

The background of the slide is a photograph of an oil pumpjack (jackal) in silhouette against a bright orange sunset sky. The sun is a large, glowing orb positioned behind the pumpjack's walking beam. In the foreground, there is a dark silhouette of a fence or barrier. The overall scene is industrial and atmospheric.

UNCTAD
14th African Oil, Gas and Minerals, Trade and Finance Conference and Exhibition
São Tomé & Príncipe

Lessons From Petrobras Development And Applicability To Other NOCs

By Khalid Ghoslani
Managing Director

November 22nd 2010

EnerGConsulting[®]
Generating Value for Our Clients

Copyright © 2010 EnerGConsulting[®]

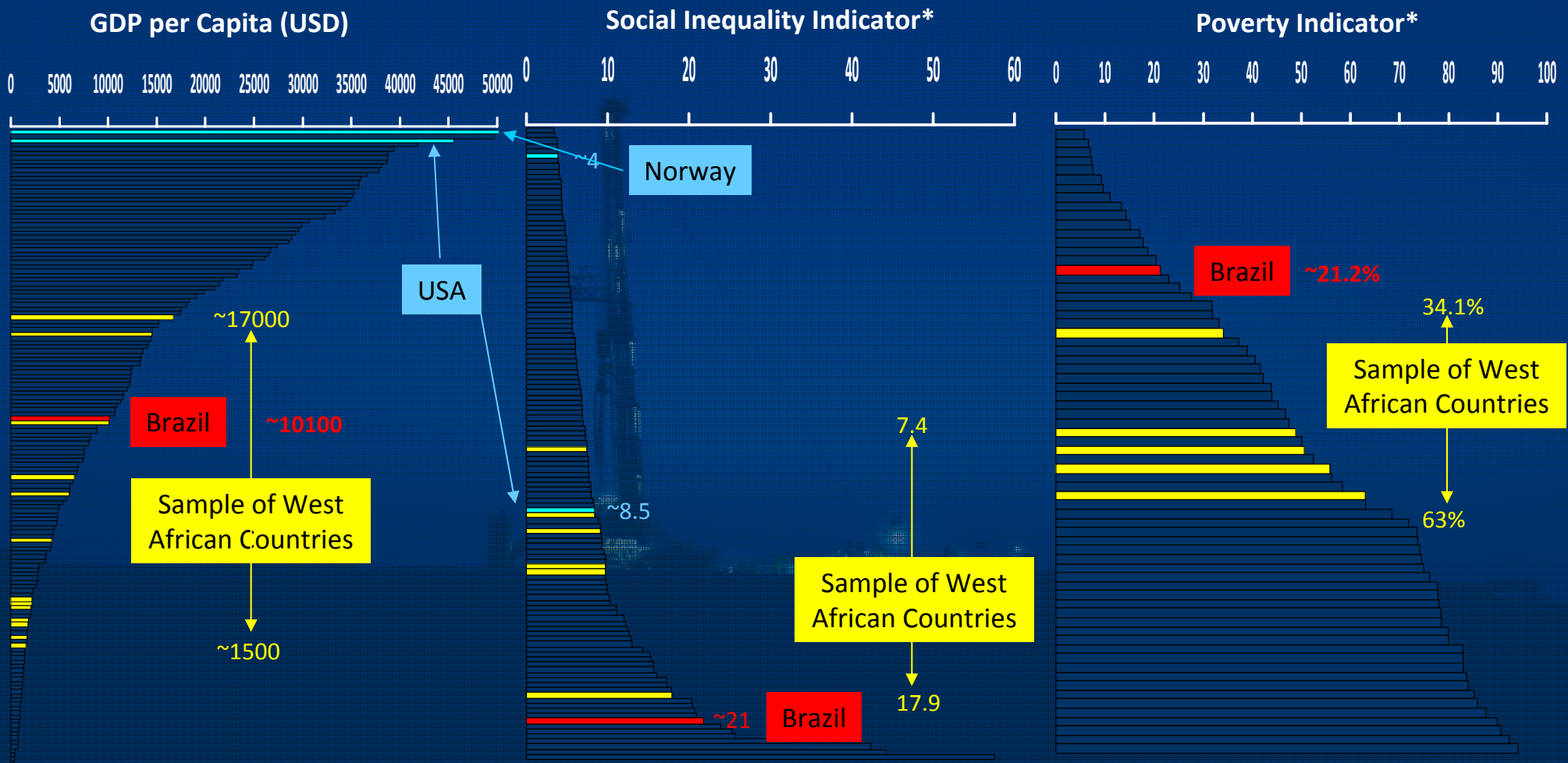
About *EnerGConsulting*®

- *EnerGConsulting*® is a boutique energy consulting firm providing management and technical consulting services for the energy industry in Brazil, the Middle East and soon in West Africa.
- Our expertise comprises a wide range of the energy value chain including operations, HSE&Q, marketing, valuation, business process design & implementation, and strategy.
- We are unique in that we leverages existing resources within clients' organisations and facilitates the transfer of capabilities.
- We offer our clients focused yet flexible boutique consulting services. By tapping into customers' assets in priority order, our interactions with clients are optimized, thus generating greater value.

Outline

- Brazil Is A Developing Country
- Yet Brazil's NOC Managed To Become A Leader In Deep-Offshore E&P At Home...
- And An Established Player World Wide...
- And Generates Considerable Positive Externalities
- Looking At Petrobras Reserves History...
- We Recognise The Role Of Institutional Capabilities Building...
- Coupled With Well Timed Policies...
- And An Impressive *Modus Operandi*
- We Must Learn from It And Try to Replicate It

