



# **ESG Presentation**

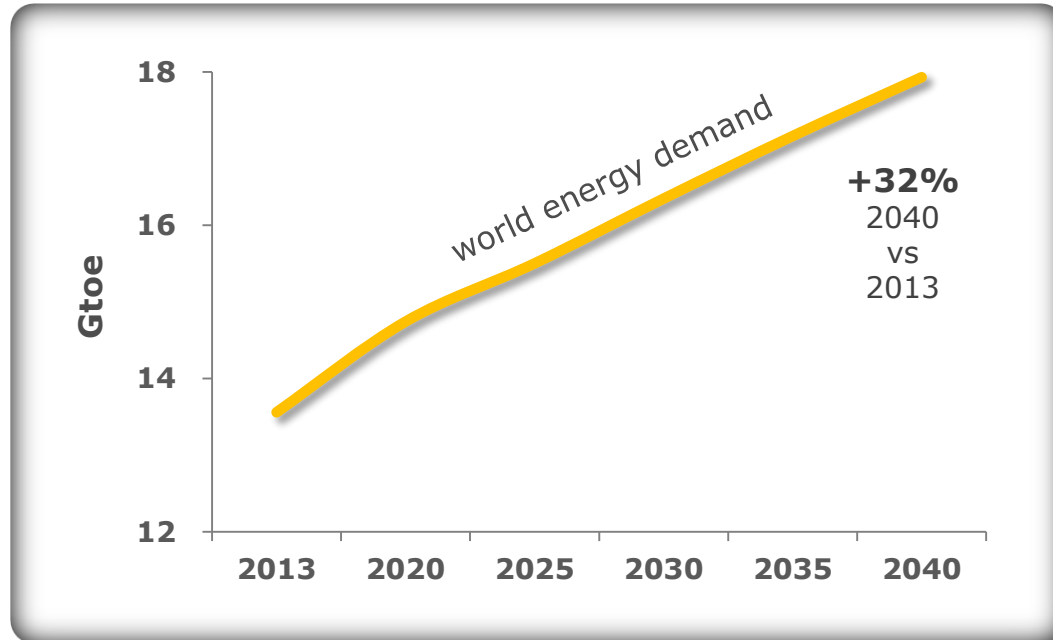
Developing sustainable energy: Eni's Integrated Model

Paris, 30 September 2016

[eni.com](http://eni.com)

