



REPSOL



Refining Business

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ED Industrial Businesses & Trading



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Key messages

- > Highly Competitive
 - > Highly Quality Assets
 - > Value Chain. Optimization

01

> Economic
Delivery

02

> Strategic
Lines

03

Highly Competitive

**High Quality
assets**

**Value chain.
Optimization**

Quality assets

Highly Competitive

6 Refineries

3 different markets

Fully integrated

Deep conversion

capacity

**Other business
integration**

**Value chain.
Optimization**

Quality assets

Repsol Sites

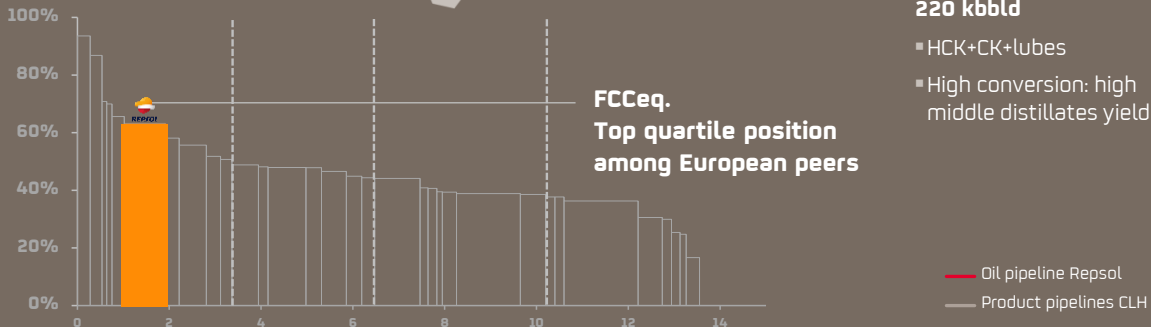
PERU



LA PAMPILLA
117 kbbl/d
24% FCC eq.

- FCC + VB
- Most complex and largest refinery in Peru
- Upgraded in early 2017 for producing high quality fuels.

SPAIN



Source: WoodMackenzie refinery evaluation model 2017 with real Repsol data.

Quality assets

Cartagena Refinery. Best in class

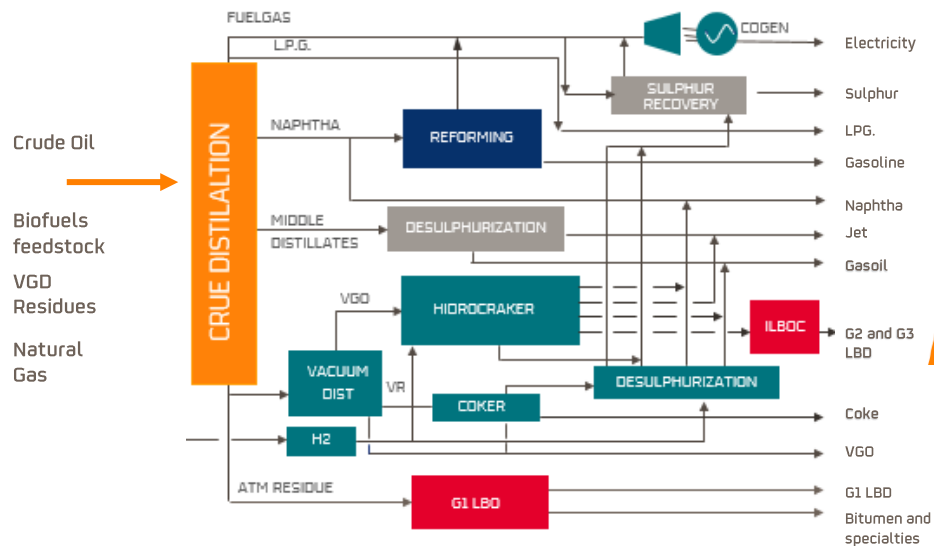
- **220** kbpd
76% FCC eq
- Solomon
Pacesetter ^[1]
- Leading reference for
insurance companies



[1] Solomon Associates', European Fuels Study 2014 and 2016, Western Europe Peer Group

Quality assets

Cartagena Refinery. Best in class



Upgraded
in 2011 [1]

0% Fuel Oil
production

All Groups **LBO**
production

Excellent
logistics



COKE CUTTING DIGITAL SYSTEM

[1] C-10 project. Completed in nov'11 [€ 3.1 bn]. Included new atmospheric distillation unit, a hydrocracker, a delayed coker and desulphurization units.

