



**International
Downstream Conference
& Exhibition**

Under the patronage of His Royal Highness Prince Salman bin Hamad Al Khalifa,
the Crown Prince and Prime Minister of the Kingdom of Bahrain

GDA INTERNATIONAL DOWNSTREAM CONFERENCE & EXHIBITION 2023

Downstream Turning Points - Capitalising on Transformation

**13-15 February 2023
Exhibition World Bahrain**

POST-EVENT REPORT

MESSAGE FROM THE LEADERSHIP



International
Downstream Conference
& Exhibition

Dear Industry Professionals and Friends,

I was honoured to chair the 2nd edition of the GDA International Downstream Conference & Exhibition.

Back with renewed energy and enthusiasm, we hosted the GDA Conference & Exhibition 2023 at a brand new venue 'Exhibition World Bahrain' which recently opened in the Kingdom of Bahrain as the Middle East's largest venue of its sort.

I hope you found the conference programme and networking experience to exceed your expectations.

I also hope you were able to explore creative ways of not only sustaining, but also growing the downstream industry while positively contributing to the peace and prosperity of humanity. As I look into the future, I see a significant growth potential for our industry, despite the challenges posed by geopolitics, environmental concerns, post-pandemic dynamics, and economic uncertainties.

I hope you find this post-event report a valuable knowledge asset for future growth. While expressing my deep appreciation and gratitude for your active participation in this event, I re-iterate my appeal to join the GDA family for unlocking our combined potential to excel and address future challenges.

Suleman A. Al-Bargan
Chairman, Gulf Downstream Association
Senior Vice President of Global Manufacturing,
Saudi Aramco



Dear Sponsors, Exhibitors, Delegates and Visitors,

Thank you for blessing the 2nd edition of the GDA International Downstream Conference and Exhibition under the theme 'Downstream Turning Points - Capitalising on Transformation' with your gracious presence at the Exhibition World Bahrain, Kingdom of Bahrain.

As the industry becomes more competitive, we are navigating through a critical period of transformation where margin improvement, sustainability and capitalising on resources are topics of major significance. I hope that this event offered you a chance to interact with leading decision-makers addressing critical topics while exchanging ideas and building strategic partnerships across the downstream value chain.

It is my great pleasure to present you with this post-event report with highlights of all the salient outcomes, especially the key takeaways from every technical session and expert workshop. We are sure that this report will serve the purpose of a knowledge repository and a quick reference guide for all the downstream industry players to plan their future initiatives and develop roadmaps to address the industry challenges.

Based on the feedback we have received post-event, we can confidently say that this event met with a resounding success. Our ambition is to build on this success, and we hope that you will support and participate in all aspects of our future conferences and exhibitions.

Mohammad Al-Shahrani
Secretary General, Gulf Downstream Association
Director of Affiliates Manufacturing Excellence of Global Manufacturing,
Saudi Aramco

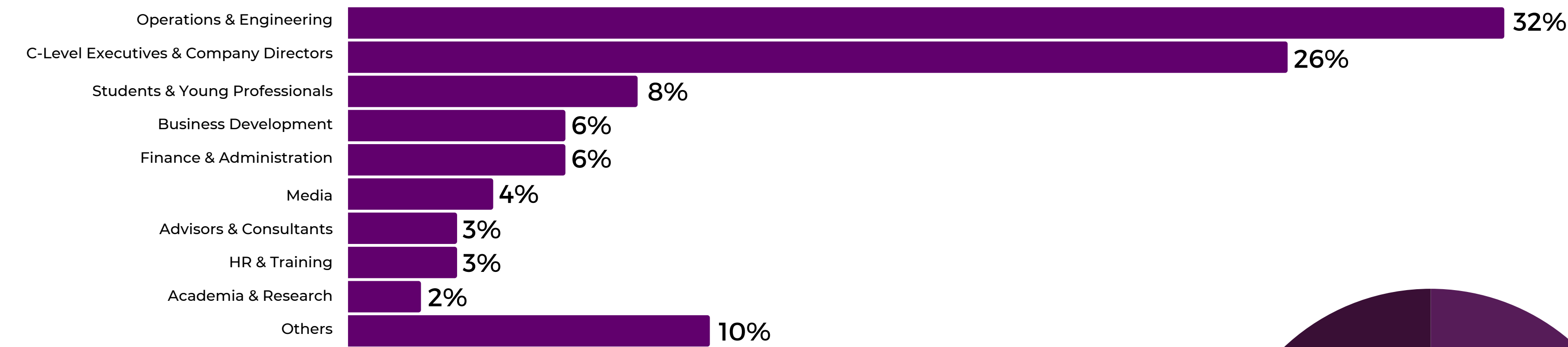
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EVENT STATISTICS



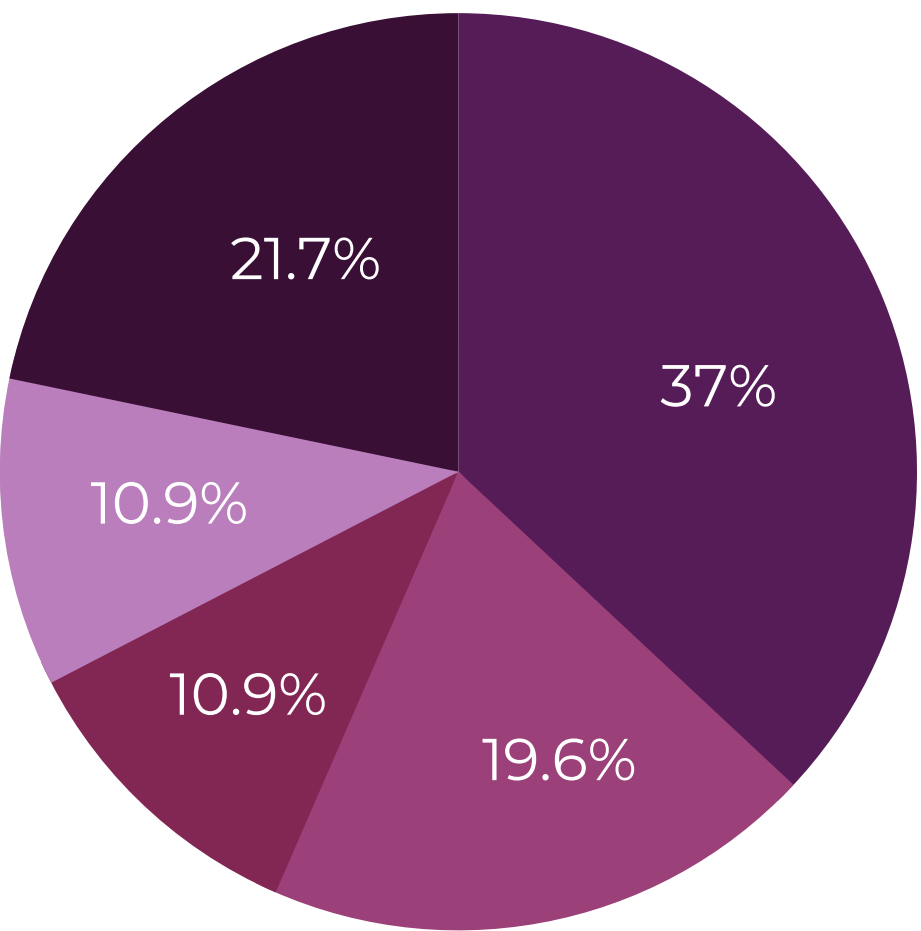
TOP PROFESSION



TOP 10 COUNTRIES

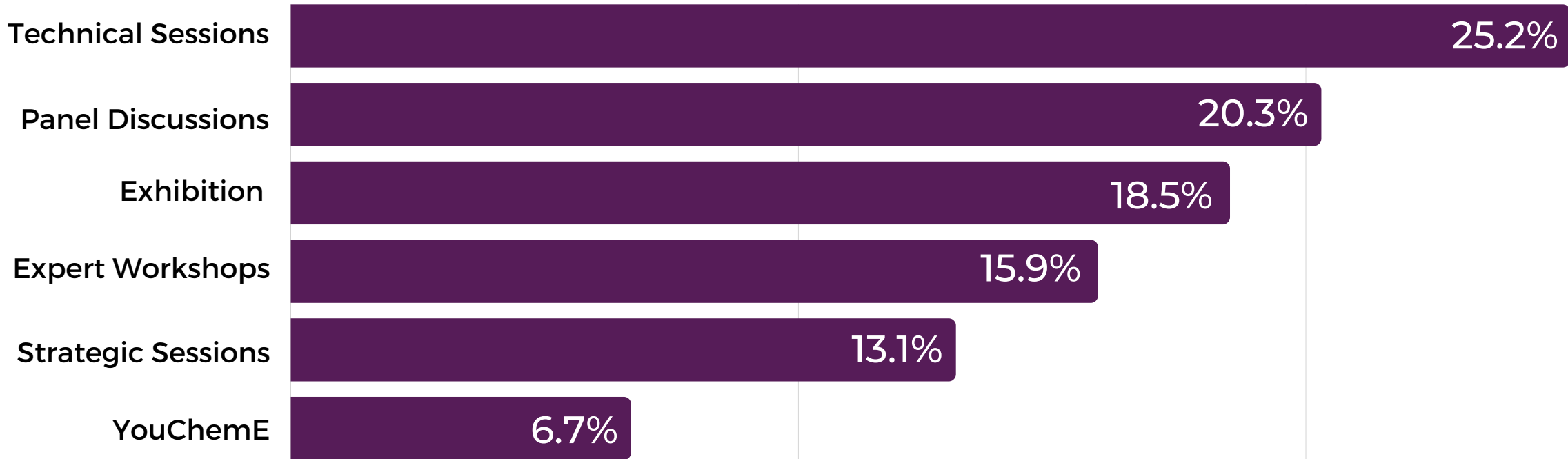
KSA	1703	Oman	29
Bahrain	1503	Korea	20
UAE	144	India	13
Kuwait	109	UK	9
USA	29	Pakistan	8

TOP COMPANIES



PARTICIPANTS FEEDBACK

Most of the participants enjoyed attending:



979
DOWNLOADS

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A FEW TESTIMONIALS...



International
Downstream Conference
& Exhibition

"This conference is extremely good for exchange of ideas and improves the industrial safety and performances. Beautiful experience."

Badal Kumar De
Maintenance Engineer,
Saudi Aramco

"The GDA Conference proved that collaboration is key to thrive the emerging disruptions. There were ample opportunities to network and share experiences and most of all, it established GDA as a true ambassador of facilitating collaboration."

Nooruddin Ahmed
Managing Partner.
Certero Business Corporation

"GDA International Conference & Exhibition fulfilled the desire and eagerness of all audience to re-connect and exchange knowledge post COVID-19. In addition, this edition was focused, specific and inclusive especially about today energy challenges and opportunities."

Emad A Al Muhaisen,
Division Head,
Saudi Aramco

"It's my first time to attend and I learned a lot. As an oil and energy laboratory professional, I was able to dive in deeper about core businesses and values related to Gulf downstream. Panel discussions and workshops were really engaging. I will definitely share my experience to my colleagues."

Anthony Bergonio
Senior Lab Technician,
Saudi Aramco

"We are really thrilled with what we saw here at GDA. It was a really great platform to connect with all our customers and our partners in the field of oil and gas and downstream where we shared experiences and technical activities on the same platform."

Mohammed Alwazzan,
Managing Director,
Nalco Water - An Ecolab Company

"Well organised, keep it up. The conference is informative and the exhibitors are well presenting the business."

Faten Rasool,
Analyst,
BAPCO

GRAND OPENING

The recently concluded Gulf Downstream Association International Conference & Exhibition 2023 was a resounding success, with over 3,600 attendees from across the globe gathering to share insights, ideas and learnings on the current state and future of the energy industry. The conference, which took place over 3 days, was a great opportunity for industry players to network and engage in discussions around key challenges and opportunities facing the industry today.

The conference kicked off with a panel discussion by the senior leadership of the world's leading energy companies, who highlighted the need for the industry to embrace new technologies and innovation in order to remain competitive and meet the evolving needs of consumers. The event stressed that while there are challenges facing the industry, such as the ongoing transition to clean energy, there are also opportunities for growth and development for those who are willing to adapt and innovate.

One of the key themes that emerged from some of the discussions across the conference was the need for greater collaboration between industry players and governments in order to address major challenges facing the sector and the importance of developing policies that incentivise investment in new energy technologies, and highlighted the need for greater international cooperation on issues such as energy security and climate change.





There were a number of presentations and case studies highlighting the success of companies that have made the transition to renewable energy, which invited speakers to share the challenges and opportunities associated with the adoption of these technologies.



Many speakers stressed that while there is still much work to be done to scale up renewable energy infrastructure and address the technical and financial challenges involved, there is no doubt that renewables will play an increasingly important role in the energy mix in the years to come.

In addition to the panel discussions and presentations, there were also a number of interactive workshops and networking events at the conference which provided speakers the opportunity to engage more deeply with specific topics.



The conference also featured an exhibition area, where companies showcased their latest products and services related to the energy industry as well as the YouChemE programme dedicated to young professionals in the downstream sector.

Overall, the GDA Conference was a great success, providing participants with valuable insights, ideas and connections to help them navigate the complex and rapidly-evolving energy landscape. As the industry continues to face challenges and opportunities in equal measure, it is clear that events like this will play an increasingly important role in shaping the future of the sector. With continued collaboration, innovation and investment, the energy industry has the potential to drive sustainable growth and development for years to come.



WATCH THE OPENING CEREMONY VIDEO



Opening Ceremony Video - GDA International Downstream Conference & Exhibition 2023


Share



Watch on  YouTube



**International
Downstream Conference
& Exhibition**

Day 1

**13 February
2023**

VIEW DAY 1 RECORDINGS

Time	Topic	Total Attendance
10:00 - 10:30	Welcome and Opening Remarks	900
10:30 - 11:30	Panel Discussion: Business Transformation	900
12:00 - 13:15	Technical Session: Resilience - Room A	72
12:00 - 13:15	Technical Session: Future Growth - Room B	188
12:00 - 13:15	Technical Session: Decarbonisation and Sustainability - Room C	136
12:00 - 13:15	Expert Workshop: Next Generation Project Delivery - Session 1: The Root Causes and Implications of Troubled Projects - Room D	48
12:00 - 13:15	Expert Workshop: Evolution of Asset Integrity Management through Predictive Maintenance - Room E	46
14:30 - 15:45	Technical Session: Resilience - Room A	52
14:30 - 15:45	Technical Session: Future Growth - Room B	57
14:30 - 15:45	Technical Session: Decarbonisation and Sustainability - Room C	115
14:30 - 15:45	Expert Workshop: Biofuels Technology Overview & Trends - Room D	19
16:45 - 17:10	Official Conference Opening	800
17:10 - 18:00	Panel Discussion: Downstream Growth Challenges and Opportunities	800
		4,133

DOWNSTREAM GROWTH CHALLENGES AND OPPORTUNITIES

KEY TAKEAWAYS

- Downstream growth in the GCC is towards the access to energy and to capture market opportunity and to continue the business sustainability, reputability, and reliability as they could be integrated with upstream to lead the supply chain and increased profitability.
- Flexibility is a key factor, for different feedstock acceptance and a wide range of product quality portfolios that can meet market requirements and international ESG quality legislations.
- A part of the unusual challenges that caused the oil business major disruption was the 2021 slowdown and closure of some downstream refineries and petrochemicals due to the Covid-19 pandemic, which was followed by the Russian/Ukraine geopolitical events. The lessons learnt was to develop a national force of human capital resources for such circumstances, where outsourcing might be restricted or unachievable.

