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### PETROBRAS DAY 2020

# Roberto Castello Branco





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



Mind the Gap

# **STRATEGIC PLAN** 2021 - 2025

### Strategic pillars support our transformational agenda



**DIGITAL TRANSFORMATION** 

## Management Model



# 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



### Running the ship through rough waters





### AMBITION: zero fatalities and zero leakage

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

<sup>1</sup> Intensity of Greenhouse Gases Effect emissions
 <sup>2</sup> VAZO: Spilled volume of oil and oil products
 <sup>3</sup> Total Recordable Injuries

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## Roberto Ardenghy

*Chief Institutional Relationship and Sustainability Officer* 

# 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



# 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\*

\* 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

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

Carbon commitments related to 2015 base. Other commitments based on 2018. <sup>1</sup>In accordance to the zero routine flaring initiative of the World Bank <sup>2</sup>CCUS: Carbon Capture, Utilization and Storage

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



\* A refinery's CWT (Complexity Weighted Tonnes) considers the  $CO_2$  emission potential, equivalent to distillation, for each process unit.

# Five commitments in social responsibility





Early Childhood Initiative

- 1. 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

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# 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

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# Andrea Almeida

*Chief Financial and Investor Relations Officer* 

### **Finance strategies**





Mitigate risks through active liability management



Maximize shareholder returns



Optimize working capital

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



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

<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

#### Active portfolio management US\$ 25-35 billion

# Investing less with a higher return

CAPEX 2021-2025



Growth CAPEX: 69%

\* ~ 50% of CAPEX in Dollars

# **Deleveraging to generate value**





## Cash flow resilient to low oil prices



**OCF 2021** US\$ billion BRENT US\$/bbl 20 30 40 50 60 FX 11.0 16.5 22.1 27.6 5.2 5.4 17.3 22.9 5.4 6.2 11.8 28.4 7.0 12.5 18.1 23.6 29.2 5.6 24.3 5.8 13.3 18.8 29.9 7.7

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

<sup>1</sup> FCF = operating cash flow - cash flow from investments/ FX rate of US\$ 5.5/BRL <sup>2</sup> Brent to stabilize gross debt, assuming minimum cash level of US\$ 5.5 billion, without considering divestments

### **Procurement - strategic drivers**



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# *Carlos Alberto Pereira de Oliveira*

Chief Exploration and Production Officer

### **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



Total production post-divestments

**Divestments impact in 2025** (MMboed)

- Onshore and shallow waters: 0.3
- Marlim cluster: 0.2
- Albacora + Albacora Leste: 0.1

• Total: 0.6

Production of non-commercial gas Production of commercial gas **Oil production** 

# New projects for 2021 impacted by COVID-19



\* Additional processing capacity of Buzios' platforms and beggining of co-participation agreement

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



# Low breakeven and lifting cost reinforce our competitiveness



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



\* Does not consider divestment

## New investments outside Southeast basins



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### Rudimar Lorenzato

*Chief Production Development Officer* 



#### Petrobras is the leader in FPSO projects

#### 6 fields and 13 new FPSOs from 2021 to 2025



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



# Decommissioning of wells, lines and platforms



#### Annual distribution US\$ billion



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

# **Refining, Gas & Energy and Logistics Projects**





Gas processing plant Route 3

#### 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**



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



#### **Benefits captured**

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

#### **Ongoing initiatives**

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- PAP 30

# Optimization and innovation in Pre-S

- 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 Reduction in well interconnection costs** 7% p.y. average reduction 2016 2017 2018 2020 2019

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

#### HISEP<sup>®</sup> - 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)



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### Anelise Lara

### *Chief Refining and Natural Gas Officer*

### **Refining strategies**



Assets near to the largest oil supply and the largest consumer market More efficient processes and new environmentallyfriendly products with renewable content

# Refining portfolio: smaller with higher value



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

	Current	2025			
Refineries	<ul> <li>REFAP</li> <li>RNEST</li> <li>RPBC</li> <li>REPAR</li> <li>REDUC</li> <li>RLAM</li> <li>RECAP</li> <li>LUBNOR</li> <li>REPLAN</li> <li>SIX</li> <li>REVAP</li> <li>REMAN</li> </ul>	<ul> <li>RPBC</li> <li>REDUC</li> <li>RECAP</li> <li>REPLAN</li> <li>REVAP</li> </ul>			
	Capacity 2.2 MMbpd	Capacity 1.15 MMbpd			
Other assets	<ul> <li>Liquigas</li> <li>Braskem</li> <li>BR Distribuidora</li> <li>PBIO</li> </ul>	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

