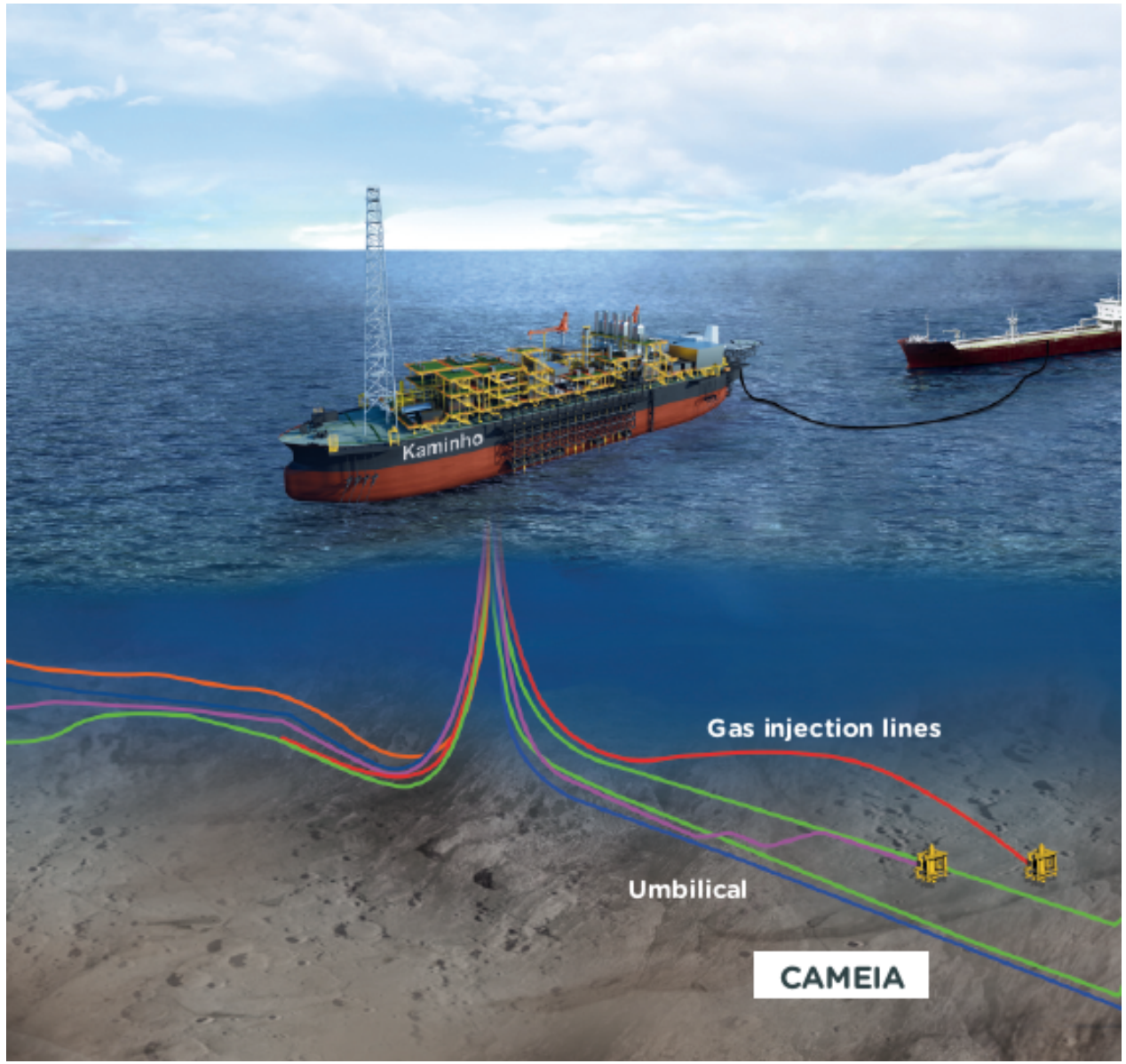
