#1 | *THE OPEN GROUP OSDU™ FORUM QUARTERLY NEWSLETTER*

Fall 2020

The Open Group OSDU™ Forum delivers an Open Source, standards-based, technology-agnostic data platform for the energy industry that stimulates innovation, industrializes data management, and reduces time-to-market for new solutions.

Welcome to the inaugural edition of The Open Group OSDU™ Forum quarterly newsletter.

The OSDU Forum was officially launched in March 2019 and has since grown to have over 170 active Member organizations in November 2020. I was fortunate enough to become the first Chair of the OSDU Forum and have recently been re-elected as Chair for a further two-year term. Thank you to the OSDU Forum Members for giving me the opportunity to continue to lead this exciting initiative going forward.

We also have a new Vice-Chair of the OSDU Forum who is Zak Curry, Senior Global Customer Solutions Manager at Amazon Web Services. Zak is an experienced energy technology leader who delivers digital solutions globally to Exploration and Production majors, Network Operation Centers, and oilfield service companies. I look forward to working with Zak on continuing the growth of the OSDU Forum and its ecosystem as well as establishing the OSDU Data Platform as an enabler for the energy industry.

We have made tremendous progress over the last couple of years in developing an Open Source, standards-based, technology-agnostic data platform for the energy industry. The COVID-19 pandemic of 2020 has fundamentally changed the way we work and significantly impacted the future direction of our industry. Despite the headwinds caused by the downturn and the lockdown, the OSDU Forum has reached the following milestones:

- The Vision of the OSDU Forum is now well-recognized by the industry
- The Forum is well-positioned to achieve alignment through standards and agility using Open Source
- The OSDU Forum is recognized as one of the most active areas among the 12 existing Forums in The Open Group
- The OSDU Forum delivered the R2 Release in May of 2020 and work is continuing on the upcoming Mercury Release of the OSDU Data Platform
- We hope to be able to announce further details over the next few months
- The Forum Members see the value in their personal/company contributions, and a path to adoption
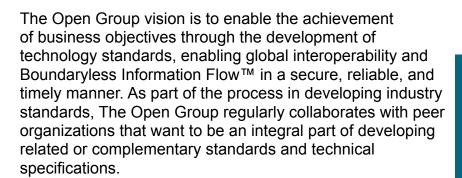
Looking forward, I intend to maintain vigorously the openness and transparency of the Forum, build a thriving OSDU ecosystem, and position the OSDU Data Platform as the new energy data platform for 2021 and beyond.

We hope you like the format of this quarterly newsletter and I look forward to giving you the next update in 1Q 2021. Until then, stay safe, and Happy Holidays!

LATEST NEWS

THE OPEN GROUP AND THE ASSOCIATION OF OIL & GAS PRODUCERS TO COLLABORATE ON INDUSTRY STANDARDS

The Open Group, the vendor-neutral technology consortium, and the International Association of Oil & Gas Producers (IOGP) today announced a three-year Memorandum of Understanding (MoU) that will foster more Oil and Gas industry collaboration for the development of common information standards.

The Open Group vision is to enable the achievement of business objectives through the development of technology standards, enabling global interoperability and Boundaryless Information Flow™ in a secure, reliable, and timely manner. As part of the process in developing industry standards, The Open Group regularly collaborates with peer organizations that want to be an integral part of developing related or complementary standards and technical specifications.

IOGP is a unique upstream forum in which member organizations share industry knowledge and devise best practices to achieve improvements in health, safety, environment, security, and social responsibility.

Both parties are entering into this agreement to provide subject matter experts with a better understanding of the areas of strategic overlap, as well as the digital use-cases that benefit from the distinctive strengths of each organization.

Steve Nunn, President and CEO of The Open Group, said: "The Open Group is proud to partner with the International Association of Oil & Gas Producers, aligning our common goal of adding significant value to the Oil and Gas industry through the creation and promotion of technology standards. This milestone example of cross-organization collaboration will lay the foundations for innovation and shape the future of the industry as a whole."

