

Under the patronage of

وزارة الطاقة والمعادن  
Ministry of Energy and Minerals



# The future of energy

Green Hydrogen – From Vision to Action

**Dec 12-15, 2023**

Oman Convention & Exhibition Centre  
Muscat, Sultanate of Oman

**GREEN  
HYDROGEN  
SUMMIT**  
OMAN





# 850 Billion

The estimated value of the Green  
Hydrogen market in 2050

– Re-Think Energy

# Connecting global leaders

GHSO 2023 is the largest Green Hydrogen event in the MENA region. Global decision makers in policy, finance, tech and industry will come together for discussions geared towards driving economies of the future and advancing energy solutions that can sustainably meet the energy demands of our growing population.

Ensuring uninterrupted and reliable fuel supplies and critical energy related commodities at affordable prices remains a fundamental goal. Governments and senior executives will highlight the critical role of Energy and how we can cooperate globally to achieve sustainable energy systems.



# Uniting for a sustainable future



**6000+**  
Visitors



**3000+**  
Delegates



**500+**  
Companies



**100+**  
Speakers



**50+**  
Exhibitors



**100+**  
Countries

The renewable energy revolution has enabled a green hydrogen economy to come into focus. A hydrogen economy could compensate for the limitations of renewables as Hydrogen makes it feasible to imagine a complete energy transition.

With over 131 countries including Oman, committed to Net Zero by 2050, the Green Hydrogen industry is set to play a key role in shaping the energy industry. Learn how you can play a role in shaping this new industry.



# 5 strategic objectives to move into H<sub>2</sub>



Ensure energy security



Diversify economies, connect industries and create new jobs



Decarbonize to safeguard a sustainable future



Create Green H<sub>2</sub> sectors with a competitive LCOH for export markets



Support innovation and capabilities development

# 6day event program

## DECEMBER

10                      11                      12                      13                      14                      15

BMW H<sub>2</sub> Driving tour  
Dubai - Muscat

|                       |                    |            |
|-----------------------|--------------------|------------|
| Exhibition            | Exhibition         | Exhibition |
| Masterclass Workshops | Conference<br>OCEC | Conference |

Field Visits

Women in Future Energies

Energy Executive Circle

Gala Dinner

KEMPINSKI

# 2day conference

Join 100+ speakers from around the globe as they highlight opportunities green hydrogen presents in a Net-Zero world.

Held over two days, the conference raises awareness and inspires action in support of a sustainable energy future. It provides a platform to discuss the latest technological advancements, investment opportunities, and policy frameworks necessary for scaling up hydrogen infrastructure globally.

Through the conference program, stakeholders can unite to share success stories and ideas for collectively working towards reducing greenhouse gas emissions, raising new sustainable economies, and creating clean and resilient energy systems needed to power our world.



# Conference themes

- Global H<sub>2</sub> Review
- Oman's Green Hydrogen Mission: From Vision to Action
- The challenge: Hydrogen production at scale
- Green Hydrogen Markets
- Hydrogen Supply Chain
- Policies, regulations & certification
- The role of hydrogen in the energy trilemma
- In country value: Hydrogen driving a green economy
- Green financing
- Sustainable H<sub>2</sub> mobility: Auto shipping & aviation
- Green Hydrogen innovation and start ups



*Guided by our aspirations and empowered by strategic advantages, the Sultanate of Oman is poised, with the grace of Allah Almighty, to emerge as a premier global producer of green hydrogen by 2030. Our strategic vision aligns harmoniously with Oman Vision 2040, encompassing economic diversification, the advancement of renewable energy, and a resolute commitment to carbon emissions reductions on our path towards carbon neutrality by 2050. The momentum behind our newly announced projects and comprehensive hydrogen initiatives stands as a testament to both the allure of our investment landscape and our steadfast dedication to establishing Oman as a leading hydrogen hub and our ambitious energy transition strategy.*

**Firas Al-Abduwani PhD**

*Director General of Renewable Energy and Hydrogen  
Ministry of Energy and Minerals  
Sultanate of Oman*



# GHSO23 Conference program

DAY 1 WED 13 DEC

OCEC HALL 3

8:00 – 8:30 [Registration & Opening Ceremony](#)

8:30 – 9:00

## Keynote

With an industry-leading regulatory framework and a first-of-its-kind public auction system for land blocks, Oman is clearly a frontrunner in the global green hydrogen race. As an emerging green hydrogen hub, Oman will be well-positioned to supply clean energy to support decarbonizing economies globally. For green steel and other hard-to-abate industries, Oman is ideal for investment.