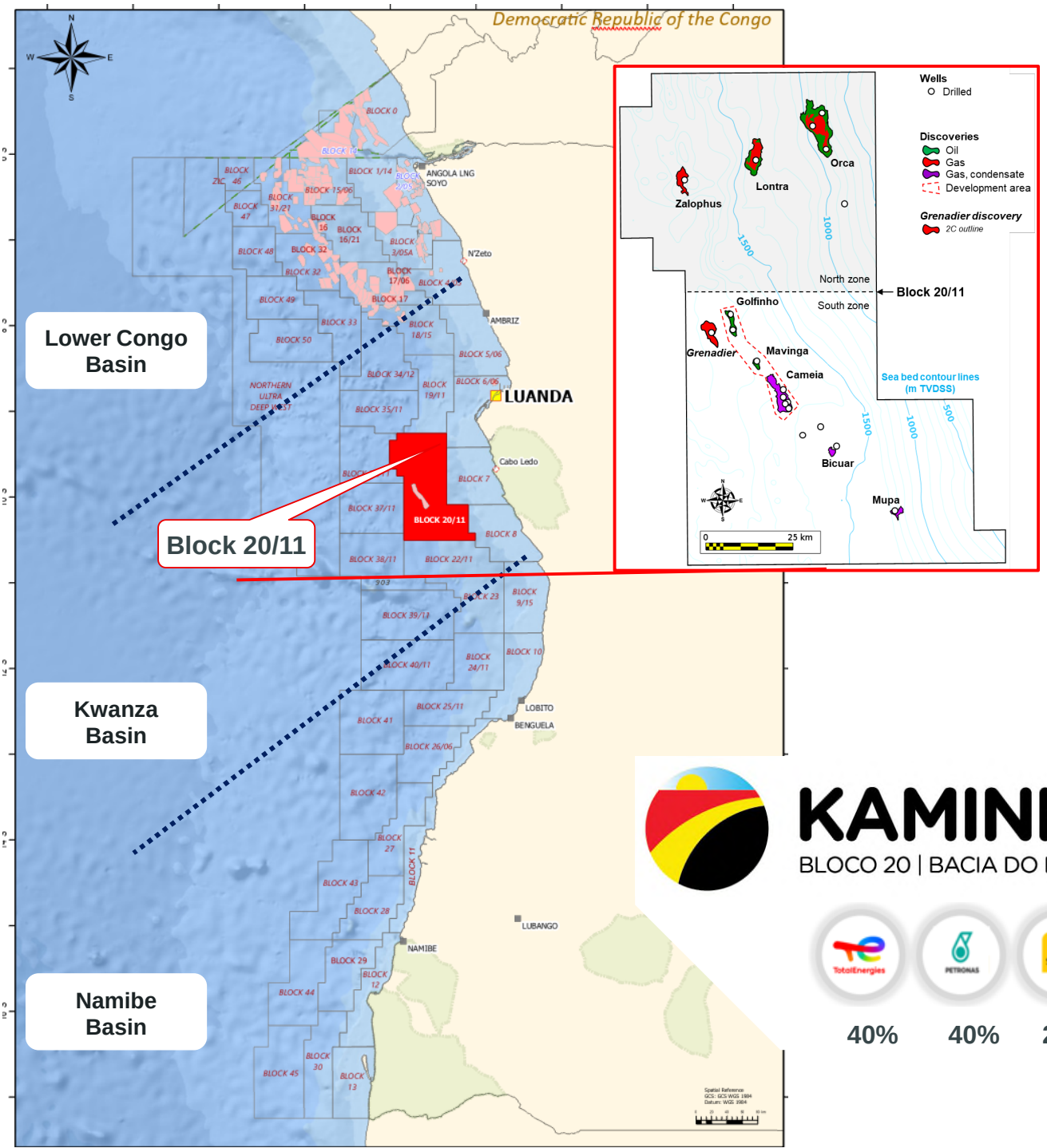


