





## Overview Presentation on the State of Paraná - Brazil

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**Webinar Going globally: Biotechnology, Renewables Energy and related ICT Sectors**

**ENRICH in Brazil Matchmaking Tour Info Session, July 4<sup>th</sup>, 2019**



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**This is the Brazil you already know!**





# Let us now Introduce another perspective on Brazil



The Startup Accelerator of Sistema Fiep @ Curitiba



The Historical Center of Curitiba, Paraná



One of the turbines of the Itaipu Hydroelectric Power Plant

# A few introductive Data on Brazil!



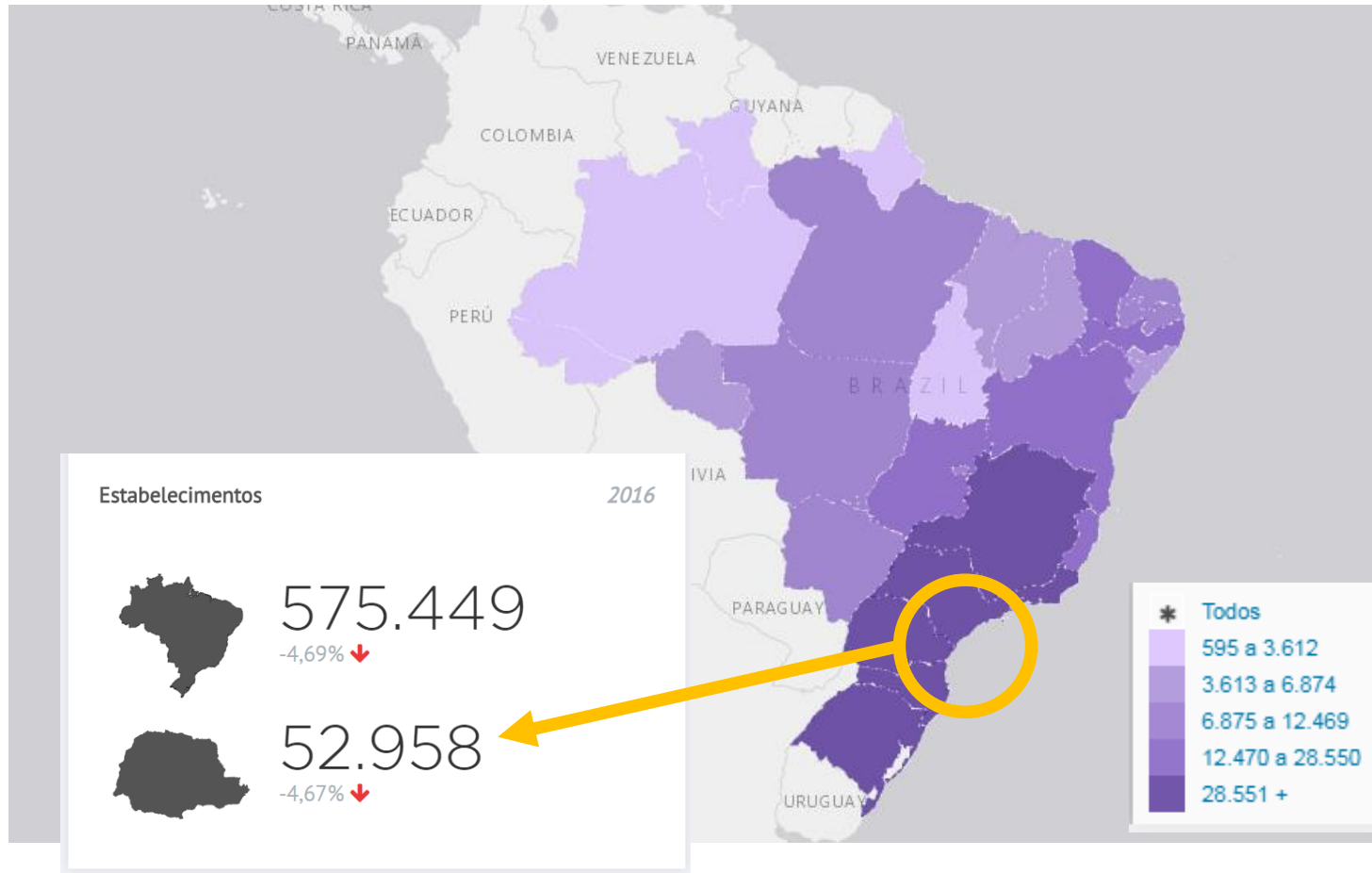
**Area**  
**8.514.876 km<sup>2</sup> (5<sup>th</sup>)**

