



الجمعية العمانية للطاقة  
Oman Energy Association

# 11th Edition of the OPAL Award for Best Practices 2025 Winning Projects

# Award Objectives

- The OPAL Award for Best Practices, launched in 2015, aims to showcase top-performing members and spread their accomplishments throughout the industry.
- The event provides the opportunity to other members to emulate their counterparts and to encourage them to compete in such proactive developments.
- The award program is designed to identify and honor companies and other organizations that have demonstrated best practices in developing, deploying, and maintaining solutions.
- A panel of independent judges, possessing expertise in the relevant field, selects winners based on submitted entry forms. Entries are evaluated on criteria including business value, maturity, innovation, and relevance to other organizations.

## Award Classes

Operating Companies

Large Contractors

Local Community Contractors

Small & Medium Enterprises

## Winners

- Winners are chosen by a panel of independent judges who have expertise in the field.
- Judges select winners from written entry forms. They score entries on business value, maturity, innovation, and relevance to other organizations.

# Award Categories

## ➤ Omanisation

Most innovative policies and procedures implemented towards recruiting, developing and retaining Omani workforce.

## ➤ Health & Safety

Most successful HSE practice that has minimized risks to fatal injuries, damage to assets and reputation or change people behavior and improve safety culture.

## ➤ Environmental and Sustainable Energy Excellence

Highlights practices that demonstrate a significant positive impact on environmental sustainability and energy transition. It includes initiatives focused on emissions reduction (Net Zero Emissions), efficient use and conservation of water and electricity, waste minimization, and the adoption of sustainable or renewable energy solutions.

## ➤ Energy Transition

Adopting of energy efficiency initiatives like the usage of Renewable Energy, Green Hydrogen, better management of energy, thereby minimizing carbon footprint.

## ➤ Operational Excellence

Technically recognized as best practice in the industry, using innovative approaches or techniques that improved the operational efficiency and effectiveness in terms of reduced resources, time, and/or scale of economy, improved profitability so as to benefiting the company and the industry as a whole.

## ➤ Research & Development (R&D)

Sustained research and development activities that are developed or promoted or implemented for the benefit of the Energy Operations that enhance production without impacting safety and environment.

## ➤ Omani Products and Services

Companies who maximize the use of locally manufactured products and/or services that retain and improve local business partnerships and supply chain.

## Petroleum Development Oman Operating Company



### Project Name

Building Skills, Empowering Careers: EMDAD's Technicians TFE Programs

### Project Description

**Business Impact:** The EMDAD Technicians Training for Employment (TFE) Programme delivers workforce localization by addressing the Ministry of Energy and Minerals' mandate to Omanize 130 priority technical roles across Electrical, Mechanical, and Instrumentation disciplines. The 18-month programme supports 152 Omani trainees: 66 Electrical, 30 Mechanical, and 56 Instrumentation & SCADA, all mapped to MEM priorities and verified contractor demand. The first cohort of 26 Electrical Technicians (STS) achieved 100% retention and placement, with over USD 2 million retained annually in the local economy through sustainable employment.

**Innovation:** The programme is built on a demand aggregation model, translating MEM-prioritized roles and consolidated manpower forecasts from PDO, contractors, and operators into funded, accredited training pipelines. It is co-designed with PDO experts, aligned with OPAL standards, and delivered through accredited institutes, including the nation's first Instrumentation & SCADA Technician stream.

**Maturity:** Launched in 2024 as an Electrical pilot, the programme has evolved into a scalable, multi-stream initiative, expanding in 2025 to include Mechanical, Instrumentation, and SCADA streams, with strong employer buy-in from AIP, Galfar, SAS, GPS, and collaboration with OXY and Shawamikh.

**Relevance:** The programme supports Omanization targets, strengthens critical technical capabilities, integrates HSE and hands-on field experience, and delivers long-term ICV value aligned with Oman Vision 2040.

## Alshawamikh Oil Services SAOC

### Local Community Contractors



### Project Name

Intilaqah Leadership Program

### Project Description

The Intilaqah Leadership Program is a strategic Omanisation initiative by Alshawamikh Oil Services Company SAOC, designed to strengthen national leadership capability and prepare high-potential Omani employees for future senior roles. Aligned with organizational priorities and Oman Vision 2040, the program integrates leadership development with real business challenges, ensuring both immediate and long-term value.

The program has delivered measurable impact by accelerating leadership readiness and strengthening succession planning. Graduates have led projects that improved operational efficiency, strengthened safety compliance, and optimized cross-functional processes. The program has also boosted employee engagement and retention by providing clear career pathways, fostering motivation, and reinforcing organizational loyalty. Alumni actively drive cultural transformation, digital adoption, and collaboration across the company.

The program followed a structured and transparent selection process, with employees applying via the Menaiteach System and selection based on assessments and performance. Participants completed a pre-assessment and engaged in a blended-learning journey combining experiential learning, business-critical projects, simulations, and executive mentorship, ensuring leadership concepts were applied to real operational challenges. Projects were presented to a review committee, and a post-assessment and graduation marked program completion.

With five participants promoted into leadership roles, the program demonstrates strong maturity. Its structured yet flexible design makes Intilaqah a scalable, adaptable, and transferable model for sustainable leadership readiness and succession planning.

### **Project Name**

Bisat C Expansion - Fresh Graduates Recruitment Program

### **Project Description**

The training for employment program at OQ Exploration and production is an outcome of Local Content (In-Country Value) initiatives that are designed with clear objectives aim to cultivate a workforce that is well-prepared to meet the demands of the Oil & Gas industry, through a combination of theoretical learning and practical on-job training. The training focused on Omani Engineering Fresh Graduates in different disciplines linked to Bisat field Operations requirements.

Upon the successful completion of the training, participants emerge proficient in a range of roles, including Operator, Electrician, Technician, and more. The implementation of this training program is going to help meeting Omanisation percentage in Operation phase from 30% in the first year to reach with plan to reach 85% in year four.

The program was initiated with 16 graduates, and it reached 71 graduates in 2025. It was delivered in collaboration with a certified training institute (Takatuf Petrofac Oman Institute) and the DBOOM Contractor, the program ensures a seamless transition of trainees into operational roles.

