



25  
YEARS  
ANNIVERSARY

# IDW DOWNSTREAM CONFERENCE

*Unlocking the Full Potential of Today's Assets*

16–17 September 2025 • Istanbul, Türkiye

CO-HOSTED BY



## POST EVENT **REPORT**



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# Introduction



**Marking a milestone of 25 years of industry leadership, IDW 2025 was held on 16–17 September 2025 in Istanbul, Türkiye, co-hosted by SOCAR Türkiye.**

Bringing together key stakeholders from refining, petrochemicals, and the energy transition sectors, the event focused on the industry's journey toward a sustainable, net-zero future. Key discussions revolved around:

- Enhancing operational efficiency and profitability amid market volatility
- Fostering greater integration between refining and petrochemical industries
- Accelerating digital transformation and advancing circular economy initiatives
- Developing strategies for workforce renewal and talent retention in an evolving industry landscape

Providing bespoke networking opportunities was a key mission of the event and was achieved by organising over 100 pre-arranged one-to-one meetings, roundtable discussions according to delegates' interests, extended networking breaks and a memorable Gala Dinner.

# Sponsors & Exhibitors



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# Participating Companies



## MEDIA PARTNERS & SUPPORTERS



# Key Speakers



**Bilal Guliyev**  
General Manager,  
R&D and  
Innovation Co.  
**SOCAR TÜRKİYE**



**Bora Özdemir**  
Chief of Digital  
Transformation  
**SOCAR TÜRKİYE**



**Mehmet Ozenbas**  
Corporate Group  
Director,  
Sustainability &  
HSE  
**SOCAR TÜRKİYE**



**Ozgun Deliismail**  
Process  
Development  
Supervisor  
**SOCAR TÜRKİYE**



**Güven Kaya**  
Deputy General  
Manager  
**SASA POLYESTER**



**Fabien Lundy**  
Vice President,  
Commercial -  
EMEA  
**AXENS**



**Fanbing Ye**  
Lead Technology  
Engineer, TTS -  
Aromatics  
**AXENS**



**Sergei Merchev**  
Business Developer  
Director  
**INTEGRATED  
GLOBAL SERVICES  
(IGS)**



**Murat Üstay**  
**USTAY  
CONSTRUCTION  
COMPANY /  
TURKISH  
CONTRACTORS  
ASSOCIATION**



**Walter Pfeiffer**  
Partner  
**ROLAND  
BERGER**



**Simay Akgun**  
Configuration  
Specialist  
**HONEYWELL  
UOP**



**William  
Cameron**  
Director  
**WOOD  
MACKENZIE**



**Jay Parekh**  
Senior Director,  
Hydrocracking SME  
**CHEVRON  
LUMMUS GLOBAL**



**Fadi Mhaini**  
Vice President &  
General Manager,  
MENA  
**LUMMUS  
TECHNOLOGY**



**Atakan Devrim  
Pakkan**  
General Manager  
of Türkiye & South  
Caspian  
**EMERSON**



**Mikhail Shiryaev**  
Business Development  
Manager  
**EXXONMOBIL  
CATALYSTS AND  
LICENSING**



**Jose de Barros**  
Chief  
Decarbonization  
Officer  
**LUMMUS  
TECHNOLOGY**



**Rudolf Huycke**  
Business  
Development  
Manager  
**H2SITE**



**Sanjay Lodha**  
Global Business  
Director  
**TUBACEX**



**Sanja Šepić**  
Manager of  
Production and  
Energy Management  
**INA GRUPA**

# Event Highlights

**200+**

REGISTERED  
DELEGATES

**54%**

BUYERS -  
REFINERS &  
PETROCHEMICAL  
PRODUCERS

**10**

HOURS OF  
NETWORKING

**94%**

SATISFACTION  
RATE

**100+**

PRE-ARRANGED  
MEETINGS

**40**

SPEAKERS &  
PANELISTS

**3**

PANEL  
DISCUSSIONS

**5**

ROUNDTABLE  
DISCUSSIONS

## VIDEO HIGHLIGHTS



Watch the highlight video to relive the energy, insights, and innovation from IDW Conference 2025!



WATCH NOW

## EVENT PHOTOS



View the full photo album!



WATCH NOW

## DELEGATE LIST



VIEW LIST





# Executive Summary



The 25th Anniversary Edition of International Downstream Week (IDW 2025) brought together over 200 leaders from refining, petrochemicals, and technology in the historic city of Istanbul, Türkiye, marking a significant milestone for the global downstream community.

Co-hosted by SOCAR Türkiye, this two-day event centered on driving efficiency, sustainability, and integration across the sector. It united diverse perspectives from energy producers, licensors, and technology innovators to address key industry challenges. The program seamlessly blended strategic discussions on investment, policy, and decarbonization with in-depth technical sessions on asset optimization, digital transformation, and catalyst innovations. Key highlights included:

- Over 20 presentations and panels, with 40+ international speakers, panelist and roundtable moderators from top operators and solution providers.
- The launch of Collective Intelligence Networking Roundtables, enabling peer-to-peer discussions on change management, digital transformation, and circularity.
- A focused Digitalisation Panel, exploring AI, data integration, and cybersecurity in refining.
- A memorable Networking Evening on the magical Bosphorus, providing a scenic and collaborative setting for strengthening connections.