Moderator

Anthony Wood, Vice President – MDE&I, S&P Global

Speakers

Abdulla Naji Ateya Al Messabi, Chief Executive Officer, ADNOC Refining

Dr. Faisal M. Al-Faqeer, Sr. VP - Liquids to Chemicals, Saudi Aramco

Abdul Rahman Yahyaei, CEO, Opal

Rachid Majiti, Senior Partner, McKinsey & Co.



BUSINESS TRANSFORMATION KEY TAKEAWAYS



Moderator

Naif Aldandeni, Senior Director, Baker Hughes

Speakers

Yahya A. Abushal, CEO, Sadara Chemical Company

Leon De Bruyn, President and CEO, Lummus Technology

Ms. Afaf Zainalabedien, Deputy Chief Executive Corporate Services, BAPCO

Sultan Albigishi, SVP Projects & Technical, ADNOC Refining

- Energy production is moving on a fast-paced transformation from fossil fuels to alternative non-fossil fuels and renewable energy mainly for sustainability and business continuity and hence crude oil production would be oversupplied in the short term with environmentally friendly cleaner fuel legislation and decarbonization.
- The investment economics focus has shifted to the petrochemical industry through integration with refineries in the GCC region. In addition, the optimization focus is currently on cracking the bottom of the barrel to produce cleaner and valuable fuels and focusing on commercialization and the end-to-end value chain.
- The ME is rich in crude oil as energy feed stock and hence different era is expected to start in this region attracting co-investors and Joint Ventures with new technology, instead of the legacy investments in downstream and expanding refining capacity.



Jay Parekh, Hydrocracking Subject Matter Expert, ART Hydroprocessing



Husain Aldailami, Senior Reliability Engineer, BAPCO



Ricky Stewart, Advisor, Solomon Insights



Amr Elsayed, Corrosion Engineer, Saudi Aramco

Placement of High Activity of Hydrotreating Catalysts is Key to Unlocking the Probability of Hydrocracking Unit Gross Margin

To achieve business goals, asset-based organisations must prioritise reliability and integrity to streamline the attainment of business goals, optimise costs and resources, and achieve optimised overall availability throughout. World-class benchmarking services provide data-driven insights to assess current performance and stay ahead of the competition. A data-driven approach coupled with a strategic plan focused on teamwork and employee engagement is necessary for positive change. This requires taking action to create a working culture and environment focused on improving overall asset integrity, reliability, and management.

BAPCO's Journey Towards Performance Excellence

The ICR 1000 catalyst line has been traditionally applied to increase volume swell in distillate hydrotreating applications with aromatic feeds, and improve hydrotreat activity for better utilisation of downstream hydrocracking catalysts. However, ART has demonstrated the use of the catalyst family for processing highly refractory vacuum gas oil feeds, increasing the viscosity index of unconverted oils, and reducing unconverted oil bleed rates in units processing refractory feedstocks. ART highlighted these niche application practices, from concept development to implementation in commercial units, and how they have helped customers improve refining margins and maximise cycle length, demonstrating the practical value and benefits of the ICR-1000 high-activity hydrotreating catalyst line in commercial refinery applications worldwide.

Mitigating Corrosion in Cooling Water Systems with High Chloride & Sulfate

Corrosion is a major problem in industry and infrastructure, resulting in significant expenditure every year to prevent, retard, and repair its damages, particularly in cooling water systems. This work focuses on studying the engineering of an inhibitor for carbon steel metal used in cooling systems, where the synergy between inhibitor components such as nitrite, molybdate, and dichromate is examined and optimised using the factorial experimental design followed by the one-factor-at-a-time approach. The results show that the new formula of molybdate-nitrite corrosion inhibitor delivers a corrosion inhibition efficiency of 99.33%, and inhibits Microbiologically Influenced Corrosion (MIC) caused by Sulfate Reducing Bacteria (SRB). Various combinations of the corrosion inhibitor components are introduced according to the required cost versus corrosion inhibition. Further studies are planned to widen the synergy study and increase flexibility to meet environmental regulations.



BAPCO's No.5 Crude Distillation Unit (5CDU) Fired Heater Replacement Project - A Success Story

- 1.Fired heaters in refinery process units are critical equipment that have a significant impact on the economics, operability, safety, reliability, and environmental performance of a refinery.
- 2.BAPCO replaced three old fired heaters with a single high-efficiency heater in their No.5 Crude Distillation Unit (5CDU) as part of their modernisation project due to the business case justification for the replacement.
- 3.The new heater has significantly improved overall performance, including reducing fuel gas consumption, increasing operational availability, lowering NOx emissions, reducing maintenance costs, and improving overall operability and reliability.



Abdulla Al Bin Ali,
Process Engineer,
BAPCO

Nalco Water Antifouling Program Extends Two Condensate Distillation Units Runlength

- 1.The two gas condensate distillation units of a major Middle East Refining company have a processing capacity of over 200,000 barrels per day and their main goal is to distill kerosene for further jet fuel production.
- 2.These units historically suffered from premature fouling and coking accumulation, leading to an average run length of 6 to 8 months and eroding a part of the annual company's profit.
- 3.Nalco Water proposed a technical solution involving a chemical program and advanced monitoring, which led to a great success in fouling and coking mitigation, resulting in increased run length of +317% and returned savings after chemical program and monitoring expenses.



Dr. Walter Militello,
Senior Manager,
Nalco Water An Ecolab Co.

Leverage Chemistry to Challenge Visbreaker Operational Limitations & Improve Conversion

- 1.SAMREF's Visbreaker Heaters were experiencing tube fouling and coke deposition, resulting in high tube differential pressure and limiting heater severity.
- 2.A new antifoulant additive injection trial was evaluated to minimise coking tendency inside furnace coils, allowing for an increase in severity and conversion, and improving product yield and margin.
- 3.The trial run was executed safely for a period of 6 months, and the results revealed the antifoulant additive injection effectiveness to be proven up to 460 degC with a noticeable 2 BarG additional heater dP gain, equivalent to one month run length extension. The calculated benefit of 1.5 M\$ over the cycle length with a benefit-to-cost ratio of 9/1. Further conversion can be achieved with a revised injection strategy and higher coil outlet temperature considering two heaters injection.



Shahid Raza,
Staff Process Engineer,
Saudi Aramco Mobil Refinery
Company Ltd. (SAMREF)

FUTURE GROWTH KEY TAKEAWAYS

MODERATED BY:
Dr. Dawoud Bahzad, Division Director - Science & Technology (S&T),
Kuwait Institute for Scientific Research (KISR)



Abdullah Albannay,
Digital Solutions Architect,
Saudi Aramco



Elodie Letourmy,
Gasoline Lead Technologist,
Axens



Abdullah Marri,
Lead Process Engineer,
Saudi Aramco



Mikhail Khvastunkov,
Engineering Specialist,
Saudi Aramco

Plant of the Future: Planning the Journey

- 1.The plant of the future study conducted by the Saudi Aramco Digital Plant Team aligns the Factory of the Future (FoF) initiative with SA's internal initiatives for transforming the company's operations and business, including the digital transformation program, digital plant, and operational excellence.
- 2.The study presents the current challenges in the energy industry and the opportunities presented by the current development, such as 4IR and national initiatives like Vision 2030, while establishing a path forward with actions tailored to fit within the current demands of the industry and the company to maximise potential ROIs and establish leadership with successful implementation.
- 3.Recommendations are presented to inspire leadership, take necessary actions, and form focus groups for continuous development of the plant of the future and align it with the dynamics of the market, company, and talents. This will help keep the stable momentum of the initiative and ensure its success in the future.

Alkylation Technology as an Answer to the C4 Management and Gasoline Pool Constraints

- 1.Refiners in the Middle East are facing increasingly stringent gasoline specifications to meet customer demands and export quality requirements, with high RON premium specifications being particularly important.
- 2.Alkylation is seen as an ideal solution to help refiners meet these specifications and manage the C4 olefinic cut.
- 3.Axens is offering a solution to this challenge through the AlkemaXTM Alliance, which combines three technologies: ExxonMobil Alkylation Technology, Alkyfining, and C4 Isomerization, to develop an optimal and tailor-made solution for refiners.

Crude C4 Alternatives for a Successful Grassroots Petrochemicals

The increasing demand for high-quality gasoline and stringent export specifications has put Middle East refiners in a tight spot, and the alkylation process seems to be the ideal solution to tackle this problem. Axens has come up with the AlkemaXTM Alliance, which includes three cutting-edge technologies - ExxonMobil Alkylation, Alkyfining, and C4 Isomerization - to provide a tailor-made solution to refiners. By highlighting the main advantages of these technologies and their relation to the C4 olefinic cut management, Axens aims to present a comprehensive solution to the gasoline pool problematic. The presentation will focus on the importance of the alkylation process in meeting RON 95 Euro V specifications and how it can be used to produce valuable components like 1,3-butadiene, isobutylene, and normal butenes. With Axens' portfolio of processes and technologies, refiners can find an optimum configuration for their project, based on economics and strategic goals, minimising the need for rework.



Oil Downstream Outlook and Strategies

There are indicators that suggest that the implications of today’s crisis could be even more far reaching. We have a suite of clean energy technologies that are mature, and we estimate that over the next five years, the amount of installed renewable capacity worldwide will be equivalent to the capacity installed over the last two decades. That acceleration is being reinforced not just by climate priorities, but very strongly by energy security priorities and by considerations of industrial policy, in many countries.

Delivering resilience in the energy transition: An external perspective on Shell Rhineland reconfiguration

The industry’s focus five years ago had been on upgrading projects to convert lower value oil products into higher value products. With continuing pressing challenges due to the disruptive energy transition, the trend now is more around energy transition projects including lower emissions, cleaner sources of hydrogen and further integration with petrochemicals.



Dr. Ahmad Al Qattan,
Market Intelligence,
Kuwait Petroleum International



Johnny Stewart,
Principal Analyst EMEARC,
Wood Mackenzie



Low carbon and fossil fuels: A story of sustainable co-existence?

Decarbonisation of oil & gas sector is relevant and impactful. A short - mid and long term strategy comprising of wake to well emissions, bio fuels and LCAF along with government incentives have kick started the journey in the region.

Decarbonising your asset: A stepwise evaluation of refiners' response options

There is no avoidance to carbon capture. Everyone has to be part of it and there are low, medium and high cost solutions are available.

Technology advancements in Energy Efficiency – Challenges, Solutions and Illustrations

Energy efficiency programs at the refineries are easiest to start towards decarbonisation journey. Identifying right projects and combination with digital benefits will be key to measure and improve the decarbonisation benefits



Dimitrios Orfanidis,
Division Head: Downstream
Investment Analysis, Saudi Aramco



Gurminder Singh,
Director, Technology Licensing -
MENA, Shell Catalysts & Technologies



Amitkumar Khadayata,
Senior Engineer - Energy Management,
ADNOC Refining

DECARBONISATION AND SUSTAINABILITY KEY TAKEAWAYS

MODERATED BY:
Dr. Hayat Abdulla Yusuf, Assistant Professor and PCAP
Program Coordinator, University of Bahrain



Improving Refinery Amine Operations and Profitability through Veolia Total Amine Solution

The paper discusses the importance of amine units in the refinery operations, and how poorly operated amine units can result in increased operating costs and out of specification products. It emphasises the need for improved technologies and techniques to maintain product quality, improve reliability, conserve energy, and preserve refinery throughput. Veolia WTS's "Total Amine Solution" packages are presented as a solution to positively impact production and yield performance and cost improvements. These packages utilise a combination of traditional and new on-stream and on-site measurement technologies, high-level analytics, and membrane separation technology. The paper highlights several new methods developed in the last few years and introduced and proven within the industry. These technologies and data availability allow for faster root cause analysis and corrective actions, with more transparency and urgency than was possible before digital technologies were applied to the refinery operating environment. The paper includes several example case studies from refineries to demonstrate the potential value generated through adoption of new technologies and analytic techniques in amine units. These case studies highlight Veolia's Amine Reclaim Technology, 24/7 data monitoring platform, Max-Amine technology, technical infrastructure set up, and online cleaning for amine systems. Overall, the paper emphasises the importance of amine units in the refinery operations and presents Veolia WTS's Total Amine Solution packages as a solution to improve amine unit operations and reduce operating costs.



Introduction of a Circular Route to Produce Circular Products from End of Life Plastics

The International Sustainability & Carbon Certification (ISCC+) obtained by Saudi Aramco's Ju'aymah NGL Fractionation Plant is a recognition of the plant's sustainability efforts in the waste plastic recycling initiative in partnership with SABIC and SATORP. The circular route to produce circular polymers from SABIC plastic waste is a significant step towards reducing carbon footprint and minimising the harm of single-use plastic on the environment. The initiative involves converting mixed plastic waste into Pyrolysis Oil or TAC Oil, which will be processed at SATORP to produce circular plastic and establish the first petrochemical circular value chain in the Kingdom. It's great to see companies taking steps towards sustainability and adopting circular economy principles.



Case Studies on Implementation of Decarbonisation Strategies at HPCL Mumbai Refinery

Hindustan Petroleum Corporation Limited (HPCL) has developed a plan to achieve net-zero emissions from crude refining and energy consumption by 2040. As HPCL's refineries are relatively older installations, they have higher specific energy consumption than similar-sized refineries, and emissions from HPCL refineries are also higher than expected for refineries with similar complexity. Therefore, decarbonisation strategies have been formulated with energy efficiency as a major focus area for abating CO2 emissions at HPCL.

