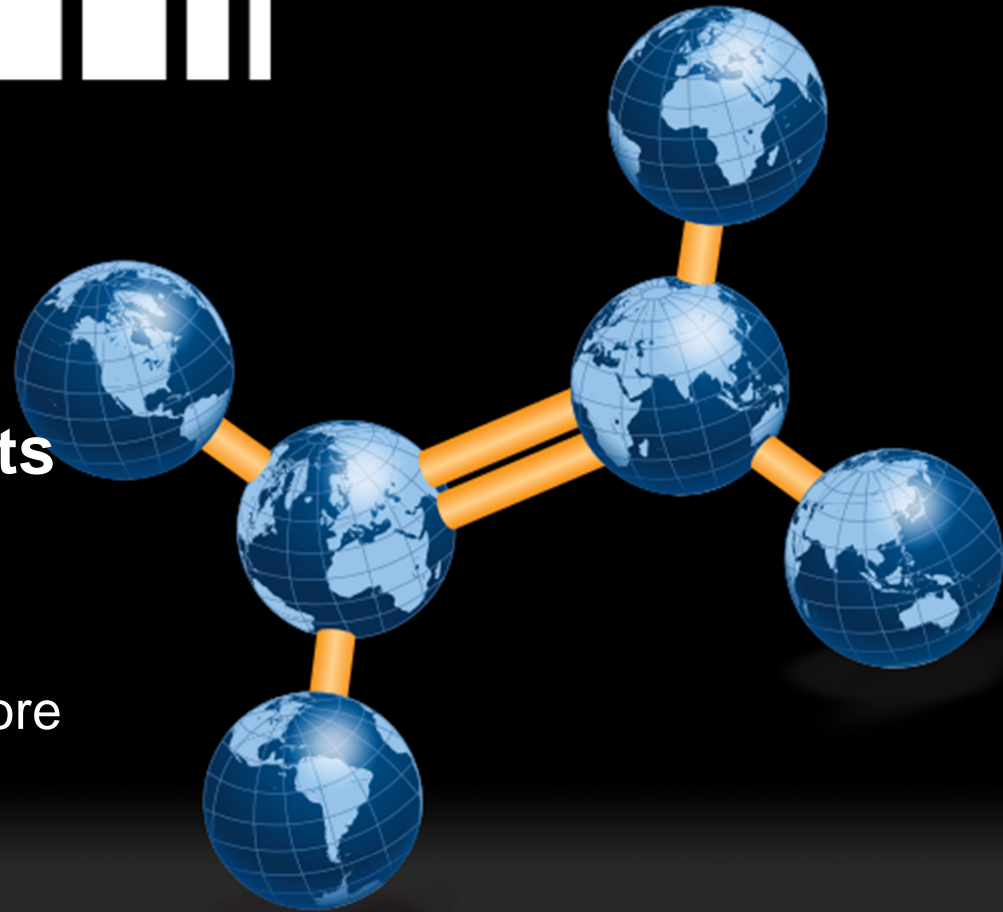


Inaugural Ethylene Forum

Technip Onshore: Delivering Technological Projects

Nello Uccelletti

Senior Vice President Onshore
Technip

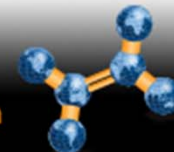


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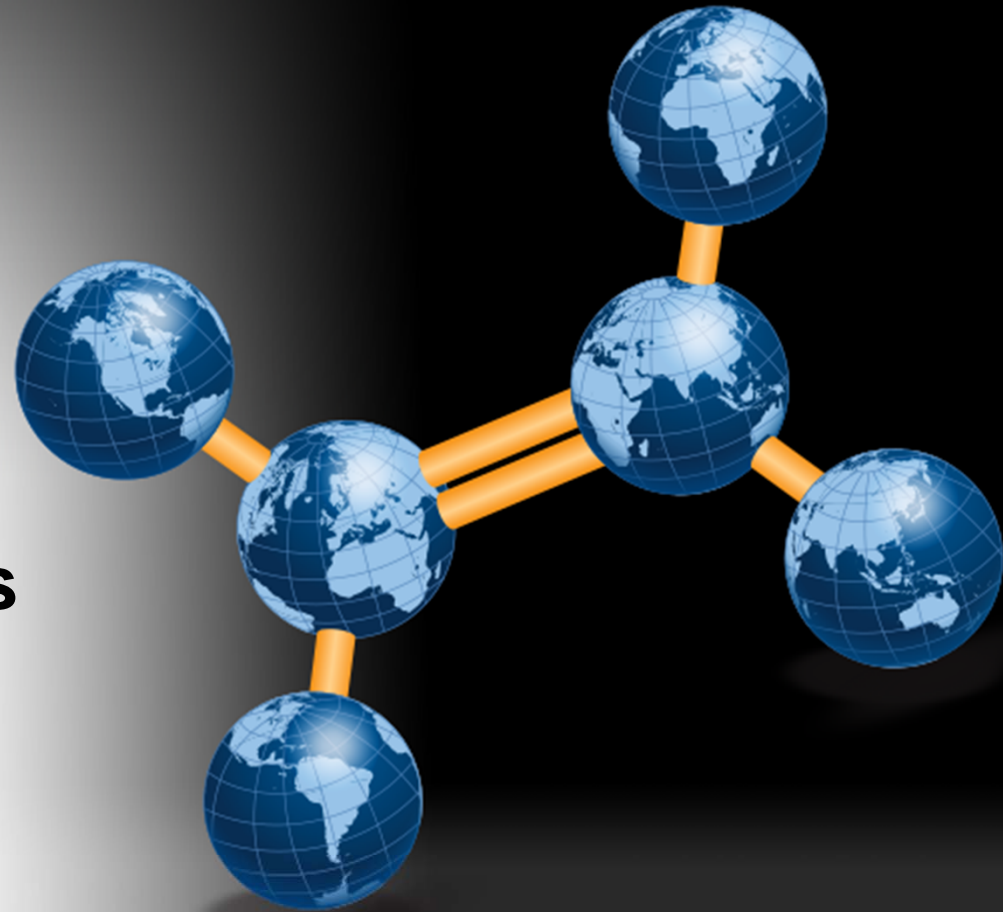


Contents

- More than 50 Years of Technology and Entrepreneurship
- Our Onshore Expertise in a Growing Market
- Technip Onshore Worldwide
- Conclusion