Throughout the event, a clear theme emerged: the downstream sector is entering a new era of operational excellence, driven by low-capex decarbonization, data-powered optimization, and a highly skilled, adaptable workforce.





# Day 1

## Strategic Scene Setters and Market Perspectives

### Keynote Presentations

#### SOCAR Türkiye Keynote: Investment, ESG and Net Zero Pathways



**Mehmet Ozenbas**, Corporate Group Director, Sustainability & HSE,  
**Socar Türkiye**

SOCAR reaffirmed its role as the largest foreign investor in Turkey, with a total of \$18.7 billion committed across major assets including the STAR Refinery, Petkim (3.6 Mt/y), TANAP, SOCAR Terminal, and a 51 MW wind power project. The keynote outlined the company's ESG governance framework and its sustainability roadmap to 2030, which has streamlined 240 initiatives into 60 priority actions.

Key decarbonisation levers include: Energy-efficiency improvements, Flare-reduction initiatives, Electrification and renewable energy integration, Fuel switching, Low-carbon hydrogen, CCUS deployment, with offsets positioned strictly as a last resort

SOCAR emphasised its preparedness for emerging regulatory frameworks—such as the EU Green Deal, CBAM, and Türkiye's draft ETS—and highlighted expanded disclosures to include Scope 3 emissions and broader supply-chain transparency.



#### Market Outlook: Geopolitical Pressures & Industry Headwinds

**Walter Pfeiffer**, Partner at **Roland Berger**, described the increasingly turbulent geopolitical environment reshaping global refining. He highlighted the influence of OPEC+ production decisions and the rerouting of global shipping from the Suez Canal to the Cape of Good Hope, which is altering bunker fuel demand and trade flows. He projected 2025 as the lowest refining capex year in a decade, with hydrogen projects experiencing significant delays and biofuels under margin pressure due to high feedstock costs and capex inflation. Despite these headwinds, he noted a positive trend: the practical, widespread deployment of AI and digital solutions across the downstream value chain, driving new efficiencies and performance gains.





## Wood Mackenzie Perspective: Demand Peaks, Chemicals Growth

**William Cameron**, Director at **Wood Mackenzie** presented a detailed outlook on long-term demand trends, projecting global liquids to peak around 2031, with conventional oil products declining from 87 mb/d in 2029 to 71 mb/d by 2050. In contrast, chemicals demand is set to rise sharply, growing from 0.9 Bt in 2024 to 1.5 Bt by 2050, driven primarily by aromatics and olefins.

He highlighted integration—particularly crude-to-chemicals pathways—as a critical strategy for restoring margins beyond 2030. While Europe has seen a steep decline in the chemicals uplift available to refiners, highly integrated operators with advanced olefins and aromatics capabilities remain best positioned to capture long-term value.



## Keynote Panel Discussion

# Futureproofing Downstream in Türkiye and the region: Building Integrated Strategies to 2030 and Beyond

### Moderator:

- **Walter Pfeiffer, Partner, ROLAND BERGER**

### Panelists:

- **Bilal Guliyev, General Manager, R&D and Innovation Co, SOCAR Türkiye**
- **Güven Kaya, Deputy General Manager, Board Member, SASA**
- **Mehmet Ali Nalcacioglu, COO, BIOTREND ENERJİ**
- **Andrew Inglis, Director, ETASCA**

The keynote panel highlighted Türkiye's strategic challenge of meeting nearly 90% of its thermoplastics demand through imports. In response, SOCAR and SASA outlined ambitious petrochemical integration plans—including flexible steam crackers and aromatics complexes—with FEED completion targeted for 2026. Biotrend Enerji shared advancements in waste-to-chemicals pathways, such as plastic-to-naphtha pyrolysis and SAF/marine fuel production using RDF and sewage sludge as feedstock.

Panelists also addressed the widening European cost gap, emphasizing how energy disadvantages continue to undermine competitiveness relative to the Middle East, and stressing the need for supportive policy frameworks and access to financing.

In parallel, the panel showcased the growing role of AI-driven optimisation, with applications ranging from CDU corrosion monitoring and UAV-based inspections to predictive maintenance and optical-sorting technologies—all delivering measurable improvements in safety, OPEX, and operational efficiency.



## Technical Sessions & Innovation Highlights

### Session Two:

#### DOWNSTREAM ASSET OPTIMISATION: Maximising Performance and OpEx

The second session of IDW 2025 focused on downstream asset optimisation, highlighting how refiners and petrochemical players are maximising performance and operational excellence through innovative technologies. Presentations underscored the importance of sustainability, decarbonisation, renewable fuels, and crude-to-chemicals integration, with contributions from SOCAR Türkiye, Chevron Lummus Global, Axens/ExxonMobil, and Honeywell UOP.