Two case studies have been presented to showcase the quick implementation of decarbonisation strategies at HPCL's Mumbai Refinery. In the first case study, during the revamp of CDU-I, the design coil inlet temperature was improved from 242 degC to 284 degC using pinch study with minimum modifications in the preheat trains. This has resulted in a 30% reduction in furnace duty despite an increase in throughput by 35%. Fouling mitigation has been ensured by using helical type heat exchangers. In the second case study, an in-house HP R&D developed antifoulant is used for dosing in crude, CDU & VDU bottom circuits for fouling minimisation, which has resulted in CO2 emission reduction by 43000 tons/annum and energy saving to the tune of 18000 ton fuel oil equivalent.





NEXT GENERATION PROJECT DELIVERY - SESSION 1: THE ROOT CAUSES AND IMPLICATIONS OF TROUBLED PROJECTS (BY GDA PROJECT MANAGEMENT TECHNICAL COMMITTEE)



Moderator

Dr. Saadi Adra, Founder and CEO, Advisors

Speakers

Mohammed Hammad, VP Training & Development,
Project Management Institute - KSA

Ghassan H Soraihi, Product Movements & Utilities Operations
Division Head, Jazan Refinery Complex, Saudi Aramco

Adnan Nassereddine, Director of Projects, Jacobs Zate

Fatima Al Zaabi, Project Manager, ADNOC Refining

Nawaf A. Al-Ahmad, Team Leader, Major Projects, Kuwait Integrated
Petroleum Industries Company (KIPIC)

- Lack of engaged communications and poor collaboration / decision making between owner, operator, project manager and contractor, starting from early phases all through commissioning often causes re-work either on design, implementation, or even both. Inevitably, this leads to conflicts on deliverables and performance causing conflicts, delays and exceeding budget.
- In some cases, owners rely on contractors, while not addressing risk allocation and associated impact or recovery or mitigation costs. Meanwhile, these same owners tend to initiate multiple packages simultaneously. This dries the limited pool of qualified contractors of the needed resources, often causing delays. When things go wrong, some owners whip the contractors and blame them for all issues. This is caused to lack of proper enterprise planning, coupled with risk management and joint collaborative agreements with contractors.
- Inadequate planning efforts (FEED) leads to indefinite scope and entails high risks. Not involving key stakeholders at early phases causes misalignment, changing priorities and missing the target to realise benefits.

EVOLUTION OF ASSET INTEGRITY MANAGEMENT THROUGH PREDICTIVE MAINTENANCE (BY GDA DIGITALISATION TECHNICAL COMMITTEE)

KEY TAKEAWAYS

- Although predictive maintenance brings more visibility to assets management and helps to detect faults at early stages, development and maintaining the models require a lot of human intervention. Bapco and Aspentech SMEs demonstrated that human intervention in all phases of project execution and models' maintenance is key to successful predictive maintenance implementation. The solution requires plenty of inputs from the end users at early stages and as time progresses such interventions is cut down.
- Management of change and training on a daily basis is another crucial factor to maximise the benefits of predictive maintenance applications.
- Even though predictive maintenance is a proven technology, proper asset selection is key to capitalise on and justify the adoption of such a technology in the industry. Predictive maintenance is a tool to help maintenance team to manage mechanical assets more efficiently and does not replace humans.



Moderator

Abdulrahim
Mohammed,
Automation
Engineer, BAPCO



Speakers

Mohamed Alaradi,
Principal Consultant
Engineer,
Aspen Technology



Vinayak Parmar,
Product Movements &
Utilities Operations
Division Head,
Jazan Refinery
Complex,
Saudi Aramco

BIOFUELS TECHNOLOGY OVERVIEW AND TRENDS (BY GDA TECHNOLOGIES TECHNICAL COMMITTEE)

KEY TAKEAWAYS

- Increased competition for biofuel feedstock will impact the markets for biofuels. Disruptions in the global agricultural market will be witnessed in the biofuel industry as the debate over food as fuel intensifies due to rising inflation rates and supply chain delays brought on by the ongoing conflict between Russia and Ukraine.
- As the Gulf refineries continue to invest in fossil fuels conversion units to meet the energy demands of today, they can take advantage of ebullated bed or slurry bed technologies that are suitable to process more difficult renewable feedstocks like locally available municipality waste, circular feeds, or lignocellulosic feed which most western refineries are not equipped to do without significant metallurgy upgrades.
- Due to the nature of limited feedstock and desire to minimise transportation, the solutions will tend to be local and smaller. These bio fuels production units will not enjoy the scale of typical big refineries, but will be more efficient in molecular management .



Moderator

Anood Taher,
Senior Specialist of
Process Engineering
(Process Simulation),
R&D,
ADNOC Refining



Speakers

Mohanraj Subramanian
Associate Director,
Commodity Insights,
S&P Global



Goutam Biswas
Technology Director,
Chevron Lummus
Global (CLG)



Dr. Ranjit Kulkarni
Project Manager,
ADNOC Refining



International Downstream Conference & Exhibition

Day 2

14 February 2023

[VIEW DAY 2 RECORDINGS](#)

Time	Topic	Total Attendance
10:00 - 11:00	Panel Discussion: Decarbonisation & Sustainability	508
11:15 - 12:15	Technical Session: Decarbonisation and Sustainability - Room B	112
11:15 - 12:15	Technical Session: Digitalisation in Downstream Sector - Room C	244
11:15 - 12:15	Expert Workshop: Next Generation Project Delivery - Session 2: How to Improve Project Delivery Today and in the Future? - Room D	115
11:15 - 12:15	Strategic Session - Market Analysis and Industry trends - Room A	216
13:30 - 14:30	Technical Session: Disruptors - Room B	94
13:30 - 14:30	Technical Session: Decarbonisation and Sustainability - Room C	149
13:30 - 14:30	Expert Workshop: Digital Energy Management and Decarbonisation - Room D	55
13:30 - 14:30	Strategic Session - Technology Transformation - Room A	129
14:45 - 15:45	Panel Discussion: Energy Transition	215
16:00 - 17:00	Technical Session: Digitalisation in Downstream Sector - Room B	45
16:00 - 17:00	Technical Session: Disruptors - Room C	17
16:00 - 17:00	Expert Workshop: Challenges of Digital Transformation in Asset Management - Room D	34
16:00 - 17:00	Expert Workshop: Digitalisation in Action, Real Case Study of Refinery Optimisation - Room E	30
16:00 - 17:00	Strategic Session - Downstream World-Class Projects Delivery - Room A	77
		2,040

DECARBONISATION AND SUSTAINABILITY
KEY TAKEAWAYS



Moderator

Andreas de Vries
Downstream
Finance,
Strategy & Planning,
Saudi Aramco

Speakers

Dr. Hasan Karam
VP of Plant Operations
(RR),
ADNOC Refining

Fadi Alshihabi
ESG Services
Leader, KPMG

Tetsuo Ariei
Senior Fellow,
JCCP

- To control the climate change crisis from the downstream industry while ensuring energy security, the industry should follow maximizing energy production with minimizing emissions using new process technologies for business sustainability and competitiveness.
- Standardize carbon recording performance across different sectors, where globally the regulators are putting pressure on manufacturers for Environmental, Social and Governance (ESG) and standards for carbon reporting like Global Reporting Initiative (GRI) and Task Force on Climate Related Financial Disclosure (TCFD).
- GCC downstream are targeting zero carbon for GCC by 2050 and hence started looking forward to customers need and products specification as per international regulatory legislation for products sustainability.

ENERGY TRANSITION
KEY TAKEAWAYS

- In the past 10-15 years, a lot of expansion in renewable energy has been noticed like solar energy, windmills, or battery storage, and power storage in different applications in the industry to adopt Environment, Social, and Governance (ESG) regulatory. Energy producers have started talking about decarbonization to control global warming, which is the welcome change to be considered in the world.
- Geopolitical events started 2022 and abnormal spike in crude products prices and refinery margins showed that affordability puts pressure on accelerating the pace of energy transition. Therefore, Investments in oil refineries need to continue.
- In 2020, with Covid-19 pandemic and crude oil prices collapse and refinery margins dropped to negative figures, the world started the narrative change in energy transition and hence for the near future, downstream refineries need to strategically consider alternative renewable energy sources with their challenges, opportunities and associated risk. The future energy mix will contain Wind, Solar, Nuclear, Green Hydrogen, and core existing refinery products.

Moderator

Keith A. Couch
Head of Business
Development &
Integrated Projects,
Honeywell UOP

Speakers

Gaurav Srivastava
Executive Director,
Consulting,
Advisory Services,
S&P Global

Mohammed Al-Habib
Regional Energy
Transition Executive
Director - MENATI,
Baker Hughes

Musaab Mulla
Manager S&MA,
Saudi Aramco



TECHNOLOGY TRANSFORMATION

KEY TAKEAWAYS



Moderator

Nathan Ergonul, Managing Director, ART Hydroprocessing

Speakers

Mahdi Al-Adel, CEO, Aramco Ventures

George Cui Shan, Chairman & CEO, SUPCON

Evgeny Fedotov, SVP - EMEA, AVEVA

Abdulla Omar Al Ameri, VP of Asset Development
Division, ADNOC Refining

- Continuous challenges for the past 90 years that are facing refineries are Environmental Social Governance, consumer behavior, decarbonization, new generation of the products and transformation of technology. Those challenges led refinery to focus on petrochemical manufacturing and integration with refineries to increase refining profitability.
- To continue as reputable long term suppliers, reliable, and sustainable, refiners need to cope with technology evolution in operations, and commercialization to capture value on the table and while meeting stringent specification with lower carbon fuel emissions and green power generation.
- Maximize technology usage for refinery optimization and adopt refinery integration with petrochemical to provide flexibility with variety of feedstock and products portfolio diversity. The focus on Hydrogen production technology is as important as the main substance to combine with carbon to produce hydrocarbons and desulphurization to remove sulphur from fuel emissions.

DOWNSTREAM WORLD-CLASS PROJECTS DELIVERY

KEY TAKEAWAYS



Moderator

Dr. Saadi Adra, Founder and CEO, Advisors

Speakers

Hafedh Al-Qassab, Acting Deputy Chief Executive of Operations & BMP Project Director, BAPCO

Juan Manuel Tovar, CEO, Tecnicas Reunidas, KSA

Meqbel A. Al-Shammari, Manager of Hydrogen & Petrochemical Program, Saudi Aramco

Issam Srour, Consultant, IPA

- Assign clearly EPC roles and responsibilities correctly for all project activities, specifying detailed and well communicated engineering design, procurement and construction phases with assigning the five W's (Who, What Where, Why, and When). With continuous major development projects in the ME. GCC needs to establish a global project management supply chain team to reduce project schedule delivery and reduce the risk of projects delays or failure.
- World class project delivery requires the right decision-making team and to start at the right time as per market demand, with roll over disciplinary actions from start to end journey of a project with success story without compromise on Human, Health Safety and Environment.
- Project delivery success depends widely on different challenges of the multi-disciplinary working team strategy with strength in, leadership, communication, competency, capability, reinforcement, schedule, methodology, recording, targets priorities, operability, completion success criteria and post project implementation profitability analysis.

MARKET ANALYSIS AND INDUSTRY TRENDS

KEY TAKEAWAYS

- World is entering the era of business uncertainties and geopolitical effect on fluctuating supply and demand disruption, GCC countries plays vital role in the global energy supply with consideration to their readiness for the coming short and long-term strategies to cope with changes in ESG regulatory and legislation.
- Refineries in GCC are expanding with petrochemical integration for better optimization and profit-making business with the wider range of products portfolio supply with the challenge focusing on products new quality constrains, energy transition and efficiency improvement for long term sustainability.
- To be competitive, Sustainability and Reliability Opportunity goals should consider the products carbon footprint for the short- and long-term downstream investment, which is believed to be a focus point by technology providers. Refineries with higher profitability are those integrated with petrochemical plants and residue crackers for cracking the bottom of the barrel, as the naphtha and fuel oil has negative crack spread compared to crude oil as feed stock.



Moderator

Eiman Al Hammadi, Business Development Manager,
ADNOC Refining

Speakers

Jon Stroup, Vice President, Solomon Insights

Dr. Yasser Boghdady, Senior Oil Industry Expert,
OAPEC - Organization of Arab Petroleum Exporting
Countries



McKinsey's perspective on what refiners can do to decarbonise their operations

McKinsey outlines several strategies for downstream operators, particularly refiners, to decarbonise their operations. One approach is to increase energy efficiency through the use of downstream-specific technologies like waste-heat-recovery technology and medium-temperature heat pumps. Another option is to adopt green hydrogen, which can be produced through electrolysis using renewable energy rather than steam methane reforming, or through blue hydrogen, which uses SMR plus carbon capture, utilisation, and storage (CCUS). High-temperature electric cracking, which uses electric coils instead of fuel gas to provide heat, is another promising technology, but is still in the early stages. Finally, replacing conventional-oil feedstocks with biobased feedstocks or recycled-plastic materials could significantly reduce both Scope 1 and Scope 3 emissions and extend the lifetime of refining assets.



Reduced Emissions by Eliminating Routine Process Flaring with Predictive Analytics

This describes how Saudi Aramco, a global oil and gas company, partnered with OnPoint, a Koch Engineered Solutions company, to reduce flaring events at its facilities. Flaring events were causing loss of production and profit, and the company wanted to take a proactive approach towards net zero emissions. The team processed hundreds of variables and identified key scenarios contributing to process flaring events. Using machine learning, they developed a real-time monitor that allowed operators to predict process flaring events up to 40 minutes in advance and take corrective action. As a result, the number of minutes in flare was reduced by over 60% the year following implementation, and the company gained insight into the sources of the events to reduce future flaring.



Steam Systems: The Root of Energy Efficiency

It's true that energy efficiency is a key factor in reducing carbon emissions, and improving the steam management system can be a major contributor to that effort.

By breaking down the steam management system into the five elements you mentioned, companies can effectively monitor and optimise steam production, consumption, and treatment to minimise energy waste and greenhouse gas emissions. Improving the efficiency of steam systems can also result in significant cost savings for companies.



It's important to note that while steam systems are a critical element of energy efficiency, they are not the only area that companies should focus on. Other measures such as renewable energy adoption, supply chain optimisation, and employee engagement can also contribute to reducing carbon emissions. However, as you noted, improving the steam management system can be a great starting point for companies looking to reduce their carbon footprint.

DECARBONISATION AND SUSTAINABILITY KEY TAKEAWAYS

MODERATED BY:
Fadi Mhaini, Managing Director, Lummus Technology MENA and
Global Director of Technology Licensing for KSA, Chevron
Lummus



SASREF Blue Hydrogen Production with Reduction in GHG emission

- 1.SASREF is committed to reducing GHG emissions and has undertaken a synergy initiative with SIPCHEM to improve its margin, operation excellence, and EHS aspects.
- 2.SASREF has reduced its GHG emissions significantly by exporting CO2 and producing Blue Hydrogen through a conventional steam methane reformer (SMR) process.
- 3.SASREF has obtained the world's first independent certification for "blue" hydrogen production from TÜV Rheinland, which signifies a major milestone in their efforts to develop clean energy solutions and be a major supplier of Lower Carbon Aviation Fuels (LCAF) in line with Saudi Arabia's national vision 2030. The certification is based on specific criteria that consider mass and energy flows, direct and indirect emissions, and the avoided burden approach to determine the amount of Blue Hydrogen produced.