Brazil Is A Developing Country

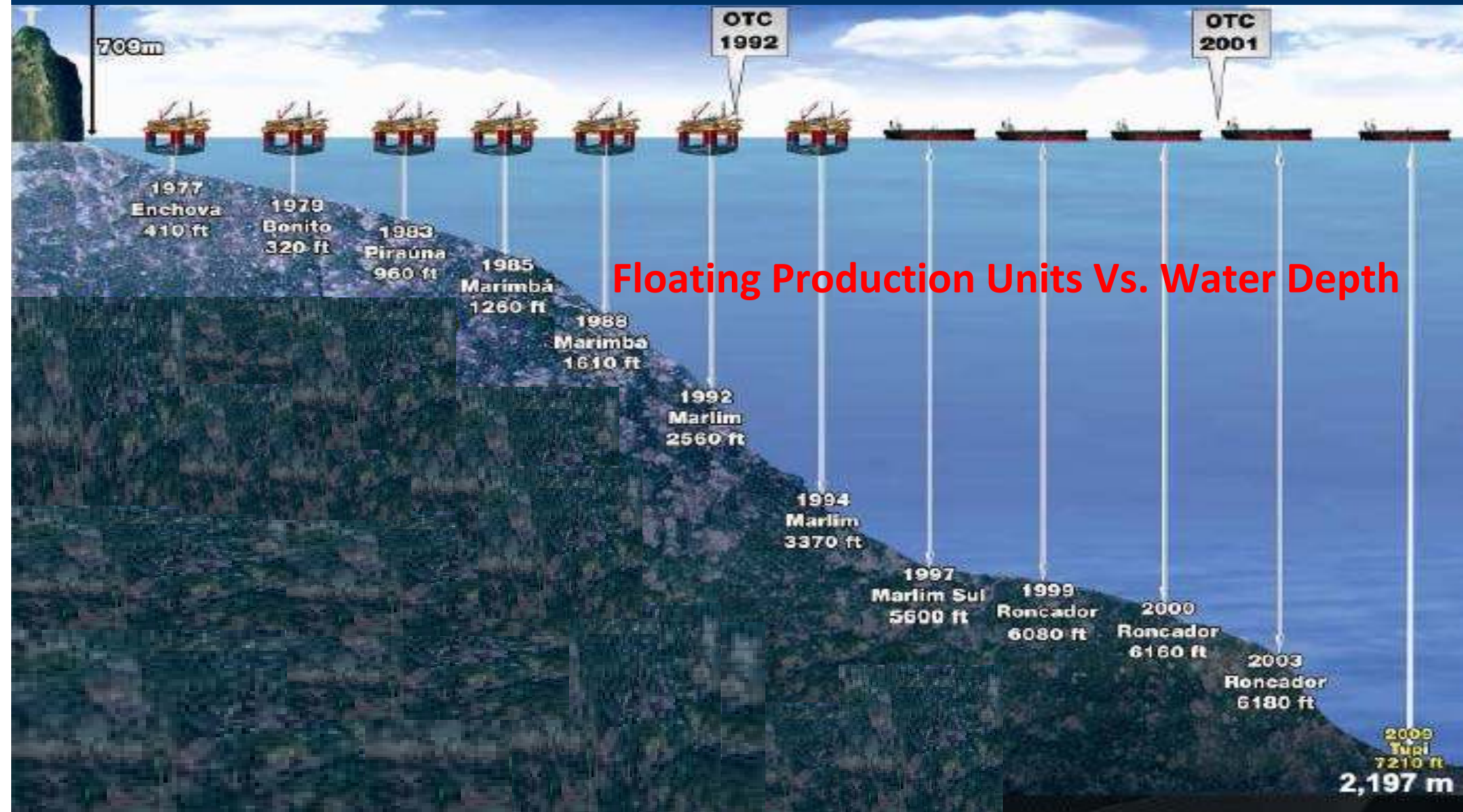


* Source IMF 2009 data

- Ratio of income for Richest 20% to Less well off 20%.
- Source UNDP 2004.

- Population % living on less than USD2 per day.
- Source UNESCO EFA Global Monitoring Report (1999-2004).

Yet Brazil's NOC Managed To Become A Leader In Deep-Offshore E&P At Home...