TotalEnergies

KAMINHO
BLOCO 20 | BACIA DO KWANZA

A PIONEER DEVELOPMENT IN THE KWANZA BASIN

Pionniers depuis 100 ans



KAMINHO

BLOCO 20 | BACIA DO KWANZA

TotalEnergies	PETRONAS	Sonangol
40%	40%	20%

TotalEnergies

2 Reservoirs
Cameia & Golfinho

70 kbo/d

FPSO is **160 km** to Luanda & **110 km** to shore

Start up in **2028**

Water Depth **1,600** to **1,800 m**

Pioneers for 100 years

Origin of the Name

Kaminho Timeline

2011

Kwanza Basin Exploration & Appraisal

18 Wells
7 Discoveries

2020

TotalEnergies Farm-in

Operatorship
Fast-track development launched for Cameia & Golfinho

2021 2023

Making it viable

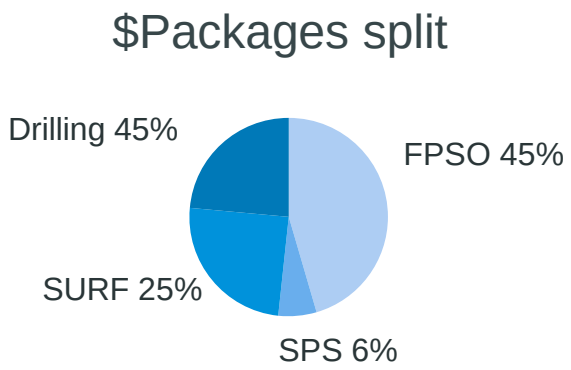
Value Engineering
Petronas Farm-in
Block merge and PSC negotiations