## Seeh Al Sarya Engineering LLC

Local Community Contractors



### Project Name

Omanisation Beyond Compliance

### Project Description

Seeh Al Sarya Engineering LLC (SAS) has implemented a comprehensive Omanisation Best Practice that positions national workforce development as a core business strategy rather than a compliance requirement. Designed for a high-risk, multi-site oil and gas environment, the programme delivers measurable operational, economic and societal value. Built on four pillars—targeted recruitment, competency-based training, structured career development and technology-enabled monitoring—the initiative has driven record localisation results. Omani nationals now represent 55.23% of the workforce from 42.68% in 2020, with more than 500 Omanis onboarded in 2025 across technical, skilled and professionalism.

Training for Employment (TFE) is a key component, delivered with accredited institutes. In 2025, 70 Omanis graduated in HSE and Electrical disciplines, while a structured internship programme supports 22 university and college students, creating a sustainable talent pipeline. A skill -placement framework and mentorship system ensure effective deployment and competency, faster performance readiness and reduced turnover.

Technology underpins governance through a live Omanisation dashboard and Internship Tracker, providing real-time KPI visibility and talent analytics. Scalable across sectors such as mining, utilities and infrastructure, the model integrates people, process and data into a continuous improvement cycle that strengthens operational resilience, knowledge retention and cost efficiency.

## SLB (Schlumberger) Oman & Co LLC

Large Contractors



### Project Name

SLB National Talent Omanisation Strategy

### Project Description

SLB aims to meet future business demands by empowering young Omani talent through structured workforce planning and comprehensive development initiatives. Each year, all departments will align hiring needs with operational and project forecasts, ensuring the company brings in the right number of Omanis while equipping them with strong competencies. This vision emphasizes exposing local professionals to major global oil and gas projects to prepare them for future leadership roles.

The strategy is built on several key pillars: a strong commitment to local hiring, prioritizing fresh graduates, and ensuring gender balance across professional roles. SLB implements standardized training programs for all new hires, support the growth of at least 100 interns annually, and offer on-demand training to prepare departments for upcoming needs. A structured local talent screening process ensures Omani candidates are considered first for any position, including transfers or replacements. The company will also actively participate in national workforce programs such as Eidaad and Ruwad, while strengthening the SLB Summer Internship Program in collaboration with local universities. SLB aims to maintain at least 82% Omanisation across its workforce.

Ultimately, SLB's focus on professional hiring and training reflects its long-term commitment to developing future leaders and contributing to Oman's workforce advancement.

## Special Oilfield Services Co. LLC (SOS)

Large Contractors



### Project Name

Empowering a Nation: Production Chemicals Integrated Services 100% Omanization Journey

### Project Description

The Production Chemicals Integrated Services (PCIS) contract between Petroleum Development Oman (PDO) and Special Oilfield Services (SOS), established in 2015, represents a benchmark achievement in sustainable workforce localization within Oman's oil and gas sector. In alignment with Oman Vision 2040, the initiative set a clear and ambitious objective to achieve 100% Omanization across all PCIS positions, covering more than 120 headcounts.

Through a structured and well-governed approach combining workforce assessment, role-specific training, succession planning, and continuous performance monitoring, the project successfully achieved full Omanization by Q3 2025. Critical leadership, technical, and operational roles including Contract Manager, Site Managers, Maintenance Technicians, and Laboratory Chemists were fully Omanized. Key enablers included PDO's Industrial Apprenticeship Programme (iAP), customized on-the-job development pathways, and strong collaboration between PDO and SOS leadership teams.

Importantly, the Omanization journey was delivered without compromising operational excellence or safety performance. The project sustained over 12 years of LTI-free operations, maintained customer satisfaction levels exceeding 90%, enhanced digital reporting efficiency, and secured a five-year contract renewal. The PCIS Omanization initiative stands as a scalable, value-driven model demonstrating that national talent development and service excellence can be achieved in parallel.

## Project Name

Worker Welfare Management - Transforming Systems, Empowering People

## Project Description

Oman Shell's Worker Welfare Management program represents a shift in how worker dignity, rights, and wellbeing are protected within energy operations. Implemented between 2023 and 2025, the program safeguards more than 2,000 workers across high risk contracts while embedding welfare into everyday business decision making.

From a business impact perspective, the initiative eliminated recruitment fee risks, ended passport retention, and reduced welfare related non compliance by 40 percent. By integrating welfare KPIs into Business Performance Reviews, leadership now has monthly visibility, enabling early intervention, stronger accountability, and more resilient contractor performance.

The maturity of the program lies in its institutionalization. Worker Welfare Terms and Conditions are contractually embedded and supported by formal Welfare Management Plans, leading and lagging indicators, digital dashboards, regular audits, and cross functional governance through Natural Teams and senior leadership oversight.

Its relevance extends beyond Oman Shell. The program aligns with OPAL Worker Welfare Standards and ILO principles and offers a practical, scalable model that operators and contractors can adopt across Oman's energy sector to strengthen ethical labor practices. Innovation sits at the heart of the initiative. A multilingual, anonymous QR based Worker Welfare Observation Card gives workers a safe voice and enables proactive, data driven prevention.

## **Project Name**

OQGN Safety Culture Transformation Program

## **Project Description**

The OQGN Safety Culture Transformation Program is a 3-Year strategic initiative aimed at embedding a proactive, ownership-driven safety culture across the organization. The program combines behavioral safety interventions, leadership engagement, digital tools, and employee empowerment to drive sustainable change.

Governed by a robust stewardship model through baseline surveys, campaigns, training, digital integration, forums, and roadshows, OQGN has implemented a structured and holistic methodology that strengthens both safety performance and organizational culture.

The business impacts are tangible: reduced incident costs, stronger workforce engagement, improved compliance, and enhanced reputation as a leader in HSSE excellence. The program also demonstrates maturity, with measurable improvements in safety culture indicators and visible leadership commitment across all levels of the organization.

Importantly, the initiative is relevant and replicable, offering a best-practice model for other companies in the energy sector. By combining human performance principles with innovative digital solutions and engagement methods, OQGN is setting a benchmark in the region for safety culture transformation.

This program reflects OQGN commitment to "Beyond Zero Harm" - empowering people, leveraging innovation, and building a sustainable culture of safety that supports the company's long-term success and industry leadership.

## National Drilling & Services Co. SAOC

Large Contractors



### Project Name

NDSC ZOOM Project

### Project Description

National Drilling & Services Co. SAOC (NDSC) has implemented NDSC Zoom, a centralized CCTV monitoring center at head office, to strengthen safety culture through real-time visibility and proactive intervention across rig operations. The initiative enables continuous monitoring of safe and at-risk behaviors, supporting immediate engagement, corrective action, and sustained improvement in operational safety performance.

