



**International
Downstream Conference
& Exhibition**

**14 - 16 February 2023
Kingdom of Bahrain**

Under the patronage of the Prime Minister of the Kingdom of Bahrain

GDA INTERNATIONAL DOWNSTREAM CONFERENCE & EXHIBITION

Theme: Downstream Turning Points - Capitalising on Transformation

EVENT PROGRAMME

**14-16 February 2023
Kingdom of Bahrain**

www.gdaconference.org

Day 1 - Tuesday, 31 May 2022

06:30 - 08:30 **Registration Opens**

08:30 - 09:30 **Conference Opening Ceremonies including Ministerial Keynotes**

09:30 - 10:20 **Panel Discussion - Business Transformation**

This panel will discuss novel ways of transforming the downstream business. This includes the application of new business strategies and business models, doing things in a new way, establishing new joint-ventures or business agreements, and adopting new approaches to achieve business goals. Shifting business focus, such as shifting from a volume driven business to a margin driven business, as well as dealing with an increasingly competitive environment are key elements of the discussion. The integration and utilization of existing assets in the transformative journey. What kind of approach should different levels within a downstream organization adopt to achieve this transformation? Has the current pandemic triggered a need for accelerated business transformation, or a time to consolidate? Success stories and case studies will be shared, especially of a case where a failing business has been transformed into a successful one using novel business strategies and approach.

10:20 - 10:40 **Exhibition Opening Ceremony**

10:40 - 12:00 **Technical Sessions**

Digitalization in Downstream Sector	Disruptors
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12:00 - 13:00 **Lunch**

13:00 - 14:00 **Special Session - Market Analysis and Industry Trends**

Downstream industry is currently passing through many uncertainties and fluctuations, such as: feedstock availability, market demands, regulatory / environmental constraints, competitive energy systems, technology disruptions and geo-politics. It is vital for refiners and technology/service providers to understand these trends and prepare proactively.

This special session will discuss several questions such as:

- How to make sense out of diverse trends and market analyses from different sources?

- What refiners and technology/service providers should focus on?

- When is the oil/product demand most likely to peak?

Is fuel demand threatened by the EV/FCEV growth, shared mobility, autonomous vehicles, regulatory framework or policies?

- When and how they may cause real disruption to gasoline demand?

13:00 - 14:20 **Technical Sessions (Parallel Session)**

Future Growth	Human Capital?
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14:20 - 15:10 **Panel Discussion - Energy Transition**

Zero-carbon energy sources, including hydrogen, nuclear, biofuel and renewable energy sources like wind, solar, as well as lithium-ion batteries, coexist with the fossil-based sources e.g. oil, natural gas and coal. However, transformation of global energy from fossil-based to zero-carbon energy sources is currently going on at a fast pace and will be enforced in many countries before the second half of this century, creating a new challenging environment to the downstream industry.

This panel discussion will focus on the energy transition from fossil-based to zero-carbon energy, and the challenges for the downstream industry. What are the roles of government policies in enforcing this transition? How environmentalists, business analysts, refiners and automakers are predicting the future as electric vehicles grow in popularity? What is the impact on fossil fuel demand? How refiners will keep growing in the energy business while reducing cost and improving CO2 intensity performance? Where will be the downstream industry in the future?

15:10 - 16:10 **Special Session - Technology Transformation**

Downstream industry is agile and dynamic. Process technologies are continuously evolving, to improve performance, increase margin, stay competitive and/or to keep meeting the ever-changing customer requirements and environmental regulations which is becoming more stringent.

This session will focus on the challenges the downstream industry is facing, including enforcement of more stringent changes in customer requirements and environmental regulations, the involvement of new market competitors, higher operating cost and minimal refinery margin. What is the impact of these challenges on the downstream industry? What strategies oil refiners are taking to overcome these challenges, and how transforming to innovative process technologies can help refiners to stay in business and be competitive.

15:10 - 16:30 **Technical Sessions (Parallel Session)**

Resilience	Sustainability
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16:20 - 17:20 **Special Session - Sustainability**

This session will emphasize on the sustainability strategies, their implementations, and impact in both upstream and downstream. The speakers will share their successful environmental sustainability practices and will discuss the most critical sustainability risks. In addition, the experts will discuss :

- Environmental considerations in oil and gas industries, related to Water Management, Carbon Capture, Waste Management and co-processing of renewables
- Characteristics of products and processes targeting sustainability
- Best practices in the field of sustainability that are being applied
- Sustainability solutions with some highlights on their potential benefits and drawbacks