**Population**  
**208.494.900 (6<sup>th</sup>)**

**GDP**  
**US\$ 3,217 Trillion (8<sup>th</sup>)**



# And on the State of Paraná!



## Paraná

**Area (15<sup>th</sup>)**  
199.307 km<sup>2</sup> (2,5%)

**Population (5<sup>e</sup>)**  
11.348.937 (5,5%)

**GDP (5<sup>e</sup>)**  
US\$ 402 Billions (12,5%)

# A few Economic Data on Paraná

## SECTOR NUMBERS PARANÁ

### Employment and Income



**736,048**

Jobs (2017)

▲ **0.1%** Variation  
compared to 2016



**49,893**

Companies (2017)

▼ **-4.2%** Variation  
compared to 2016



**R\$ 22.7 bi**

Total anual wage (2017)



**R\$ 2,366.72**

Average monthly  
Income (2017)



**9%**

Workers with  
completed higher  
education (2017)



**52,9%**

Workers with  
completed secondary  
education (2017)

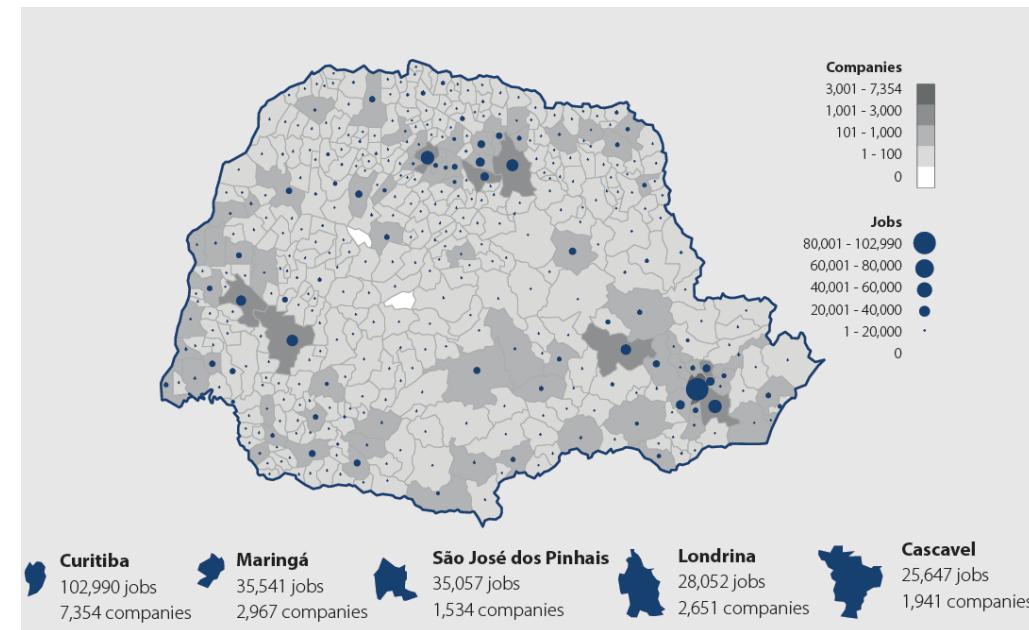


**28,2%**

Female workers (2017)

**71,8%**

Male workers (2017)



## Production and Sales



**R\$ 197.4 bi**

Gross production (2016)

▲ **5.2%** Variation  
compared to 2015



**R\$ 215.9 bi**

Net sales revenue (2016)