A baseline transportation risk analysis for transport of hydrogen in the Kingdom of Bahrain

- 1.This paper provides a detailed risk analysis for the road transportation of hydrogen in the Kingdom of Bahrain, with the aim of enabling concerned parties and legislators to properly plan for safe introduction of hydrogen fuel to the roads.
- 2.The analysis includes a literature review for relevant standards, good practices, and accepted research methods, as well as statistical analysis of traffic and road accident data, consequence analysis for loss of containment scenarios involving hydrogen, and quantitative risk analysis using good practices such as those included in the 'Purple Book' CRP-18E.
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- 3.The results of the analysis are used to determine overall risk associated with road transportation of hydrogen and to make recommendations for safe transportation of hydrogen in the future, including a framework for future analysis and for legislators and concerned parties in charge of the road transportation of hydrogen fuel.

Decarbonisation Pathways for Achieving Lower Carbon Aviation Fuel (LCAF) in a Refinery

- 1.The aviation sector is a significant contributor to global GHG emissions, accounting for about 2.5% of global emissions, and the industry has committed to achieving net-zero emissions by 2050.
- 2.LCAF is a regular Jet fuel that has a reduced life cycle carbon intensity by 10% or more from the global figure of 89 gCO2-eq/MJ, and is endorsed by ICAO as part of the measures for decarbonising the aviation sector.
- 3.The presentation evaluates the available pathways for reducing CO2 emissions associated with manufacturing aviation fuel in a refinery to meet LCAF criteria, including carbon capture, fuel switching, and lower carbon utilities, but reduction in refining intensity alone may not be sufficient to attain LCAF without emissions reduction in upstream crude oil operations carbon intensity.

Yaser Fallatah,
Manager of Planning and Business
Development,
Saudi Aramco Jubail Refinery Company
(SASREF)

Bassam Alhamad,
Former Director of the Quality Assurance &
Accreditation Center, University of Bahrain

Dr. Nasiru Tukur,
Engineering Consultant, Saudi Aramco



DIGITALISATION IN DOWNSTREAM SECTOR
KEY TAKEAWAYS

MODERATED BY:
Maha AlHarbi, Downstream Digital and
Technology Coordinator, Saudi Aramco



Manojkumar Mantry
Measurement Engineer,
Saudi Aramco



Ali Mostafa Ali Al-Shatti,
Engineer - Research & Technology,
Kuwait National Petroleum Company (KNPC)



Hussain Fardan,
Senior Process Control Engineer, BAPCO

Hydrocarbon Custody Transfer
Blockchain Technology “SALIENCE”

- 1. Saudi Aramco has implemented Blockchain Technology to automate their meter-to-cash business processes in custody transfer of hydrocarbons, which is a significant step towards digital transformation, Industrial Revolution 4.0, and Industrial Internet of Things.
- 2. The implementation of Blockchain technology has enabled Saudi Aramco to achieve benefits such as authenticity, traceability, dispute avoidance, and efficiency in their hydrocarbons supply chain meter-to-cash business processes.
- 3. The Blockchain solution provides end-to-end domestic sales traceability, eliminates manual data entry, and optimizes lengthy hydrocarbon trade reconciliation, resulting in enhanced visibility of the custody transfer for all concerned parties, easy monitoring and enforcement of agreements, and proactive elimination of potential claims and disputes.

Breakthrough Technological Pilot
Study in KNPC 3D Metallic Printing
of Selected Refinery Spare Parts

- 1. KNPC Research & Technology has successfully implemented 3D printing technology to raise the benchmark of industrial applications for spare parts in the oil and gas industry, which is aligned with their digital transformation strategy.
- 2. The use of 3D printing has led to a reduction in procurement lead-time by 97.3% and lowered the cost of conventional manufacturing by 41.3%. Additionally, 3D printing has allowed for the production of complex designs and improved metallurgical parts, with minimal waste generation compared to traditional manufacturing processes.
- 3. The outcomes from this emerging technology can be applied to all segments of the oil and gas industry and support material development to achieve refinery plant integrity and sustainability. The technology is still under development, and further evaluation and study of prototypes will help to mitigate challenges and obstacles.

Implementation of Integrated 3D
Virtual Reality Operator Training
Simulator at BAPCO

- 1. The refining industry is undergoing a complete revolution due to ongoing digitalisation initiatives, and operator training is no exception.
- 2. BAPCO refinery has deployed an integrated 3D Virtual Reality (VR) Operator Training Simulator (OTS) that integrates a high-fidelity dynamic simulation model and a plant topography model, allowing a field operator and a console operator to engage on a virtual platform in the same manner as they would in reality. The 3D VR OTS has resulted in an exponential advance in training efficiency and effectiveness, and the session will take the audience through the phases of developing and deploying the 3D VR OTS, as well as lessons learned and the maintenance of such a solution.

DIGITALISATION IN DOWNSTREAM SECTOR

KEY TAKEAWAYS

MODERATED BY:
Mohamed Al Noaimi,
Business Strategy Leader, BAPCO



Faris Alghamdi,
Maintenance Planning &
Engineering Supervisor (A),
Saudi Aramco



Shardul Shindadkar,
Asst Mgr - Sales and
Marketing, Ingenero Inc



Hamad Saeed Al Naqbi,
Team Leader - Inspection (I),
ADNOC Refining



Prashanth Markonda
Koteswara, Senior
Engineer - Inspection,
ADNOC Refining

Reverse Engineering Toward Supporting the Domestic Industries

Significance of Applied AI for Process Manufacturing Digitalisation

Giving wings to carryout internal inspection in critical equipment (Drone case)

1. Reverse Engineering reduce maintenance time and costs as well as it has a positive spillover on local suppliers.
2. New Challenges faced by the downstream sector necessitate a paradigm shift in embracing new technologies as they improves production, efficiency, reliability, emissions, safety and sustainability.
3. New technology deployment such as Drones has aided operators to conduct safer, effective and cost-effective equipment inspection.



Jad Dib,
Partner, McKinsey & Co.



Shahreyar Khan,
Engineering Specialist - Process
& Control Systems Department,
Saudi Aramco



Ahmad D Hammad,
Science Specialist, Saudi Aramco



Mohamed Janahi,
Account Manager, Topsoe

McKinsey's perspective on the energy transition and potential demand scenarios up to 2050

1. Geopolitical tensions and a rebound in energy demand have caused extreme volatility in energy markets, making supply security and affordability uncertain. The energy mix is projected to shift towards power, with electricity and hydrogen-based fuels accounting for 50% of the energy mix by 2050.
2. Renewable energy generation is predicted to reach 80-90% of the global energy mix by 2050, with solar and wind build-out rates growing by a factor of five and eight, respectively.
3. To achieve the goal of limiting global warming to 1.5°C, the global energy system needs to accelerate its transformation away from fossil fuels towards efficiency, electrification, and new fuels. Significant investments will be required to kickstart new technologies, and total investments across energy sectors are predicted to grow by more than 4% p.a., with returns remaining uncertain.

Leveraging Enhanced Circularity Towards Growing Disruptive Vanadium Based Redox Flow Batteries

1. The global energy economy is shifting towards a mid-century net-zero emissions target, which is leading to fundamental changes in the energy mix, with growing utilisation of renewable sources such as solar and wind.
2. Energy storage batteries, particularly Vanadium Redox Flow Batteries, are high-potential candidates for renewable energy storage capabilities for industrial peak shaving and power load management.
3. The reclaimed Vanadium from extractive metals reclamation technologies can be utilised to produce Vanadium electrolytes for Vanadium Redox Flow Batteries, contributing to the circular economy and low-carbon pathway towards climate goals.

Starting your Renewable Journey with Co-Processing

1. Legislation is driving the move towards producing transport fuels from renewable feedstocks in many countries, creating opportunities for refineries to increase their market share.
2. Renewable feedstocks vary considerably in terms of their properties, level of contamination and availability, and there is also considerable variation in the properties, specifications and application of the end product.
3. Refineries need a flexible solution when it comes to renewable feedstocks, and this involves choosing the right process design and catalyst technologies.

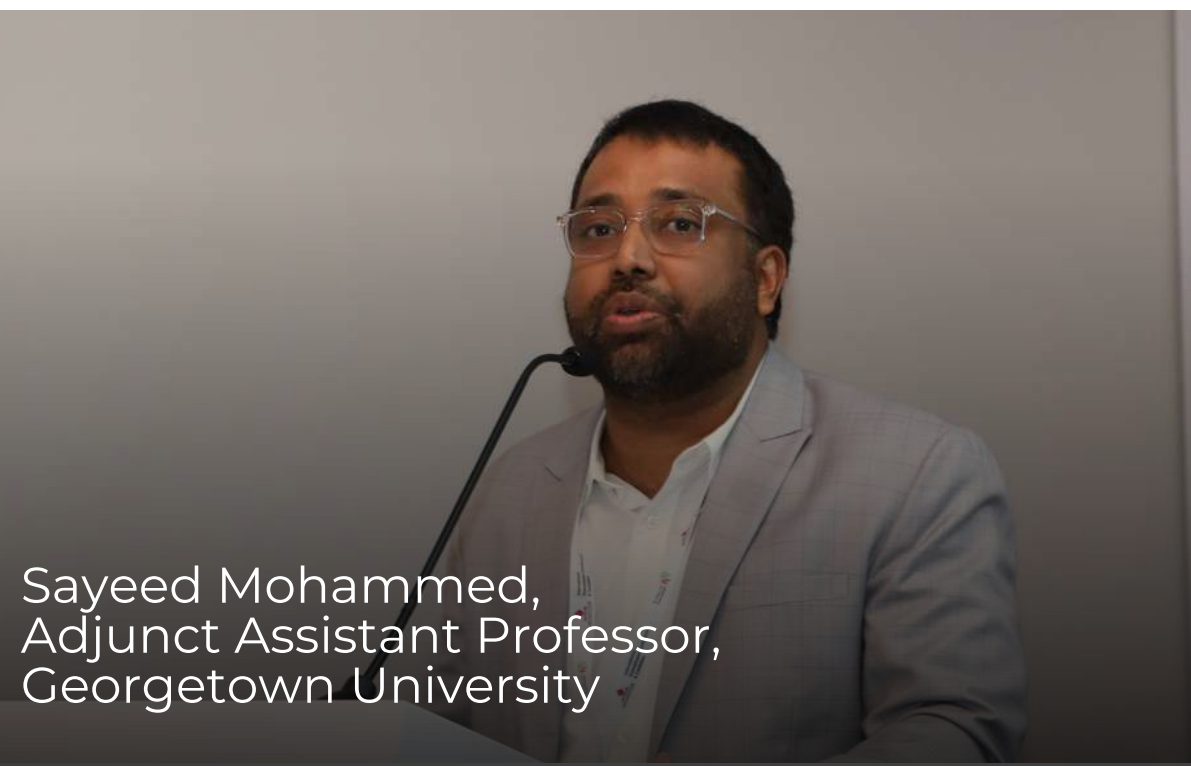


Are the new sustainability regulations and policies rocking the fossil fuel industry?

1. There is growing pressure on the fossil fuel industry to reduce greenhouse gas emissions and comply with the Paris Agreement, due to stakeholders' and investors' pressure, national commitments for net zero, and rapidly changing market expectations.
 2. This paper will discuss the latest policy and regulatory developments affecting the oil and gas industry, primarily downstream operations, including mandatory climate-related disclosure and ESG, net-zero commitments by national governments, carbon border tax, and the rise of stringent regulations.
- The paper will explore the emerging trends, challenges, and barriers in embracing these new policies and regulations and highlight key case studies and response measures by the fossil fuel industry at a global level, and also provide preliminary findings from the region in responding to these policy and regulatory disruptions.

Ultrasonically Enhanced Oxidative Desulfurization UoDS

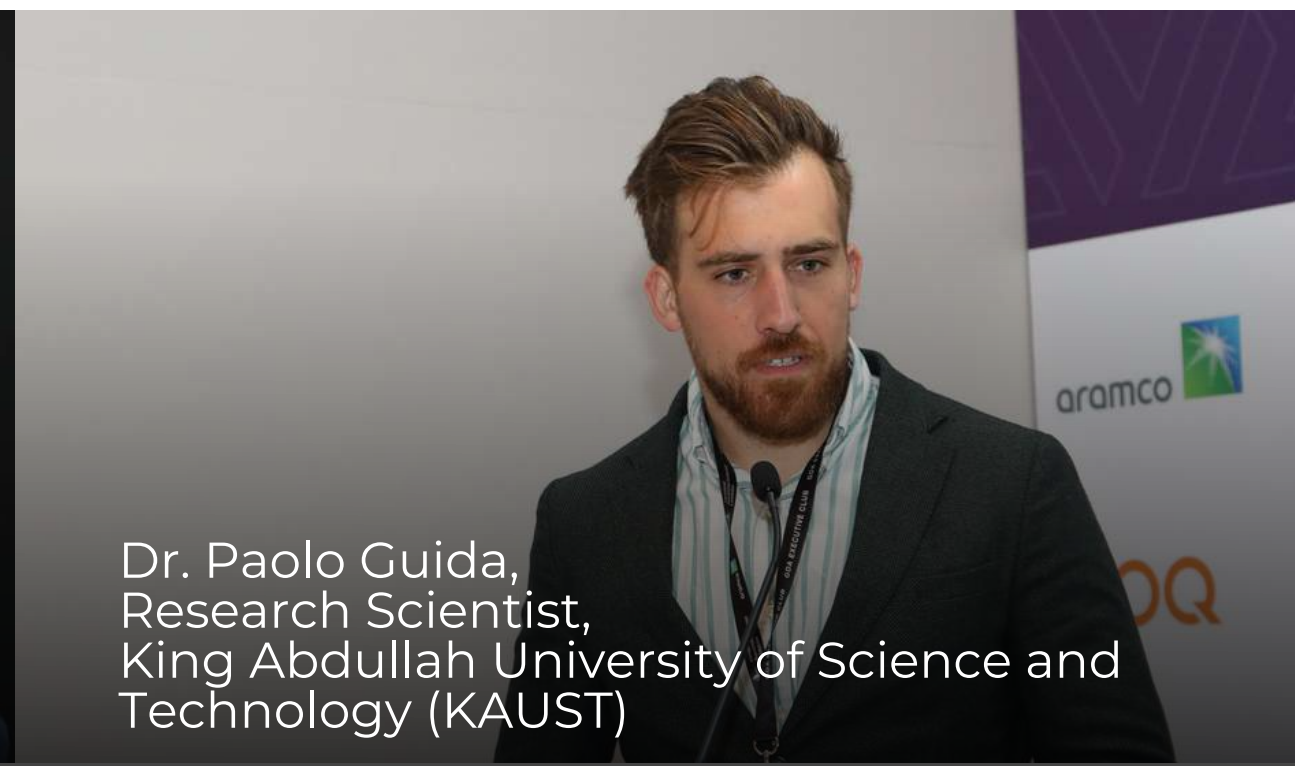
1. UoDS is a promising method for removing sulfur from fuels: UoDS is a type of oxidative desulfurization (ODS) that uses ultrasonic waves to enhance the oxidation reaction. This method has shown to be effective in removing a wide range of sulfur compounds from various fuels, including diesel and gasoline.
 2. Ultrasonic waves enhance the reaction rate and efficiency: The use of ultrasonic waves increases the rate of the oxidation reaction, making the process faster and more efficient. This can result in a higher sulfur removal rate and less energy consumption compared to conventional ODS methods.
- UoDS has some limitations and challenges: While UoDS has shown promising results, there are still some limitations and challenges that need to be addressed. For example, the high cost of ultrasonic equipment and the potential for side reactions that can reduce the efficiency of the process. Additionally, the effectiveness of UoDS can be affected by factors such as temperature, pH, and the presence of other contaminants in the fuel.



