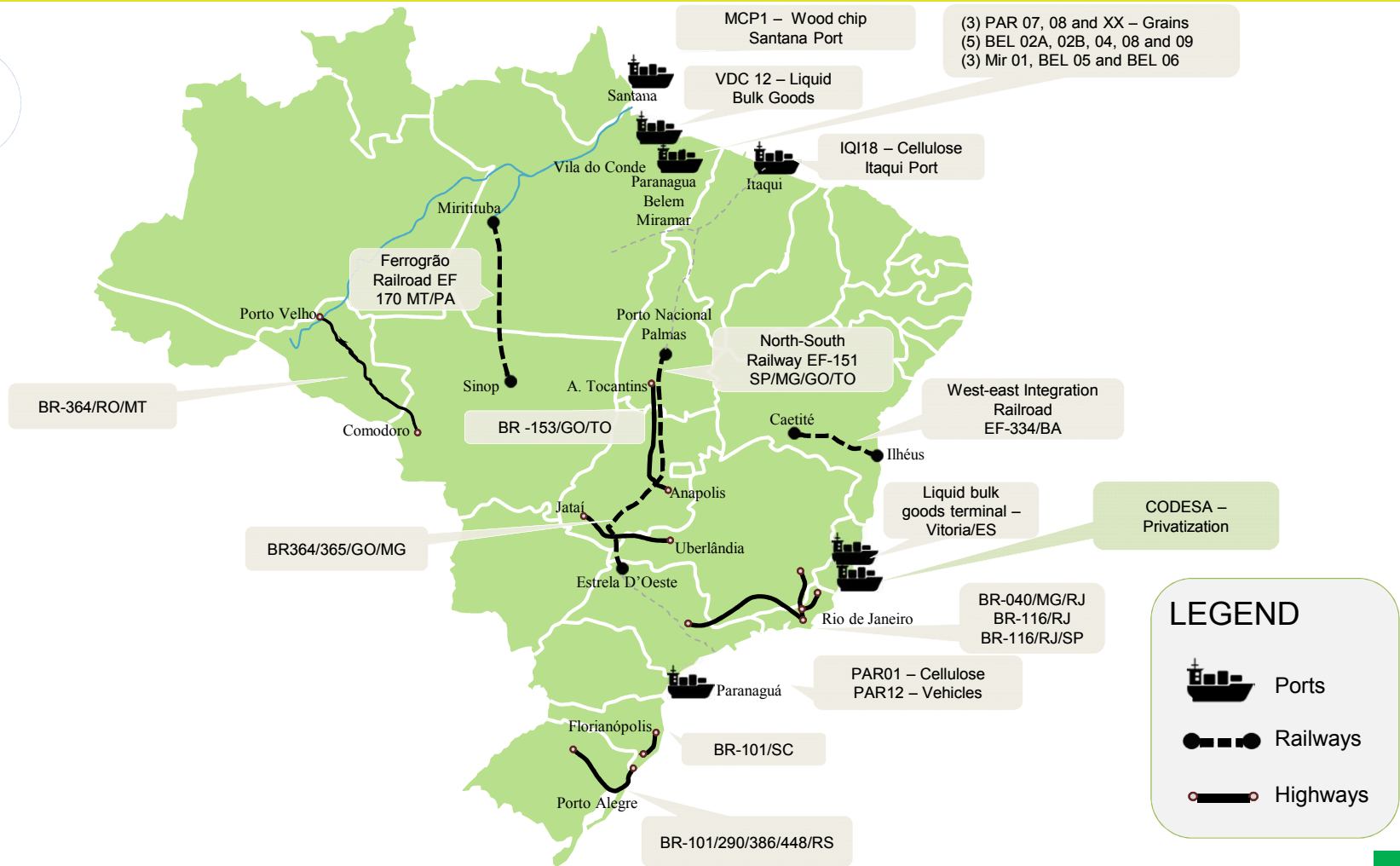
ENERGY

MINING

OIL & GAS

DEFENSE

SUPPLY & FINANCE



### LEGEND

- Ports
- Railways
- Highways

# Further efforts from private and public sectors to improve the quality for airport infrastructure and services needed

## LOGISTICS

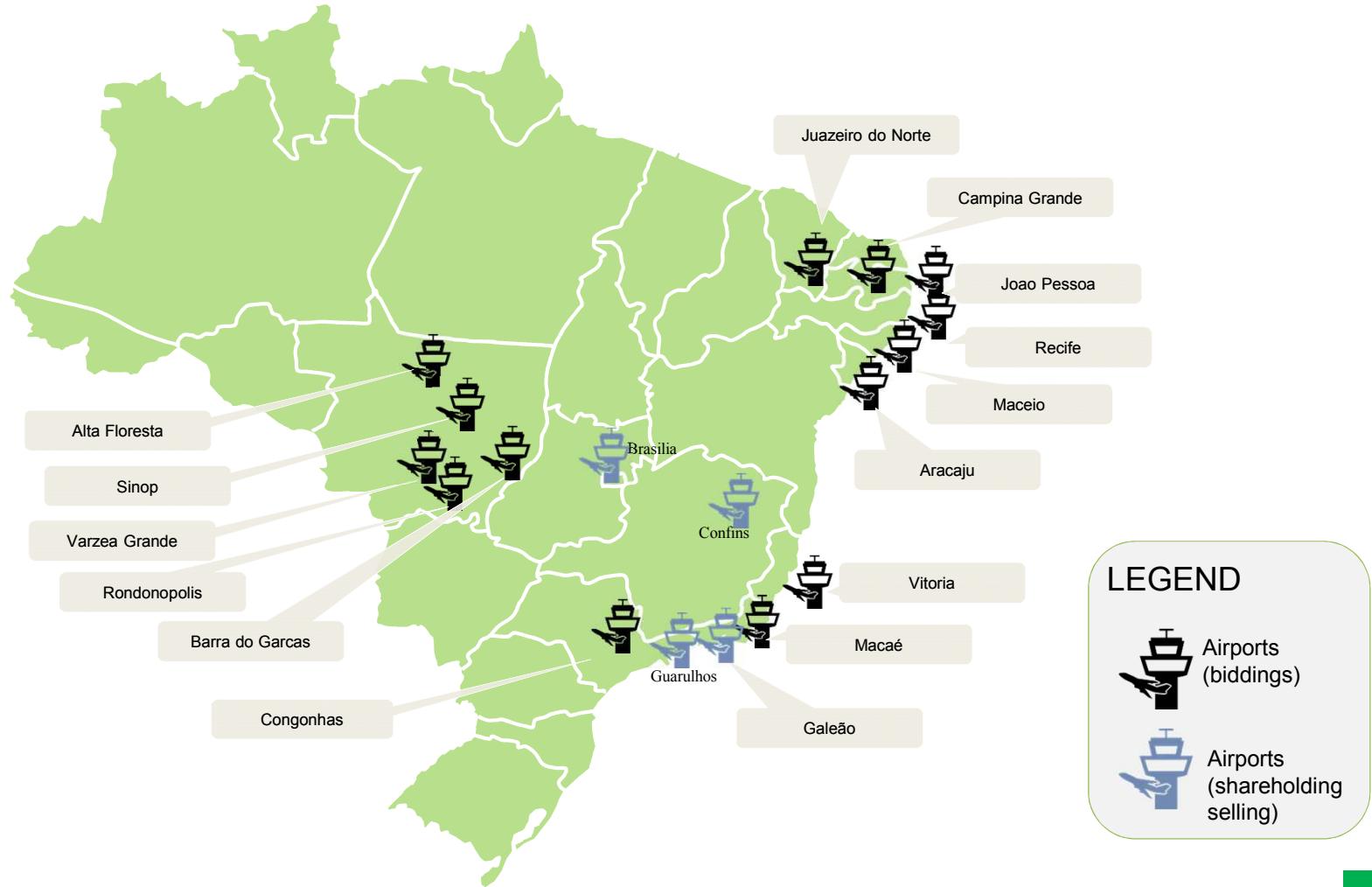
ENERGY

MINING

OIL & GAS

DEFENSE

SUPPLY & FINANCE



**LEGEND**

-  Airports (biddings)
-  Airports (shareholding selling)

Source: PPI Secretariat.



**ENERGY  
OIL & GAS  
MINING**

**Estimated investments: BRL 18,7 bi**

**Estimated Grant/Bonus: BRL 20,5 bi**

# Concession of power plants and transmission lines & privatization of a power utility company

LOGISTICS

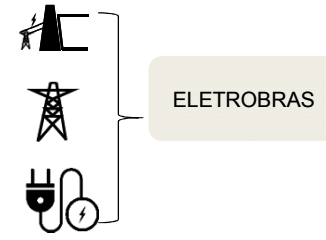
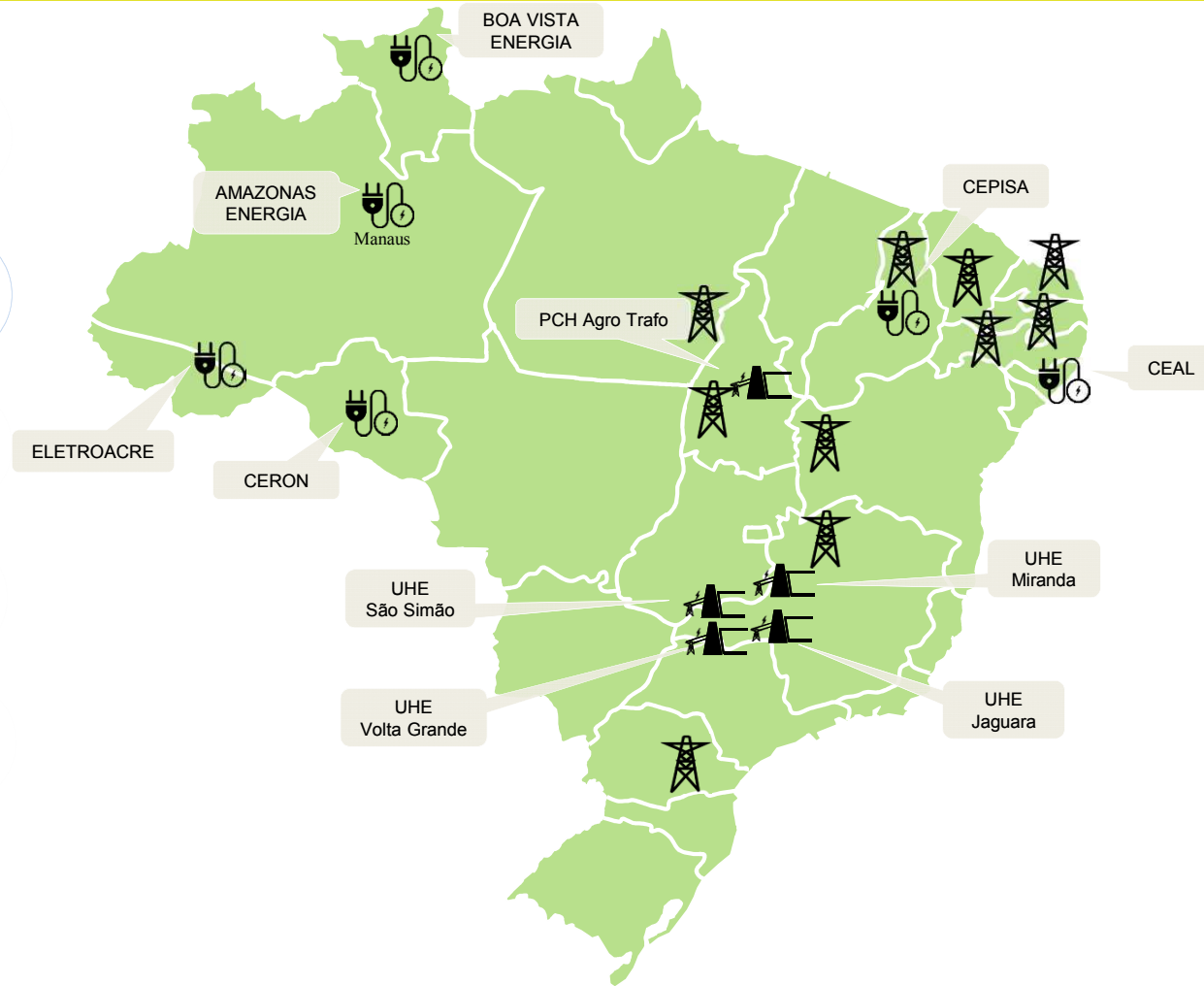
**ENERGY**

OIL & GAS

MINING

DEFENSE

SUPPLY & FINANCE



**LEGENDA**

- Generation
- Transmission
- Distribution

Source: PPI Secretariat.

# Projects that are strong drivers of the economy, a sector that represents almost 15% of the national GDP

LOGISTICS

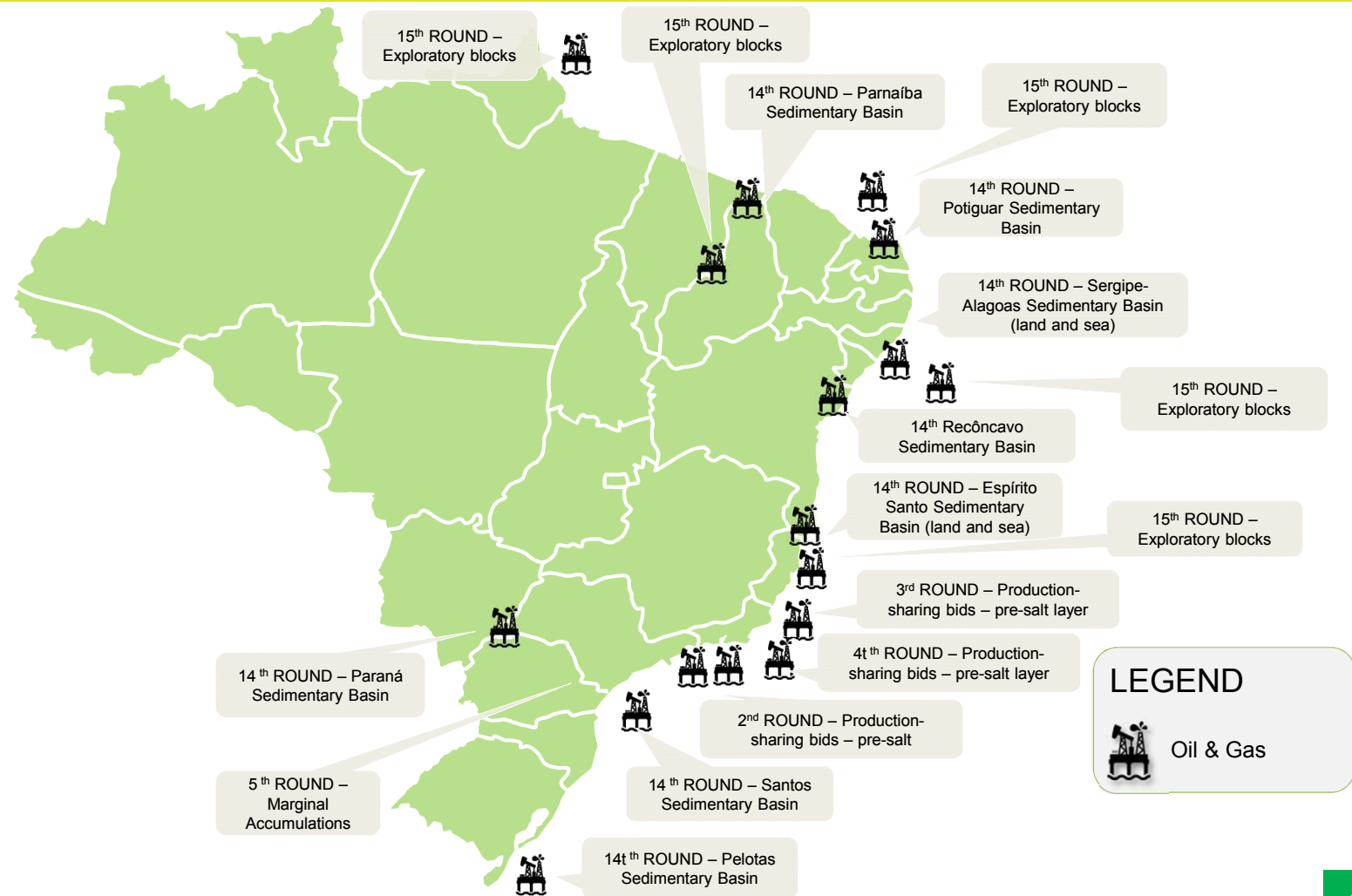
ENERGY

**OIL & GAS**

MINING

DEFENSE

SUPPLY & FINANCE



# New sector under concessions, mining allows the opening of attractive investment fronts

LOGISTICS

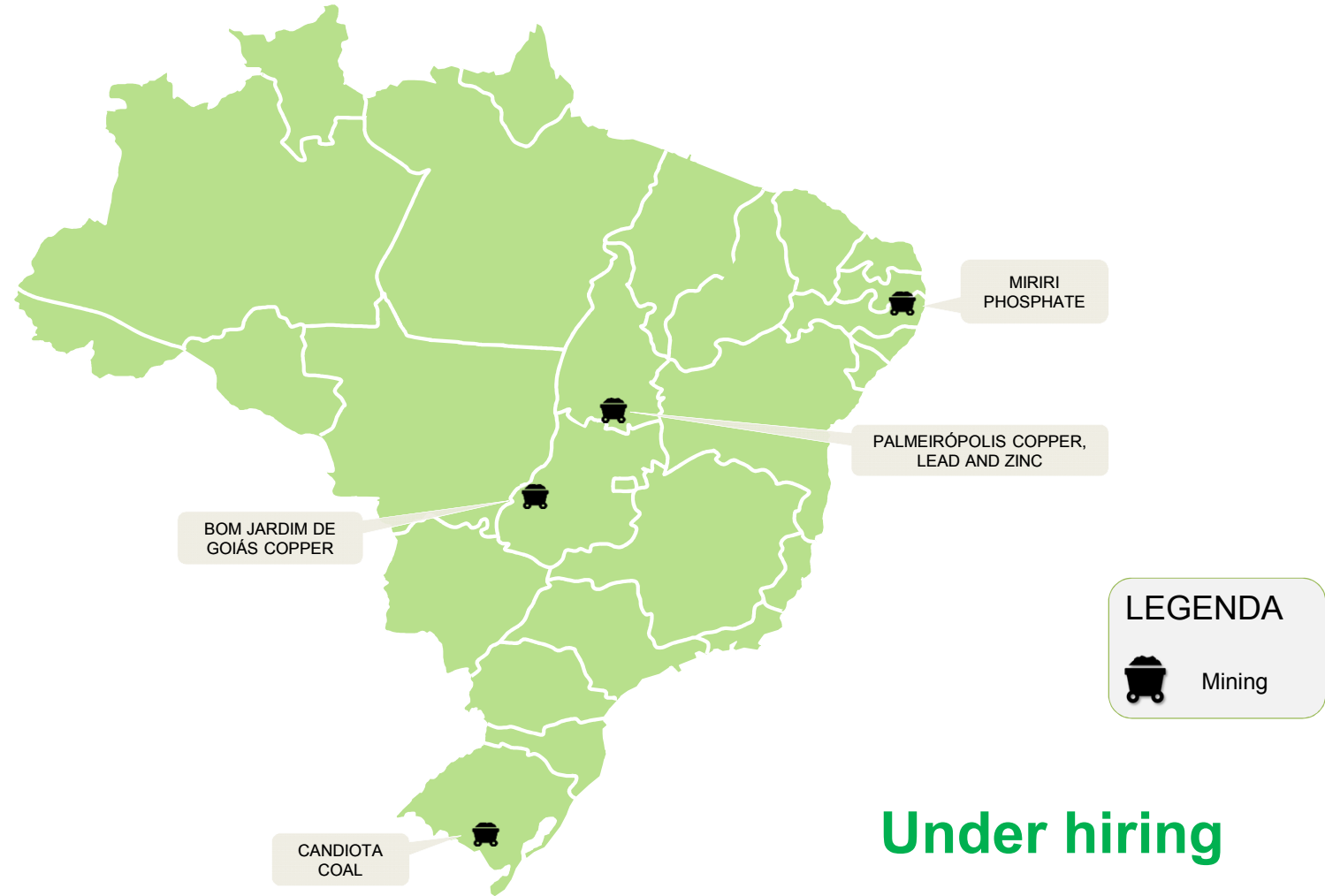
POWER

OIL & GAS

**MINING**

DEFENSE

SUPPLY &  
FINANCE



**Under hiring**

## Defense (PPP)



1<sup>st</sup> Federal PPP  
25 years

Estimated investments: BRL 1,09 bi

# Public Private Partnership (PPP) for Brazilian Air Force's networks integrated management in an administrative mode with value for money

LOGISTICS

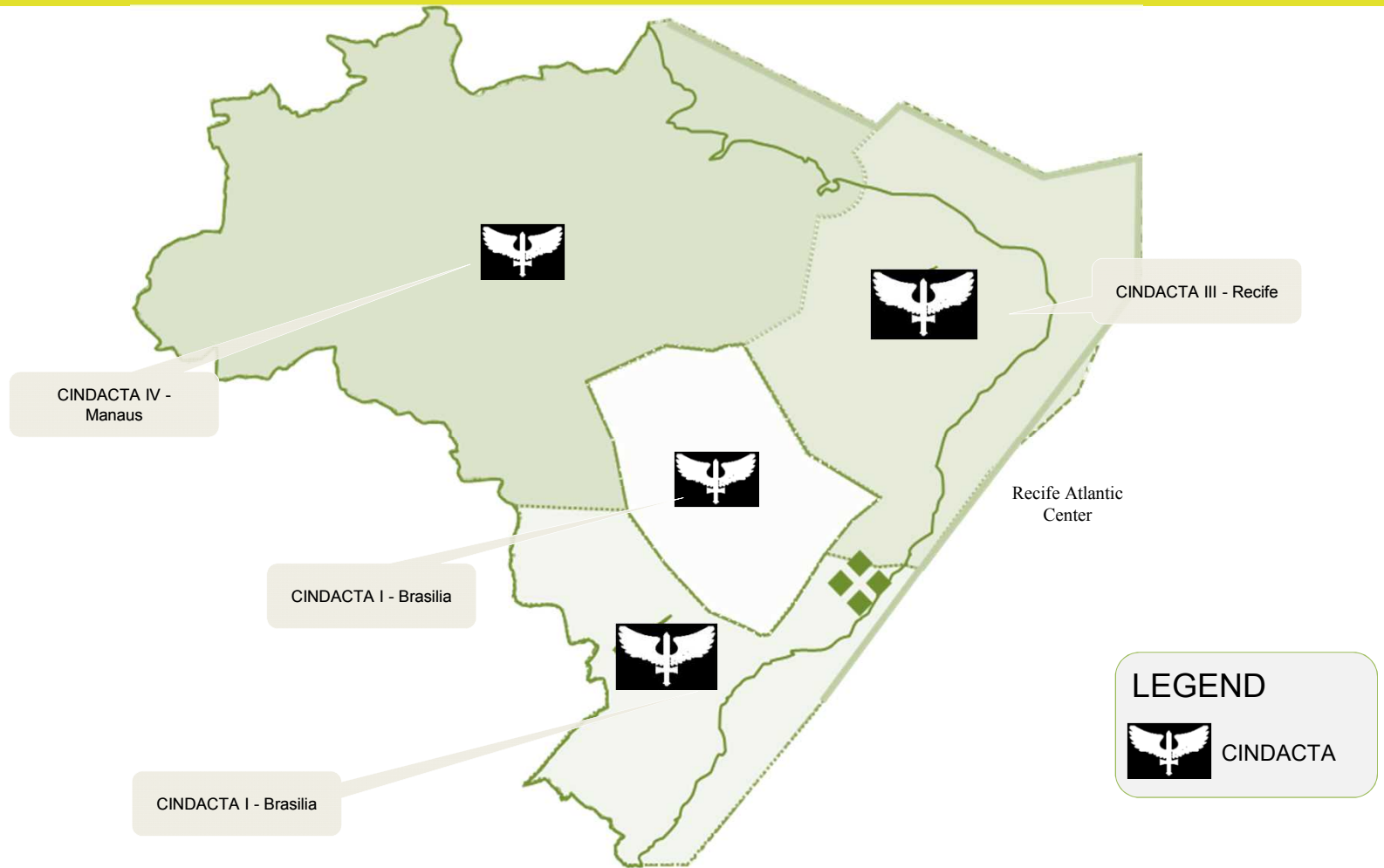
ENERGY

OIL & GAS

MINING

**DEFENSE**

SUPPLY & FINANCE







# SUPPLY & FINANCE

CEASAMINAS  
CASEMG  
LOTEX  
CASA DA MOEDA



# Privatization process needed to improve the efficiency of each sector

LOGISTICS

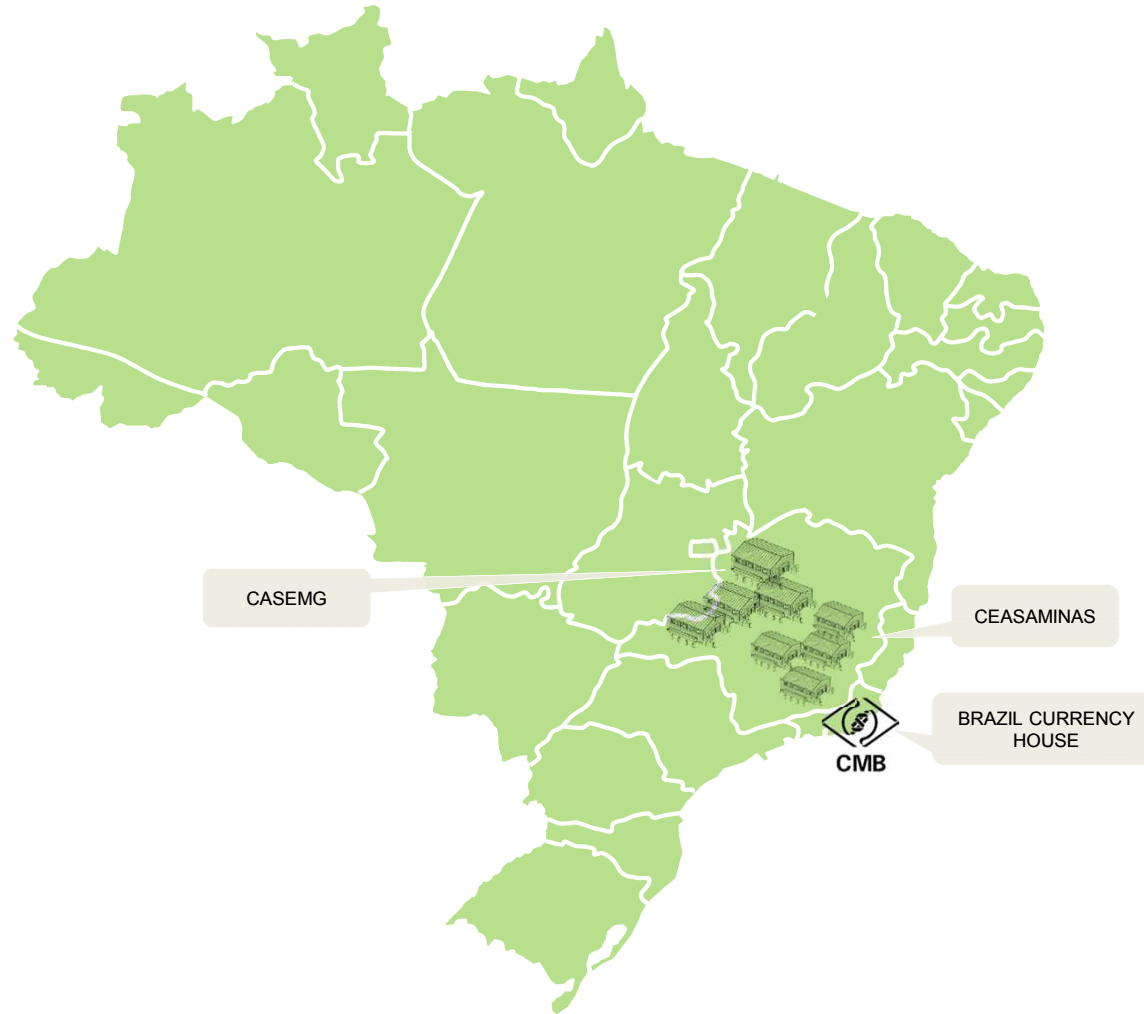
ENERGY

MINING

OIL & GAS

DEFENSE

**SUPPLY & FINANCE**



**LEGEND**

-  Supply
-  Finance
- CMB**

## Deliverables of PPI until 4<sup>th</sup> quarter/17

Meeting of PPI	Projects	Auction/Renewals	
1 <sup>st</sup> and 2 <sup>nd</sup> meeting of PPI projects with informed auction/renewals	São Simão	3 <sup>rd</sup> quarter/17	
	Miranda		
	Volta Grande		
	1 <sup>st</sup> and 2 <sup>nd</sup> meeting of PPI with expected renewals	2 <sup>a</sup> . Rod. Pré-sal	4 <sup>th</sup> quarter/17
		14 <sup>a</sup> . Rod. BI.Expl.	3 <sup>rd</sup> quarter/17
		Lotex	4 <sup>th</sup> quarter/17
		PCH Agro Trafo	
CONVICON			
3 <sup>rd</sup> meeting of PPI with expected renewals	NITPORT	3 <sup>rd</sup> quarter/17	
	NITSHORE		
	Caramuru		
3 <sup>rd</sup> meeting of PPI with expected renewals	DECAL	4 <sup>th</sup> quarter/17	
	Malha Paulista	4 <sup>th</sup> quarter/17	
	Paranaguá Celulose		
	Paranaguá Veículos		
Itaqui Celulose			
3 <sup>rd</sup> meeting of PPI with expected renewals	PPP COMAER	4 <sup>th</sup> quarter/17	
	Jaguara	3 <sup>rd</sup> quarter/17	
	3 <sup>a</sup> . Rodada Pré-sal	4 <sup>th</sup> quarter/17	
	11 Linhas de Trans.		
	MIR01(GLP Miramar)		