Quality assets

Main Strengths

5 as 1

5 refineries optimized
as a single one

1st

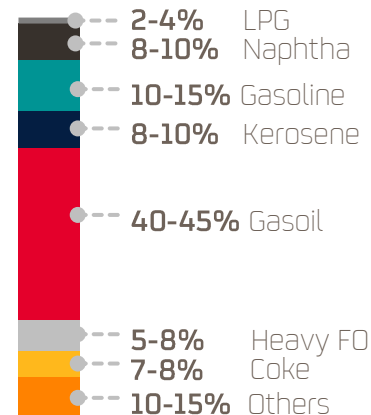
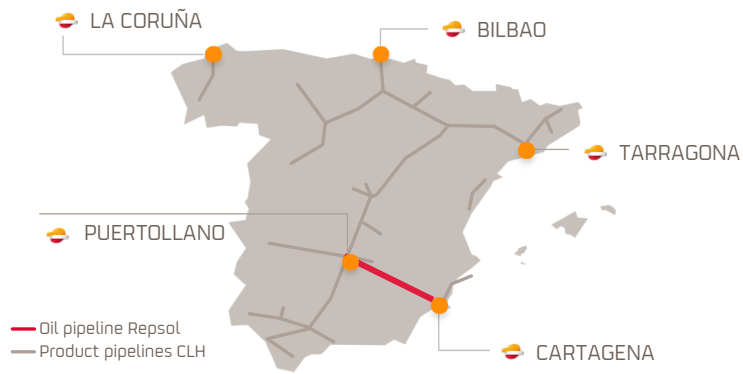
coking capacity
in Europe

>50%

middle distillates
production

2 + 5

2 different markets
5 different schemes



Highly Competitive

**1 Mbb/d refining
capacity**

Market leader:

62% Spain's
distillation capacity

65% Peru's
distillation capacity

**Other business
integration**

Lube base oil units.

Petrochemicals

Bitumens

**Value chain.
Optimization**

Quality assets

Integration gives all business natural synergies

Integration with other Business



LPG



Fuels



Chemicals



Lubricants(*)



Asphalts

Cartagena



A Coruña



Puertollano



Tarragona



(**)

Bilbao



Pampilla



Key messages

Highly Competitive

6 Refineries

1 Mbbbl/d refining
capacity

Other business
integration

**Value chain.
Optimization**

Value chain. Optimization



Crude Oil
and biofuels



Global
Optimization



Safety



Reliability



Efficient
operation



Supply
to other
business

Flexible and capturing opportunities



> Spot vs Contracts Optimization



- **65% of crude feedstock comes from spot market**

> More Challenging Crudes



- **Facilities prepared to process challenging crudes**

> Wider Portfolio



- **>200 crudes studied and ready to be processed**
- **57 new crudes processed since 2014**
- **78 different crudes processed in 2018**