#### **SOCAR Türkiye: R&D Driving Sustainability and Emissions Reduction**

Bilal Guliyev, General Manager, R&D and Innovation Co, from SOCAR Türkiye presented the activities of its dedicated R&D company, founded in 2019 to support the group's innovation and decarbonisation strategy. Over the past year, the unit has delivered 35 projects, filed 33 patents, published seven papers, and brought four products to market. Current initiatives focus on CO<sub>2</sub> utilisation, including Direct Air Capture (DAC) and conversion pathways to methanol and sustainable aviation fuel (SAF). A joint project with Technip Energies is advancing algae-to-SAF technology, targeting commercialisation as early as next year. These efforts align with SOCAR Türkiye's strategic objective to reduce emissions by 40% by 2035.





### **Chevron Lummus Global: Low-Capex Revamps for Hydroprocessing Assets**

**Jay Parekh, Senior Director and Hydrocracking SME from Chevron Lummus Global (CLG)** shared case studies on upgrading existing hydroprocessing infrastructure to boost yields and enable renewable fuel production. Its Isoterra technology allows refiners to process lipid feedstocks into renewable diesel and SAF within existing units. A hydrocracker revamp example demonstrated capacity gains of up to 40% by introducing fresh feed into the second stage. Other pathways included integrating isodewaxing units into hydrocracker gas loops for low-capex base oil production, and repurposing Residuum Desulfurization (RDS) units for hydrocracking service to increase distillate and jet output.

### **Axens & ExxonMobil: Cutting OPEX in Paraxylene Production**

Co-presentation from **Christophe Pierre, Reforming Product Line Manager at Axens** and **Mikhail Shiryaev, Business Development Manager at ExxonMobil** addressed the challenge of reducing OPEX in paraxylene production, where feedstock accounts for nearly 80% of costs. Their presentation showcased the benefits of Liquid Phase Isomerization (LPI), which operates at lower temperatures than conventional Vapor Phase Isomerization (VPI), delivering improved energy efficiency and xylenes retention. A hybrid approach combining VPI and LPI was shown to achieve a 4% OPEX saving, a 1% increase in paraxylene output, and a payback period of less than two years demonstrating both economic and environmental benefits.

### **Honeywell UOP: Crude-to-Chemicals through Advanced Integration**

**Simay Guven Akgun, Lead Appl/Sys Sales Engineer from Honeywell UOP** concluded the session by presenting its vision for sustainable and flexible refining through deeper crude-to-chemicals integration. Conventional pathways that send naphtha to steam crackers were described as inefficient, with ethylene yields nearly halved compared to ethane feedstocks. Honeywell's Naphtha to Ethane and Propane (NEP) process offers a catalytic solution, converting naphtha into pure ethane and propane. This innovation raises total olefin yields from ~40% to more than 60%, while reducing equipment complexity, cutting crude use by 40% for the same output, and lowering overall costs positioning refiners to meet future petrochemical demand profitably and sustainably.

## Session Three: ENERGY EFFICIENCY: Driving Emissions Reduction and Profitability

The third session highlighted how downstream operators are advancing operational safety, energy efficiency, and sustainability through UAV deployment, digitalisation, bio-based pathways, and next-generation automation. Presentations from SOCAR Türkiye, Lummus Technology, and Emerson explored practical implementations and future trends, before the session closed with a dynamic lightning round of short interventions from international experts.

### **UAVs in Action: SOCAR Türkiye's Case Study**

**Ozgun Deliismail, Process Development Supervisor from SOCAR Türkiye** demonstrated how UAV technologies are transforming safety and inspection practices across its facilities. Six drones, including both outdoor and confined-space models, now support flare imaging, pipeline monitoring, thermal and air-quality mapping, and 3D defect tagging. The integration of UAVs has improved safety in high-risk zones, accelerated inspections, reduced maintenance costs, and generated highly accurate data for sustainability reporting. Routine autonomous flights are being piloted for continuous emissions monitoring, and the initiative has already been recognised with a robotics innovation award, with expansion to SOCAR assets in Azerbaijan underway.

### **Lummus Technology: Bio-Based Fuels and Chemicals Pathways**

#### **Jose de Barros, the Chief Decarbonisation Officer at LUMMUS TECHNOLOGY**

presented scalable bio-based pathways for sustainable aviation fuel (SAF), renewable fuels, chemicals, and polymers. With blending mandates accelerating in both the EU and US, feedstock constraints are pushing innovation in ethanol-to-ethylene (ETE) and ethylene-to-chemicals (ETC) processes. Case studies demonstrated successful SAF production from bio-ethanol with high conversion efficiency and commercial-scale viability. Additional routes included HEFA, CO<sub>2</sub>-to-methanol, and advanced recycling of plastics and municipal waste. Lummus also emphasised the role of repurposing existing assets and applying hybrid digital-first-principles tools to minimise both capex and carbon intensity while maximising SAF yields and reliability.

### **Emerson: The Future of Automation**

**Devrim Pakkan, General Manager of Türkiye & South Caspian, EMERSON** outlined Emerson's vision of industrial automation evolving toward adaptive and autonomous operations. Key enablers include intelligent field devices, unified data fabrics, and AI-embedded advanced process control. Emerson's maturity roadmap positions power generation as an early adopter of autonomy, with refineries expected to follow through progressive adoption of predictive and adaptive systems. Case examples demonstrated significant reductions in model build times and enhanced cybersecurity resilience, underlining the necessity of unified IT/OT strategies as facilities digitise.

