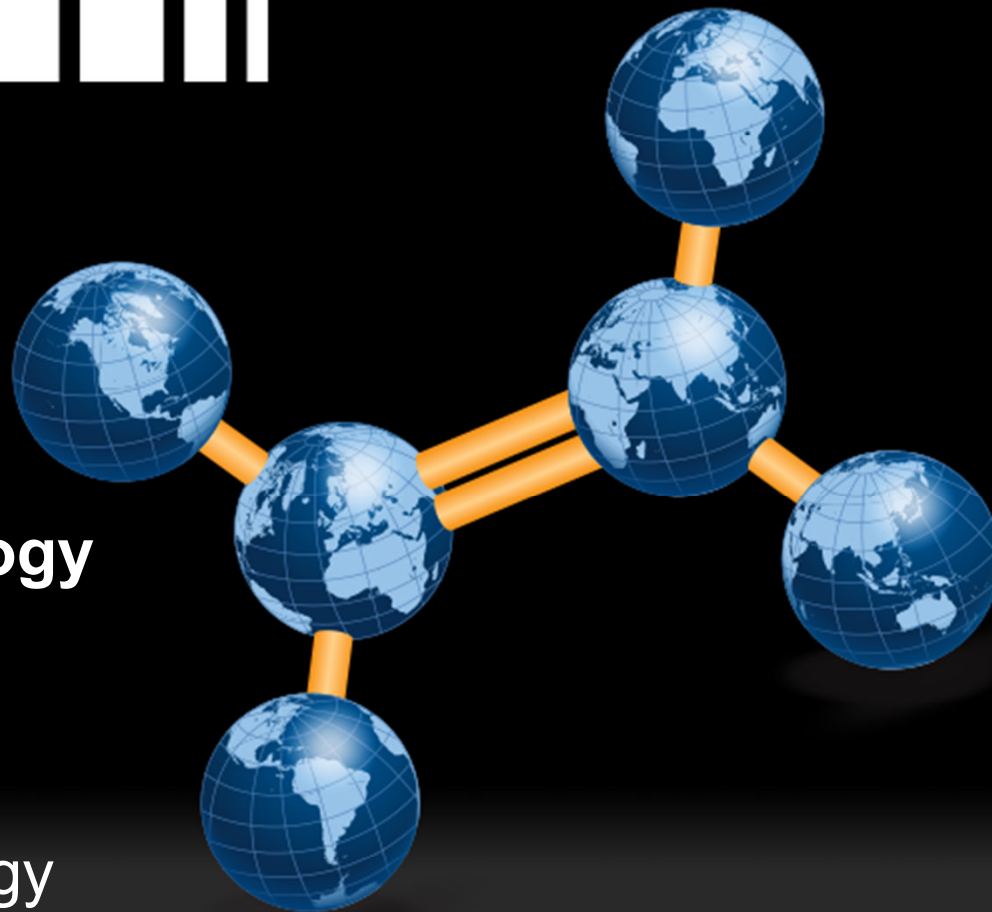


Inaugural Ethylene Forum

**Technip Stone &
Webster Process
Technology,
a world-class
downstream technology
leader**

Stan KNEZ
SVP, Process Technology
Technip

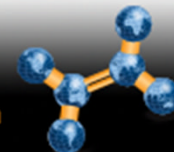


Technip



Agenda

- Our purpose, business and centers
- Our technologies
- The value of Technology management



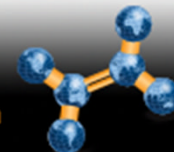


Technip Stone & Webster Process Technology combines leading technologies in a global business unit

- Formed in 2012 after acquisition
- Offers a portfolio of technologies, proprietary or through alliances, coming from Technip and Stone & Webster, in refining, hydrogen, ethylene, petrochemicals, fertilizers and GTL
- Headquartered in Houston with centers around the world



Technology differentiates Technip in the marketplace



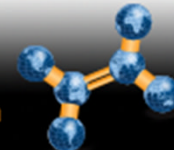


Why a New Global Business?