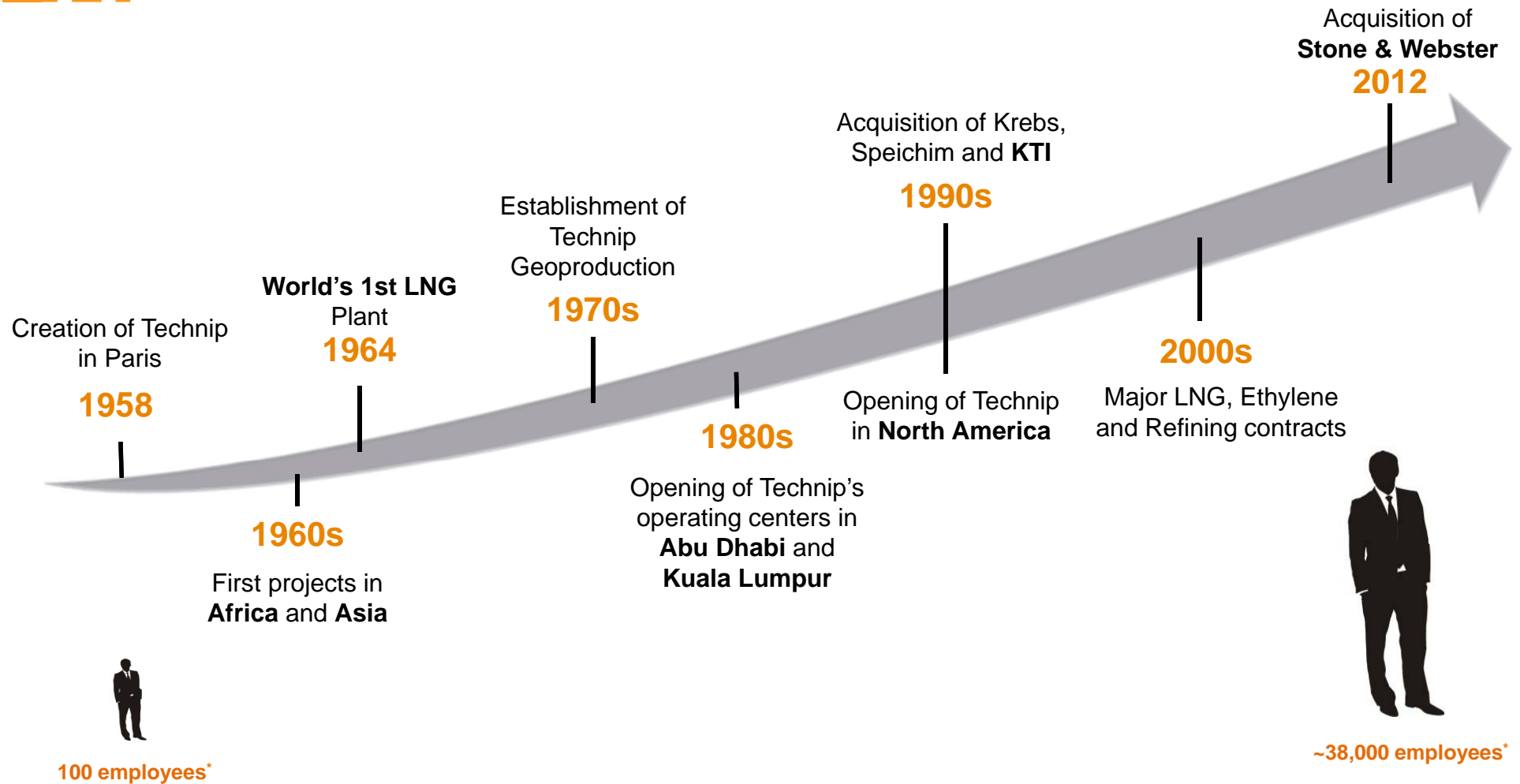
**More than 50 Years
of Technology and
Entrepreneurship**



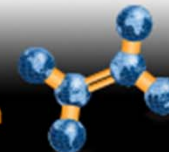
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Technip's Dynamic Growth