Sayeed Mohammed,
Adjunct Assistant Professor,
Georgetown University



Ahmed Al Jiffry,
Investor Relations Manager,
Saudi Aramco Base Oil Company (Luberef)



Dr. Paolo Guida,
Research Scientist,
King Abdullah University of Science and
Technology (KAUST)



NEXT GENERATION PROJECT DELIVERY - SESSION 2: HOW TO IMPROVE PROJECT DELIVERY TODAY AND IN THE FUTURE? BY GDA PROJECT MANAGEMENT & COMMISSIONING TECHNICAL COMMITTEES



Moderator

Ghaith Aljazzar, Regional Director of Business Development, Fluor Corporation

Speakers

Roberto J. Arbulu, Executive Vice President of Strategic Project Solutions, Inc (SPS)

Ali Hasan Jaffar, Operations Superintendent, BAPCO

Michele Scotto-Di Carlo, Chief Operating Officer, Technip Energies

Dr. Ahmad Al Qattan, Market Intelligence, Kuwait Petroleum International Ltd

KEY TAKEAWAYS

- Industry is experiencing less than optimal results when it comes to capital project delivery - data indicates that in some cases 98% of projects do not achieve cost, schedule, cash and attainment targets.
- It's inevitable to leverage new technologies, software, and tools to plan, execute and control & monitor project delivery and performance.
- Resource planning and especially competency development and capacity build up is crucial element in realising benefits. This includes involving Operations, Engineering, Maintenance and other concerned teams in the planning, pre-commissioning activities and commissioning & start up activities. Another valuable plan is to send the concerned owner teams to other similar facilities to learn fast and be equipped with all knowledge required and accelerate their readiness to take on critical roles at both start up and normal operations.

DIGITAL ENERGY MANAGEMENT AND DECARBONISATION (USING ONLINE OPTIMISATION AND MONITORING TOOL) BY GDA ENERGY MANAGEMENT TECHNICAL COMMITTEES

KEY TAKEAWAYS

- Digital tools provide transparency and can do the following for all employees of the organisation, if properly assigned:
 - Analyse PAST data
 - Showcase/monitor PRESENT performance & improvement opportunities,
 - Forecast FUTURE performance
- Energy Efficiency can be enhanced, thereby reducing CO2 emission, through the use of tools such as: RIS,APC,PI Vision, Dashboards etc. Participants got clear ideas about the potential areas and pathways to achieve improved energy efficiencies and understood where to focus more (Design/Retrofitting, Planning, Digital twins and avoiding unplanned downtime/ disturbances) to improve the Energy metrics.

Moderator

Mohamed Alhashmi, Team Leader of Energy Management, ADNOC Refining

Speakers

Dhanasekar Periyasamy, Sr. Principal Solution Consultant,
Aspen Technology

Aisha Al Mehrezi, Manager of Technical Assurance Department,
ADNOC Refining



CHALLENGES OF DIGITAL TRANSFORMATION IN ASSET MANAGEMENT BY GDA DIGITALISATION & RELIABILITY TECHNICAL COMMITTEES



Speaker

Ahmad Albasri
Sr. Engineer of Reliability,
Kuwait Integrated Petroleum
Industries Company (KIPIC)

KEY TAKEAWAYS

Difficulty in Business Case Realization

- Involvement of stakeholders in the decision making process to support the business case for the investment.
- Pilot the initiative on a smaller scale and limiting the investment to showcase the benefits and then go for a larger implementation scope

Low Digital Maturity and old workplace practices leading to adaptation resistance

- Involvement of all stakeholders during the implementation project phases
- A top-bottom approach, where adoption is accepted by leadership, which in turn shall set an example for other users to adopt the digital transformation for Asset Management

Lack of Technical Expertise

- Involvement of stakeholders by creation of “champions” or “super-users” that focus on developing the technical expertise to act later as a knowledge transfer vehicle for each team
- Planning proper technical expertise development programs that is more than just class room training which involves “hand-holding” approach and “hands-on” activities

Data integrity and its effect on decision making

- Adoption of International Standards for asset management data collection Involvement of stakeholders for data quality control checks in the form of audits
- Communication campaigns demonstrating the importance of good data and how it can help the users

DIGITALISATION IN ACTION, REAL CASE STUDY OF REFINERY OPTIMISATION BY GDA OPERATIONAL EXCELLENCE TECHNICAL COMMITTEES

KEY TAKEAWAYS

- Digitalisation of refinery and petrochemical plants is a proven way to positively impact the industry bottom line; however, as with any new technology deployment there is buy in challenges and early adopters likely benefit the most
- Brining relevant digitalisation topics from today's competitive market place, with proven industry experiences, helps generates high levels of interest because of their relevancy and accelerated implementation for value addition to the refinery and petrochemical bottom line
- Keeping things simple and of course relevant in digitalisation case studies, makes the buy in process more straightforward. Often operators buy in hurdle is high when it comes to new technologies because of the status quo perception
- Digitalisation is a journey and investing in such long term IT infrastructure requires partnering with service providers combining the technology and IT skills. Such way accommodates the future developments not only in IT but also in technology

Moderator

Nasser Al Shammari, Operational Excellence Engineer, SATORP

Speakers

Nimit Arora, Senior Director, Lummus Technology





International Downstream Conference & Exhibition

Day 3

15 February 2023

[VIEW DAY 3 RECORDINGS](#)

Time	Topic	Total Attendance
09:00 - 10:00	Technical Session: Human Capital and Talent Management - Room A	70
09:00 - 10:00	Technical Session: Resilience - Room B	43
09:00 - 10:00	Technical Session: Digitalisation in Downstream Sector - Room C	57
09:00 - 10:00	Expert Workshop: Decarbonising Refining & Petrochemical Assets - Room D	33
09:00 - 10:00	Expert Workshop: Using Technology Toward Enhancing HSE Performance And Culture - Room E	25
10:00 - 11:00	Panel Discussion: Digital Transformation in Downstream	315
11:15 - 12:15	Technical Session: Human Capital and Talent Management - Room A	115
11:15 - 12:15	Technical Session: Resilience - Room B	69
11:15 - 12:15	Technical Session: Digitalisation in Downstream Sector - Room C	79
11:15 - 12:15	Expert Workshop: Everyone Communicate, Few Connect; Keys to Effective Leadership Communication in the Digital Eras - Room D	28
11:15 - 12:15	Leadership Session: The State of Leadership (by SPSP) - Room E	45
13:30 - 14:30	Panel Discussion: Human Capital & Diversity	403
14:45 - 15:30	GDA Conference Outcome and Closing Remarks	403
		1,685

DIGITAL TRANSFORMATION IN DOWNSTREAM

KEY TAKEAWAYS



Moderator

Nadim Haddad, Partner, Oliver Wyman Group

Speakers

Norm Gilsdorf, Senior Vice President of Honeywell Global High Growth Regions, Honeywell

Dr. Pratap Nair, President & CEO, Ingenero Inc

Nayef Al Otaibi, VP - Digital Transformation, Saudi Aramco

Steven Qi, Senior Vice President of Customer Success, Aspen Technology

- Currently, the digital transformation is on the top of the agenda of all oil and gas industries to be implemented for the full range of integrated businesses from feed to products, which covers end-to-end supply chain processes for more efficiency and commercialization of the downstream industry.
- With downstream complexity, it is important to look at the availability of Artificial Intelligence (AI) technology and upskilling of human resources to cope and navigate through the new digitized systems for the maximum possible benefit to the business in commercialization, optimization, and measurable & sustainable problem solving.
- Cybersecurity is the most important IT objective to consider with all robust digitalization transformation processes for safe sustainability and reliability of the business.

HUMAN CAPITAL & DIVERSITY

KEY TAKEAWAYS

- In the Oil and Gas business complexity, it is strictly prudent to place high-level world-class quality development succession plan for the talent youngsters to take over from the experienced and knowledgeable employees in the future.
- To be successful in business, diversity in terms of gender equation with percentage or a KPI measure should not compromise quality and emphasis should be on putting the right person in the right position.
- In gender selection, one should consider intellectual and not physical diversity as the beauty of leadership is to have multi-diverse intellectual personalities with different gender, and different mindsets, and hence diversity should focus on value creation and not only on gender, age or nationality.

Moderator

Dana Bukhammas, HR Manager, BAPCO

Speakers

Reem Al Ghanim, HR Leader, Saudi Aramco

Oleg Konovalov, Thought leader, author and TEDx speaker, olegkonovalov.com

Jamillah Al-Mutairi, Team Leader, Process Engineer, Kuwait National Petroleum Company (KNPC)

Ibrahim Al-Mugahwi, Director, Industrial Jobs Certification Department, Saudi Petroleum Services Polytechnic (SPSP)





Kholood Alabdullatif,
Downstream Development Academy,
Saudi Aramco

Leverage Tech Trends; Using Digital Storytelling as an Instructional Tool to Develop Young Leaders in Saudi Arabia

- Digital storytelling is the practice of combining oral traditions of storytelling with visual and sound capabilities of digital media. It is relevant to current young generation, respects cultural values and significantly reduces cost of training for young leaders. The emphasis is on “Human First, Employee Second.”



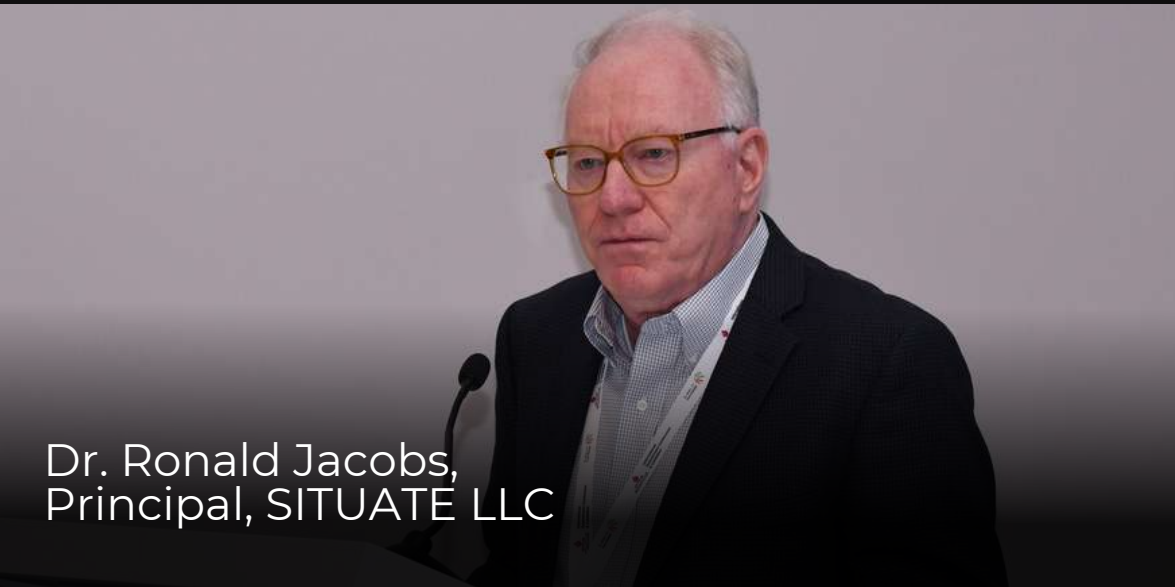
Abdulhamid Al-Omair.,
Director of Leadership & Engineering
Accelerated Development Center (LEAD),
Saudi Petroleum Services Polytechnic

Tracking the Financial Impacts of Structured On-the-Job Training (S-OJT)

- Structured On-the-Job training is planned and occurs in the work setting with focus on tasks and based on research and informed practices. S-OJT impacts are measured through training efficiency (faster outcome at less cost) and training effectiveness (superior outcomes at less cost) – on average 70% savings in time and cost. KNPC achieved reduction of training time from 55 to 36 months through S-OJT while gaining higher value for the employees.

Novel Approach to Engineers’ Training & Development

- Practical competency-based training for young engineers designed to meet their job requirements in collaboration with IFP Training. Delivered in small modules (1 week) spread over 1 – 2 years with continuous evaluation and without impacting on work obligations. Covers the full value chain – from well to consumer on 3 levels – Fundamental (1-5 years’ experience), Intermediate (6-15 years’ experience), Mastery (15+ years’ experience)



Dr. Ronald Jacobs,
Principal, SITUATE LLC

HUMAN CAPITAL AND TALENT MANAGEMENT

KEY TAKEAWAYS

MODERATED BY:
Dr. Basim Abussaud, Assistant Professor,
King Fahd University of Petroleum & Minerals (KFUPM)



Promoting Innovation Culture in KNPC

- Psychological safety as defined by Harvard professor Prof. Amy Edmondson “is a belief that one will not be punished or humiliated for speaking up with ideas, ask questions, raise concerns, or admit mistakes.”

Safety is good but psychological safety is better

- Absence of psychological safety led to disasters at work such as Deepwater Horizon rig explosion in 2010 and Texas City refinery explosion in 2005.
- Psychological safety is a necessity to have not a luxury to have. Psychological safety is strongly linked to employee engagement. Creating psychological safety must be a business priority for all CEOs.