2024

FID

May the 20th, 2024

6 billion USD project
Main EPCC Contracts signed
SNL Joint Operatorship

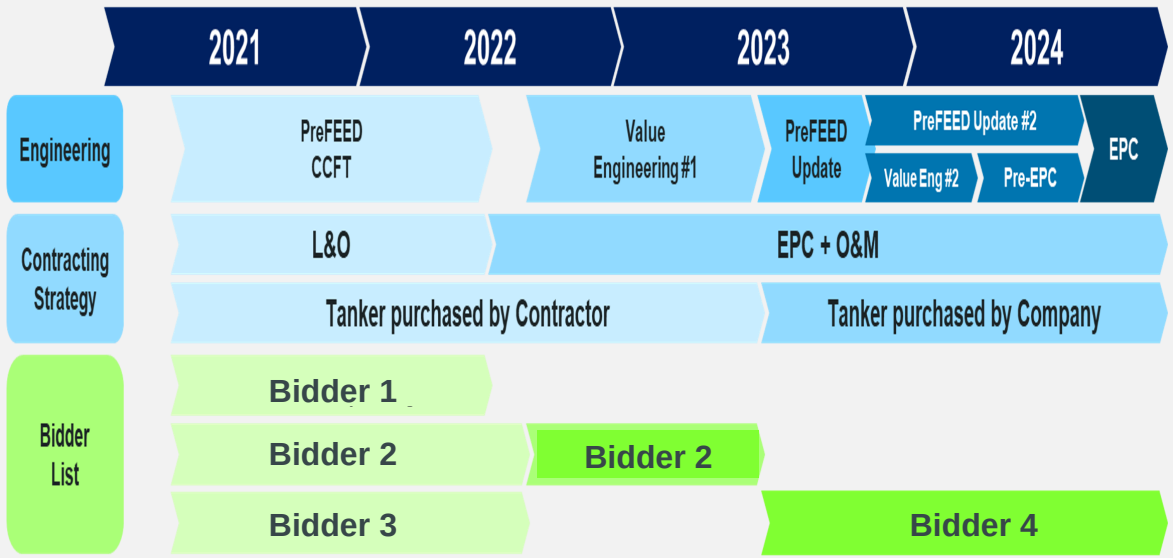


Kaminho's journey in a challenging environment

FPSO Call for Tender phases

Several changes to adapt project to an evolving context

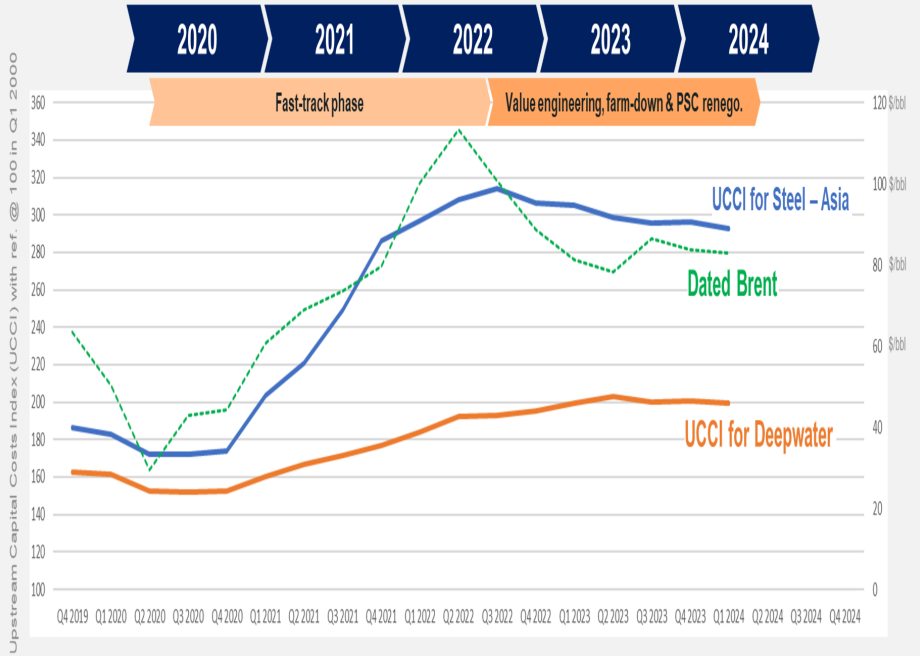
- Contractor-driven market
- Increasing Contractors' financing cost discarding Lease & Operate model
- Value engineering required to meet project economics criteria



Economical context

Challenging environment

- Post-COVID recovery faster's than accelerated project development
- Raw material prices impacted by the war in Ukraine

