



**Expanding
petrochemicals**

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Disclaimer

This document may contain forward-looking information on the Group (including objectives and trends), as well as forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, notably with respect to the financial condition, results of operations, business, strategy and plans of TOTAL. These data do not represent forecasts within the meaning of European Regulation No. 809/2004.

Such forward-looking information and statements included in this document are based on a number of economic data and assumptions made in a given economic, competitive and regulatory environment. They may prove to be inaccurate in the future, and are subject to a number of risk factors that could lead to a significant difference between actual results and those anticipated, including currency fluctuations, the price of petroleum products, the ability to realize cost reductions and operating efficiencies without unduly disrupting business operations, environmental regulatory considerations and general economic and business conditions. Certain financial information is based on estimates particularly in the assessment of the recoverable value of assets and potential impairments of assets relating thereto.

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Financial information by business segment is reported in accordance with the internal reporting system and shows internal segment information that is used to manage and measure the performance of TOTAL. Performance indicators excluding the adjustment items, such as adjusted operating income, adjusted net operating income, and adjusted net income are meant to facilitate the analysis of the financial performance and the comparison of income between periods. These adjustment items include:

(i) Special items

Due to their unusual nature or particular significance, certain transactions qualified as "special items" are excluded from the business segment figures. In general, special items relate to transactions that are significant, infrequent or unusual. However, in certain instances, transactions such as restructuring costs or asset disposals, which are not considered to be representative of the normal course of business, may be qualified as special items although they may have occurred within prior years or are likely to occur again within the coming years.

(ii) Inventory valuation effect

The adjusted results of the Refining & Chemicals and Marketing & Services segments are presented according to the replacement cost method. This method is used to assess the segments' performance and facilitate the comparability of the segments' performance with those of its competitors.

In the replacement cost method, which approximates the LIFO (Last-In, First-Out) method, the variation of inventory values in the statement of income is, depending on the nature of the inventory, determined using either the month-end price differentials between one period and another or the average prices of the period rather than the historical value. The inventory valuation effect is the difference between the results according to the FIFO (First-In, First-Out) and the replacement cost.

(iii) Effect of changes in fair value

The effect of changes in fair value presented as an adjustment item reflects for some transactions differences between internal measures of performance used by TOTAL's management and the accounting for these transactions under IFRS.

IFRS requires that trading inventories be recorded at their fair value using period-end spot prices. In order to best reflect the management of economic exposure through derivative transactions, internal indicators used to measure performance include valuations of trading inventories based on forward prices.

Furthermore, TOTAL, in its trading activities, enters into storage contracts, which future effects are recorded at fair value in Group's internal economic performance. IFRS precludes recognition of this fair value effect.

The adjusted results (adjusted operating income, adjusted net operating income, adjusted net income) are defined as replacement cost results, adjusted for special items, excluding the effect of changes in fair value.

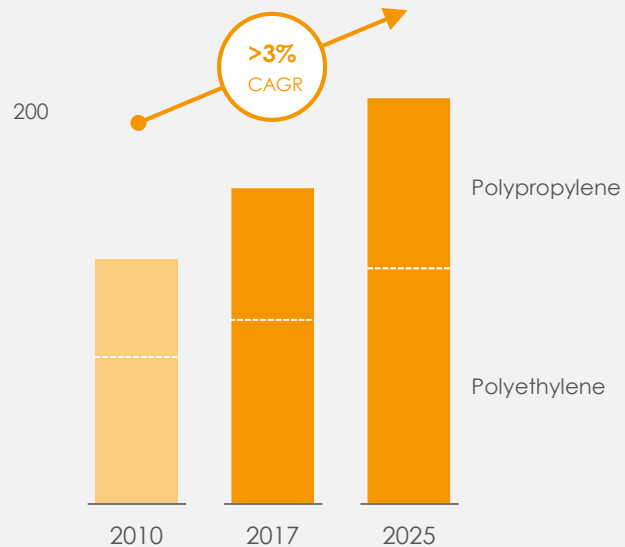
Cautionary Note to U.S. Investors – The SEC permits oil and gas companies, in their filings with the SEC, to separately disclose proved, probable and possible reserves that a company has determined in accordance with SEC rules. We may use certain terms in this presentation, such as resources, that the SEC's guidelines strictly prohibit us from including in filings with the SEC. U.S. investors are urged to consider closely the disclosure in our Form 20-F, File No 1-10888, available from us at 2, Place Jean Millier – Arche Nord Coupole/Regnault - 92078 Paris-La Défense Cedex, France, or at our website: total.com. You can also obtain this form from the SEC by calling 1-800-SEC-0330 or on the SEC's website: sec.gov.