The Human Energy Equation - Bridging Industry and Academia

- Of All Energy sources, Human Energy is the most relevant and needs to be Harnessed from the Grassroots
- Energy Transition is Human first...Humans need to be prepared and skilled to prepare for the transition.
- $E = SI^n$ - the proposed Human Energy Equation can be considered as a tool to measure Human Energy



RESILIENCE KEY TAKEAWAYS

MODERATED BY:
Aqeel Almuharraqi, Superintendent FCCU &
Utilities, Technical Services, BAPCO



Edwar Jimenez,
Process Specialist – Fired Heaters
Technical Services Department, BAPCO

Abdulaziz Al-Alwani,
Technical Console Lead,
Saudi Aramco Mobil Refinery Company Ltd.
(SAMREF)

Ibrahim Althaali,
Process Engineer ,
Saudi Aramco

What Makes for a Safe Fired Heater?

1. Fired heaters are potential hazards and incidents related to them can cause serious injuries, equipment damage, plant downtime, and production losses. Therefore, ensuring safe operation of fired heaters is crucial for the safe, reliable, and efficient operation of process units.
2. To improve safety, instrumentation and hardware such as ESD systems are incorporated into fired heater design, and process hazard analyses can be used to assess and mitigate risks. Comprehensive training and detailed operating procedures are also important for safe operation.
3. BAPCO developed an all-encompassing standard for safe operation and startup of fired heaters, which specifies requirements such as critical safety items, standard operating procedures, oversight of startups, and training on fired heater hazards. A refinery-wide assessment was conducted to identify gaps between current operation and the standard, and having a dedicated refinery fired heater specialist has been critical in ensuring continuing focus on safety, reliability, operability, emissions, and energy conservation.

De-bottleneck Refinery Cooling Water Summer Constraint to Capture the Loss of Distillate Yield and Sustain High RON Gasoline Production with Rented Chillers

1. The increase in seawater temperature during summer months has caused significant operational constraints in the Vacuum Distillation Unit and Alkylation Unit, resulting in lower vacuum gas oil cut point, higher fuel oil yield, and lower alkylate production rates.
2. The implementation of rented chiller applications, specifically air-cooled chillers, has been proven effective in reducing the cooling water supply temperature, ultimately eliminating the constraints faced by the units during summer months.
3. The use of air-cooled chillers inside the process area for the Vacuum Distillation Unit is considered a first of its kind in the neighboring industry and the Middle East, and has resulted in a significant improvement in the feed rate of the unit and a marginal improvement benefit of more than \$10.0 M.

Enhanced Grading System to Mitigate Pressure Drop Build Up in Hydrocracking Reactors

1. Accumulation of iron sulfide particulates caused chronic challenges in the Hydrocracker unit of Ras Tanura Refinery, leading to high pressure drop and reduced overall conversion.
2. Different technologies can be used to mitigate the pressure drop build-up resulting from contaminants accumulation in fixed bed reactors, including enhanced grading systems, mechanical solutions, and upgraded reactor internals.
3. The Crystaphase CatTrap® reticulated grading technology was chosen by RTR, which has one of the highest external and internal void volumes, enabling the second stage reactor to reach its full life cycle potential without skimming or rate reduction. This resulted in a significant improvement in gross margin of \$21MM in the last cycle.



Innovative Approach for Onstream Removal of Ammonium Chloride Fouling Prevents Crude Unit Shutdown

1. The absence of a desalter and high chloride levels in the overhead systems of Bapco's No.4A Crude Distillation Unit (4ACDU) have caused reliability challenges. However, the refinery has managed to improve reliability and ensure steady operation during the 6 year turnaround and inspection cycle through metallurgical improvements and process changes.
2. The flooding and high pressure drop (dP) across the top section trays in the preflash column of the 4ACDU have been a persistent problem for Bapco, causing reduced unit feed rates and incurring substantial financial penalties. However, the installation of a new piping jumpover and onstream chemical cleaning proved successful in mitigating the issue and achieving maximum throughput without the need for a costly unplanned shutdown.

Low carbon energy hub and future of residue processing

1. The energy supply has been facing a turbulent period due to multiple factors, such as energy transitions, IMO ruling, pandemic shutdown, oversupply, and geopolitical events. These factors have led to wild fluctuations in energy prices, which ultimately impacts the consumers' living standards.
2. Despite the uncertainty surrounding the future of fossil fuels, the world population and middle-class growth are expected to drive a 25% increase in energy demand and petrochemical feedstock by the middle of the next decade. This will lead to capacity additions in some Asian markets for new crude processing and upgrade of resid oil to support lifestyle improvement.

Jazan Refinery Sulfuric Acid Reliability Enhancement

1. Jazan Refinery Complex in Saudi Arabia has implemented a comprehensive water reuse program that has allowed it to achieve zero wastewater discharge to the marine environment. This has been achieved by treating the water with sulfuric acid, which is a key step to ensure the healthiness of the reused water.
2. The use of concentrated sulfuric acid in the steam condensate polishing unit of the water treatment process caused corrosion issues that resulted in 16 cases of corrosion within 6 months. To address this, the refinery deployed best practices from other industries to upgrade materials of construction to Alloy 20, which has higher corrosion resistance. This resulted in an improvement in mean time between failure (MTBF) from 16 to 66 days and a reduction in the meantime to repair (MTTR) from 3 to 1 day.





Saeed S. AlAlloush, Engineering Consultant, Saudi Aramco



Ali Hussain Ali Albaqshi, Analyst - Systems Technology Applications, Kuwait National Petroleum Company (KNPC)



Gabriel Winter, Engineering Specialist, Saudi Aramco



Jitendra Chellani, Process Consultant, KBC (A Yokogawa Company)

New Invention for smart digital control of the Sulfur Reduction Additive in Fluid Catalytic Cracking Process- Refining Complex

- The steps of culture hack roadmap (define north star, identify behaviors, hunt for friction, design hacks, execute hacks and assess results) shall be tailored based on organisation strategy and context

Predictive Maintenance (PdM) in Gulf Downstream companies Case Study

- Define the required innovation capacity in terms of resources and capabilities for the next phase

Enhanced Unit Monitoring Enabled by Digital Twin

- Define KPIs for behavior's change activities



Asset digitalisation for wiser plant operation

1. TEN emphasised the importance of shifting perspective to making Smart Digitalisation Wiser by allowing it to augment the intelligence to resources - making it human centric.
2. Wise digitalisation would allow Cost comparisons, Carbon contribution comparisons, reduce project cost and carbon footprint, federate people and knowledge, and increase performance and sustainability.
3. A wise digitalisation program is expected to be the single source of truth for project continuity.

Multi-Unit Harvesting of Real Time Optimiser Technology in Yanbu Refinery

1. Developing a Multi-unit RTO is feasible and allows significant value capture. Yanbu refinery is the first refinery to have deployed refinery wide RTO in the Middle East.
2. Major challenge for the RTO was the absence of connection between the Planning at the Enterprise Level and the APC installed on the manufacturing unit guiding the production. RTO helps with closing the gap between Plan vs. Actual.
3. The Refinery wide RTO at Yanbu has a payback period of 3-12 months, reduced operator intervention, enhanced APC utilisation/performance, and enabled advanced engineering optimisation.

SASREF Digitalising of Asset-Care Routine (SORA)

1. Operator round automation enabled Operation Driven Reliability for SASREF and allowed front line workforce to improve the plant reliability and operational profitability.
2. At SASREF, SORA is being currently being used for Operations Check Rounds, Electrical Check Rounds, QMI Check Rounds, Fire Fighting Check Rounds.
3. SORA allowed -
 - Enhanced the unit reliability and availability through automation & early detection of abnormalities
 - Enabled operators to take correct action upon monitoring of equipment's limits and alarms
 - Proactively address health, safety, environmental & regulatory requirements
 - Facilitate continuous monitoring & Auditing online
 - Less cycling time & paper.



Frederic Le Fur, Sales Digital Director Europe,
Technip Energies



Raad Bassam Mulla,
Yanbu Laboratory Unit, Supervisor (A),
Saudi Aramco



Saeed Al-Ghamdi,
Maintenance Strategies Manager,
Saudi Aramco Jubail Refinery
Company (SASREF)



DECARBONISING REFINING & PETROCHEMICAL ASSETS BY GDA INDUSTRY TRENDS COMMITTEE



Moderator

Dr. Nasiru Tukur, Engineering Consultant, Saudi Aramco

Speaker

Gurminder Singh, Director, Technology Licensing - MENA,
Shell Catalysts & Technologies

KEY TAKEAWAYS

- Improving energy efficiency is a low hanging fruit and a major pathway for accelerating transition to net-zero emissions in refining and petrochemical assets.
- Lower carbon products (such as green/blue hydrogen, biofuels) will play a vital role in lowering the GHG emissions from the products' end use (Scope 3).
- Achieving net-zero emissions may not be possible without ambitious mitigation actions that include large-scale deployment of carbon capture and storage (CCS).

USING TECHNOLOGY TOWARDS ENHANCING HSE PERFORMANCE AND CULTURE

BY GDA HSE COMMITTEE

KEY TAKEAWAYS

- Providing HSE roles and responsibilities to workers without providing them with the proper channels to carry on with them can have a negative impact on the HSE culture of the organisation.
- Low code app development platforms can speed the process of digital transformation by reducing development time, enabling faster deployment, increasing agility, being cost-effective, empowering non-technical staff, and providing easy integrations.
- Digital tools can be used in enhancing HSE performance of the organisation by analysing data in real-time, allowing companies to identify trends and take proactive measures to address potential risks.
- Building digital communication bridges between workers and the HSE group can improve HSE culture using digital proper tools to carry on HSE responsibilities and requirements by the workers.



Moderator

Nada Kamel Alsaleh
Senior Engineer of Process Safety Management,
Kuwait National Petroleum Company (KNPC)

Speakers

Hebah Bader Asad Hussain
Senior Engineer of HSE Technical Support,
Kuwait Integrated Petroleum Industries Company (KIPIC)

Fawaz Alomair
Engineer of HSE Technical Support,
Kuwait Integrated Petroleum Industries Company (KIPIC)

EVERYONE COMMUNICATE, FEW CONNECT; KEYS TO EFFECTIVE LEADERSHIP COMMUNICATION IN THE DIGITAL ERA

BY GDA LEADERSHIP & PEOPLE DEVELOPMENT COMMITTEE

KEY TAKEAWAYS

- Communication and interaction are the two most important aspects of a leader's role. Therefore, leaders need to focus on being clear, emotionally adequate, and able to interact with all people to provide effective guidance.
- Contemporary communication tools can improve workplace communication: The workshop aimed to teach professionals how to utilise contemporary communication tools to facilitate conversations in multiple professional settings. By adopting these tools, professionals can become more efficient, comprehensible, impactful, and entertaining, resulting in a reduction of rework, frustration, and anxiety.
- Non-Violent Communication is an essential contemporary approach for effective communication: The workshop included hands-on group activities to demonstrate new communication concepts such as Non-Violent Communication. This approach encourages communicating with empathy and compassion towards others, making it an essential tool for effective communication.

Moderator

Rayyan S. Tayeb, HR Business Partner of Global Manufacturing, Saudi Aramco

Speaker

Kholood Alabdullatif, Downstream Development Academy, Saudi Aramco



YouChemE PROGRAMME



The Young Professionals & Students Programme (YouChemE) co-located with the conference brought over 500 young professionals and students from across the region.

YouChemE programme featured panel discussions and mentoring sessions as well as workshops on Visionary Leadership, Resume Writing, and Problem Solving conducted by experts.

The Triple Bond Competition and the Treasure Hunt offered an opportunity for students to network with the different companies in the exhibition to complete the challenge. For the first time, a high school engagement program was conducted, called 'FUEL: Future Leaders' where school students gained a good insight into the downstream industry and its different career paths.

Organised and conducted by a youth committee with members from Bahrain, KSA, UAE, Oman and Kuwait, under the chairmanship of Fatema Husain from BAPCO, the programme was sponsored by Saudi Aramco, BAPCO, ART Hydroprocessing and the GDA.

Other highlights included:

- 3D printing station
- Professional photoshoot service

- Resume checking service
- BAPCO refinery site visit
- GDA Connect launch

2,000

professional
headshots

500

young professionals
and students

50

resumes
checked

4,500

man hours of
knowledge exchange

Sponsored by



Powered by



Day 1 - 13 February

10:30 - 11:00 YouChemE Opening

11:00 - 11:45 Cup of Wisdom

Wadha Al Khateeb
CEO, KNPC



13:30 - 14:45 Triple Bond Competition

15:00 - 15:15 GDA CONNECT
Launch



15:30 - 16:45 Roundtables Mentoring

11:00 - 17:00 Treasure Hunt

11:00 - 17:00 CV Checking
& Professional Photobooth

16:45 - 17:00 Raffle Draw

Day 2 - 14 February

10:00 - 11:00 Job Ready Workshop

Moosa Al Lawati
People and Culture Lead, eMushrif Inc.



11:15 - 12:15 Career Journey Panel



Aram Al Yahya
Trucking Operations Section Head, Saudi Aramco



Khalid Al-Abdulwahed
Director, Maintenance & Operations Training Center, SPSP



Khalifa Al Khalifa
Associate, Environmental Specialist, Bapco



Moderator: Raad Mulla
Yanbu Laboratory Unit, Supervisor, Saudi Aramco

13:30- 14:30 Problem Solving
& Storylining

Waddah Al Zaabi
Associate, McKinsey & Co.