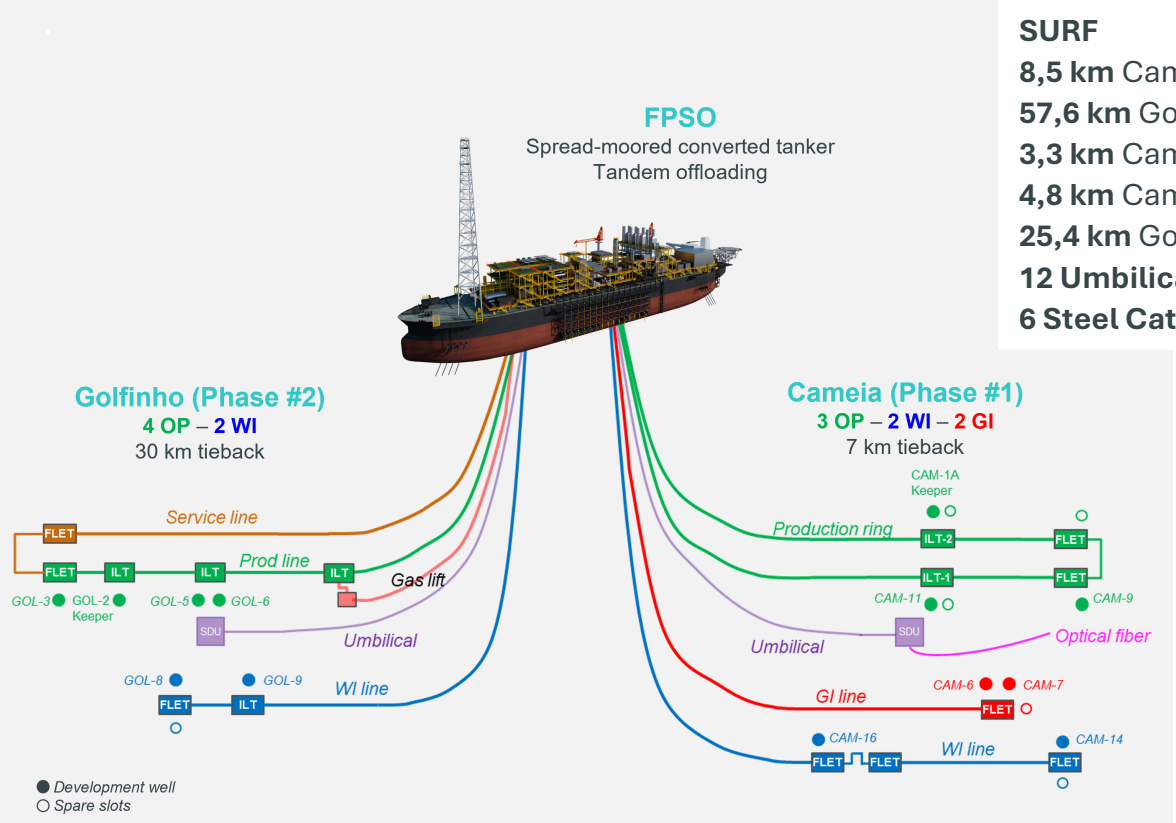


Kaminho Development Scheme

A revolutionary design towards more sustainable and efficient operations

FPSO

Full Electric FPSO
All gas reinjected
Zero routine flaring (closed flare)
No venting by design
Central power generation
Waste heat recovery unit
Variable speed drive compressors
70 kbopd of production capacity
315 MMSCFD of gas treatment capacity
55 kwbpd of water injection capacity
2 million barrels storage capacity
Mooring Depth: 1,600 m



SURF

8,5 km Cameia production line
57,6 km Golfinho hybrid loop with insulated rigid pipe
3,3 km Cameia gas injection flowlines
4,8 km Cameia water injection flowlines
25,4 km Golfinho water injection flowlines and riser
12 Umbilicals (2 main and 10 static)
6 Steel Catenary Risers

SPS

13 wells and associated Christmas trees
SPS master control station
Intelligent completion for producer wells

Geosciences

A development of pre-salt fractured carbonate reservoirs, **a first in the Angolan deep-offshore**
Reservoirs depth at more than 4,000 meters below sea level
Pressure maintenance by water and gas reinjection

Surface facilities

Key metrics

Capacity (@ 95% availability)	Oil: 70 kbopd Gas compression: 315 mmscf/d @ 435 bar Water injection: 55 kbwpd
Oil Scheme	4 stage separation + decanting tank in the hull
Compression (All electric)	HP2/HP3: 3 x 50 % VSD HP1: 2 x 70 % VSD LP/MP: 2 x 50 % VSD
Power Generation	69 MW Power Demand Open Cycle – 2+1 Gas turbines
Topsides Weight	ca. 30 ktons

Carbon Footprint Reduction

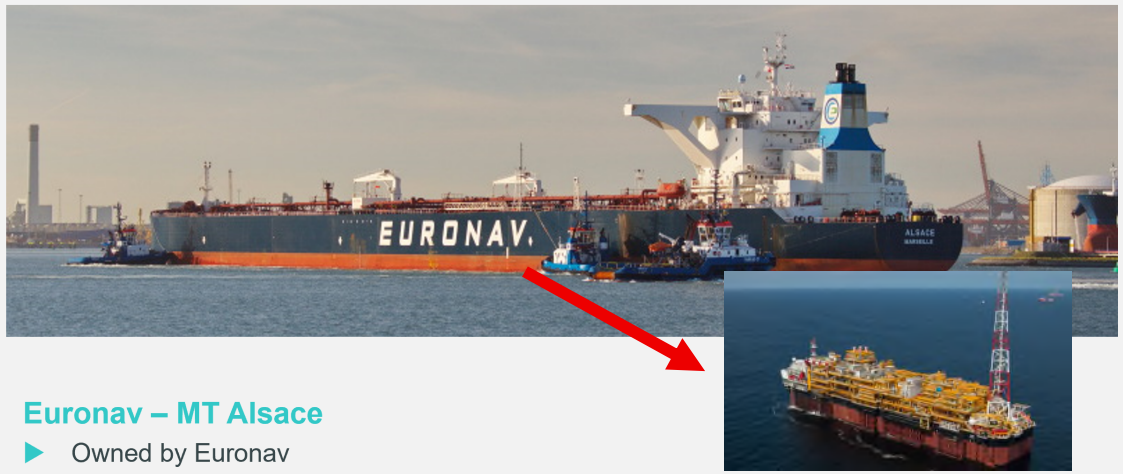
Energy efficiency

- All electrical FPSO, centralized power generation with WHRU
- Variable Speed Drive (VSD) for compressors