16:40 - 18:00 **Technical Sessions (Parallel Session)**

Digitalization in Downstream Sector	Disruptors
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18:00 - 18:20 **Break**

18:20 - 18:50 **Keynote - Peter Hinssen**

18:50 - 20:00 **Gala Dinner**

Day 2 - Wednesday, 01 Jun 2022

07:00 - 09:00 **Registration Opens**

09:00 - 09:50 **Panel Discussion - Downstream Growth Challenges and Opportunities**

The panel will discuss the future growth of downstream. Members of the panel will share their points of view on the key enablers for a robust growth in this sector. Changes in the demand side will be discussed with special emphasis on how downstream can turn demand changes into opportunities. Supply side will also be covered where panelists will elaborate on the changes in Upstream and how they can be potentially leveraged to make downstream more profitable. Panelists will shed light on the challenges facing downstream growth. In addition to the general theme, the session will zoom into downstream growth in GCC and deliberate the growth potential along with the challenge.

09:50 - 10:10 **Break**

10:10 - 11:30 **Technical Sessions (Parallel Session)**

Future Growth	Human Capital
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10:10 - 11:30 **Expert Sessions**

11:30 - 12:30 **Lunch**

12:30 - 13:50 **Technical Sessions**

Resilience	Sustainability
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12:30 - 13:50 **Expert Sessions**

13:50 - 14:10 **Break**

14:10 - 15:30 **Technical Sessions**

Digitalization in Downstream Sector	Disruptors
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14:10 - 15:30 **Expert Sessions**

15:30 - 15:40 **Break**

15:40 - 16:30 **Closing Panel Discussion - Digital Transformation in Downstream**

Digital transformation is inevitable for the downstream industry to survive and thrive. It helps to increase plant efficiencies, increase productivity and reduce operating cost by leveraging a plethora of IR4.0 technologies such as AI, Augmented Intelligence, AIoT, ML, VR/MR, Big Data Analytics, and Cloud computing. Such technologies have potential to achieve autonomous plants (self-learning, self-optimizing and self-sustaining). Panelists will share their experience and address the following key-questions facing the downstream industry in their digital transformation journey:

- How the new-age technologies be applied in the downstream industries?
- What are the business verticals within the downstream industries that can benefit the most?
- What are the key challenges, risks and obstacles? How to manage them?
- What will be the role of human workforce in such autonomous plants?
- What are the best practices for achieving a successful digital transformation?

16:30 - 16:50 **GDA Raffle Draw**

Day 3 - Thursday, 02 Jun 2022

07:00 - 08:30 **Registration Opens**

08:30 - 09:20 **Panel Discussion - Human Capital and Diversity**

Downstream industry is faced with unprecedented demands on its human capital due to high percentage of ageing workforce, low in-take of fresh workforce, technology disruptions, cultural & skill diversity, multiple roles, multi-tasking, aggressive deadlines and handling uncertainties. It is vital to maintain a happy state of mind to ensure maximum productivity with minimal health impacts. According to World Economic Forum's "The Jobs Reset Summit" held on 20-23 Oct 2020, 50% of all employees will need reskilling by 2025, as adoption of technology increases. Critical thinking and problem-solving top the list of skills employers believe will grow in prominence in the next five years. Newly emerging this year are skills in self-management such as active learning, resilience, stress tolerance and flexibility. Soft skills are the new hard skills of the future workforce. This panel will dwell on the above altered future of skill requirements for the workforce – now and for the foreseeable future.

09:20 - 09:30 **Short Break**

09:30 - 10:20 **Panel Discussion - Downstream World-Class Projects Delivery**

For downstream refiners and service providers to become highly competitive, deliver efficient projects, carry out safe commissioning & startups and run smooth operations, panelists will share their success stories in project execution, best practices and lessons learned. Panelists will also discuss current challenges during projects' life cycle, e.g. procurement and construction's delays, cost overruns and not realizing promised benefits. The discussions will shed light on What Refiners, PMCs' and EPCs' may do differently and how to bridge performance gaps by leveraging the current experience of COVID-19 pandemic.