▲ **0.2%** Variation  
compared to 2015



**R\$ 79.5 bi**

Industrial transformation value  
- VTI (2016)

▲ **4.6%** Variation  
compared to 2015

# A few Foreign Trade Data on Paraná

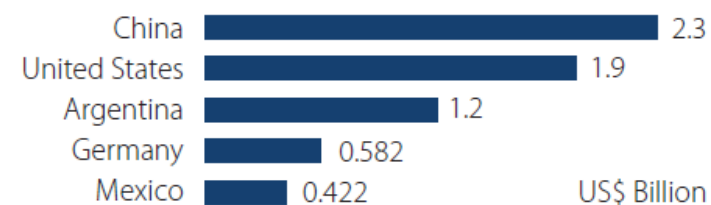
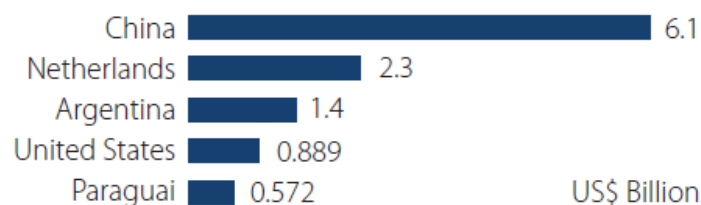
Exports (2018)  
**US\$ 20 bi**  
▲ **10.9%** Variation  
compared to 2017



Balance of trade (2018)  
**US\$ 7.7 bi**



Imports (2018)  
**US\$ 12.3 bi**  
▲ **7.4%** Variation  
compared to 2017



HS6	Description	US\$ billion
120190	Soya beans, whether or not broken, except for sowing	5.208
020714	Frozen cuts and edible offal of fowls of the species Gallus domesticus	1.664
890520*	Floating or submersible drilling or production platforms	1.664

HS6	Description	US\$ billion
271019	Medium oils and preparations, of petroleum or bituminous minerals, n.e.s.	1.186
870421	Motor vehicles for the transport of goods, with compression-ignition internal combustion piston engine diesel or semi-diesel engine of a gross vehicle weight <= 5 t	0.599
310420	Potassium chloride for use as fertiliser (excl. that in pellet or similar forms, or in packages with a gross weight of <= 10 kg)	0.520

\* Specific situation – Export oil platform byTekit



# A Quick Overview on The State of Paraná



# Infrastructure

## Paraná-Brazil

Fonte: Conselho de Infraestrutura da Fiep  
Source: Fiep's Infrastructure Council



### PORTS

**Two ports:** Paranaguá and Antonina. Paranaguá is located at 91 km off Curitiba. It is the Southern Region's major port and ranks second in terms of cargo handling in Brazil. The area of influence covers the Southern Region and parts of the states of Sao Paulo SP, Matto Grosso do Sul, Matto Grosso, Rondonia, and Paraguay.

### ROADS

The road network covers 120.9 thousand kilometers. Some 21.2 thousand kilometers are paved; 5.6% are two-lane roads and 94.4% are one-lane roads. Paraná's highways are regarded as the best roads of the Southern Region of Brazil by the country's National Transport Confederation.

### RAILROADS

The railroad network covers 2.4 thousand kilometers run by two operators:

