

# PETP BASDAY 2020

December 1st, 2020

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The presentation may contain forward-looking statements about future events that are not based on historical facts and are not assurances of future results. Such forward-looking statements merely reflect the Company's current views and estimates of future economic circumstances, industry conditions, company performance and financial results. Such terms as "anticipate", "believe", "expect", "forecast", "intend", "plan", "project", "seek", "should", along with similar or analogous expressions, are used to identify such forward-looking statements. Readers are cautioned that these statements are only projections and may differ materially from actual future results or events. Readers are referred to the documents filed by the Company with the SEC, specifically the Company's most recent Annual Report on Form 20-F, which identify important risk factors that could cause actual results to differ from those contained in the forward-looking statements, including, among other things, risks relating to general economic and business conditions, including crude oil and other commodity prices, refining margins and prevailing exchange rates, uncertainties inherent in making estimates of our oil and gas reserves including recently discovered oil and gas reserves, international and Brazilian political, economic and social developments, receipt of governmental

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# Cautionary statement for US investors

We present certain data in this presentation, such as oil and gas resources, that we are not permitted to present in documents filed with the United States Securities and Exchange Commission (SEC) under new Subpart 1200 to Regulation S-K because such terms do not qualify as proved, probable or possible reserves under Rule 4-10(a) of Regulation S-X



# PETROBRAS DAY

"The best energy company in shareholder value creation, with a focus on oil and gas, with safety and respect for people and the environment"



# Strategic pillars support our transformational agenda

#### **CULTURAL TRANSFORMATION**



# Maximization of return on capital employed

- Portfolio management, natural owner
- Discipline in capital allocation
- Value over volume



# Reduction of cost of capital

- Deleveraging path
- Transparency and liability management



#### Relentless search for low costs and efficiency

 Resilience to lowprice scenarios



### Meritocracy

- Value Culture
- Merit-based variable compensation program
- EVA®



# Safety, health, respect for people and the environment

- Transparent communication
- Safety culture
- Decarbonization and renewable fuels



# Management Model





Courage, transparency and integrity



Accountability



Broad and efficient communication



Meritocracy



Strategic consistency



Trust



Agility, efficiency and data driven decisions



Succession planning and talent density

# Employees' and company's health is our priority



### Fight against COVID

- Home office, massive testing, tracking and quarantining
- Special care for boarding
- Adjustments to operational routines
- Wide distribution of personal protection equipment
- Continuous risk assessment
- Cooperation with society



### Financial resiliency

- CAPEX reduction in 2020
- Disbursement of Revolving Credit Lines
- Postponement of bonuses and dividends
- Expense reduction and postponement
- Working capital optimization
- Hibernation of shallow waters platforms

COVID-19 + Global recession

Uncertainties

Fast response

+

Strategy
acceleration

Solid performance in 2020

# Running the ship through rough waters

7.5 billion

gross debt reduction (9M20)

US\$

16.4 billion

free cash flow (9M20)

US\$

1 billion

and more than 50 assets on sale

### **Production growth**

Oil and gas production grew 9%, with a 32% increase in the pre-salt layer

### **Export records**

Oil and fuel oil with low sulfur content

### Cleaner and higher value-added fuels

Record production and sale of low-sulfur S-10 diesel

New gasoline with higher octane

### Improved risk perception

10-year bonds with the lowest yield in our history

# Targets 2021

### AMBITION: zero fatalities and zero leakage

Spilled volume<sup>2</sup> GHG Intensity<sup>1</sup> **Gross debt** TRI<sup>3</sup> **ΔEVA**® E&P 17 kgCO2e/boe **US\$ 67** US\$ 1.6 120 m<sup>3</sup> < 0.7 billion billion Alert limit Refining 40 kgCO2e/CWT

<sup>&</sup>lt;sup>1</sup> Intensity of Greenhouse Gases Effect emissions

<sup>&</sup>lt;sup>2</sup> VAZO: Spilled volume of oil and oil products

<sup>&</sup>lt;sup>3</sup> Total Recordable Injuries



# Governance and management quality



- Emissions intensity\* as a factor in the variable remuneration of all employees
- We reached level 4 in carbon management quality in the Transition Pathway Initiative (TPI)



Institutional Relationship and **Sustainability** Office



Climate Change Executive Management

# Commitment to climate and affordable energy



Transparency: carbon quantified in the critical processes



Resilience of position in fossils in view of low carbon transition



Strengthening of skills to create value in low carbon



Double resilience

#### **Economic**

Low breakeven ( < US\$ 35/bbl)



**Environmental** 

Low carbon

# Technology and innovation in our core business



### Innovations in operations

Hi-Sep, CCUS, closed flare, energy efficiency and water reuse and waste treatment



### **BioRefining**

Renewable diesel, BioQAV, bioproducts and lubricants



# Competencies for the future

R&D in modern renewables, petrochemical and low carbon products and compensatory projects

CAPEX 2021-25: US\$ 1 billion\*

<sup>\*</sup> CAPEX for environmental commitments

# Our 10 sustainability commitments



1. 25% reduction in absolute operating emissions by 2030

- 2. Zero routine flaring by 2030<sup>1</sup>
- 3. 40MM ton CO<sub>2</sub> reinjection by 2025 in CCUS<sup>2</sup> projects
- 4. 32% reduction in carbon intensity in the upstream segment by 2025 (15 kgCO<sub>2</sub>e/boe, maintained until 2030)
- 5. 40% reduction in methane emission intensity in the upstream segment by 2025
- 6. 16% reduction in carbon intensity in the refining segment by 2025, expanding to 30% by 2030 (30 kgCO<sub>2</sub>e/CWT)



7. 50% reduction in freshwater capture in our operations by 2030



8. Zero increase in residues generation by 2025

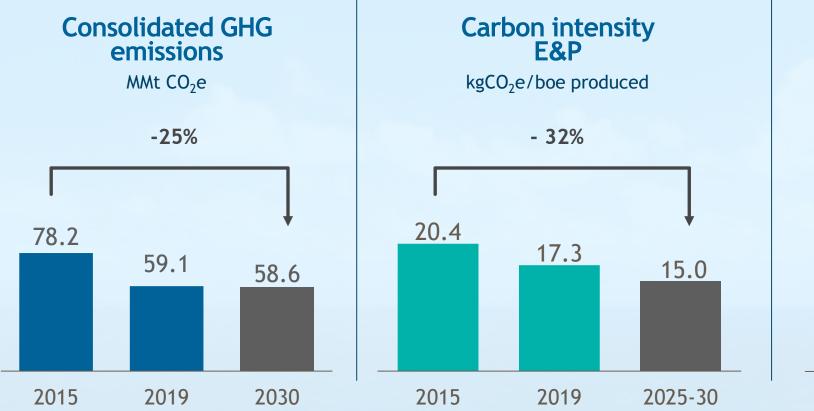


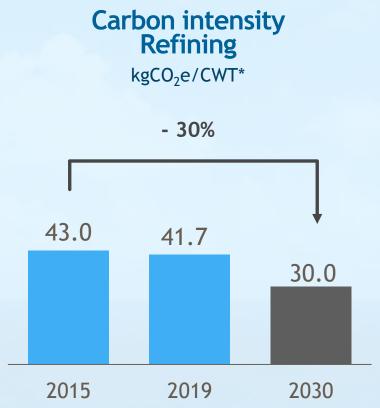
9. 100% of Petrobras facilities with a biodiversity action plan by 2025



10. Investments in socioenvironmental projects, human rights programs and community relationship

# Our production is in the first quartile in carbon intensity in the offshore O&G industry





<sup>\*</sup> A refinery's CWT (Complexity Weighted Tonnes) considers the CO<sub>2</sub> emission potential, equivalent to distillation, for each process unit.