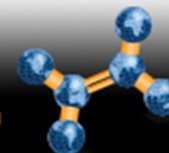
- Leverage our combined experience in the commercial application of process technologies and project execution capabilities
- Strengthen focus on technology growth:
 - Invest in R&D to enhance performance
 - Expand services offered by our lab
 - Pursue strategic additions to our portfolio
- Bring together industry experts to deliver innovative technology solutions



Process Technology delivers more services with combined capabilities



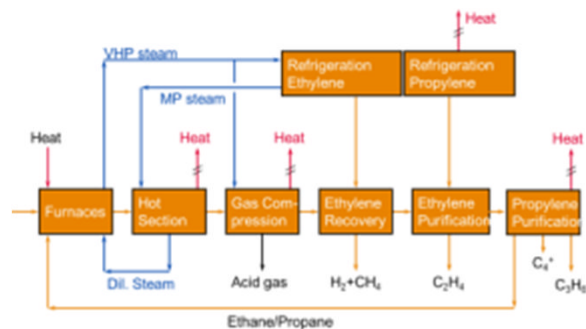
~1,200 People in Seven Locations Around the World



PT Offers Three Types of Services

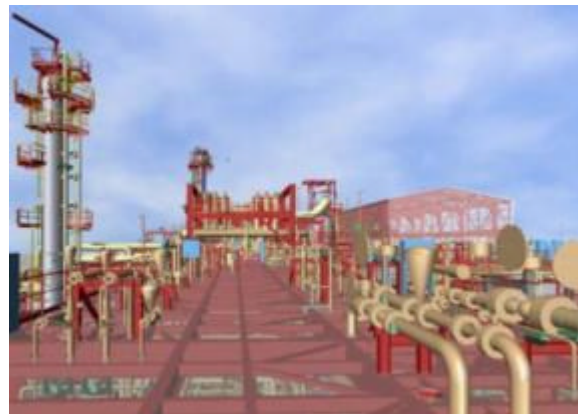
Process Technologies

Licenses



- Licensed proprietary technologies chosen at early stage of projects

Process Design/Engineering

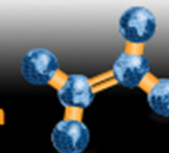


- Process design packages/engineering to guarantee plant performance
- Assistance to plant start-up and follow-up during plant production