### Attendee insights

With over 131 countries, including Oman, committed to Net Zero by 2050, the Green Hydrogen industry is set to play a key role in shaping the energy industry.

9:00 – 10:05

## Oman's Green Hydrogen Mission: From Vision to Action

EXECUTIVE PANEL

Oman is on its way to becoming the Hydrogen hub of the Gulf. The Sultanate's notable efforts in supporting hydrogen are showcased through strategic signings that have transitioned plans into action, driving progress and rallying support for hydrogen projects within the country.

Video by Ministry of Energy & Minerals and Hydrom

10:05 – 10:30 [Coffee Break](#)

10:30 – 11:30

## Global H<sub>2</sub> review

SESSION

The hydrogen industry is set to play a key role in the future of global sustainable energy. Governments and industries are rallying behind Green Hydrogen as it enables the decarbonization of sectors like transportation, industry, and power generation, fostering economic growth and energy security while supporting the mitigation of climate change. Showcasing the latest updates from a regional and international perspective, lessons learned and good case practices.

11:30 – 12:30

## The challenge: Hydrogen Production at Scale

SESSION

Rolling out renewable hydrogen at scale entails the deployment of gigawatt electrolyzers to ensure sufficient resources. Additionally, integrating desalination at scale, renewables, and a robust grid infrastructure are crucial components. Overcoming these challenges is the key to realizing the full potential of hydrogen at scale.

12:30 – 14:00 [Lunch Break](#)

14:00 – 15:00

## Green Hydrogen Markets

PANEL DISCUSSION

This session offers a concise and informative exploration of the rapidly evolving market for green hydrogen. As governments and industries worldwide seek clean energy alternatives, green hydrogen is gaining traction as a versatile solution. In this session, experts and market analysts will discuss the current state of the green hydrogen market, including supply, demand, pricing trends, and emerging investment opportunities.

15:00 – 16:00

## Policies, Regulations and Certification

PANEL DISCUSSION

Developing effective policies, regulations, and methodologies is paramount for the widespread adoption of green hydrogen. Identifying and addressing gaps while leveraging global best practices ensures a supportive framework that incentivizes investment, fosters innovation, and promotes sustainability, driving the growth of the green hydrogen sector.

16:00 – 17:30 [Networking and exhibition](#)

DAY 2 THURS 14 DEC

OCEC HALL 3

8:00 – 8:30 [Welcome and introduction](#)

9:00 – 10:00

## The Role of Hydrogen in the Energy Trilemma

PANEL DISCUSSION

The growing demand for green hydrogen necessitates the active involvement of developers, deployment off-takers, and market shapers. Their collaborative efforts drive the affordability and scalability of green hydrogen solutions, unlocking its potential as a sustainable energy source for a wide range of applications.

10:00 – 11:00

## Green Financing

SESSION

This session focuses on the pivotal connection between green financing and national incentives, key components in driving sustainable initiatives.

We will also emphasize the critical role of governments and policymakers in promoting sustainability through national incentives and Financial Institutions' Role in Sustainable Investments.

11:00 – 11:30 [Coffee Break](#)

11:30 – 12:30

## Hydrogen Supply Chain

SESSION

This session will delve into the intricacies of the hydrogen supply chain : the production, transportation, storage, and distribution of hydrogen, as well as the challenges and opportunities that lie along the supply chain. Experts will highlight the importance of developing domestic capabilities, creating jobs, and promoting technology transfer through strategies in support of 'In Country Value'.

12:30 – 13:30

## Sustainable H<sub>2</sub> Mobility: Auto Shipping & Aviation

SESSION

Governments worldwide are actively implementing regulations to support low emissions vehicles. Hydrogen plays a significant role in decarbonizing the transport sector, offering zero-emission options with longer ranges and faster refuelling times. Its potential impact lies in enabling sustainable, clean transportation and reducing greenhouse gas emissions on a large scale.

13:30 – 15:00 [Lunch Break](#)

15:00 – 16:00

## Green Hydrogen Innovation and Start Ups

EXECUTIVE PANEL

Experts will shed light on various innovative processes, including electrolysis, water desalination technologies, and advanced storage methods, all of which contribute to the efficient and cost-effective generation of green hydrogen. The discussion will highlight the pivotal role of innovation in scaling up green hydrogen applications across diverse sectors.

16:00 – 17:30 [Networking and exhibition](#)

# GH2SO23 Workshops

TUES 12 DEC

OCEC

8:00 – 8:30 Registration & Opening

WELCOME

8:30–9:00

## Master class workshop – Icebreaker

For an engaging Masterclass, we will start the day with an icebreaker activity: GH2 Fact or Fiction: Each group will come up with 3 facts, two of which are true and one that is false. Each group will share their statement and the rest will guess which one is the false statement.