INVESTMENT  
PARTNERSHIPS  
PROGRAM

**Governance, transparency and participation**

**Improvement of political (Ministries) and technical capacities (Regulators)**

**Legal and environmental certainty, rationality, accountability and predictability**

**Competitiveness and public interest**

**Monitoring and responsiveness**



**Marco Aurelio Barcelos**  
Secretary for Investments and Partnerships

marco.barcelos@presidencia.gov.br  
[www.ppi.gov.br](http://www.ppi.gov.br)

Aug 31, 2017

MINISTÉRIO DOS  
TRANSPORTES, PORTOS  
E AVIAÇÃO CIVIL



# PROGRAMA DE AVIAÇÃO REGIONAL

Agosto/2017

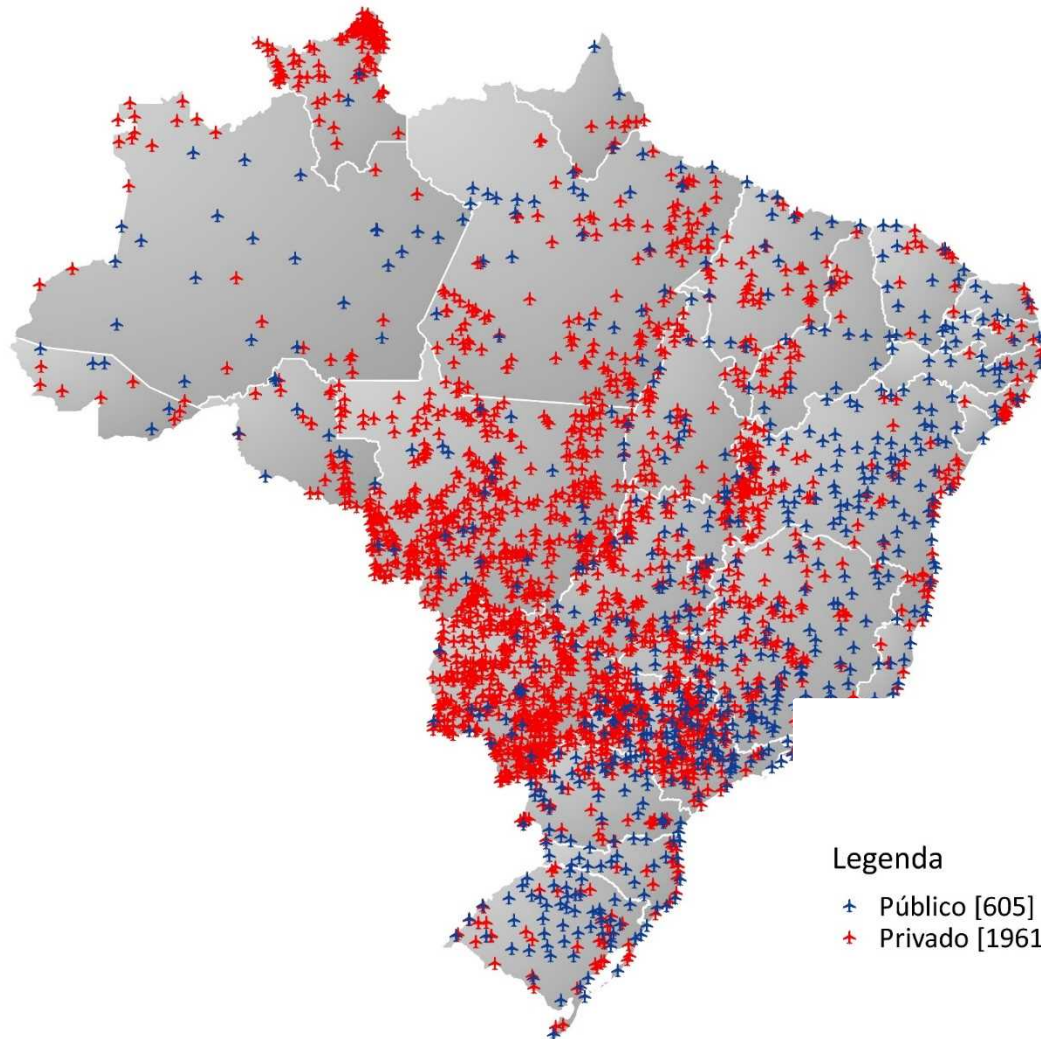


## ROTEIRO

- Cenário da infraestrutura da aviação civil no Brasil
- Diretrizes do Programa
- Construção da rede regional
- Ações do programa
- Recursos e cronograma



## Cenário da Infraestrutura – Aviação Civil



Legenda

- + Público [605]
- + Privado [1961]

# AERÓDROMOS NO PAÍS

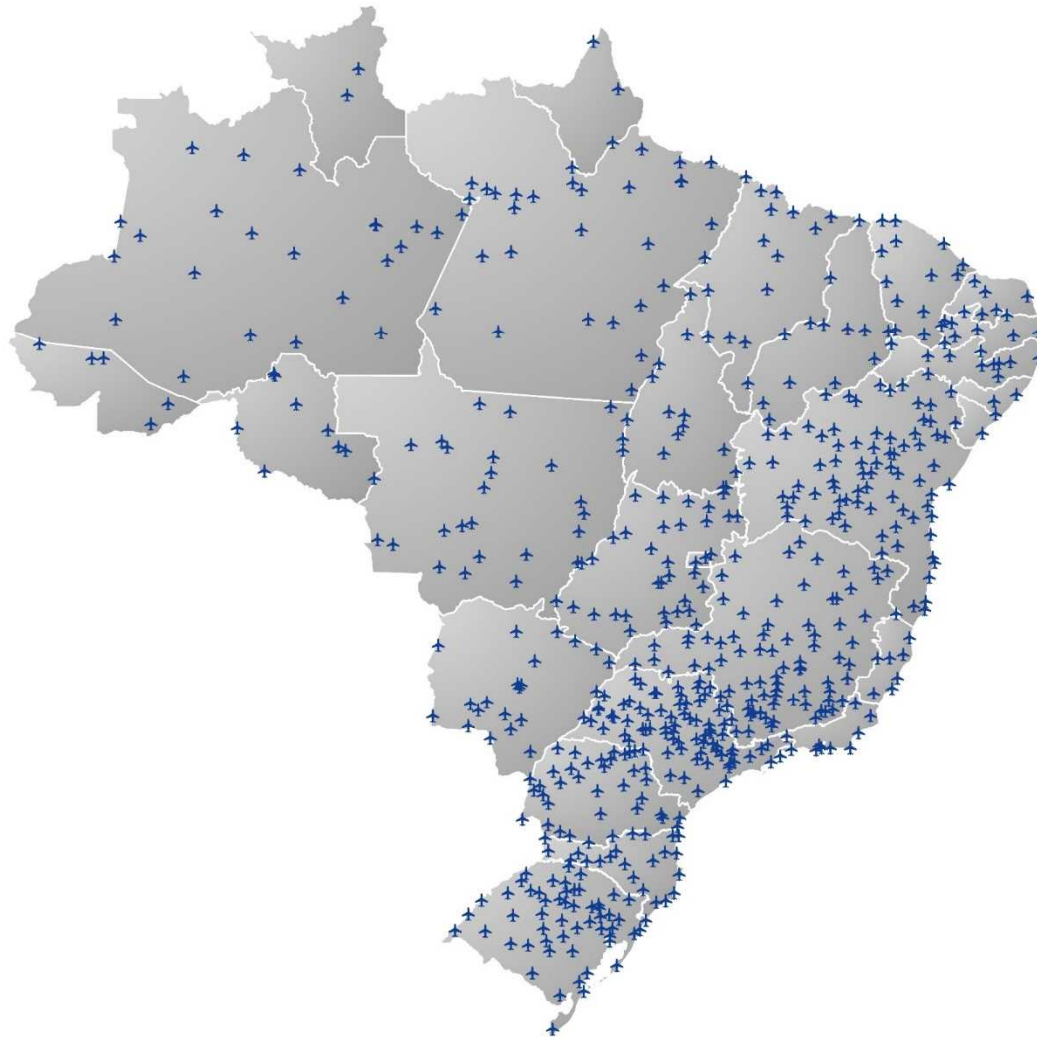
**1.961**  
**PRIVADOS**

**605**  
**PÚBLICOS**





Ministério dos Transportes,  
Portos e Aviação Civil



# AERÓDROMOS NO PAÍS

1.961  
PRIVADOS

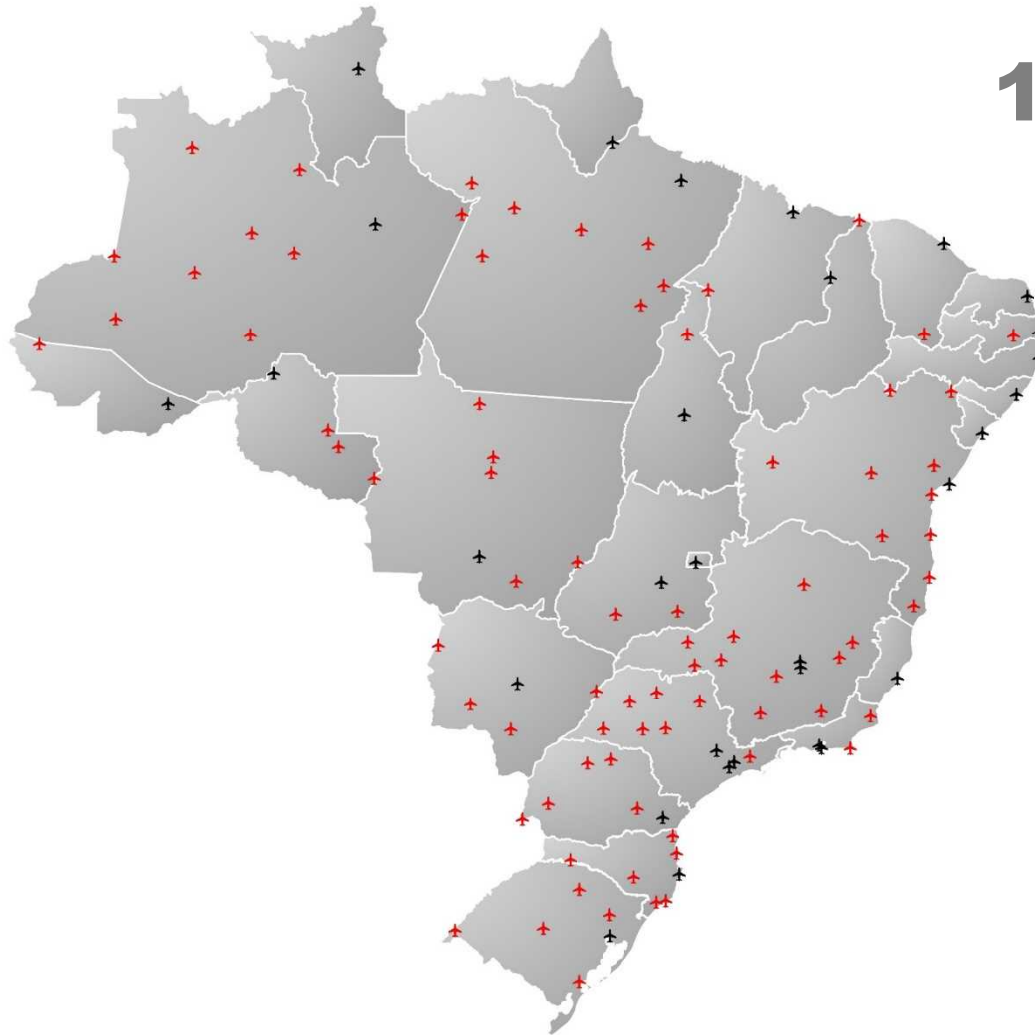
605  
PÚBLICOS



113  
operam voos regulares



Ministério dos Transportes,  
Portos e Aviação Civil



# 113 AEROPORTOS COM VOOS REGULARES

**83**

**atendem o interior  
dos Estados**

**30**

**atendem às operações  
aéreas comerciais  
nacionais e internacionais**

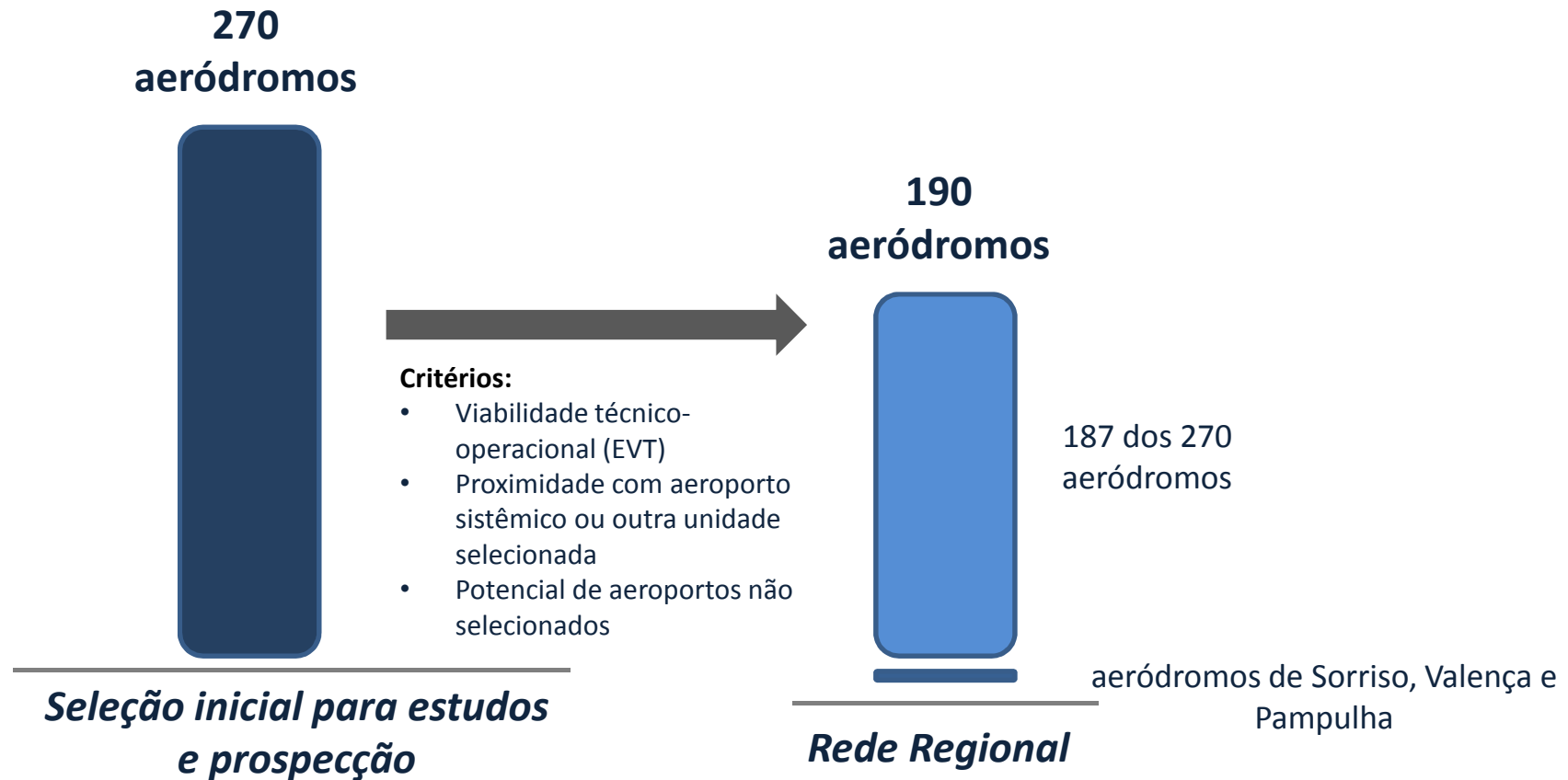


## Diretrizes do Programa

- Aumento da cobertura espacial e demográfica dos serviços, atendendo aos requisitos de segurança e fluidez
- Estabelecimento das redes regional e complementar (local) de aeroportos
- Recuperação, equalização e ampliação da capacidade instalada nos aeroportos (clientes atendidos por unidade de tempo)
- Ampliação da prontidão operacional dos aeroportos (tempo total disponível para atendimento aos clientes)
- Acessibilidade universal
- Sustentabilidade

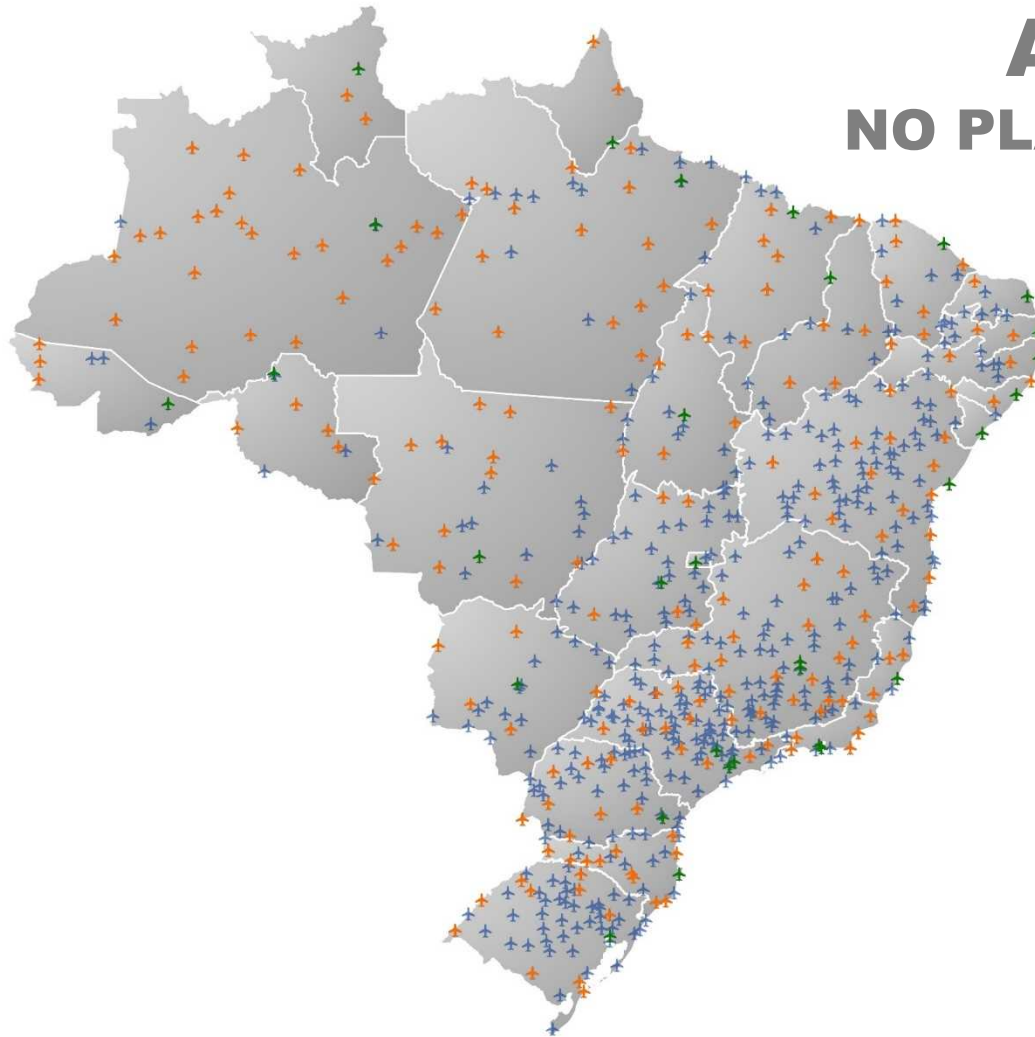


## Construção da Rede Regional





# AERÓDROMOS NO PLANEJAMENTO DO SETOR



**30**  
**NACIONAIS**

**190**  
**REDE REGIONAL**

**385**  
**INTERESSE LOCAL /  
COMPLEMENTAR**



## Ações do Programa

### 1. Investimentos em andamento

- Ampliação da capacidade e modernização dos terminais de passageiros
- Aumento da dimensão e da capacidade de suporte dos sistemas de pistas, taxiways e pátios de aeronaves
- Sistemas e equipamentos de apoio à navegação aérea

### 2. Gargalos de segurança (safety & security)

- Veículos para combate à incêndio em aeroportos (CCI)
- Equipamentos para inspeção de segurança (raio-X, pórtico e raquetes)

### 3. Modernização dos sistemas de navegação aérea

### 4. Acessibilidade

### 5. Investimentos previstos



## Investimentos em andamento: critérios 2017/18

<b>INDICADORES DE CUSTO</b>	CUSTO DO INVESTIMENTO POR PASSAGEIRO	
<b>INDICADORES DE OPERAÇÃO</b>	OPERA NO CENÁRIO ATUAL	PROXIMIDADE COM AEROPORTOS SISTÊMICOS
<b>INDICADORES DE BENEFÍCIOS</b>	PARTICIPAÇÃO DA DEMANDA NA REDE (POTENCIAL E REAL)	POTENCIAL DE RENTABILIDADE DO OPERADOR AEROPORTUÁRIO
	COBERTURA DA POPULAÇÃO NA AMAZÔNIA LEGAL	COBERTURA DA POPULAÇÃO EM ATÉ 120 MIN DE DESLOCAMENTO
<b>ELEMENTOS ADICIONAIS PARA ANÁLISE E TOMADA DE DECISÃO</b>	INTERESSE DAS COMPANHIAS AÉREAS	INTERESSE DO ESTADO EM ASSUMIR A OPERAÇÃO DO AERÓDROMO
	FATORES EXTERNOS QUE ATRASEM OU INVIABILIZEM A IMPLANTAÇÃO DO EMPREENDIMENTO	FASE DO EMPREENDIMENTO

## *AERÓDROMOS SELECIONADOS*

**270**

AERÓDROMOS

**190**

REDE  
REGIONAL

**177**

DEMANDAM  
INVESTIMENTOS

**58**

PRIORITÁRIOS





# PRIORIDADES

UF	PRIORITÁRIOS	RECOMENDADOS
AC	1	2
AL	2	2
AM	4	25
AP	0	1
BA	3	13
CE	3	6
<b>DF</b>	<b>0</b>	<b>0</b>
ES	1	3
GO	2	5
MA	3	8
MG	3	19
MS	1	5
MT	4	12
PA	5	14
PB	2	2
PE	2	4
PI	2	5
PR	3	8
RJ	2	4
RN	1	1
RO	3	5
<b>RR</b>	<b>0</b>	<b>0</b>
RS	4	10
SC	2	7
<b>SE</b>	<b>0</b>	<b>0</b>
SP	3	12
TO	2	3
	<b>58</b>	<b>177</b>



# Investimentos em andamento: Convênios



Ministério dos Transportes,  
Portos e Aviação Civil

NÚMERO DO CONVÊNIO	UF	MUNICÍPIO	OBJETO	STATUS	
				VALOR UNIÃO	STATUS
769301/2012	BA	VITÓRIA DA CONQUISTA (LADO AR)	Construção do novo Aeroporto - Sistema de pista e pátio; cerca; e balizamento noturno	R\$ 47.763.366,32	PRESTAÇÃO DE CONTAS APROVADA
761586/2011	RS	SANTO ÂNGELO	Restauração e reforço da PPD, taxiway e pátio de aeronaves; sinalização horizontal, execução de cerca de proteção	R\$ 3.595.086,78	EM FASE DE PRESTAÇÃO DE CONTAS
775634/2012	PE	FERNANDO DE NORONHA	Reforma do sistema de pistas e pátios de aeronave, balizamento noturno, acesso a seção contra incêndio, sinalização horizontal e cerca	R\$ 13.340.385,91	EM FASE DE ENTREGA DAS OBRAS
763213/2011	SC	CORREIA PINTO	Implantação de balizamento noturno, farol rotativo e biruta iluminada	R\$ 1.312.599,72	AGUARDANDO ENVIO DAS MEDIÇÕES
839114/2016	SP	SOROCABA	Implantação de EPTA cat. especial.	R\$ 6.940.303,68	EM FASE DE PROJETOS
763876/2011	AL	PENEDO	Alargamento, pavimentação e recuperação da PPD, da pista de taxi e do pátio de aeronaves, cerca patrimonial, sinalização horizontal/vertical, balizamento noturno	R\$ 3.921.887,44	EM FASE DE PROJETOS
822719/2015	BA	VITÓRIA DA CONQUISTA (LADO TERRA – TPS)	Construção do TPS, aquisição e instalação dos equipamentos de auxílio à navegação, complemento da cerca operacional, reservatórios de água, iluminação de via de contorno, mobiliários e equipamentos do SESCINC, iluminação do pátio de aeronaves e implantação de redes de telecomunicações	R\$ 44.955.000,00	EM FASE DE PROJETOS
839130/2016	MS	BONITO	Execução de serviços de recapeamento na PPD, pista de taxi e pátio de aeronaves, reforma e ampliação da SCI, aquisição e implantação do PAPI	R\$ 3.877.057,14	EM FASE DE PROJETOS
839133/2016	MS	COXIM	Execução de serviços de recapeamento na PPD, pista de taxi e pátio de aeronaves, e Implantação da Cerca Operacional	R\$ 2.878.183,38	EM FASE DE PROJETOS
821221/2015	PB	ARARUNA	Serviços de Modernização e Melhorias no Aeródromo	R\$ 1.500.000,00	EM FASE DE PROJETOS
839458/2016	RO	CACOAL	Implantação de auxílios a navegação PAPI, EPTA e Estação Meteorológica para operação em IFR.	R\$ 2.103.059,60	EM FASE DE PROJETOS



## Investimentos em andamento: Convênios

NÚMERO DO CONVÊNIO	UF	MUNICÍPIO	OBJETO	STATUS	
				VALOR UNIÃO	STATUS
761964/2011	ES	LINHARES	Construção de nova PPD e de nova pista de táxi; melhoramento da pista de táxi existente "B"; ampliação do pátio de aeronaves; sinalização horizontal; sinalização luminosa na nova PPD e na pista de táxi.	R\$ 7.929.161,73	EM FASE DE EMISSÃO DA LICENÇA DE INSTALAÇÃO E DESAPROPRIAÇÃO
777179/2012	PB	CAJAZEIRAS	Construção do balizamento noturno	R\$ 1.052.994,65	EM OBRAS
827668/2016	CE	ARACATI	Implantação de EPTA, Categoria A	R\$ 2.137.860,00	EM OBRAS
836760/2016	CE	JIJOCA DE JERICOACOARA	Implantação de EPTA Categoria "A" e construção de vias operacionais, construção de cerca operacional e aquisição de mobiliário para Terminal de Passageiros	R\$ 12.270.944,80	EM OBRAS
762960/2011	PR	CASCADEL	Construção do novo TPS	R\$ 3.537.915,98	OBRAS PARALISADAS - EM FASE DE NOVA LICITAÇÃO



## Investimentos em andamento: Termos de Compromisso

NÚMERO DO TC	UF	MUNICÍPIO	OBJETO	STATUS	
				VALOR UNIÃO	STATUS
001/2017	PE	<b>SERRA TALHADA</b>	Projeto Básico e Executivo, construção do Terminal de Passageiros - TPS, Seção Contra incêndio - SCI e Pátio de estacionamento de Aeronaves e pista de taxi	R\$ 20.000.000,00	EM FASE DE PROJETOS
002/2017	PR	<b>MARINGÁ</b>	Projetos, ampliação e recuperação da PPD, taxiway paralela, recuperação de taxiways, acostamentos nas taxiways existentes, pátio de aeronaves, reforma e ampliação da Seção Contra Incêndio, implantação de auxílios à navegação aérea e obras complementares	R\$ 112.080.638,90	EM FASE DE PROJETOS
003/2017	SP	<b>RIBEIRÃO PRETO</b>	Estudos e projetos, ampliação do TPS, recapeamento da PPD, implantação de turnaround nas cabeceiras e ampliação do pátio de estacionamento de aeronaves	R\$ 79.920.000,00	EM TRATATIVAS
004/2017	PI	<b>BOM JESUS</b>	Reforma e ampliação da PPD; novo TPS; balizamento noturno, CUT e Equipamentos de auxílio a navegação aérea	R\$ 22.000.000,00	EM TRATATIVAS



## Investimentos em andamento: TEDs

UF	MUNICÍPIO	OBJETO	STATUS	
			VALOR UNIÃO	STATUS
AM	IAUARETÊ	Ampliação de 1600x30 para 2000x30 m, com reforço dos pavimentos em concreto. Obra COMARA	R\$ 6.719.241,70	Em fase de celebração
AM	ESTIRÃO DO EQUADOR	Ampliação de 1200x30 para 1500x30 m com reforço dos pavimentos em concreto. Obra COMARA	R\$ 11.694.335,54	Em fase de celebração
AM	LÁBREA	Ampliação e adequação as condições de segurança operacional - Obra COMARA	R\$ 8.433.823,50	Em fase de celebração
AM	COARI	Ampliação e adequação as condições de segurança operacional - Obra COMARA	R\$ 8.652.599,26	Em fase de celebração
AP	OIAPOQUE	Instalação de cerca operacional, sinalização horizontal e recuperação do balizamento noturno	R\$ 2.500.000,00	Em fase de celebração
AM	MOURA - BARCELOS	Recapeamento e Finalização da lateral restante com a sua ampliação em tratamento superficial duplo (TSD) na pista de pouso e decolagem do aeródromo	R\$ 7.500.000,00	Em fase de celebração
RS	SANTA MARIA	Sinalização Luminosa	R\$ 1.500.000,00	Em fase de celebração
BR	ESTUDOS E PROJETOS	Complementação de Projetos para as obras com previsão de execução pela COMARA para os aeroportos de COARI, LABREA, BOCA DO ACRE, BREVES, MARAÃ e MARECHAL TRAUMATURGO	R\$ 4.500.000,00	Em fase de celebração
BR	EQUIPAMENTOS DE NAVEGAÇÃO AÉREA	Estação Meteorológica de Superfície - Automática (EMS-A) ILS Cat I (Instrument Landing System) Estação Meteorológica de Superfície - Cat I (EMS Cat I)	R\$ 80.000.000,00	Em fase de assinatura