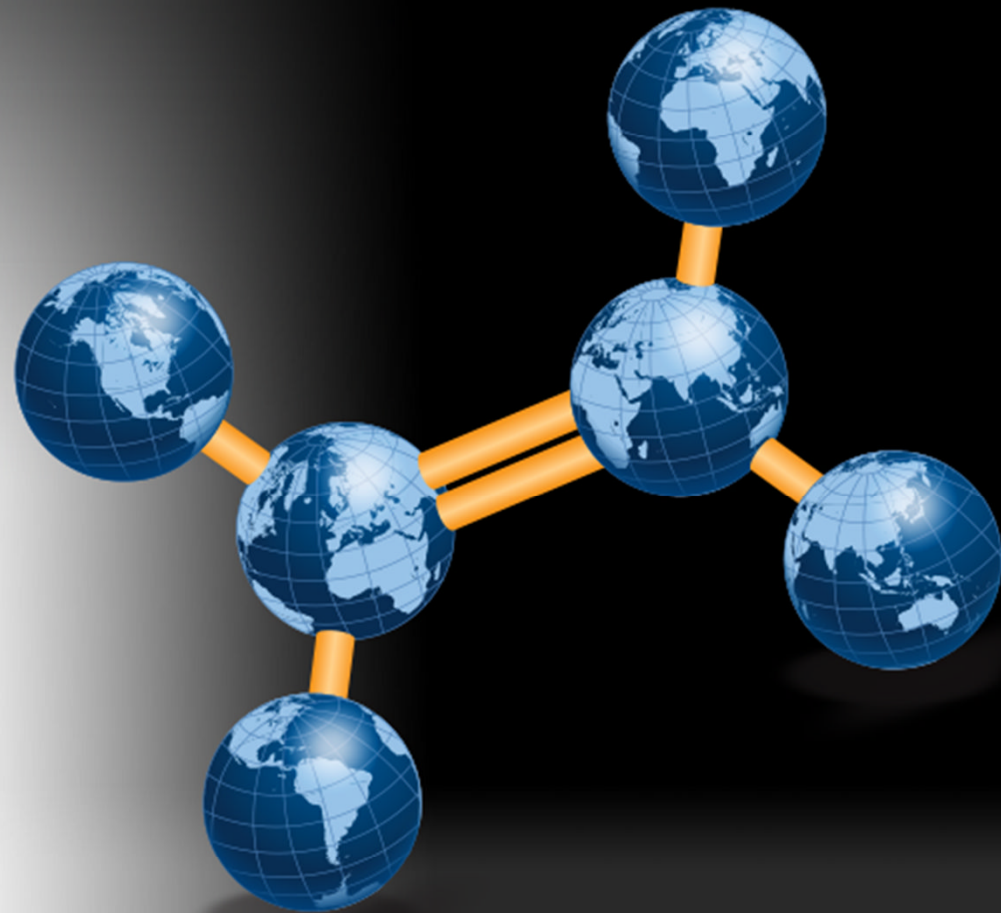
Proprietary Equipment



- Design, supply and installation of critical proprietary equipment

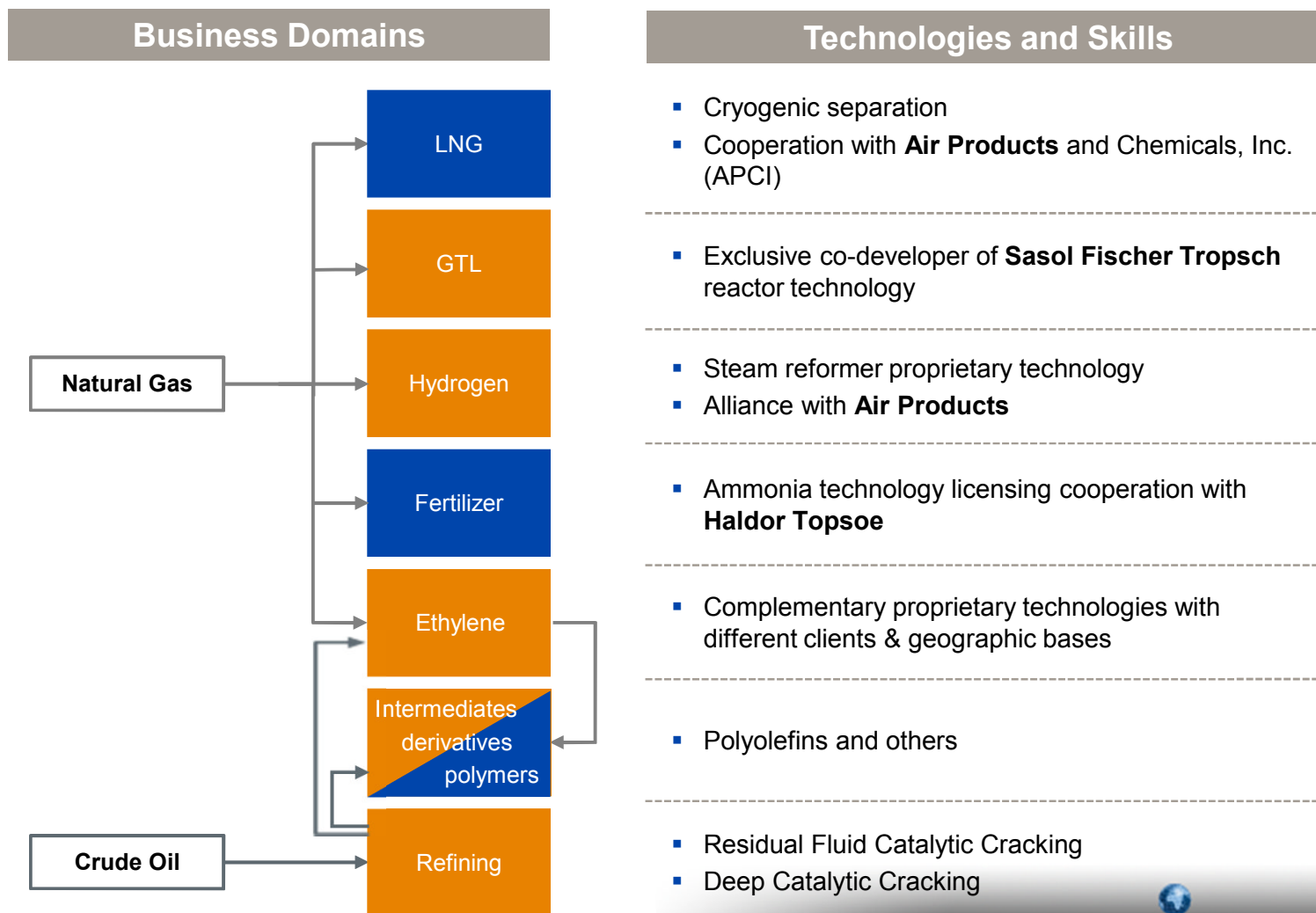


Our Technology Portfolio

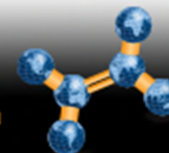


Technip

Enhanced Portfolio of Downstream Technologies



 In Process Technologies portfolio

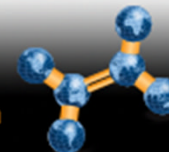


Ethylene

- Pyrolysis Technology
- Recovery Technology
- Refinery Integration
- Energy Optimization
- Emissions Reduction



BORSIG



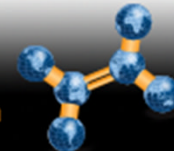
Petrochemicals and Polymers

- Ethylbenzene
 - Cumene
 - Styrene
 - Bisphenol-A
 - BenzOUT™
- Badger
- Acrylonitrile, Butadiene, Styrene Co-polymer (ABS)
 - Polystyrene