CRUDE BLENDING

Fully integrated with trading business



Biofuels: Turning a requirement into an opportunity

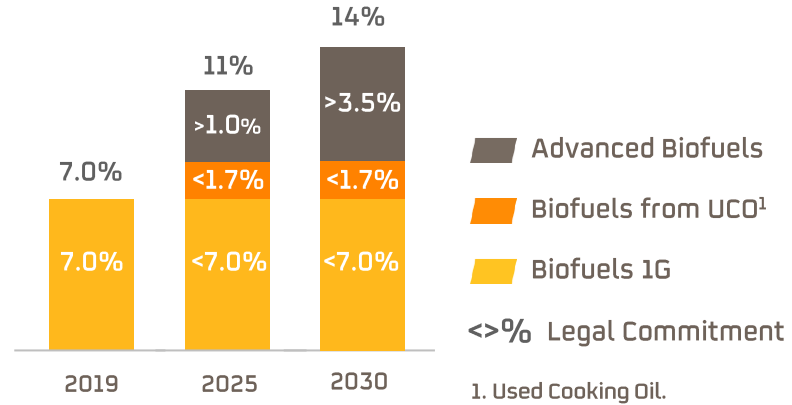


ADVANCED OPTIMIZATION

Maximization of coprocessing

and

Industrial investment under way



Planning: Advanced + Digital = Optimized



Global optimization of crudes distribution



ADVANCED OPTIMIZATION AND MORE



Integrated production planning

nepxus



Improved production scheduling

GLOBAL

- Major visibility of crude distribution, exchanges among sites and medium term stocks
- Flexibility to adapt to the market

LOCAL

- Validation of global optimization
- Improved stocks management
- Blending efficiency

Operational excellence



**OPERATIONAL
EXCELLENCE**

**DIGITAL
ENABLED**



SAFETY

- **Safety As Our First Priority**



RELIABILITY

- **Reliability a driver towards excellence**



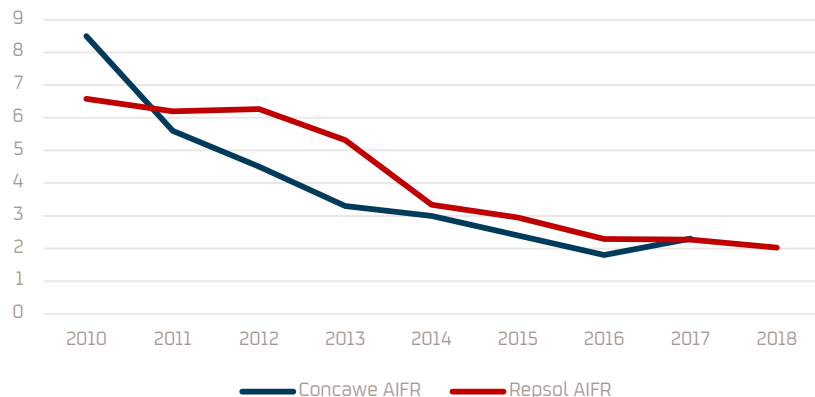
ECONOMICS
MANAGEMENT

- **Planning compliance**
- **Economics into operation**
- **Energy Management**

Continuous focus on safety improvement: our results



Personal Safety

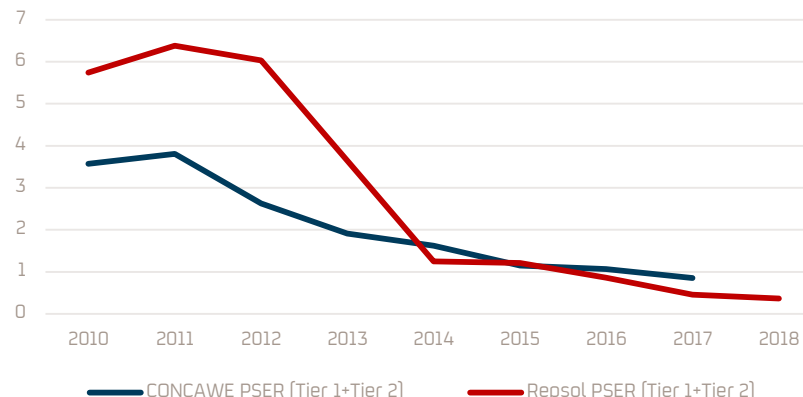


All Injury Frequency

Note: Concawe

[European Oil Company Organisation for Environment, Health and Safety]

Process Safety Event Rates Tier 1&Tier 2



A Tier 1 Process Safety Event is a loss of primary containment (LOPC) with the greatest consequence.