## Gargalos de segurança (safety & security)

### Veículos para combate à incêndio

**89 Veículos Adquiridos**

**83 Aeroportos Contemplados**

**82 Aeroportos Beneficiados**  
(até agosto de 2017)

**1 Veículos a distribuir**



**Pórticos / Raio-X / Detectores Manuais  
mínimo de 41 aeroportos**



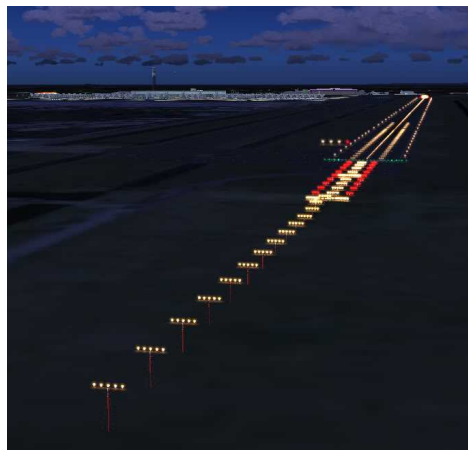


# Modernização dos sistemas de navegação aérea

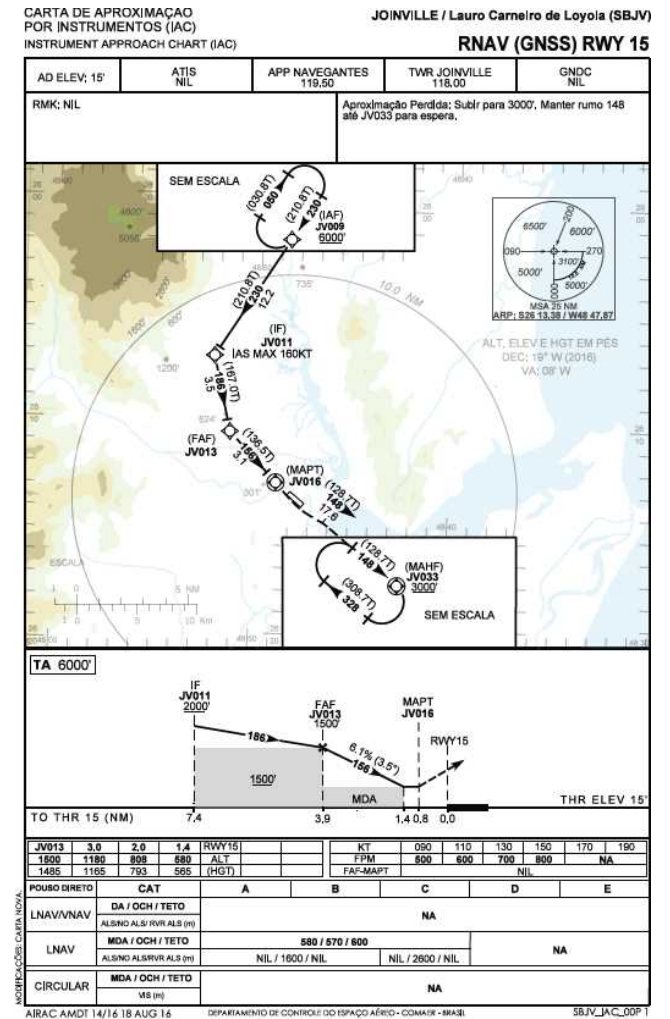


EMS-A

ALS



ILS





## Acessibilidade

### Edificações

Todos os projetos de edificações  
incorporando requisitos de  
acessibilidade universal



### Lado ar (pistas e pátios)



Avi-Rampa em 23 aeroportos  
com operações regulares





## Investimentos Previstos

UF	MUNICÍPIO	OBJETO	STATUS	
			VALOR UNIÃO	STATUS
RS	PASSO FUNDO	Reforma e ampliação de pavimentos, ajuste de faixas, SCI e novo TPS	R\$43.700.000,00	AGUARDANDO DOCUMENTAÇÃO
GO	JATAÍ	Construção de pista de pouso e decolagem, pista de táxi e pátio de aeronaves, auxílios a navegação, SCI e TPS	R\$ 40.500.000,00	AGUARDANDO DOCUMENTAÇÃO
SP	SÃO CARLOS	Recuperação de pista, alargamento e recuperação de taxiway, sinalização horizontal e vertical	R\$2.000.000,00	EM FASE DE APROVAÇÃO NO GEPAC
SC	CHAPECÓ	Ampliação do TPS e vias de serviço	R\$8.500.000,00	EM FASE DE APROVAÇÃO NO GEPAC
MT	CÁCERES	Balizamento Noturno e ajustes nas instalações elétricas para implantação do balizamento	R\$5.000.000,00	EM FASE DE APROVAÇÃO NO GEPAC
MT	TANGARÁ DA SERRA	Balizamento Noturno, instalações elétricas para implantação do balizamento e infraestrutura lado ar	R\$5.000.000,00	EM FASE DE APROVAÇÃO NO GEPAC
MT	SINOP	Infraestrutura para operação 4C IFR e recuperação do pátio existente	R\$8.000.000,00	EM FASE DE APROVAÇÃO NO GEPAC
RJ	ITAPERUNA	Cerca operacional; recapeamento da pista de pouso, pista de táxi e pátio e reforma do TPS	R\$3.000.000,00	EM FASE DE APROVAÇÃO NO GEPAC
RJ	RESENDE	Cerca operacional; recapeamento da pista de pouso, pista de táxi e pátio e reforma do TPS	R\$7.000.000,00	EM FASE DE APROVAÇÃO NO GEPAC
RO	ARIQUEMES	Ampliação de PPD e ajustes de faixa de pista	R\$8.000.000,00	EM FASE DE APROVAÇÃO NO GEPAC



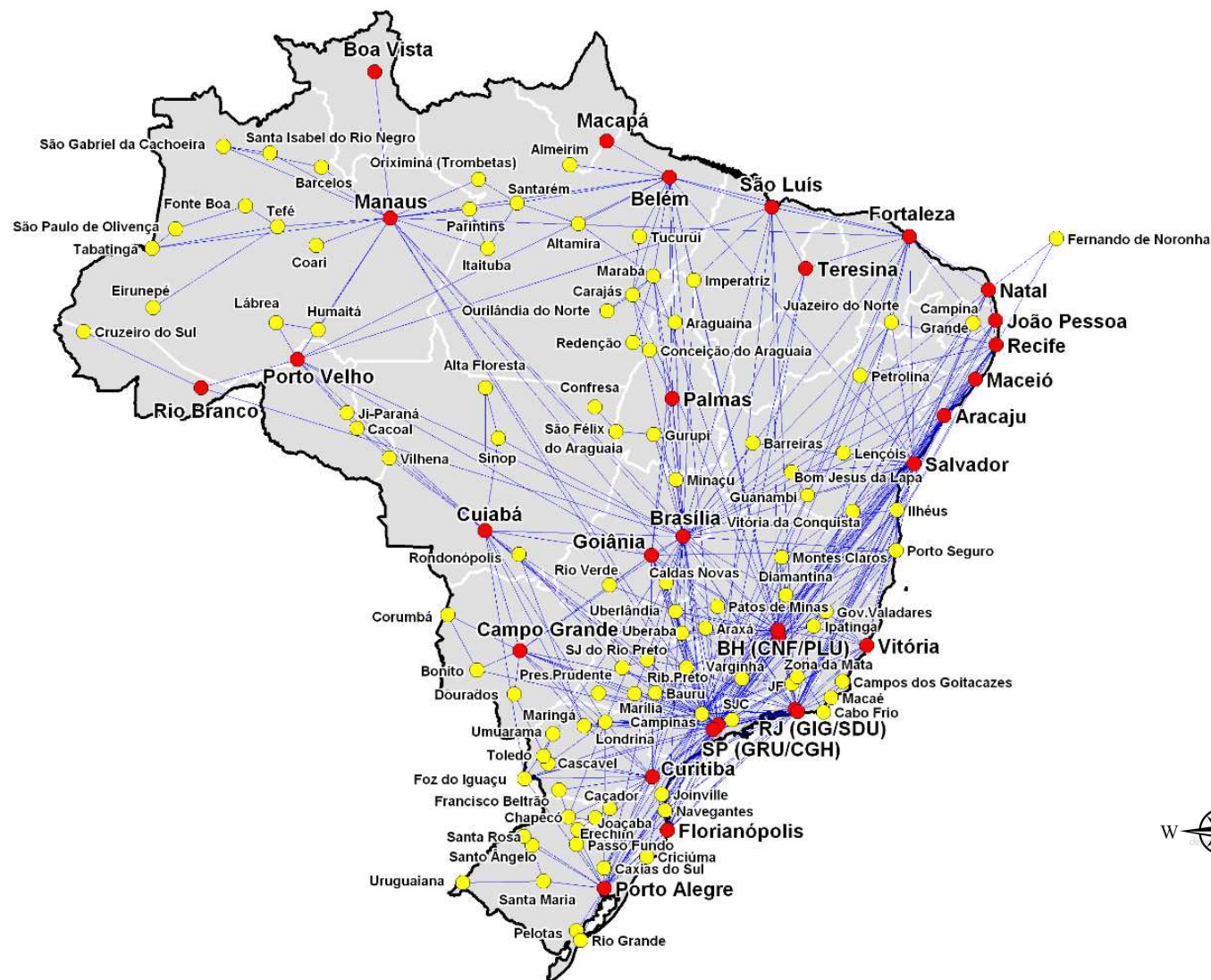
## Investimentos Previstos

UF	MUNICÍPIO	OBJETO	STATUS	
			VALOR UNIÃO	STATUS
RO	CACOAL	Ampliação de TPS e vias de serviço	R\$ 8.000.000,00	EM FASE DE APROVAÇÃO NO GEPAC
RO	JI-PARANÁ	Construção de TPS e ajuste nas vias de serviços e pátio de aeronaves	R\$ 11.000.000,00	EM FASE DE APROVAÇÃO NO GEPAC
TO	ARAGUAÍNA	Recuperação de pavimentos, ajustes de faixas, SCI e reforma do TPS	R\$ 67.000.000,00	EM FASE DE APROVAÇÃO NO GEPAC
RJ	ANGRA DOS REIS	Ampliação de PPD, faixa de pista, nova Taxiway, novo Pátio de aeronaves, novo TPS, vias de acesso e serviço complementares	R\$ 29.000.000,00	EM FASE DE APROVAÇÃO NO GEPAC
MS	DOURADOS	Reforma e ampliação de pavimentos, ajuste de faixas, SCI e novo TPS	R\$ 49.000.000,00	EM FASE DE PROJETOS
MG	GOVERNADOR VALADARES	Reforma e ampliação do TPS, recuperação parcial da PPD, instalação das Turnarounds na cabeceira, recuperação e reforço das pistas de taxi e reforma e ampliação do pátio de aeronaves	R\$ 32.000.000,00	EM FASE DE PROJETOS

# Regular domestic airmail



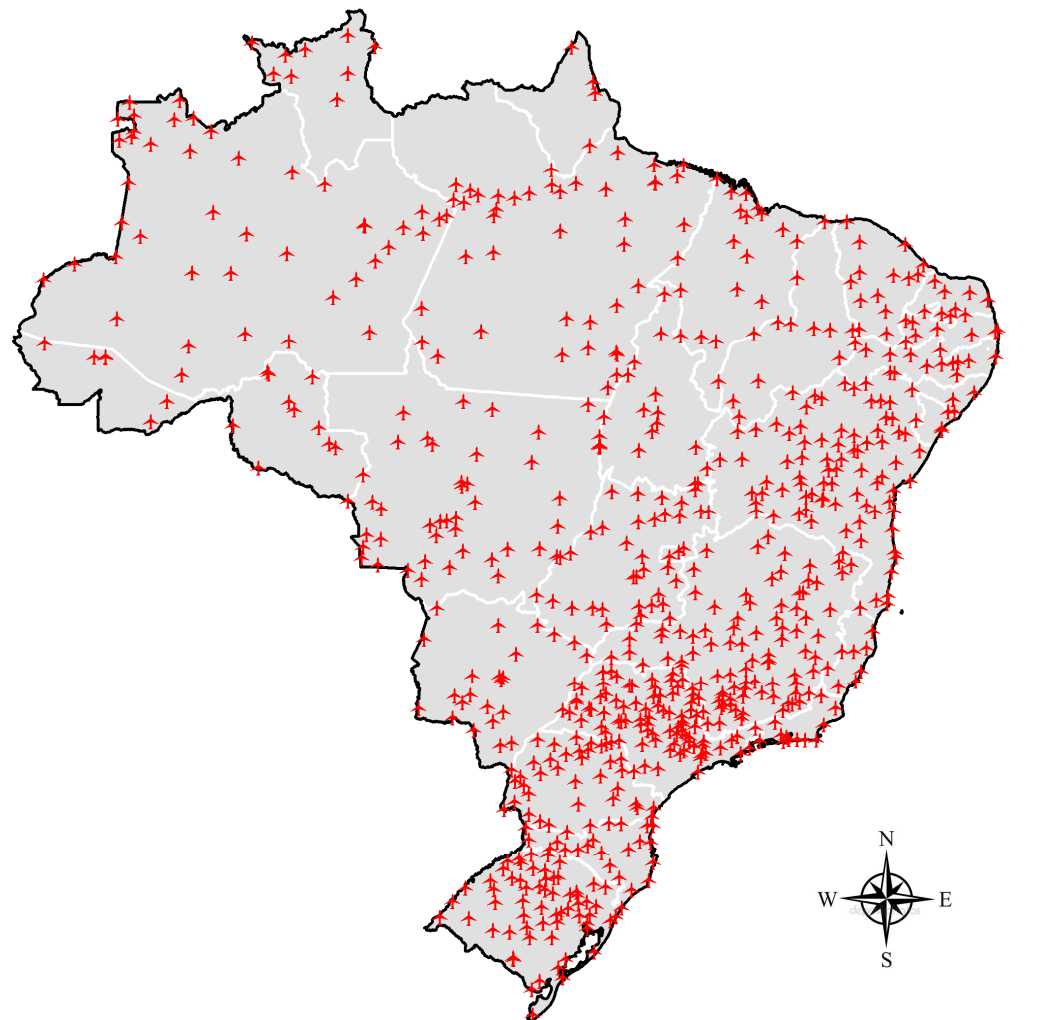
Ministério dos Transportes,  
Portos e Aviação Civil



# Regional Airports



Ministério dos Transportes,  
Portos e Aviação Civil

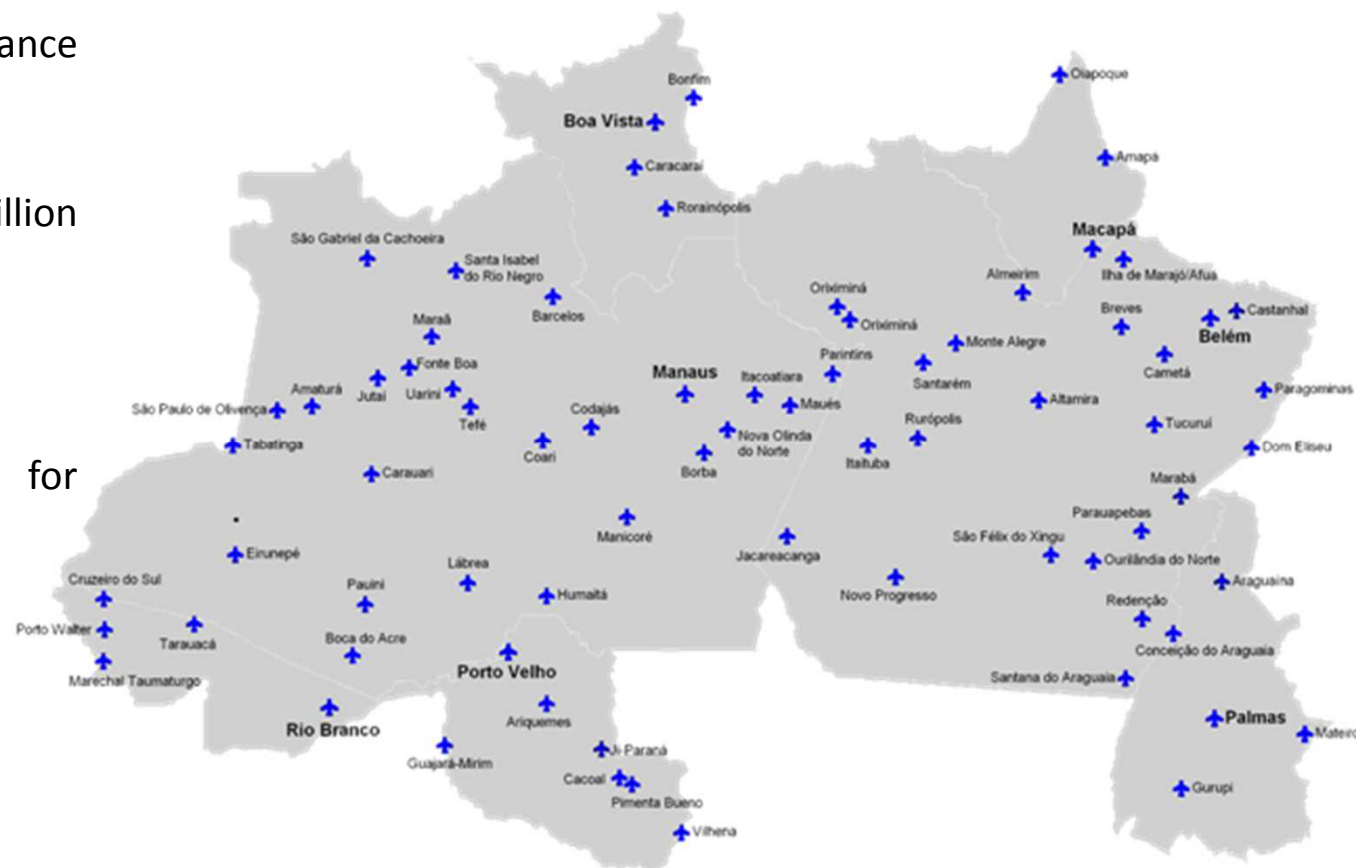


Region	Airports
North	67
Northeast	64
Midwest	31
Southeast	65
South	43
<b>Total</b>	<b>270</b>

# North Airports



- ✓ Enlargement, maintenance and operation
- ✓ Demand 2016: : 4.9 million pax
- ✓ Population : 17,7 million
- ✓ Minimum investment for operation : BRL 1.7 Billion



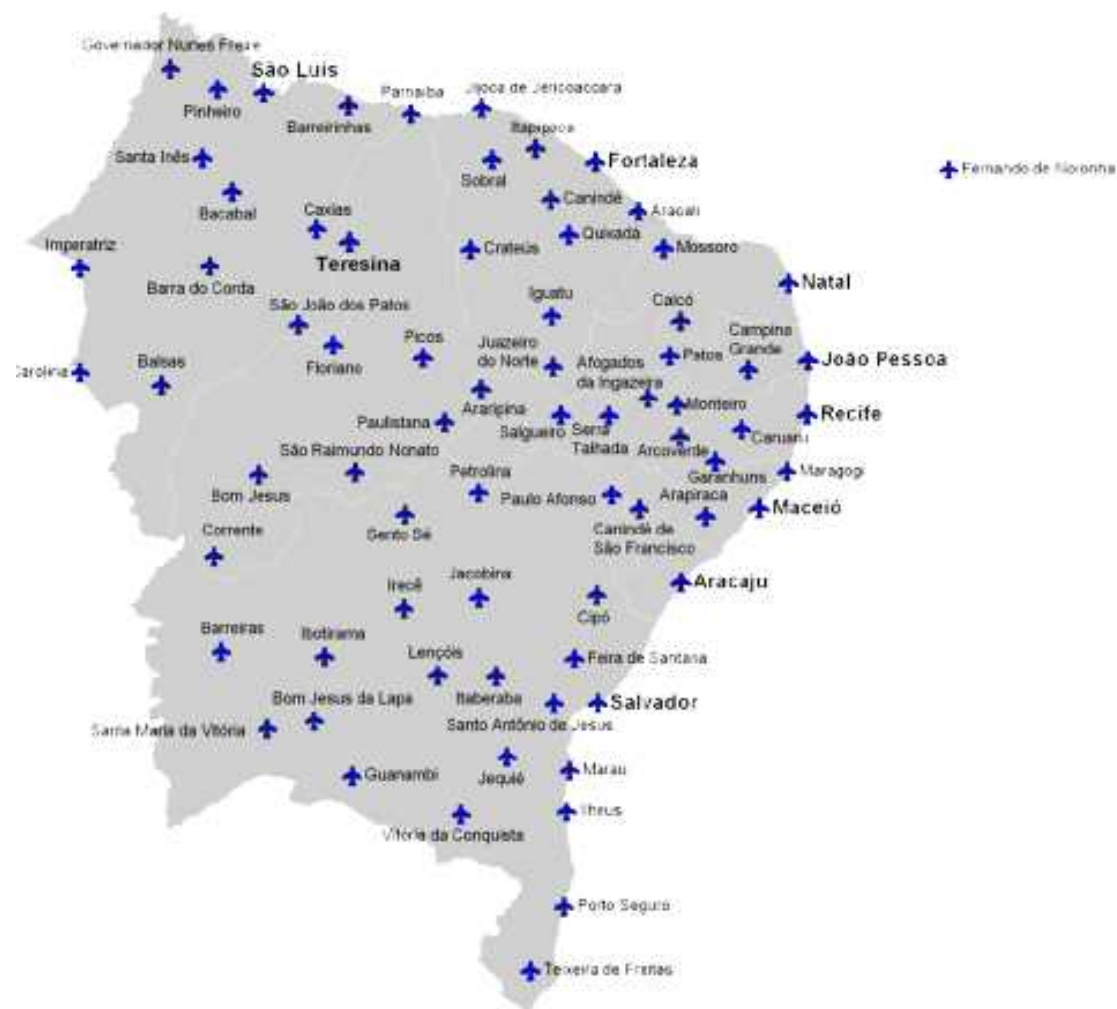
State	Airports
Acre	4
Amazonas	25
Amapá	2
Pará	24
Rondônia	6
Roraima	3
Tocantins	3
<b>Total</b>	<b>67</b>

# Northeast Airports



Ministério dos Transportes,  
Portos e Aviação Civil

- ✓ Enlargement, maintenance and operation
- ✓ Demand 2016: 16.2 million pax
- ✓ Population : 56,6 million
- ✓ Minimum investment for operation : BRL 2.1 Billion

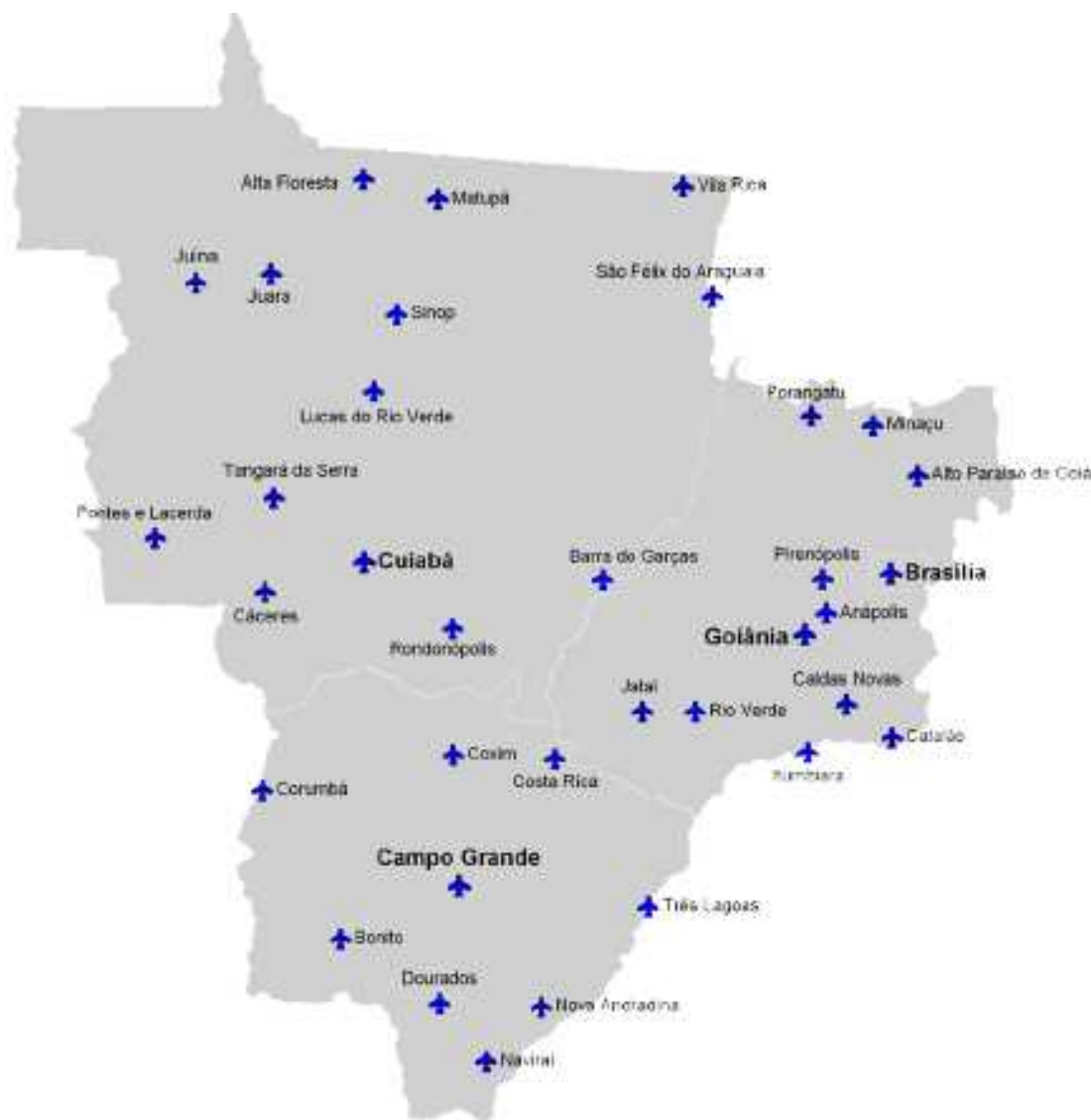


State	Airports
Alagoas	2
Bahia	20
Ceará	9
Maranhão	11
Paraíba	3
Pernambuco	9
Piauí	7
Rio Grande do Norte	2
Sergipe	1
<b>Total</b>	<b>64</b>

# Midwest Airports



- ✓ Enlargement, maintenance and operation
- ✓ Demand 2016: 12.36 million pax
- ✓ Population : 15,66 million
- ✓ Minimum investment for operation : BRL 0.9 Billion



State	Airports
Goiás	10
Mato Grosso do Sul	8
Mato Grosso	13
<b>Total</b>	<b>31</b>

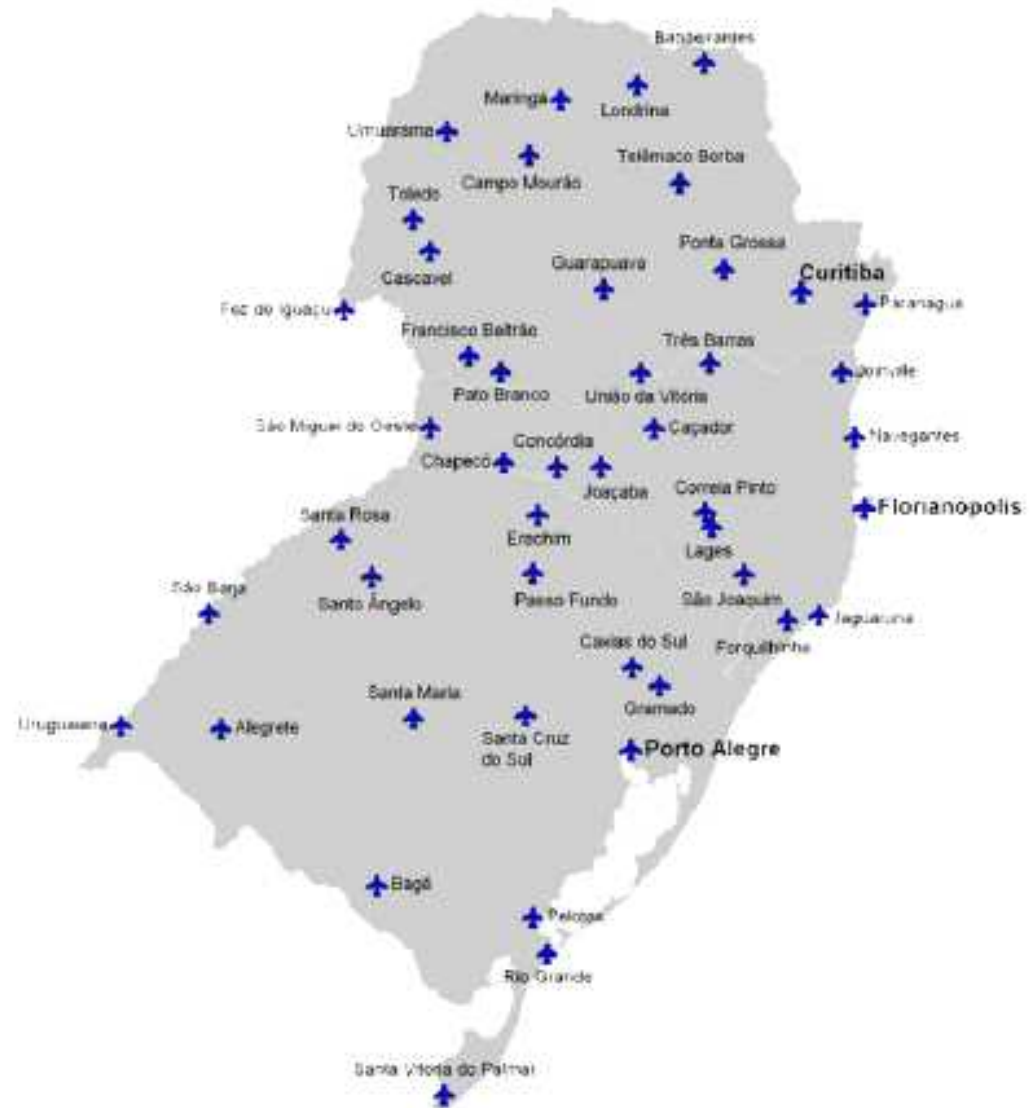




# South Airports



- ✓ Enlargement, maintenance and operation
- ✓ Demand 2016: 11.45 million pax
- ✓ Population : 85,11 million
- ✓ Minimum investment for operation : BRL 1.6 Billion