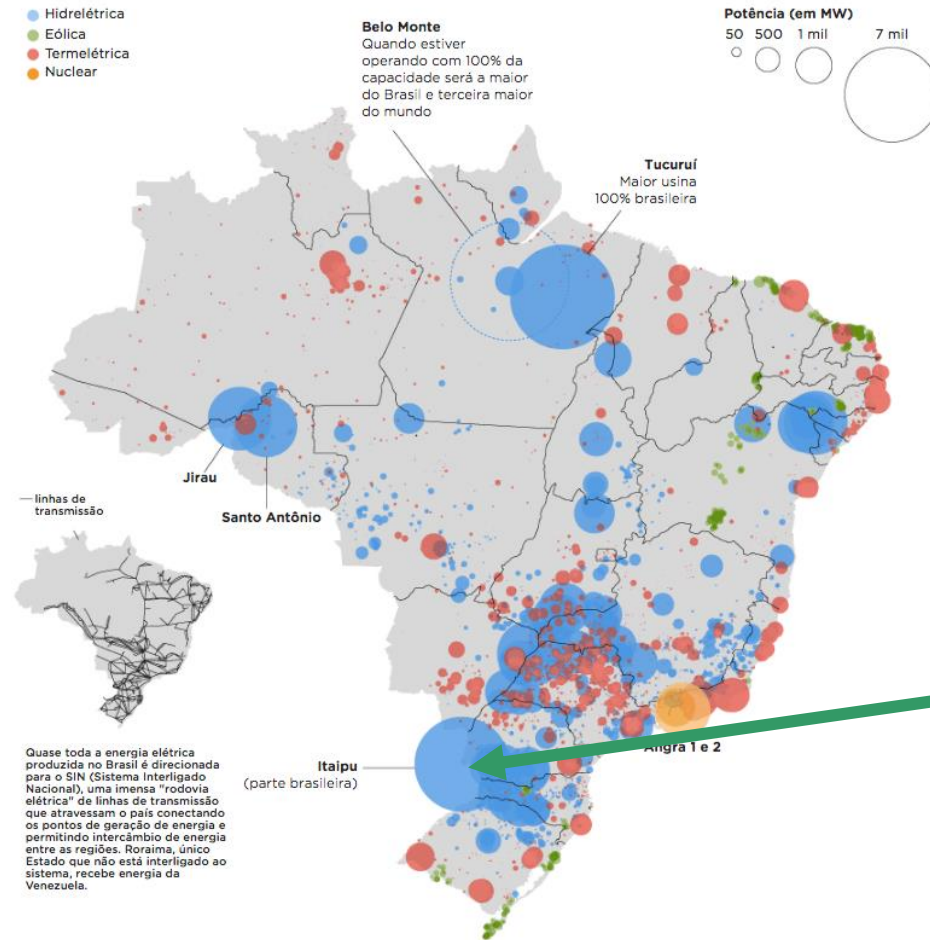
- a) RUMO logística, with 2,039 km;
- b) Estrada de Ferro Paraná Oeste S.A – FERROESTE, with 248.5 km.

### AIRPORTS

**Paraná has 39 state-run airports.** Of them, some states have regular lines: Curitiba, Maringá, Londrina, Cascavel and Foz do Iguaçu, Ponta Grossa and Pato Branco. Curitiba and Foz do Iguaçu offer international flights. The Afonso Pena International Airport passenger flow is nearly 7 million every year, and it handles over 2,000 tons of cargo/month.



# Brazil: Biodiversity and Renewable Energy is Key



Composição da matriz energética elétrica, em % da potência total instalada



\*Não está no gráfico a energia solar, que corresponde a 0,02% da matriz energética



Foz do Iguaçu

# Abundant Renewable Energy

Paraná - Brazil

The State of Paraná has Itaipú Power Plant, **MAJOR ELECTRIC POWER GENERATOR** plant which holds the world record in electric power generation.

It has the company considered the **COUNTRY'S MAJOR ELECTRIC POWER DISTRIBUTOR**

- **29 PLANTS:**
  - 16 hydroelectric
  - 1 thermoelectric
  - 12 wind power plants