A Tier 2 Process Safety Event is a LOPC with lesser consequence

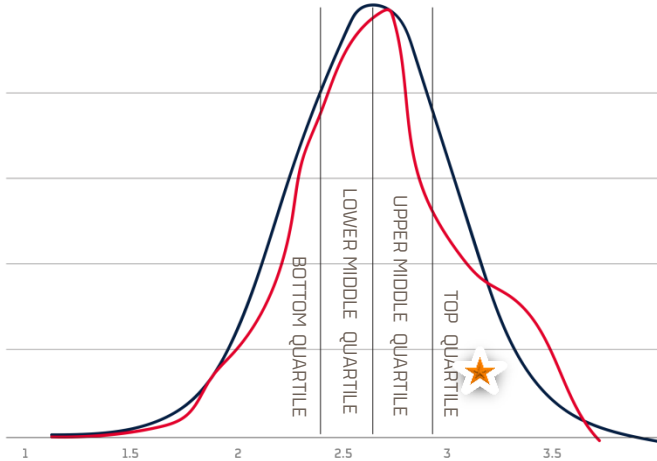


MOBILITY GESIP

All 6 refineries in Insurance ratio Top Quartile



Insurance ratio



“Cartagena, at the top of a worldwide risk management ranking”

- Leading reinsurance companies assess the quality of our refineries every 3 years
- Categories evaluated:
 - Hardware:
 - Assets risk evaluation
 - Software:
 - Process Management
 - Emergency Control

Reliability



Reliability
increase



- Safety
- Availability
- Costs
- Energy efficiency



Utilization



Margin

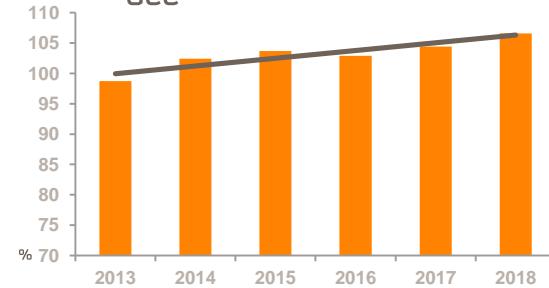


DIGITAL ZUF

Failure Reduction Index



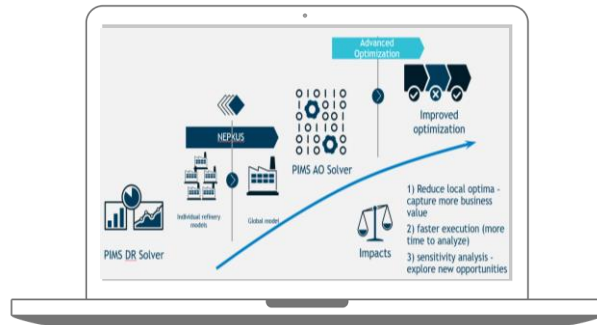
UCC



Economics Management



Program Compliance



One single language, one common goal: the organization speaks in \$, horizontally and vertically



Economics Management. Energy



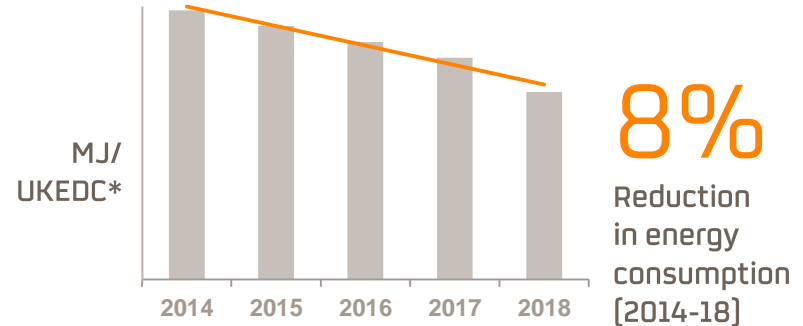
625 completed actions

2.2 million tonnes/y of CO2 reduction

308  million euro invested in energy efficiency

47% of the achieved reduction made with operational improvements without investment

 5 refineries certified in ISO 50001



Period: 2011-2018

*Normalization basis for Solomon's metrics

Highly integrated with our customers...