## Lightning Session Highlights

The session concluded with rapid-fire insights from international experts:

- Kuldip Rawat, Executive Director MEA&SA at Sabin Metal shared how precision in precious metal reclaim is critical amid volatile markets, with platinum and silver prices rising sharply. With Turkey relying on imports, reclaiming each gram strengthens resilience and reduces costs; Sabin's 99.9% recovery accuracy was highlighted as an industry benchmark.
- Daniele Falcinelli, Business Development Specialist from Conser presented advanced refinery valorisation pathways, showing how C<sub>2</sub>-C<sub>5</sub>+ cuts can be upgraded into high-value products through integrated, lower-impact processing routes.
- Official new book launching by Dr. Marcio Wagner da Silva, Process Engineering Manager from Petrobras focused on stockpiling operations. The work underscores stockpiling as a critical yet underexplored element of safe, efficient downstream integration, with direct links to process economics, accident prevention, and unit coordination.





# Networking Evening



Delegates enjoyed an exclusive Bosphorus cruise aboard a three-deck yacht, featuring:

- Live classical music by a violin trio during the beautiful sunset
- Cocktail reception on the panoramic rooftop deck
- A Turkish traditional dance performance

The evening provided ideal conditions for informal networking and collaboration, with Istanbul's illuminated skyline as the backdrop.







# Day 2

## Process Innovation, Catalysts & Collaboration



### Session Four:

### PROCESSES & CATALYSTS: Enhancing Reaction Efficiency for Improved Operations - Part 1

The fourth session examined Europe's polymer chain, downstream competitiveness, refinery efficiency upgrades, and new hydrogen recovery technologies. Speakers from S&P Global, Sulzer Chemtech, and H2Site presented both market and technical perspectives, before the session concluded with a special interview on Turkey's downstream FDI outlook.

#### Europe's Polymer Chain and Competitiveness Reset

**Michael McDermott, Director of Polymers at S&P Global Commodity Insights**, outlined the structural challenges facing Europe's polymer sector. Global capacity expansions have outpaced demand, pushing cracker utilization to multi-decade lows in 2024–2026. PET faces the sharpest overbuild, with operating rates dropping below 70%, while RPET capacity additions remain insufficient to offset demand pressures on virgin PET.

Europe's cost position is further weakened by ageing assets requiring retrofits, high energy and labor costs, and stringent carbon and recycling legislation. Industry responses lean toward restructuring and portfolio realignment rather than outright closures. Polymer production is increasingly decoupled from domestic crackers, relying instead on imported feedstocks, while investments shift toward polypropylene, RPET, and downstream compounding.





### **Sulzer Chemtech: Revamping the Vacuum Column**

**Libor Hojsik, Senior Refining Applications Manager at Sulzer Chemtech** showcased a refinery case study where smart upgrades to a vacuum distillation unit delivered both yield and energy benefits. The revamp included high-performance trays, structured packing, and optimised steam distribution. As a result, distillates yield increased by 3.3% (around 10 t/h), steam consumption fell by 3 t/h, and product quality improvements allowed HVGO streams to be routed to hydrocrackers. The project also improved crude flexibility and enabled an ejector to be taken offline, underlining the efficiency gains achievable through targeted revamps.

### **H2Site: Palladium Membranes for Hydrogen Recovery**

**Rudolf Huycke, Business Development Chief - Hydrogen Separation, H2Site**, presented H2Site's palladium membrane technology, which delivers 99.97% pure hydrogen at recoveries of up to 98%. Unlike PSA or polymeric systems, the membranes selectively permeate only hydrogen, with catalytic variants also enhancing reaction yields. Demonstrated use cases include recovering hydrogen from HDS purge gas at a cost below €0.50/kg, achieving a payback in around one year while avoiding 8–9 kg of CO<sub>2</sub> per kilogram of H<sub>2</sub> recovered. With over ten projects deployed and units scaling rapidly, palladium membranes are emerging as a cost-competitive and carbon-efficient complement to electrolysis for refinery hydrogen needs.



### **SPECIAL INTERVIEW with**

**Harun Köksal, Expert, Sectoral Activities Unit at the Investment & Finance Office of the Presidency of the Republic of Türkiye.**

Mr. Köksal highlighted Turkey's strong FDI performance, attracting over US\$11 billion in 2023 and hosting more than 86,000 foreign firms. The 2024–2028 strategy aims to increase Turkey's global FDI share to 1.5% and its regional share to 12%, focusing on quality investments aligned with sustainability and value-chain shifts.

Chemicals represent a key sector, with a stock of around US\$15 billion, making up roughly half of industry FDI. Turkey's position as the #2 plastics producer in Europe and top net importer of propylene presents significant opportunities. Investors benefit from broad incentive schemes, including VAT exemptions, tax reductions, social security support, and tailored packages for projects exceeding US\$50 million. Köksal emphasised that Invest in Türkiye provides end-to-end support for investors, serving as a one-stop shop for companies entering the market.