# Curitiba is considered to be the “Smartest” City in Brazil



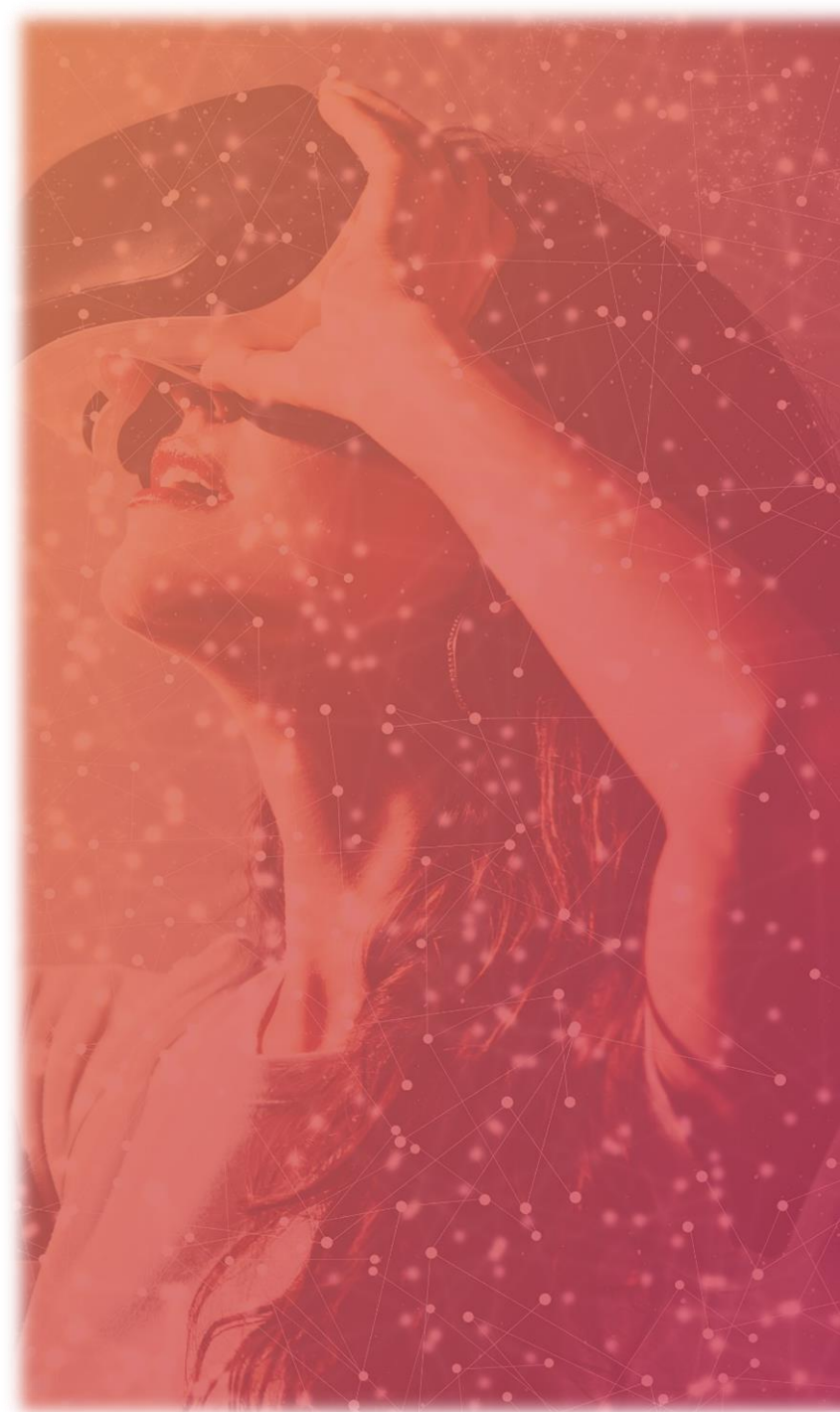
