# STEERING E&P IN A CHANGING ENVIRONMENT



## Industry environment

- O&G prices expected to remain low
- Climate challenge:
  - Switch to gas
  - Reduce our emissions



















### Total E&P Strategy

### **BE RESPONSIBLE**

SAFETY as Core Value
Leader on CLIMATE & ESG
Reduce Environmental footprint
Promote Gas as Transition Energy

### BE PROFITABLE

Optimize Availability of Installations
Maintain Low Technical Costs
Deliver Projects
Be Selective

### BE SUSTAINABLE

Renew Reserve through Exploration & DRO prioritizing:

- Low Break-ever
- Operated activities

Capitalize on our Strengths:

Deepwater / LNG / Africa / Middle East / North Sea

### Technology, Innovation and Digital

### People

A profitable and resilient E&P division in a volatile environment

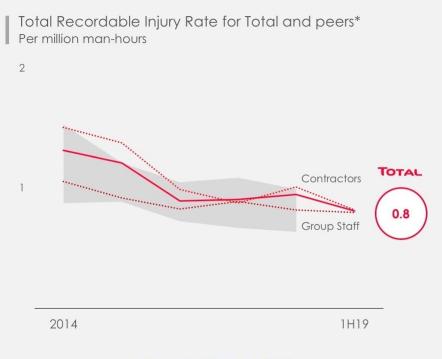


## BE RESPONSIBLE



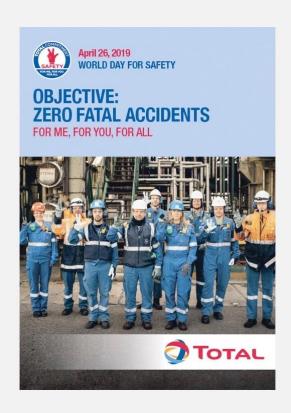


### **Safety**, Total's core value Cornerstone of operational efficiency and sustainability





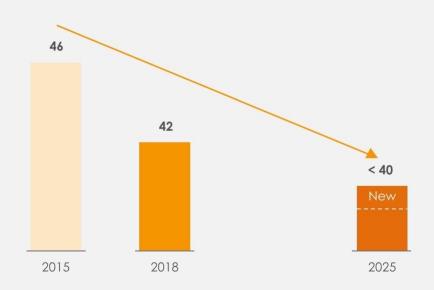
<sup>\*</sup> Group TRIR excl. Specialty Chemicals Peers: BP, Chevron, ExxonMobil, Shell





## Reducing CO<sub>2</sub> emissions while growing the company

Scope 1 & 2 emissions from operated oil & gas facilities Mt/y -  $CO_{2\,eq}$ 





- Each site to display CO<sub>2</sub> emissions to promote staff awareness
- "CO<sub>2</sub> fighter squad" to leverage all Total competences and reduce CO<sub>2</sub> emissions



### Reduction of CO<sup>2</sup> Emissions

- Flaring reduction
- Keeping Methane emissions to a minimum
- Developping an Energy Efficiency tool box
- Process Electrification
- Hybridation with renewables (example of Oman Sohar LNG)













## Reducing LNG GHG footprint

LNG GHG emission breakdown



#### **GHG** main contributor

- Liquefaction process itself
- Shipping

Liquefaction improvement initiatives

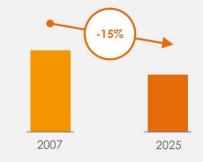


**Process and operations efficiency**: up to 10% GHG reduction

**High efficiency** turbines: up to 15% GHG reduction

**All electric approach** (grid, renewable): up to > 50% GHG reduction

Shipping emission by LNG carrier type



### Portfolio arbitrage

**Improve insulation** (membrane technology)

Select **optimized propulsion** (LNG as fuel, low pressure two stroke engine)

Install reliquefaction systems

8



<sup>\*</sup> Scope 1+2 from gas production to regas at terminal

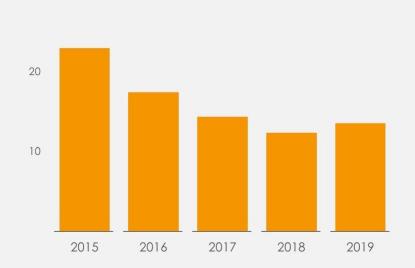
## BE PROFITABLE





## Capex discipline and operational excellence

Organic Capex B\$



Evaluating projects at 50 \$/b

Successfuly starting-up giant projects in 2018-19 Deepwater and LNG



5 FPSO ~600 kboe/d capacity 6 LNG trains ~30 Mt/y capacity



### Sanctioning new wave of profitable projects

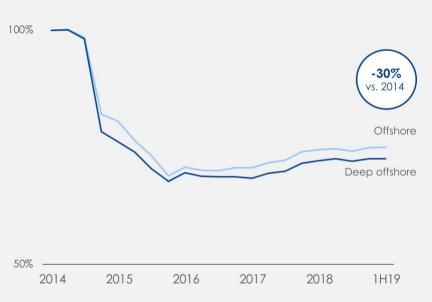
Launching > 800 kboe/d to fuel growth post-2023