## Session Five:

### PROCESSES & CATALYSTS: Enhancing Reaction Efficiency for Improved Operations Part 2

The fifth session highlighted how coatings and surface technologies can significantly improve energy efficiency, reduce fouling and coking, and extend the lifecycle of critical refinery assets. Presentations from Tubacex and Integrated Global Services (IGS) demonstrated case studies where innovative ceramic and high-emissivity coatings delivered measurable cost savings, operational stability, and sustainability benefits. The session concluded with the launch of Collective Intelligence Networking Roundtables, designed to foster peer exchange on pressing industry challenges.

#### **Tubacex: TUBACOAT Ceramic Coatings in Action**

**Sanjay Lodha, Global Business Director at Tubacex** presented its TUBACOAT ceramic coating, a 150- $\mu$ m surface treatment resistant to temperatures up to 850 °C. The coating's smooth, anti-stick properties reduce fouling and coking, while its hardness—four times greater than the base metal—extends tube life by 5–10 years.

Case studies illustrated strong returns:

- A European visbreaker unit quadrupled cycle length, cut coke deposition by 75%, eliminated the need for quarterly cleaning, and achieved ROI in under a year.
- In a North American delayed coker, spalling intervals increased by 40%, extending maintenance cycles from two to four years and generating up to US\$10M in value.
- Additional deployments—from CCR catalyst lines to calciner and pyrolysis units—showed multi-year performance improvements, reduced replacement needs, and savings of several million dollars annually.



#### **IGS: High-Emissivity Coatings and Robotic Cleaning**

**Sergei Merchev, Director, Business Development at IGS** showcased its C-TAC high-emissivity coatings and robotic cleaning solutions, positioned as fast-payback, licenser-recognized OPEX efficiency projects.

Highlights included:

- A CCR unit in Turkey reduced fuel use by 15.1% and stabilized skin temperatures for 2.5 years following an 11-day application.
- A Spanish SMR cut bridge wall temperature by 40 °C, saving 4% fuel consumption and extending operational cycles for over a decade with a re-application in 2023.
- Robotic convection cleaning reduced stack temperature by 56 °C, boosting heater efficiency by 3% while lowering hydrogen costs.





## Launch of Collective Intelligence Networking Roundtables

Immediately following Session 5, the event introduced the Collective Intelligence Networking Roundtables, 35-minute moderated discussions designed to promote peer-to-peer learning and collaborative problem solving:

- **Table 1: Best Practices and Real-Life Examples on Change Management**

Explored how to manage resistance to organizational change and digital transformation, particularly amid the rapid adoption of AI.

Moderator: Burcak Timucin, Organisational Change & Adaptation Group Manager, SOCAR Türkiye

- **Table 2: Getting Quicker to the Final Investment Decision (FID)**

Addressed strategies for accelerating project decisions to capture opportunities and improve competitiveness.

Moderator: Leandro Labanca, Business Development Manager, AXENS

- **Table 3: Creating the Right Ecosystem to Attract and Retain the Next Generation of Engineers**

- Discussed solutions to the looming talent gap as veteran engineers retire and new professionals remain scarce.

Moderator: Fabien Lundy, EMEA Commercial Vice President, AXENS

- **Table 4: Lifetime Extension of Aging Assets**

Focused on strategies to safely and efficiently extend the operating life of refineries and industrial plants.

Moderator: Attila Szekeres, MOL Group

- **Table 5: Downstream Circularity – Re-refining of Spent Motor Oils**

Examined market drivers, challenges, and technologies shaping Türkiye's approach to circularity and re-refining.

Moderator: Cem Camli, Partner, EY-Parthenon

[Read the full Roundtables Report Here](#)



## Digitalisation Panel Discussion: Unlocking Value through Industrial AI and Data Integration

The afternoon session featured a high-level panel discussion on digital transformation in refining and petrochemicals.

### Moderator:

**Jose de Barros, Chief Decarbonization Officer, LUMMUS TECHNOLOGY**

### Panelists:

- **Bora Özdemir, Digital Transformation Group Director, SOCAR Türkiye**
- **Sanja Sepic, Manager Production & Energy Management, Rijeka Refinery, INA**
- **Yasin Demir, Global Project Pursuit Director, EMERSON**
- **Federico Callero, Senior Sales Account Manager, ASPENTECH**

The conversation explored how operators and technology providers can accelerate digital adoption without heavy capital investment through scalable, trustworthy, and integrated solutions.

### Scene-Setter:

Refinery Perspective: New Digital Approach in Planning/Scheduling/Operational Targets Solutions (RTO, RTEO)

**Sanja Sepic (INA/MOL Group)** set the stage by outlining the refinery vision of a fully integrated digital plant, spanning energy scheduling, hydrocarbon optimization, APC, and process simulation.

- **Benefits:** AI enables real-time adaptation to complex problems, lowering operating and equipment costs.
- **Challenges:** explainability, total cost of ownership, closed-loop feasibility, legacy/multi-vendor integration, and workforce readiness.
- **Progress:** INA is trialling digital twins and hydrogen network optimisation; MOL sites are testing RTO across multiple vendors. Energy cost reductions of ~1.5% and CO<sub>2</sub> savings of ~2% are already measurable from RTO deployments.