# Five commitments in social responsibility





**Early Childhood Initiative** 

- Human Rights training program for 100% of employees
- 2. Actions to promote diversity, providing an inclusive environment
- 3. Human Rights Due Diligence in 100% of operations
- 4. Socioeconomic diagnosis of communities
- 5. Measurement and disclosure of the social return of at least 50% of the socioenvironmental projects

# Governance is our priority





### Main developments

- Code of Ethical Conduct
- Guide to Ethical Conduct for Suppliers
- Return to the Partnering Against Corruption Initiative (PACI) of the World Economic Forum



### **Our commitments**

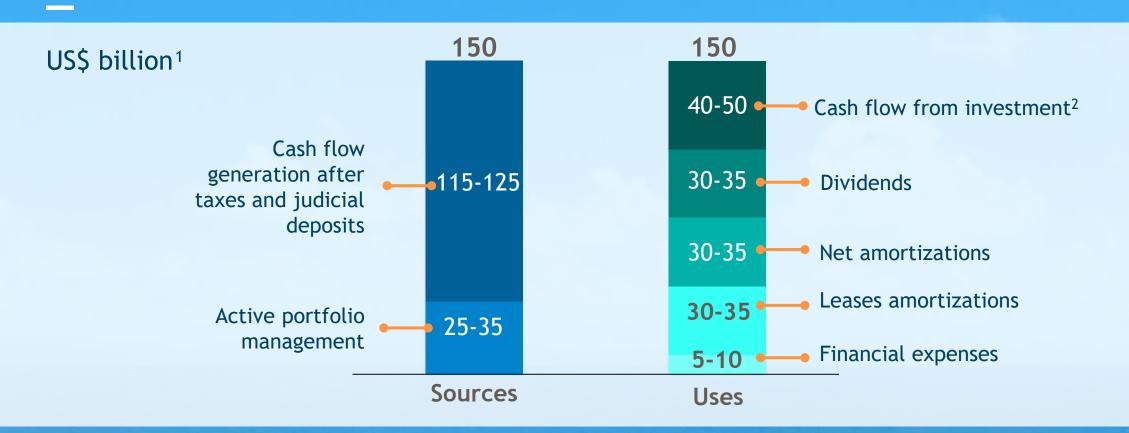
- Governance model that allows the balance between efficiency and control
- Integrity and transparency,
   zero tolerance to fraud and
   corruption



# Finance strategies



# Strong expected free cash flow generation: front and center for capital management



### Projects are NPV positive with *Brent* @ US\$ 35/bbl

<sup>&</sup>lt;sup>1</sup> Considers Brent @ US\$ 45/bbl in 2021-22 and US\$ 50 until 2025 and long run. Real FX Rate 2021-2025: R\$ 5.50, R\$ 4.69, R\$ 4.46, R\$ 4.28 and R\$ 4.07 <sup>2</sup> Excludes leases classified as total CAPEX.

### Divestments to reduce debt and invest in world-class assets

2021-2025 period



#### E&P

- 209 onshore and shalow water assets in Brazil (22 assets in 2020)
- Assets in other countries: Argentina, Bolivia, Colombia and USA
- Marlim cluster (50%)
- Albacora / Albacora Leste
- Frade



#### **Downstream**

- REFAP
- Braskem
- RNEST
- Colombia
- REPAR
- PBIO
- RLAM
- BSBios
- LUBNOR
   BR
- REGAP
- REMAN
- SIX

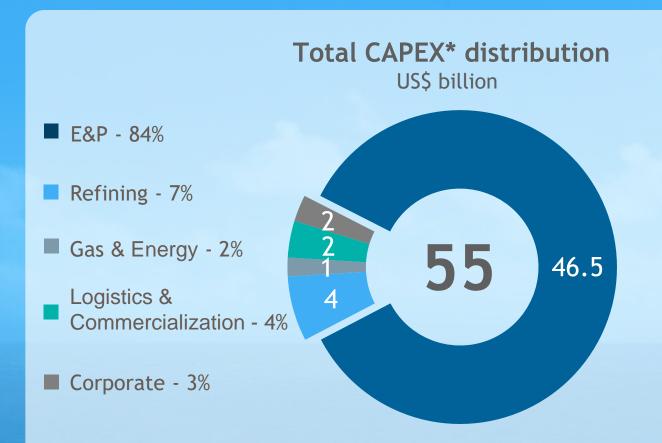


#### **Gas and Power**

- NTS (10%), TBG, GTB e **TSB**
- Gas pipelines (routes)
- ANSA
- GASPETRO
- Thermal power plants
- UFN-III