ExxonMobil



سابك
sabic



Refining

- Fluid Catalytic Cracking (FCC)
- Resid Fluid Catalytic Cracking (RFCC)
- Deep Catalytic Cracking (DCC)
- Catalytic Pyrolysis Process (CPP)
- High Severity FCC (HS FCC)
- More Iso-paraffin (MIP)/Cleaner Gas Propylene (CGP)



JX Nippon Oil & Energy



BELCO

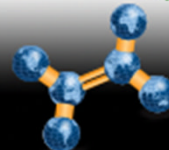


KOCH-GLITSCH



Spraying Systems Co.
Experts in Spray Technology

bp



Technip

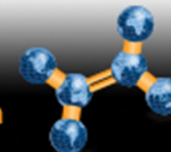
DCC Maximizes Propylene Production

91,000 bpd DCC unit operating at PetroRabigh making >900 KTA propylene

- Building block for petrochemical integration
- 18 units licensed around the world; 7 by Technip outside China
- Utilizes both riser and bed cracking
- Propylene yields over 20 wt%
- Ethylene yields of 4-5 wt%



Technip has exclusively licensed DCC technology outside China since 1993



Unique Portfolio of FCC and Olefins Technologies Allows Integrated Configuration



Proprietary technology

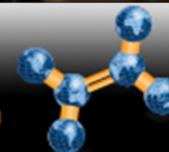
Operating experience

Know-how

Reduces capital costs

Production flexibility

Energy efficiency

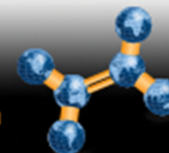


Hydrogen: Global Market Leader in Alliance with Air Products

- 50 years of core H₂ competence
- Hydrogen and Syngas Plants
- Proprietary Steam Reformer technology
- Revamps/Capacity Increase
 - 20-year Alliance with Air Products
 - “sale-of-gas” H₂ plants
- Tailored advanced solutions for high efficiency and cost-effectiveness



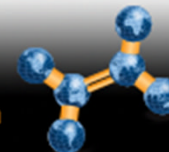
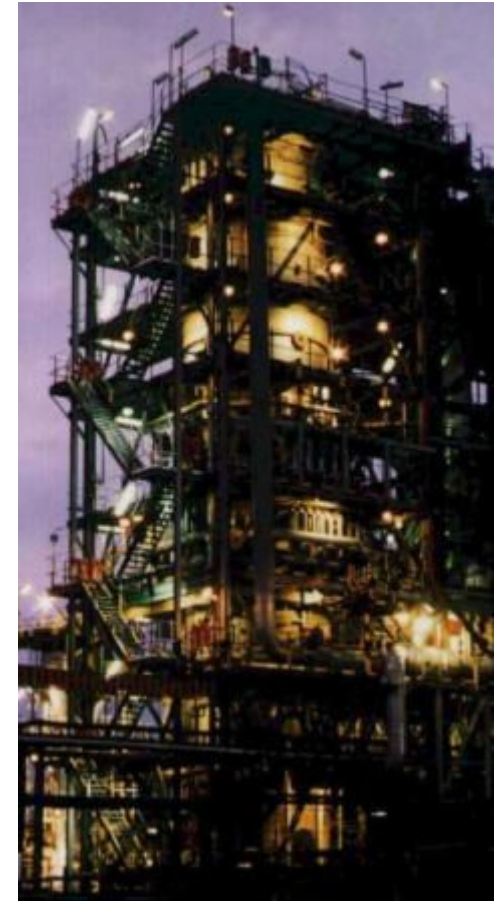
 Technip is a global leader, with >35% market share and >260 plants worldwide