The NDSC Zoom Center is supported by advanced technology, including multi-screen high-definition displays, two-way communication with rigs, live camera streaming from each unit, and an integrated observation and reporting platform managed by a dedicated CCTV Advisor. This capability ensures structured oversight of critical and high-risk activities during daily operations.

NDSC Zoom operates through a structured five-step framework: observation, intervention, reporting, action closeout, and review. When at-risk behaviors are identified, immediate communication is established with site management, followed by stand-down discussions and reinforcement of safe practices. All observations are formally recorded, assigned for corrective action, verified, and closed with supporting evidence, ensuring clear accountability.

Weekly reviews analyze trends and root causes, enabling targeted rig visits, focused safety campaigns, and organization-wide shared learning. The system promotes transparency, consistency, and knowledge transfer across all units. Recognition and weekly QHSE discussions sustain engagement and accountability.

## Gulf Petrochemical Services & Trading L.L.C (GPS)

Large Contractors



### Project Name

Culture change and IVMS violations reduction

### Project Description

The company has taken action to invest in the installation of IVMS and DFMS system in the fleet aiming to enhance driver culture on road hazards and reducing road traffic accidents due to drivers' attitudes. Initially the violations started at higher levels due to technical issues, awareness and understanding. With continual efforts on coaching, training, counselling, and applying consequences had led to improvements of culture and reduced high potential road traffic accidents. The company goals as part of no harm believe to achieve zero violations by end 2026 as practically as possible.

#### Impact of the project:

- Improved trust of clients.
- Enhanced reputations on efforts towards reducing road traffic accidents.
- Reducing insurance fees and production loss.
- Extending safe driving behaviors in the community and complying with safe cultures

#### Architecture and Project Methodology:

- Installing the IVMS/DFMS in the fleet.
- Investigate the recorded violations.
- Communicate company vision of zero IVMS/DFMS violations.
- Apply the reward and consequence as applicable to achieve the compliance.

#### The project has key contributions to:

1. Business Impact: On reputations, reduction of road traffic incidents and staff morale. Budget reductions due to less repair work and insurance fees.
2. Maturity: It shows commitment of management and staff for safer organization.
3. Relevance: It is part of day-to-day commitment to reduce road traffic accidents and implementing Opal standards as practical as possible.
4. Innovation: Involving drivers to the expected changes and motivating them to be part of the safe changes. Learning and adapting new technology to help improve business profit and reputation.

## Al Haditha Energy SAOC

Local Community Contractors



### Project Name

Lifting Equipment Proximity Warning - A real-time System that strengthens engineering controls at the workplace.

### Project Description

At Al Haditha Energy SAOC, The Lifting Equipment Proximity Warning System was implemented as a proactive safety innovation to prevent Line of Fire incidents during lifting operations. The project addresses a critical risk in construction and oil & gas activities, where personnel and equipment are often exposed to moving cranes and lifting equipment within congested work areas.

The system uses proximity detection technology to identify unsafe closeness between lifting equipment and personnel or objects. When predefined safe distances are breached, the system provides audible and visual alerts to the operator, enabling immediate corrective action. This real-time warning significantly reduces reliance on human judgment alone and strengthens engineering controls at the workplace.

Following implementation, the project demonstrated measurable improvement in lifting safety, enhanced operator awareness, and reduced potential for serious incidents. The system supports compliance with client and industry HSE requirements and aligns with the hierarchy of controls by eliminating and mitigating risks at source.

This best practice showcases Al Haditha Energy- innovation, leadership commitment to safety, and a strong focus on preventing high-potential incidents, contributing to a safer and more resilient work environment.

## Abraj Energy Services

Large Contractors



### Project Name

Innovating Sustainable Energy: Enhancing Rig Fuel Efficiency through Smart Advisory Systems

### Project Description

**Business Impact:** The initiative achieved an average 7.2% fuel reduction per well, delivering direct cost savings without compromising drilling performance or reliability. Optimized engine load management improved efficiency, reduced greenhouse gas emissions, supported regulatory compliance, and strengthened sustainability and CSR goals—demonstrating strong return on investment and long-term business value.

**Innovation:** This project presents a real-time digital advisory system that determines the optimal number of engines to meet power demand efficiently. Using predefined engine operating ranges, live data, and embedded decision logic, it provides actionable recommendations, eliminating reliance on human judgment and enabling consistent, sustainable, and fuel-efficient power management.

**Maturity:** Following a successful trial launched in mid-2024, the system has completed over six months of continuous, monitored deployment across multiple wells and diverse rig conditions. Proven reliability and increasing operator adoption demonstrate a high level of technical maturity, confirming the solution is ready for broad-scale implementation.

**Relevance:** The system's core is a manufacturer-independent model for managing engines. Its adaptable design and simple setup allow operators to customize features and quickly replicate the solution across diverse operations, delivering proven, scalable fuel savings.

## Al Sahari Oil Services SAOC

Local Community Contractors



### Project Name

Goal Zero Water Services –Transition from Diesel to Solar

### Project Description

#### Business Impact

- 400,000 L/month Diesel Savings
- 50% Lower OPEX & Maintenance Costs
- 1,072 ton CO<sub>2</sub> Avoided Monthly
- Reduced Fuel
- Lower Noise & Emissions
- Improved Air Quality
- Stable, Reliable Solar-First Power
- Less Dependence on Volatile Fuel Supply

#### Innovation

- First Mobile Solar-BESS in Oman Oilfields
- Retractable PV Arrays for Desert Mobility
- BESS Handles ESP Start-Up Currents
- Cuts Fuel Costs & CO<sub>2</sub> Emissions
- Digital Monitoring Integrated with SAP/eWCAT
- Hybrid EMS Prioritizes Solar

#### Maturity

- Modular, Containerized PV with Retractable Design
- Solar-First EMS + ATS with DG Backup
- 200+ Staff Trained (85% Omani) in Hybrid Ops

#### Relevance

- Proven Solar-Hybrid Model for Remote Oilfields
- Aligned with PDO Goal & Net Zero 2050
- Containerized PV-BESS-DG Units for Deployment
- Modular Design Enables Load Growth & Multi-Site Rollout
- Replicable Across Oil & Gas, Mining, Utilities
- Plug-and-Play with Retractable Solar Arrays
- Hybrid EMS Ensures Seamless Power Continuity
- Minimal Civil Works, Fast Desert Commissioning
- Best Practice in MENA



## Project Name

Cold Gas Recovery to Meet Net Zero Goals

## Project Description

Oman LNG has implemented a strategic brownfield project aimed at reducing greenhouse gas (GHG) emissions while enhancing energy efficiency and delivering strong economic value. This initiative supports the company's long term net-zero emissions ambition and demonstrates its commitment to sustainable and responsible operations.