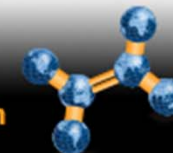


*Overall Group employees



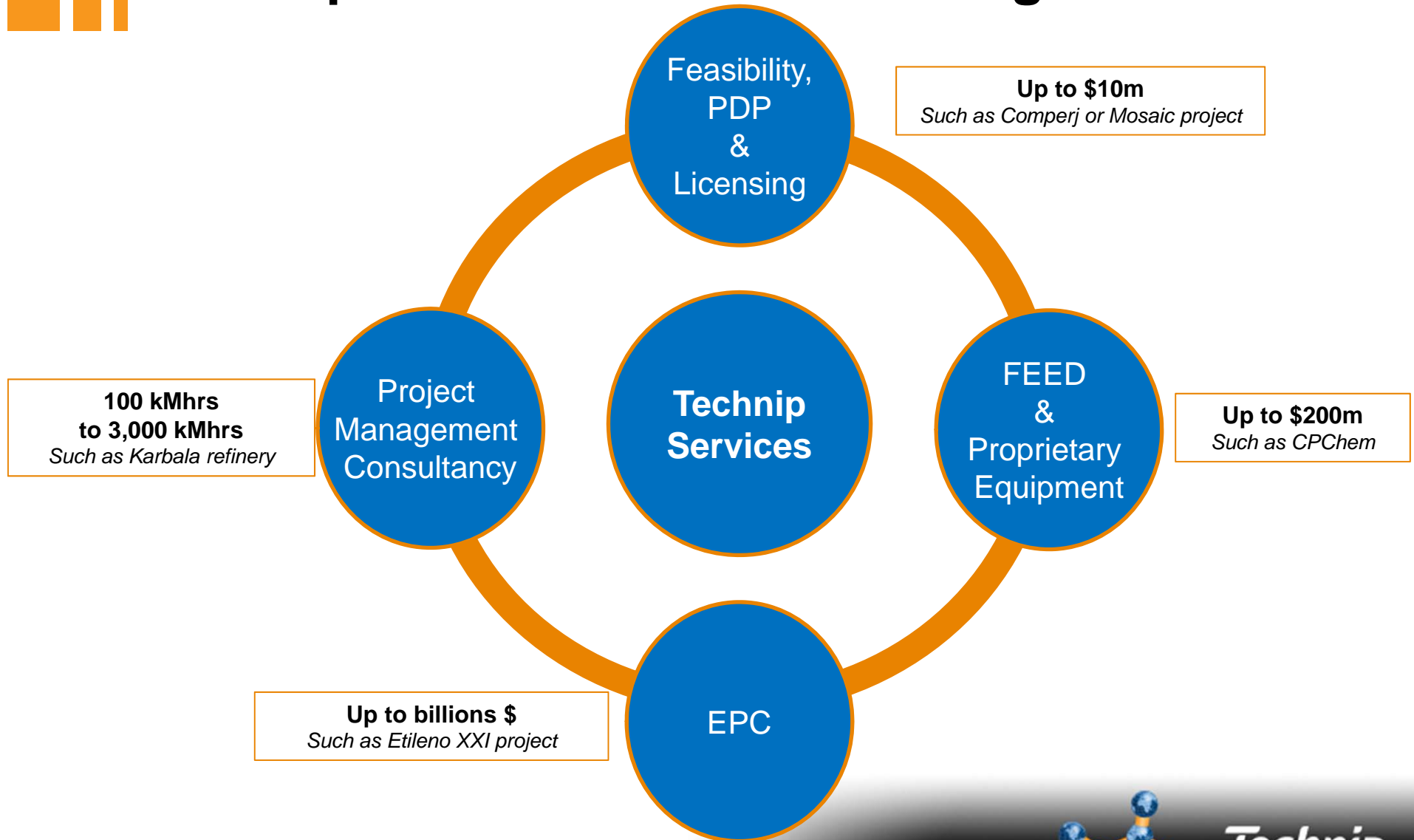


Technip Onshore Market Coverage

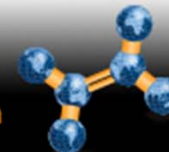




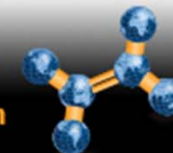
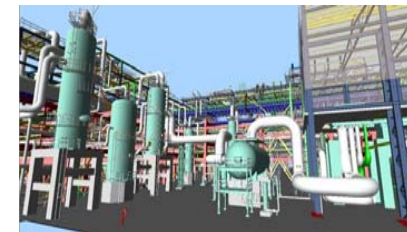
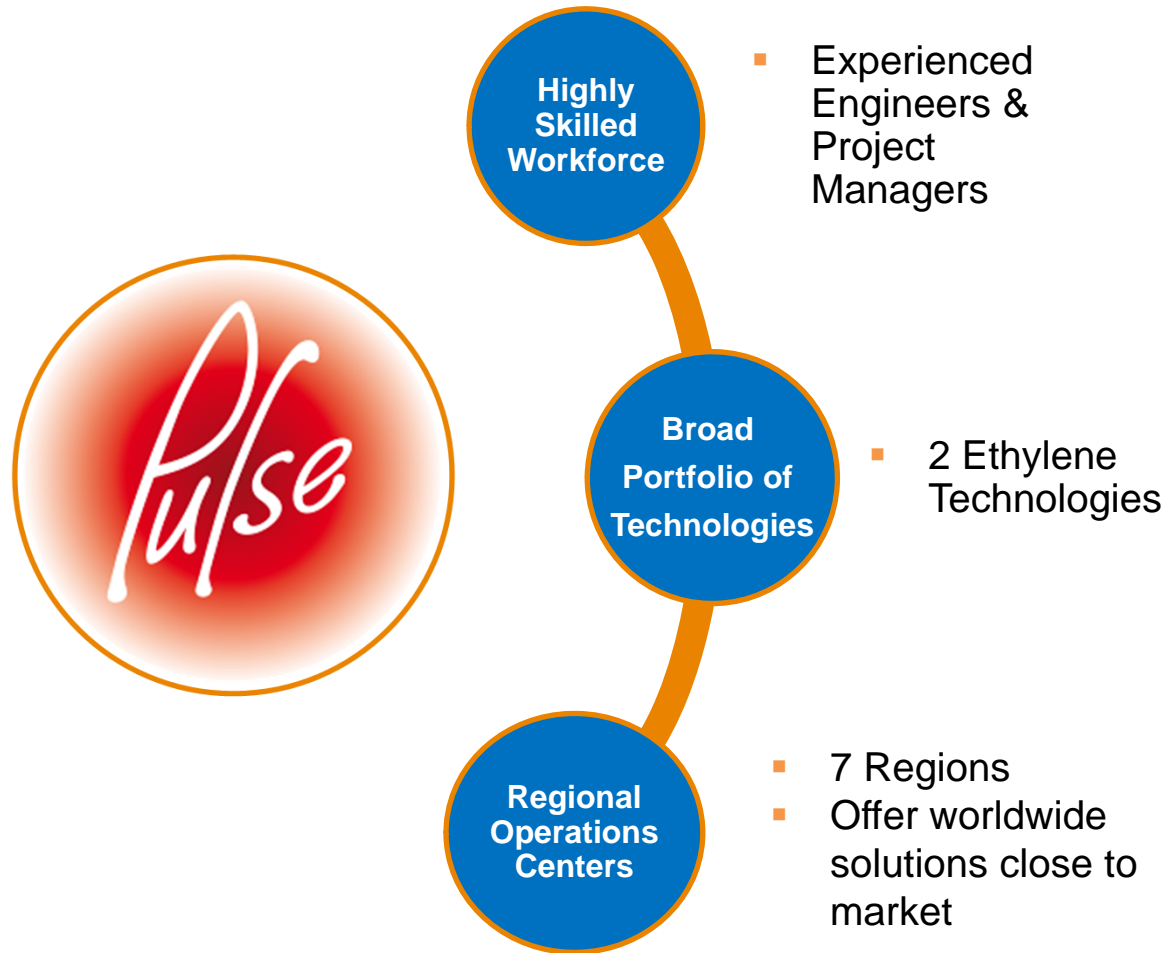
Technip Onshore Service Offering



 Contract size



A Global Footprint Close to Clients





Refinery



Gonfreville Refinery, France

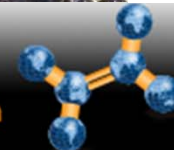
Grassroot's refineries with capacities up to 400,000 bpsd:

- 30 built since 1958
- 6 delivered in the last decade

Brownfield projects in more than 75 countries



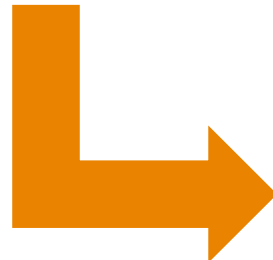
Al Jubail, Saudi Arabia



LNG and GTL



Camel LNG plant, Algeria



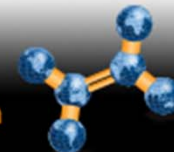
Yemen LNG, Yemen

World's first LNG plant:

- Camel LNG, Algeria 1964
- Technip's liquefaction process technology

More recent key achievements:

- Qatar LNG
- Yemen LNG
- Onshore technology "offshorized" with the Floating LNG
- Sasol Oryx GTL in Qatar – 34,000b/d



Ethylene & Petrochemicals



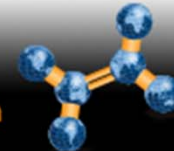
Liao Yang, China

World leading market share

- Close relationship with technology providers
- 2 world leading ethylene technologies
- Solid EPC track record
- Over 150 ethylene references
- More than 200 polymers units
- Integrated Refinery & Petrochemical
- Complex



MOC, Thailand



Fertilizer



Fertilizer Plant, Algeria

Worldwide footprint with:

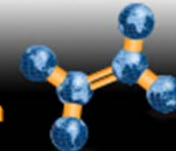
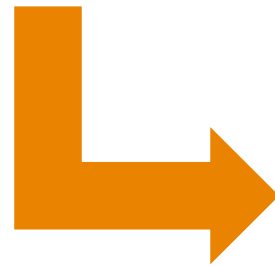
- More than 400 large fertilizer complexes in 40 countries
- Unparalleled position serving the client all along the value chain

Demographic growth drives demand:

- Strong position in fast developing countries



Grassroot fertilizer complex, Vietnam



Our Clients: Worldwide IOC & NOC





Our Technology Partners

SASOL *reaching new frontiers*

Badger

DOW

AIR PRODUCTS

Wieland

ExxonMobil *Research and Engineering*

bp

UHDE *High Pressure Technologies*

BORSIG

Axens *IFP Group Technologies*

TOTAL PETROCHEMICALS

MECS

Shell

AsahiKASEI

INEOS *THE WORD FOR CHEMICALS*

SINOPEC

جامعة الملك فهد للبترول والمعادن
King Fahd University of Petroleum & Minerals

ارامكو السعودية
Saudi Aramco

HALDOR TOPSOE *CATALYZING YOUR BUSINESS*

SUNCOR *ENERGY*

RIPP

SABTEC *SHARING TECHNOLOGY*

NESTE OIL

ENEOS

BELCO

Spraying Systems Co. *Experts in Spray Technology*

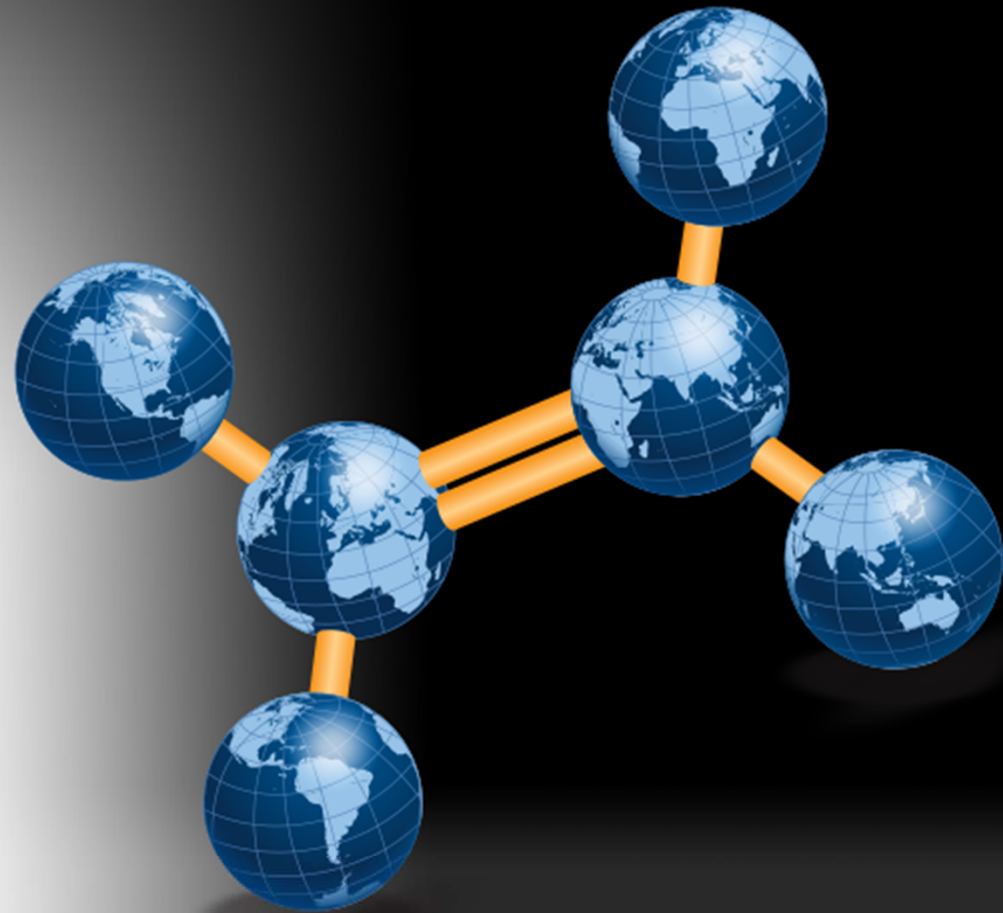
KOCH-GLITSCH

ifp *Energies nouvelles*

NIPPON OIL *Your Choice of Energy*

Technip

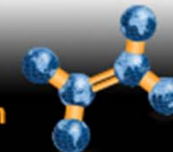
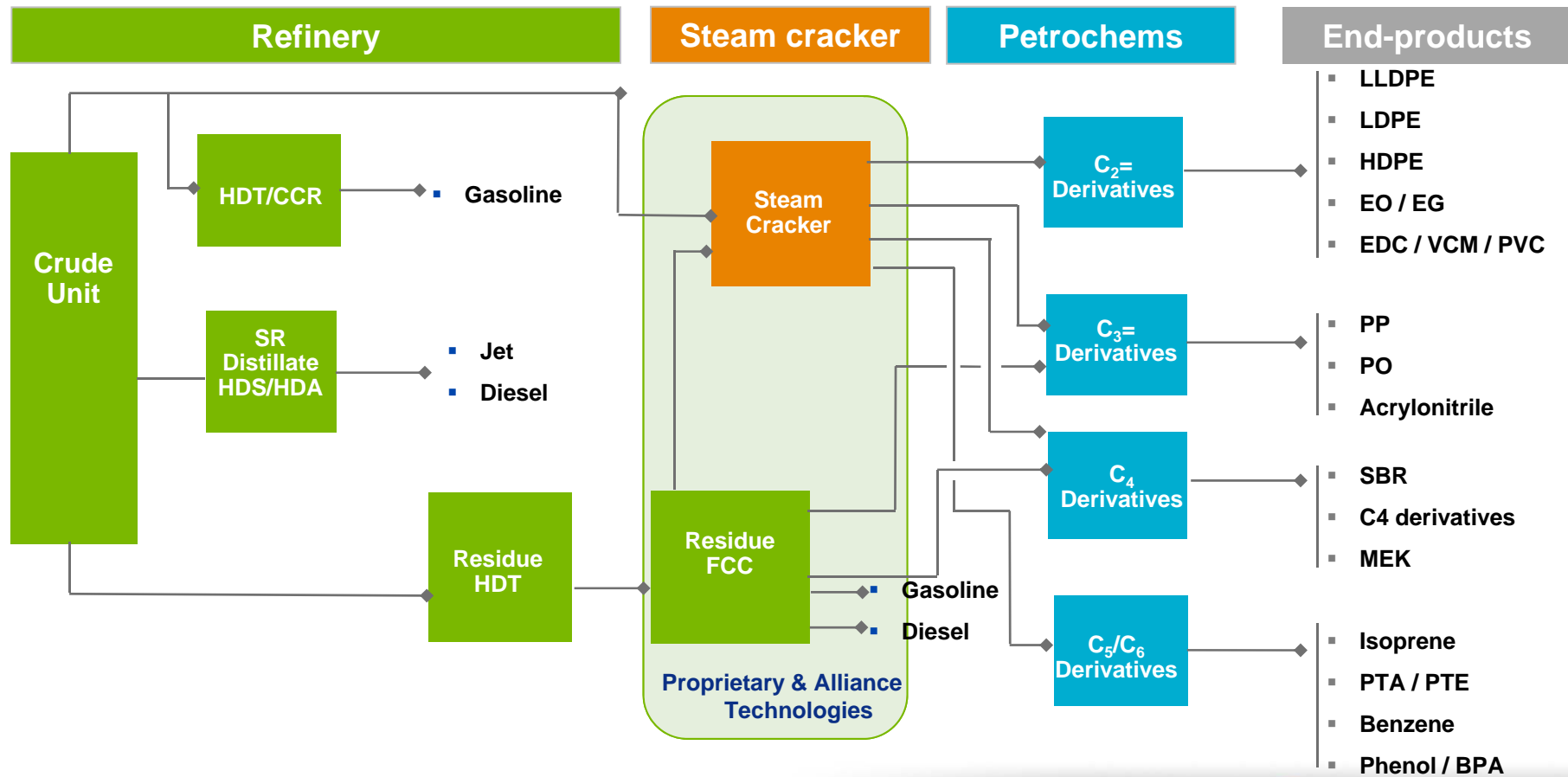
Our Onshore Expertise in a Growing Market



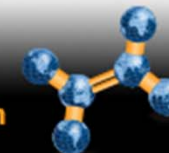
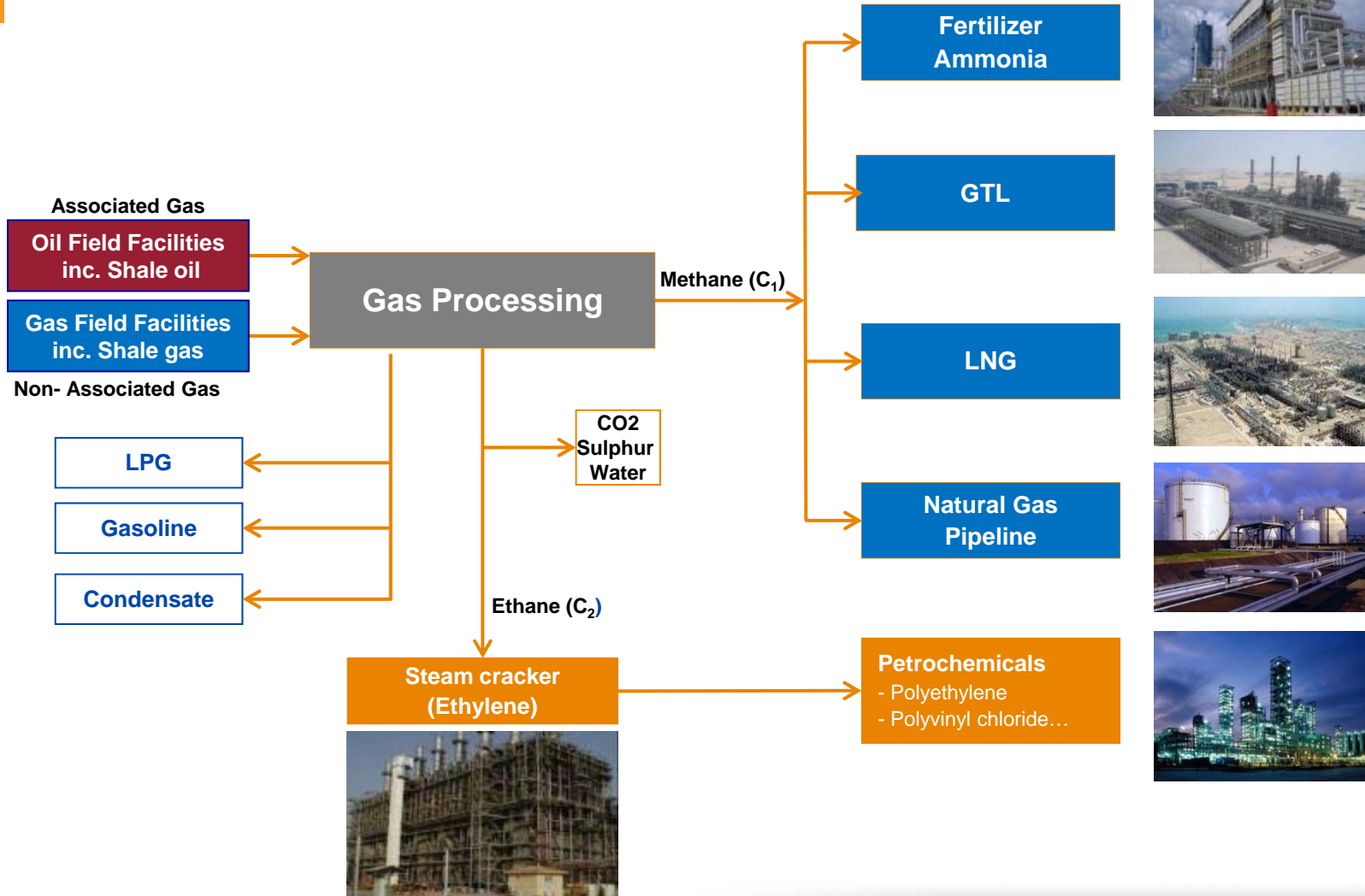
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Technologies at the Core of the Industry