14:45- 15:30 Visionary Leadership
for the Youth

Dr. Oleg Konovalov
Thought Leader, Author and TEDx Speaker



11:00 - 16:00 Treasure Hunt

11:00 - 16:00 CV Checking
& Professional Photobooth

15:45 - 16:00 Raffle Draw

Day 3 - 15 February

09:30-14:00 FUEL
Future Leaders



9:00-13:30 Refinery Site Visit



9:00 - 11:00 Treasure Hunt

11:00- 12:00 YouChemE Symposia



Jamilah Al Mutairi
Team Leader Process Engineering, KNPC

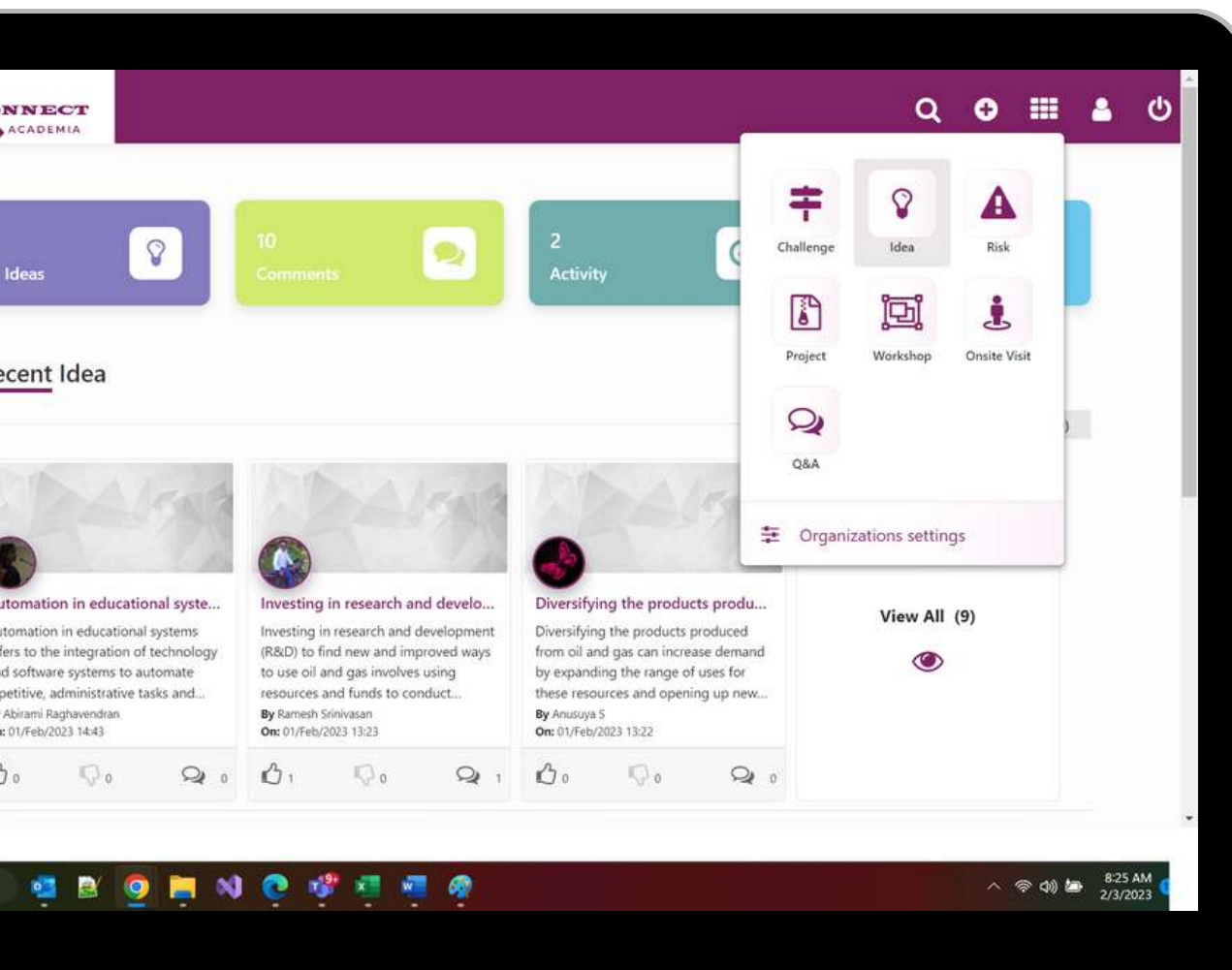


Dr. Haifa Al Khalifa
Dean of College of Engineering, University of Bahrain

14:00-14:30 YouChemE Closing

11:00-14:00 CV Checking
& Professional Photobooth

14:30 - 15:00 Raffle Draw & Treasure Hunt
Winners Announcement



During the GDA Conference 2023, a unique and noble initiative GDA CONNECT was launched by the GDA in collaboration with Technology Partners – **CERTERO** and **SwiftAnt** at the YouChemE booth with a portal for academia and industry experts to register for free.

A brand-new online platform that connects students from academia with mentors and professionals from the industry. This pioneering, smart and secure, collaboration platform will feature workshops, Q&A, ideas, projects, site visits and more.

- Authentic Portfolios
- Dynamic Collaboration
- Sustainability Focus
- Matchmaking Engine



Register as a
professional



Register as a
student

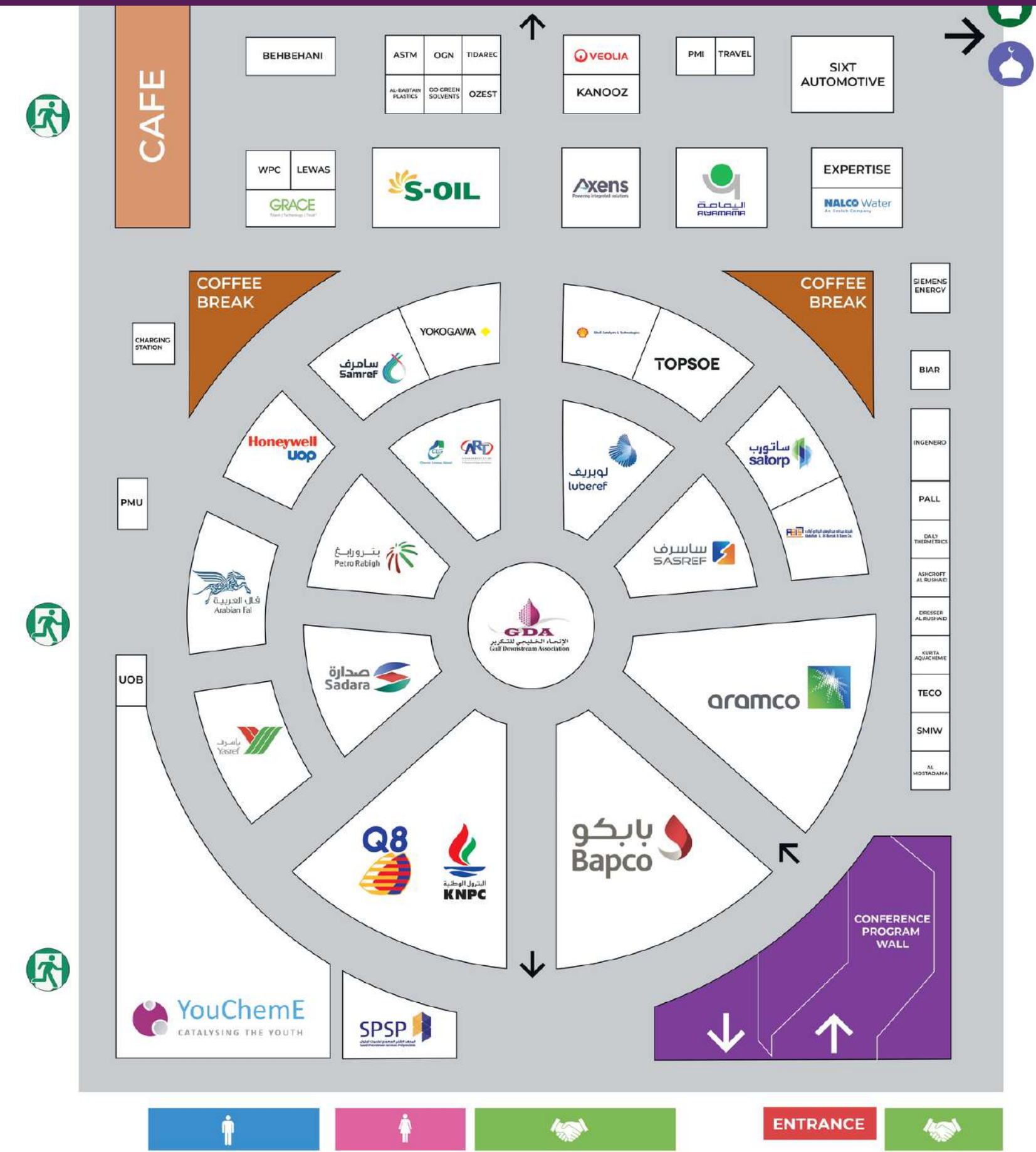


EXHIBITOR LISTING



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- 24th World Petroleum Congress
- ABIS
- Al Babtain Plastic and Insulation Material
- Al-Yamama Company for Trading and Contracting
- Arabian Fal
- Ashcroft Al Rushaid Instrument Co Ltd
- ASTM International
- Axens
- Baker Hughes
- BAPCO
- Behbehani Brothers WLL
- BIAR
- CLG & ART
- Daily Thermetrics Corporation
- Dresser Al Rushaid Valve & Instrument Co Ltd
- Farhat Tours
- Honeywell UOP
- Ingenero Inc
- Kanooz Contracting Services
- Kurita AquaChemie
- Kuwait National Petroleum Company (KNPC)
- Kuwait Petroleum International Ltd
- Leadership Excellence for Women (LEWAS)
- Nalco Water An Ecolab Co.
- Oil & Gas News
- OQ
- Ossama Ahmed Zainy Co for Contracting (OZEST)
- Pall Corporation
- Petro Rabigh

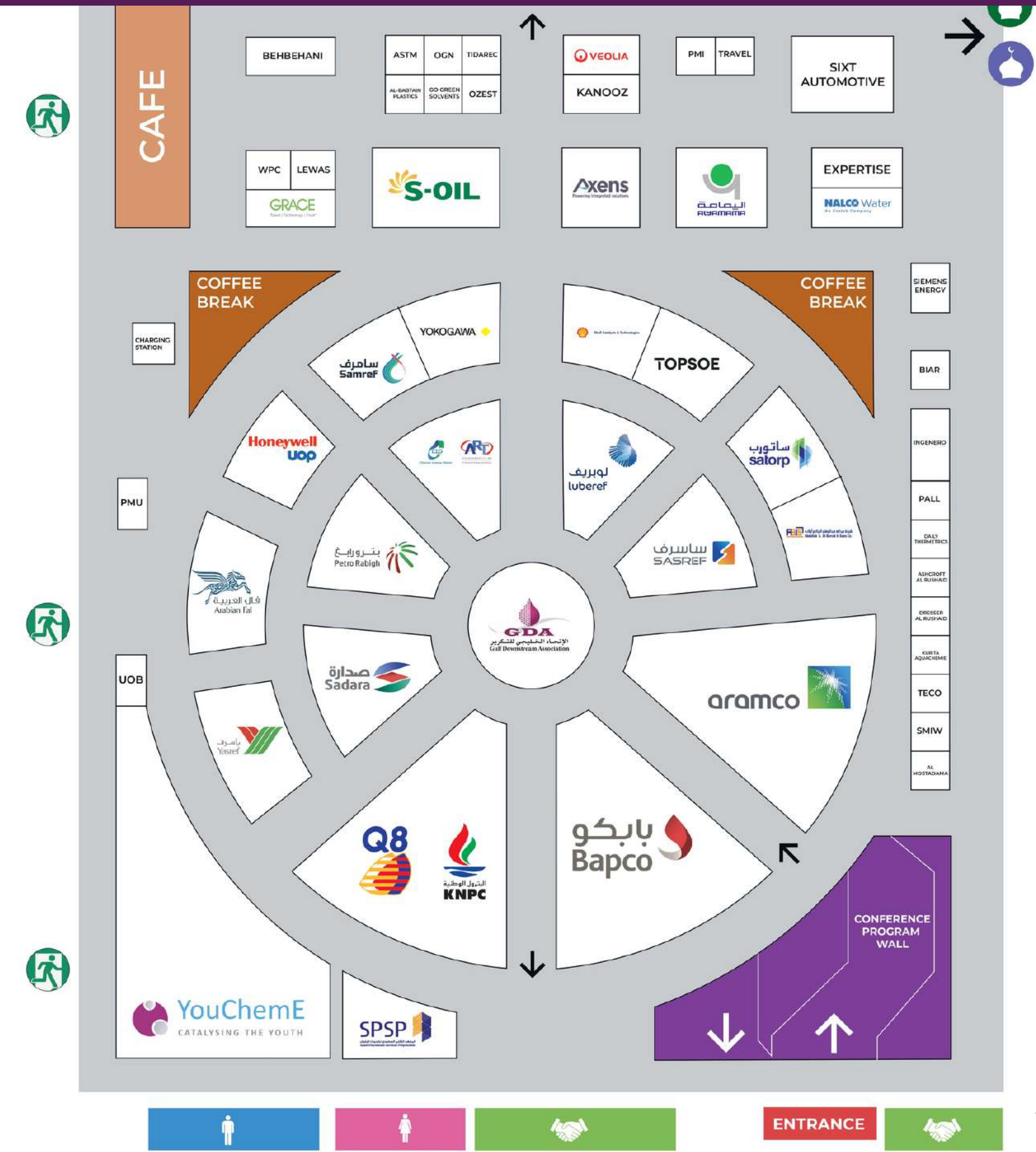


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- S-Oil Corporation
- Sadara Chemical Company
- Safe Management for Industrial Waste Co.
- SATORP
- Saudi Aramco
- Saudi Aramco Base Oil Company (Luberef)
- Saudi Aramco Jubail Refinery Company (SASREF)
- Saudi Aramco Mobil Refinery Company Ltd. (SAMREF)
- Saudi Factory for Environmental Solvents
- Saudi Petroleum Services Polytechnic
- Shell Catalysts & Technologies
- Siemens Energy
- SIXT Rent a Car
- Sustainable Environmental Works Co. Ltd. (Al- Mostadama)
- Technip Energies
- Teco Middle East
- Topsoe
- University of Bahrain
- Veolia Water Technologies & Solutions
- W.R. Grace & Co
- Yanbu Aramco Sinopec Refinery Co. (YASREF)
- Yokogawa Middle East & Africa B.S.C.(c)



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ARTICLES

BROADCAST

INDUSTRY PARTNERS

1 Radio Partner
1 Strategic Media Partner
13 Media Partners
6 Supporting Organisations

AUDIENCE REACHED

500,000+

Oil & Gas, Petrochemicals, Refining
and the wider Energy sector

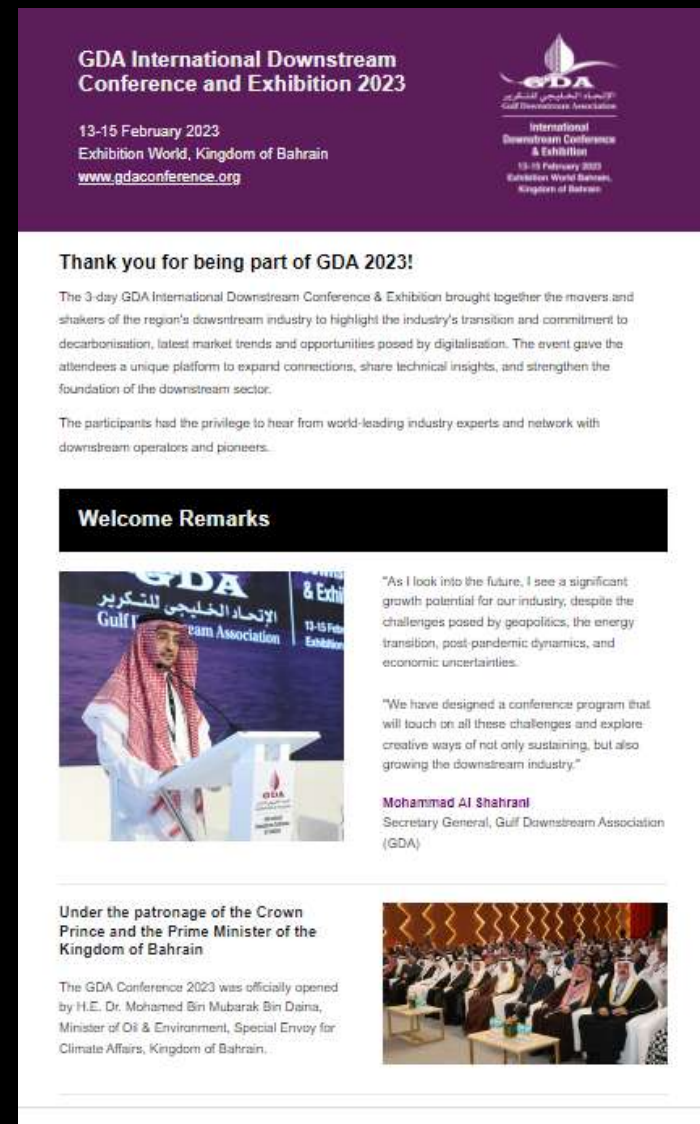
CONTENT PIECES

180+

Articles, Social Media Posts, Radio Ads,
Email Campaigns, Broadcast etc.