<sup>1</sup> Carbon mitigation projects and water reuse

# **BioRefino 2030**

Balance between value creation and environmental sustainability

Technological and engineering challenges surpassed

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

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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



# 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

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### André Chiarini

Chief Trading and Logistics Officer

### Marketing, Sales & Logistics strategies



To offer efficient commercialization and logistics solutions with sustainable products and activities, being the number 1 choice of our customers

# Maximization of value in marketing, sales, logistics and inventory management



Maximize value with commercialization

Logistics solutions for commercialization and E&P



Optimization of inventory management



Crude oil

Diversify exports and commercialize oil to refineries in Brazil



Fuel oil Maintain reference in the global market of LSC fuel oil



Light Products Competitive performance in domestic and international markets



Sustainable Products



Expand complementary markets



New operational model with Digital Transformation



Optimize asset use



Increase efficiency



Integration with subsidiaries



Acting as conductor of the inbound supply chain



Rationalize storage network



Digitalize warehouses



Discarded Materials Center/Global Scrap Contracts

### Future: advanced studies along with the Research Center

#### Additive manufacture



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

# IoT and unmanned vehicles



 Forklifts, trucks, small aircrafts (UAV) and automated vessels with the advance 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

## **Commercialization & Logistics CAPEX**



#### Main projects

- Pipeline and terminal maintenance
- Ship docking maintenance
- Pró-Dutos, ESG, WTPs<sup>1</sup>
- Santos Terminal (Alemoa)
- Pipeline Master Plan São Paulo
- Pipeline replacement

#### Growth CAPEX: 22%

### Active portfolio management: smaller and more efficient





#### **Waterway Terminals**

Southeast: 9 terminals South: 5 terminals 2021 Northeast: 7 terminals North: 2 terminals

Southeast: 8 terminals 2025 South: 1 terminal Northeast: 1 terminal

#### **Onshore Terminals**



Southeast: South: Northeast: Midwest:

13 terminals 3 terminals 3 terminals 2 terminals

Southeast: 13 terminals Midwest: 2 terminals

#### Ē **Pipelines**

Southeast: 2021 South: Northeast: North:

Midwest:

- 84 pipelines 9 pipelines C 58 pipelines 18 pipelines 6 pipelines
  - S Southeast: Midwest:

2025

82 pipelines 6 pipelines

## **Oil exports expansion**



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

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### Nicolás Simone

Chief Digital Transformation and Innovation Officer

# **Digital Transformation and Innovation Strategy**





# Digital transformation and innovation - Upstream





Al and Analytics	<ul> <li>Predictive maintenance for preventing pla shutdown</li> <li>Machine learning for identifying analogue reservoirs</li> </ul>	tform es in
Digital Twins	<ul> <li>Topside Integrity Management</li> <li>Digital Rocks</li> </ul>	
Innovation in pre-salt systems	<ul> <li>Lower CO2 emissions and human risk exp</li> <li>Robotization and subsea processing</li> </ul>	oosure
Augmented reality	<ul> <li>360° Immerse navigation asset inspection maintenance</li> </ul>	and
Integrated Data Platform	High Performance Computing Conne	hore ctivity

# Digital transformation and innovation - Downstream







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



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



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



Decarbonization and Biofuels technologies
Renewable Diesel and BioJet Production Technologies

Downstream efficiency

BioRefining

Robotization and Digitization

# Digital transformation and innovation - Commercialization



Al and Analyti	<ul> <li>Air, Sea and Land Operations performance analysis and optimization</li> </ul>
کی اور کی	<ul> <li>Smart Warehouse: Robotization, Digitalization and Automation</li> <li>Ton • Paperless</li> </ul>
Augment Reality and Al	<ul> <li>Pipeline Protection</li> <li>Monitoring, detection, location, repairs and tracking</li> </ul>
Integrat Technolo Platfor	ed gical • CRM 360 <sup>0</sup>
Competitive Ma Intelligence	arket Supply Chain - IOT Platform

# **Digital transformation and innovation - Corporate Areas**







### **Connected to Accelerate - Innovation Ecosystem**





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