The project involves the development of an innovative cold gas recovery system designed to operate during plant turnarounds. During these periods, cold gas is flared resulting in energy losses to maintain cryogenic conditions, particularly to keep the Main Cryogenic Heat Exchanger (MCHE) below  $-40^{\circ}\text{C}$ . Maintaining this temperature is essential to prevent mercury-induced liquid metal embrittlement (LME), which can compromise equipment integrity.

The new recovery system captures the cold gas and redirects it into the plant fuel gas network for reuse in LNG production instead of flaring to atmosphere.

The system is expected to recover approximately 1,100 tons of gas annually, generating savings of more than USD 300,000 from avoided gas losses. In addition, it is estimated to reduce CO<sub>2</sub>-equivalent emissions by around 3,000 tons per year, corresponding to a potential annual carbon value of USD 80,000 at a USD 25/ton carbon price.

Beyond its environmental and financial benefits, the project showcases engineering innovation and scalable, cost-effective solutions.

## Project Name

Engine Performance Optimizer (EPO) for Drilling Rigs

## Project Description

OQEP & NOV jointly had a pilot to support the de-carbonization initiatives on OQEP rigs in Block 60 – 2 rigs (Abraj 205 & Abraj 210) had been hosted as part of this trial where we had the Engine Performance Optimizer. This product mainly involves in the optimization of engines which are being used for the rig operations, where OQEP had a visibility in real-time of the Engine parameters (as part of Engine Monitoring) & Load advisory system at the rig site, which will highlight the optimum usage of the engines based on the engine loads & thereby optimize the fuel consumption and in-turn reduce the carbon footprint.

Under this pilot, OQEP was able to achieve significant number of reductions - about 5% of total diesel consumption & GHG emissions on Rig 210. Based on the successful pilot results, we are looking to scale up to 5 rigs with this solution in this year- with more user engagement, this system is expected to have a potential reduction of 10 - 15% on diesel consumption & thereby having a direct effect on further reducing the GHG emissions over a definite period.

## Project Name

ZERO-Pit Drilling: Enhanced Waste Management

## Project Description

Oxy Oman's Pitless Drilling Initiative replaces traditional reserve pits with a closed-loop waste management system designed to conserve water, minimize environmental impact, and align with Oman Vision 2040 goals for resource efficiency and pollution reduction. By integrating cuttings drying and on-site fluid dewatering, rigs now process drilling waste in real time, recovering 85% of water-based mud for reuse. This significantly reduces freshwater demand, supporting national targets to protect natural resources and enhance sustainable industrial operations.

Field trials delivered 60–70% overall waste volume reduction, the complete elimination of on-site pits, and 70% less trucking requirements, with the potential to avoid 2,400 t CO<sub>2</sub> annually as the initiative scales up. The closed-loop design improves site safety, removes contamination risks, and enhances operational cleanliness and efficiency.

Economically, the initiative remains cost-neutral, with savings from pit construction avoidance, reduced hauling, and recovered drilling fluid. Importantly, the project strengthens In-Country Value by developing local capabilities in waste processing, enabling Omani contractors to adopt and scale these technologies.

Oxy Oman's approach shows that water stewardship, environmental compliance, and economic efficiency can be achieved simultaneously, offering a replicable model for sustainable onshore drilling in Oman.

## SLB (Schlumberger) Oman & Co LLC

Large Contractors



### Project Name

Decarbonizing Fracturing Operations with IRIS & Biodiesel

### Project Description

SLB, in partnership with BP Oman, has implemented an innovative project to decarbonize hydraulic fracturing operations by integrating the Idling Reduction Intelligent System (IRIS) with biodiesel fuel adoption. The initiative supports Oman's Vision 2040 and Net Zero 2050 goals by reducing CO<sub>2</sub> emissions, optimizing fuel consumption, and enhancing operational safety.

Conventional fracturing operations require pumps to idle between stages to avoid complex manual restarts, resulting in excessive fuel consumption, emissions, noise, and equipment wear. IRIS addresses this inefficiency by automatically shutting down pumps after idle periods and enabling remote restarts from the control van through an integrated electric starter system. This automation eliminates unnecessary idling and manual intervention.

Pilot deployment of IRIS prevented 407 tonnes of CO<sub>2</sub> emissions, saved over 150,000 liters of diesel, and reduced fuel costs by \$101,000. In parallel, SLB transitioned from conventional diesel to biodiesel blends, starting with B05 in 2023 and progressing to B20 by 2025, achieving CO<sub>2</sub> emission reductions of up to 17% and saving an estimated 80 metric tonnes of CO<sub>2</sub> in 2025 alone.

Beyond emissions and cost savings, the project reduces noise, improves safety, lowers operator fatigue, and extends equipment life, providing a scalable model for sustainable oilfield operations.

## Project Name

Powering a Greener Future: Oman's First-Ever Electrification Initiative for Rigs Camps

## Project Description

PDO's Rig & Camp Electrification Initiative is a landmark achievement in Oman's energy transition, replacing diesel-based power generation with grid-connected electricity. The project delivers measurable improvements in safety, environmental performance, operational reliability, and workforce welfare, while establishing a scalable best-practice model aligned with Oman Vision 2040.

The initiative began with Rig 99, Oman's first electrified rig, proving technical feasibility, reliability, and cost efficiency. The electrified rig eliminates approximately 24,638 km of annual fuel transport and reduces about 4,100 tons of GHG emissions, while improving power reliability, reducing downtime, and enhancing safety and welfare conditions.

Camp electrification is progressing, with 15 camps currently connected, delivering immediate benefits of reduced diesel logistics and improved living conditions. Each connected camp avoids around 3,833 km of annual road travel and reduces approximately 1000 tons of GHG emissions. Infrastructure is completed at 14 locations, future-ready to accommodate up to 50 camps.

Combined, the initiative eliminates over 339,000 km of annual road travel and enables potential GHG reductions exceeding 56,500 tons per year at full rollout. By reducing logistics costs, downtime, and HSE risks, this scalable program strengthens PDO's operational efficiency, sustainability performance, and long-term business resilience.