# Two main challenges for the future

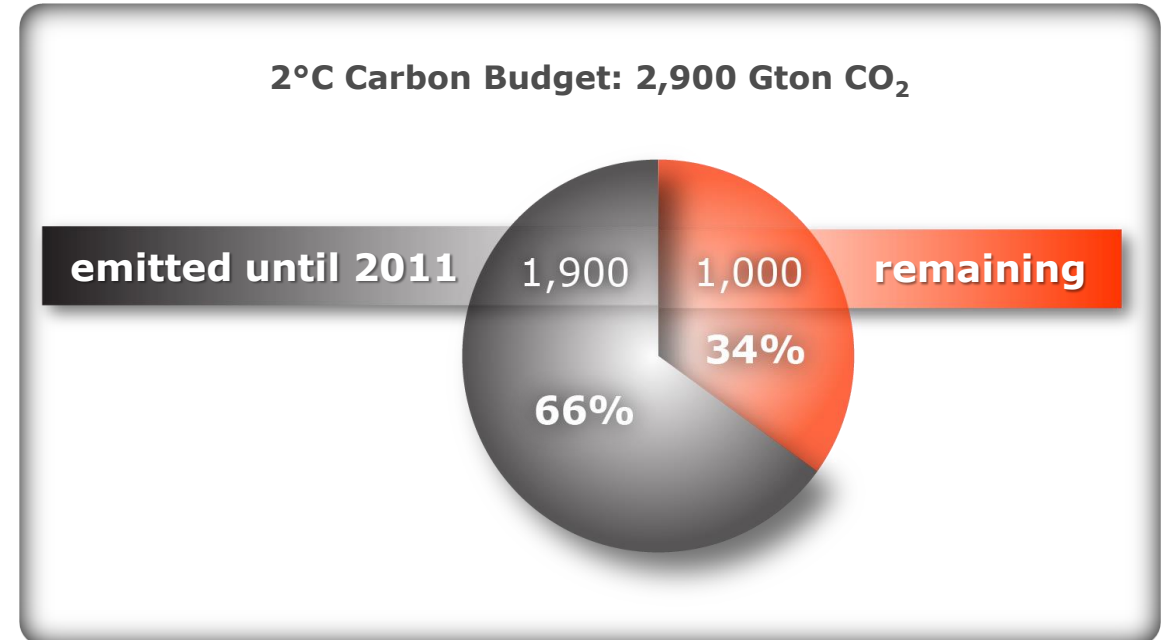
## Maximising access to energy



**1.3 billion people**  
without access to electricity

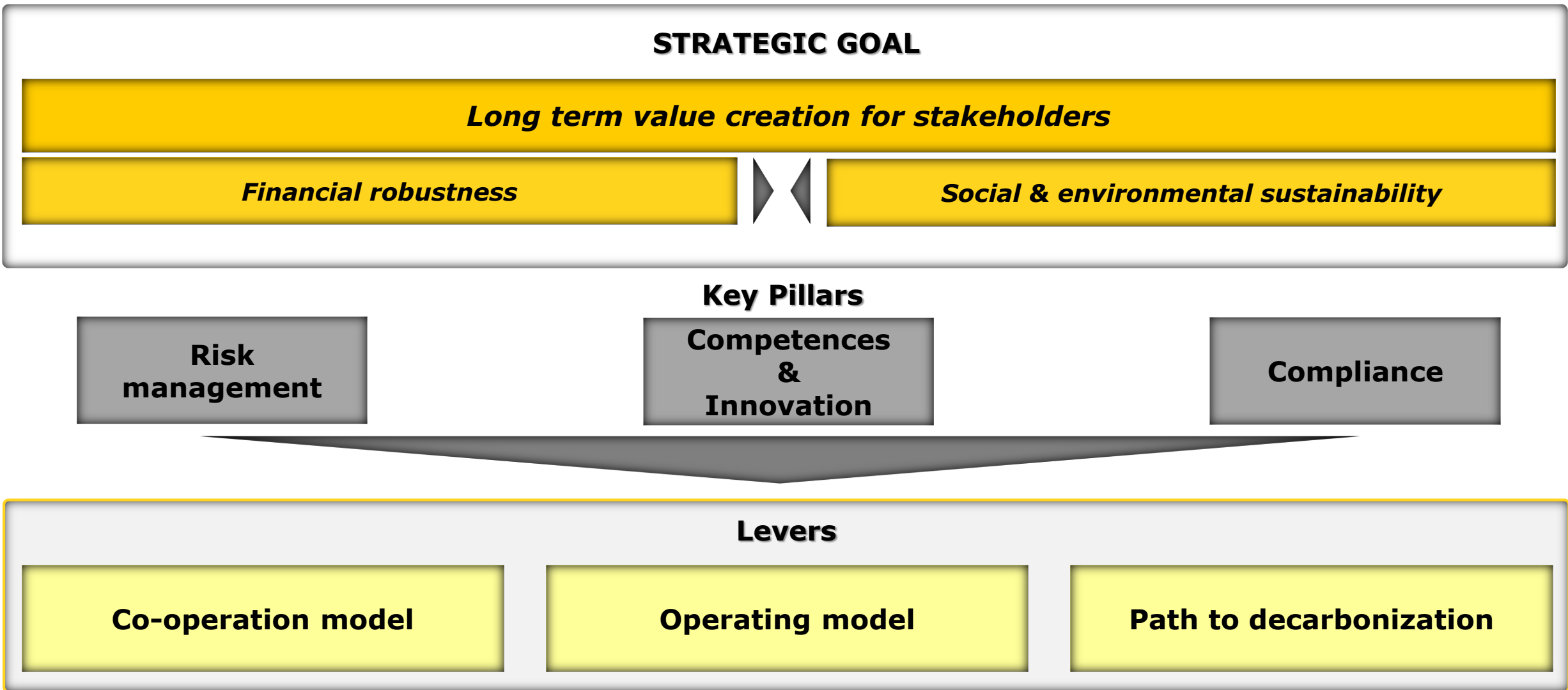
**2.7 billion cooking**  
with biomass

## Fighting climate change

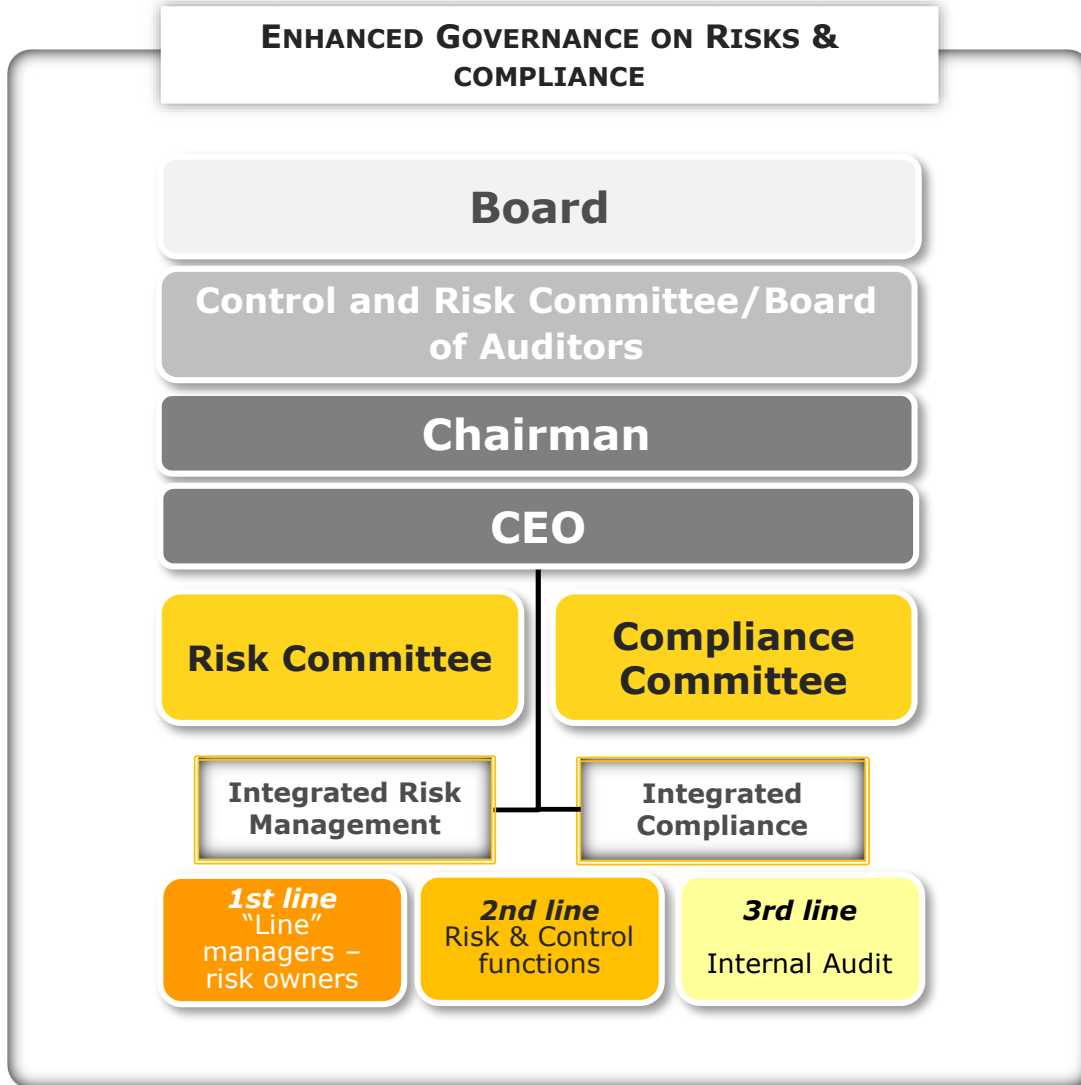


**under INDCs,**  
carbon budget will be  
exhausted within 2040

# Eni integrated model



# Eni governance on risks and compliance



# An integrated strategy for decarbonization

**Eni acknowledges the need to limit the temperature increase below 2°C**

## carbon footprint reduction

### Reduction of GHG emissions:

- Reduction of routine flaring
- Minimise fugitive methane emissions
- Energy efficiency

### Carbon pricing policies

- Public advocacy for carbon pricing
- Internal carbon pricing sensitivity

## low carbon portfolio

large share of **natural gas reserves**

**portfolio resilience** at 450 ppm scenario

## commitment on renewables

**Energy Solutions** Department

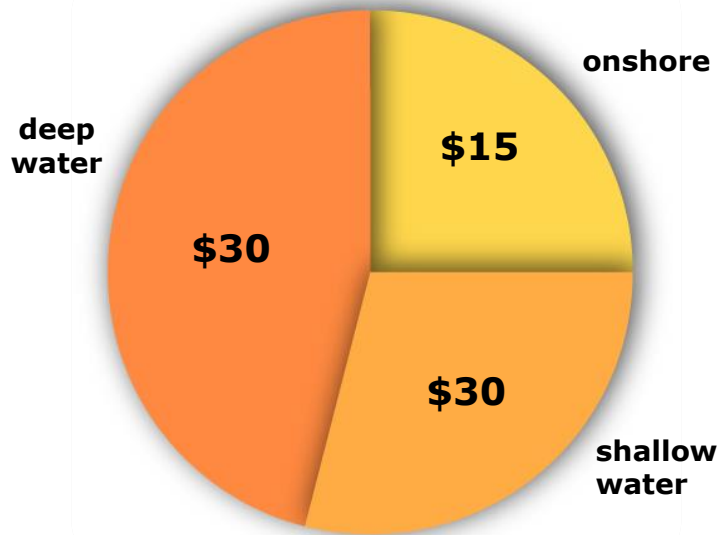
**Green conversion of downstream assets:** green refinery and biofuels

Research focus on **energy mix diversification and green businesses**

**International engagement for joint action**

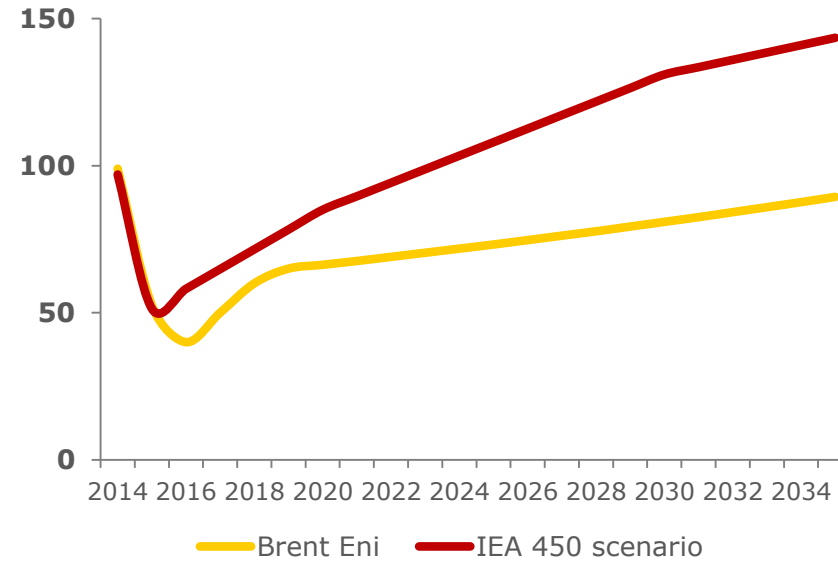
# Portfolio resilience is enhanced by gas and cost competitiveness

new projects 2P res | Bep \$/boe



avg 27 \$/boe

oil price scenario | \$/bbl



- Eni oil price scenario is **lower than the IEA 2°C assumptions**
- Eni applies carbon pricing sensitivity **\$ 40/ton in real terms**

no risk of stranded assets

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## **COOPERATION & DEVELOPMENT**

# Long-term value creation - our flagship model



## **CREATING A LONG TERM PARTNERSHIP**

- FULL PARTNERSHIP**
- Transfer of **KNOW HOW**
- UNINTERRUPTED PRESENCE**



## **BEING LOCAL**

- PRODUCTION FOR DOMESTIC MARKET**
- ACCESS TO ELECTRICITY**
- ENERGY MIX**
- ECONOMIC DIVERSIFICATION**
- LOCAL DEVELOPMENT**
- HEALTH AND EDUCATION**







# Providing energy to foster development


## Power generation


- 4 gas power plants supplying:
  - 60% of power in Congo
  - 20% in Nigeria
- Off-grid power in Congo and Nigeria