... through optimized logistics



Domestic Market



Exports

Creating a solid culture in the organization



Commitment, awareness
and individual responsibility



Training



Highly Competitive

6 Refineries

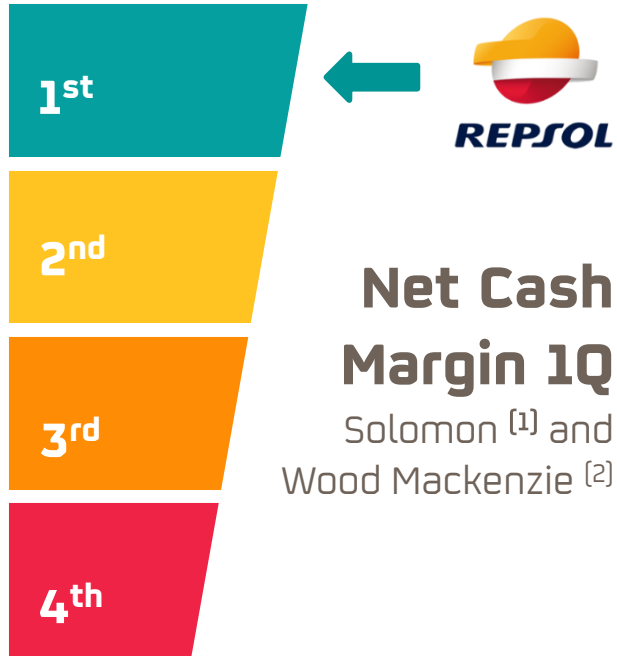
1 Mbbbl/d refining
capacity

Other business
integration

Value chain.
Optimization

Repsol Refining System

Highly Competitive



One of the best in Feedstock Advantage ^[1]



1Q Return on Investment ^[1]



1Q Maintenance Index ^[1]

[1] Solomon Associates', European Fuels Study 2016, Western Europe Peer Group;
[2] WoodMackenzie refinery evaluation model 2017 with real Repsol data

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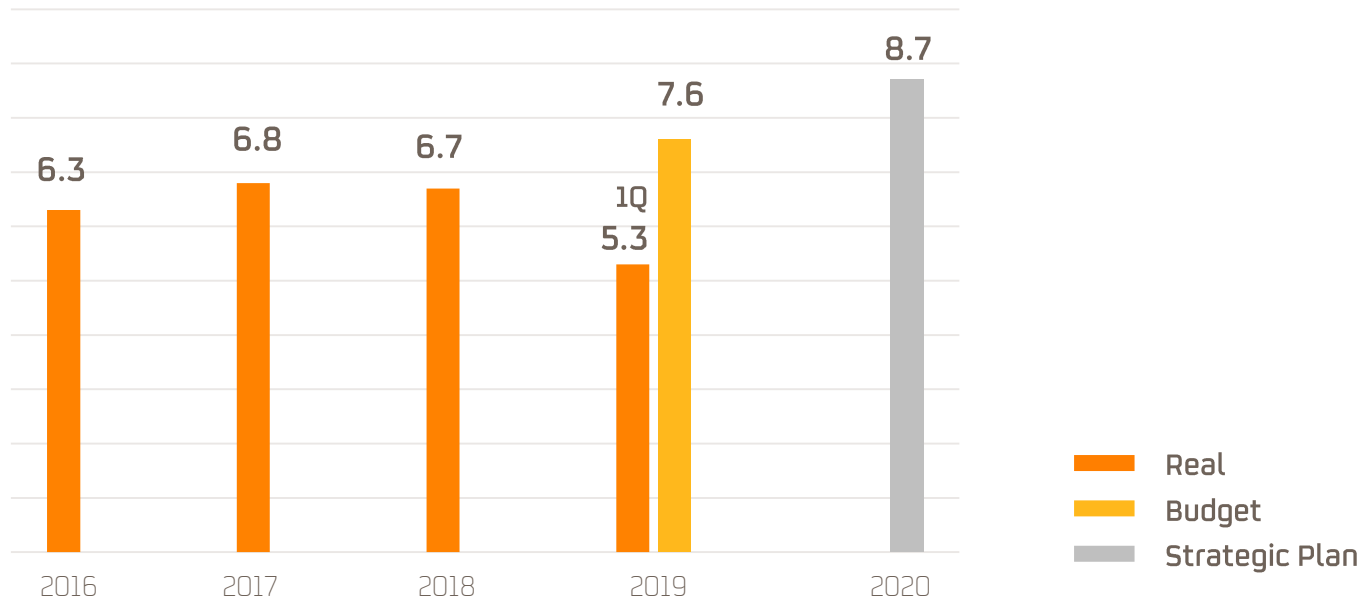
> Strategic
Lines