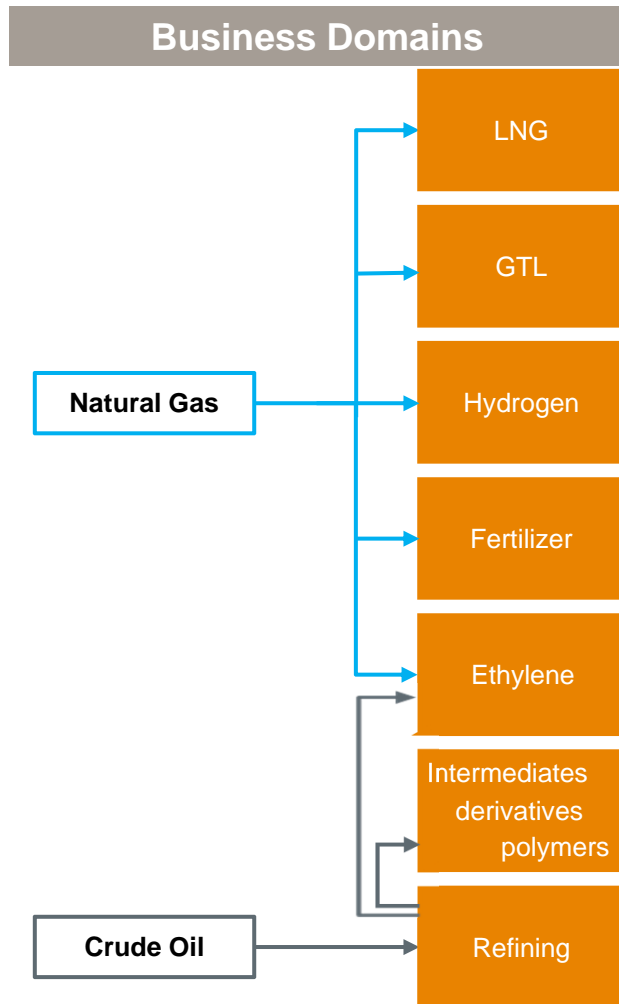


Natural Gas Value Chain

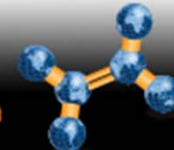




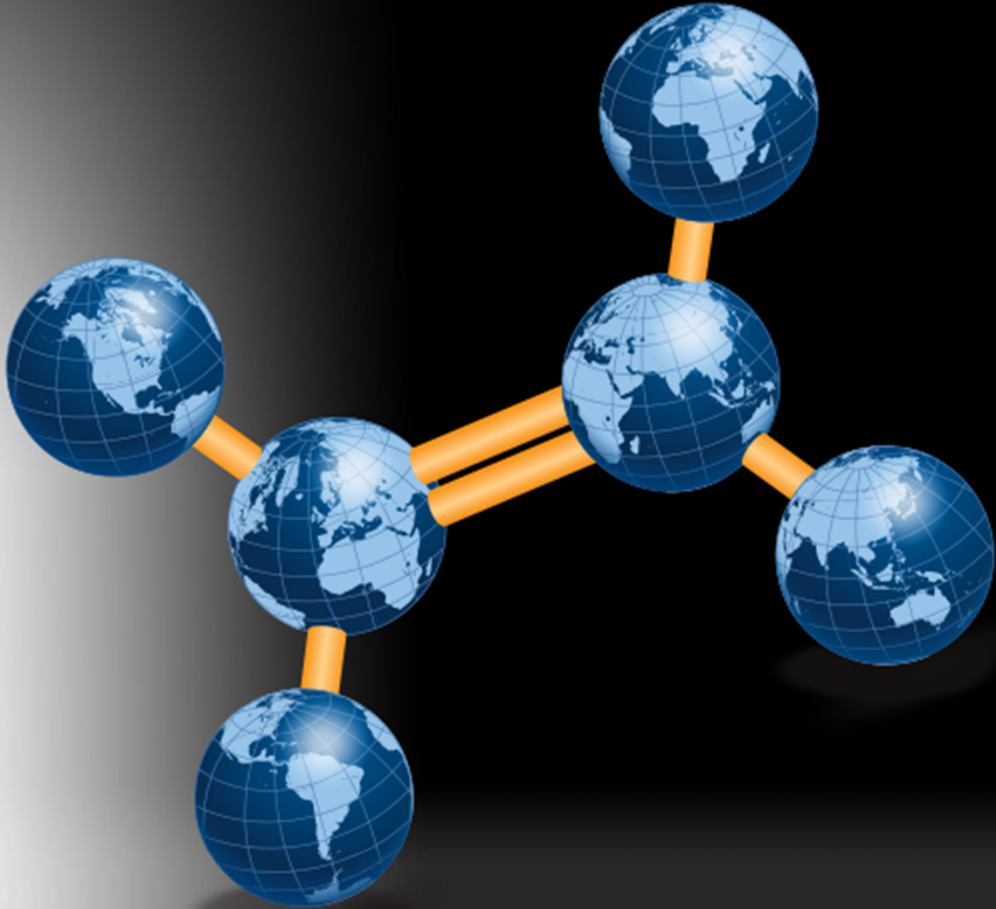
Technology Portfolio



- ### Technologies and Skills
- Cryogenic separation
 - Cooperation with Air Products and Chemicals, Inc. (APCI)
 - Exclusive co-developer of Sasol Fischer Tropsch reactor technology
 - Steam reformer proprietary technology
 - Alliance with Air Products
 - Ammonia technology licensing cooperation with Haldor Topsoe
 - Complementary proprietary technologies with different clients & geographic bases
 - Polyolefins and others
 - Residual Fluid Catalytic Cracking
 - Deep Catalytic Cracking