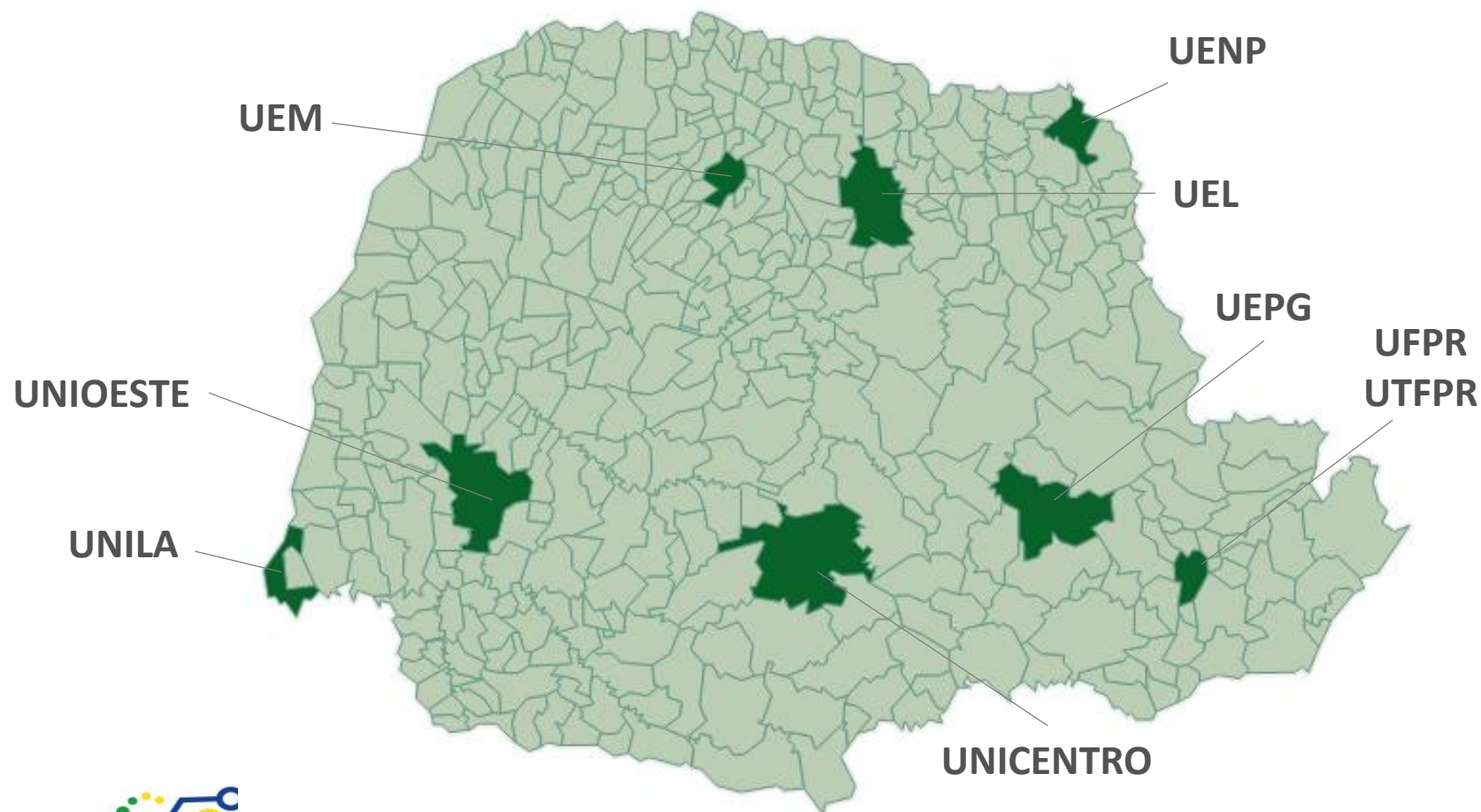
Curitiba is considered the smartest city in the country.