# Investing less with a higher return

CAPEX 2021-2025

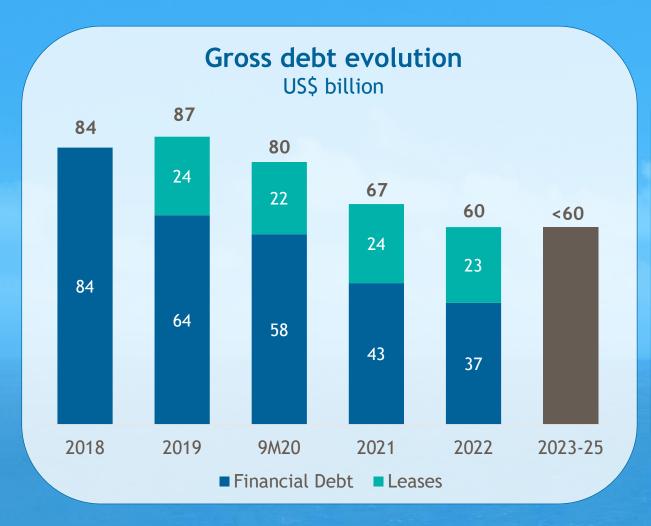


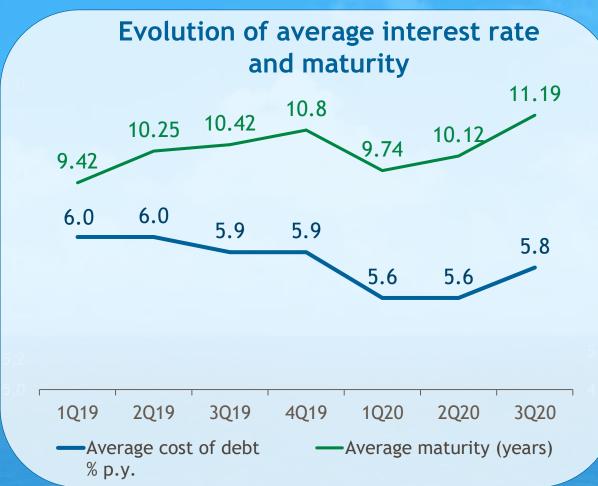


**Growth CAPEX: 63%** 

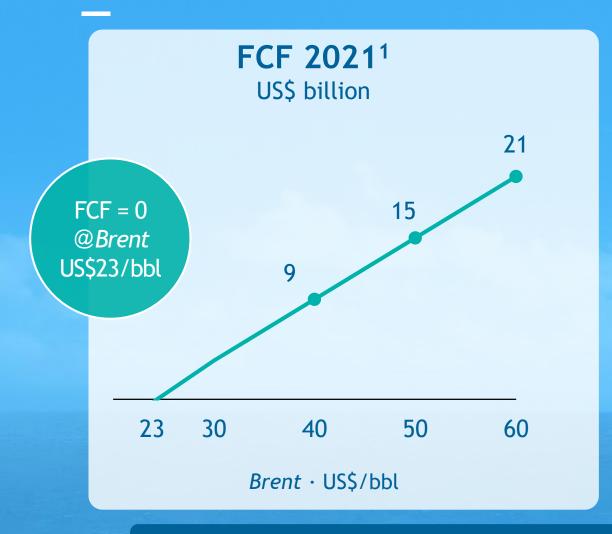
<sup>\* ~ 50%</sup> of CAPEX in Dollars

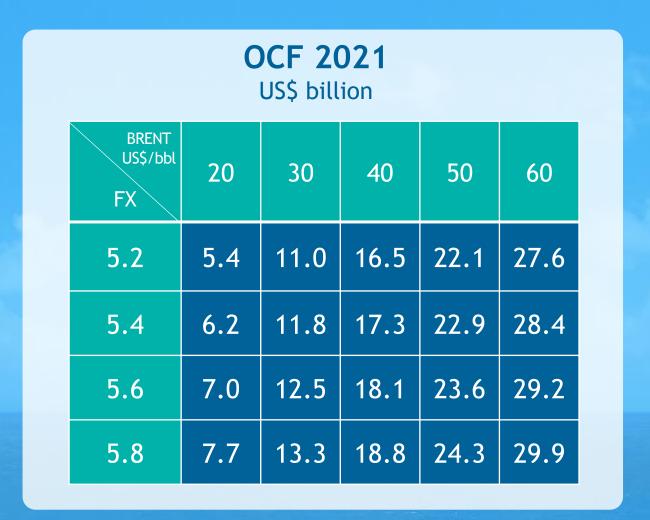
# Deleveraging to generate value





### Cash flow resilient to low oil prices





### Cash flow neutral in 2021 @ Brent US\$ 28/bbl<sup>2</sup>

<sup>&</sup>lt;sup>1</sup> FCF = operating cash flow - cash flow from investments/ FX rate of US\$ 5.5/BRL

<sup>&</sup>lt;sup>2</sup> Brent to stabilize gross debt, assuming minimum cash level of US\$ 5.5 billion, without considering divestments

# **Procurement - strategic drivers**

- Guide to ethical conduct for suppliers
- Alignment with ESG practices

Compliance

₩orking capital reduction

Mais Valor Program

- Standardization and simplification
- Interaction with suppliers



Early Engagement **EVA**®

Alignment of incentives

- High performance incentivebonus
- Best Suppliers Awards



Volume sinergy

### Value generation

- Costs reduction
- Optimization of procurement schedules
- Procurement planning

- Scope integration and interface reduction
- Gains of scale



# **E&P** strategies

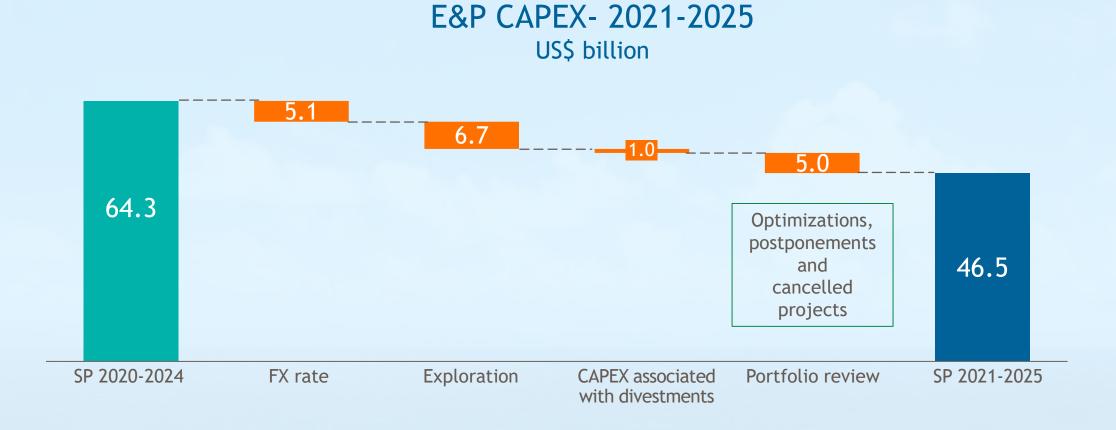


Maximize portfolio value, focusing on deep and ultra-deep waters



Grow sustained by world-class oil and gas assets in deep and ultra-deep waters

# 5-year CAPEX revision to maximize value



### Focus on world-class assets

# Focus on value maximization with higher concentration in pre-salt and divestments



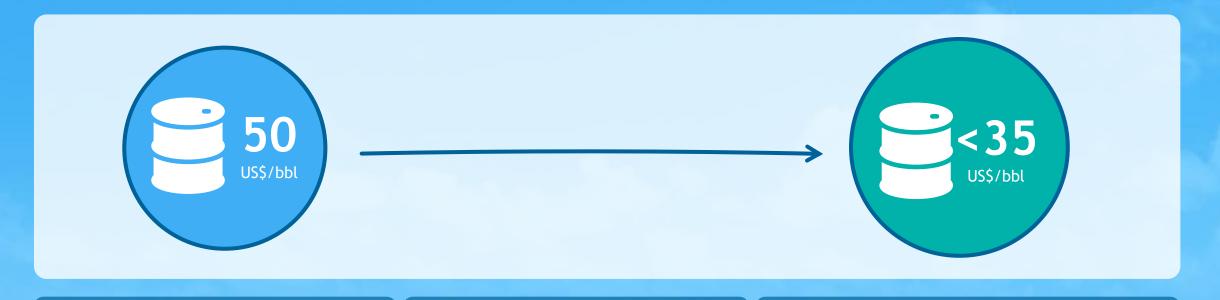
\* +/- 4% \*\* Post-divestments

# New projects for 2021 impacted by COVID-19



<sup>\*</sup> Additional processing capacity of Buzios' platforms and beggining of co-participation agreement