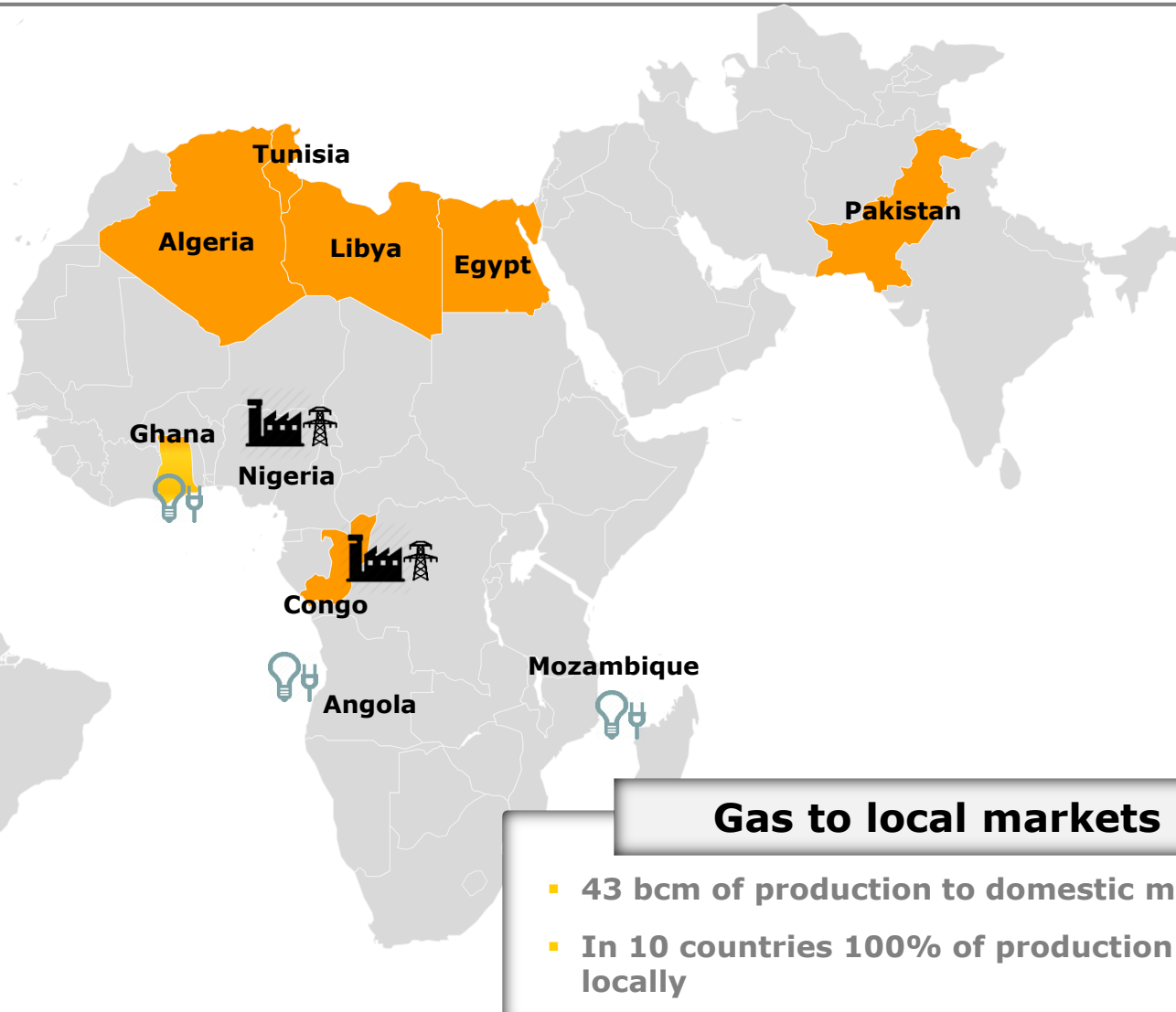
Access to energy for 18 million people

 = existing gas power plan

 = new power generation projects

 = 100% gas production to local market/primary suppliers

 = 100% future gas production to local market/primary suppliers



## Gas to local markets

- 43 bcm of production to domestic markets
- In 10 countries 100% of production sold locally



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# Development projects for local communities

## Economic diversification



≈ 550,000 people involved in agricultural projects mainly in Congo, Tunisia and Nigeria

## Health care



≈ 900,000 patients examined more than 1 mln vaccinations mainly in Angola, Congo and Pakistan

## Access to water



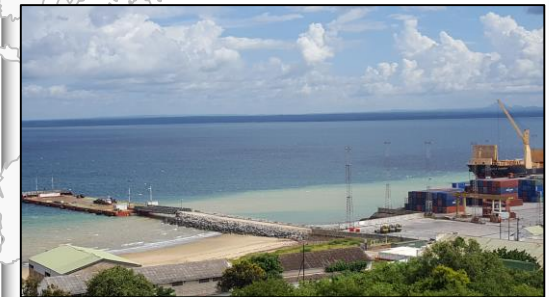
≈ 130,000 people reached mainly in Congo, Kazakhstan, Mozambique and Nigeria

## Education



≈ 90,000 students reached mainly in Kazakhstan, Italy, Mozambique and Nigeria

## Infrastructure



≈ 500,000 beneficiaries of transportation projects reached mainly in Kazakhstan and Nigeria

**2010-2019**

**Investments for ~1 Bln €\***

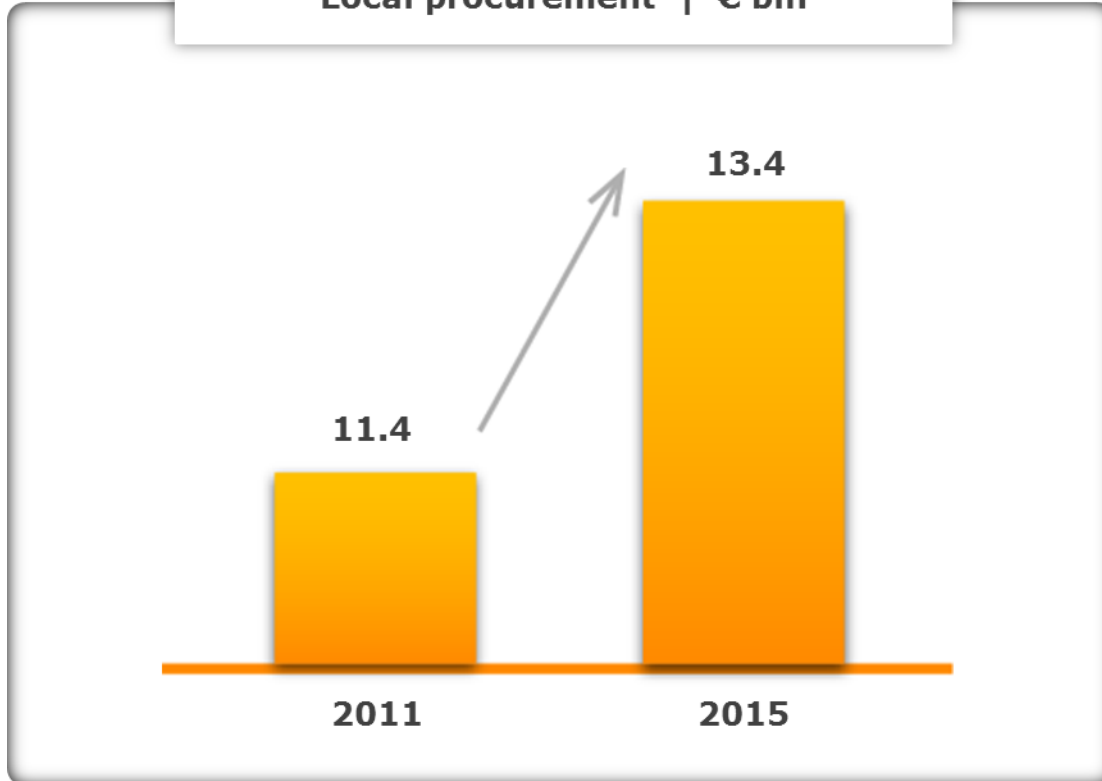


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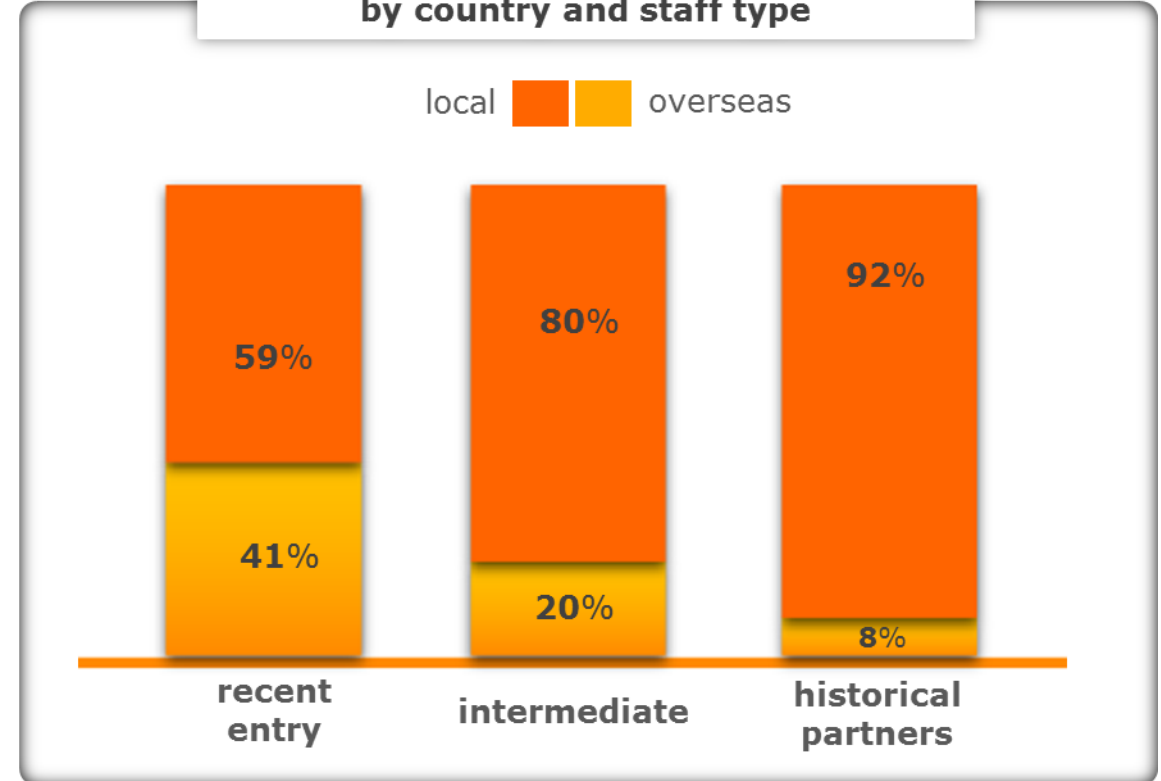
\*including off-grid projects