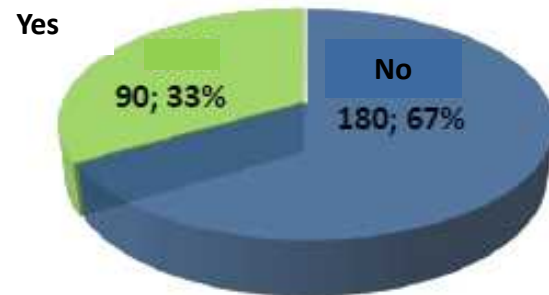


State	Airports
Paraná	15
Rio Grande do Sul	15
Santa Catarina	13
<b>Total</b>	<b>43</b>

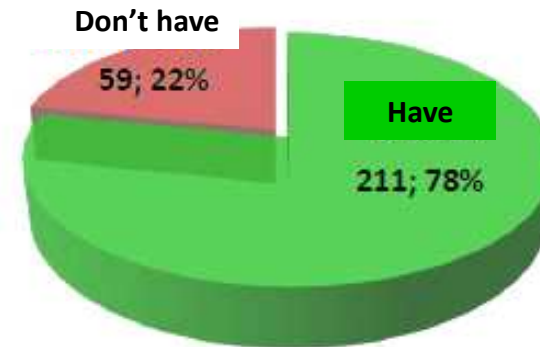
# General features of Reginal Airports



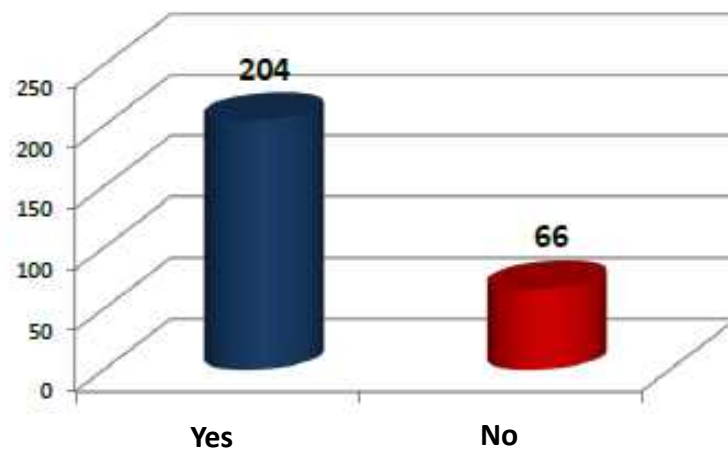
## OPERATE REGULAR FLIGHTS



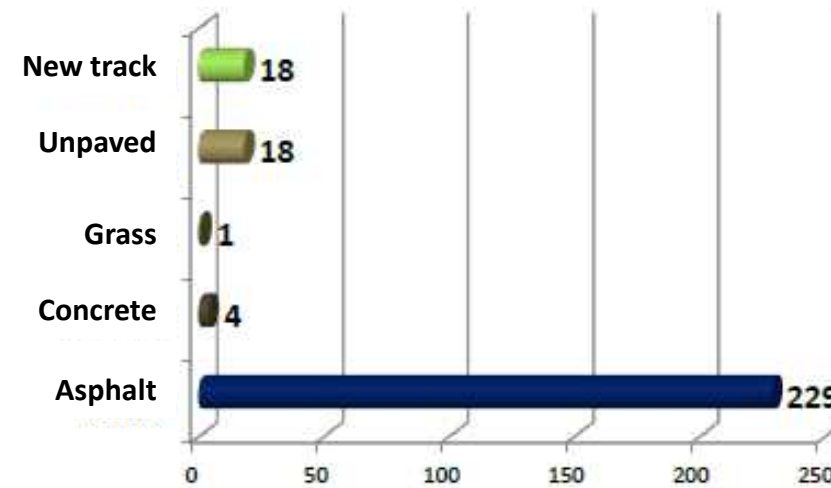
## HAVE ADMINISTRATOR



## HAVE PASSENGER TERMINAL



## TYPES OF RUNWAY





**THANK YOU**

**SECRETARIAT FOR DEVELOPMENT AND PARTNERSHIPS**

**[dino.antunes@transportes.gov.br](mailto:dino.antunes@transportes.gov.br)**

**(61) 2029-7679**

**Ministry of Cities**  
National Secretary **Environmental Sanitation**

# Basic sanitation in Brazil: perspectives and challenges

**Ernani Ciríaco de Miranda**  
Director of the Department of Planning and Regulation

# Concept of Basic Sanitation in Brazil

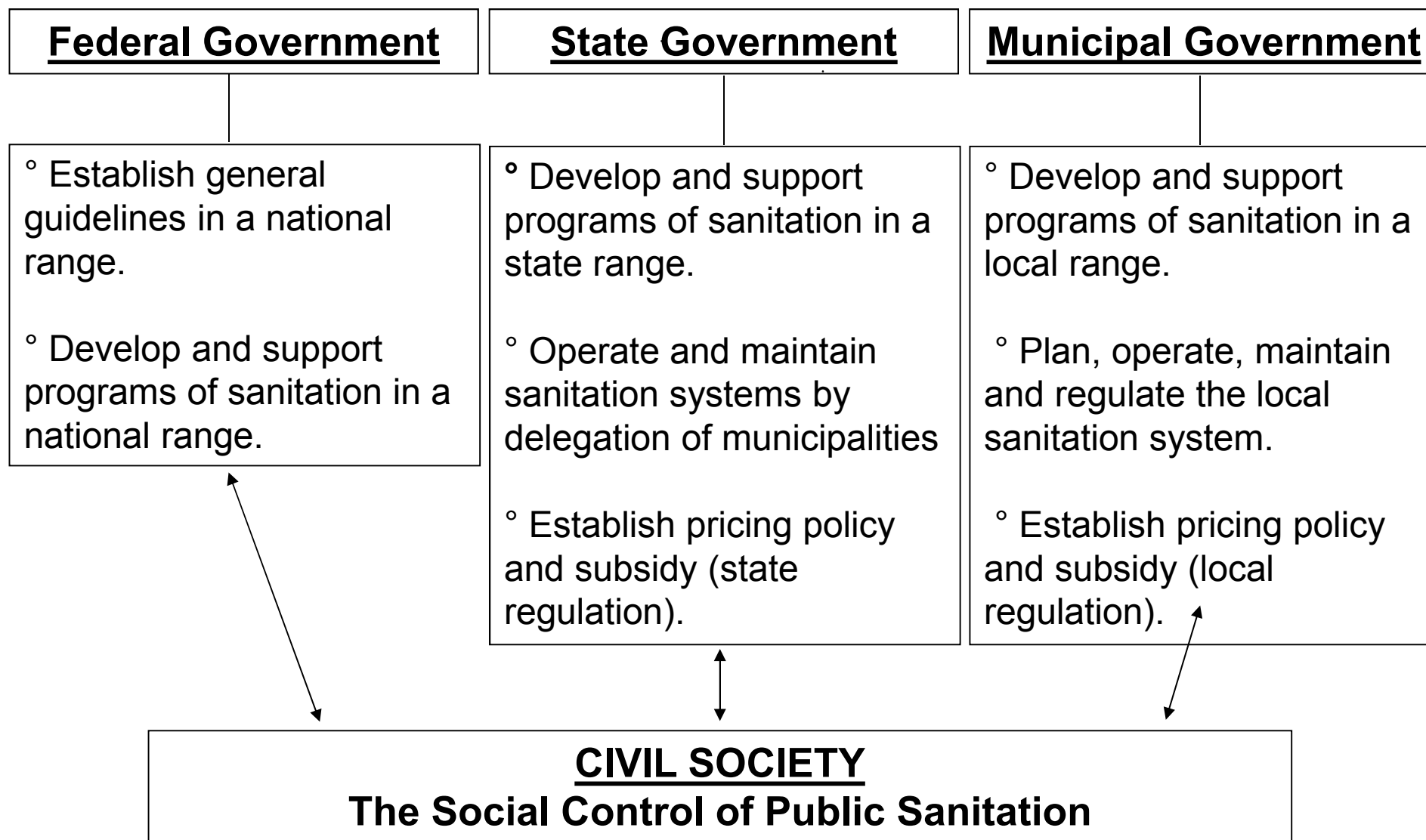
(Law 11.445/07)



# INTRODUCTION

- Law 11455/2007 establishes the **national guidelines for basic sanitation**.
- The **Plansab - National Basic Sanitation Plan** is the main instrument of the Law and guides the federal policy for the sector.
- The duration of Plansab is from **2014 to 2033** (20 years).
- Another important instrument is the **National Sanitation Information System**, which contains a large database of services across the country.

# Assignments on Basic Sanitation in Brazil



# Brazil's Regions\* and States:



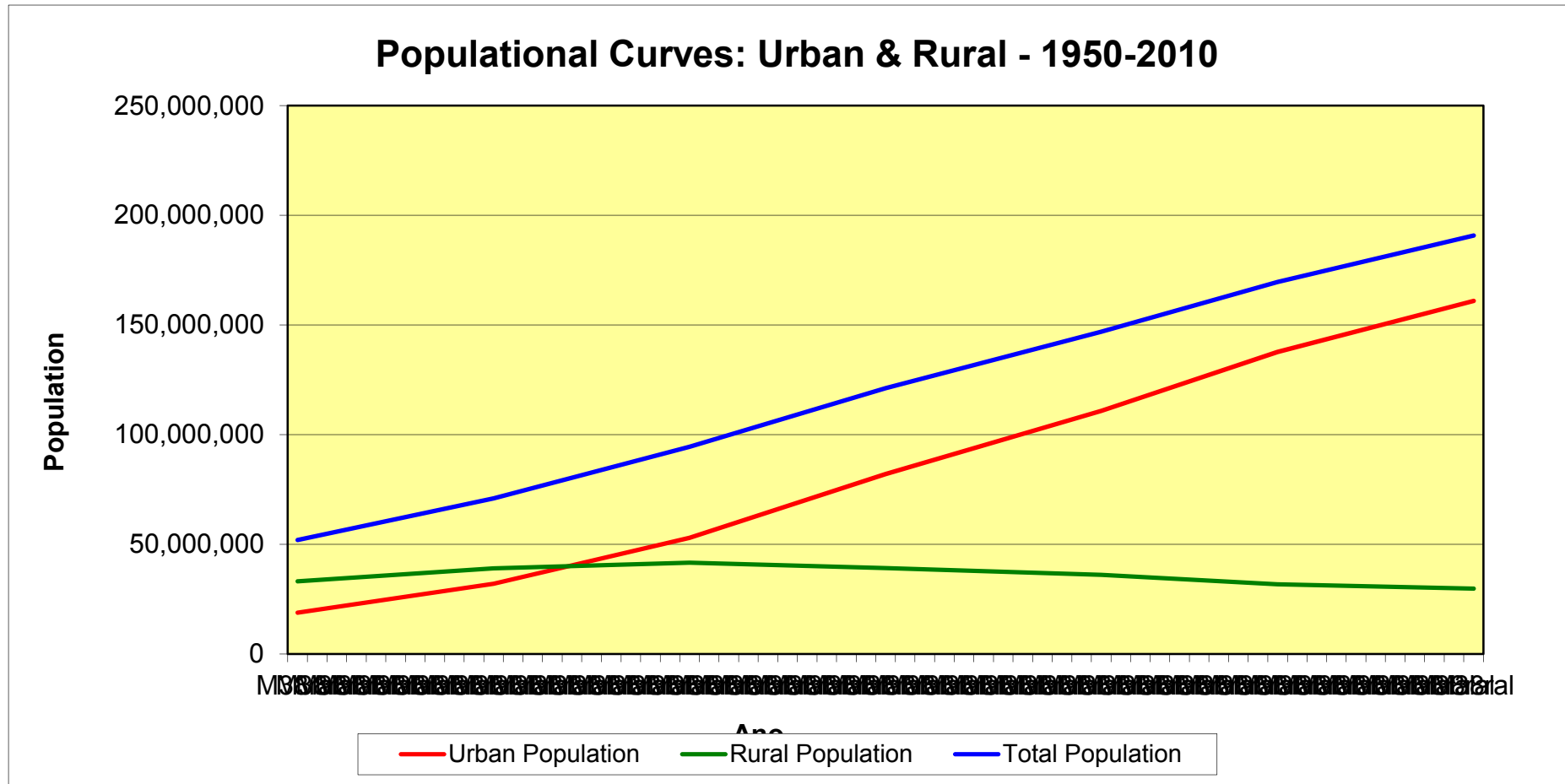
\* social-economic regions.



# The population growth and urbanization process in Brazil

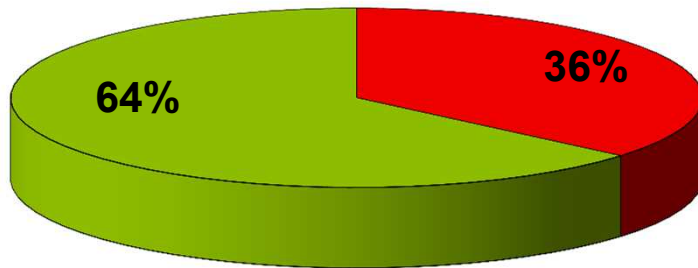
Year	Urban			Rural			Total			
	Urban Population	% urban	Variation in the decade	Rural Population	% rural	Variation in the decade	Total Population	Variation in the decade	Number of cities	Variation in the decade
<b>1950</b>	<b>18.782.891</b>	36,16		<b>33.161.506</b>	63,84		<b>51.944.397</b>		<b>1.889</b>	
<b>1960</b>	32.004.817	45,08	70,39	38.987.526	54,92	17,57	70.992.343	36,67	2.766	46,43
<b>1970</b>	52.904.744	55,98	65,30	41.603.839	44,02	6,71	94.508.583	33,13	3.952	42,88
<b>1980</b>	82.013.375	67,70	55,02	39.137.198	32,30	-5,93	121.150.573	28,19	3.991	0,99
<b>1991</b>	110.875.826	75,47	35,19	36.041.633	24,53	-7,91	146.917.459	21,27	4.491	12,53
<b>2000</b>	137.755.550	81,23	24,24	31.835.143	18,77	-11,67	169.590.693	15,43	5.507	22,62
<b>2010</b>	<b>160.925.792</b>	84,36	16,82	<b>29.830.007</b>	15,64	-6,30	<b>190.755.799</b>	12,48	<b>5.565</b>	1,05
<b>Variation % 1950/2010</b>			<b>756,8 %</b>			<b>-10,0%</b>		<b>267%</b>		<b>195%</b>

# The population growth and urbanization process in Brazil

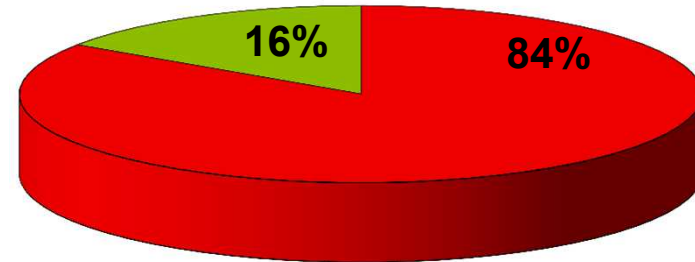


# The population growth and urbanization process in Brazil

**Urban & Rural - 1950**



**Urban & Rural - 2010**



## Access indicators for water supply (%)

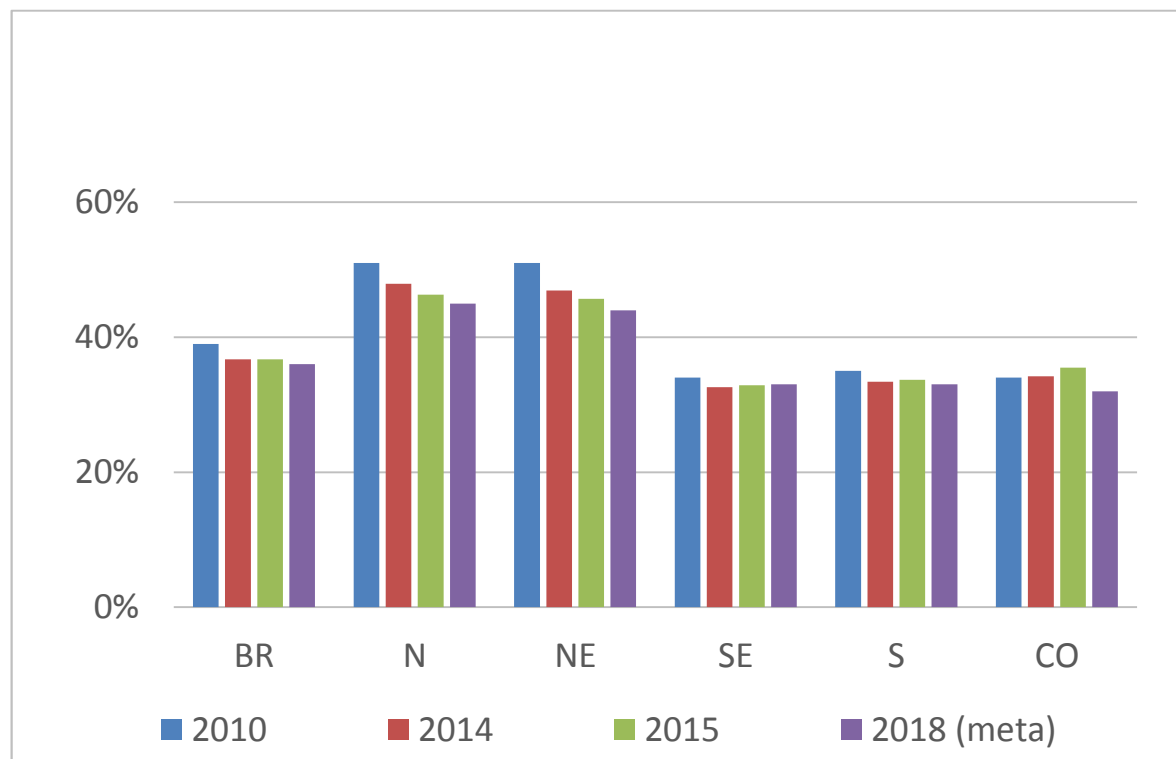
### Goals and partial results

INDICATOR	SOURCE	YEAR	BRAZIL	N	NE	SE	S	CO
<b>A1. % of urban and rural households served by water supply system or well or spring, with internal plumbing</b>	Censo	2010	90	71	79	96	98	94
	Adjusted Pnad	2014	92,6	79,0	83,7	97,2	99,0	97,2
	Adjusted Pnad	2015	93,0	80,1	84,6	97,4	99,1	97,3
		2018	93	79	85	98	99	96
		2023	95	84	89	99	99	98
		2033	99	94	97	100	100	100
<b>A2. % of urban households served by water supply system or well or spring, with internal plumbing</b>	Censo	2010	95	82	91	97	98	96
	Adjusted Pnad	2014	96,2	86,0	93,9	97,4	99,3	97,9
	Adjusted Pnad	2015	96,3	86,8	94,5	97,5	99,3	97,9
		2018	99	96	98	99	100	99
		2023	100	100	100	100	100	100
		2033	100	100	100	100	100	100
<b>A3. % of rural households served by water supply system or well or spring, with internal plumbing</b>	Censo	2010	61	38	42	85	94	79
	Adjusted Pnad	2014	66,4	43,1	47,9	91,0	96,9	87,0
	Adjusted Pnad	2015	67,4	44,1	49,3	91,0	98,2	88,6
		2018	67	43	53	91	96	88
		2023	71	46	60	95	98	93
		2033	80	52	74	100	100	100

# Index of **water losses** in the distribution (%)

## Goals and partial results

INDICATOR	SOURCE	YEAR	BRAZIL	N	NE	SE	S	CO
A6. % index of water losses in the distribution	SNIS	2010	39	51	51	34	35	34
	SNIS	2014	36,7	47,9	46,9	32,6	33,4	34,2
	SNIS	2015	36,7	46,3	45,7	32,9	33,7	35,5
		2018	36	45	44	33	33	32
		2023	34	41	41	32	32	31
		2033	31	33	33	29	29	29



## Access Indicators for **Collection of Sewage (%)**

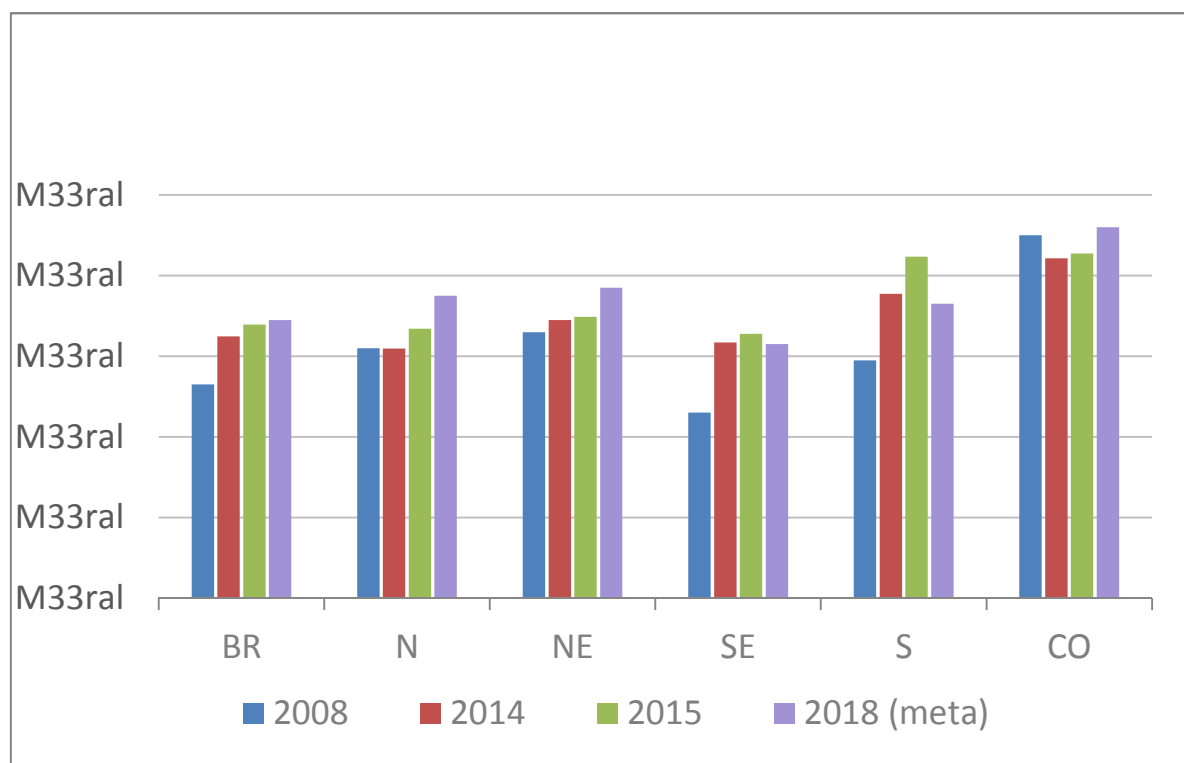
### Goals and partial results

INDICATOR	SOURCE	YEAR	BRAZIL	N	NE	SE	S	CO
<b>E1. % of urban and rural households served by a sewerage or septic tank for the excreta / sewage</b>	Censo	2010	67	33	45	87	72	52
	Adjusted Pnad	2014	69,8	34,9	49,5	89,4	73,8	57,0
	Adjusted Pnad	2015	72,0	37,5	51,7	90,4	77,0	63,0
		2018	76	52	59	90	81	63
		2023	81	63	68	92	87	70
		2033	92	87	85	96	99	84
<b>E2. % of urban households served by a sewerage or septic tank for the excreta / sewage</b>	Censo	2010	75	41	57	91	78	56
	Adjusted Pnad	2014	77,1	43,0	61,6	92,9	79,2	60,0
	Adjusted Pnad	2015	78,9	44,8	63,6	93,6	81,2	65,6
		2018	82	56	66	94	84	69
		2023	85	68	73	95	88	77
		2033	93	89	86	98	96	92
<b>E3. % of rural households served by a sewerage or septic tank for the excreta / sewage</b>	Censo	2010	17	8	11	27	31	13
	Adjusted Pnad	2014	19,2	8,1	13,3	30,4	32,8	18,3
	Adjusted Pnad	2015	21,7	9,4	15,3	32,8	36,7	27,1
		2018	35	24	28	49	46	40
		2023	46	34	39	64	55	53
		2033	69	55	61	93	75	74

# Index of Treatment of Sewage Collected (%)

## Goals and partial results

INDICATOR	SOURCE	YEAR	BRAZIL	N	NE	SE	S	CO
E4. % index of treatment of sewage collected	PNSB	2008	53	62	66	46	59	90
	Adjusted SNIS	2014	64,9	61,9	69,0	63,4	75,5	84,3
	Adjusted SNIS	2015	67,9	66,8	69,8	65,6	84,7	85,5
		2018	69	75	77	63	73	92
		2023	77	81	82	72	80	93
		2033	93	94	93	90	94	96



## Access Indicators for solid waste management (%)

### Goals and partial results

INDICATOR	SOURCE	YEAR	BRAZIL	N	NE	SE	S	CO
<b>R1. % of urban households served by direct collection of waste</b>	Censo	2010	90	84	80	93	96	92
	Adjusted Pnad	2014	92,2	89,3	84,3	94,2	95,3	95,1
	Adjusted Pnad	2015	92,8	90,7	85,3	94,5	96,3	95,8
		2018	94	90	88	99	99	95
		2023	97	94	93	100	100	97
		2033	100	100	100	100	100	100
<b>R2. % of rural households served by collecting waste direct and indirect</b>	Censo	2010	27	14	19	41	46	19
	Adjusted Pnad	2014	30,3	15,9	21,9	45,6	53,8	23,8
	Adjusted Pnad	2015	31,1	15,6	22,7	46,6	54,9	23,8
		2018	42	28	33	58	62	37
		2023	51	37	42	69	71	49
		2033	70	55	60	92	91	72
<b>R3. % of municipalities with presence of dumping ground / garbage dump</b>	PNSB	2008	51	86	89	19	16	73
	SNIS	2014	59,8	92,2	87,7	48,7	27,1	85,6
	SNIS	2015	53,4	88,7	86,1	45,5	13,7	84,3
		2018	0	0	0	0	0	0
		2023	0	0	0	0	0	0
		2033	0	0	0	0	0	0



## Indicator for **urban drainage (%)** **Goals and partial results**

INDICATOR	SOURCE	YEAR	BRAZIL	N	NE	SE	S	CO
<b>D1. % of municipalities with flood and / or inundation in urban areas</b>	PNSB	2008	41	33	36	51	43	26
	S2ID	2015	17,8	33,6	4,0	24,3	26,3	10,5
		2018	--	--	--	--	--	--
		2023	--	--	--	--	--	--
		2033	11	6	5	15	17	5

## BRIEF EVALUATION

- Indexes of access to basic sanitation services reveal **regional inequalities** with lower rates in the North and Northeast and higher in the South and Southeast.
- They also reveal **inequalities between the urban and the rural**, with the latter standing at a much lower level than the urban one.
- Inequality also occurs when one analyzes access indexes according to **income brackets**.
- Low levels of **treatment of sewage and solid waste**.
- **Challenge: investment programs to be focused on accelerating the reversal of this picture.**

## Investments in basic sanitation - R\$ million

### Compromise and Plansab

Federal Government Resources	Water Supply	Sewage	Urban Drainage	Solid Waste	Gestion	Total
Compromise until 2015	36.335,1	30.043,1	13.759,0	1.642,3	2.164,5	83.944,1
Plansab - 2014 a 2033	78.838	140.734	12.418	34.205	33.703	299.899

Plansab also estimates a need for investments with resources from other agents, which totals R\$ 208,553 million.

Therefore, the **total investment requirement in 20 years is R\$ 508,452 million.**

**Challenge: to enable high investments from the federal government and other agents.**

# CHALLENGES & OPPORTUNITIES

- **Improve sector regulation.**
- **Improve the companies, utilities, municipalities, etc. (service providers).**
- **Increase of the investors and private sector, especially in sewage.**
- **Reduce the cycle of planning and projects.**
- **Feasible financing alternatives.**
- **Water crisis and climate change.**
- **Treatment of sewage and solid waste.**
- **Reduction of water losses.**
- **Energy Efficiency.**
- **Use of biogas and alternative energies.**

***Thank you!***

Ministry of **Cities**  
National Secretary **Environmental Sanitation**



**Collaboration between JAPAN-BRAZIL and in the context of Natural Disasters (ND)  
and Disaster Risk Reduction and Management (DRRM)**

National Center for Monitoring and Early Warning of Natural Disasters  
(CEMADEN)



Oswaldo L. L. Moraes  
CEMADEN

[www.cemaden.gov.br](http://www.cemaden.gov.br)



# Natural Disasters in Brazil: over 95% of disasters are climate-related



Forest fires, Floods,  
Drought, Mass Moviments



Droughts, Floods, Flash  
Floods



Wildfires, Floods, Erosions



Wildfires, **Flash Floods**,  
Floods, Droughts, **Landslides**



Flash Floods, Wind Storms,  
Hails, Landslides



# Post-2011 DRR Policy in Brazil: A Paradigm Shift

## National Plan for Risk Management and Response to Disasters

\$ 8 billion over 4 years  
2012-2015

**Relief and  
recovery**



**Response**

**Strengthening early warning  
networks**

(e.g., 4 thousand automated raingauges, 9  
weather radars,  
300 riverflow sensors, data integrations,  
modeling, hazard prediction, etc.)