# E&P portfolio resilient to Brent prices of US\$ 35/bbl





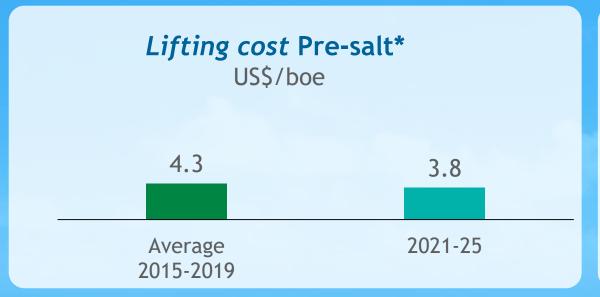


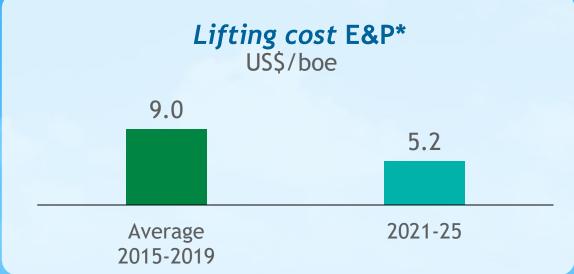
Projects revision



Technology, innovation and digital transformation

# Low breakeven and lifting cost reinforce our competitiveness





Prospective breakeven US\$/boe

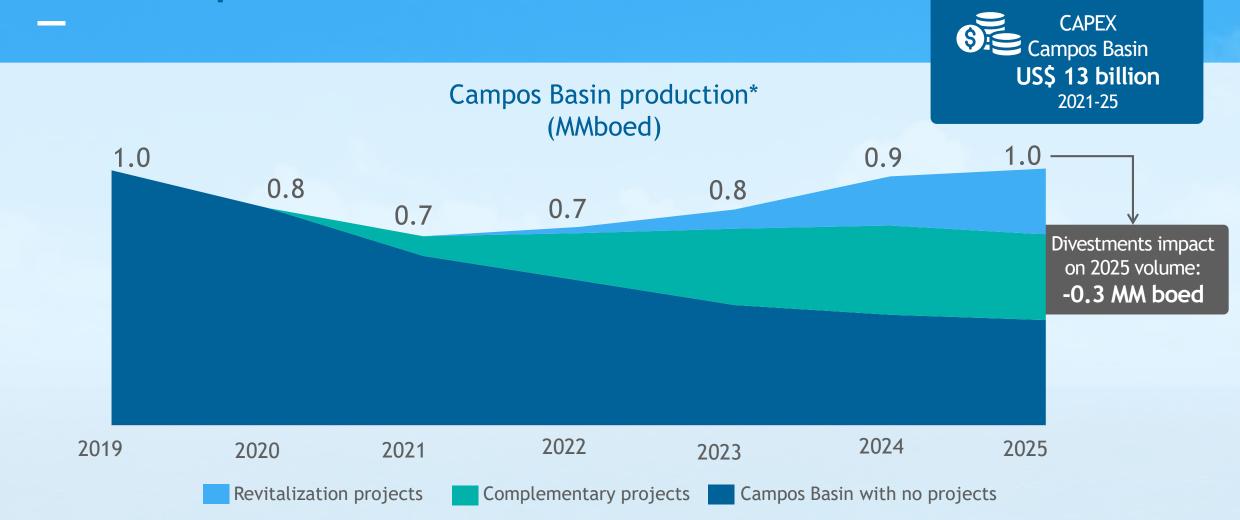
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Prospective breakeven
US\$/boe

20

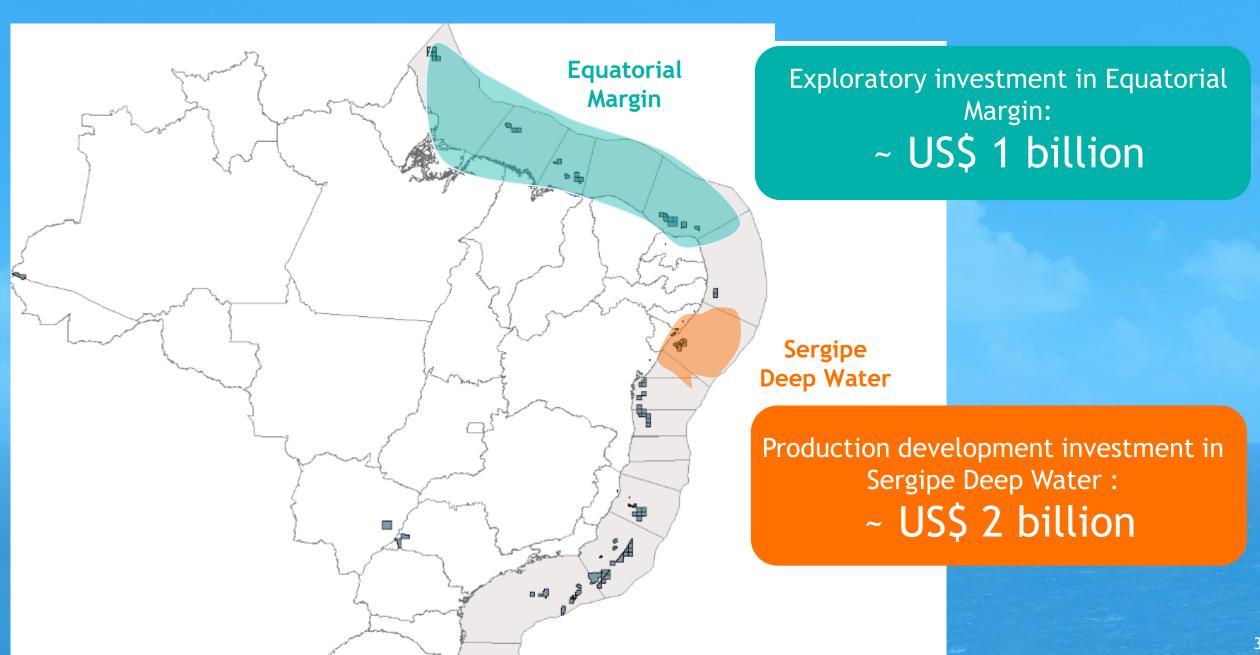
<sup>\*</sup> Without leasing cost, without government take