## AspenTech: Unified Platforms and Industrial AI

AspenTech emphasized the value of vertical integration from linking planning, scheduling, and operations to minimise margin leakage, while horizontal integration ensures design-to-operations continuity. Their unified platform, reinforced by synergies from the Emerson acquisition, delivers industrial AI tools across the asset lifecycle, from field sensors to enterprise decision support.

## SOCAR Türkiye: Data Fabric and Cybersecurity-by-Design

Bora Özdemir (SOCAR Türkiye) highlighted the role of a unified data fabric to contextualize diverse data sources from historians, alarms, safety logs, spreadsheets, and even video feeds into actionable intelligence. SOCAR applies AspenTech-based tools with minimal incremental CAPEX/OPEX to elevate field data for operational and management decisions.

Cybersecurity was flagged as critical: SOCAR applies governance-led controls, annual vendor compliance checks, and strict equipment lifecycles (phones every 2 years, laptops every 4) to ensure OT/IT security alignment.

## Decarbonization Use Cases and OPEX Levers

Panelists agreed that digitalization is a powerful decarbonization lever:

- Energy dashboards, digital twins, and AI-based optimization tools cut unit energy consumption and reduce CO<sub>2</sub> intensity.
- Cloud migration and green-metric monitoring (via Microsoft and AWS) further support sustainability.
- Concave analysis shows up to 25% CO<sub>2</sub> reduction is possible through OPEX-led measures, without major CAPEX.

## Culture and Trust as Enablers

The discussion concluded with consensus on three points:

- Trustworthy AI requires transparency and high-quality input data.
- Culture change is as important as technology, organizations must align OT, IT, and business teams with shared accountability.
- Inevitable adoption: AI and digital tools are becoming inseparable from refinery competitiveness; speed of adoption will determine profitability.





## SPECIAL PRESENTATION: Turkish Contractors on the Global Stage

**Murat Üstay, General Manager, Ustay Construction Company & Executive Board Member, Turkish Contractors Association (TCA)**

In this special keynote presentation, Mr. Üstay highlighted the global footprint of Turkish contractors:



- Scale and reach: 130 members deliver 90% of international and 70% of domestic projects, with ~13,000 projects in 137 countries and revenues exceeding US\$0.5 trillion; ~US\$30 billion new work annually. The association is ranked #2 worldwide by project count (ENR).
- Sustainability challenges: Construction accounts for ~10% of global CO<sub>2</sub> emissions, driving adoption of energy-efficient materials, circular economy practices, and modularization.
- Technology adoption: Integrated project delivery, robotics, drones, IoT, smart procurement, and modular fabrication (O&G modules, precast units, e-rooms) accelerate project delivery.
- Execution complexity and risk: Technical requirements are growing, with >1,000,000 di-inch piping and tens of thousands of wired I/Os. Projects face underprepared FEED, frequent revisions, and geopolitical disruptions (~2 per 3–4-year project) requiring security measures.
- Cost pressure: Turkey's labor costs have doubled in USD terms within 2.5 years while productivity halved, creating a 4x effective cost increase.





## Closing Panel Discussion:

### Making the Future Work – Preparing for the Next-Gen Downstream:

### Catalysts, Decarbonisation, and Skills for the Future

#### Moderator:

Andrew Inglis, Director, ETASCA

#### Panelists:

- Fabien Lundy, EMEA Commercial Vice President, AXENS
- Fadi Mhaini, VP & General Manager, MENA, LUMMUS TECHNOLOGY
- Sanjay Lodha, Global Business Director, TUBACEX
- Emre Kuzu, Regional Director, Honeywell UOP

#### Energy Efficiency as a Decarbonisation Accelerator

Panelists agreed that low-capex “quick wins” offer the most cost-effective Scope 1 & 2 abatement levers compared to capital-intensive electrification or hydrogen options.

Examples included:

- Anti-fouling heat exchanger coatings delivering ~7% fuel gas savings.
- Combustion air preheating, heat recovery networks, and digital controls.
- Holistic, plant-wide optimization programs (20+ applications) showing measurable Scope 1–2 reductions.



While electrification and hydrogen heating can achieve deep abatement, these solutions remain capex-heavy, grid-dependent, and contingent on low-carbon hydrogen availability.

### **Optimising Molecule Management to Maximise Margins**

Catalyst innovation was spotlighted as a key enabler of downstream profitability:

- Continuous R&D is yielding new generations of catalysts with higher selectivity, yield, and lower carbon footprints.
- Transition to non-mineral feeds (UCO, vegetable oils, plastic pyrolysis oils) introduces impurities requiring flexible yet selective catalyst systems.
- Integrated process-catalyst design enables molecule-level optimization—routing the “right molecule to the right place”—with hydrocracking conversion efficiencies up to 99.8%.
- Case studies demonstrated advanced coatings on CDU preheat trains cutting fuel gas by 7%, with paybacks under 12 months.