**Prevention**



**Building structural  
resilience** (slope, stabilization,  
drainage and flood control)

**Monitoring and  
warning**



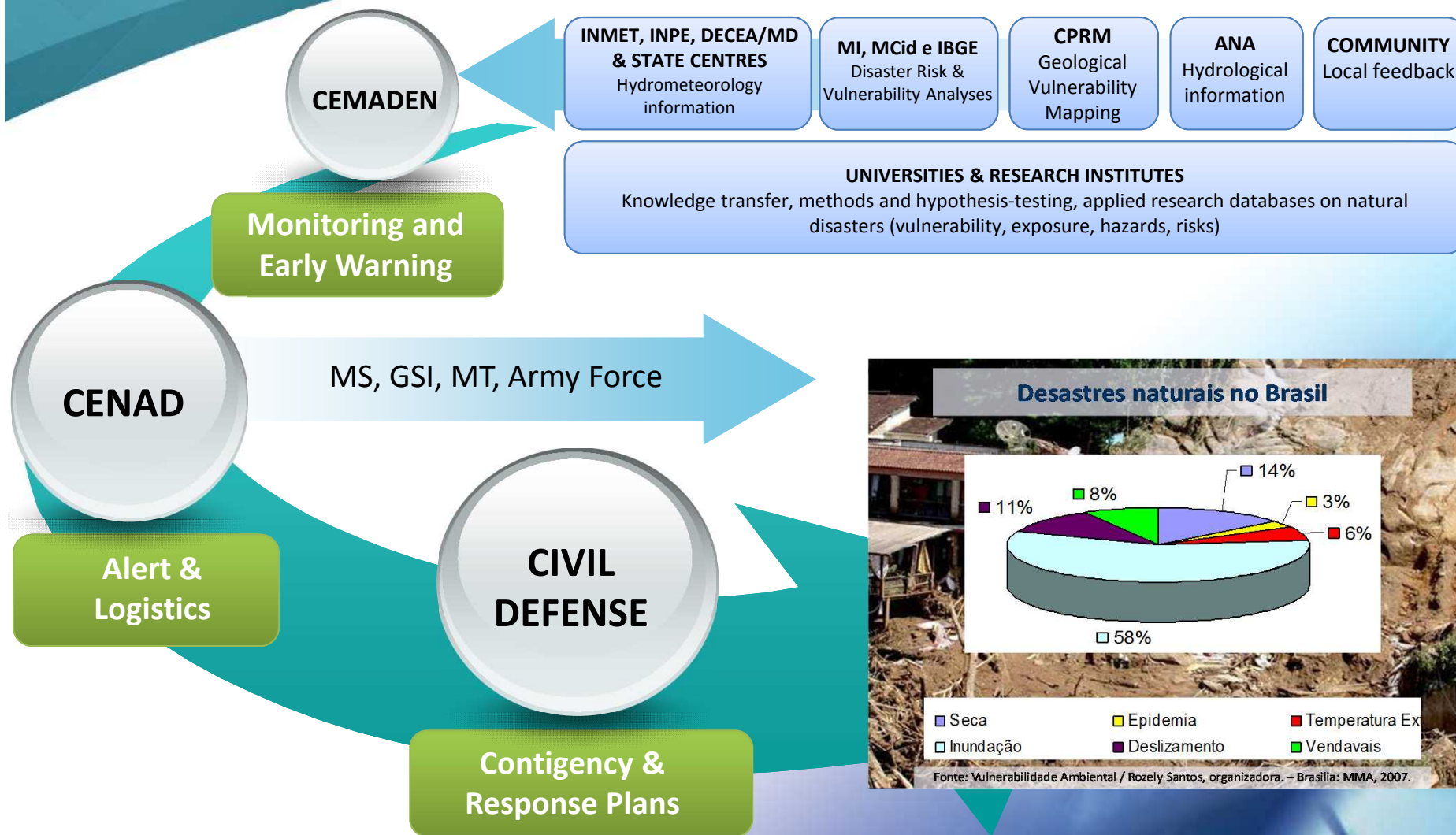
**Mapping and  
understanding risk**



High resolution mapping  
of risk areas for 1000  
municipalities



# National Strategy for Disaster Risk Management



The National System for Natural Disasters Prevention is basically composed by integrated actions developed in **two centers** of the government federal level:

- National Centre for Monitoring and Early Warning of Natural Disasters (CEMADEN**-Presidential Decree nº 7513, of **July 1<sup>st</sup>, 2011**), which is a center of the Ministry of Science, Technology and Innovation (MCTI), and
- The **National Centre for Disaster and Risk Management (CENAD)**, linked to the Ministry of National Integration (MI)

The Centre implements, on national level, the **continuous monitoring of adverse hydro meteorological and climate conditions, which may trigger processes that produce imminent risk of natural disasters occurrence**. Based on data and information of several equipment's (pluviometers, fluviometers and meteorological radars, etc), CEMADEN **analyses and issues early warning of risks of geodynamic processes of landslides and hydrological alerts associated to floods and impacts of severe droughts**.

The early warnings are reported to CENAD, which retransmits them to the state and municipal departments of Civil Defense.

## RESPONSIBILITIES of CEMADEN

- (i) to **produce early warnings** of relevant natural disasters for protective and civil defense actions across the country, **supporting the actions of National Centre of Risk and Disaster Management – CENAD**, linked to the Ministry of National Integration;
- (ii) to **produce and release studies** aiming the production of necessary information for planning and implementation of actions against natural disasters;
- (iii) to **develop scientific, technological and innovation capacity**, for continuing improving the natural disasters early warning;
- (iv) to develop **and implement observation systems** for monitoring natural disasters;
- (v) to develop and **implement computational models**, to operate computational systems needed to the elaboration of alerts;
- (vi) to promote capacity building, training and support to research in correlated areas of action.**

**+ 9  
Radars**

**+ 4.750  
Rain Gauges**

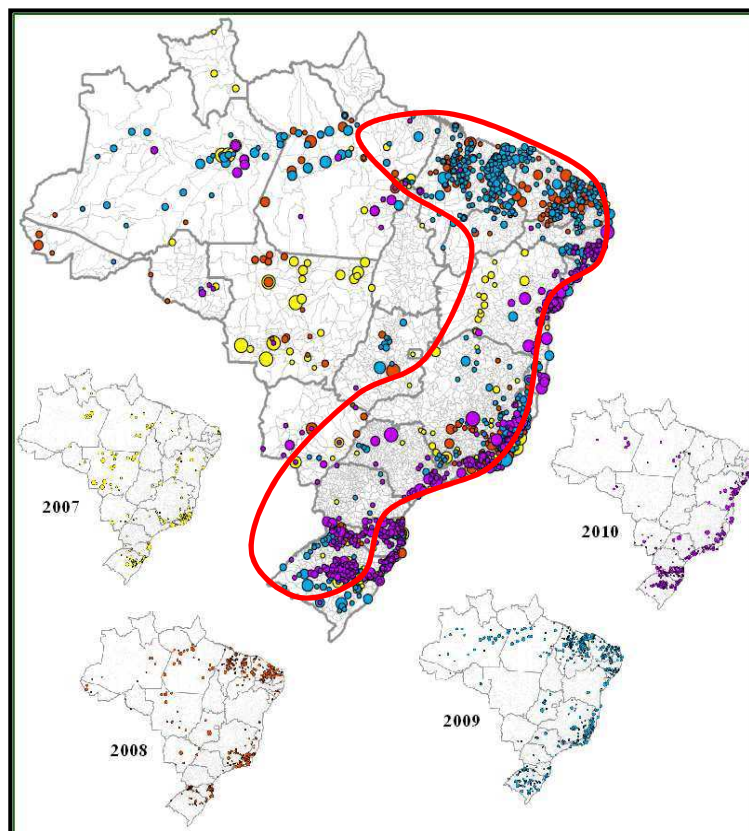
**+ 300  
Hydrological Stations**

**10 ETR + 970  
Prisms  
135 PCDs GEO**

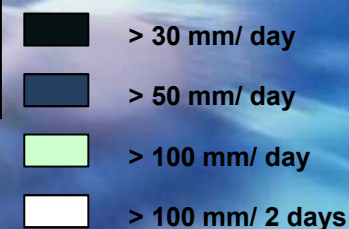
**+ 100 Agro-meteorological  
Stations**

**+ 550 PCDs AQUA  
Soil Moisture Sensors and  
Rain Gauges**

## Evolution of Natural Disasters in Brazil



Fonte: Defesa Civil Nacional e MPOG

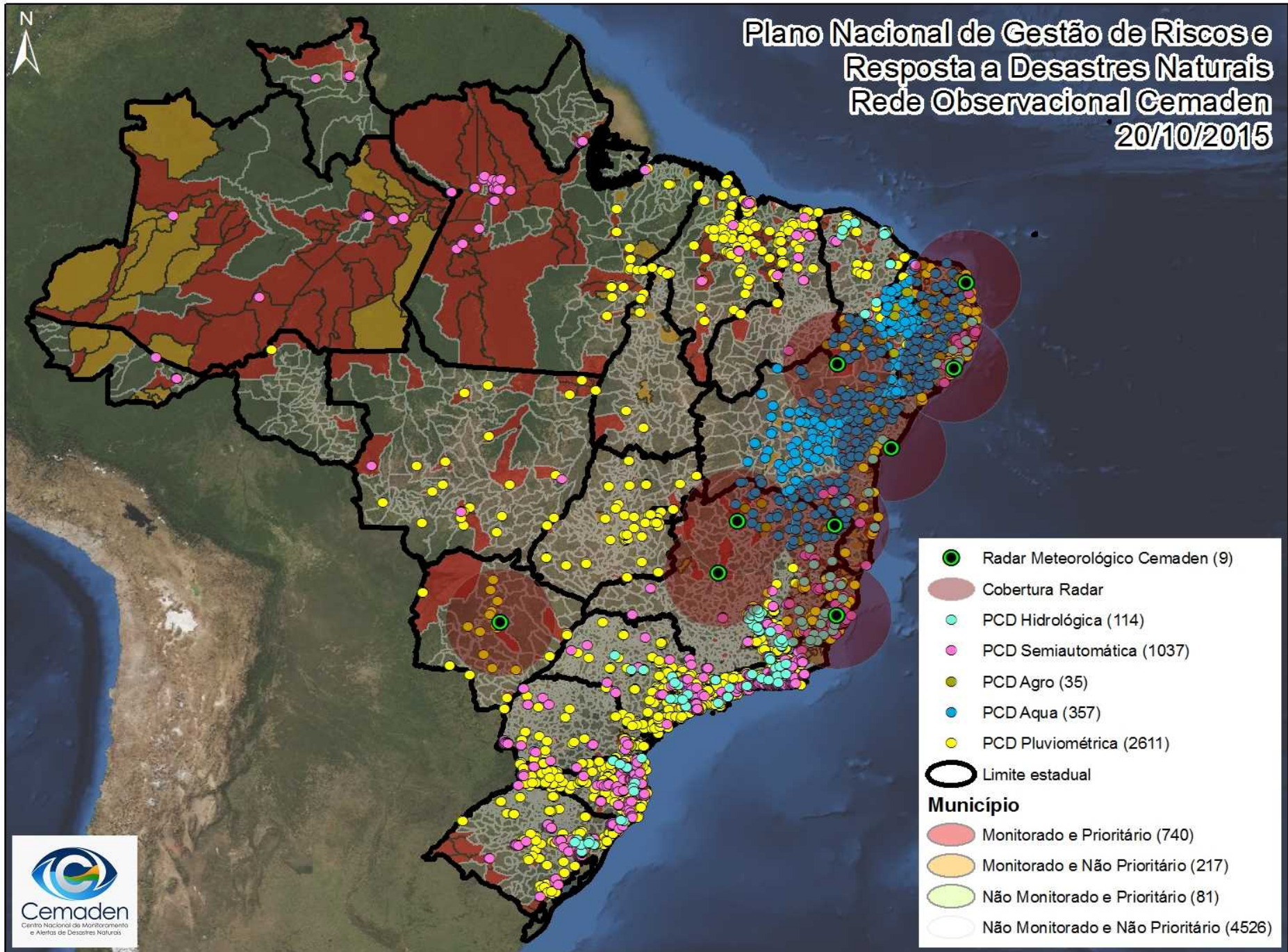


**RISK = SUSCEPTIBILITY X EXPOSURE**

# Plano Nacional de Gestão de Riscos e Resposta a Desastres Naturais

## Rede Observacional Cemaden

20/10/2015



Collaboration between **CEMADEN/MCTI** and **JAMSTEC**:

- **LoI signed on 2014.**
- Intend to formulate a MoU that would provide a framework for collaboration in areas of mutual interest.
- This could **benefit the operational activities at CEMADEN**: explore new possibilities for technical and scientific advancements applied to supporting knowledge transfer to specific groups.

## THREE MAIN TOPICS-For collaboration BRAZIL –JAPAN on Natural Disasters

### **Weather extremes (dry spells, intense rainfall and seasonal droughts) and flow forecasting**

- *Characterization and forecasting of dry spells*
  - *Rainfall estimation using satellite*
- *Flood and landslides hazard mapping*
  - *An early warning system for flash floods and landslides*

### **Soil moisture calibration and monitoring sensing**

*Soil moisture from satellite in Brazil: validation and application*

### **Science knowledge to support disaster risk reduction and adaptation**

*Cascade of uncertainties in the warning's chain of production (forecasting, risk exposure vs vulnerability, people): the importance of the right tools for decision support*

*Scientific knowledge for preparedness: DRR education + early warning systems (crowdsourcing + citizen science)*



## THREE MAIN THEMES:

## 1) Droughts

### **Weather extremes (dry spells, intense rainfall and seasonal droughts) and flow forecasting**

- *Characterization and forecasting of dry spells*
- *Rainfall estimation using satellite*
- *Flood and landslides hazard mapping*
  - *An early warning system for flash floods and landslides*

### **Soil moisture calibration and monitoring sensing**

*Soil moisture from satellite in Brazil: validation and application*

### **Science knowledge to support disaster risk reduction and adaptation**

*Cascade of uncertainties in the warning's chain of production (forecasting, risk exposure vs vulnerability, people): the importance of the right tools for decision support*

*Scientific knowledge for preparedness: DRR education + early warning systems (crowdsourcing + citizen science)*

## THREE MAIN THEMES:

### **Weather extremes (dry spells, intense rainfall and seasonal droughts) and flow forecasting**

- *Characterization and forecasting of dry spells*
- *Rainfall estimation using satellite*
- *Flood and landslides hazard mapping*
- *An early warning system for flash floods and landslides*

### **Soil moisture calibration and monitoring sensing**

*Soil moisture from satellite in Brazil: validation and application*

## 2) Floods and landslides

### **Science knowledge to support disaster risk reduction and adaptation**

*Cascade of uncertainties in the warning's chain of production (forecasting, risk exposure vs vulnerability, people): the importance of the right tools for decision support*

*Scientific knowledge for preparedness: DRR education + early warning systems (crowdsourcing + citizen science)*

## THREE MAIN THEMES:

### **Weather extremes (dry spells, intense rainfall and prolonged droughts) and flow forecasting**

- *Characterization and forecasting of dry spells*
  - *Rainfall estimation using radar*
- *Flood and landslides hazard mapping*
  - *An early warning system for flash floods and landslides*

### **Soil moisture calibration and monitoring sensing**

*Soil moisture from satellite in Brazil: validation and application*

## 3) Risk Communication

### **Science knowledge to support disaster risk reduction and adaptation**

*Scientific knowledge for preparedness: DRR education (local communities and schools)*

*Alert and communication for state and local civil defense, reliability for landslides processes*

## Specific Proposals

Cemaden would like to have access to the raw rainfall data for South America produced by GSMAP

As a counterpart Cemaden can provide the data collected in situ that would be used for calibration.

## Specific Proposals

Cemaden would like to have access to the raw data for Brazil produced by the Advanced Land Observing Satellite (ALOS)

Cemaden developed an algorithm to transform rainfall estimated by radar in hydrological flow.

## Specific Proposals

establish a **permanent** program of collaboration and exchange of researchers that enable the improvement of human resources in ND and DRRM.

## Issues that must be considered for a collaboration

- Coordinated scientists and student exchange and technical visits : please, remember that CEMADEN is an operational center where research is applied to meet the goals of the center)
- Publications of articles and reports, development of models and platforms, authored by BOTH Japanese and Brazilian scientists
- This is an HORIZONTAL collaboration directed to help CEMADEN and to take advantage of the Japan experience on natural disasters and risk management and reduction
- This collaboration should include other MCTI institutes (INPE) as well as state level agencies
- This is an equal partnership with exchange of experiences, data, models, observational platforms, etc. Both countries will learn on the experiences of each other on ND and DRR
- Financial aspects of this collaboration

# Thank you for your attention

[osvaldo.moraes@cemaden.gov.br](mailto:osvaldo.moraes@cemaden.gov.br)



# Critical Aspects on the Financiability of Infrastructure Projects in Brazil

**Brazil – Japan Working Group**

**Brasília, August/2017**

*Luciene Machado*  
*Deputy Managing Director – Infrastructure Division*



**Grau:** Documento Ostensivo (Lei nº 12.527 e OS PRESI nº 01/2015-BNDES, art. 8º)  
**Restrição de acesso:** Irrestrito  
**Unidade Gestora:** AST

**Main Focus of Brazilian Government:** Increase the number of Concessions and PPPs in infrastructure

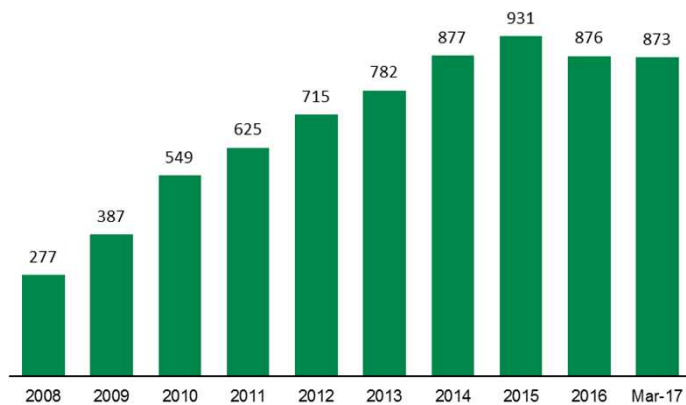
- **“Programa de Parcerias para Investimentos” (PPI):**
  - Address new rounds of concessions: airports and roads
  - Improve the robustness of public tenders and contracts, as well as regulatory and financial instruments
  - Coordination of anticipated extensions of concessions of railroads
- **Foster Investments**
  - Successful Federal Public Offers in
    - Transmission Lines (21 of 24 tranches auctioned, US\$ 4 billion Capex)*
    - Airports (4 airports auctioned, US\$ 1,1 billion Capex) [\(here\)](#)*
    - + Public Offer by the State of São Paulo (roads) [\(here\)](#)*

- **Energy:** Generation (Hydro, Wind, Solar, Biomass, Thermal), Transmission Lines, Energy Efficiency, Distribution
- **Logistics:** Roads, Railroads, Ports, Terminals (River and Seaports), Airports
- **Urban Mobility :** Urban Trains, Subways, BRTs, Tramways.
- **Water and Sanitation:** Clean water distribution, Sewage and final destination of waste

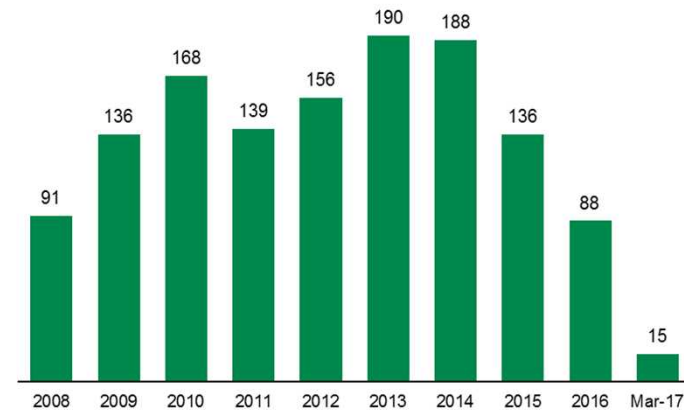
# BNDES: Main Brazilian lender for Infrastructure



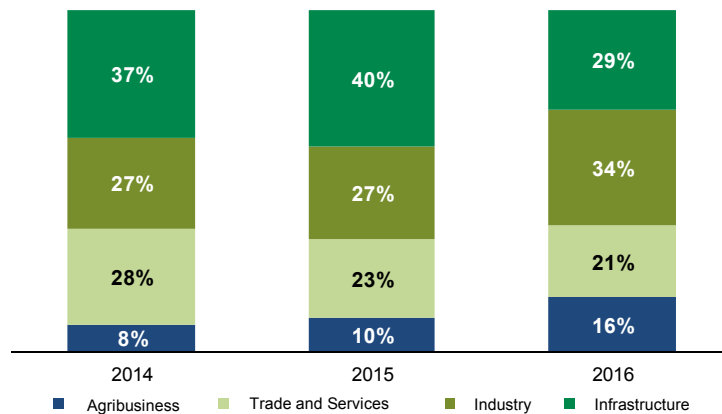
### Total Assets (R\$ billion)



### Disbursements (R\$ billion)

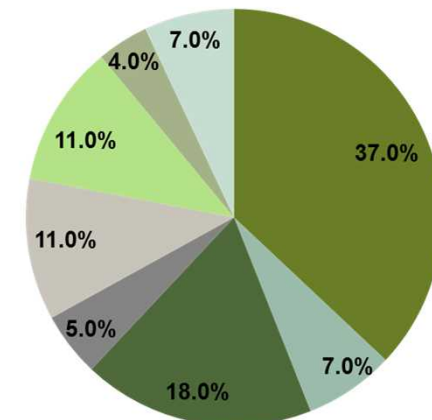


### Disbursements by Sector



### Disbursements for Infrastructure in 2016

- Electric Energy
- Construction
- Transport (roads)
- Transport (railroads)
- Transport (Other)
- Services in Transport
- Public Utility Services
- Telecommunication



# Pipeline of projects (as of March/2017)

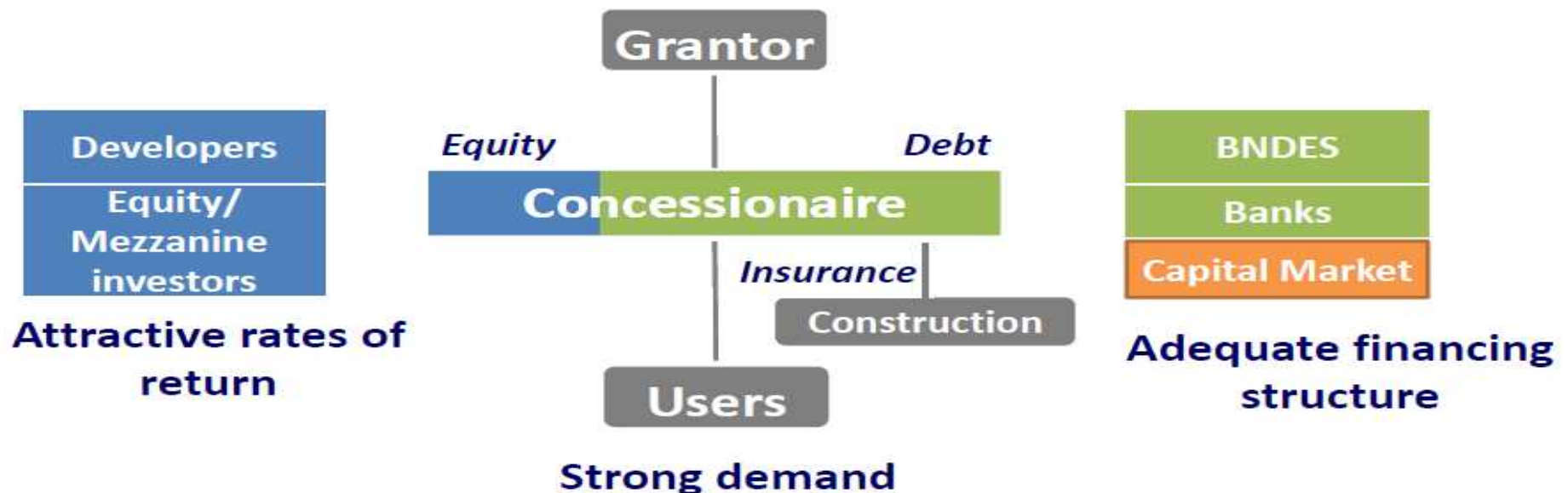


Sectors	Pipeline - highlights	Total estimated value (R\$)
Logistics	<i>Railroads and Waterways Ports, Terminals and Logistics Operators Federal Roads</i>	12,5 bi
Urban Mobility	<i>Airports Local/state railroads High-capacity systems (rail and BRTs)</i>	15,2 bi
Sanitation	<i>Water Sewage Waste</i>	1,7 bi
Energy	<i>Generation Transmission Distribution</i>	27,2 bi

- Support to priority projects via PPI (federal level), States and Municipalities
- Be the PPI agent: modeling and structuring new concessions and long term finance
- Support local state concessions in Sanitation: specialized technical studies for structuring private participation in concessions, sub-concessions and PPPs aimed at the universalization of water supply and sanitation (17 states enrolled until Aug/17) ([here](#))
- Support investments of municipalities: “Avançar Cidades” initiative

- Increase the social and environmental return of projects
- Stimulate capital markets - securitization of Infrastructure Debentures through a (green) fund based on receivables from projects of renewable energy [\(here\)](#)
- Foster compliance with best practices (social and environmental responsibility)
- Improve the agenda with foreign counterparts (e.g. cooperation with World Bank/BID on PPPs of Street Lighting: focus on energy efficient LED solutions for big cities)

- Improve financing to concessionaires: focus on the economic sustainability of concessions - favour a balanced structure of collaterals seeking the completion of projects
- Risk sharing with co-financiers with adequate guarantees: Project Finance Limited Recourse
- Allow for an adequate risk allocation alongside with the provision of long term finance





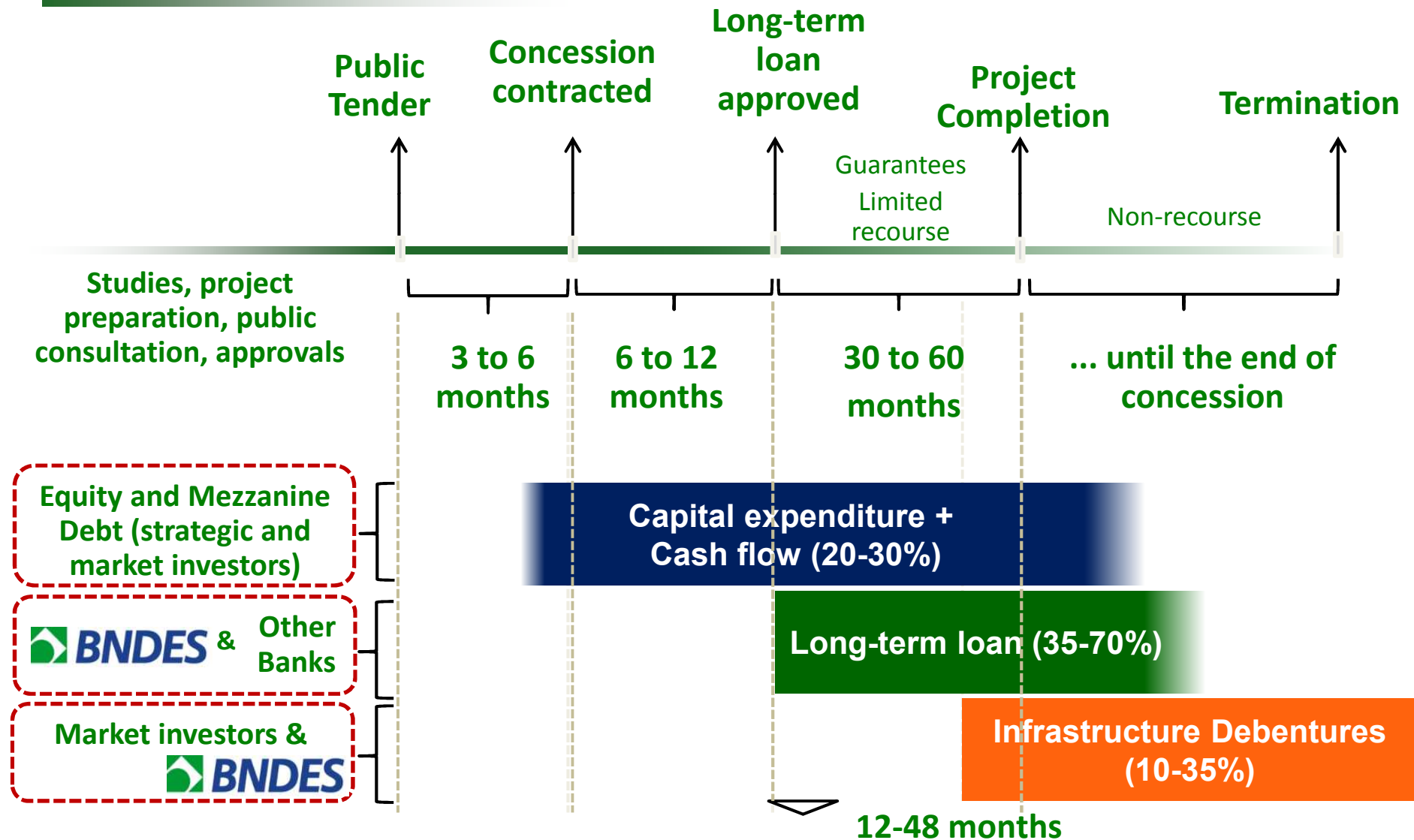
- ▶ **Accredited inspection** : joint initiative of PPI and INMETRO
  - ▶ Financiers and Granting Authority may require technical inspection of project and interventions by an independent and accredited agent
  - ▶ Expected benefits: improvements in technical quality, higher efficiency in evaluation and approval, bigger adherence of execution to planning, better reliability of tenures and budgetary provisions
  - ▶ INMETRO expected to be the technical sponsor of the program (defining scope and technical criteria for service provision and accreditation)
  
- ▶ **Credit enhancement**
  - ▶ Subordinated quotas in funds and debentures
  - ▶ Liquidity support line
  - ▶ Guarantee Funds - in discussion with World Bank/IFC.