Technip Onshore Worldwide



Technip

Current Worldwide Onshore Projects

North America

- US Ethane cracker, FEED, Sasol
- Polyethylene plants, EP, CP Chemicals
- LNG trains, FEED, Pacific Northwest
- LNG plant, FEED, Trunkline Export, LLC

Europe

- LNG trains, EPC, Yamal LNG
- Burgas, EPC, Bulgaria
- Chlorine plant 3, EPC, BASF

Middle East

- GTL plant, FEED, Uzbekistan GTL LLC
- Jubail refinery, EPC, Saudi Aramco
- PMP, EPC, Qatargas
- Halobutyl plant, EPC, KEMYA

Africa

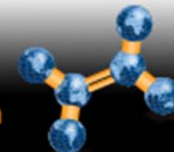
- Algiers refinery, EPC, Sonatrach

Asia Pacific

- Rapid, FEED, Petronas
- HTY plant, EPC, Michelin
- PTA plant, EPCM, JBF Petrochemicals

Latin America

- Etileno XXI, EPC, Braskem
- RPBC, EPC, Petrobras

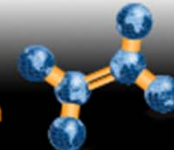


Technip in North America

- Four main locations:
 - Houston, Texas
 - Claremont, California
 - Boston, Massachusetts
 - Calgary, Canada
- Rapid growth over the past ten years:
 - +40% since 2003 to 3,900 employees in 2013
 - Stone & Webster Acquisition
 - Capture of downstream shale gas and ethylene projects such as:
 - FEED License CP Chemical
 - Dow LHC9
 - Sasol
 - Westlake
 - CP Chemicals polyethylene



Technip's Houston center



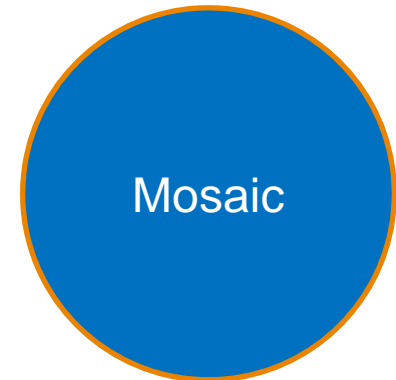
Etileno XXI Plant in Mexico

- **Client:** Braskem-Idesa
- **Facilities:** ethylene plant based on ethane, located in Veracruz, Mexico
- Technip's ethylene technologies
- FEED developed by Technip:
 - Rome, Italy
 - Claremont, California, USA
- EPC executed with support of:
 - Rome, Italy
 - Lyon, France
 - Claremont, CA, USA
 - Mexico City, Mexico

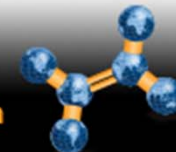




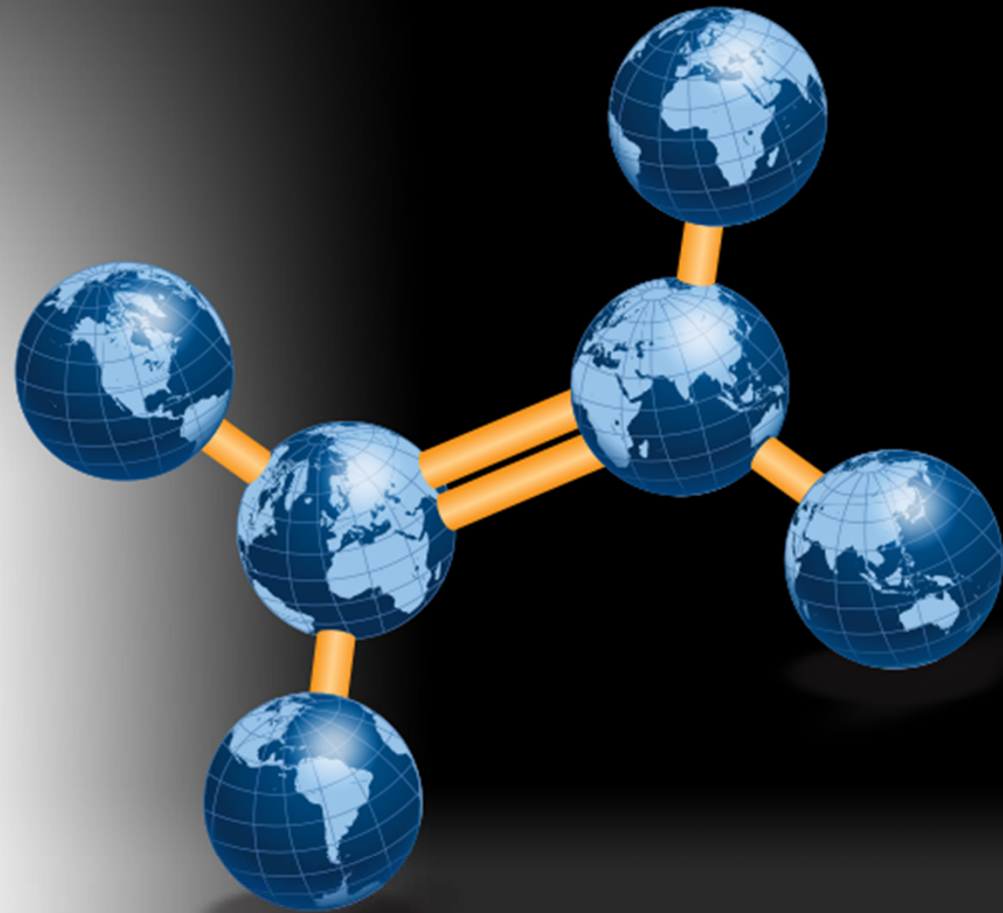
Ongoing FEEDs: Tomorrow's Opportunities



Client	▪ BG Trunkline LNG	▪ Sasol	▪ The Mosaic Company
Location	▪ Louisiana	▪ Louisiana	▪ Louisiana
Scope	▪ Studies for LNG train development to produce 13.7 mtpa	▪ Competitive EPC for ethylene and derivatives in partnership with Fluor	▪ Grassroot ammonia plant