# Empowering local workforce

Local procurement | € bln



Employees in 2015  
by country and staff type



**66% of 2015 total procurement spent on local suppliers**

**In the last 5 years, local employment\* increased by 21%**



\* Direct Managed workforce – Consolidated and Unconsolidated Subsidiaries (excluding Italy)

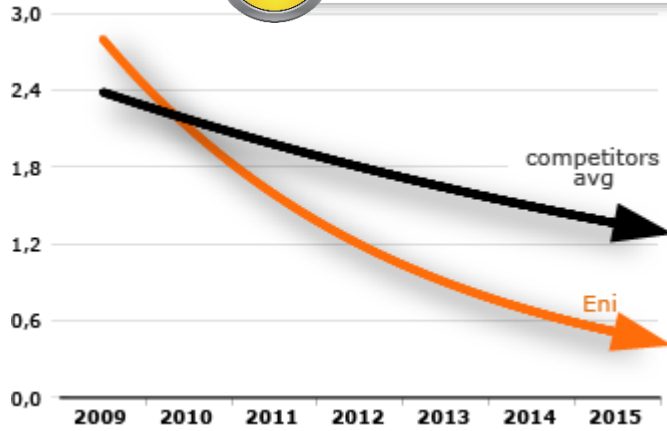
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# OPERATING MODEL

# Continuous improvement on environmental impact



## SAFETY

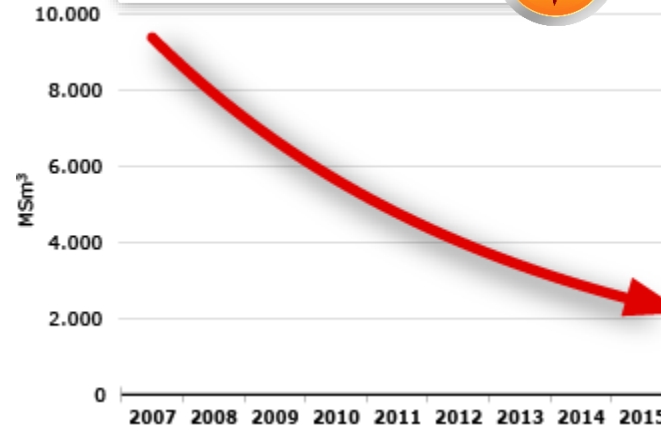


**Eni top performer since 2013**

**2015 vs 2014  
-37% TRIR**



## FLARING DOWN

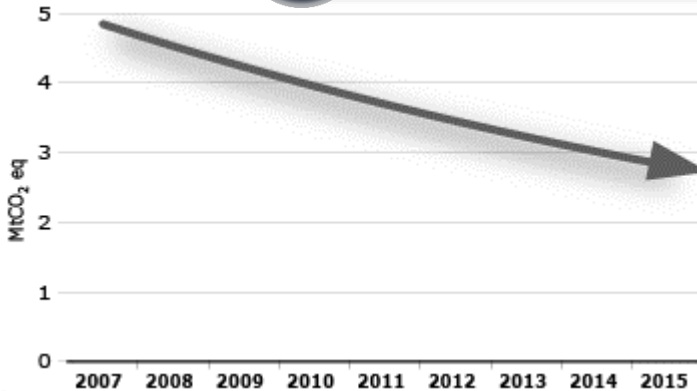


**Target: Zero routine flaring by 2025**

**Volume of flared gas:  
-73% from 2007**



## UPSTREAM METHANE EMISSIONS

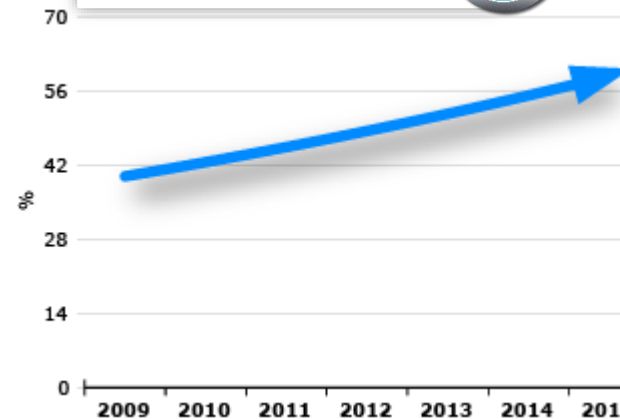


**Target: -80% reduction by 2025**

**-47% reduction from 2007**



## REINJECTION OF PRODUCED WATER



**Target: 64% reinjected by 2019**

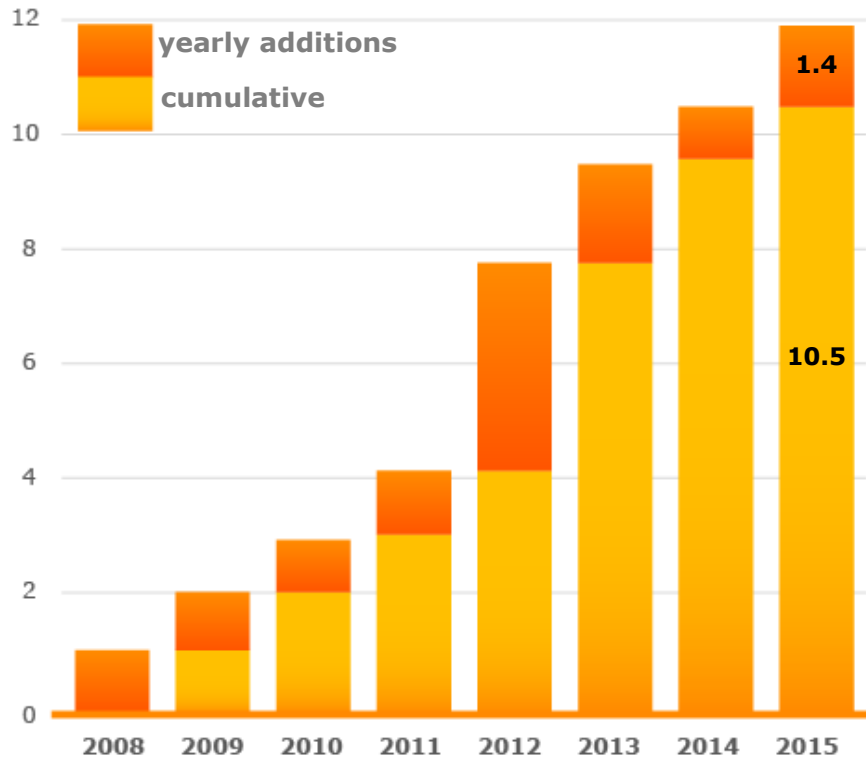
**56% reinjection of produced water in 2015**