10:20 - 10:40 **Short Break**

10:40 - 12:00 **Technical Sessions (Parallel Session)**

Future Growth?	Human Capital?
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10:40 - 12:00 **Expert Sessions**

12:00 - 13:00 **Lunch**

13:10 - 14:30 **Technical Sessions (Parallel Session)**

Resilience	Sustainability
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13:10 - 14:30 **Expert Sessions**

14:30 - 14:50 **Break**

14:50 - 15:30 **GDA Conference Outcome**

15:30 - 15:45 **Closing Remarks by Conference Chairman**

Day 4 - Monday, 13 Feb 2023

07:30 - 09:30 **Registration Opens**

09:30 - 10:00 **Welcome by GDA Founding Companies**

10:00 - 11:00 **Panel Discussion: Downstream Growth Challenges and Opportunities**

11:00 - 11:15 **Break**

11:15 - 12:30 **Technical Sessions (Parallel Sessions)**

Resilience?	Future Growth	De-carbonisation and Sustainability
<i>Exceptional diesel yield and resid conversion with low product sediment utilizing VTB recycle using ART HSLS Catalyst at the LNB H -Oil unit</i>	<i>Shaping the Refinery of the Future through Integration</i>	<i>Low carbon and fossil fuels: A story of sustainable co-existence?</i>
<i>Bapco's Journey Towards Performance Excellence</i>	<i>Alkylation Technology as an Answer to the C4 Management and Gasoline Pool Constraints</i>	<i>Decarbonising your asset: A stepwise evaluation of refiners' response options</i>
<i>Crude De-Salter Water Pump Retrofit With Non-Metallic Wear Parts</i>	<i>Crude C4 Alternatives for a Successful Grassroots Petrochemicals</i>	<i>Technology advancements in Energy Efficiency – Challenges, Solutions and Illustrations</i>

11:15 - 12:30 **Expert Workshop**

Next Generation Project Delivery - Session 1: Why Project Performance is suffering?

12:30 - 13:45 **Lunch**

13:45 - 15:00 **Technical Sessions (Parallel Sessions)**

Resilience?	Future Growth	De-carbonisation and Sustainability
<i>Bapco's No.5 Crude Distillation Unit (5CDU) Fired Heater Replacement Project - A Success Story</i>	<i>Investing in the Downstream Business Can Be Better Understood through a Case Study – The Cabinda Oil Refinery</i>	<i>Improving Refinery Amine Operations and Profitability through Veolia Total Amine Solution</i>
<i>Nalco Water Antifouling Program Extends Two Condensate Distillation Units Runlength</i>	<i>Delivering resilience in the energy transition: An external perspective on Shell Rhineland reconfiguration</i>	<i>Introduction of a Circular Route to Produce Circular Products from End of Life Plastics</i>
<i>CCR Design Enhancement and Reinforcement, Ras Tanura Clean Fuel Project</i>	<i>Oil Downstream Outlook and strategies</i>	<i>Case Studies on Implementation of Decarbonisation Strategies at HPCL Mumbai Refinery</i>

13:45 - 15:00 **Expert Workshop**

Processing Biofuels in Oil Refinery: Opportunities and Challenges

15:00 - 15:15 **Break**

- 15:15 - 16:15 **Panel Discussion: Business Transformation**
- 16:15 - 17:00 **Official Exhibition Opening Followed by VIP Tour**
- 17:00 - 18:00 **Conference Opening Ceremony including Ministerial Keynotes**
- 18:00 - 18:15 **Break**
- 18:15 - 20:30 **Gala Dinner and Award Ceremony**

Day 5 - Tuesday, 14 Feb 2023

- 08:00 - 10:00Registration Opens
- 10:00 - 11:00Panel Discussion: Decarbonisation & Sustainability
- 11:00 - 11:15Break
- 11:15 - 12:15Technical Sessions (Parallel Sessions)

De-carbonisation and Sustainability	Digitalisation in Downstream Sector
McKinsey's perspective on what refiners can do to decarbonize their operations	Hydrocarbon Custody Transfer Blockchain Technology "SALIENCE"
Reduced Emissions by Eliminating Routine Process Flaring with Predictive Analytics	Breakthrough Technological Pilot Study in KNPC 3D Metallic Printing of Selected Refinery Spare Parts
Steam Systems: The Root of Energy Efficiency	Implementation of Integrated 3D Virtual Reality Operator Training Simulator at BAPCO

- 11:15 - 12:15Expert Workshop

Next Generation Project Delivery - Session 2: What can be done to improve performance?