WORKSHOP 1

9:00–10:30

## Hydrogen 101

The Green Hydrogen 101 workshop, where we'll explore the fundamentals of green hydrogen. Learn about the Hydrogen Rainbow, the production of Green Hydrogen through electrolysis using renewable energy sources. Discover its versatile applications in transportation, industry, and energy storage. Gain insights into the challenges and future potential of green hydrogen.

10:30 – 11:00 Coffee Break

WORKSHOP 2

11:00 – 12:30

## Project Feasibility (Case Study)

In this in-depth session, we'll delve into the practical aspects of implementing green hydrogen projects. Using a real-life case study, we'll examine the feasibility factors, including resource availability, infrastructure requirements, GH2 Technico-economics...

12:30 – 14:00 Lunch Break

WORKSHOP 3

14:00–15:30

## Green Hydrogen Certification Schemes

Certification mechanisms, challenges, and considerations for international hydrogen trade and its impact. Explore the various certification frameworks and standards that ensure the sustainability and traceability of green hydrogen production and use. Discover the key components of certification, including lifecycle analysis and carbon footprint.

WORKSHOP 4

15:30–16:00

## In Country Value – Hydrogen driving a green economy

Green hydrogen offers transformative potential by generating in-country value through local production, reducing dependency on fossil fuels. This fosters job creation across the supply chain, from production to infrastructure development. Diversification is achieved by leveraging renewable resources, enhancing energy security, and paving the way for a sustainable new green economy.

16:00 – 17:30 Networking and exhibition

*Gain in-depth insights into the field of Green Hydrogen and its value chain*

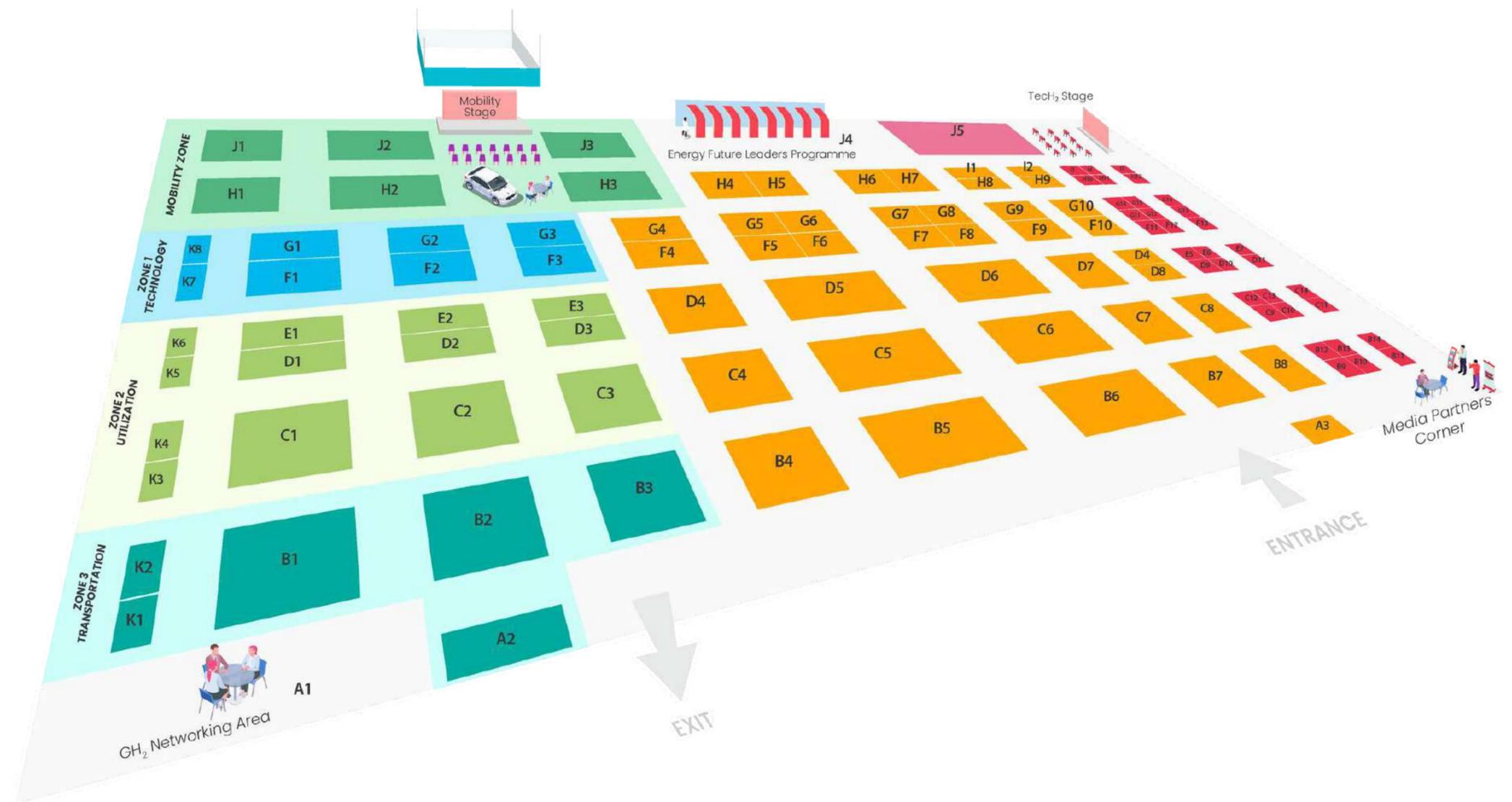
*Connect and actively engage in practical exercises and collaborative activities with leaders from the industry. Learn from pioneers as they share their knowledge, experiences, best practices and provide cutting-edge insights.*