## KCA Deutag (H&P)

Large Contractors



### Project Name

BESS – Battery Energy Storage System

### Project Description

Bentec's Battery Energy Storage System (BESS) project is a modular, containerized solution designed to enhance energy efficiency, reduce emissions, and improve operational reliability in drilling environments. Traditionally, drilling rigs rely on oversized diesel generators to handle peak loads, resulting in inefficient energy use, high fuel consumption, and significant carbon emissions. BESS addresses these challenges by enabling peak shaving, frequency stabilization, and optimized generator load management. The system integrates high-capacity lithium-ion battery racks, advanced power converters, and a sophisticated Energy Monitoring & Control System (EMCS), all housed within a robust, safety-compliant container.

BESS delivers substantial business value by reducing diesel consumption and generator operating hours—simulation data shows up to a 43% reduction in runtime and improved utilization, resulting in significant cost savings and lower maintenance needs. The system supports black start capabilities, remote monitoring, and seamless integration with existing rig infrastructure. Its modular design ensures scalability and ease of maintenance, while advanced safety and control features guarantee reliable operation in harsh environments. Overall, BESS sets a new benchmark for sustainable, resilient, and intelligent energy management in the drilling industry.

## Project Name

Unlocking Tight Carbonates Under Extreme Conditions: Retarded Acid Excellence in Sultanate of Oman: High-efficiency Stimulation Design.

## Project Description

The project focuses on enhancing acid stimulation techniques for tight carbonate reservoirs under high-temperature conditions (up to 200°C). These reservoirs are challenging due to low permeability, complex mineralogy, and extreme temperatures, which cause rapid acid reactions and ineffective stimulation. The project aims to develop a retarded acid system that controls the reaction rate, improves penetration, and enhances well productivity.

Through extensive laboratory testing, the goal is to optimize the use of acid types, ensuring the acid remains effective for longer periods. This will result in improved reservoir access, reduced acid consumption, and overall enhanced well performance.

### Business Impact:

- Increased production in tight carbonate fields by 150 m3/d.
- Enhanced well productivity by up to 10 fold, with average production of 200 m3/d.
- Increased oil production in GFRN-01 to 730 m<sup>3</sup>/day and Gas rate of 0.183 MMm<sup>3</sup>/day
- Ghafeer fields, ~180 m<sup>3</sup>/d net oil and 80 km<sup>3</sup>/d gas.
- 35% volume reduction and a 250K MT in CO<sub>2</sub> reduction.

### Innovation:

- Smart fluid design integrated with simulation technology.
- Innovation testing with significant breakthroughs.

### Maturity:

- Successful deployment in various fields.
- Proven lab testing and optimized formulations.
- Alignment with PDO JoT standards for HSE, production, and cost.

### Relevance:

- A strategic solution for tight carbonate stimulation.
- Boosting production, cost-effectiveness, and energy transition sustainability. Shaping the future of reservoir management.

## Project Name

Waterflood to Windfall at Greater Saqr

## Project Description

Greater Saqr is a key contributor to one of PDO's largest producing clusters, accounting for approximately 30% of total cluster oil production and operating predominantly under waterflood. In 2024, the area experienced a sharp production decline, directly impacting cashflow and increasing the risk of early production termination.

Through systematic and structured diagnostics, the Waterflood Optimization Project identified low reservoir throughput driven by injectivity deterioration, poor injected water quality, and insufficient injection water supply as the root causes of the decline. In response, the team developed an innovative, tiered optimization workflow progressing from field-level waterflood response, to area performance, and ultimately to well-level diagnostics. This structured approach, combined with value-based prioritization, ensured that limited resources were directed toward opportunities with the highest expected oil gain.

The workflow was automated, integrating multi-disciplinary inputs to deliver faster, consistent, and repeatable diagnostics. Since launch, a focused campaign of acid stimulations, re-perforations, bean-ups, and improvements in injected water quality and volumes successfully restored injectivity. More than 5 million barrels of additional water were injected, translating into over 1 million barrels of incremental oil and arresting the production decline.

To date, the project has delivered approximately USD 50 million in cashflow, with a further USD 250 million in the opportunity funnel. Automation also unlocked efficiency savings equivalent to 2 FTEs per year. Proven, scalable, and sustainable, the workflow is now replicated across the cluster, sustaining momentum toward long-term value delivery.

## **Project Name**

ADOPTING INNOVATIVE "REMOTE TECNO PLUG" TECHNOLOGY FOR POSITIVE ISOLATION

## **Project Description**

OQGN recently executed a project to segregate rich and lean gas, which includes a critical operation to connect the newly built gas blending station (GNH) with existing 48" pipeline at Qarn Alam. The project has been successfully completed by utilizing the most advanced technology Remote Tecno Plug® - RTP to provide positive isolation in the high-pressure gas transmission system.

The RTP is a piggable, remote controlled, tether less isolation tool that move based on differential pressure across the tool and it provides a double block and monitor isolation of pipelines while the system remains live.

**Impact:** Secured uninterrupted gas supply to key stakeholders, including PDO, OLNG, OMIFCO, IPP, creating a significant commercial advantage in gas sales. Minimized flaring, reduced gas emissions and substantial cost savings without impact on the environment.

**Innovation:** Pioneered the first-ever application of advanced RTP technology in Oman, successfully executed on a 48" high-pressure gas pipeline.

**Maturity:** Demonstrated OQGN's organizational maturity through the adoption and successful execution of advanced technologies, effectively meeting complex challenges.

**Relevance:** The project held critical importance due to the involvement of key stakeholders such as IGC, PDO OLNG, OMIFCO, IPP and its significant potential impact on gas value chain.

## Project Name

Surveying of wide range pipeline network with AI Powered Drone

## Project Description

Right of Way (ROW) surveillance is a key activity to ensure the safety and reliability of OQGN's pipeline network. Previously, this process relied on manual, paper-based reporting and extensive travel for inspections. Each cycle generated hundreds of checklists and required considerable time and effort, making the approach inefficient.

To overcome these challenges, OQGN began its digital transformation by introducing "Mueen," a GIS-based platform in 2021. This initiative streamlined reporting and improved resource utilization, marking a significant step toward operational efficiency. However, the company aimed to advance further by adopting technologies that enable faster, smarter, and more accurate monitoring.