- **Top priorities:** Energy Efficiency, Solar Energy, Sanitation, Railroads, Waterways and High capacity systems of Urban Mobility
- Minimum Equity participation of 20%
- BNDES participation: up to 80%
- Governance: independent accreditation for project and EPC + arm's length policy (e.g. mitigate conflicts between Sponsor x EPC contractor)
- Debt service coverage ratio  $\geq 1,3$ , straight line amortization profile (standard) / customized amortization profile (if required).

# Project Finance scheme



## BNDES general model



# Thank You

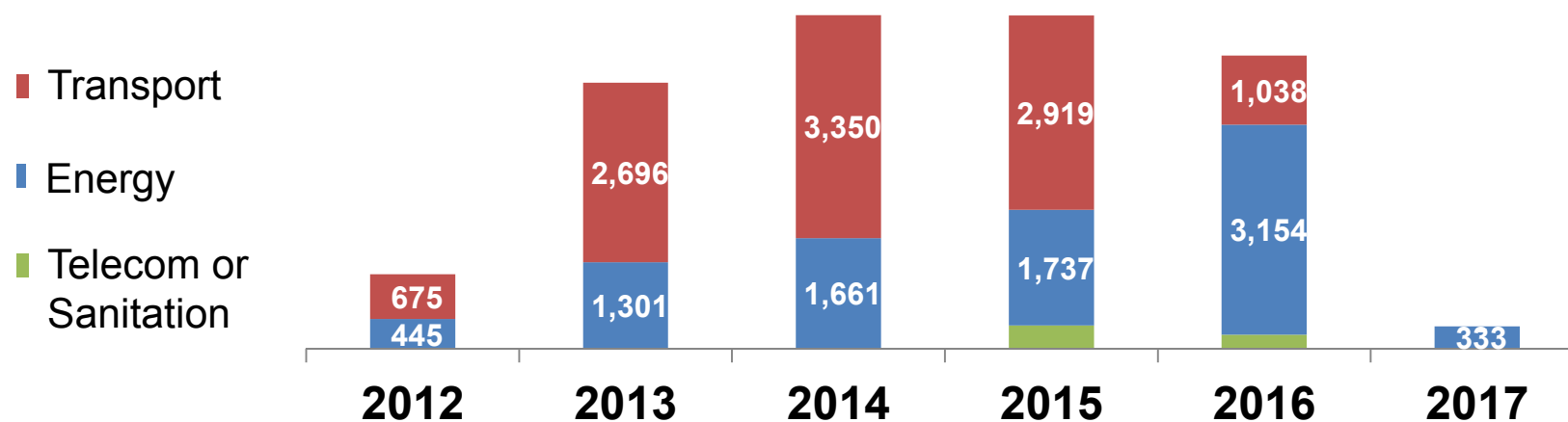
*Luciene Machado*  
*Deputy Managing Director – Infrastructure Division*



# Brazil : Infrastructure debentures

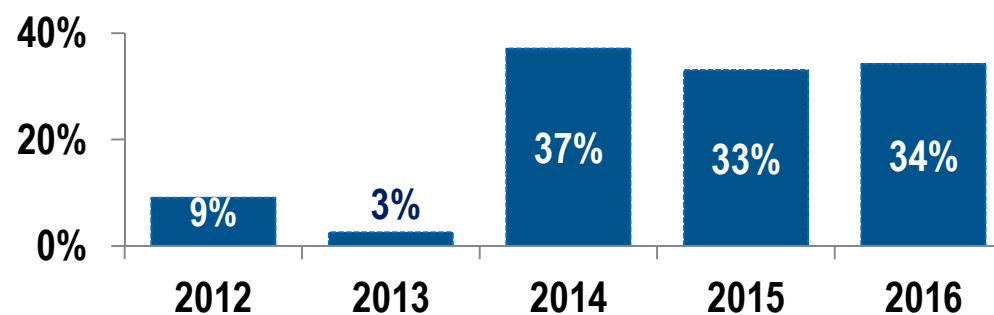


**Total issuance of R\$ 19,9 billion (2012 to Feb/2017), 79 projects**



Total (R\$ MM)	2012	2013	2014	2015	2016	2017
	1.120	3.997	5.011	5.006	4.402	333

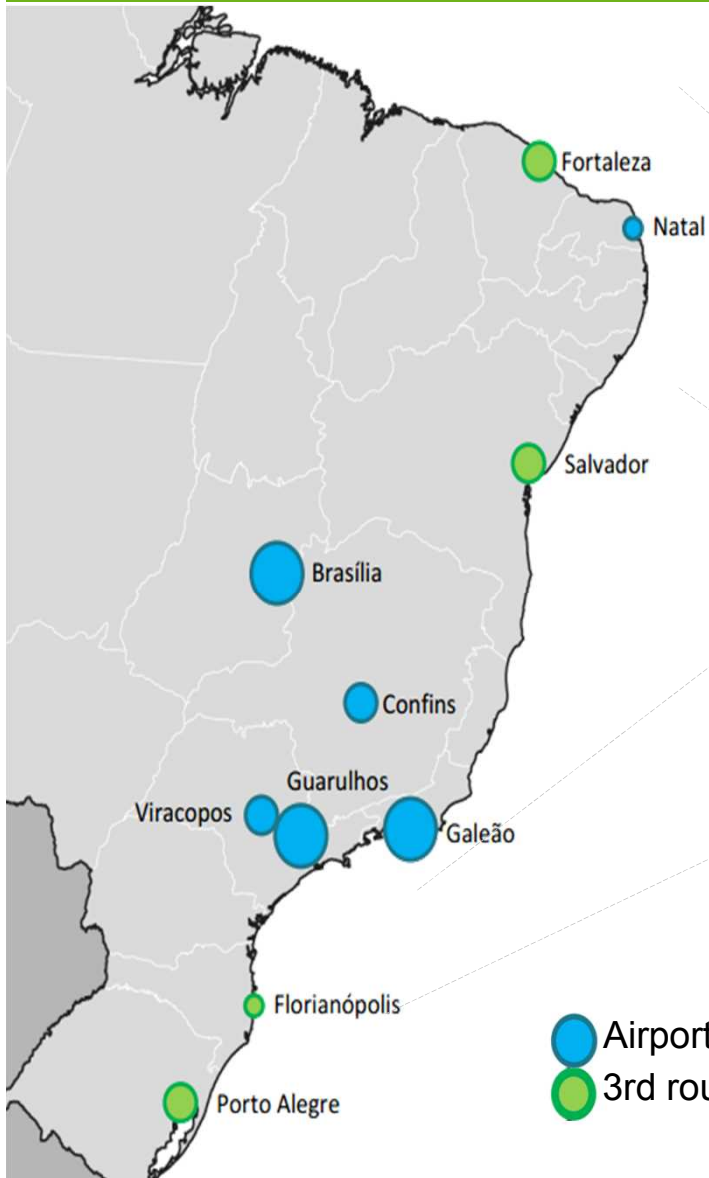
**BNDESPar share:**  
R\$ 1,43 billion, 30 issuances  
(2012-2016)



[\(back\)](#)

■ % BNDESPar

# Concession of Federal Airports: the 3rd round



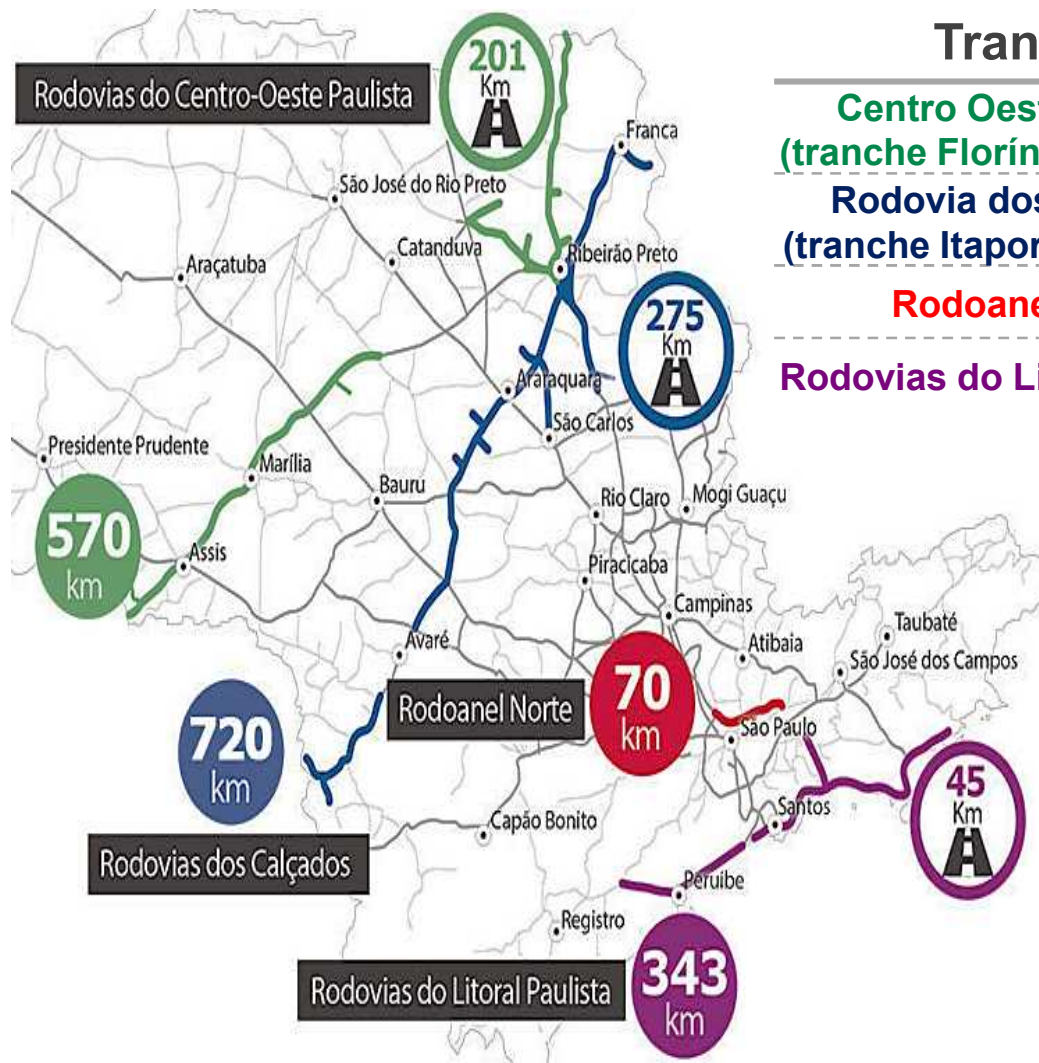
	PAX/year	Fixed concession fee (R\$ milhões)	Premium (%)
<b>FORTALEZA</b> 	5,7	1.441	18%
<b>SALVADOR</b> 	7,5	1.240	113%
<b>FLORIANÓPOLIS</b> <b>FLUGHAFENZÜRICH</b>	3,5	211	58%
<b>PORTO ALEGRE</b> 	7,6	122	852%

[\(back\)](#)

# Concession of 4 Tranches of Roads in the State of São Paulo



Model of Tender: Fixed Tariff and Maximum Fee



Tranche	Tender	CAPEX	Coverage
<b>Centro Oeste Paulista (tranche Florínea-Igarapava)</b>	21 Feb/2017	R\$ 3,9 bi	570 km
<b>Rodovia dos Calçados (tranche Itaporanga-Franca)</b>	25 Abr/2017	R\$ 5,0 bi	720 km
<b>Rodoanel Norte</b>	dez/2017	-	70 km
<b>Rodovias do Litoral Paulista</b>	dez/2017	-	343 km

[\(back\)](#)

## Auctioned

### Centro Oeste



Tender offer: R\$ 917 million  
Premium: 130,9%

### Calçados



Tender offer: R\$ 1,21 billion  
Premium: 438,1%

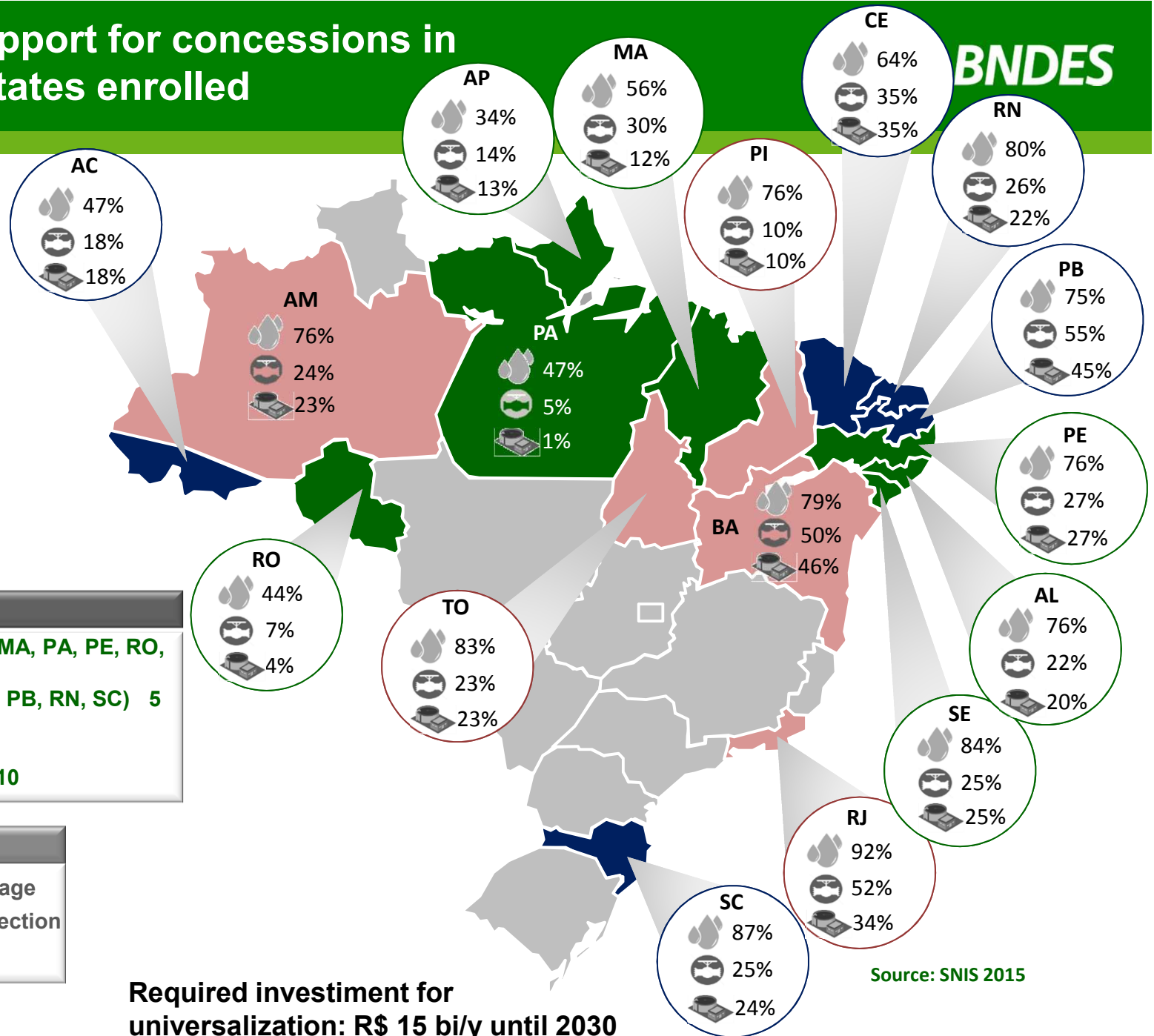
# Technical support for concessions in Sanitation: states enrolled

**BNDES**

[\(back\)](#)

States	
<span style="color: green;">■</span>	1st tranche (AL, AP, MA, PA, PE, RO, SE) 7
<span style="color: blue;">■</span>	2nd tranche (AC, CE, PB, RN, SC) 5
<span style="color: red;">■</span>	Other States 5
<span style="color: gray;">■</span>	Still to get involved 10

Figures	
	% water coverage
	% sewage collection
	% sanitation



Required investment for universalization: R\$ 15 bi/y until 2030

Source: SNIS 2015










# ***PRIVATE PARTICIPATION IN BRAZILIAN INFRASTRUCTURE:*** *Current Situation and next steps*

**Brasília, 31<sup>st</sup> of August 2017**

# GREAT GROWTH IN

## DEMAND FOR *INFRASTRUCTURE SERVICES*

	2006	2016	Average Annual Growth (2006-2016)	Rate 2016/2015
 <b>Air traffic</b> (million passanger)	46.7	96.1	7%	-7%
 <b>Toll traffic volume</b> (million vehicles/km)	657	1,775	10%	2%
 <b>Port Trade</b> (million tonnes)	693	998	4%	-1%
 <b>Container handling</b> (million TEUs)	6.1	8.8	4%	-4%
 <b>Grain production</b> (million tonnes)	131.7	186.6	4%	-10%
 <b>Trade flow</b> (US\$ billion) (IMP+EXP)	229.1	322.8	3%	-19%
 <b>Electricity consumption</b> (TWh)	352.7	459.6	3%	-1%

2

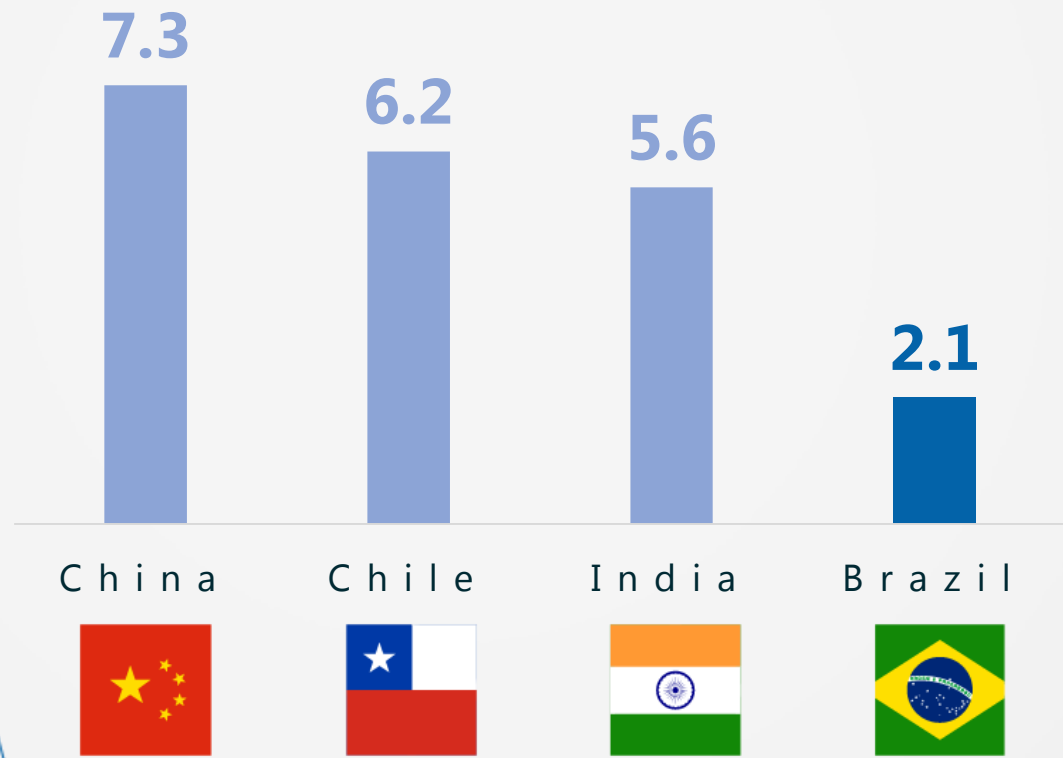
Source: Oficial data from brazilian authorities



# BRAZIL'S LOW INVESTMENT RATE



Infrastructure Investment as a Percentage of GDP  
(Average value)



Brazil invests **US\$ 37 billion** per year on average in infrastructure

At least **5% of the GDP** should be invested (US\$ 89 billion/year)

Annual deficit **US\$ 52 billion**

Source: CASTELAR, Armando. "Desafios e oportunidades na infraestrutura" (2011)  
PIB (2015): US\$ 1.816 trilhões - IBGE

# INVESTMENT PARTNERSHIPS PROGRAM

## The Brazilian Government Investment Partnerships Program

- Similar to previous Government Programs , but more private sector oriented, giving top priority to concessions in energy, transportation, mining and sanitation sectors.

### Offer ways to reduce work delays

- When a project is qualified for the Program, it is addressed as **national priority**;
- Concessions will only be granted to projects with demonstrated **environmental** feasibility;
- **Technical assistance** provided for structuring better project´s studies (BNDES\* support);
- Less state intervention regarding **returns rates**;
- The PPI board is subject to the **Brazilian Presidential Office**.



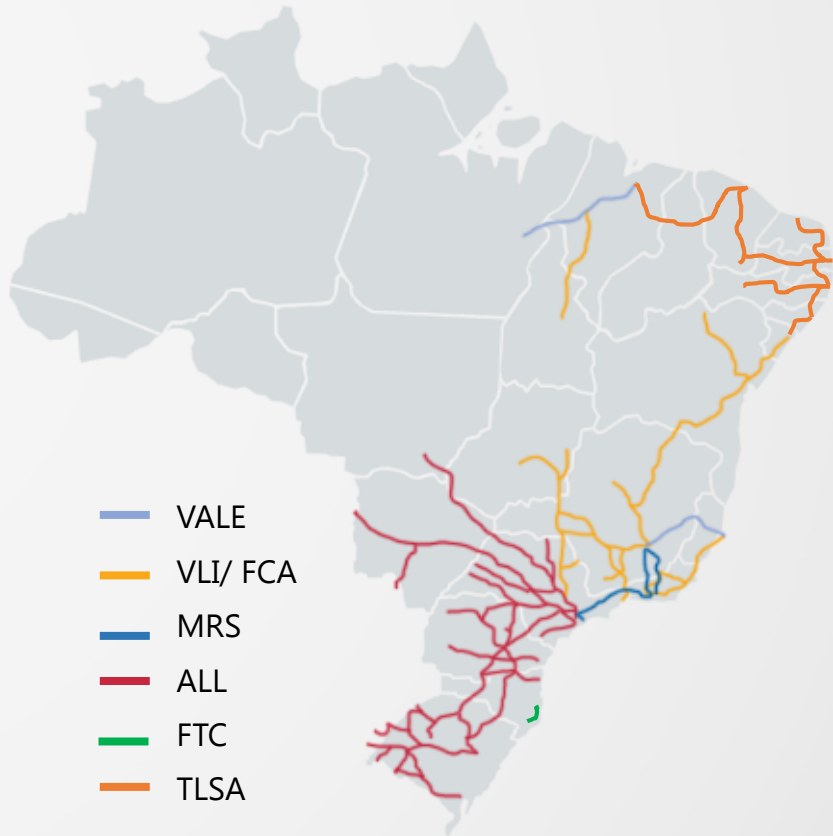
Key sectors for **japanese investments** and **cooperation**

# PRIVATE SECTOR PARTICIPATION - RAILWAYS

## Federal Railway Concession Program (RFFSA)

Regional Networks	Sections	Starting	Extension (km)
West	Ferrovias Novoeste S.A. (ALL)	July 1996	1,621
Mid East	Ferrovias Centro-Atlântica S.A. (FCA)	September 1996	7,080
Southeast	MRS Logística S.A. (MRS)	December 1996	1,674
Tereza Cristina	Ferrovias Tereza Cristina S.A. (FTC)	January 1997	164
Northeast	Cia. Ferroviária do Nordeste (TLSA)	January 1998	4,534
South	América Latina Logística S/A (ALL)	March 1997	6,586
Paulista	Ferrovias Bandeirantes S.A. (ALL)	January 1999	4,236
<b>Total</b>			<b>25,895</b>

## OPERATIONAL RAILWAYS NETWORK



**More than 90% of the rail network is operated by the private sector**

# CONCESSIONS - RAILWAYS

Three sections of railways planned for the **1<sup>st</sup> and 2<sup>nd</sup> Semester of 2018**

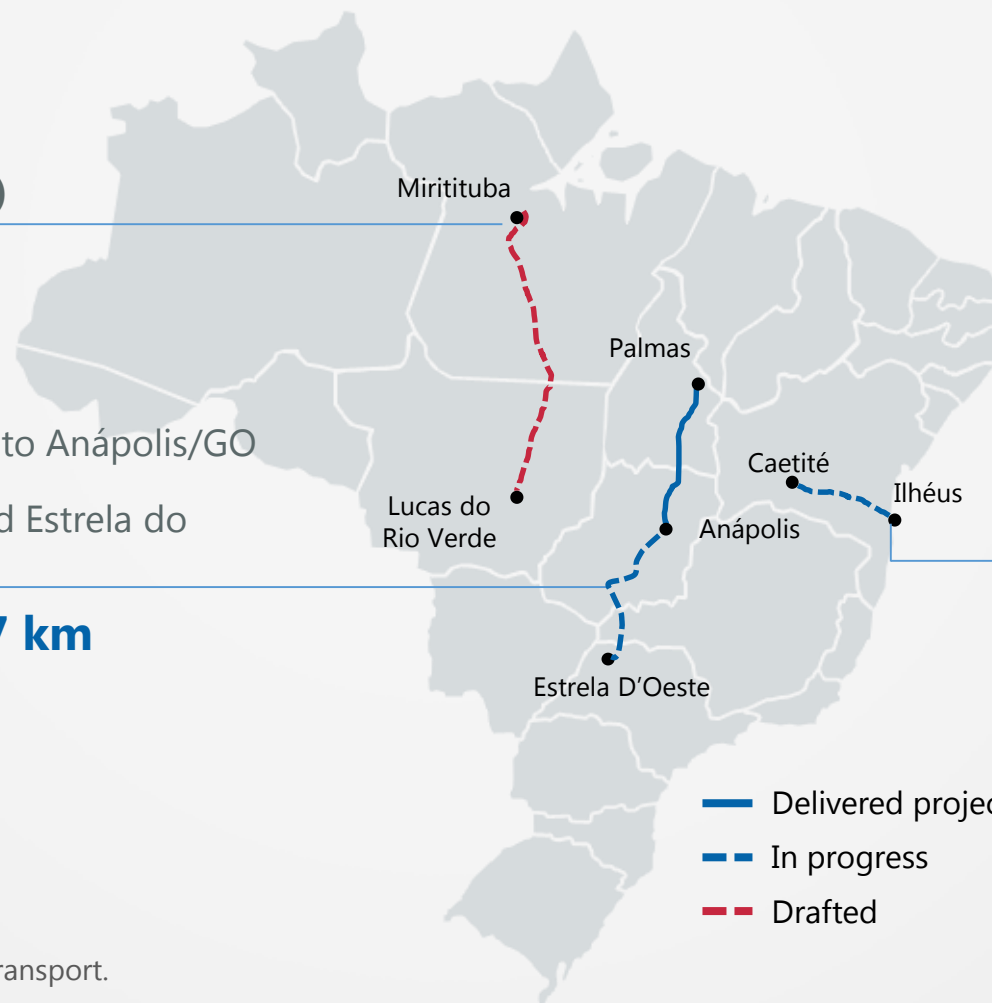
## Lucas do Rio Verde Mirituba (Ferrogrão)

Extension: **1,142 km**

## North-South

Porto Nacional/TO to Anápolis/GO (855 km)  
Ouro Verde/GO and Estrela do Oeste/SP (682 km)

Extension: **1,537 km**



## Section Ferrovia Oeste Leste (FIOL)

Extension: **537 km**

# PRIVATE SECTOR PARTICIPATION - HIGHWAYS

## Federal Highways Concession Program

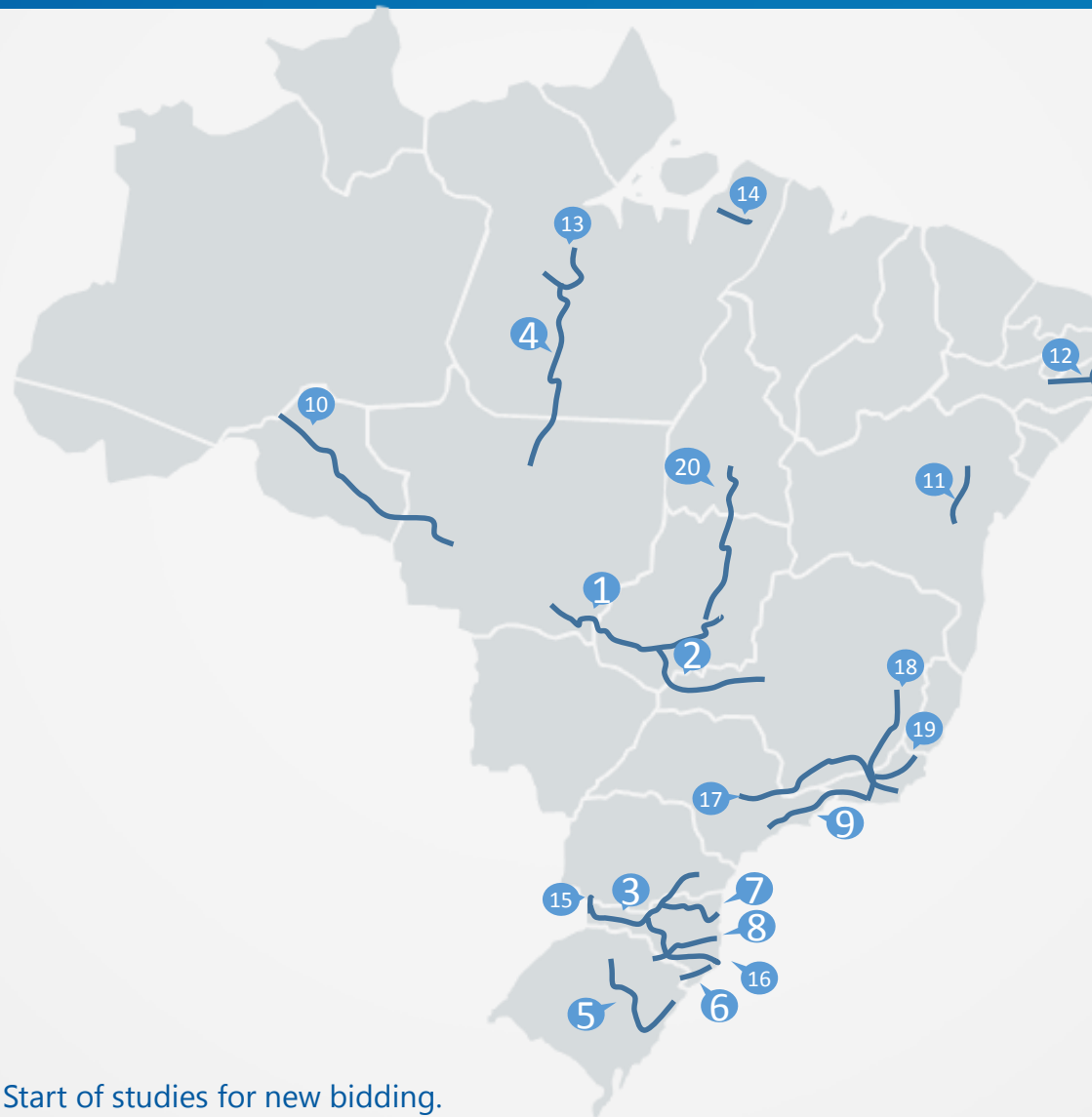
Steps	Extension (km)	% of Total
1994-1998: 6 sections	1,493	15%
2008-2009: 8 sections	3,281	34%
2013-2014: 7 sections	4,873	51%
<b>Total: 21 Sections</b>	<b>9,647</b>	<b>100%</b>



**The 21 sections** of the roads are equivalent to **15% of the total** paved federal network

# CONCESSIONS - HIGHWAYS

- 1 BR-060/364/GO-MT
- 2 BR-364/365/GO-MT
- 3 BR-476/153/282/480/PR-SC
- 4 BR-163/230/MT-PA
- 5 BR-101/290/386/448/SC/RS
- 6 BR-101/SC
- 7 BR-280/SC
- 8 BR-282/470/SC
- 9 BR-101/465/493/RJ-SP
- 10 BE-364/MT-RO
- 11 BR-101/BA
- 12 BR-101/232/PE
- 13 BR-163/PA
- 14 BR-316/PA
- 15 BR-163/282/SC
- 16 BR-282/SC
- 17 BR-116/RJ/SP\*
- 18 BR-040/MG/RJ\*
- 19 BR-116/RJ\*
- 20 BR-153/GO-TO\*



\* Start of studies for new bidding.