# 3day exhibition

Drive business growth and connect with new customers

Action-packed and vibrant, the GHSO exhibition shares the latest solutions energy decision makers, industry experts, potential customers, media and offers an opportunity to generate widespread visibility for your products and services.

It serves as a powerful platform to showcase technology and promote innovations for sustainable energy. Through effective branding and presentation, exhibitions enhance brand recognition, build trust, and create a lasting impression.



# GHSO23 Side events

ROAD SHOW

DEC 10

## BMW Ultimate H<sub>2</sub> Driving Tour

DUBAI-MUSCAT

Get revved up to embark on the ultimate driving tour powered by hydrogen! Swapping the sparkling skyscrapers of Dubai for the majestic mountains of Muscat, join our drivers as we set out to showcase the vehicles set to revolutionise cars as we know them. Our journey is a symbol of hope, demonstrating that a greener, carbon-neutral future is within reach.

TALKS

DEC 12-14

## Low Emissions Mobility Showcase

OCEC - EXPO

Taking place within the expo area, this captivating series of talks takes the mobility stage. Experts and visionaries share their solutions, presenting revolutionary breakthroughs that could reshape mobility. From fuel cell technology, H<sub>2</sub> as a fuel, utilisation and the latest developments in H<sub>2</sub> vehicles, these talks explore the limitless potential of renewable hydrogen.

NETWORKING

DEC 11

## Women in Future Energies

OCEC

Women have a vital role to play in driving an equitable, safe and abundant future for our present and future generations. By nurturing a pipeline of women leaders, 'Women in Future Energies' seeks to foster inclusive and sustainable development, inviting women to unite, and harness their collective vision to promote progress and build a resilient future for all.

TALKS

DEC 12-14

## Tech<sub>2</sub> Innovation Stage

OCEC - EXPO

The Tech<sub>2</sub> stage is located inside the expo area and is accessible to all visitors. Here, you will hear from start ups, students and inventors to learn what makes these tech pioneers tick and how their latest innovations work. Visionaries will present their challenges and ideas as we re-think the energy landscape and re-imagine a sustainable future.

VIP EVENT

DEC 12

## Energy Executives Circle

KEMPINSKI

The Circle will come together from all corners of the globe in reflection on COP28 and what comes next. Bringing together the global leaders making an impact and accelerating the deployment of sustainable energy. They will share their thoughts on the current state and outlook of energy, the challenges and opportunities that will help drive progress.

COMPETITION

DEC 12-14

## Future Energy Leaders

OCEC - EXPO

Students compete to solve the world's toughest energy challenges in the Energy Future Leaders competition. Students participating will share their solutions in support of green hydrogen. Challengers present their solutions to industry leaders, collaborate with like-minded peers, and compete for a chance to make a global impact.

GALA

DEC 12-14

## Gala Dinner + Awards

OCEC

Distinguished delegates will come together to network and celebrate a greener future, as they turn vision into action. Commitments are being made, new friendships are forged and global businesses are connected. Awards will be presented to visionary students whose ideas showcased a potent blend of sustainability and creativity in the Future Energy Leaders challenge.

FIELD VISITS

DEC 15

## Field Visits

TO BE CONFIRMED

Delegates explore the Sultanate while discussing ideas for harnessing renewable energy and unlocking new opportunities. They visit Oman's centers for innovation and hubs of ingenuity to see groundbreaking technologies, disruptive ideas, and visionary projects under development.