Recently, OQGN launched the "AI Powered Drone" project, transforming the way ROW surveillance is conducted. These drones provide real-time data, gas leak detection, flood impact assessment, and intrusion alerts. By automating critical tasks, the solution enhances safety, reduces human error, and supports rapid decision-making.

AI-powered drones have improved operational efficiency, optimized resources, reduced environmental impact, and enhanced workforce skills. Automated reporting and dashboards have replaced manual processes, ensuring accuracy and speed. This sets a new benchmark for digital innovation and demonstrates how technology can redefine infrastructure monitoring and risk management.

## Middle East Bridge LLC

Small & Medium Enterprises



### Project Name

Enhanced Carbide-Start

### Project Description

The Enhanced Carbide-Start project by Middle East Bridge LLC marks a breakthrough in downhole milling and cleanout operations, developed entirely by skilled Omani talents. At its core are high-performance star-type tungsten carbide inserts, crafted from an advanced composite of tungsten carbide (WC), cobalt (Co), titanium carbide (TiC), and tantalum carbide (TaC). This innovative blend delivers superior hardness, wear resistance, and stability compared to standard carbide.

The star-shaped multi-edge design improves cutting efficiency by up to 80%, reducing milling time in critical operations such as permanent packer milling and cement removal by as much as 30%. Operational reliability is enhanced, achieving 40–55% reductions in non-productive time (NPT) through fewer tool failures, reduced redress cycles, and minimized downtime.

Field deployments across multiple PDO operations have validated the solution's maturity, consistently delivering faster execution, improved safety, and repeatable performance. Feedback from operational teams highlights significant time savings and increased confidence under challenging well conditions.

By combining material innovation with practical tool design, the Enhanced Carbide-Start project demonstrates measurable cost optimization and efficiency gains, reinforcing the value of Omani talent in producing high-performance, reliable milling solutions for demanding oilfield environments.

### Project Name

Reviving Dead Wells and Unlocking Hidden Value Transformative Business Impact of a Versatile FeS Dissolver

### Project Description

Iron sulfide (FeS) scale is one of the most persistent flow-assurance challenges in Oman's mature oilfields, frequently causing tubing blockages, stuck ESPs, and prolonged well shutdowns despite healthy reservoirs. Conventional solutions such as milling or acids often fail to dissolve FeS effectively and introduce significant risks, including corrosion, toxic H<sub>2</sub>S generation, and costly (mechanical interventions such as ESP pulling or workovers).

This project introduces a novel, FeS dissolver that delivers a step-change in scale management. The chemistry is specifically engineered to achieve high FeS solubility while maintaining low corrosion rates and reduced H<sub>2</sub>S risk. By replacing mechanical intervention with targeted chemical treatment, the solution restores integrity in a safer, faster, and more cost-effective manner.

During 2024–2025 field deployments, the technology successfully revived long-shut wells, cleared over 2 km of FeS-plugged tubing, freed stuck ESPs without pulling completions, and delivered production uplifts ranging from 300% to 1000%. These results significantly reduced non-productive time, avoided major capital expenditure, and extended well life.

The solution is fully field-proven, repeatable, and scalable across wells, pipelines, and surface facilities. Developed and executed locally, it enhances In-Country Value while unlocking hidden production from existing assets, supporting operational excellence and sustainable energy production in Oman.

## Arabian Industries Projects

Large Contractors



### Project Name

Non-Man-Entry Robotic Desludging and Sludge Treatment Technology

### Project Description

**Business Impact:** AIP's Non-Man Robotic Tank Desludging and Sludge Treatment has delivered clear business value by reducing tank downtime and associated oil deferment, while recovering oil from hard sludge and reinjecting it into the process facility. These improvements have resulted in cost savings of up to USD 1.7 million per tank, making the technology economically attractive for oil and gas operators.

**Innovation:** This solution demonstrates strong engineering innovation for hazardous environments. The fully hydraulic, non-inductive robotic system operates safely in Zone 0 and is supported by ATEX-certified CCTV cameras, an integrated auger, high-pressure water jetting, and a custom-built high-capacity vacuum unit (the largest of its kind in the Middle East) designed to handle hard sludge efficiently.

**Maturity:** Following its initial pilot deployment, the technology matured rapidly and became the standard method for tank maintenance in southern Oman. The replacement of traditional manual desludging methods reflects consistent performance, reliability, and high client confidence.

**Relevance:** By reducing confined space entry by up to 90%, this no-man-entry approach establishes a new safety benchmark for tank maintenance in Oman. It aligns with industry best practices and encourages the adoption of advanced technologies to improve safety, efficiency, and long-term operational sustainability.

## Amlaak Energy Resource

Local Community Contractors



أملاك لموارد الطاقة ن.م.م  
AMLAAK ENERGY RESOURCES LLC

### Project Name

Aircraft Fuelling Operations & Optimisation

### Project Description

Amlaak Energy Resources LLC is a leading Omani energy company established in 2007, specializing in fuel transportation, aviation fuel services, and advanced energy infrastructure solutions. The project focuses on delivering comprehensive aviation fuel management and storage solutions across Oman, supporting civil, military, and commercial aviation sectors.

The initiative includes end-to-end aviation fuel services such as fuel transportation, storage, fuel farm construction, hydrant systems, aircraft refueling, and quality control in compliance with international standards including JIG, EI, and ISO certifications. Amlaak operates in strategic partnership with global industry leaders such as Fuelco, enabling the deployment of advanced modular fuel storage systems, automation, and safety-compliant infrastructure.

The project emphasizes operational excellence, safety, environmental responsibility, and reliability through 24/7 fuel availability, trained personnel, and strict quality assurance processes. It also supports sustainability goals through future integration of SAF, green hydrogen, and environmentally responsible technologies.

With proven experience across Oman's airports, military bases, and energy facilities, the project strengthens national aviation infrastructure while aligning with Oman Vision 2040 through innovation, safety, and sustainable growth.

### Project Name

Safe & Fast (Fixed Choke Manifold)

### Project Description

This project introduces a breakthrough design: the choke manifold is mounted directly on a non-corrosive pump, eliminating ground installation and lifting. The result—safer, cleaner, and faster operations, cutting rig-up time by 50% (from 3 to 1.5 hrs), enabling more jobs per shift and reducing environmental impact.