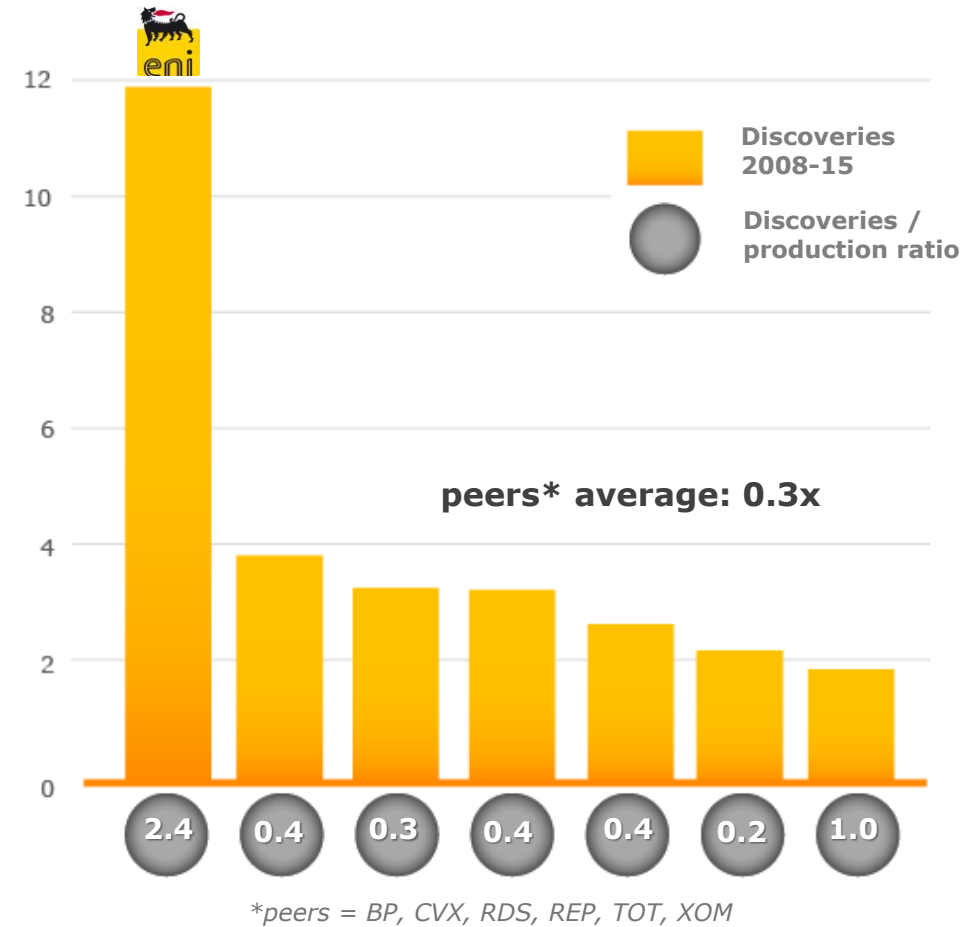
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# Eni's unique exploration track record and model