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Refining Strategy 18-20

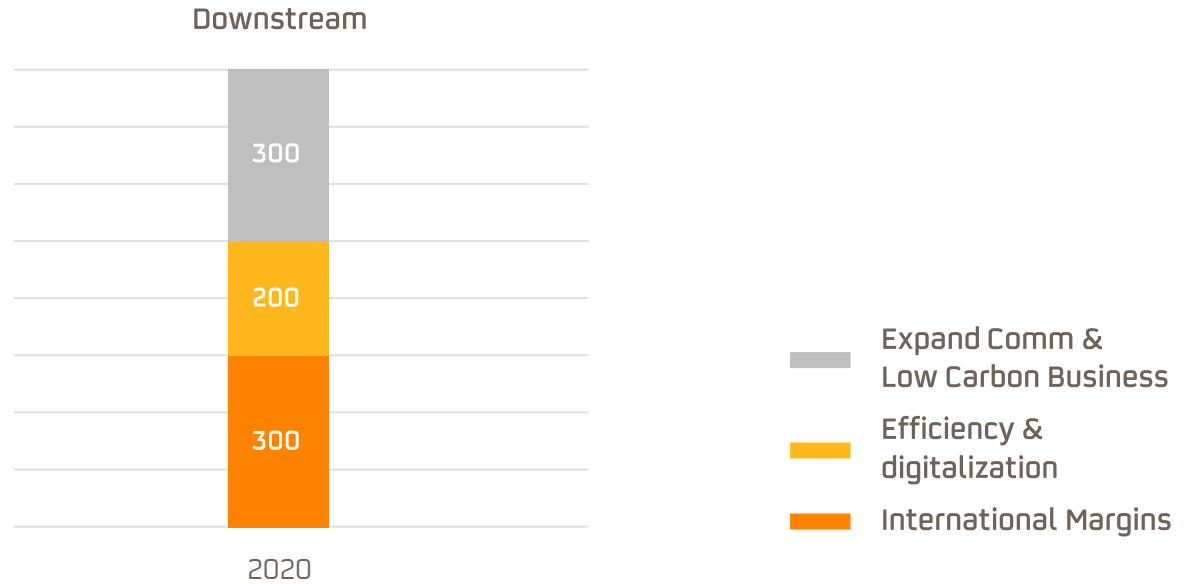
Margin indicator

\$/bbl



Refining Strategy 18-20

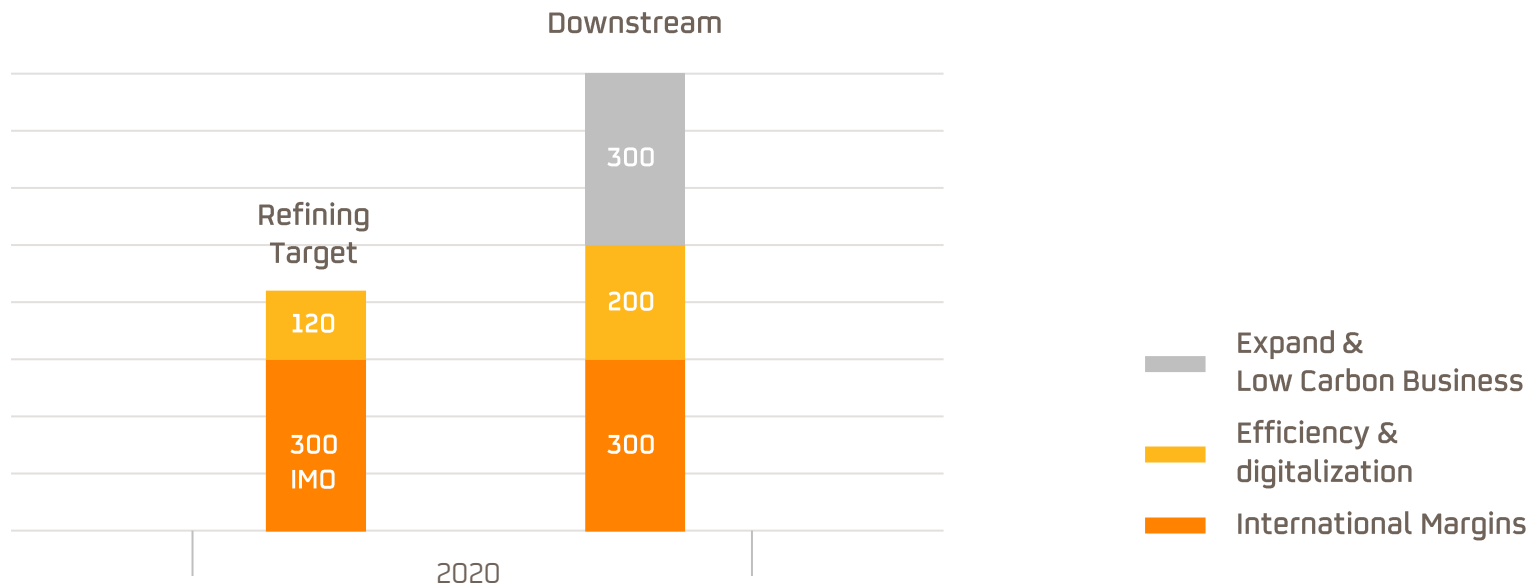