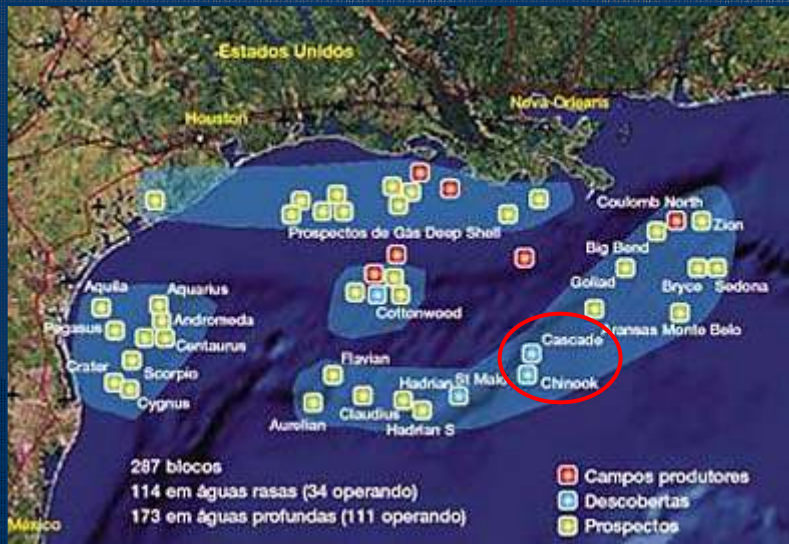


And An Established Player World Wide...

From Overseas Regulators

Petrobras is operator of Cascade Chinook fields in US Gulf of Mexico

Dec 2006. US Mineral Management Services approves the deployment of the first Floating Production Storage and Offloading (FPSO) vessel in the GOM for Petrobras.