## Leveraging favorable supply chain to launch projects Simplifying designs

Upstream Capital Cost Index Base 100 in 2014 – IHS Markit – 2Q19

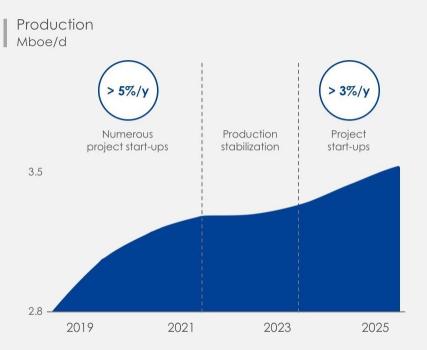


### International E&P costs stabilized at low level

- US E&P focus on shale reducing international competition
- Significant spare capacity within the supply chain
- Chinese contractors offering competitive alternative for LNG and offshore projects



### Sustainably growing profitable production



Leveraging portfolio of high-value projects

**LNG projects** driving profitable growth

Low 3%/y decline thanks to ~50% of long plateau with no decline (LNG, Middle East...)



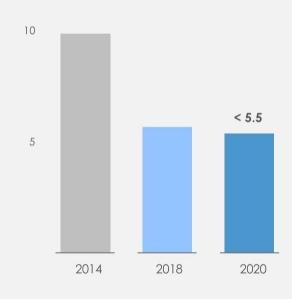
## Extending cost saving program

New Group cost reduction program B\$ - Savings vs. 2014



+ 1 B\$ in 2023 vs. 2020 50% Upstream, 50% Downstream & Corporate

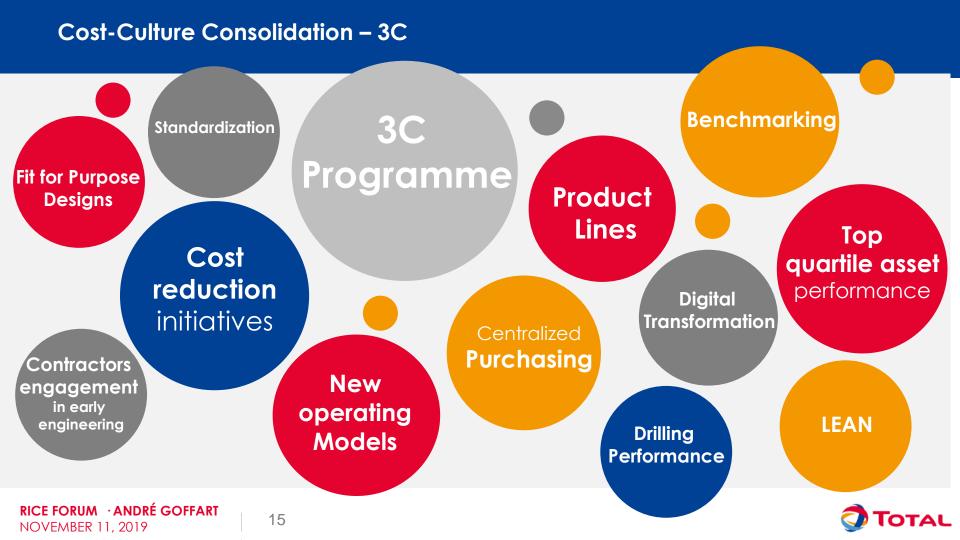
Production costs\* \$/boe



Targeting 5 \$/boe

\* ASC 932





## Digital: stepping up value creation





## Digital: data intelligence & valorisation and new ways of working



- Improving safety
- Production Optimization
  - Real time mobile access to engineering data, work orders and permit data
  - Interactive dashboards / ambitious predictive models
- Condition based Maintenance
  - Rotating machines remote monitoring (RAID)
  - Subsea Eqt. condition monitoring
- Drilling real time remote monitoring and data valorisation
- Technical Standards: increased visibility & contextualised understanding of requirements