Campos Basin: Focus on world-class assets in deep and ultra-deep waters

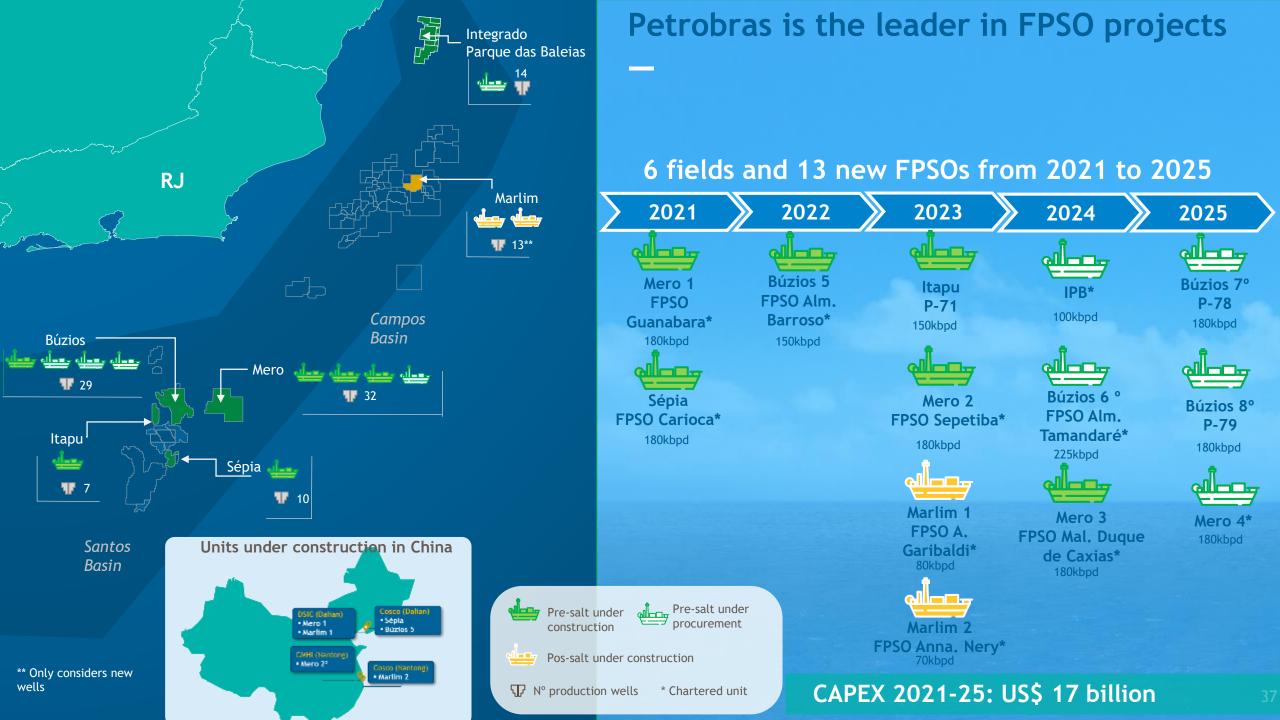


<sup>\*</sup> Does not consider divestment

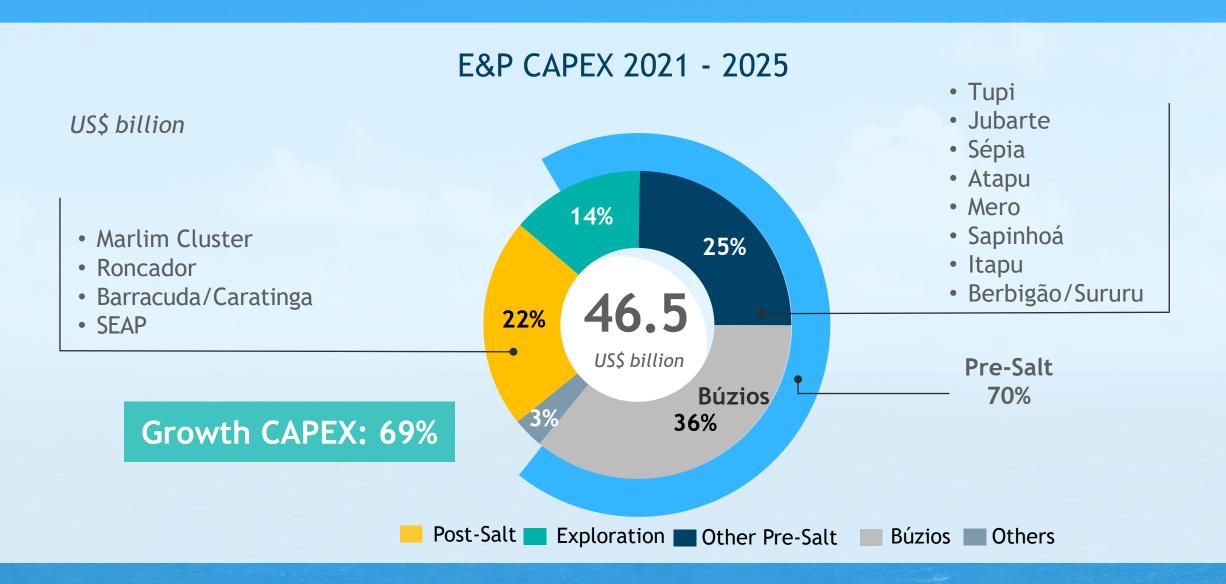
### New investments outside Southeast basins





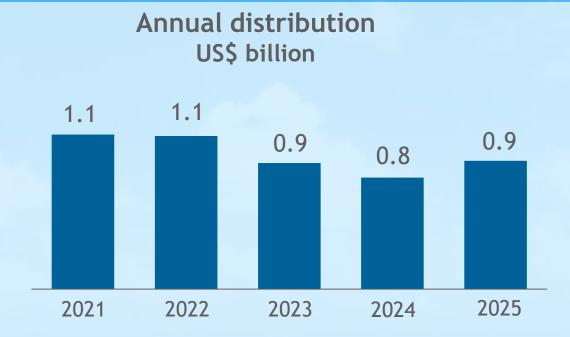


### E&P investments focusing on Pre-Salt



### Decommissioning of wells, lines and platforms





18 units and 1,000 km of risers and flowlines to be decommissioned

### Refining, Gas & Energy and Logistics Projects







Gas processing plant Route 3

Pipelines plan - São Paulo

#### Route 3

- Completion of 83%
  - ✓ Subsea pipelines 100% completed
  - Natural gas processing unit (UPGN) and Utilities

#### Refining - Diesel S-10

 Adaptation in Reduc and Revap and a new unit at Replan

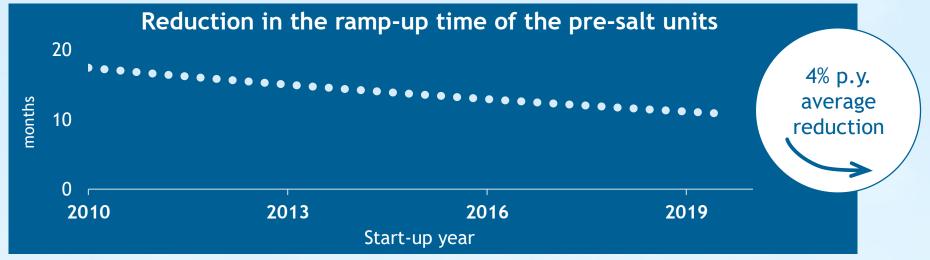
#### Logistics

Optimization of oil and oil products pipelines in São Paulo (Pró-Dutos)

CAPEX 2021-25: US\$ 0.95 billion

### **Evolution in FPSO implementation**





#### Lessons learned

- Excess of interfaces
- Unsolid suppliers
- Projects maturity
- Consortium composition (leased units)

#### **Ongoing initiatives**

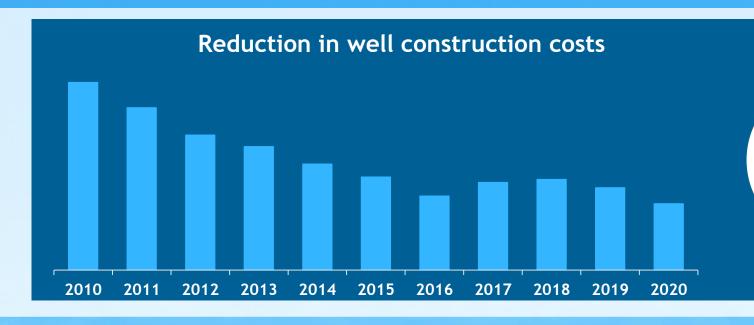
- Interfaces reduction
- Qualified suppliers
- Alignment of interest
- Standardization
- Charter companies (leased units)