# Executive committee



## CHAIRMAN



**H.E. Eng. Mohsin Al Hadhrami**  
Undersecretary  
Ministry of Energy and Minerals



## EXECUTIVE DIRECTOR



**Dr. Firas Al Abduwani**  
Director General of Renewable  
Energy and Hydrogen  
Ministry of Energy and Minerals



**Dr. Sara Vakhshouri**  
Founder and President  
SVB Energy International  
SVB Green Access



**Adithya Bhashyam**  
Associate  
Hydrogen  
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**Eng. Abdulaziz Al Shidhani**  
General Manager  
Hydrom



**Dr. Abdullah Al Abri**  
Energy & Investment  
Consultant  
IEA



**Essam Al Sheibany**  
Group Vice President QHSSE  
& Sustainability  
ASYAD



**Eng. Najla Al Jamali**  
Chief Executive  
Alternative Energy,  
OQ



**Guy De Kort**  
Director Operated Ventures  
Oman Shell



**Atsushi Suzuki**  
Chief Executive Officer  
Marubeni  
Middle East & Africa Power Limited



# Technical committee



## HEAD



**Dr. Khalil Al Hanashi**  
Senior Energy Renewal Advisor  
Petroleum Development Oman  
National Hydrogen Alliance  
Coordinator



**Nasser Al Rizeiqi**  
Director of Hydrogen Policies &  
Strategies Department  
Ministry of Energy and Minerals



**Dr. Sausan Al-Riyami**  
Director of Oman Hydrogen Centre (OHC)  
German University of Technology  
in Oman



**Monica Trench**  
Head of Hydrogen  
BP Oman



**Dr. Zakiya Al-Azri**  
Hydrogen New Technology Advisor  
Petroleum Development Oman



**Basil Elzein**  
Integration Manager  
Oman Shell



**Eng. Faiza Al Harthy**  
Energy Sector Head,  
OmanVision 2040  
Implementation & follow up unit



**Dr. Rashid Al Abri**  
Assistant Professor  
Sultan Qaboos University



**Naveen Ahlawat**  
Head - Power to X  
Vulcan Green Steel



**Mohammed Al-Tae**  
Project Engineering Manager  
Oman LNG



**Tom Costa**  
Technical Advisor  
Hydrom



**Akio Kusakabe**  
General Manager  
Energy Business Middle East  
Mitsui O.S.K. Lines, Ltd.



**Mohammed Al-Habib**  
Regional Executive Director  
Middle East, North Africa &  
Turkey Baker Hughes



**Olav Carlsen**  
Founder & Chief Executive  
Officer  
Hydrogen Rise



# Organising committee



## HEAD



**Saif Al Salmani**  
Technical Director,  
CC Energy Development



**Alhaitham Al Mushefri**  
Director of  
Communication & Media



**Mohammed Al-Ghareebi**  
External Affairs &  
Communications Manager at PDO



**Rumaitha Al Busaidi**  
Business Development  
Manager



**Abdullah Al Harthi**  
Executive Chairman &  
Founder



# Tickets

## Exhibition

DEC 12-14

FREE for visitors

## Masterclass workshop

DEC 12

200 OMR

1 Masterclass  
Coffee Break

## Conference

DEC 13-14

300 OMR

2 Day Conference pass

Coffee Breaks, Lunch

Conference Networking Area

## Women in Future Energies

DEC 11

50 OMR

Networking dinner

## Field Trips

DEC 15

Field trip locations  
and events to be  
confirmed



# Exhibition booth prices

## Space per SQM

150 OMR / SQM

Minimum 10.5 sqm

Includes complimentary delegate pass

## Shell Scheme booth

2500 OMR

3x3m

3x3m floor area

x1 Reception Table

x1 Meeting Table

x3 Chairs

x1 - 40 inch LED TV

x1 Plant

### Branding specifications

Wall area: 2.4m x 2.4m

Header logo area: 2m x 0.6m

Reception : 0.5m x 0.3m

Pillar area: 0.6m x 1.2m

\* Utilities must be paid by the exhibitor

\* Exclusive of VAT





“

*Everyone can play a role in building a better future. We believe in challenging the status quo, to build and innovate for a better world. At Birba we bring change makers together, through future focused events, media and intelligence. Our team are driven, solutions focused and inspired to shine a light on the industries and innovations which will shape the economies of the future. Supporting a better world through our events, media and intelligence.*

**Abdullah Al Harthy**  
Executive Chairman & Founder  
Birba

Keep up to date with the latest event news by following us on social media or contact one of our experts for more information.

### Sponsorship

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