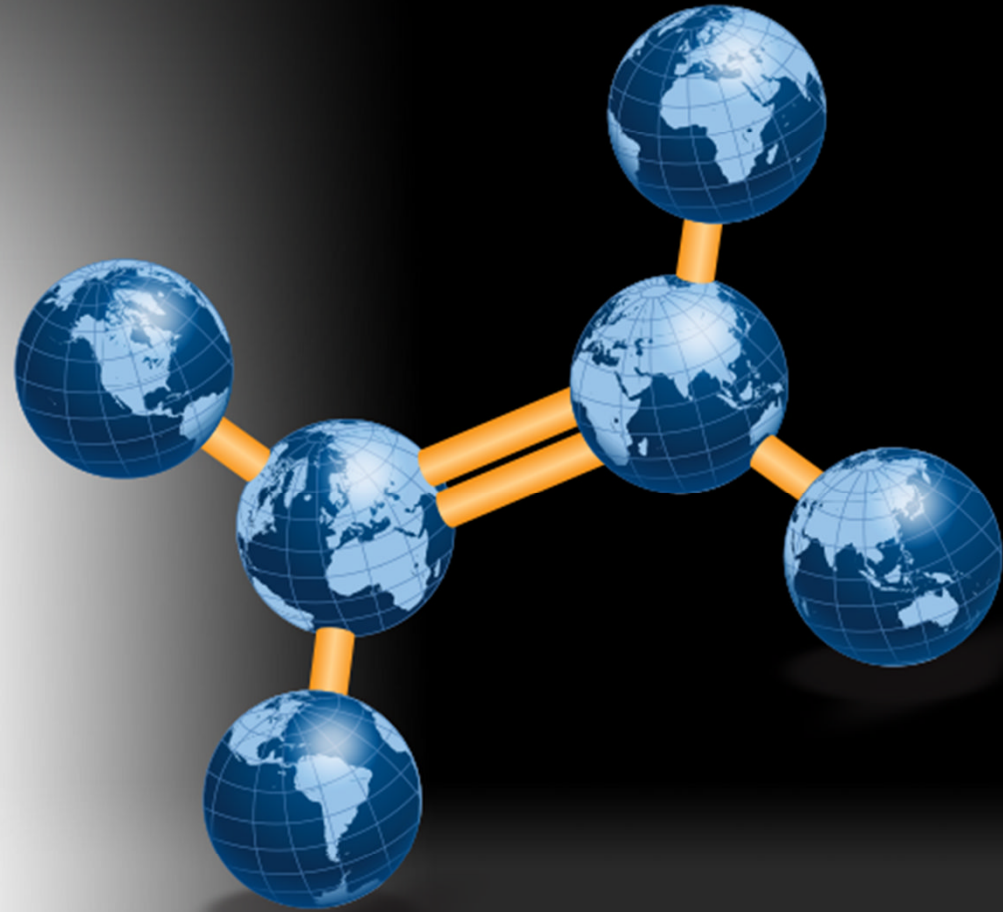
Gas to Liquids (GTL): 30 years with Sasol

- Development and engineering work for Sasol's Fischer-Tropsch technology
- Commercialization of four generations of Fischer-Tropsch reactors
- Alliance for front-end engineering for GTL facilities

SASOL
reaching new frontiers



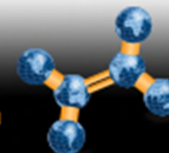
The Value of Technology Management



Technip

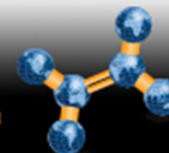
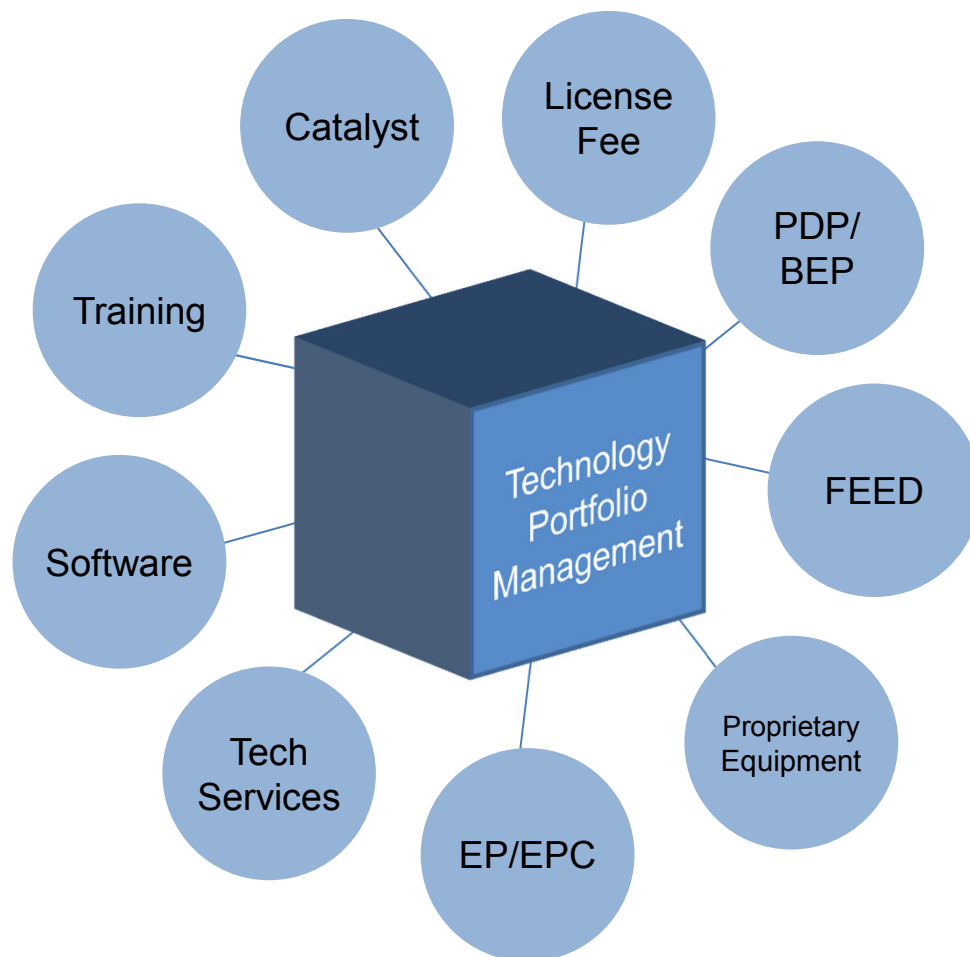