- 11:15 - 12:15Special Session - Market Analysis and Industry trends

Speaker
Musaab Mulla Manager S&MA, Aramco (invited)

- 12:15 - 13:30Lunch

- 13:30 - 14:30Technical Sessions (Parallel Sessions)

Disruptors	De-carbonisation and Sustainability
SASREF Blue Hydrogen Production with Reduction in GHG emission	
A baseline transportation risk analysis for transport of hydrogen in the Kingdom of Bahrain	
Decarbonization Pathways for Achieving Lower Carbon Aviation Fuel (LCAF) in a Refinery	

- 13:30 - 14:30Expert Workshop

Digital Energy Management and Decarbonization (Using online optimization and monitoring tool)

- 13:30 - 14:30Special Session - Technology Transformation

Speaker
Mahdi Al-Adel CEO, Aramco Ventures (invited)

- 14:30 - 14:45 Break
- 14:45 - 15:45 Panel Discussion: Energy Transition
- 15:45 - 16:00 Break
- 16:00 - 17:00 Technical Sessions (Parallel Sessions)

Digitalisation in Downstream Sector	Disruptors
<i>Reverse Engineering Toward Supporting the Domestic Industries</i>	
<i>Significance of Applied AI for Process Manufacturing Digitalization</i>	
<i>Giving wings to carryout internal inspection in critical equipment (Drone case)</i>	

- 16:00 - 17:00 Expert Workshop

Challenges of Digital Transformation in Asset Management

- 16:00 - 17:00 Special Session - Downstream World-Class Projects Delivery

Speaker
Hafedh Al-Qassab Acting Deputy Chief Executive & BMP Project Director, BAPCO *(invited)*

Day 6 - Wednesday, 15 Feb 2023

08:00 - 09:00 **Registration Opens**

09:00 - 10:00 **Technical Sessions (Parallel Sessions)**

Human Capital? and Talent Management	Resilience?	Digitalisation in Downstream Sector
<i>Leverage Tech Trends; Using Digital Storytelling as an Instructional Tool to Develop Young Leaders in Saudi Arabia</i>	<i>What Makes for a Safe Fired Heater?</i>	<i>New Invention for smart digital control of the Sulfur Reduction Additive in Fluid Catalytic Cracking Process- Refining Complex</i>
<i>Tracking the Financial Impacts of Structured On-the-Job Training (S-OJT)</i>	<i>De-bottleneck Refinery Cooling Water Summer Constraint to Capture the Loss of Distillate Yield and Sustain High RON Gasoline Production with Rented Chillers</i>	<i>Predictive Maintenance (PdM) in Gulf Downstream companies Case Study</i>
<i>New approach to Engineers training and Certification</i>	<i>Enhanced Grading System to Mitigate Pressure Drop Build Up in Hydrocracking Reactors</i>	<i>Enhanced Unit Monitoring Enabled by Digital Twin</i>

09:00 - 10:00 **Expert Workshop**

Next Generation Project Delivery - Session 3: Learning from Downstream Industry and Beyond

10:00 - 11:00 **Panel Discussion: Digital Transformation in Downstream**

11:00 - 11:15 **Break**

11:15 - 12:15 **Technical Sessions (Parallel Sessions)**

Human Capital? and Talent Management	Resilience?	Digitalisation in Downstream Sector
<i>Promoting Innovation Culture in KNPC</i>	<i>Innovative Approach for Onstream Removal of Ammonium Chloride Fouling Prevents Crude Unit Shutdown</i>	<i>Asset digitalization for wiser plant operation</i>
<i>Safety is good but psychological safety is better</i>	<i>Optimizing LC-FINING Reactor Operation & the Step Forward to a More Reliable LC-SLURRY Reactor Platform</i>	<i>Multi-Unit Harvesting of Real Time Optimizer Technology in Yanbu Refinery</i>
<i>The Human Energy Equation - Bridging Industry and Academia</i>	<i>Jazan Refinery Sulfuric Acid Reliability Enhancement</i>	<i>SASREF Digitalizing of Asset-Care Routine (SORA)</i>

11:15 - 12:15 **Expert Workshop**

De-carbonisation & Sustainability

11:15 - 12:15 **Workshop on Leadership**

- 12:15 - 13:30 **Lunch**
- 13:30 - 14:30 **Panel Discussion: Human Capital & Diversity**
- 14:30 - 14:45 **Break**
- 14:45 - 15:30 **GDA Conference Outcome and Closing Remarks by Conference Chairman**
- 16:00 - **Exhibition Closing**

Produced 29 August 2022

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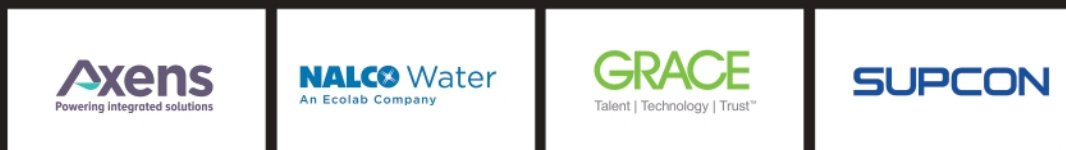
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