Cumulative discovered resources | bln boe



Discoveries vs production 2008-15 | bln boe



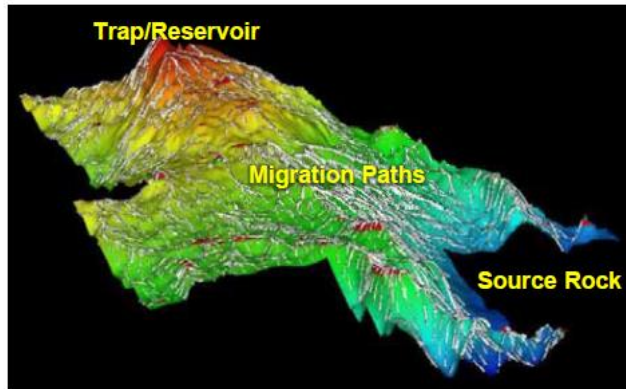


# Exploration risk evaluation

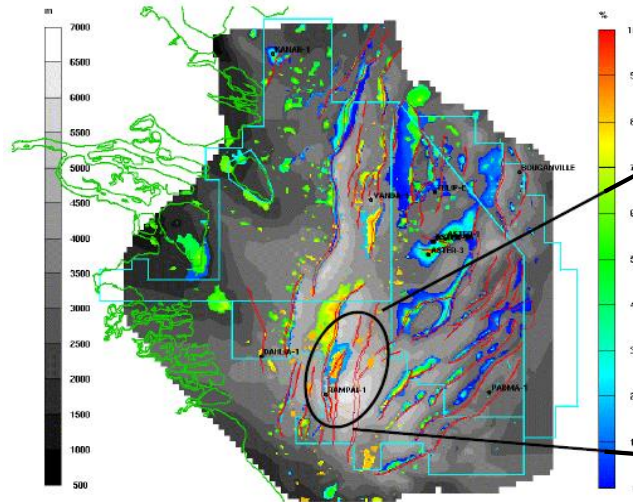
## Petroleum System Modelling



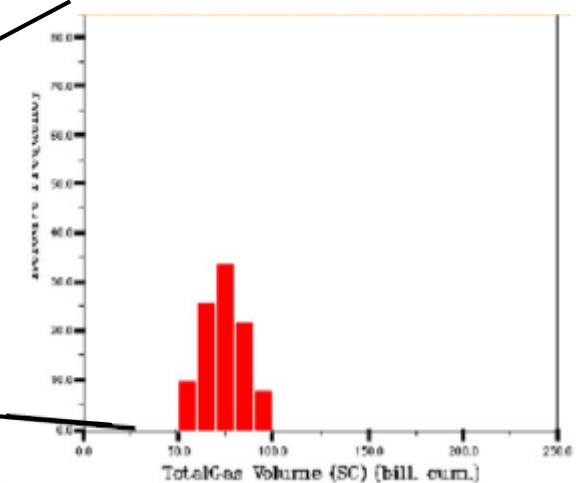
### HC Migration Paths



### Gas filling probability map



### Histogram of filling probability

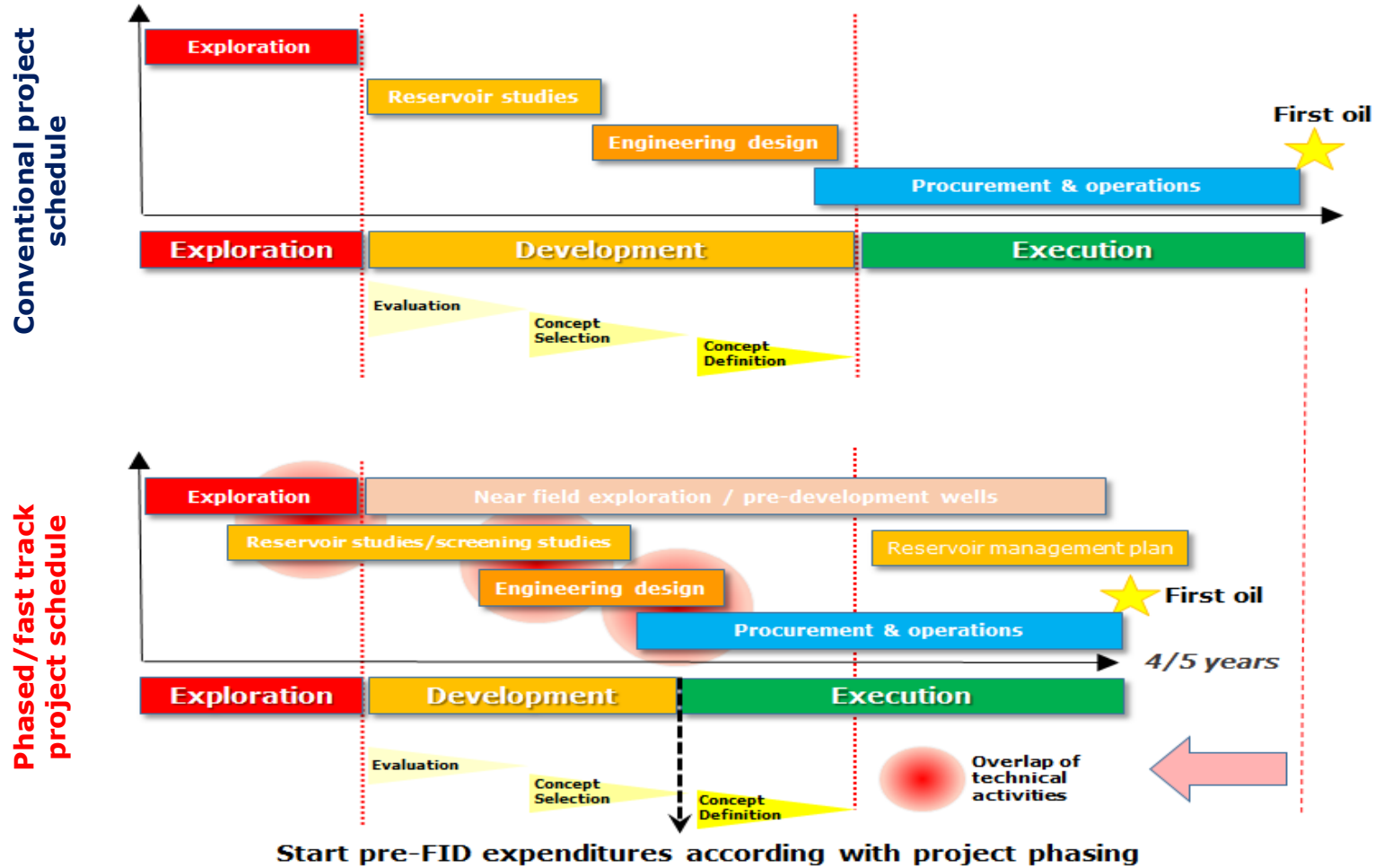


### Green Data Center

7,700 physical and virtual servers  
4.5 Petaflop of computation capacity



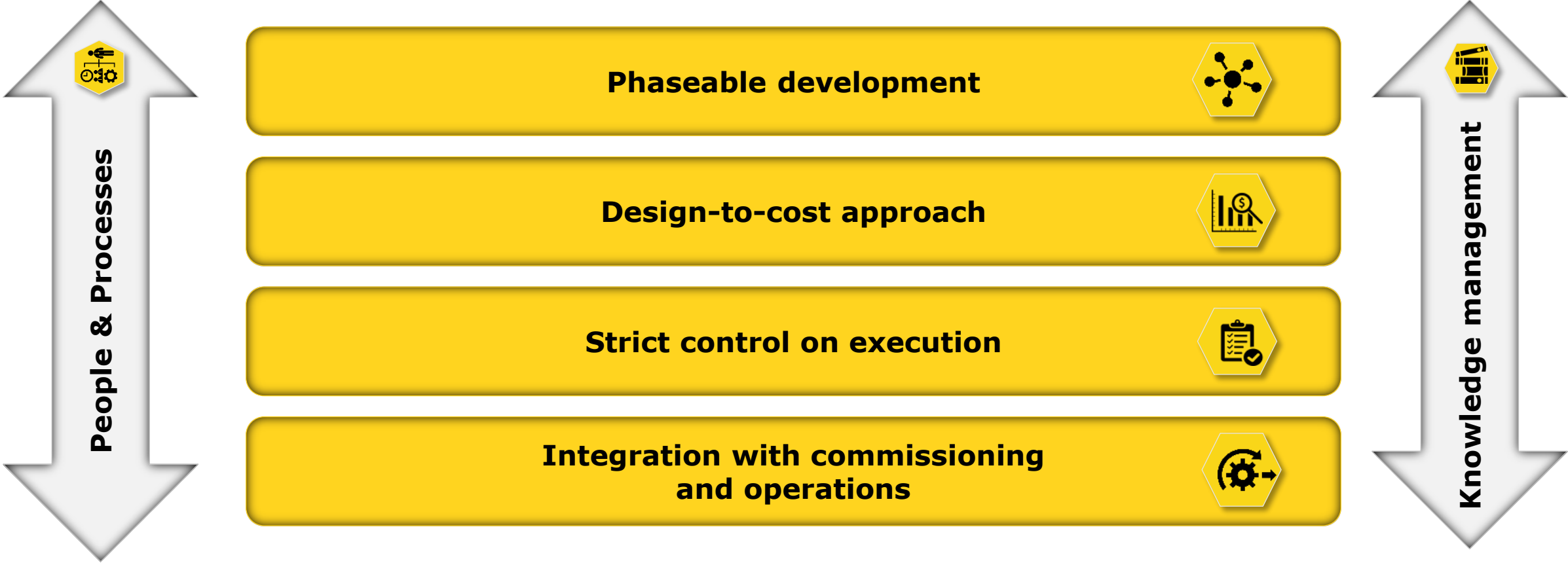
# Workflows: faster time-to-market from reserves to resources



- **Strong interfunctional integration** from exploration to start-up
- **Working in parallel rather than sequentially**
- **Risk reduction** through **reservoir uncertainties quantification**
- **3D reservoir models** developed during exploration stages



# Our development model

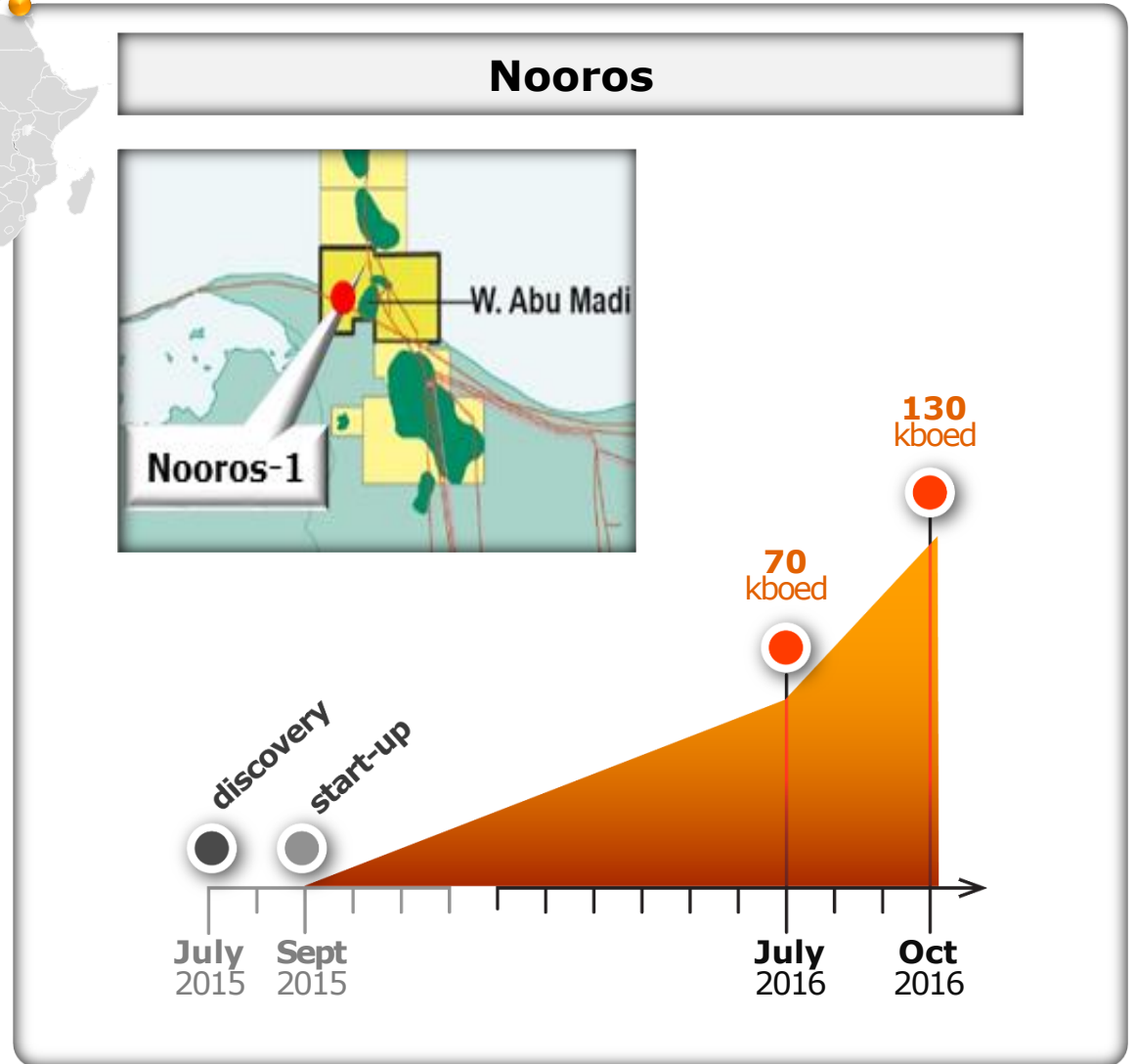
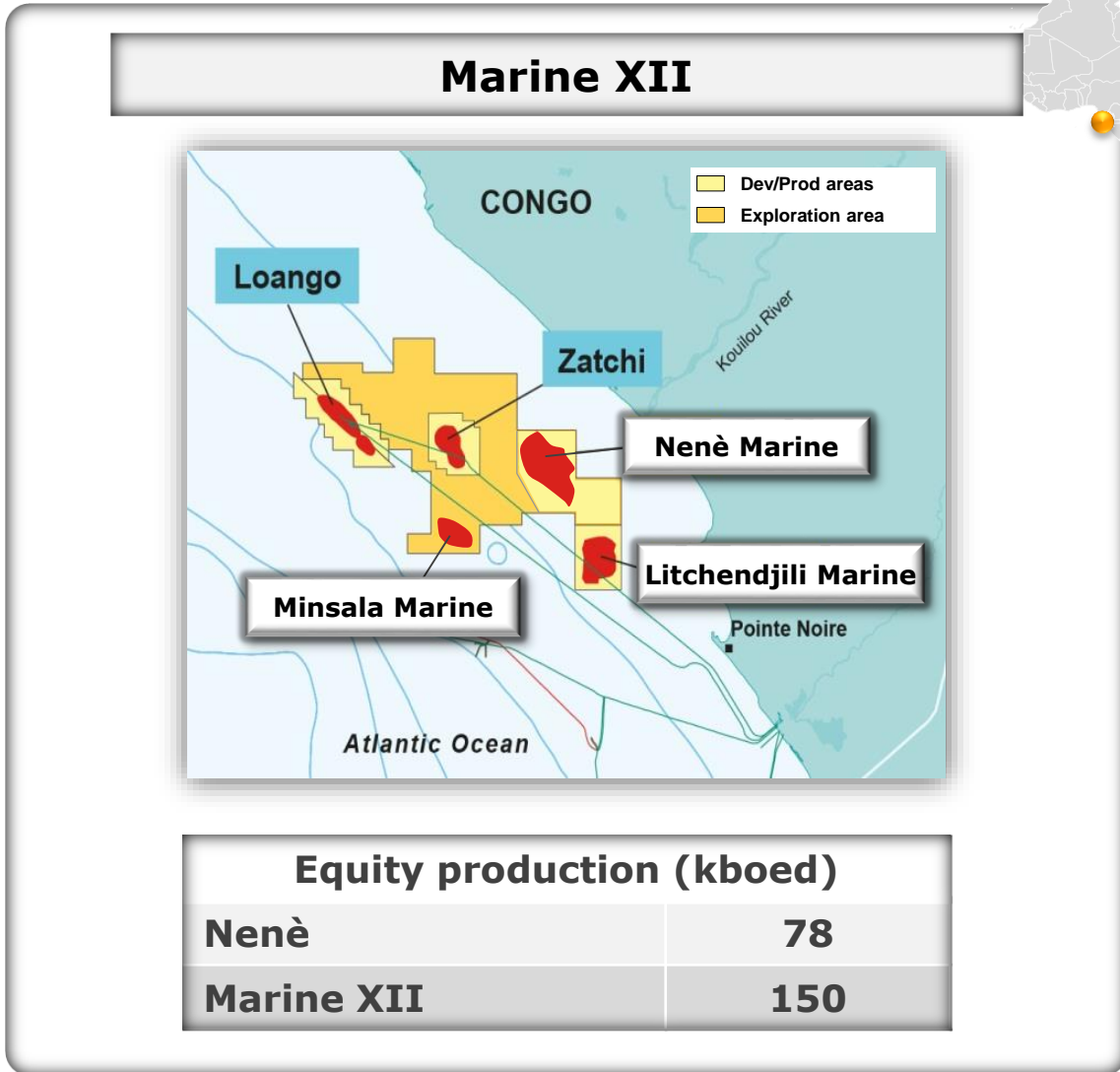