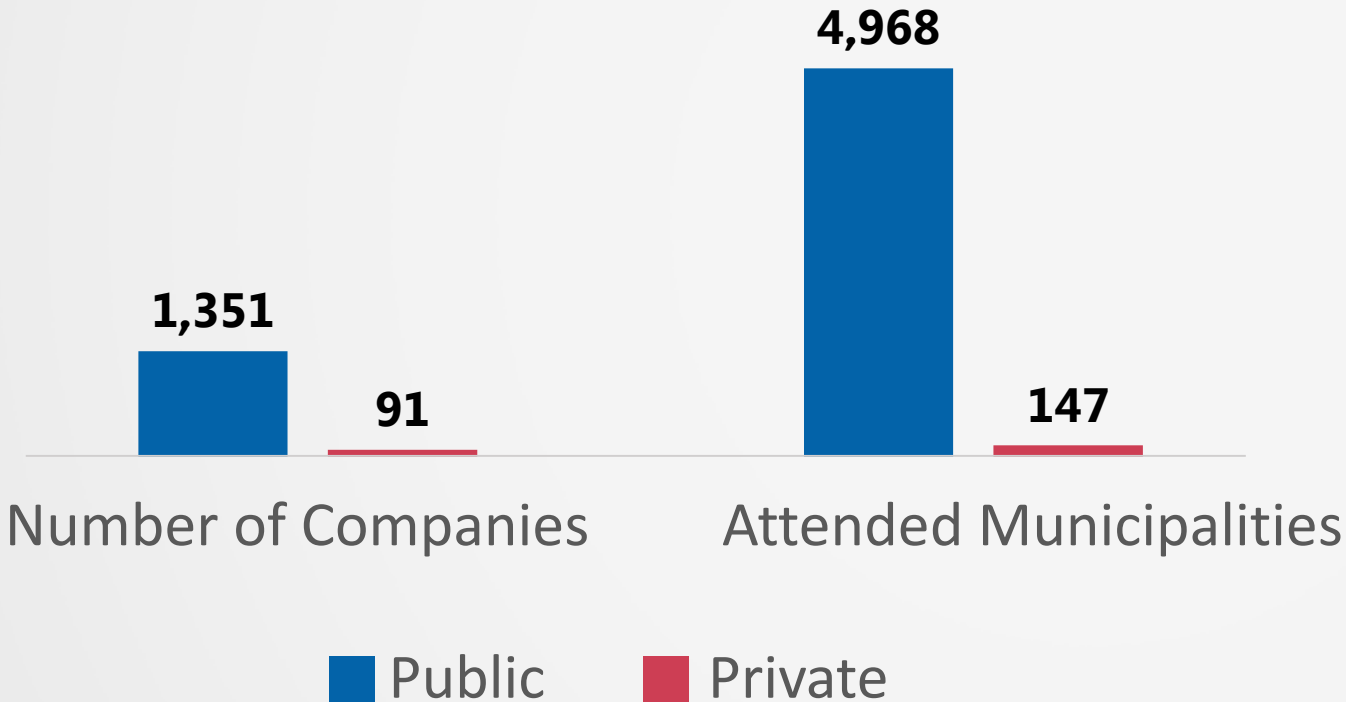


**More than 8  
thousand km** of  
roads to be awarded



# PRIVATE SECTOR PARTICIPATION - SANITATION

## ATTENDANCE BY TYPE OF MANAGEMENT IN BRAZIL



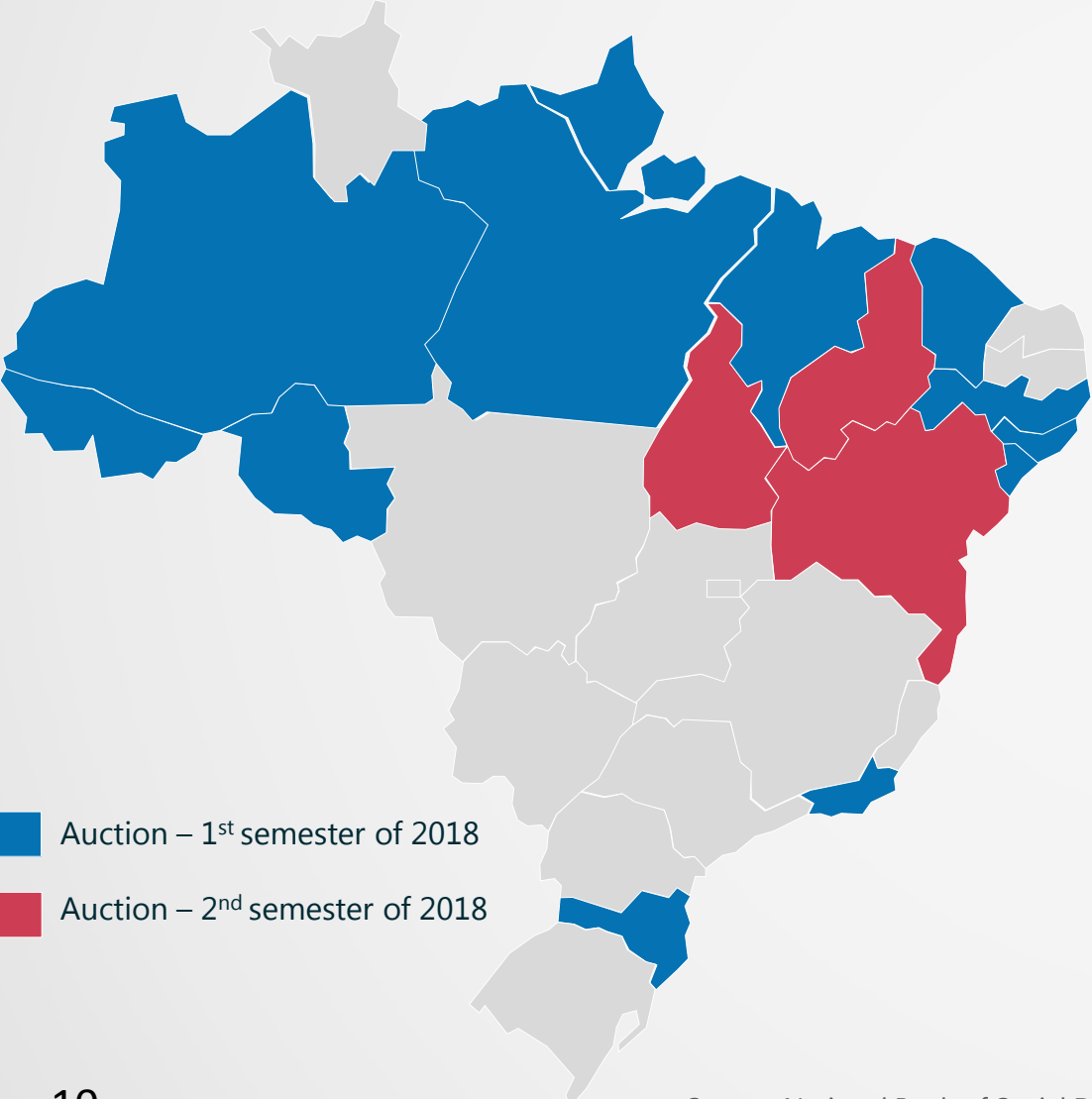
6.3% of the companies operating in the sector are private



Corresponding to 8.5% of the domestic market.

Source: SNIS 2015.

# CONCESSIONS – SANITATION



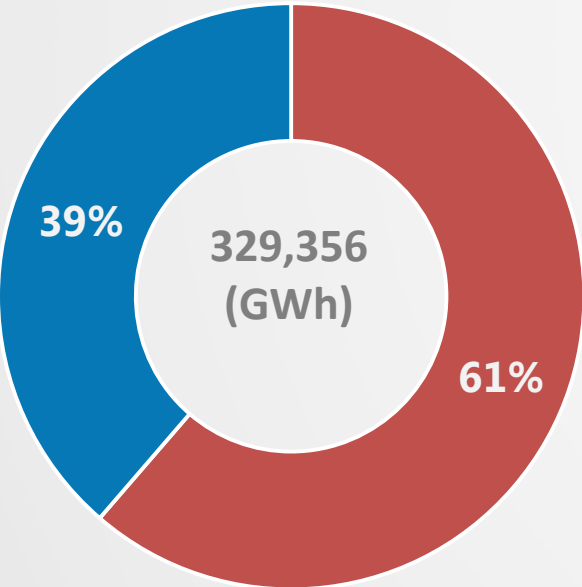
Projects	Current Stage	Auction
Water and sanitation state service provider: Rio de Janeiro, Rondônia, Santa Catarina, Ceará, Acre, Sergipe, Pernambuco, Pará, Maranhão, Amazonas, Amapá e Alagoas	Public Hearing	1 <sup>st</sup> semester of 2018
Water and sanitation state service provider: Bahia, Piauí e Tocantins	Beginning at 2 <sup>nd</sup> semester of 2018	2 <sup>nd</sup> semester of 2018

**15 State Companies** are qualified for the concession program. They represent 1,621 municipalities and **32% of the domestic Market** (68.1 million people )

# PRIVATE PARTICIPATION – ELECTRIC ENERGY

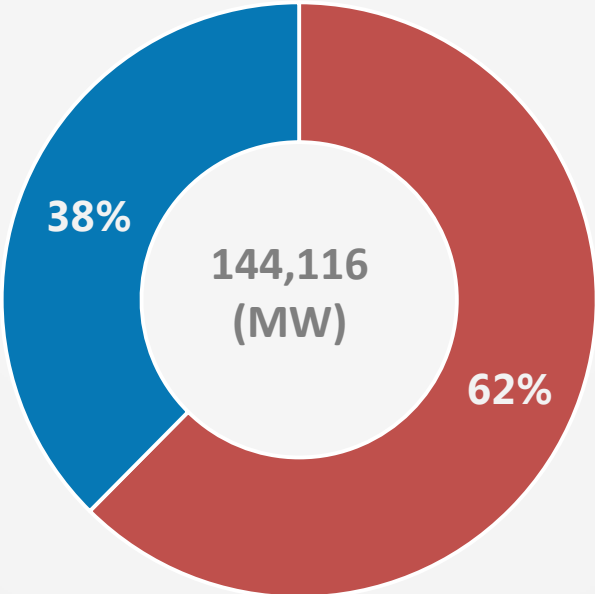
## DISTRIBUTION

Sold Energy



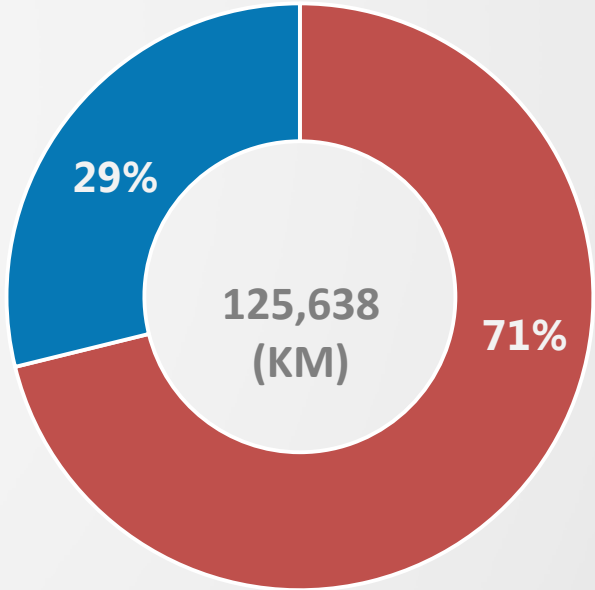
## GENERATION

Installed Capacity



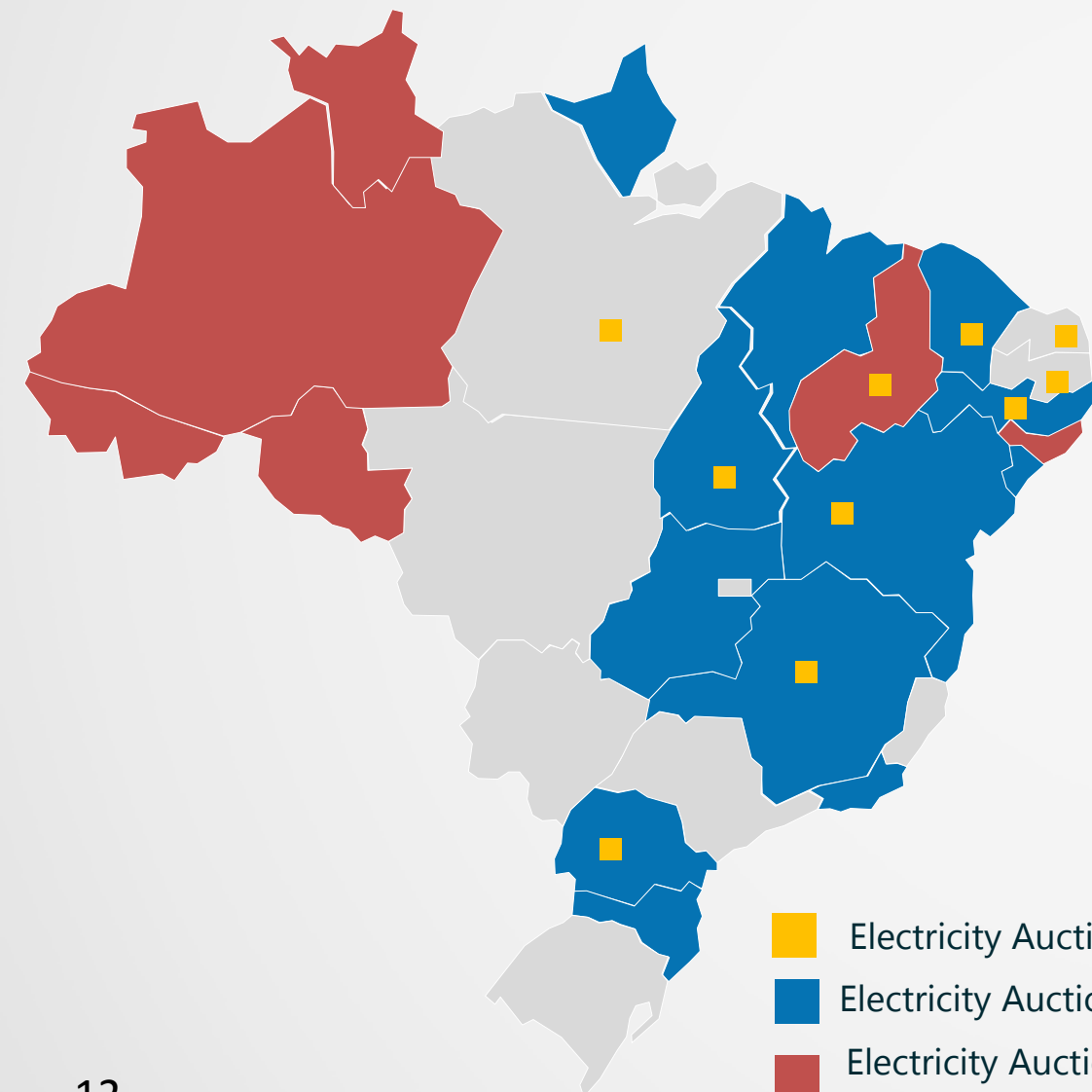
## TRANSMISSION

Extension



■ State-owned  
■ Private

# CONCESSIONS – ELECTRIC ENERGY



- Electricity Auctions – Transmission Lines
- Electricity Auctions - Generation
- Electricity Auctions - Distribution

Projects	Auction
06 Electricity <b>Distribution</b> Companies (Acre, Amazonas, Roraima, Piauí, Alagoas)	2 <sup>nd</sup> semester of 2017
Electricity <b>Distribution</b> Company of Rondônia	1 <sup>st</sup> semester of 2018
03 CEMIG's <b>Hydropower</b> Plants (São Simão, Miranda, Volta Grande and Jaragua)	27 of september 2017
02 Small <b>Hydropower</b> Plants (Pery e Agro Trafo)	2 <sup>nd</sup> semester of 2017
14 Eletrobras' <b>Hydropower</b> Plants (Coaracy Nunes, Boa Esperança, Araras, Complexo Paulo Afonso, Xingó, Luiz Gonzaga, Corumbá I, Marimbondo, Luiz Carlos Barreto, Funil (CHESF), Funil (FURNAS), Pedra, Furnas, Porto Colômbia)	To be defined
11 Power <b>Transmission</b> Lines	4 <sup>th</sup> Trimester of 2017

# PRIVATE SECTOR PARTICIPATION - PORTS



All Brazilian port terminals are operated by the private sector:  
**237 lease areas in Public Ports and 180 Private Terminals (TUPs).**



Since the **New Ports Legislation**, 57 new terminals were authorized, with investments of around **US\$ 4.9 billion**



**Other 67 terminals** are still **under review**, with the planned investment of around **US\$ 1.9 billion**

# CONCESSIONS - PORTS



Projects	Auction
Cellulose Terminal at the Port of Paranaguá/PR	1º trim/2018
Vehicle Terminal at the Port of Paranaguá/PR	
Miramar Terminal at the Port of Belém/PA	1º trim/2018
General Cargo Terminal at the Port of Santana/AP	1º sem/2018
Bulk liquid handling Terminal at th Port of Vila do Conde/ PA	3º trim/2018
Bulk liquid handling Termin at th Port of Belém (PA)	3º trim/2018
3 Grain Terminals at Port of Paranaguá /PR	3º trim/2018
Bulk liquid handling Terminal at th Port of Vitória /ES	3º trim/2018

The **privatization** of the first Public Port Authority, in the state Espírito Santo (**CODESA**)

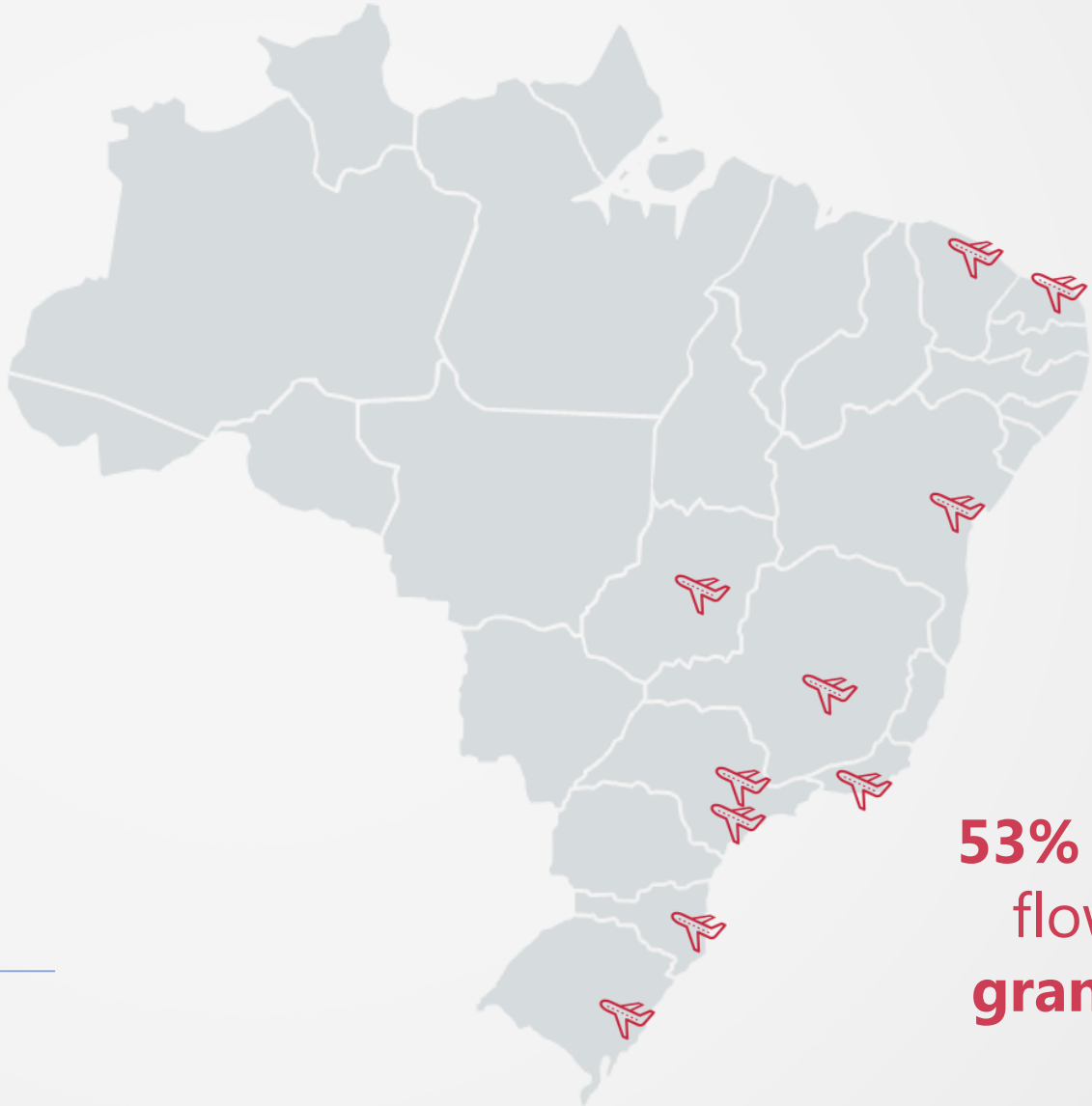
# PRIVATE SECTOR PARTICIPATION - AIRPORTS



Granted Airports

Passengers\* (million)

Guarulhos /SP	<b>12.3</b>
Brasília/DF	<b>9.3</b>
Galeão/RJ	<b>6.2</b>
Confins/MG	<b>5.3</b>
Campinas/SP	<b>4.6</b>
Natal/RN	<b>1.2</b>
Salvador/BA	<b>4.3</b>
Porto Alegre/RS	<b>3.8</b>
Fortaleza/CE	<b>2.9</b>
Florianópolis/SC	<b>1.7</b>

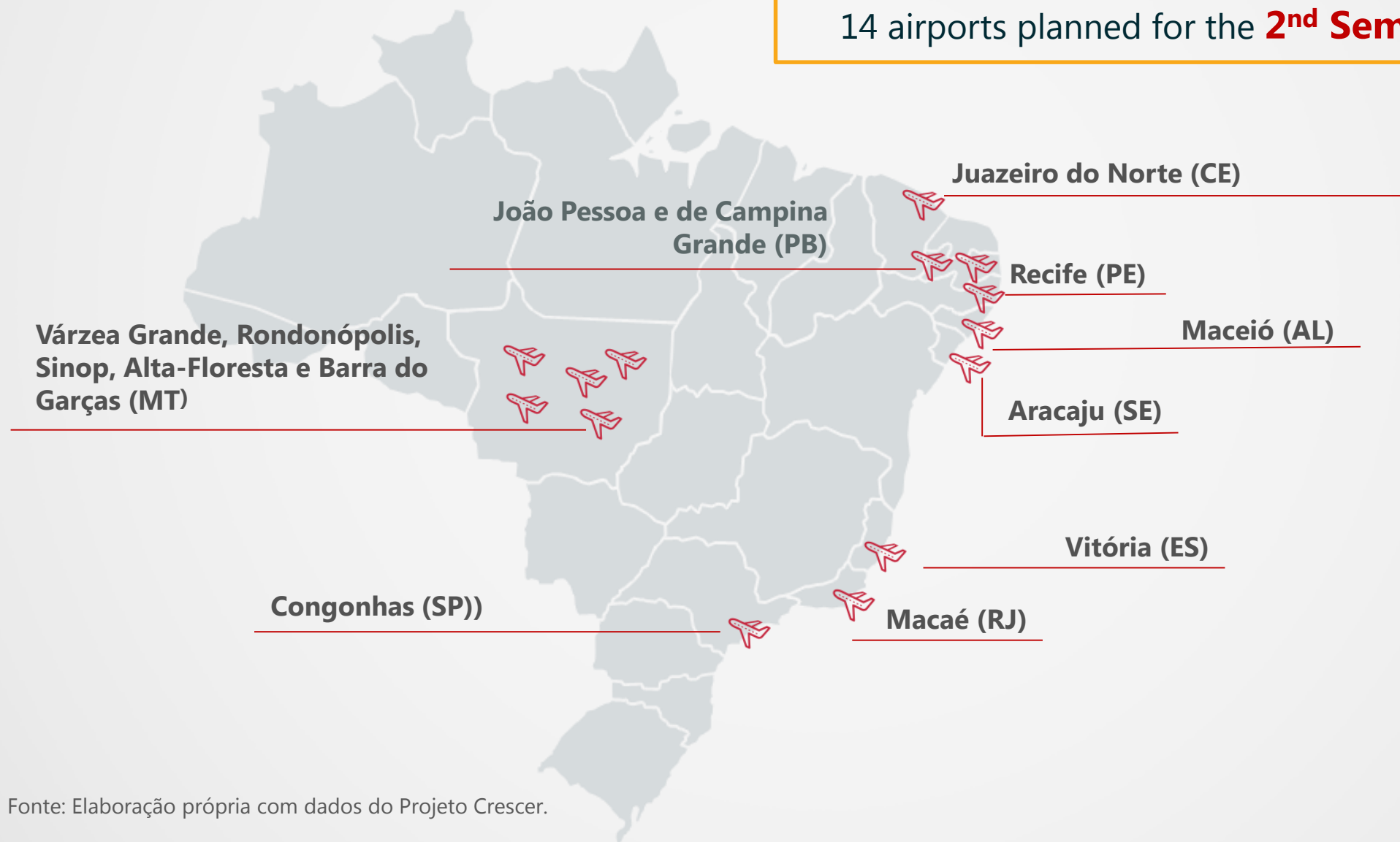


**53%** of passenger flow happens at granted airports

\*Total passengers in 2015 in the domestic market.