#### Business Impact:

Period	Time Saved (Hrs)	Cost Saved (USD)	Wasted Chemicals After (Ltr)
Per Job	1.5	175	0
Per Week	10.5	3,675	0
Per Month	45	15,750	0
Per Year	540	189,000	0
4 Years	2,160	756,000	0

50% reduction in rig-up time 50% reduction in manpower and operating costs Elimination of chemical spills.

#### Innovation

- Integrates the choke manifold with pump, eliminating manual rig-up and ground installation.
- Cuts rig-up time by 50%.
- Eliminates lifting operations and reduces exposure to high-pressure lines.
- Prevents chemical spills, protecting soil and reducing waste.

#### Maturity

- Fully implemented with consistent success in operations.
- Demonstrated repeatability across multiple jobs.
- Aligns with operational protocols and OPAL HSE requirements.

#### Relevance

- Improves safety, reduces hazards, and eliminates chemical spills.
- Minimizes environmental impact in line with Oman's sustainability vision.
- Provides measurable operational and financial benefits with strong industry relevance.

## Project Name

Thermal EOR by Cyclic Sequential Injection (CSI) in Carbonate Reservoirs

## Project Description

This project evaluated and implemented Cyclic Sequential Injection (CSI) as an improved thermal EOR strategy for heavy oil recovery in the Kahmah and Khuff carbonate reservoirs at the Mukhaizna Field, Oman. These thin (15–20 ft), fractured carbonate reservoirs contain very high-viscosity oil (4,500–8,000 cp) and present challenges for conventional thermal recovery methods. Previous approaches, including Cyclic Steam Stimulation (CSS), Sequential Steam Injection (SSI), and Group CSS, resulted in some challenges due to existing fractures.

CSI was designed to integrate the benefits of CSS and SSI by injecting steam into one well at a time within a group, while adjacent wells remain on production. Injection is rotated sequentially across the group, maintaining reservoir heat continuity while minimizing wells down-time. This combined injection-production strategy improves heat utilization and sustains oil mobility.

Field implementation demonstrated 10–20% incremental oil production, reduced water cut, improved pump performance, lower steam-oil ratios. Based on technical and operational performance, CSI was adopted as the preferred thermal EOR strategy for the Kahmah and Khuff reservoirs, delivering improved recovery efficiency and project economics. These strategies shape the future of complex carbonate reservoirs.

## Project Name

Future Foundation A novel pile concept

## Project Description

The growing demand for robust, efficient, safer and timely construction method does entail exploring a new technology and / or alter the known construction practices to achieve the desired outcome.

For majority of structure in oil and gas industry, a shallow block foundation is used. This type of foundation tend to be laborious in nature, involving activities like excavation , backfilling , steel fixing , formwork fixing, curing and protection. In other hand , pile foundation does eliminate many of activities required for normal shallow block foundation.

The pile foundation is traditionally recognized as deep foundation that implemented as a solution for large load and week soil strata. The pile is design to have a pile cap in top of it to bear the applied load.

The new concept adopted use the principle of pile foundation with elimination of pile cap and connect the structure directly to the foundation. In addition , the new concept does leverage the good soil strata normally encountered in Oman to have short pile make resulting on same amount of concrete used for black foundation.

The concept has resulted in reducing the required resource for foundation by 45 % , 70 % reduction on duration of foundation works , better environmental , HSE & quality Control

## MB Petroleum Services LLC

Large Contractors



### Project Name

Eco-Green Lubricant

### Project Description

The ECO-Green LUB project delivers strong business impact by introducing Oman's first locally produced high-performance drilling lubricant designed for high-temperature wells up to 150°C. It reduces non-productive time, minimizes equipment stress, and offers a 20% cost advantage over imported products in Oman and the Middle East, a region heavily dependent on international suppliers.

The project is highly relevant to current oil and gas industry needs, addressing both technical performance and environmental sustainability. ECO-Green LUB meets and exceeds API and Petroleum Development Oman (PDO) specifications and has been validated through laboratory testing and real field trials, demonstrating reliable performance in demanding drilling environments. Project maturity is demonstrated through a structured five-year R&D program, phased execution from concept to field deployment, certified compliance, and cross-functional governance involving management, R&D, and field operations.

Commercially, the lubricant targets a market exceeding one million liters per year. Offered at 20% lower cost than imported alternatives, the project aims to secure a 20% market share within two years, generating approximately USD 500,000 in annual net profit. Innovation lies in the use of green chemistry and locally sourced date seed oil, establishing a scalable, sustainable model for localized oilfield chemical development.

## Project Name

Conformance control with nano-spheres to optimize water-flood in carbonate reservoir

## Project Description

Daleel Petroleum implemented an innovative deep conformance control solution to address water breakthrough in its carbonate reservoirs developed with horizontal wells under conventional waterflooding. This innovation was enabled through comprehensive laboratory evaluation, leading to the selection of polymeric nanospheres as the preferred EOR agent. Once injected, the nanospheres expanded from several hundred nanometers to a few microns, representing a novel approach to selectively modifying high-permeability flow paths while preserving injectivity. This innovative mechanism allowed effective redistribution of injected water and significantly improved sweep efficiency.

The solution was implemented using a dedicated injection unit which was seamlessly integrated into the existing water injection system, requiring minimal manpower. The pilot involved two injectors and three offset producers, with the central well achieving clear water-cut reversal exceeding 20%. By November 2025, the innovative application delivered approximately 46 kbbl of incremental oil at a low unit technical cost, generating an attractive commercial outcome of 3.5 MMUSD in value versus 0.6 MMUSD in cost. With a high technology readiness level, this first innovation in North Oman carbonates is planned to expand to 10 injectors in 2026, establishing a strong benchmark for scalable deployment across Oman and the wider Middle East.

## Petroleum Development Oman Operating Company



### Project Name

ICV Journey in UWC Contracts Local Manufacturing success stories

### Project Description

The ICV (In-Country Value) Journey in UWC Contracts focuses on transforming PDO's supply chain through localization and sustainable manufacturing of critical oilfield components, including ESPs, wellheads, coated casing, OCTG accessories, swellable packers, liner hanger assemblies, and completion equipment. This initiative has delivered significant business impact by driving industrial and manufacturing growth in Oman, improving local capabilities, and reducing dependency on international suppliers. It strengthens operational resilience by ensuring stable operations, reducing lead times, and enabling agile business planning, especially during crises.