Technology Portfolio Management

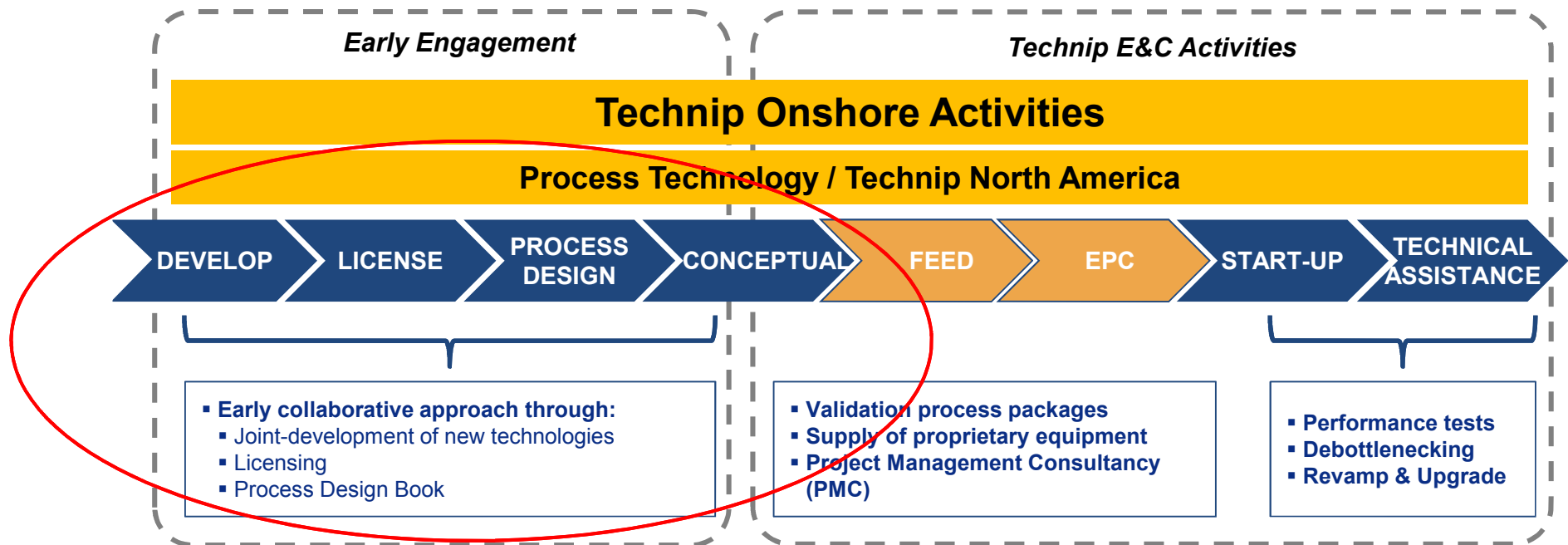




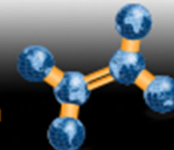
Maximizing Technology Value for Licensees