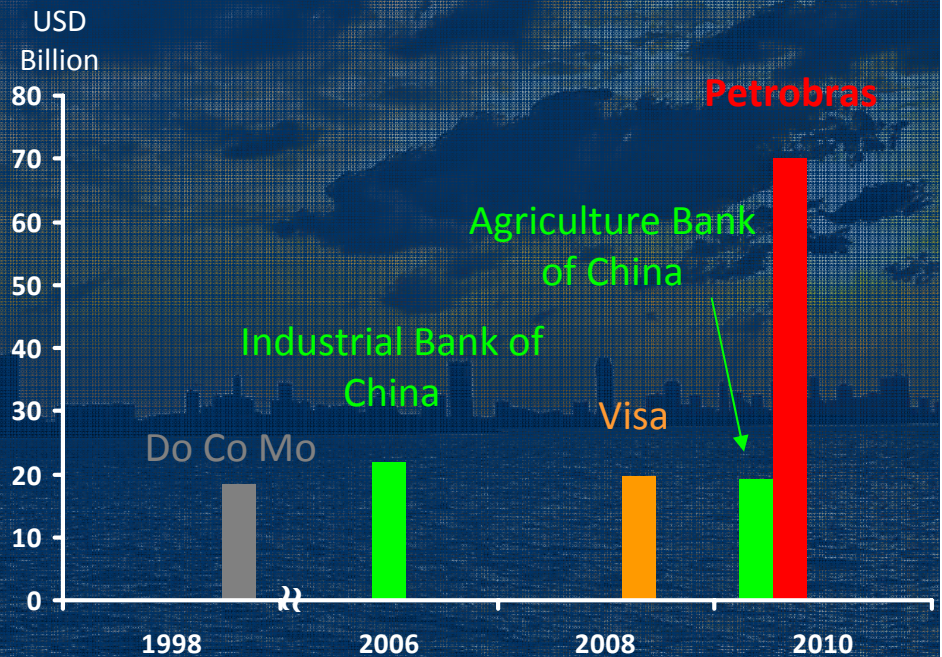


The FPSO will be located in approximately 2,700m of water and 260km off the coast of Louisiana setting the record for the world's deepest FPSO to date.

From Global Financial Markets

Petrobras preformed the world's biggest share offering in history in 2010

Petrobras raised USD~70 Billions



And Generates Considerable Positive Externalities

Private sector dynamism

- 2007 saw creation of OGX, a privately held E&P giant. 79 wells planned with 5 drilling rigs already on site.
- 2009 saw incorporation of HRT O&G another privately held E&P company.