## BE SUSTAINABLE





## E&P strategy: building on our Historical and Technical Strengths

Leveraging Expertise in Core Areas





Northern Europe





Deep and conventional offshore



Liquefied Natural Gas



### **Deepwater roadmap:** a consolidated and shared vision

### Acceleration and cost reduction drivers

Technology / Innovation

- R&D
- Industrialisation
- Collaboration with industry

Design Optimisation

- Simplification
- Standardisation
- Integration

Drilling / operations performance

- Simplification
- Capitalisation

Procurement strategy

- Contracting strategy
- Project management
- Resilience to Industry cycles





#### **SUBSEA TIE-BACK**

To feed our existing facilities and develop nearby objects



STAND ALONE MARGINAL FIELDS

To unlock our 2C resources



#### **NEXT ELEPHANT**

To define the next DW development generation



**FRONTIER** 

To create new opportunities



**MATURE FIELD** 

To support the asset profitability



## Deepwater Technology: Preparing the Future

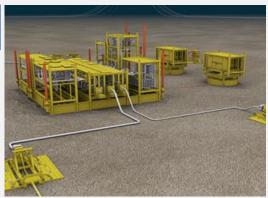
Unmanned FPSO

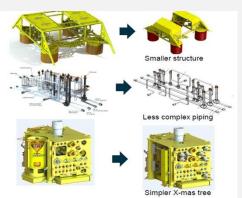




Subsea to shore

Subsea Water Injection

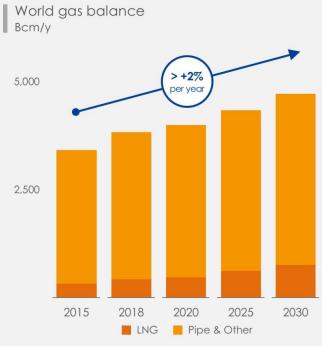




Simplification



## LNG, the engine of gas demand growth



LNG plays an increasing role in growing demand (> 15% in 2030 vs. 11% in 2018)

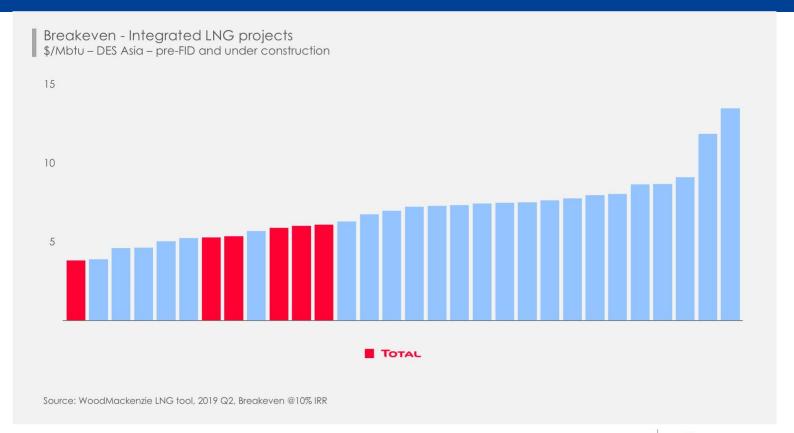








## Priority to low breakeven projects







## **North America LNG:** building strong liquefaction position Developing partnership with Sempra

### Cameron LNG, US, 16.6%



 Train 1 started, trains 2&3 by mid-2020 (3 x 4.5 Mt/y)

24

- Cameron LNG brownfield extension under study\*
- Low cost shale gas supply

#### Energia Costa Azul, Baja California, 10-15%



- · Competitive brownfield
- Phased development: Ph1 at ~3 Mt/y
- FID turn of 2019
- Low cost shale gas supply from Permian
- Total offtake ~1 Mt/y, strong advantage on shipping cost linked to Asia Pacific location

~3.5 Mt/y equity production by 2025



<sup>\*</sup> FERC/DOE authorizations granted

## **Building strong US LNG position**

Key market for global portfolio player



Sustainable abundant low cost feedstock

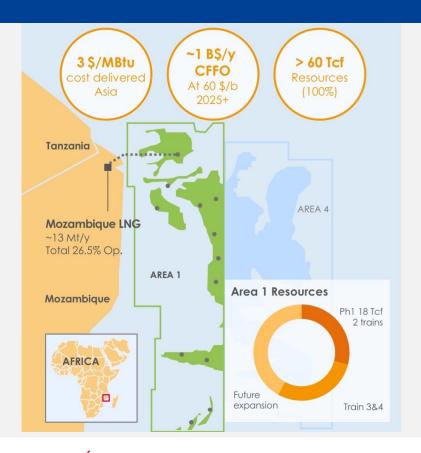
Integrated along the gas value chain

### Growing competitive portfolio

- Cameron T1 started up, T2-3 in 2020
- Expanding partnership with Sempra
- 2 Mt/y from Toshiba contract take over (Freeport): received 0.8 B\$ cash



### Mozambique LNG: unlocking world-class gas resources



### Giant high quality resources

- Gas composition well adapted to liquefaction
- Well productivity ~30 kboe/d

## Mozambique LNG: leveraging large scale to lower costs

- Upstream: subsea to shore
- 2 x 6.4 Mt/y LNG plant < 850 \$/t</li>
- Onshore synergies with Rovuma LNG
- FID June 2019, first LNG in 2024
- Launching studies on train 3&4 in 2020

~90% volume sold under long term contracts largely oil indexed

Note: Subject to closing



### Oman - Sohar LNG

1 MTPA LNG Bunkering Plant within Sohar industrial Port & direct connection to dedicated Solar Plant



LNG Bunkering Plant with Storage Tank & Jetty

Dedicated Solar plant outside the Port Zone (80 MW)





## **People**

- Competencies
- Collective efficiency
- Career development
- « One Total » Talent Management













## THANK YOU