The conclusion is from the **Connected Smart Cities**, a survey that explores the performance of 700 counties in Brazil to define the development potential of each of them. [<https://www.gazetadopovo.com.br/politica/parana/curitiba-passa-sp-e-alcanca-o-titulo-de-cidade-mais-inteligente-do-brasil-cyx6uqi0k0q1xsg53gu61u2pg/>]



# Paraná: the Largest State University Network

Universities of Paraná



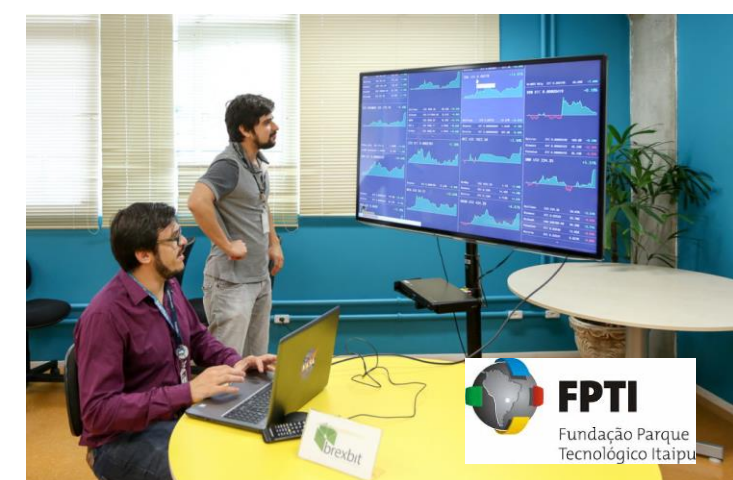
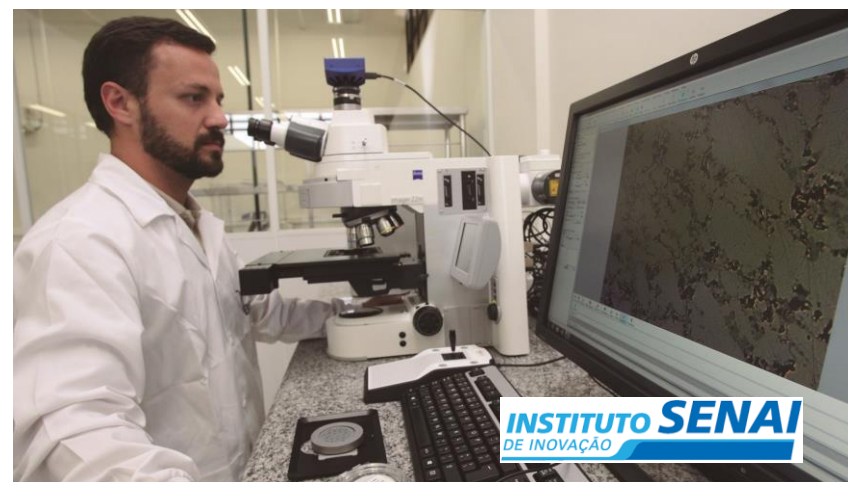


# The Innovation Ecosystem of Paraná

Paraná - Brazil

- Benchmark technological and research institutes
- More than 30 Incubators
- Over 180 higher education institutions
- 400 career and technical education institutions