Downstream Δ CFFO* 2017-2020 (M€)



[*] CFFO variation under the same market conditions

Refining Strategy 18-20

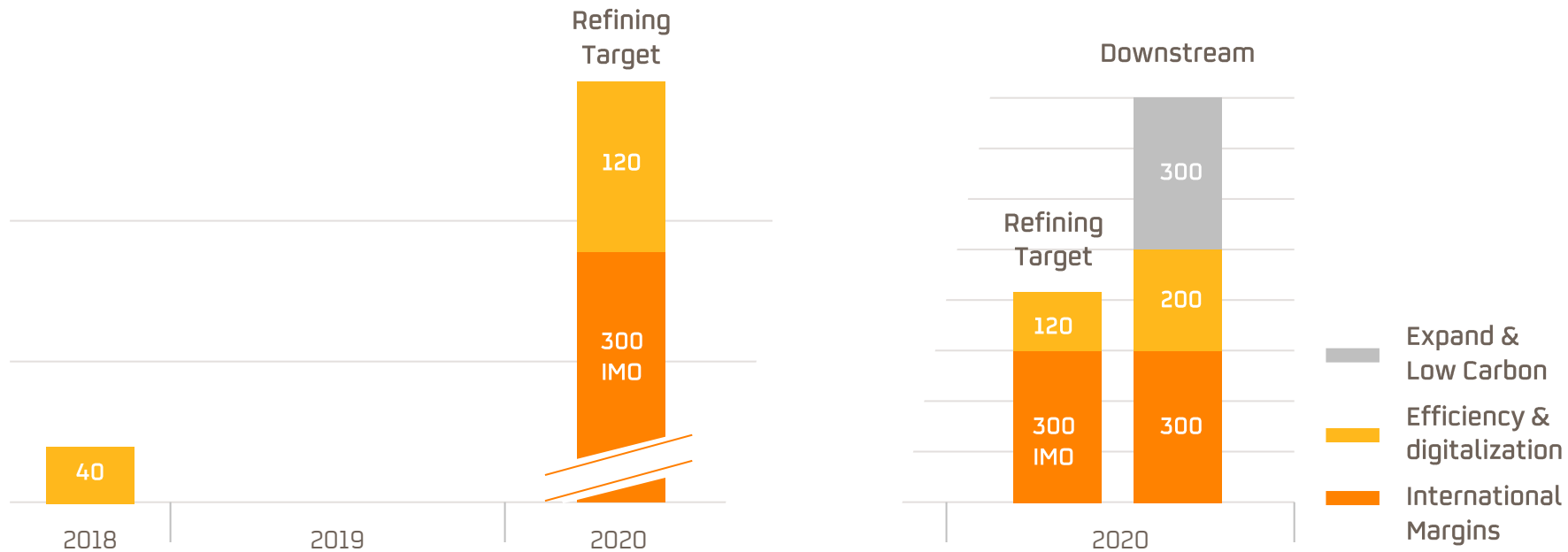
Downstream Δ CFFO* 2017-2020 (M€)