**A simpler and manageable operating model**



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# Marine XII and Nooros: examples of our integrated approach



# Minimising our operational risks

## Competences

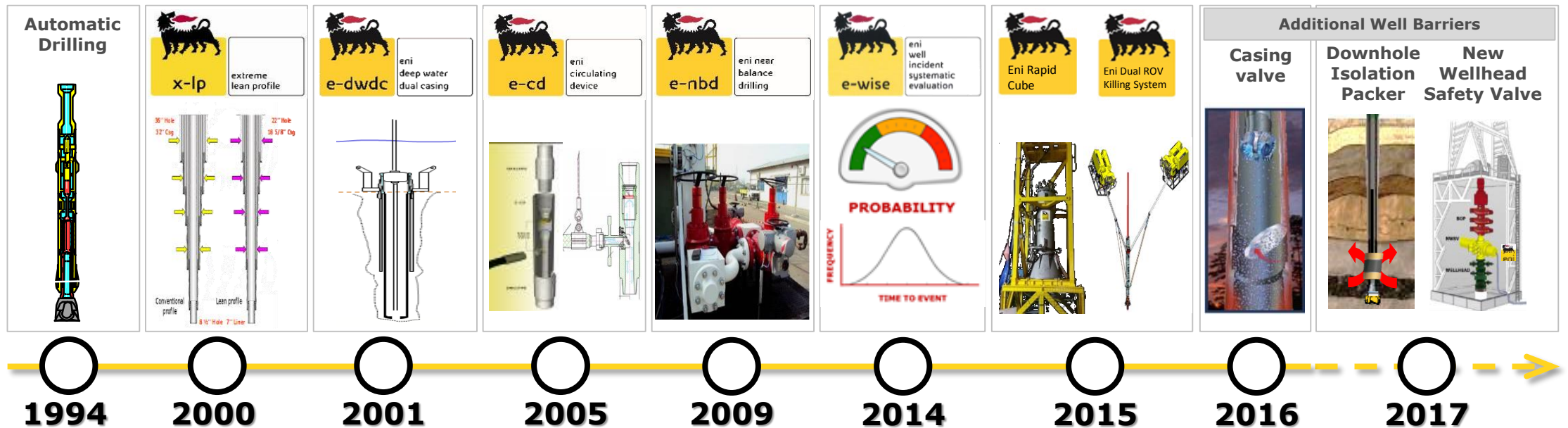
- Training
- Know how
- Safety culture

## Technologies

### OPERATIONAL RISKS

## Processes

- Organization model
- Best Practices & Procedure
- Rig Inspections
- MSG Operations
- Real Time Monitoring



50 patents to enhance safety and performance



# Focus: our Arctic operations

Our **policy**

**Offshore production activity limited to all-year-round ice-free conditions**

Our **drivers**

Safety for people  
Protecting Arctic environment  
Technologies and competencies  
Oil Spill Prevention  
Working together with local communities



Specific **risk mitigations: Goliat**

**Weather base Design:** FPSO design and operation limits defined to tolerate extreme weather conditions

**Emission reduction:** FPSO powered from shore and associated gas re-injection

**Oil Spill Detection & Response:** Intervention capability increased by novel technology (i.e. Stand by vessel Esvagt Aurora provided with the best technologies for oil detection and spill response)

**Setting the standards for offshore Arctic production**

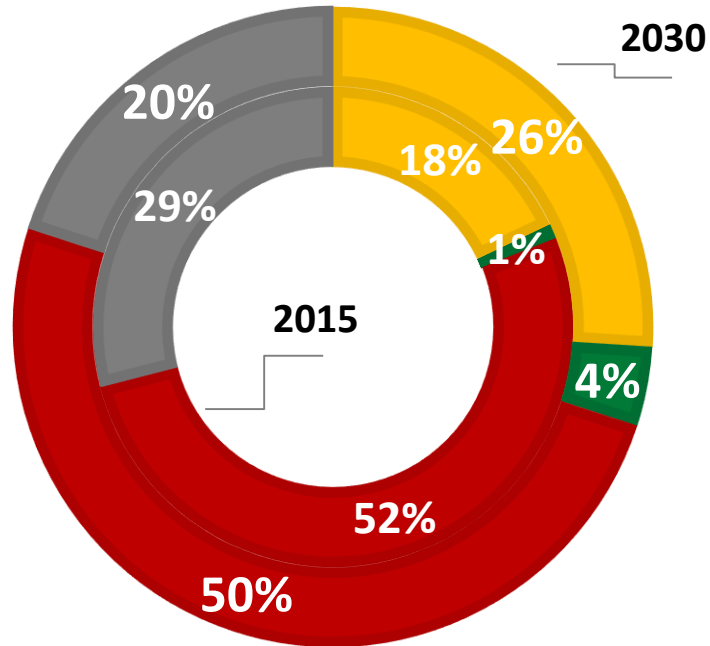


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# **PATH TO DECARBONISATION**

# The role of gas in the energy transition process

## IEA scenario



- Other (Biomass + Hydro + Nuke)
- Wind & Solar
- O&G
- Coal

## Role of gas

	Gas	Coal	Oil	Wind & Solar
Environmental impact	✓	✗✗	✗	✓✓
Emissions	—	✗✗	✗	✓✓
Costs	✓✓	✓✓	✓	✗
Reliability	✓✓	✓✓	✓✓	✗
Security of supply	✓	—	—	✓✓

