ARPEL Leadership Program

Module 2
Agenda
Module 2

Downstream Sector, the new normal Refining’s role in a world of changing demand

August, 28-30, 2019
Cartagena de Indias, Colombia
### Morning

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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<tbody>
<tr>
<td>8:30 - 9:00 am</td>
<td>Participant Registration</td>
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<tr>
<td>9:00 - 10:00 am</td>
<td><strong>Session 1. Downstream fundamentals</strong>&lt;br&gt;Before diving into the world of refining, the basic understanding of refining processes and operations will be briefly discussed.</td>
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<tr>
<td>10:00 - 10:30 am</td>
<td><strong>Breakout 1. Interactive team exercise</strong></td>
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<td>10:30 - 11:00 am</td>
<td>Break</td>
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<tr>
<td>11:00 - 12:00 am</td>
<td><strong>Session 2. Global refining overview</strong>&lt;br&gt;In this session global perspectives and overview of refining sector covering refinery capacity, supply and demand forecasts, trades.</td>
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<tr>
<td>12:00 - 12:30 pm</td>
<td><strong>Breakout 2. Interactive team exercise</strong></td>
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<tr>
<td>12:30 - 2:00 pm</td>
<td>Lunch Break</td>
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### Afternoon

<table>
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<tr>
<th>Time</th>
<th>Activity</th>
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<tr>
<td>2:00 - 3:00 pm</td>
<td><strong>Session 3. Regulatory trends</strong>&lt;br&gt;What policies and regulations are affecting the refining industry? Is the global regulatory landscape converging or diverging?</td>
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<tr>
<td>3:00 - 3:30 pm</td>
<td><strong>Breakout 3. Interactive team exercise</strong></td>
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<tr>
<td>3:30 - 4:00 pm</td>
<td>Break</td>
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<tr>
<td>4:00 - 5:00 pm</td>
<td><strong>Session 4. Latin America refining and competitive landscape</strong>&lt;br&gt;Latin America has presented swings and volatile dynamics in the refining industry. Where does the region stand in the global market? Is the industry fighting for survival or can it be competitive and integrated with the rest of the world?</td>
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<tr>
<td>5:00 - 5:30 pm</td>
<td><strong>Breakout 4. Interactive team exercise</strong></td>
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Thursday, August 29

Global Energy Scenarios and their Impact on Downstream Strategies
As new rivalries develop in the energy sectors and new technologies continue disrupting our behavior and consumption of refined products, how are companies preparing their strategies for these changes? The other big question is how climate change will play a role in the future of the oil and gas industry in particular the downstream? Will technology reshape the sector’s strategy?

**MORNING**

9:00 - 10:00 am  **Session 1. Global energy scenarios review**
We will explore IHS Markit’s scenarios and worldviews of energy supply and consumption.

10:00 - 10:30 am  **Breakout 1. Interactive team exercise**

10:30 - 11:00 am  Break

11:00 - 12:00 am  **Session 2. Climate change and energy transition**
**What is ahead for Downstream**
Climate change has become a business strategy issue from the daily operations to the value of a company’s stocks and interest of investors. Is there a place for refining as the push to energy transition gains momentum? Is a future without refining possible?

12:00 - 12:30 pm  **Breakout 2. Interactive team exercise**

12:30 - 2:00 pm  Lunch Break

**AFTERNOON**

2:00 - 3:00 pm  **Session 3. Downstream disruptors and technology developments**
What drivers and new technologies are taking place in the downstream sector? Is there still a place for traditional fuels?

3:00 - 3:30 pm  **Breakout 3. Interactive team exercise**

3:30 - 4:00 pm  Break

4:00 - 5:00 pm  **Session 4. Roundtable discussion of Latin America refining past and future strategies**
Gathering and linking the information and discussion from the previous sessions, this session will deep dive in the past, for lessons learned, and what the future for Latin America’s refining will look like

5:00 - 5:30 pm  **Breakout 4. Interactive team exercise**

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Friday, August 30

Refinery site visit
Felipe Perez is a Director of Oil Markets, Midstream & Downstream in IHS Markit and LATAM Downstream Strategist based in Washington DC office. He has over 13 years of experience in consulting in the oil and gas industries, mainly in downstream sector. He joined IHS Markit in 2017. His primary focus is on assisting clients with performance improvement and strategic initiatives.