### **Skills & Workforce Readiness for the Future Plant**

The panel emphasized that talent gaps represent one of the sector’s most pressing challenges:

- Tenure in oil & gas is now ~5 years vs ~20 years previously, while tech-sector roles average 1–2 years.
- Workforce strategies include early engagement, competitive growth paths, and cross-role rotations.
- Training and competency development leverage AI-driven, interactive platforms, Centers of Excellence, and international workshops.
- Cultural change was noted: rising diversity and inclusion (e.g., women in leadership roles such as a refinery CEO in Kuwait) and updated university curricula focused on biofeeds and sustainability.
- Panelists stressed the industry’s tangible impact—real assets, engineering problem-solving, and contributions to CO<sub>2</sub> reduction—as key to attracting the next generation of engineers.

The closing panel discussion underscored that the downstream sector must simultaneously manage execution risk, cost pressure, and decarbonization, while fostering innovation in catalysts and closing workforce gaps. The consensus: success will depend on low-capex efficiency wins, molecule-level process optimization, and investing in people as much as in technology.

# Testimonials

*"IDW packed a year's worth of ideas into a few days. I left with practical frameworks, new partners, and the momentum, thank you"*

**Senior Technical Manager**

**INTEGRATED GLOBAL SERVICES**

*"Outstanding event! high-level discussions, reflections and solutions about the challenges faced by Downstream players."*

**Process Engineering Manager**

**PETROBRAS**

*"From start to finish, the event was flawlessly organized. Every detail - from the welcoming registration to the thoughtfully planned agenda - reflected a high level of professionalism and care. What truly stood out, however, was the warm and friendly atmosphere."*

**Sales & Marketing Manager**

**LUMMUS TECHNOLOGY**

*"The perfect event to keep in touch with what happens in the refining world, looking to the future."*

**Catalyst Manager**

**SARLUX SRL**

*"Truly remarkable event with great presentations and networking events"*

**Licensors & FEED Engineering Director**

**WIKA**

*"Great experience, excellent organisation, congrats!"*

**Business Development Consultant**

**CHEMATEK**



Watch the full video testimonials to relive the energy, insights, and innovation from IDW Conference 2025!





# #IDWConference in the Media

IDW 2025 was actively followed across platforms with the event **#IDWConference**. Coverage spanned LinkedIn, Twitter/X, and industry news portals, amplifying insights shared by SOCAR Türkiye and other partners.


The 25th Anniversary Edition of IDW reaffirmed the event's role as a platform for collaboration, innovation, and transition in the global downstream sector.

 **@EuroPetroleumConsultants**

 **@EuroPetro**

 **@EuroPetro\_Official**


 **@EPC-events**

**Wood Mackenzie**  
365,209 followers  
1mo • 



Looking back at **#IDWConference 2025** in Istanbul **tr** hosted by **Euro Petroleum Consultants**, it was inspiring to see the industry come together to tackle the challenges facing refining and petrochemicals.

Our Director of Chemicals Consulting, **Will Cameron**, shared insights on refinery-petrochemical integration, exploring how synergies can unlock higher-value products and strengthen competitiveness in today's market.

Find out how our Chemicals Consulting team can help your business navigate these opportunities: <https://okt.to/eEXGIN>

**Johnny Sajland**  • 2nd  
CEO Surfcleaner  
1mo • 

Good luck Humberto!

**Humberto Salgado**  • 1st  
Regional Sales Director, Southern Europe, SurfCI...  
1mo • 

Thrilled to be representing Surfcleaner at IDW Downstream 2025 in Istanbul! Let's connect and talk about your challenges in refinery wastewater management — I'd love to hear your insights. Surfcleaner makes hydrocarbon-water separation simple and effective.

**#surfcleaner #IDWConference #downstream #refinery #petrochemicals**




**Kuldip M Rawat**  • 2nd  
Executive Director, REA & SA @ Sabir Metal Corporation | Maa...  
1mo • 

Today at IDW Türkiye 2025 I am honored to represent **Sabir Metal Corporation** together with my colleague **Bradford Cook** at one of the industry's most influential gatherings.

This conference brings together global leaders shaping the future of refining, sustainability, and energy resilience. Türkiye's role as a strategic bridge between continents reflects Sabir's own mission: delivering solutions that maximize value, advance ESG commitments, and build lasting partnerships worldwide. Being here is not just about participating in discussions — it's about contributing to the dialogue that defines the next decade.

- Proud to stand with Türkiye's dynamic energy sector and to share Sabir's vision for unlocking value and building legacy
- #IDWTurkey2025 #SabinMetal #Petrochemicals #Sustainability #EnergyLeadership #ValueCreation

**Jorge Roman**  • 2nd  
Hydrogen & Wind Energy | Product Manager | MBA-E...  
1mo • 

Takeaways from the IDW Conference (Refining & Decarbonization)


Large-scale decarbonization projects are moving carefully due to regulatory uncertainty, but refineries are actively investing in practical improvements.

- 1st-term focus: revamps, debottlenecking, and operational upgrades with fast back.