#### **Future view**

More Value added products

- Accelerate implementation
- Greater reliability
- Lower Capex
- Higher operational efficiency
- Lower emissions

### Evolution in wells for offshore E&P projects



7% p.y. average reduction

#### Benefits captured

- High performance rigs
- New well technologies
- New well design
- Enhancement in intelligent completion

#### **Ongoing initiatives**





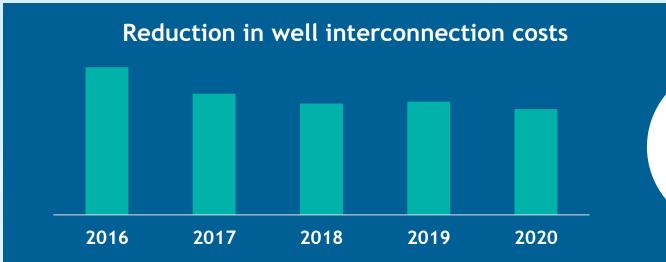
**PAP 30** 

- Optimization and innovation in Pre-Salt projects
- Post-salt well design simplification
- Decommissioning optimization

#### **Future view**

- Higher well reliability
- Rigs automation
- Electric completion
- Self abandonment wells

### **Evolution of Subsea Systems for E&P Projects**





#### Benefits captured

- Risers configurations
- Standardization
- Subsea layout optimization
- Larger diameter pipelines

#### **Ongoing initiatives**

- Subsea design speed-up
- Enlargement of EPCI SURF\*
- SCC-CO<sub>2</sub> resistant flexible lines qualification

#### **Future view**

- Ultra-deep water qualification and standardization
- Diverless operations
- Hybrid flexible lines
- Sinergy between subsea processing and topside

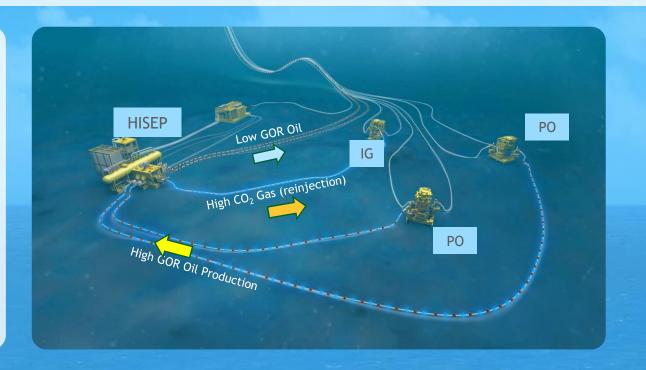
# HISEP®: innovation to enable the development of fields with a high gas-oil ratio and high CO<sub>2</sub> content

#### HISEP® - Subsea High Pressure Separation System

Removes and reinjects gas with high  $CO_2$  content in the seabed to debottleneck the topside gas processing plants and increase the field recovery fator

#### Main advantages

- Reduction of CAPEX, OPEX and FPSO lead time
- Simplification of FPSO process plant with lower emissions
- Maximization and acceleration of production (recovery factor)





### Refining strategies





Assets near to the largest oil supply and the largest consumer market

More efficient processes and new environmentally-friendly products with renewable content

### Refining portfolio: smaller with higher value



Focus on premium market, near to consumers, oil supply and logistics

#### Current

# • F

- REFAP
   REGAP
- RNEST RPBC
- REPAR
   REDUC
- RLAM
   RECAP
- LUBNOR REPLAN
- SIXREVAP
- REMAN

# Capacity 2.2 MMbpd

Other assets

Refineries

- Liquigas
- Braskem
- BR Distribuidora
- PBIO

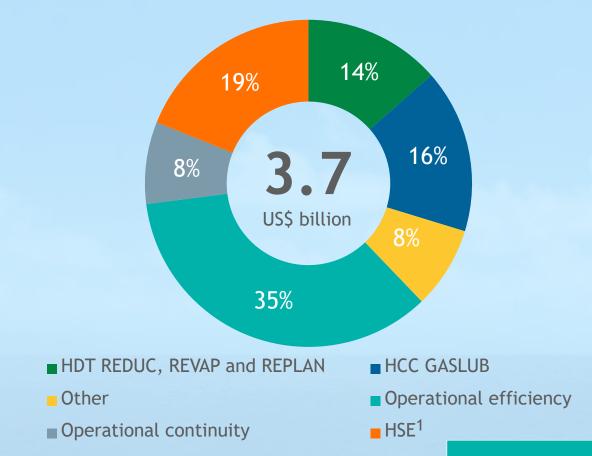
#### 2025

- RPBC
- REDUC
- RECAP
- REPLAN
- REVAP

Capacity
1.15 MMbpd

No participation

### Refining Capex



#### **Main Projects**

- 3 HDT projects for higher production of Diesel
   S-10 and HCC from Polo Itaboraí to produce
   more advanced lubricants
- Increased operational efficiency and energy efficiency
- HSE actions including reducing emissions and increasing water reuse

**Growth CAPEX: 34%** 

<sup>&</sup>lt;sup>1</sup> Carbon mitigation projects and water reuse

### BioRefino 2030



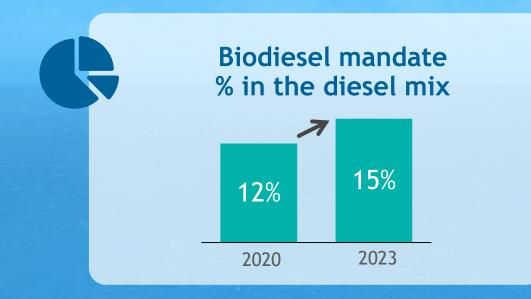
### Balance between value creation and environmental sustainability



Technological and engineering challenges surpassed

I

Regulatory challenge: recognition of **renewable diesel** in the **biodiesel** mandate

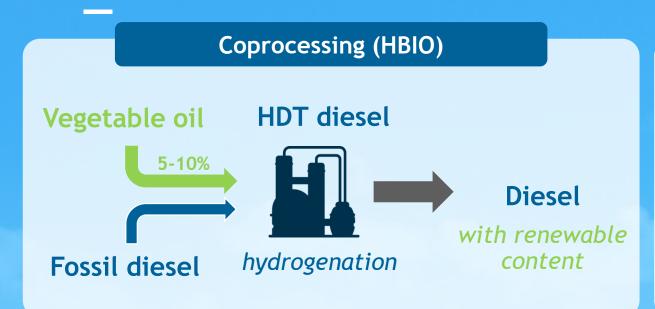


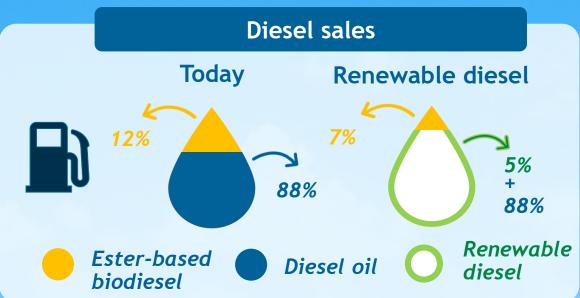


Renewable diesel compared to biodiesel

15% reduction in GHG emissions

### Renewable diesel - low carbon and focus on consumer





#### Main benefits\*:

- Reduction of GHG emmissions
- Better combustion quality and performance
- Higher stability to oxidation and lower water absortion