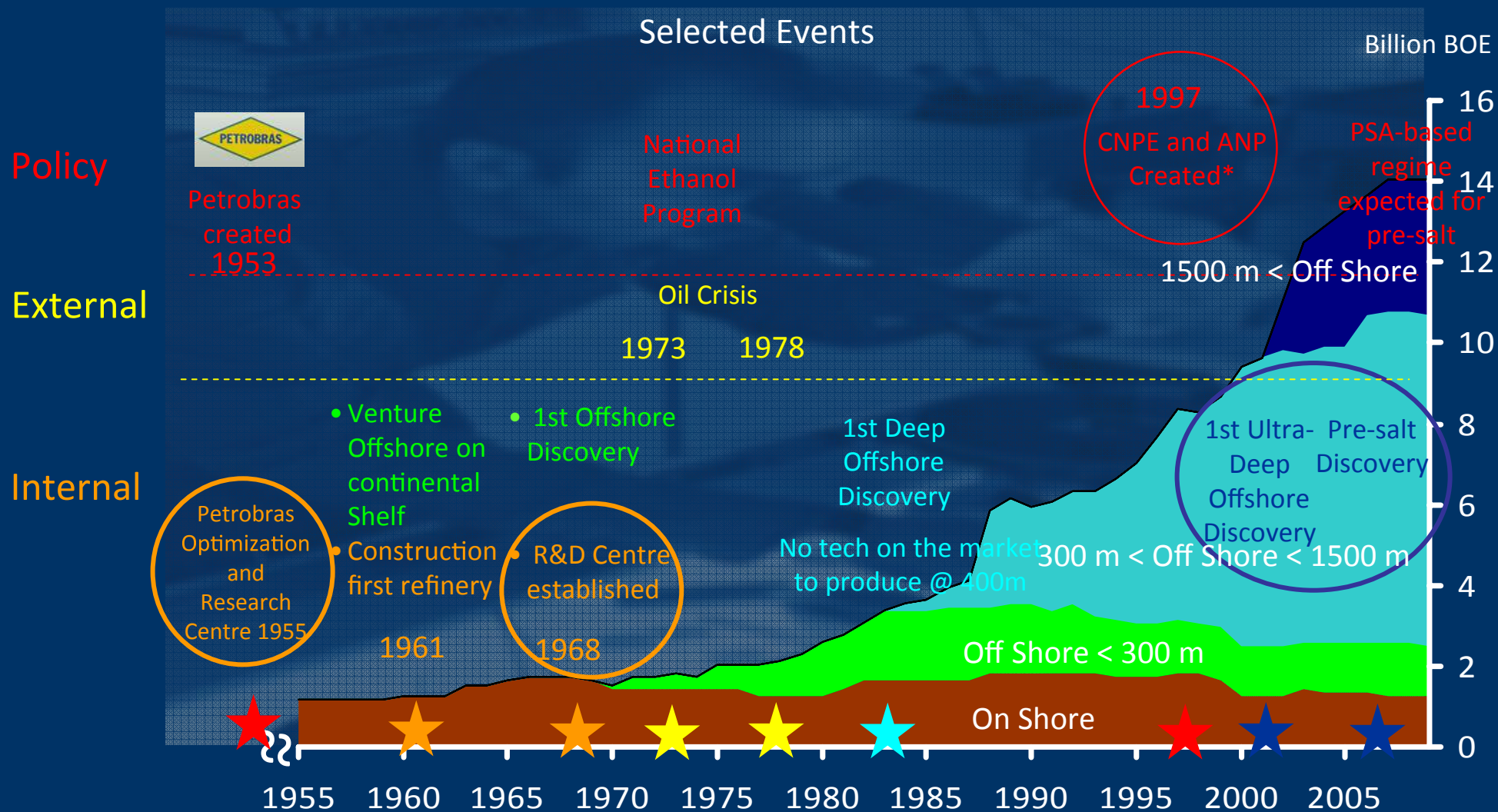
Source: OGX and HRT websites

Petrobras nurtures an eco-system of suppliers and R&D ventures

- 57000 suppliers of which 4800 on supply chain web
- Developed a new technological partnership model with 11 universities and research institutes that work in collaborative networks
- 2010 Braskem inaugurates the world first “Green-Plastic” manufacturing plant using sugarcane ethanol as feedstock.

Source: Petrobras and Braskem websites

Looking At Petrobras Reserves History



* CNPE: Conselho Nacional de Política Energética. ANP: Agência Nacional do Petróleo

We Recognise The Role Of Institutional Capabilities Building...