Flaring

- Closed Flare
- Native CO_2 extracted from Fuel Gas and reinjected
- N+1 sparing for HP2/HP3 *(+ partial sparing for HP1)*

Tanker for conversion



Euronav – MT Alsace

- Owned by Euronav
- Built in July 2012 (SHI Korea)
- Inspected and endorsed by Company and FPSO Contractor

Saipem awarded both EPC and O&M Contracts

- Engineering ongoing
- Procurement ongoing
- Conversion and Module fabrication yard secured (CMHI, China)

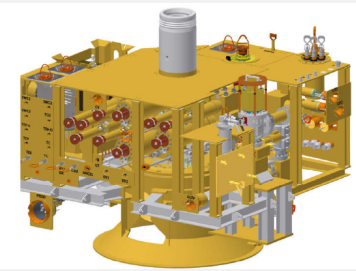
Subsea facilities

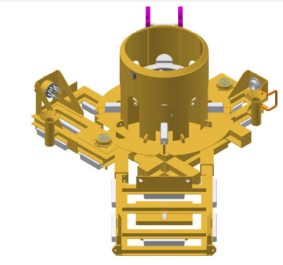
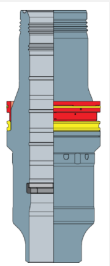
SPS

OneSubsea awarded

- Cameia & Golfinho supply
- Engineering ongoing
- HSE audits conducted in main workshops

slb OneSubsea



SURF – Cameia

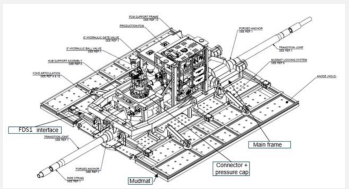
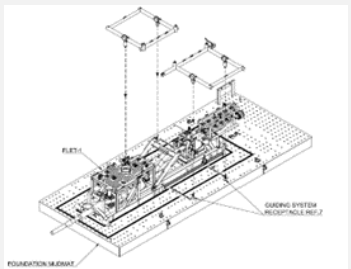
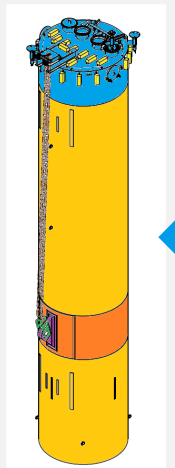
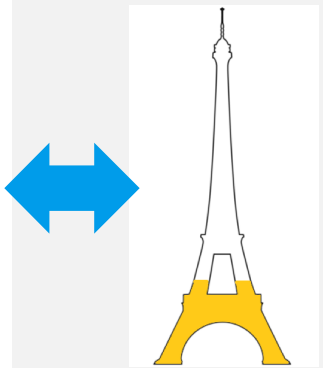
Saipem awarded