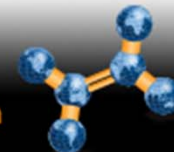
Conclusion



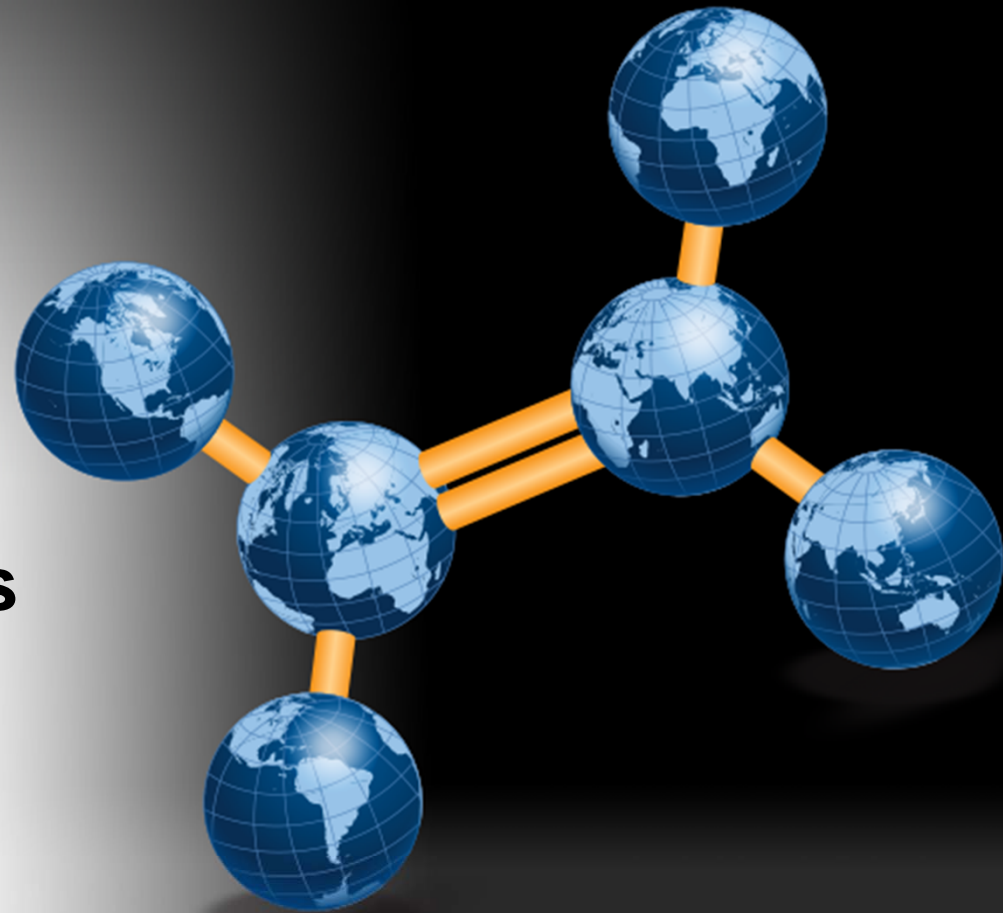
Technip

Solid Foundations for Sustainable Commitments

- Safety: a core value and an absolute commitment
- Project execution track record
- Commitment to technology
- Global business with a regional footprint
- Strong relationship with clients and partners
- Focus on promising North American market



**More than 50 Years
of Technology and
Entrepreneurship**



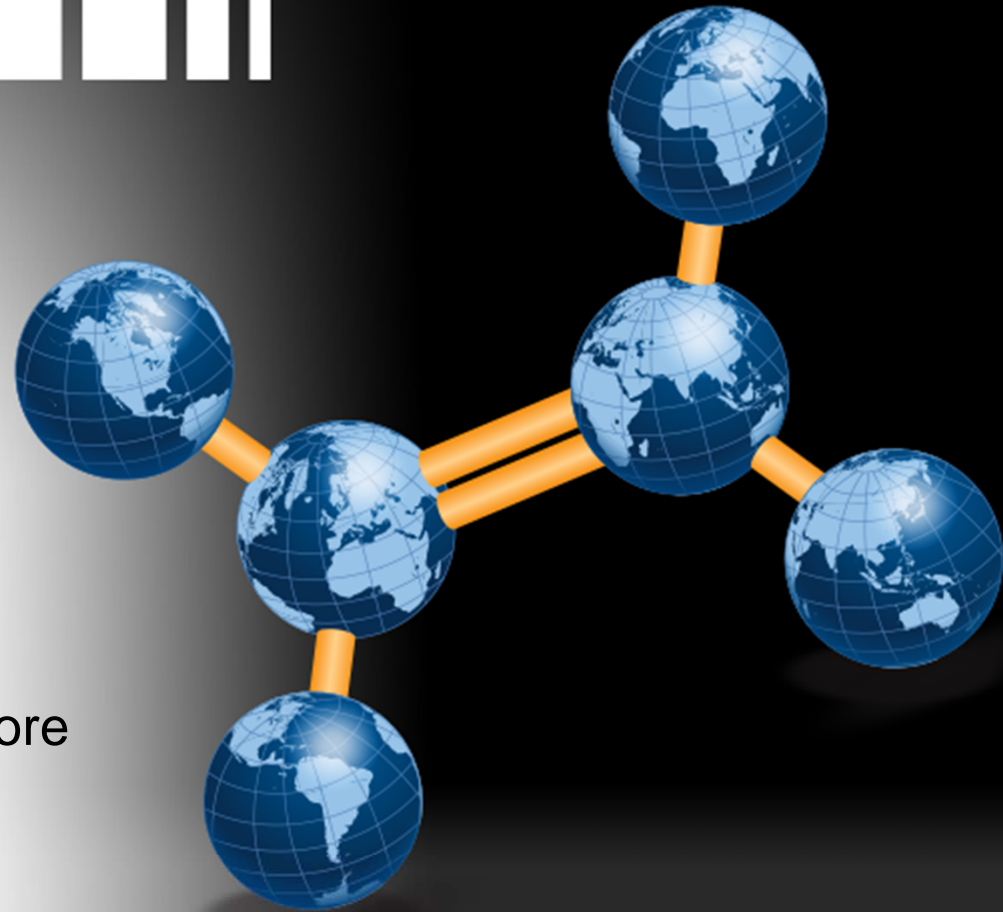
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Thank you!

Nello Uccelletti

Senior Vice President Onshore
Technip



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