Capturing growth in petrochemicals

More cracker capacity needed to meet continuously rising demand



Main polymer demand
Mt/y

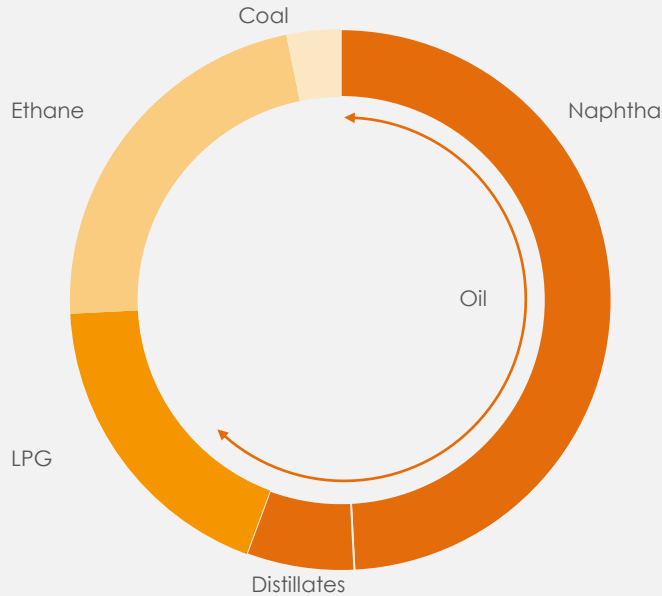


~40 Mt/y new capacity **needed**
~30 Mt/y capacity **sanctioned**

A clear path to creating value

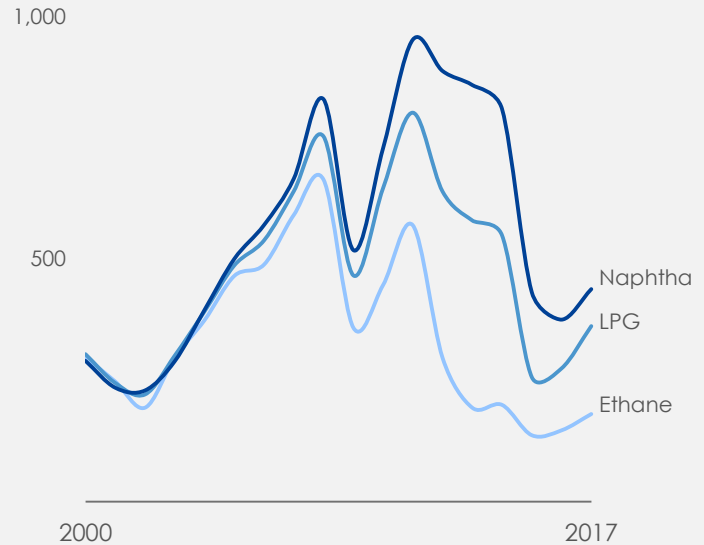
Profitability driven by access to cheap feedstock

Main polymer feedstocks



Polymer price is oil-linked

Feedstock prices
\$/t



US shale underpinning **ethane and LPG discount**

Implementing a two-pillar strategy

Expanding gas-based cracker capacity, increasing naphtha cracker flexibility

Expanding gas-based cracker capacity

US ethane market

Middle East long-term contracts



Increasing flexibility of historic naphtha crackers

Leveraging integration to valorize refinery off-gas

Converting to cheaper, increasingly available LPG



Upgraded European platforms cracking LPG and ethane

Antwerp and Normandy positioned among leaders



Normandy cracker processing **up to 60% LPG**

Antwerp modernization completed

- 60% ethane, off-gas & LPG cracker feedstock
- Shut down oldest cracker and polymers

Shut down Carling cracker

Expanding worldclass petrochemicals in the US

Total-Borealis-Nova joint venture, an integrated polyethylene leader

Borealis-Nova JV, Total 50%



Port Arthur

New 1 Mt/y cracker



Bayport

existing 0.4 Mt/y polyethylene



Bayport

New > 0.6 Mt/y polyethylene

Houston
Port Arthur
Bayport
La Porte
Carville

Total



Port Arthur

200 kb/d refinery and 1 Mt/y cracker (40%)



La Porte

1.2 Mt/y polypropylene World largest



Carville

1.2 Mt/y styrene (50%) 0.6 Mt/y polystyrene

Low-cost ethane to **high-end polyethylene**

50% interest in a **best-in-class JV**

- 1.7 B\$ Capex for 1 Mt/y ethane cracker
- Low-cost expansion, maximum synergies with existing cracker and refinery
- Expanding Bayport polymer to 1 Mt/y

~1 B\$ CFFO from **US R&C operations**

Evaluating further growth prospects in **land of opportunity for petrochemicals**

Expanding giant integrated platform in South Korea

Highly competitive brownfield project from low-cost propane

~1 B\$
2016 net
income*

>1 B\$
2016 CFO*

~1.4 Mt/y
debottlenecking



Best-in-class integrated platform

- 8 Mt/y highly flexible condensate splitter
- 1.1 Mt/y cracker and polymers
- 3.5 Mt/y aromatics