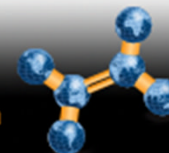
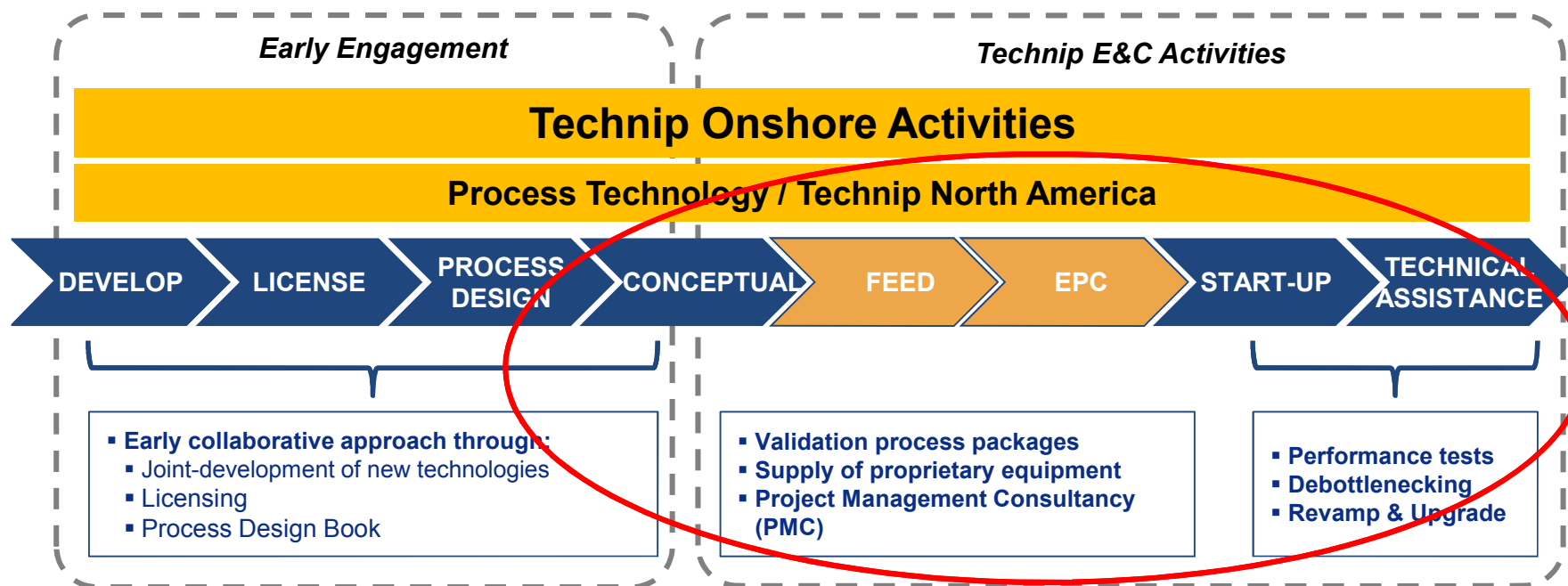
Process Technology Provides Early Engagement



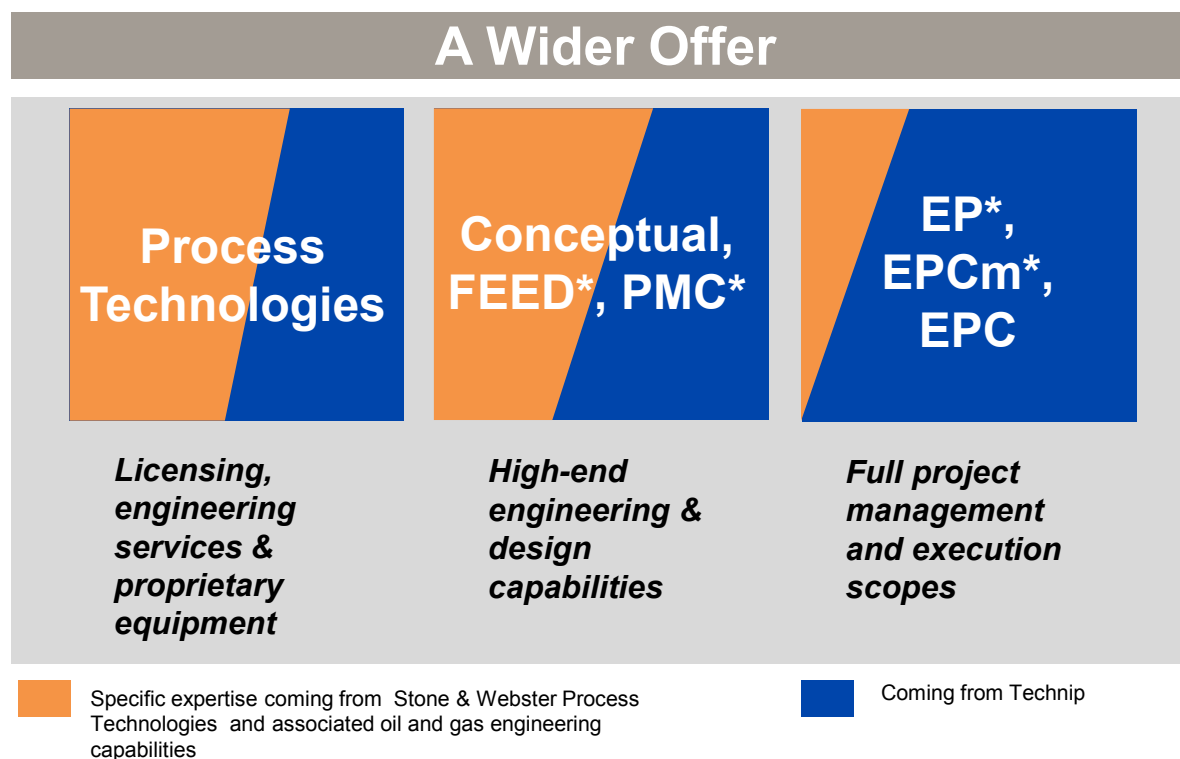
Early involvement helps clients to know options