The Building Block of Petrobras Success

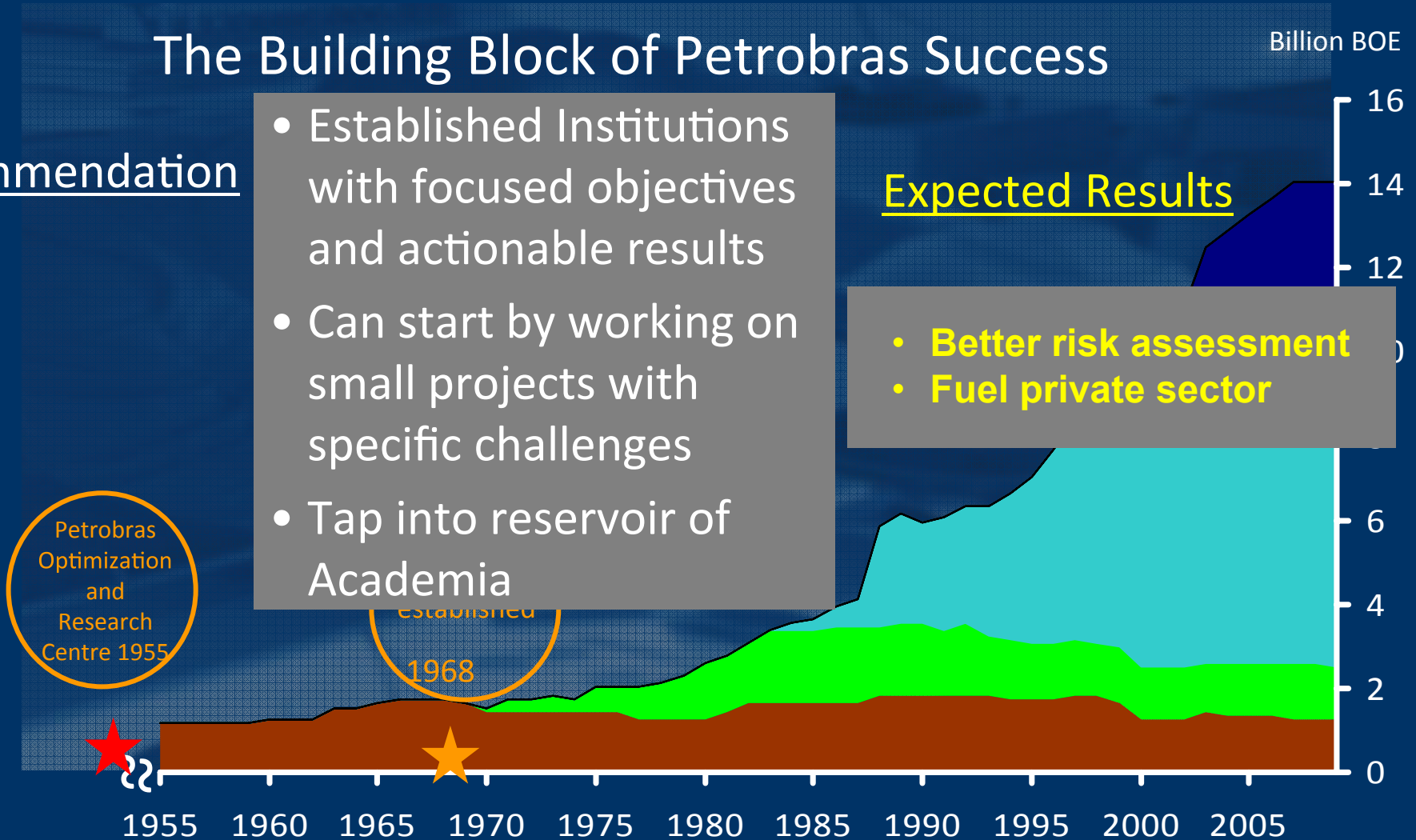
Recommendation

- Established Institutions with focused objectives and actionable results
- Can start by working on small projects with specific challenges
- Tap into reservoir of Academia

Expected Results

- Better risk assessment
- Fuel private sector

Internal



Coupled With Well Timed Policies...

Recommendation

Create an oversight structure type ANP

Policy

Expected Results

- NOC will be more focused on its core business and mandate of finding and developing hydrocarbon resources
- Healthy competition with foreign operators will oblige NOC to raise its levels

Applicability

NOC with critical mass size



* CNPE: Conselho Nacional de Política Energética. ANP: Agência Nacional do Petróleo