SOCIAL MEDIA COVERAGE

MARKETING & PROMOTION



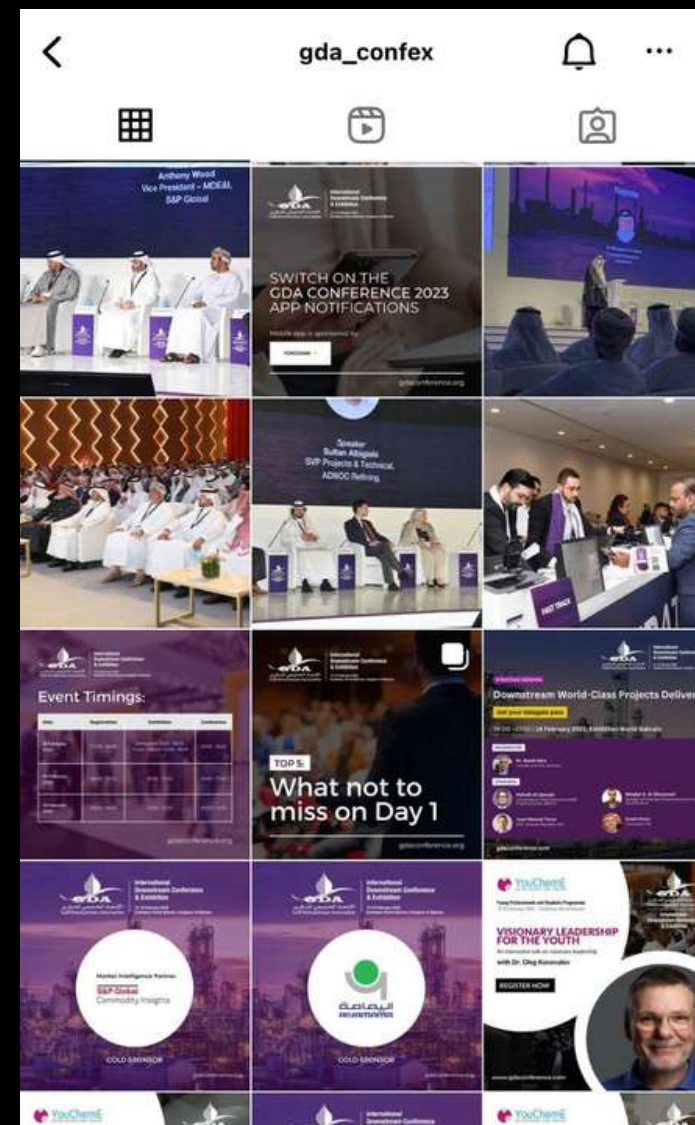
Email Campaigns

Campaigns: 64
 Database: 42.6K+



LinkedIn

Followers: 2022
 Impressions: 98.1K
 Likes: 5,115
 Reposts: 309



Instagram

Followers: 432
 Likes: 805



Twitter

Impressions: 86.2K
 Followers: 320

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3 INTERVIEWS

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Leadership Session

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Closing Ceremony

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Director of Ras Tanura Refinery Operations Department, Saudi Aramco

ORGANISING COMMITTEE

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Saudi Aramco

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Ministry of Oil and Environment

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ADNOC Refining

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Manufacturing Excellence, Saudi Aramco

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Fahad Al Ghamdi
Safety leader HSSE,
Saudi Aramco

Amal Al Aamer
Communications Manager, GDA

Duaa Hussain
Acting Communications Manager,
GDA

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Downstream Strategy & Capital
Planning Manager , Saudi Aramco

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Aqeel Almuharraqi
Superintendent FCCU & Utilities, Technical Services, BAPCO

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Department , BAPCO

Abdullatif Salih Alhameli
Western Region Joint VenturePortfolio
Manager , Saudi Aramco

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R&D Portfolio Manager, KAUST Catalysis
Center

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Assistant Professor, King Fahd University
of Petroleum & Minerals (KFUPM)

Dhanasekar Periyasamy
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MENA and Global Director, Technology
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Gurminder Singh
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Partner, McKinsey & Co.

Mohamed Al Noaimi
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Mohammed Benchekchou
Director, Shell Catalysts & Technologies

Mohammed Farsi
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Nihar Gulwadi
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Omar Al Hamed
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Refining

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Project Director, Honeywell UOP

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Marketing Manager, GDA

Ravivenkatesh Narayanaswamy
Vice President - Fuels, Chemicals and
Resource Solutions, S&P Global

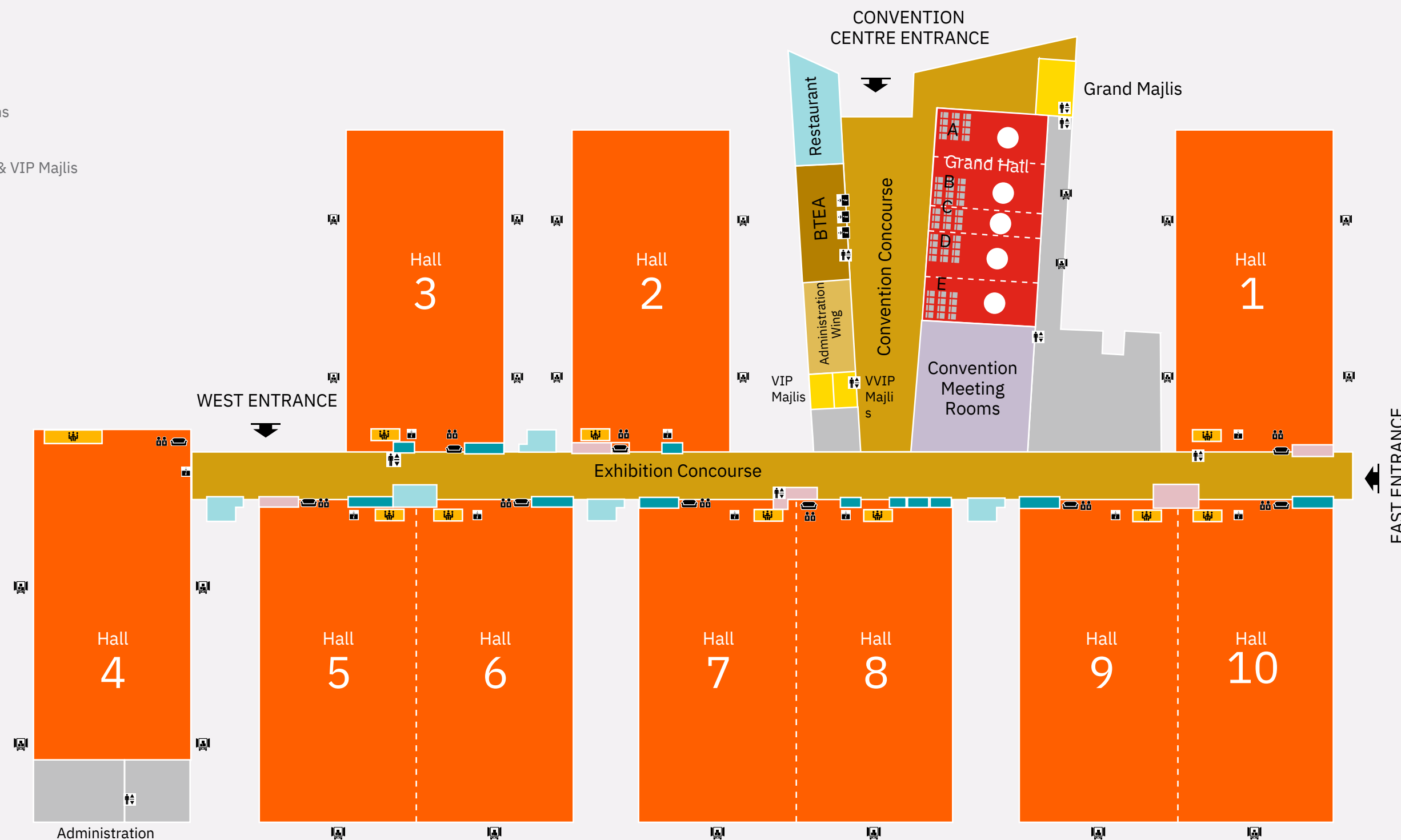
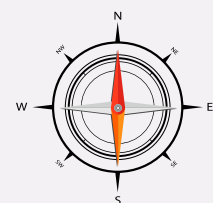
Dr. Samir Elkareish
Vice Chairman, Egyptian General
Petroleum Corporation

SHINE TOGETHER

SHINE TOGETHER
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LEGEND

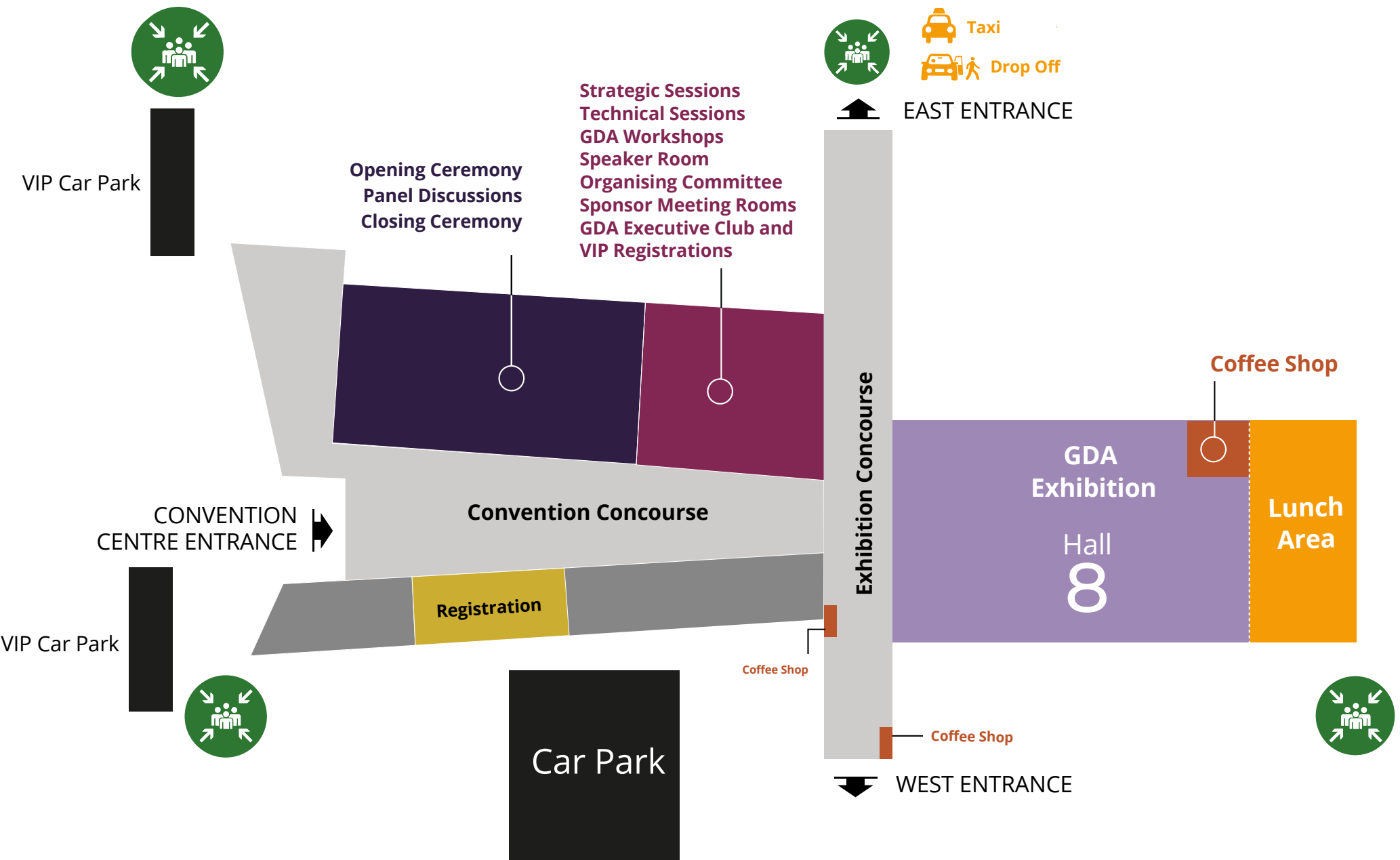
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-  Convention Meeting Rooms
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-  Grand Majlis, VVIP Majlis & VIP Majlis
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-  Cafes
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-  Majlis
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ABOUT GDA

The Gulf Downstream Association (GDA) was established by its Founding Companies Saudi Aramco, Kuwait Petroleum International (KPI), Bahrain Petroleum Company (BAPCO), Kuwait National Petroleum Company (KNPC), Abu Dhabi National Oil Company (ADNOC) and OQ.

GDA is a pioneering, non-profit association and “point of reference” for all downstream players including industry professionals, corporate executives and legislators seeking to foster excellence and drive advancement through mutually beneficial engagement and industry collaboration.

The Association was established to aggregate the scattered wealth of knowledge that lies across the global downstream industry in order to accelerate development and serve as a catalyst for strong and sustainable industry growth in the Gulf region and worldwide.

GDA takes a leading role in supporting the local, regional and international industry through sharing of knowledge, experience and best practices.



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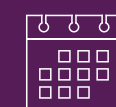
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