- Engineering ongoing
- Procurement ongoing
- Installation vessel (FDS) secured

SAIPEM

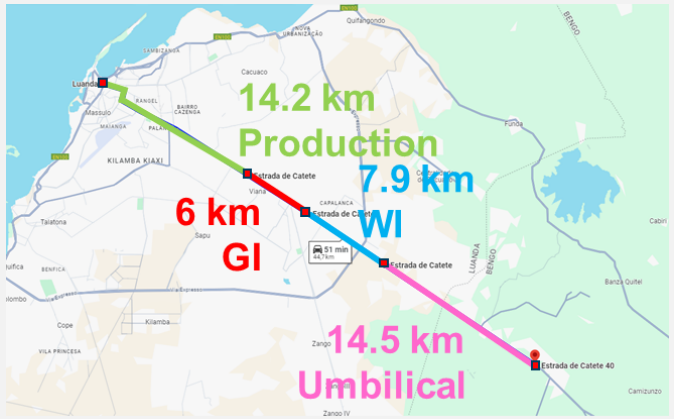
Subsea structures

- 3,300 tons of subsea
- 45% of Eiffel Tower structural steel weight

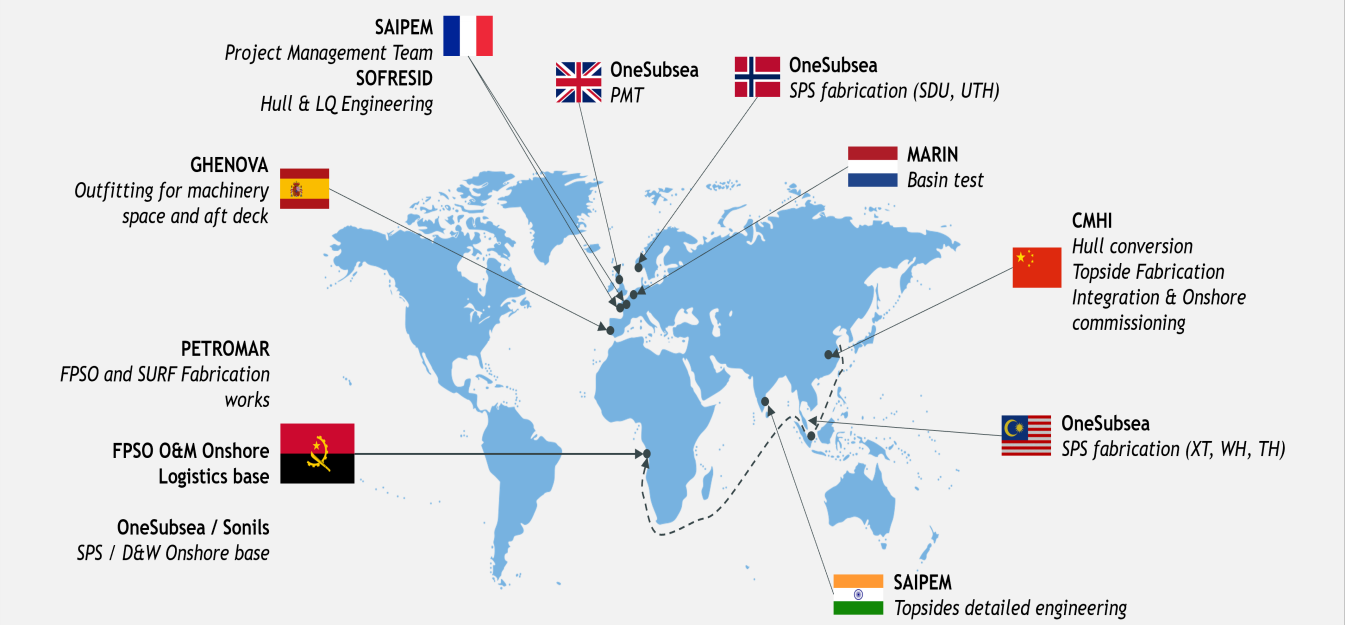
Flowlines

- Production ring
- Water and gas injection lines
- Dynamic and static umbilicals