**Jalf Huycke**'s presentation sparked strong interest in hydrogen solutions: **SITE** membranes recover  $H_2$  already in refinery streams, reducing SMR load and emissions with double-digit efficiency gains. Site on-site  $H_2$  generation complements or replaces traditional WGS+PSA trains, adding net  $H_2$  output.

Bottom line: Refineries are pragmatically improving processes, optimizing hydrogen, and embracing digital upgrades, while larger decarbonization moves at clearer conditions

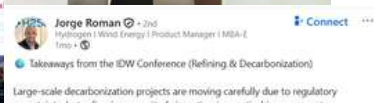
**INWCONFERENCE #EPC #IDWWhistambur #Decarbonization #Optimization #H2SITE**

**Olcay Doğukan Aydın**  • 2nd  
Catalysis and Chemicals Management Chief Engineer  
1mo • 

During 16th and 17th of September, I found the opportunity to participate the **#IDWConference** in Istanbul. It was a privilege to come together with the outstanding people of Oil & Gas industry, listen to their insights for today & for future and increase the level of networking.

On the other hand, retaining the values is something that the attraction of engineering cannot succeed solely. For this case, I certainly believe that the "Employee Branding" and "Perceived Organizational Value" become very essential. For this reason, HR departments have more responsibilities than ever before.

**Euro Petroleum Consultants #OilandGas #Refining #Petrochemicals**



**Türkiye Mühendisler B...**  • 22,307 followers  
1mo • 

IDW Downstream Conference'a Yönetim Kurulu Üyemiz **Murat Üstay** da katılmış, Türk inşaat sektörü hakkında bir sunum yapmıştır.

**#constructtheworld #TürkiyeMühendislerBirliği #TurkishContractorsAssociation #inşaatsektörü #TMB #TCA #construction #mühendislik #ekonomininlokomotifi**

**Dr. Marcio Wagner da...**  • Following  
Process Engineering Manager at Petrobras  
View my services  
1mo • 

The great day has arrived!


The International Downstream Week (IDW) 2025 is Starting and we have a pleasure to launch officially our second book - Transfer and Stockpiling Operations in the Crude Oil Refining Industry - in this high level event which is occurring in Istanbul, Turkey **tr**

Thanks, **Euro Petroleum Consultants** for this amazing event and opportunity!

**Taylor & Francis Group**

**#refining #downstream #IDW2025**



**Bilal Guliyev, PhD** • 2nd  
General Manager (R&D & Inn...  
1mo • 

Honored to participate in the IDWConference, sharing the stage with visionary leaders dedicated to driving sustainable transformation in the downstream industry.

I had the privilege to present how we at SOCAR Turkey R&D and Innovation are advancing future-ready technologies with a strong focus on sustainability and the circular economy:

- Advanced catalysts enabling  $CO_2$ -based methanol and DME production
- Innovative upcycling of plastic waste into valuable chemical feedstock



New catalytic pathways for sustainable aviation fuel (SAF) production

Bio-based technology solutions to enhance environmental performance


It was a pleasure to contribute alongside an outstanding lineup of experts delivering actionable insights and real-world innovation.

Many thanks to the organizers and fellow speakers making this such an inspiring and impactful event.

**ICAR #petkim #starrefinery #socarturkiye #sustainability #innovation #CO2utilization #astupcycling #SAF #Downstream #EnergyTransition #sustainableaviationfuel #wastewater treatment**

**Livia Caradonna**  • 2nd  
Marketing Manager presso H2SITE  
1mo • 

come and meet us at our stand! At **#IDWConference**

**H2SITE**  
17,854 followers  
1mo • 

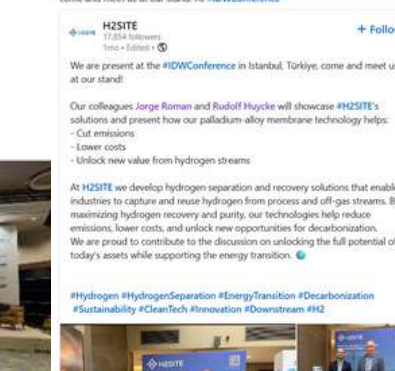
We are present at the **#IDWConference** in Istanbul, Türkiye, come and meet us at our stand!

Our colleagues **Jorge Roman** and **Rudolf Huycke** will showcase **#H2SITE's** solutions and present how our palladium-alloy membrane technology helps:

- Cut emissions
- Lower costs
- Unlock new value from hydrogen streams

At **H2SITE** we develop hydrogen separation and recovery solutions that enable industries to capture and reuse hydrogen from process and off-gas streams. By maximizing hydrogen recovery and purity, our technologies help reduce emissions, lower costs, and unlock new opportunities for decarbonization. We are proud to contribute to the discussion on unlocking the full potential of today's assets while supporting the energy transition.

**#Hydrogen #HydrogenSeparation #EnergyTransition #Decarbonization #Sustainability #CleanTech #Innovation #Downstream #H2**





# See you next year!



Thanks to all our delegates, sponsors, and partners for shaping an exceptional edition in Istanbul.

We look forward to welcoming you next year! IDW 2026 in Croatia, stay tuned!

For 2026 event enquiries please contact:



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SHAPING BUSINESS**