Prior to joining IHS Markit, Felipe worked as a Senior Consultant and Business Development Executive at KBC covering major Latin America clients. Felipe holds a B.S.E. in Chemical Engineering from the University of São Paulo, Brazil and an M.Sc. in Refinery Design and Operation from University of Manchester, England. Fluent in Spanish, Portuguese, and English.

**Background**

**Industry Experience**

- Latin America Downstream Sector
- Performance Benchmarking
- Feasibility Studies
- Operational Improvement
- Energy Efficiency
- Best Practices Implementation

**Selected experience**

- **Refinery Asset Divestment Strategy**
  Prepared downstream market analysis for a refinery seller in South America to support the transaction.

- **Investment and Market Assessment**
  Complete value chain assessment of Oil & Gas markets and investment prospects in a South American country for a foreign global energy company.

- **Crude Oil Products Exports Optimization**
  Defined optimized alternatives for exports of refined products for a Latin America refinery constrained by local market regulations.

- **Retail Model and Regulation Benchmarking**
  Elaborated main benchmarks for retail model and regulation comparing Brazilian market to US and Europe.

- **Operational Improvement Studies**
  For numerous assignments in Brazil, Chile, Mexico and other countries in LATAM, delivered profit improvement programs. These projects included benchmarking performance against best practices, gap analysis, operational reviews, modeling and process optimization. Defined opportunity implementation strategy considering technical and economic criteria.

- **Refinery Conceptual Design**
  Designed steam and power systems and configuration analysis for $8 billion refinery expansion and revamp in Latin America.

- **Best Practices Implementation**
  Assessment of corporate and operational practices. Developed work processes, designed and implementation of organizational structure, and operational strategies based on operational excellence and international industry best practices.

- **Global Refining Outlook and Challenges for Latin America**
  Key presenter at CERAWeek and major conferences in Latin America on the global outlook of the refining sector and the implications and perspectives for the industry in Latin America.
Sandeep Sayal is a Vice President for IHS Markit’s research for Oil Markets, Midstream and Downstream. He is responsible for leading the long-term forecast models that cover global fundamental balances, refinery capacity additions and trade. He has developing refinery configuration studies using LP models, performed regional market studies and developed crude oil and product price forecasts using refining valuation models. Formerly with Purvin & Gertz, Sandeep worked for Chevron, UOP and Pennzoil. He held numerous positions in refining, trading, product management, and global supply optimization business units. Mr. Sayal has a BS in Chemical Engineering from UDCT (Mumbai University), a MS in Chemical Engineering from Louisiana Tech University, and an MBA from Cornell University.

**Selected experience**

**Refinery Configuration Studies**
Mr. Sayal has performed numerous screening studies using PIMS LP models to assist clients in assessing their investment in new grass-roots refineries for producing transportation fuels and petrochemicals. The deliverables including generating material and utility balances and developing scaled up capital cost estimates and DCF analysis.

**Investment Due Diligence**
Mr. Sayal was the project manager in performing a quantitative and qualitative assessment of the competitive position of a client’s refineries. The team constructed PIMS LP models and cash flow models to evaluate the refinery operations and developed various scenarios and advised client of potential value enhancements for their assets.

**Crude Oil Evaluation and Price Forecasts**
As part of the core crude evaluation team at IHS, Mr. Sayal has developed crude oil and refined product pricing outlooks for clients monetizing their new crude production and for those looking to purchase crudes for existing and new refinery investments. The work streams involved reviewing assays, understanding trade flow patterns, evaluation of the market price setting region and refinery configurations, and developing refinery values and price forecasts.

**Market Studies**
Mr. Sayal performed a review of the US West Coast market outlook as it related to the client’s existing refinery operations in that region. The study entailed a review and forecast of the West Coast business environment including domestic crude oil production and import supply, product markets and related price margin forecasts.

**Regulatory Impacts**
Mr. Sayal participated on a team to understand the impact of the Volcker rule on the energy industry in the United States. His task was to capture the role of banks in providing financial resources and services including risk management and intermediation services in the commodities sector and assessing the cost to the refining industry due to the potential changes in the regulations.