[*] CFFO variation under the same market conditions

Refining Strategy 18-20

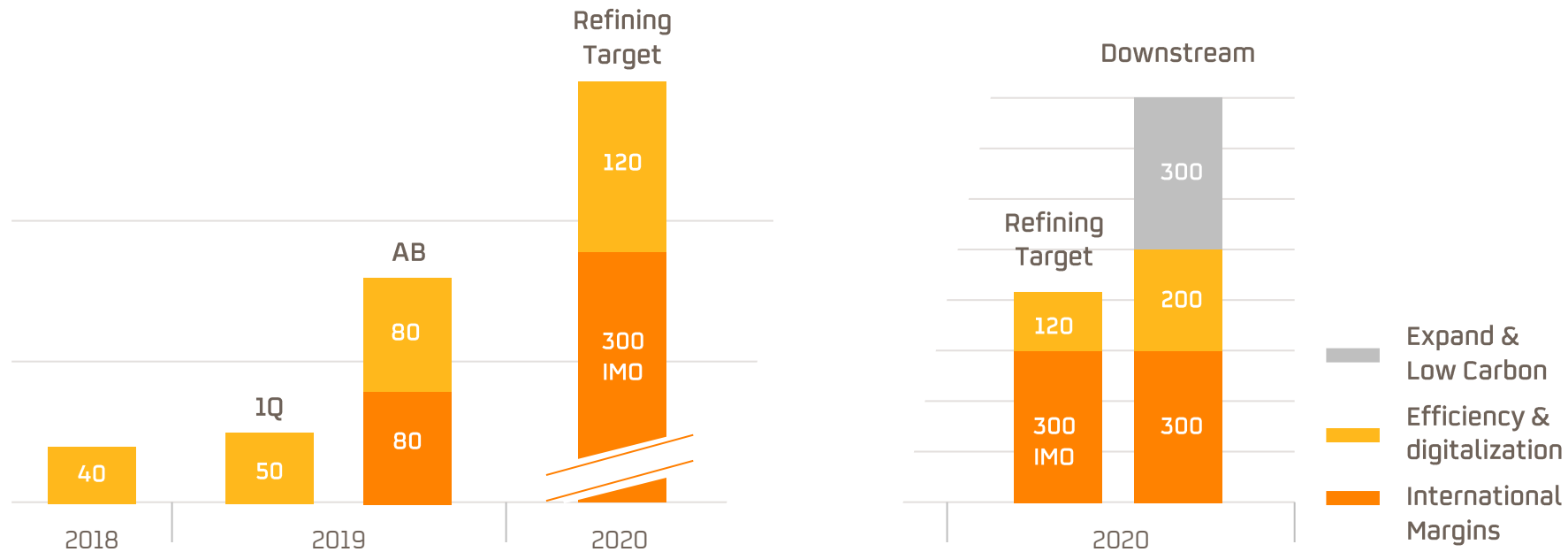
Downstream Δ CFFO* 2017-2020 (M€)



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Refining Strategy 18-20

Downstream Δ CFFO* 2017-2020 (M€)



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Refining Strategy 18-20

To continue leveraged in our main strengths to consolidate our competitiveness position

FEEDSTOCK
OPTIMIZATION
& SUPPLY

PLANNING

MANUFACTURING

DISTRIBUTION

OUR TEAM



DIGITAL TRANSFORMATION



Ready for IMO 2020



REPSOL