- Can be added in any proportion to high performance diesel
- Low contaminant levels

### Gas & Energy Strategies

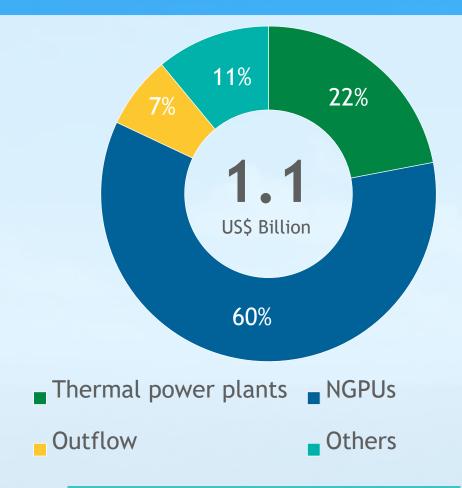


Higher value in natural gas marketing and sales



Optimization of the thermoelectric portfolio focusing on value generation for our natural gas

### Gas & Energy CAPEX



**Growth CAPEX: 53%** 

#### Main projects

- Construction of Itaboraí natural gas treatment unit
- Upgrades in natural gas turbines in thermal power plants
- Modernization of the control and dispatch system in thermal power plants

### Active portfolio management in Gas & Energy



Regasification Terminals

#### Current

- TRBGB: 20 MMm<sup>3</sup>/d
- TRBA: 20 MMm³/d (being leased)
- PECÉM: 7 MMm³/d

Capacity 47 MMm<sup>3</sup>/d

#### 2025

- TRBGB: increased to 30 MMm³/d
- TRBA: 20 MMm<sup>3</sup>/d

Capacity 50 MMm<sup>3</sup>/d



Natural Gas Processing Units

#### **Current**

• TECAB, UTGCA, UTGC, UTGSul

Capacity 66 MMm<sup>3</sup>/d

#### 2025

+UTGITB (2022):
 21 MM m³/d

Capacity 87 MMm<sup>3</sup>/d



#### **Transportation**

#### Current

• NTS, TBG, GTB, TSB

#### 2025

 No participation in Transportation



#### **Distribution**

#### Current

 Completion of divestment by end of 2021

#### 2025

No participation in Distribution



Thermal Power Plants

#### Current

- 17 owned plants
- 13 participations

Capacity
6.6 GWmed

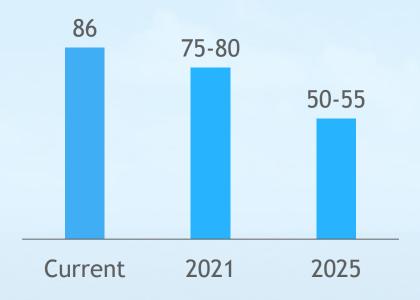
#### 2025

• 10 owned plants

Capacity 4.3 GWmed

# Gás+ Program: Petrobras remains a relevant player even after the opening of the market

# Petrobras natural gas supply market share (%)



#### **G**+ Actions

- New commercialization model and product segmentation
- Gas processing services in our units
- Digital contracts and sales through automated platforms

#### Expected results G+

 Greater satisfaction and loyalty of Petrobras clients



### Our Marketing, Sales & Logistics ambition



Be the first choice of our clients, by offering sustainable products through efficient trading and logistics solutions

# Maximization of value through marketing, sales, logistics and improved inventory management practices



Maximize value through Marketing & Sales



Logistics solutions for Sales and E&P



Improved inventory management practices



Crude oil

Diversify exports and intensify negotiations of oil to other refineries in Brazil



Fuel / bunker oil Keep our low sulfur bunker oil as a reference in the global market



Light and Middle Distillates
Competitive performance in the
domestic and international markets



Development of new, sustainable Products



Expand presence in fast growing markets



New operational model with Digital Transformation



Optimize asset utilization



Increase efficiency



Better integration with subsidiaries - Transpetro & PB-LOG



Act as a "conductor" of the inbound supply chain



Rationalize warehouse footprint - cut by half



Digitalize warehouses



Implement Discarded
Materials Center/ Scrap
Global Contracts

### Promising future: advanced projects along with our Research Center

### Additive manufacture



 3D printing of critical components for reduction of downtime, transportation and storage

### loT and unmanned vehicles



 Forklifts, trucks, small aircrafts (UAV) and automated vessels with developments in AI and 4G/5G mobility

# Digital ship



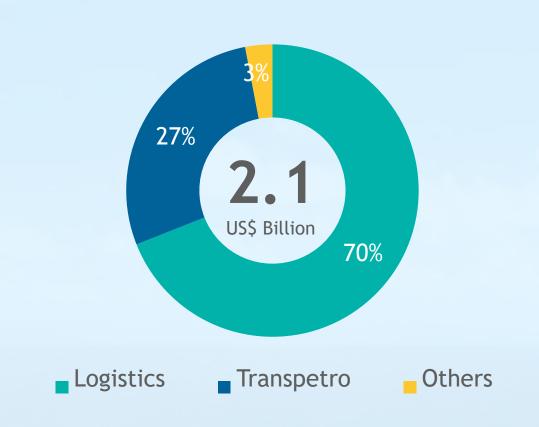
- Real-time Insights via GPS/IoT
- Automation with focus on operational and energy efficiency

### New operational planning model



- Robust and resilient planning
- Anticipation of competitors' moves
- Real time information

### Marketing, Sales & Logistics CAPEX



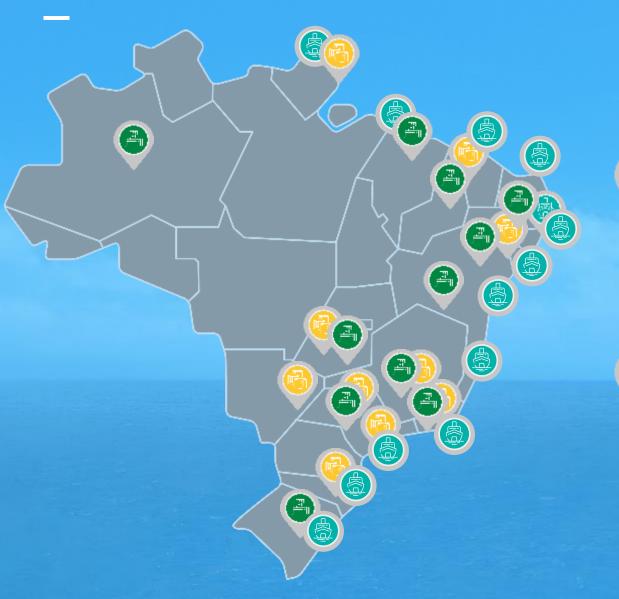
#### Main projects

- Pipeline and terminals maintenance
- Ship docking maintenance
- "Pró-Dutos" Pipeline Program, WTPs1
- Santos Terminal Bid (Alemoa)
- Pipeline Master Plan São Paulo
- Pipeline replacement