From an innovation perspective, the project introduced technology transfer to local entities, identified new opportunities for local manufacturing as well creating job opportunities for Omanis and developing a skilled workforce adept in manufacturing and maintenance processes. These efforts fostered a culture of innovation and positioned local manufacturers as competitive players in the global market.

The project demonstrates strong maturity with a clear roadmap, phased rollouts, and a focus on operational reliability and national economic priorities.

Its relevance lies in supporting Oman's economic diversification, securing supply chains, and enhancing ICV returns through local workforce development and sustainable practices. Environmental benefits, such as reduced transportation, further align with global sustainability goals.

### Project Name

Bisat C Expansion

### Project Description

The Bisat-C Expansion Project is to expand existing oil processing facility with an additional 447,000 bbl/day of gross fluids, including 410,000 bbl/day of produced water and 37,000 bbl/day through the oil train.

Empowering local industry is one pillar in Bisat C Expansion Project. ICV and the project team had planned with minimum ICV requirement to achieve the pillar. The project had many equipment manufactured in Oman such as:

1. All storage tanks- by Majees Technical Services
2. Inlet Separate – By Heavy Equipment Maintenance & Trading Co. LLC (HEMT)
3. Gas Liquid Reactor Skids - HEMT
4. Instrument Air Receiver- HEMT
5. Nitrogen Receiver- HEMT
6. Metering Skid-By Vanguard Engineering & Oilfield Service LLC
7. Non-Standard piping- HEMT
8. Structural steel- By Bashaer Gulf Projects and Technical Services LLC
9. Electrical cables –By Oman Cables Industry SAOG

A key highlight of the project is its emphasis on local content and enhancing In Country Value. The project includes the successful deployment of the largest locally manufactured inlet separator in Block 60, by HEMT, an Omani SME under the EPC contractor Enerflex. This reflects OQEP's commitment to supporting domestic industries and creating economic opportunities for local businesses.

## Al Haditha Energy SAOC

Local Community Contractors



### Project Name

AWN – SMEs Development Program

### Project Description

AWN – Al Haditha SME Development Program is a strategic initiative that identifies, develops, and integrates Omani SMEs into the energy sector, directly supporting In-Country Value (ICV), Omanisation, and community empowerment. AWN, meaning “Support” in Arabic, reflects the program’s core purpose.

The program follows a structured three-tier model: SME selection, a six-month incubation phase covering training, HSE compliance, mentoring, and trial work, and full onboarding through sustainable contracts.

To date, over 20 Omani SMEs have been successfully developed across multiple service areas, evolving from micro-scale businesses into competitive energy-sector contractors. AWN is governed by a dedicated Vendor Development Team, ensuring transparency, performance monitoring, and alignment with Oman Vision 2040.

AWN delivers clear business value by building a reliable, cost-efficient, and locally based supply chain, reducing reliance on international contractors while improving mobilization speed and operational excellence. Now fully implemented and mature, the program has enabled several SMEs to grow from single-asset operators into multi-client oil and gas service providers.

AWN represents a transferable best practice aligned with Oman’s ICV and OPAL objectives through its end-to-end SME development approach.

## Dreamlab Technologies

Small & Medium Enterprises



### Project Name

DmarcOM

### Project Description

DmarcOM is a locally developed, Oman-hosted SaaS platform that demonstrates best practices in protecting organizations from email-based cyber threats such as phishing, spoofing, and domain impersonation. The solution delivers clear business value by reducing email-related security incidents, protecting brand reputation, and lowering operational effort through automation and centralized visibility.

From an innovation perspective, DmarcOM. simplifies complex email security mechanisms into an easy-to-deploy and cost-effective solution, making advanced protection accessible to organizations of all sizes. Automated monitoring, periodic reporting, and actionable alerts enable faster decision-making without requiring deep technical expertise.

The platform reflects a mature and reliable implementation, having progressed from concept to a fully operational service with stable deployment, continuous monitoring, and proven usability. Its design emphasizes scalability, data control, and consistent performance across different organizational environments.

DmarcOM. is highly relevant to today's threat landscape, where email remains a primary attack vector. By addressing a critical security gap with a practical, locally built solution, DmarcOM. offers a sustainable and effective approach that aligns with real operational needs and measurable outcomes.

## SLB (Schlumberger) Oman & Co LLC

Large Contractors



### Project Name

Ma'an Program

### Project Description

Ma'an is a strategic initiative by SLB designed to empower Local Community Contractors (LCCs) and Small & Medium Enterprises (SMEs) in Oman, driving inclusive economic growth and supporting Oman Vision 2040. Through a structured, phased approach, together with and through industry partners and tools, Ma'an identifies, validates, and integrates qualified LCCs and SMEs into the energy supply chain, fostering fair access to opportunities and long-term sustainability.

The program strengthens local capabilities, enabling SMEs and LCCs to compete regionally and globally, while contributing to In-Country Value (ICV) and national economic development. Ma'an introduces a collaborative model combining spend analytics, category alignment, and capability workshops to accelerate supplier readiness. With clear governance, stakeholder engagement, and repeatable processes, Ma'an ensures resilience and scalability across multiple categories. By aligning with industry priorities and client expectations, Ma'an creates a robust ecosystem that unlocks untapped potential and supports energy transition goals. Together, we are building a stronger, more competitive local supply chain—driving growth, innovation, and shared success.

## OQ SAOC

Large Contractors



### Project Name

Ladayn Polymer Program

### Project Description

The Ladayn Polymer Program, launched in 2023, is a national industrial initiative designed to build a complete downstream plastics value chain in Oman. The program enables local manufacturing by turning OQ-supplied polypropylene and polyethylene into finished products. It drives diversification, strengthens local industry, while replacing imports.

Ladayn delivers measurable business impact. It has secured more than 27 agreements with over USD 220 million in committed investment, with 74% of projects representing FDI. At full capacity, it will supply over 100,000 tons of polymers to downstream manufacturers. In 2025 Ladayn has inaugurated 9 projects that will help create more than 400 direct jobs, and improve OQ's netback by shifting polymer sales to domestic applications.

The program is innovative in its agile, investor-centric approach. It has introduced new plastic applications to Oman, including advanced compounds, fire-resistant materials, plastic pallets, and water tank compounds, many for the first time in the region.

Ladayn demonstrates strong maturity, nine projects were commissioned in 2025, with additional projects under construction, supported by clear governance, active global investor outreach, and a national public-private taskforce.

The model is highly relevant and replicable. It is already being applied to other industrial sectors, positioning Oman as a competitive regional polymer hub.