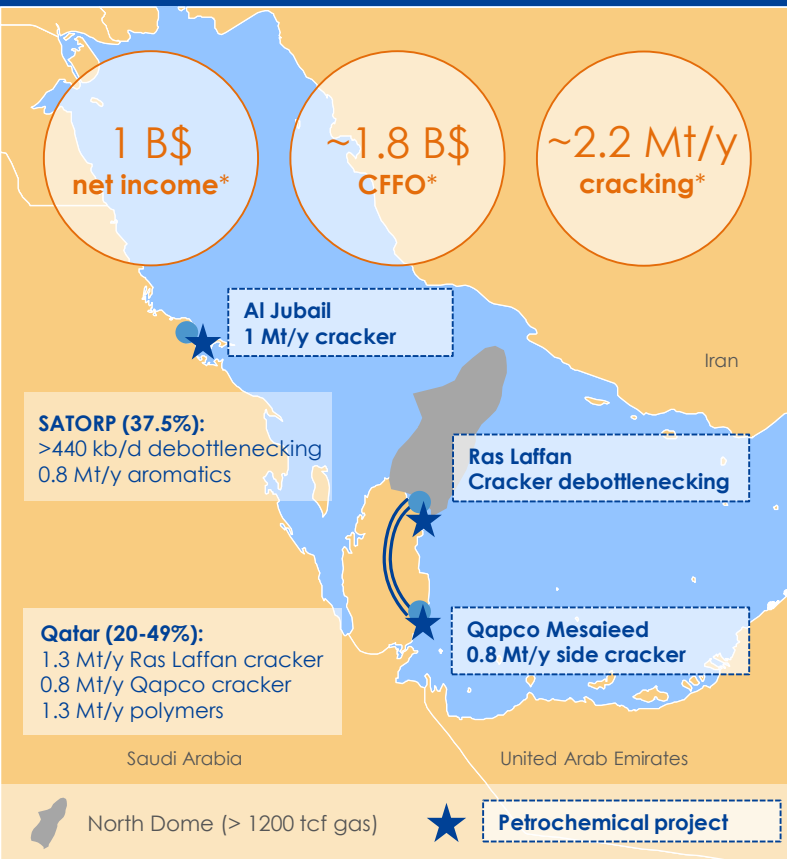
Low-cost debottlenecking

- ~450 M\$ Capex, ~20% IRR
- +30% ethylene capacity
- Polymers 20% cheaper than China greenfield

Increasing cracker flexibility to 25% LPG feedstock

Expanding worldclass operations in the Middle East

Evaluating 3 projects to double cracking capacity to >4 Mt/y



Growing Qatar petrochemicals by up to 40%

- 100% ethane cracking
- Ras Laffan debottlenecking to ~1.4 Mt/y
- New 0.8 Mt/y Qapco side cracker

Building on SATORP refinery success

- Evaluating 1 Mt/y cracker
- >75% off-gas, ethane and LPG feedstock

Memorandum of Understanding to study Iran and Algeria petrochemicals

* In 2016, 100% view

Developing high-end polymers

Tailor-made solutions supporting margins

Specialty polyethylene



#1 in China for orange pressurized gas & water pipes

6% per year demand growth for metallocene grades

Antwerp investment

Lightweight solutions Polypropylene compound



5% per year demand growth

Doubling compounding capacity 2016-22

Polyblend, Carling investments

High performance bioplastics 75 kt/y polylactic acid JV



>10% per year demand growth

Biosourced, biodegradable

Thailand JV, **world #2 player**

Expanding high return petrochemicals

Strong business taking advantage of favorable outlook

~1.8 B\$
CFFO
in 2017

~30%
ROACE
in 2017

~20%
CFFO growth
2017-22*



* In constant petrochemical environment

Relentlessly **improving competitiveness**

Capturing >3% per year **demand growth**

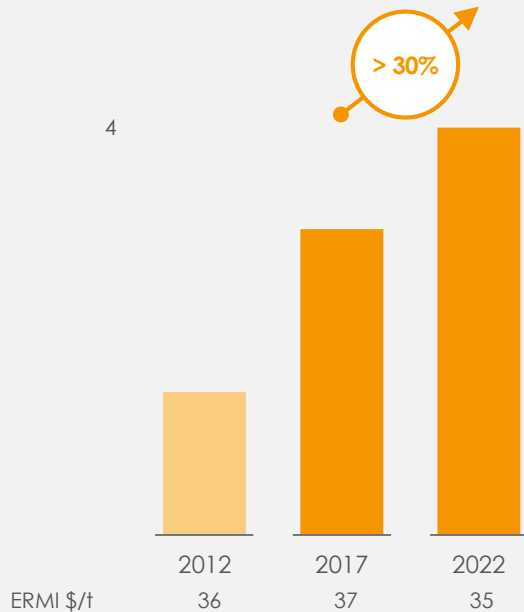
Best-in-class projects **adding >20% capacity**

- Maximizing synergies on giant platforms
- Adding value to advantaged feedstock
- Securing low cost energy

Increasing R&C organic free cash flow by >30%

Expanding petchems, selectively upgrading platforms, reducing costs

R&C organic free cash flow
B\$



* In 2017 petrochemical environment