And An Impressive *Modus Operandi*

Recommendation

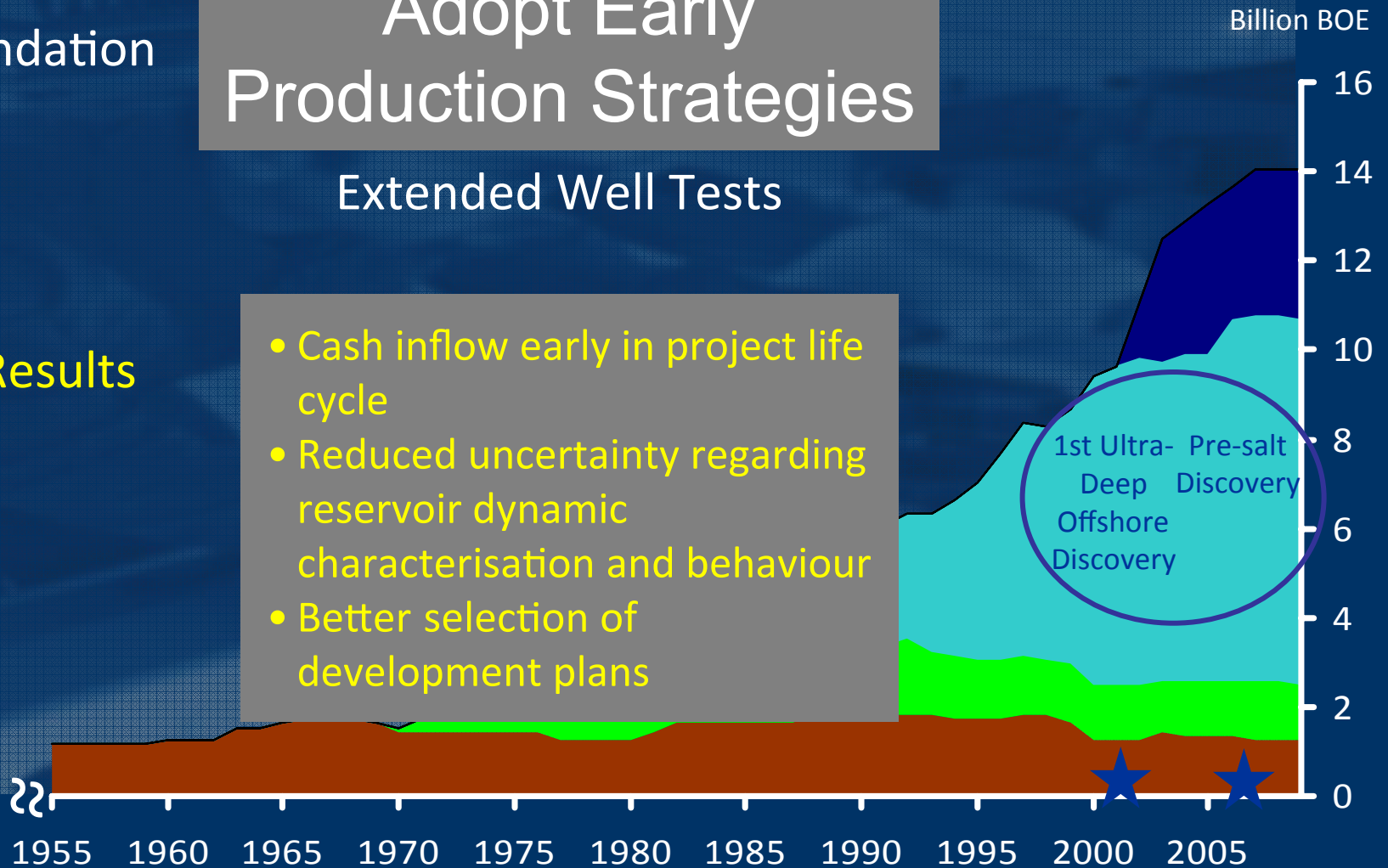
Adopt Early
Production Strategies

Extended Well Tests

Expected Results

- Cash inflow early in project life cycle
- Reduced uncertainty regarding reservoir dynamic characterisation and behaviour
- Better selection of development plans

Internal



Conclusion

We must learn from it and try to replicate it!!!



In the 80s we saw the emergence of a new management style from Japan with Kaizen concepts of continuous improvement

Are we witnessing the emergence of a new management style à la Brazil?

ODEBRECHT

PETROBRAS

VALE

UNCTAD

14th African Oil, Gas and Minerals, Trade and Finance Conference and Exhibition
São Tomé & Príncipe

Thank You For Your Attention



EnerG Consulting[®]
Generating Value for Our Clients