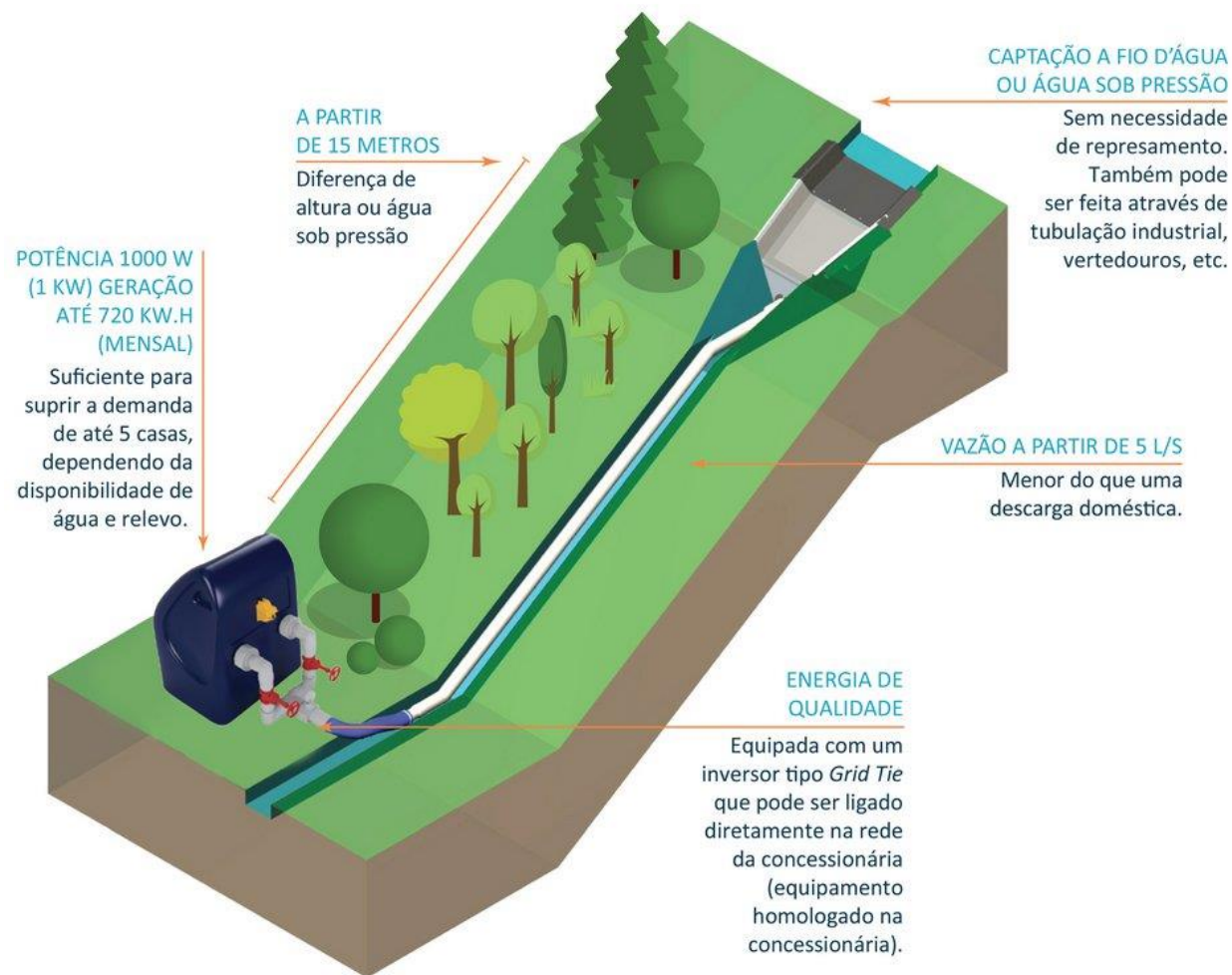
# The Innovation Ecosystem of Paraná





# Metha Energy – Renewables

## Micro hydroelectric plant



# Bley Energy – Renewables

## Micro Biogas (Bio Methane) plant

This Technology produces Biogas (Bio Methane) out of organic substrates (waste, sewage, waste), submitted to anaerobic bio-digestion processes.



2,30m

1,50m

1,50m





# GoEpik: ICT / Industry 4.0

## Virtual and Augmented Reality for Industrial Processes



Wellington e Priscila Mecon são técnicos da Enxas, startup que lidam com os processos de aceleração

# 4VANTS: ICT / Industry 4.0

## Computer Vision and AI for Assets quality Analysis





# Exy9: Bio / ICT

## Connected Exoskeleton for Industrial Processes





## Further Information!

The State of Paraná ranks fifth in economic representation among Brazil's states. According to data from IBGE (Brazilian Institute for Geography and Statistics), in 2016, the State of Paraná accounted for a GDP of R\$401.7 billion, which corresponds to 6.4% of the national GDP. Simultaneously, it presented a per capita GDP of R\$ 35,726.00.

According to IBGE census, in 2010 Paraná accounted for 11 million inhabitants, of which 9.4 million were in the urban area (85.4%) and 1.6 million, in the rural area, distributed in its 399 towns. The State's total area is 199,554 square kilometers.

Regarding the economic activities, according to IBGE data (2016), the commerce and services sector is predominant in the state. It accounts for 50.5% of the economy, followed by the industry, responsible for 25.7% of the state's activities, while agriculture accounts and cattle-farming account for 9.9% of the total domestic production.

The State of Paraná has one of the most representative and diversified industries in Brazil, which more than 49 thousand establishments, employing more than 736 thousand workers, generating more than R\$ 197 billion in gross production.

All this together with its privileged location, excellent infrastructure and a skilled workforce, make the State of Paraná one of the best business environments in the country, and it is among the three Brazilian states that attract the most direct investments.



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