# CONCESSIONS - AIRPORTS

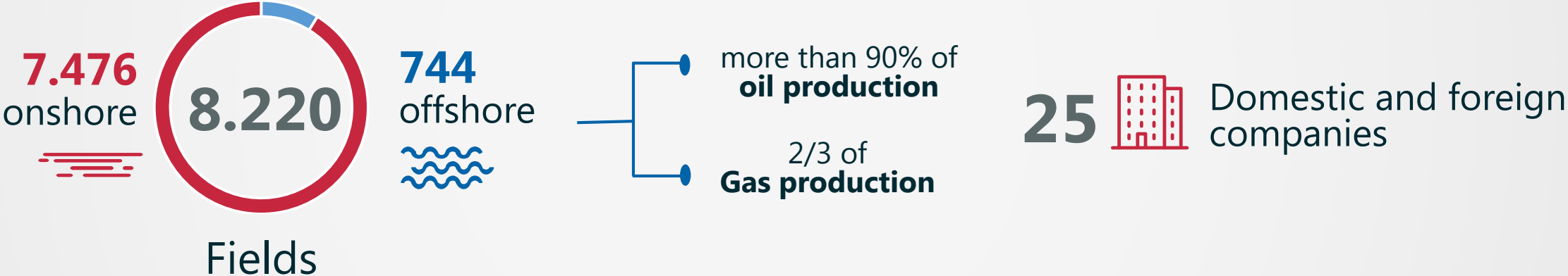
14 airports planned for the **2<sup>nd</sup> Semester of 2018**





# CONCESSIONS - OIL AND GAS

## PRODUCTION IN BRAZIL



**Petrobras** is responsible for more than **90%** of the **oil** and **gas production**

# CONCESSIONS – OIL AND GAS

Projects	Auctions
14 <sup>th</sup> Round of Exploratory Blocks of Oil and Natural Gas	27 <sup>th</sup> September 2017
2 <sup>nd</sup> Round Under the Oil Production Sharing Regime	27 <sup>th</sup> October 2017
3 <sup>rd</sup> Pre Salt Sharing Round	27 <sup>th</sup> October 2017
4 <sup>th</sup> Round of Marginal Fields of Oil and Gas	2 <sup>o</sup> Trimester of 2018
15 <sup>th</sup> Bidding Round of Blocks	
5 <sup>th</sup> Bidding Round of Areas with Marginal Accumulations	1 <sup>st</sup> semester of 2018
5 <sup>th</sup> Production Sharing Bidding Round	
16 <sup>th</sup> Round of Bids of Blocks, in the Concession Modality	2 <sup>nd</sup> semester of 2019
6 <sup>th</sup> Bidding Round of Areas with Marginal Accumulations	

Fonte: Elaborada  
própria com base  
do site do Programa  
Crescer e ANP

Source: ANP – Brazilian Agency for Oil and Gas and Investment Partnerships Program – PPI.



There is a broad consensus in Brazil that the way to overcome the country's infrastructure deficit depends on **increasing private participation** in management and investment in the sector.

***Thank you!***

**Matheus Braga de Castro**  
Industrial Policy Specialist  
matheus.castro@cni.org.br



ESTADO DO PARANÁ  
Brasília - Agosto/2017

# ESTADO DO PARANÁ

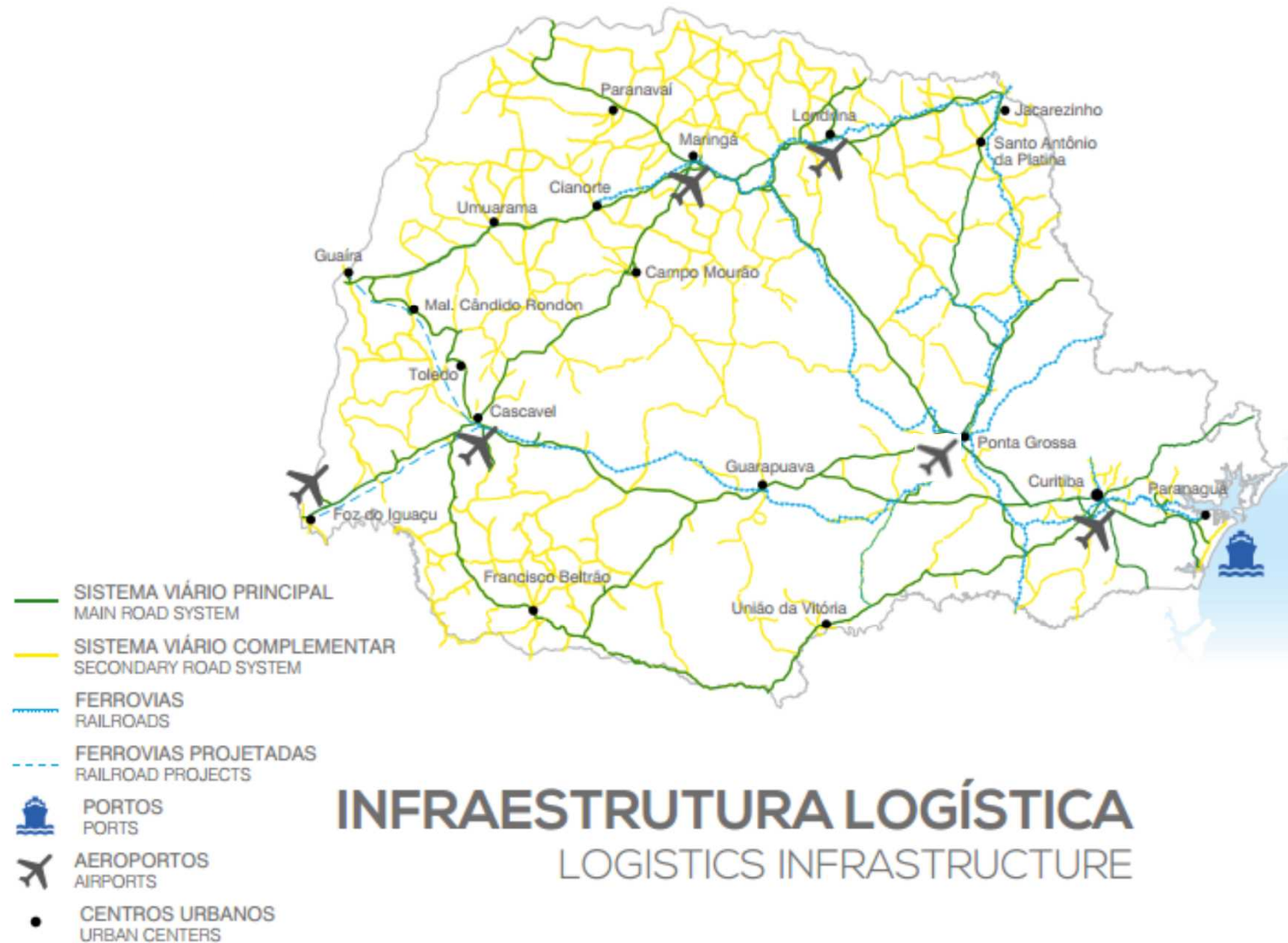
Localizado na região sul do Brasil, o Paraná possui uma população de 11 milhões de habitantes, distribuídos em 399 municípios. O Estado tem uma posição geográfica privilegiada: faz fronteira com o Argentina e o Paraguai o que confere vantagens logísticas no comércio com o Mercosul – e divisa com os estados de São Paulo (maior mercado nacional), Santa Catarina e Mato Grosso do Sul.



AMÉRICA DO SUL  
SOUTH AMERICA

# ESTADO DO PARANÁ

São 13.750 km de rodovias  
pavimentadas, 2.400 km de  
ferrovias, 02 portos, 44  
aeroportos



# GESTÃO DE 2011-2018

## MODELO DE GESTÃO

Desde o início da gestão em 2011, o Governo do Estado definiu como estratégia de desenvolvimento do Paraná a introdução de um conjunto de ações voltadas ao diálogo.

Este novo jeito de governar permitiu a cooperação e pactuação de objetivos de desenvolvimento com a sociedade e com os setores produtivos.





# O ESTADO DO PARANÁ

MELHOR ESTRATÉGIA DE ATRAÇÃO DE INVESTIMENTOS DA AMÉRICA DO SUL



**4ª MAIOR ECONOMIA  
DO BRASIL**



**3º MAIOR PÓLO  
INDUSTRIAL DO PAÍS**



**2º ESTADO MAIS  
COMPETITIVO DO  
BRASIL**

# RANKING DE COMPETITIVIDADE



## Paraná lidera ranking de atração de investimentos, diz Financial Times

O Paraná tem a melhor estratégia para atração de investimentos da América do Sul, de acordo com análise do Jornal Financial Times FDI Intelligence. A pesquisa "Estados Sul-Americanos do Futuro" - edição 2016/2017, realizada pelo grupo britânico, é considerada uma das mais importantes publicações sobre investimento direto no mundo. O Estado ficou à frente de Bogotá, São Paulo, Pernambuco e Rio de Janeiro em um ranking que tomou como base dados de 28 estados, províncias e cidades da América do Sul.

# RANKING DE COMPETITIVIDADE



## Paraná foi o Estado do Sul que mais reduziu a pobreza

O Paraná conseguiu reduzir a pobreza em 15% entre 2009 e 2015. O número de pessoas que residem em domicílios cuja renda mensal *per capita* é de até meio salário mínimo – um dos critérios para medir a pobreza - caiu de 2,1 milhões para 1,5 milhão no Estado.

Foi a maior queda entre os Estados do Sul e quase cinco vezes a registrada no Brasil no mesmo período. Os dados são da Pesquisa Nacional por Amostra de Domicílios (PNAD) do IBGE, compilados pelo Instituto Paranaense de Desenvolvimento Econômico Social (Ipardes).

# RANKING DE COMPETITIVIDADE



## **Paraná avança em indicadores de Desenvolvimento Humano**

O Paraná melhorou seus indicadores de desenvolvimento humano entre 2011 e 2014, mostra levantamento Radar IDHM, realizado pelo Programa das Nações Unidas para o Desenvolvimento (PNUD), em parceria com Instituto de Pesquisa Econômica Aplicada (IPEA) e a Fundação João Pinheiro. O *ranking* estabelece uma pontuação de 0 a 1 e quanto mais perto de 1 mais bem posicionado o Estado. Em 2011, o Paraná havia obtido uma pontuação 0,761, que passou a 0,790 em 2014, um crescimento de 3,8%. O Estado, considerado de alto desenvolvimento humano, foi o quarto no *ranking*, atrás do Distrito Federal (0,839), São Paulo (0,819) e Santa Catarina (0,813). A média brasileira foi de 0,761 em 2014, contra 0,738 em 2011.

# RANKING DE COMPETITIVIDADE



## RATING DO ESTADO DO PARANÁ

Instituição	2017	2016
<b>STN<sup>(1)</sup></b>	-	<b>B-</b>
<b>Fitch Rating</b>	<b>AA+</b>	<b>AA</b>

NOTA: (1) o rating de determinado ano é aferido de acordo com os indicadores econômico-financeiros dos últimos três anos (2013 a 2015).

Obs.: O rating da Fitch é de escala nacional Brasil.

# INDICADORES ECONÔMICOS DO ESTADO DO PARANÁ



## PRODUTO INTERNO BRUTO:

Quinta economia do País  
(6,0% do PIB nacional em  
2014).

Fonte: IBGE/IPARDES.

# INDICADORES ECONÔMICOS DO ESTADO DO PARANÁ



## AGROPECUÁRIA:

Apesar de deter apenas 2,3% do território brasileiro, o Paraná é o segundo maior produtor de grãos, devendo colher cerca de 42 milhões de toneladas na safra 2016/2017, representando aproximadamente 19% da produção nacional.

- 1º lugar na produção de carne de frango (4 milhões de toneladas em 2015).
- 1º lugar na produção de trigo (3,9 milhões de toneladas na safra 2016/2017).
- 1º lugar na produção de feijão (774,7 mil toneladas na safra 2016/2017).
- 2º lugar na produção de soja (18,8 milhões de toneladas na safra 2016/2017).
- 2º lugar na produção de milho (17,8 milhões de toneladas na safra 2016/2017).
- 3º lugar na produção de carne de suíno ( 778 milhões de toneladas em 2016).

Fonte: IBGE/IPARDES.

# INDICADORES ECONÔMICOS DO ESTADO DO PARANÁ



## INDÚSTRIA

A indústria de transformação do Paraná registrou um Valor da Transformação Industrial (VTI) de R\$ 79 bilhões em 2014, assegurando a terceira colocação no ranking nacional (8,3% do VTI brasileiro). Fonte: IBGE.

4ª posição no ranking do processamento de petróleo (9,9 milhões de m3 em 2016), atrás apenas de São Paulo, Bahia e Rio de Janeiro. Fonte: ANP.

Segunda maior indústria de veículos automotores, pela ótica do valor agregado (R\$ 13,6 bilhões em 2014). Fonte: IBGE.

- Segunda maior indústria de alimentos, pela ótica do valor agregado (R\$ 19,3 bilhões em 2014). Fonte: IBGE.



# INDICADORES ECONÔMICOS DO ESTADO DO PARANÁ



## SERVIÇOS

Quinto maior Valor Adicionado Bruto (VAB) do setor de serviços (R\$ 197 bilhões em 2014).

Fonte: IBGE/IPARDES.

# PARCEIROS COMERCIAIS DO ESTADO DO PARANÁ



## PARANÁ: Principais Parceiros Exportação

Países	Participação % em 2016
CHINA	23
ARGENTINA	10
ESTADOS UNIDOS	5
PAÍSES BAIXOS (HOLANDA)	4
ARÁBIA SAUDITA	3
ALEMANHA	3
PARAGUAÍ	3
COREIA DO SUL	2
JAPÃO	2

## PARANÁ: Principais Parceiros Importação

Países	Participação % em 2016
CHINA	16
ESTADOS UNIDOS	13
ARGENTINA	10
FRANCA	5
ALEMANHA	5
PARAGUAI	4
ESPANHA	3
MÉXICO	3
ITÁLIA	2

OPORTUNIDADES DE  
INVESTIMENTOS NO  
ESTADO DO PARANÁ



# **EMPRESAS PUBLICAS E PROGRAMAS DE GOVERNO**

# O ESTADO DO PARANÁ

## VANTAGEM LOGÍSTICA

Acesso rápido e direto aos **principais mercados consumidores** do país



Acesso aos mercados consumidores do **Mercosul e Am. Latina**



Acesso a **4 Portos** estratégicos



Acesso aos mercados consumidores do **Sul do Brasil**



# O ESTADO DO PARANÁ

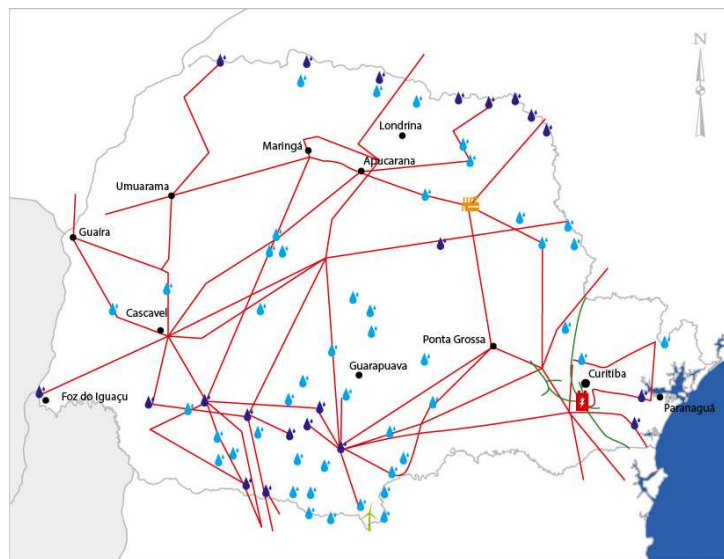
## VANTAGEM ENERGÉTICA E UTILITIES



Abastecimento garantido de água industrial  
garantida, eficiente e competitiva



Gás industrial disponível  
para as principais regiões  
industriais do estado



COPEL Companhia  
Paranaense de Energia : a  
melhor distribuidora de  
energia do Brasil



Incentivos fiscais para o custo da  
energia elétrica e gás industrial

# PROGRAMA PARANÁ COMPETITIVO

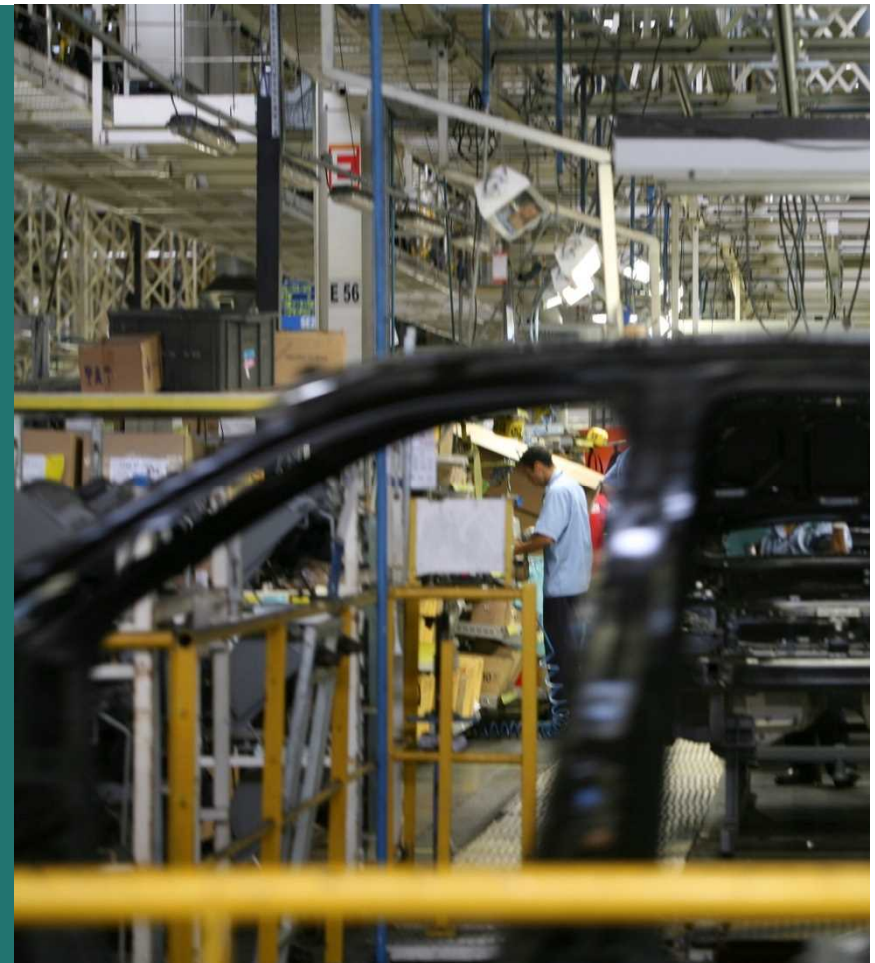
Programa de incentivos fiscais com o objetivo de atrair investimentos ao estado do Paraná  
- Decreto Nº 6.434/2017

## Objetivo

Promover a atração de novos investimentos e a expansão de empresas já estabelecidas no estado

## Vantagens

Parcelamento do ICMS incremental  
Diferimento do ICMS da energia elétrica de fornecedoras instaladas no Paraná e do gás natural fornecido pela Compagás.



# Companhia de Saneamento do Paraná

**SANEPAR**

*Dedicação sem limites ao povo do Paraná*



# A Sanepar - Serviços

	Água	Esgoto	
	<b>3,8 Milhões</b> Economias ativas <sup>1</sup>	<b>2,7 Milhões</b> Economias ativas <sup>1</sup>	
	<b>100%</b> Índice de abastecimento com rede	<b>70 %</b> Índice de cobertura com rede	<b>100%</b> Índice de tratamento
	<b>3.056.784</b> Total de ligações	<b>1.994.218</b> Total de ligações	
	<b>52,1mil km</b> Extensão da rede de distribuição de água	<b>33,5 mil km</b> Extensão da rede coletora de esgoto	

<sup>1</sup> O termo economia ativa é usado para denominar todo imóvel ou subdivisão de um imóvel que possui uma instalação privada ou de uso comum de serviços de água e/ou esgotamento sanitário cadastrado e faturado pela Sanepar.



# A Sanepar - Serviços

## Resíduos Sólidos Urbanos



**100%**

Índice de cobertura  
população urbana



**50,7 mil**

ton/ano  
Tratamento de resíduos  
sólidos urbanos



**3**

Aterros Sanitários.

Cianorte + 4 Municípios - Tratamento  
Apucarana - Tratamento  
Cornélio Procópio – Coleta e  
Tratamento



# Investimentos Previstos Sanepar

2017	2018	2019	2020	2021	2017 - 2021
água <b>481,0</b> milhões	água <b>414,3</b> milhões	água <b>336,6</b> milhões	água <b>354,6</b> milhões	água <b>356,0</b> milhões	água <b>1,9</b> Bilhão
Esgoto <b>517,6</b> milhões	Esgoto <b>457,6</b> milhões	Esgoto <b>407,1</b> milhões	Esgoto <b>386,6</b> milhões	Esgoto <b>372,0</b> milhões	Esgoto <b>2,1</b> Bilhões
Outros <b>83,4</b> milhões	Outros <b>78,1</b> milhões	Outros <b>56,3</b> milhões	Outros <b>58,8</b> milhões	Outros <b>72,0</b> milhões	Outros <b>348,6</b> milhões
Total <b>1082,0</b> milhões	Total <b>950,0</b> milhões	Total <b>800,0</b> milhões	Total <b>800,0</b> milhões	Total <b>800,0</b> milhões	Total <b>4,4</b> Bilhões

# Programa de Investimentos



# INFRAESTRUTURA TERRESTRE

Previsão da Demanda – PDZPO APPA



Produto	2010	2015	2020	2025	2030
Complexo de Soja (t)	11.241.260	13.810.491	16.739.468	19.546.994	22.313.866
Soja (t)	6.437.619	8.018.068	9.819.638	11.527.394	13.190.580
Farelo de Soja (t)	4.030.407	4.989.367	6.087.169	7.159.775	8.237.595
Óleo de Soja (t)	773.235	803.056	832.661	859.825	885.691
Fertilizantes e Adubos (t)	6.890.848	9.370.968	10.529.303	11.742.998	12.579.477
Contêiner Líquido (t)	5.021.793	8.562.509	11.168.305	13.707.315	16.321.195
Carne de Aves (exportação)	1.287.717	1.543.264	1.920.926	2.312.461	2.695.729
Madeira e Móveis (exportação)	812.148	825.051	960.646	1.118.526	1.302.353
Papel (exportação)	316.226	380.813	408.831	438.911	471.203
Produtos Alimentícios (exportação)	196.719	221.329	229.754	238.500	247.579
Algodão (exportação)	140.317	206.059	276.144	370.066	495.934
Carne Bovina (exportação)	136.513	163.099	261.718	419.969	673.908
Produtos Alimentícios (importação)	195.615	304.961	361.498	428.517	507.962
Máquinas e Equipamentos (importação)	170.778	269.467	344.900	441.449	565.024
Plásticos (importação)	136.850	275.748	389.832	551.117	779.131
Prod. Cerâmicos, Vidros e suas Obras (importação)	119.805	311.179	510.336	836.954	1.372.610
Açúcar (t)	4.367.415	5.920.571	6.222.580	6.539.994	6.840.935
Açúcar granel (t)	3.493.932	4.749.103	5.003.684	5.269.538	5.521.641
Açúcar ensacado (t)	873.483	1.171.468	1.218.896	1.270.456	1.319.293
Milho (t)	2.994.887	3.655.744	4.447.905	5.367.758	6.446.179
Combustíveis (t)	1.514.129	3.260.640	3.813.186	4.368.705	4.896.266
Trigo (t)	890.492	591.718	506.341	437.147	381.168
Álcool Etílico (t)	776.772	816.395	1.805.070	3.791.265	7.562.949
Veículos (t)	222.536	330.315	412.840	503.725	617.302
Celulose (t)	169.969	1.273.659	1.299.330	1.358.855	1.456.669
Produtos Químicos (t)	141.294	219.764	292.418	311.341	326.147
Outros (t)	1.414.956	1.955.214	2.352.666	2.786.961	3.296.145
Total do Porto (t)	35.646.352	49.767.988	59.589.413	70.463.058	83.038.298

# INFRAESTRUTURA TERRESTRE

Programa de Investimentos (Recursos Público e Privados)



# INVESTIMENTOS PRIVADOS

## *Programa de Investimentos - Resumo*



### **Paraná**

- Terminais Uso Privado – R\$ 3,4 Bilhões
  - Terminais Green Field
    - Pontal do Paraná – Porto Pontal
    - Embocuí – Novo Porto
    - Embocuí - TERLIP
- Arrendamentos (PPI) – R\$ 1,2 Bilhões (5 novas outorgas – 17/18)
  - Arrendamento de Novas Área Públicas

# ARRENDAMENTOS – PPI

Arrendamento de novas áreas públicas



# PROGRAMA DE ARRENDAMENTOS - PPI

*Porto de Paranaguá*



## **Paranaguá**

- Área PAR XX – Granéis Sólidos Exportação (Oficinas)
- Área PAR 07 – Granéis Sólidos Exportação (Corex)
- Área PAR 08 – Granéis Sólidos Exportação (Corex)
- Área PAR 01 – Carga Geral – Florestais
- Área PAR 12 – Veículos



# TERMINAL DE USO PRIVADO TUP GREEN FIELD

## Novos Portos Privados



- 1) LEGENDA
- 1 - PIER DE U
  - 2 - CAS. DE U
  - 3 - PIER DE G
  - 4 - ARMAZEM T
  - 5 - ARMAZEM I
  - 6 - MANUTENÇÃO
  - 7 - BRANCA DE
  - 8 - REFEITÓRIO
  - 9 - ESTACIONA
  - 10 - BLOCO A
  - 11 - PORTÃO D
  - 12 - ESTACIONA
  - 13 - ÁREA DE T
  - 14 - REFEITÓR
  - 15 - SUBESTAÇÃO
  - 16 - SANITÁRIO
  - 17 - POSTO DE

2) DIMENSÃO DOS IT

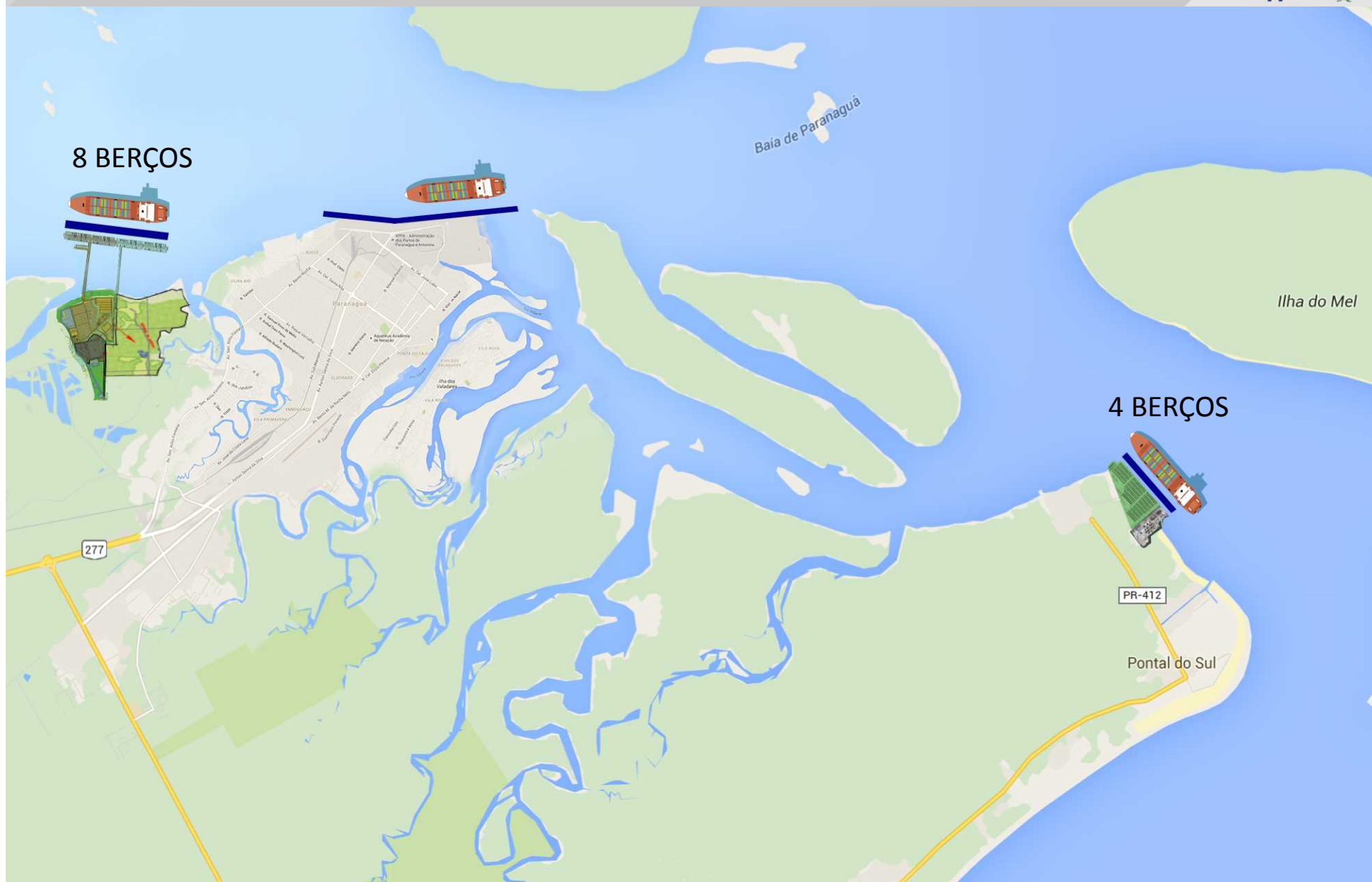
ITEM	UNID.
10M	(M)
10M	(M)
10M	(M)
10M	(M)
10M	(M)

3) DIMENSÕES EM M

4) LEVANTAMENTO T

# TERMINAIS DE USO PRIVATIVO - TUP

Alteração da "Poligonal" – Embocuí e Pontal do Paraná



# Copel

Companhia integrada  
Geração, Transmissão,  
Distribuição, Comercialização  
e Telecomunicações

Desde 1994 na BM&FBovespa  
23 anos de listagem

20 anos de listagem na NYSE  
1ª do Setor Elétrico Brasileiro

Presente na União Europeia  
15 anos de Latibex



# Copel

Melhor distribuidora da América Latina (CIER)  
**2011, 2012, 2014, 2016 e 2017**

Melhor distribuidora do Brasil para o cliente (Abradee)  
**2011, 2012, 2014, 2015, 2016 e 2017**

R\$ 13,8 bilhões de investimento em seis anos (2011-2016)  
**+ R\$ 2,06 bilhões para investir em 2017**

Maior empresa do PR  
**Presente nos 399 municípios**



## **LUCIANO PIZZATTO**

Secretário de Representação do Paraná

55-41-99972.4819

lucianopizzatto@uol.com.br