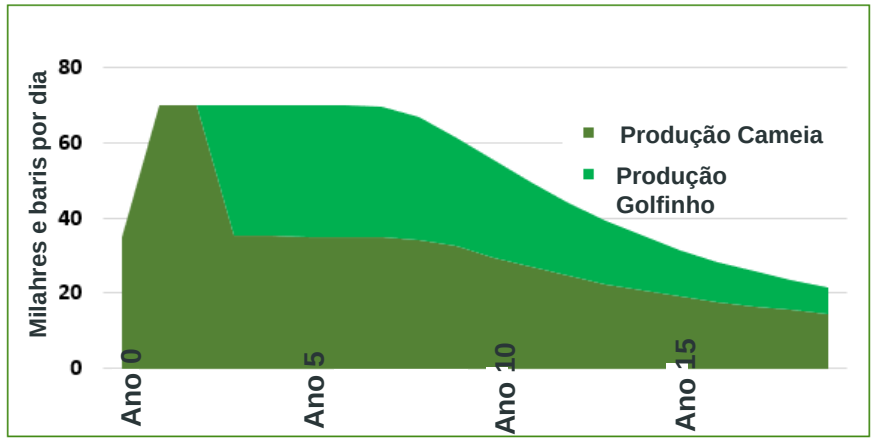


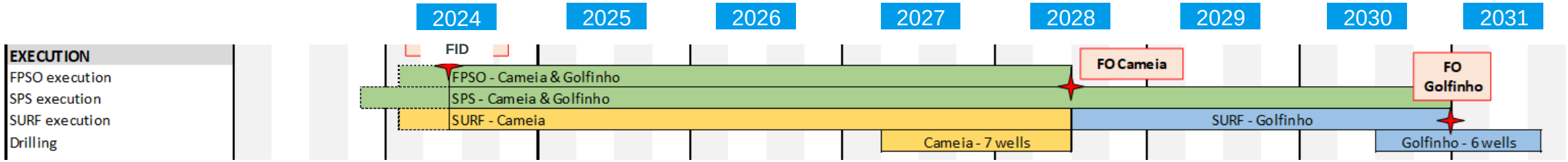
Execution plan

Main workshops & yards locations



Production Profile

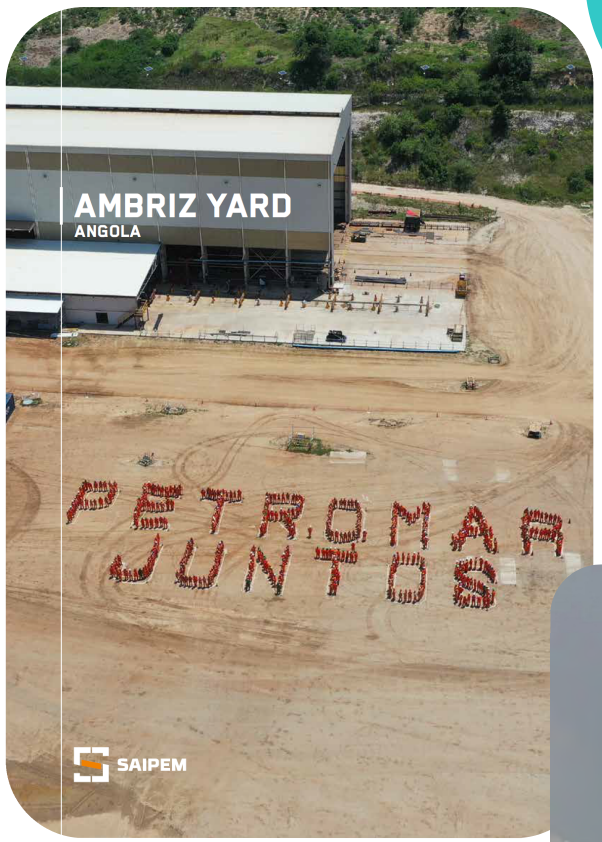




Pionniers depuis 100 ans

Local content

1
Fabrication
Yard

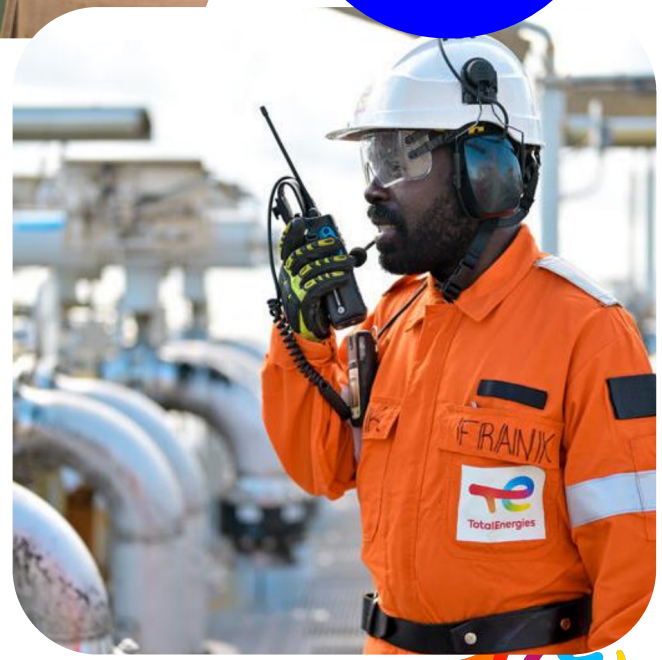


1.5
MMhrs

11
MMhrs

20
Years
Operations

30%
of project
manhours



OBRIGADO !
MERCI !
THANK YOU !