Technip's Regions Bring Full-Scale EPC

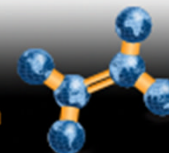


Full Coverage of the Whole Project Life Cycle



Stone & Webster Process Technology acquisition has strengthened Technip's downstream leadership position

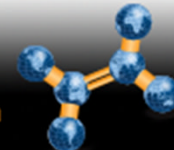
*FEED: Front-End Engineering Design, PMC: Project Management Consultancy, EPCm: Engineering, Procurement, Construction, Management





Technip Stone & Webster Process Technology

- Leading-edge technologies in key downstream markets
- Best-in-class alliance partners
- Proprietary equipment and software
- Investment in research and development
- Commercialization of new technologies
- Unparalleled global team of technology experts
- Closely integrated technology and project delivery organizations



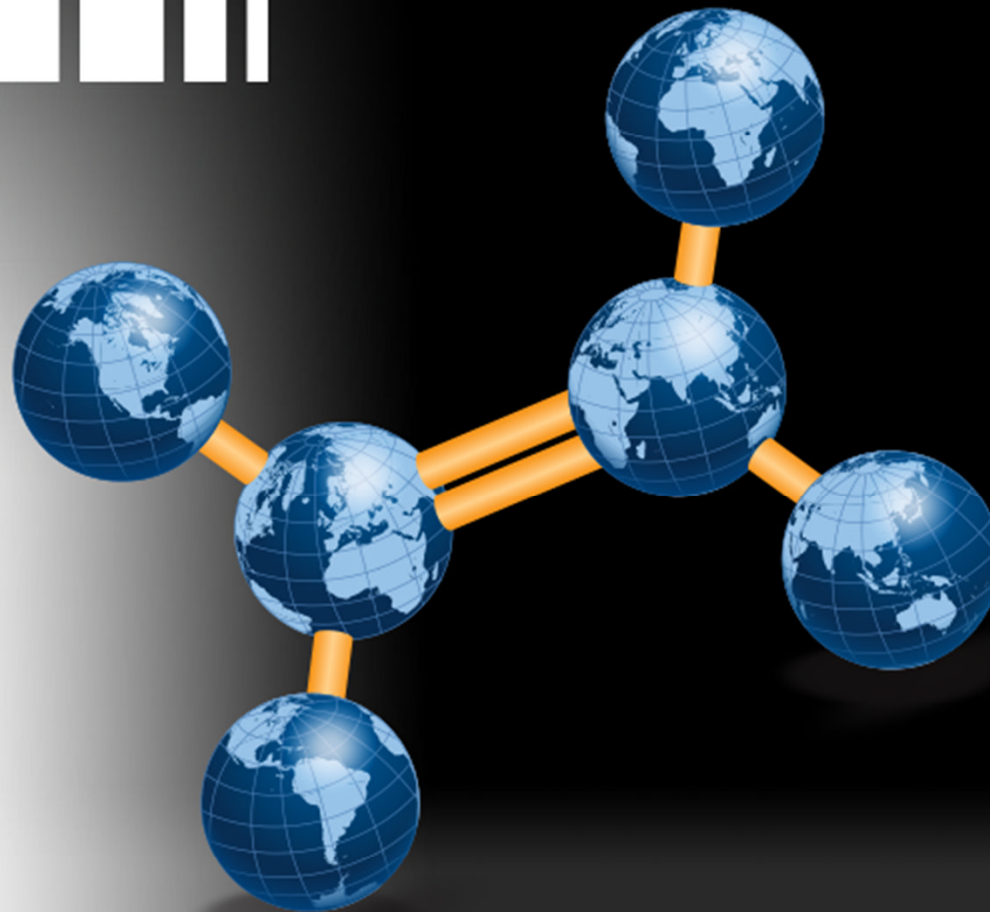
Inaugural Ethylene Forum

Thank You!

Stan KNEZ

SVP, Process Technology

Technip



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