**Growth CAPEX: 22%** 

<sup>1</sup> Wastewater treatment plant 50

### Active portfolio management: leaner and more efficient





#### **Maritime Terminals**

Southeast: 9 terminals

South: 5 terminals

Northeast: 7 terminals

North: 2 terminals

Southeast: 8 terminals 2025

South: 1 terminal

Northeast: 1 terminal



#### **Onshore Terminals**

Southeast: 13 terminals

South: 3 terminals

Northeast: 3 terminals

Midwest: 2 terminals 2025

Southeast: 13 terminals

Midwest: 2 terminals



#### **Pipelines**

South:

Southeast: 84 pipelines

9 pipelines 2

58 pipelines Northeast:

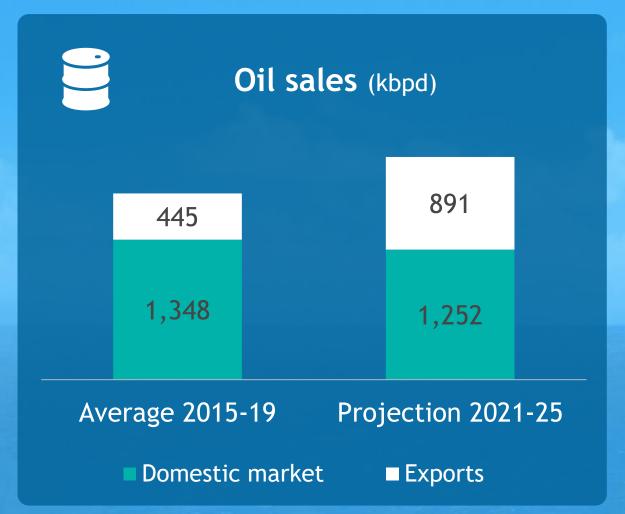
18 pipelines North:

Midwest: 6 pipelines

Southeast: 82 pipelines

6 pipelines Midwest:

### Oil exports expansion - 2021-25



- Expansion of global client portfolio by developing new markets and increasing competitiveness
- Oil exported\* to 18 countries and 41 refineries in 3 continents, totaling 214 million barrels (~700 thousand bpd)

\*By the end of October 2020



### Digital Transformation and Innovation Strategy



Process
Digitalization
and Automation



**Al and Analitycs** 



Information security



Agile at Scale



Innovation Ecosystem



Augmented Reality



Technological Platforms Simplification

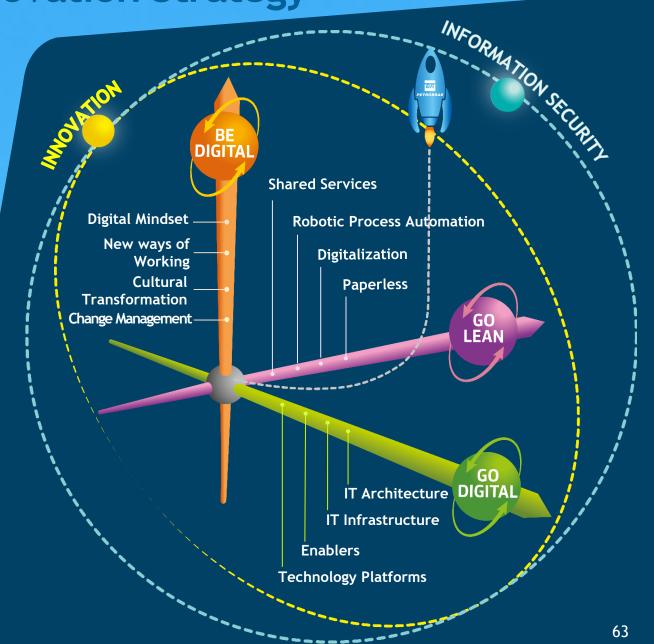


Connectivity



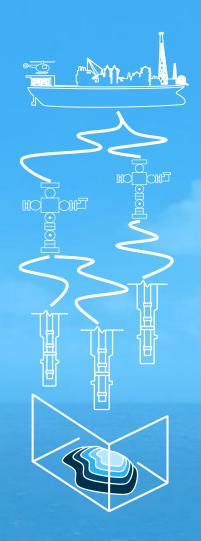
HPC (High-performance computing)

**CAPEX 2021-25 US\$ 1.5 billion** 



### Digital transformation and innovation - Upstream







Al and Analytics

- Predictive maintenance for preventing platform shutdown
- Machine learning for identifying analogues in reservoirs



**Digital Twins** 

- Topside Integrity Management
- Digital Rocks



Pre-Salt production systems innovations

- Lower CO2 emissions and human risk exposure
- Robotization and subsea processing



Augmented reality

• 360° Immerse navigation asset inspection and maintenance

Integrated Data Platform High Performance Computing

Offshore Connectivity

### Digital transformation and innovation - Downstream







**Digital Twins** 

- Virtually built twin refineries
- Gains by 09/2020 US\$ 125mi Potencial: US\$173mi/year



- Online Reliability: Mobile device assistance for inspections, operations and safety
- and Automation Virtual reality applied to inspection and mantainance



Al and Analytics

- Predicting automatic shutdowns and failure diagnostics
- Integrated Gas & Energy data platform



Downstream Innovation

- Decarbonization and Biofuels technologies
- Renewable Diesel and BioJet Production Technologies

Downstream efficiency

**BioRefining** 

Digitalization and Robotization

### Digital transformation and innovation - Commercialization and Logistics







Al and **Analytics** 

• Air, Sea and Land Operations performance analysis and optimization



- Smart Warehouse: Robotization, Digitalization and Automation
- **Paperless**



Augmented Reality and Al

#### **Pipeline Protection**

Monitoring, detection, location, tracking and repair



Integrated **Technological Platforms** 

- S&OP Evolution
- CRM 360°

Competitive Market Intelligence

Supply Chain - IOT

**Integrated Data Platform** 

### Digital transformation and innovation - Corporate Areas







**Digital Procurement** 



**Digital Legal** 



**Digital HR** 



Digital HSE and COVID response



**Digital Finance** 



Digital Shared Services Center

### Connected to Accelerate - Innovation Ecosystem

#### **Startup Selection**

(OUT) 2019/20 +500 engaged - 23 selected (IN) 93 engaged - 15 selected





**Open Innovation Platform** 

#### Scientific Colaborative Network

120 in Brazil + 85 abroad

#### Competitive Partnerships

Challenge based selection







Corporate Innovation Lab Safety Innovation Lab **Smart Office** 



**Entrepreneurial Ecosystem** Acceleration Program focused on Sustainability and Energy







**CENPES "Lab of Labs"** 

Largest Research Center in Latin America

**Open Data Platform** 



# PETP BASDAY 2020

December 1st, 2020