# GHG reduction targets

## Flaring down

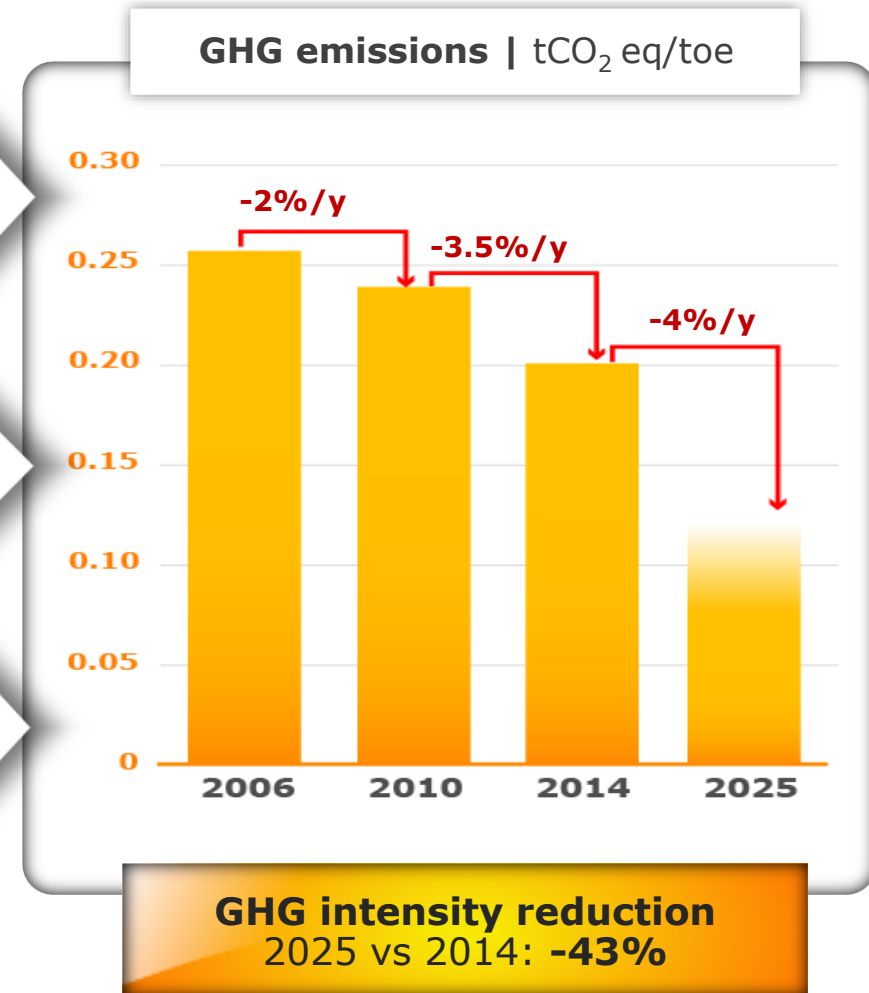
- Main projects: **Nigeria, Congo, Libya**
- GHG reductions: **-5 Mton CO<sub>2</sub>**

## Methane fugitives

- Monitoring/control campaigns in **50 sites**
- GHG reductions: **-2 Mton CO<sub>2</sub>**

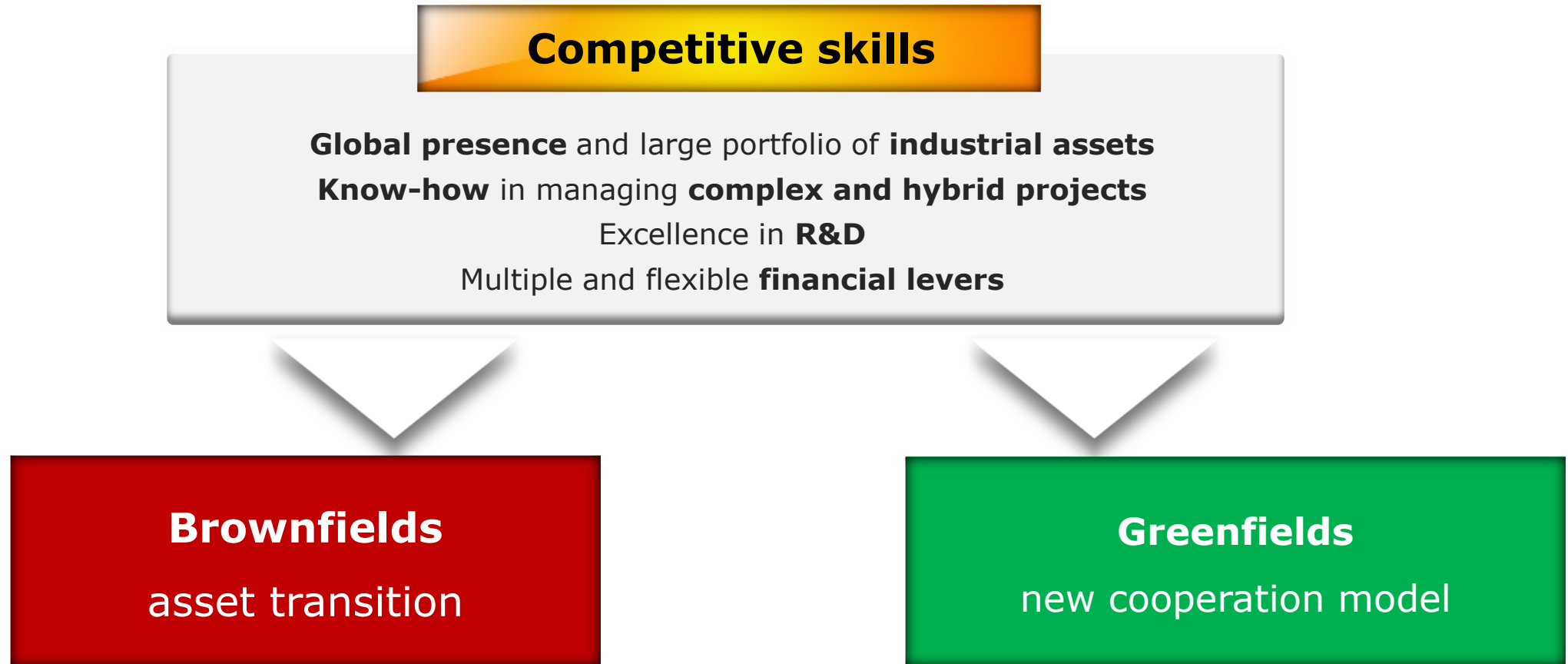
## Energy efficiency

- Initiatives in **existing sites & new plants**
- GHG reductions: **-2 Mton CO<sub>2</sub>**



# Energy Solutions business model

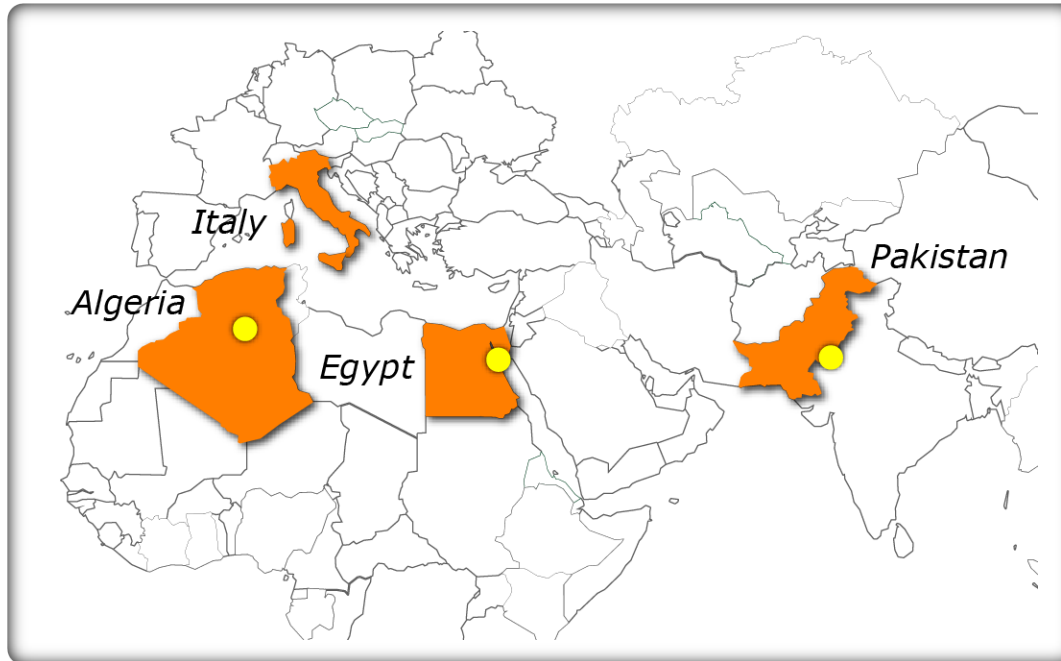
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# Energy Solutions: map of activities

## Ongoing Projects



- **220 MWp** of capacity installed in Italy by 2022  
Reclaim and convert existing industrial areas in Italy implementing large-scale renewables energy plants
- **160 MWp** of capacity installed abroad by 2018  
Integrating renewable with oil & gas assets
- **6 FIDs** planned **by end 2016** for fast-track development in Egypt, Algeria and selected Italian sites, for a **total capacity** of about **150 MWp**
- On average **0.3 Mtons/y** of **CO<sub>2</sub> emissions avoided** for 20 years

**TARGET:**  
maximize the use of **renewables** to meet the **energy needs of our facilities** and  
**reduce CO<sub>2</sub> emissions**

# Eni's new mission

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***We are an energy company***

*We are working to build  
**a future where everyone can access energy**  
efficiently and sustainably*

*Our work is based on **passion** and **innovation**,  
on our **unique strengths and skills**, on the quality **of our people**  
and in recognising that **diversity** across all aspects of our operations  
and organisation is **something to be cherished***

*We believe in **the value of long term partnerships**  
with the countries and communities where we operate*