The Open Group has established several Forums that are relevant for IOGP members, including:
• The Open Group OSDU™ Forum – delivers an Open Source, standards-based, technology-agnostic data

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platform for the energy industry that stimulates innovation, industrializes data management, and reduces time-to-market for new solutions
- The Open Group Open Process Automation™ Forum – aims to develop a standards-based, open, secure, and interoperable process control architecture that addresses both technical and business issues for process automation
- The Open Footprint™ Forum – focuses on the development of open and vendor-neutral industry standards to provide consistent and accurate measurement and reporting of environmental footprint data, including water, waste, and land data

IOGP is currently working to develop an Industry Digitalization Roadmap (IDR), which has touchpoints with the strategic direction of the OSDU Forum and the New Energy platform. This partnership will not only increase the relevance and adoption of the OSDU Data Platform by enriching it with IOGP curated standards and technologies, but also facilitate IOGP in delivering the IDR in an Agile manner.

Johan Krebbers, GM Digital Emerging Technologies/VP IT Innovation of Shell, said: "With the cooperation of IOGP, we are jointly able to add some advanced new features to the OSDU Data Platform, making it ever stronger as the open energy data platform."

Gordon Ballard, Executive Director of IOGP, added: "This collaboration will combine the industry and technical standards knowledge of IOGP with the Open Source and technology expertise of The Open Group to accelerate the adoption of open standards-based ecosystems for Oil and Gas. Together we can tackle critical industry challenges."

PPDM COLLABORATION

Since 1990, the PPDM Association has worked with its global membership towards developing a healthy data ecosystem, including the development of the International Petroleum Data Standards. With the introduction and growth of the OSDU Forum and the OSDU Data Platform, the importance of building this platform on a strong, proven foundation of standards and best practices is evident.

Leveraging the standards that have already been created by subject matter experts in the PPDM Association, the OSDU Forum is able to accelerate the innovation of the platform. Some of the standards already being leveraged within different areas of the platform include:

- Understanding and converging on critical vocabularies is a foundation for interoperability

- The OSDU Forum is leveraging semantic standards such as "What Is A Well", and "Well Status" and "Classification to support clarity".
- Design teams are leveraging the vast storehouse of business data knowledge in the PPDM Data Model as JSON schema are developed, shortening design time, and increasing confidence in the results
- The trustworthiness of data can be planned and verified through access to the publicly available Data Rules Library
- Implementations will benefit through access to the defined Well Identification best practices

For those interested in expanding their expertise, the Professional Development area of the PPDM Association, including the CPDA™ program, provides opportunities for data professionals to grow and certify their data expertise and skills. This is critical to prepare data professionals for the future and ensure high-quality data serves as the foundation for the OSDU Data Platform.

MISSION AND VISION

Mission: The Open Group OSDU Forum delivers an Open Source, standards-based, technology-agnostic data platform for the energy industry that stimulates innovation, industrializes data management, and reduces time-to-market for new solutions.

Vision: The OSDU Forum seeks to reduce data silos to enable transformational workflows, accelerate the deployment of emerging digital solutions for better decision-making, and create an open, standards-based ecosystem that drives innovation for the energy industry.

BUSINESS STRATEGY

As we respond to the dual challenge of meeting the world's increasing energy demands and reducing greenhouse gas emissions, the energy sector is transitioning toward renewable energy resources while ensuring the continued delivery of existing energy sources such as oil and, increasingly, natural gas. Several Operators have started their own transition, setting clear emission targets and new business strategies to address the challenges and obtain these targets.

We are seeing the operating models of some companies change from a traditional upstream/downstream business model toward a more integrated energy delivery service directed to the consumers (B2C and B2B). These new service lines streamline energy delivery and enable the flexibility of energy resources, which is guided and influenced by consumer demands. This transition is not only controlled by the Operators, but is also driven to a large extent by the policies of particular countries or regions, such as the EU. Therefore, the Operators' response and drive is likely to vary from region to region.

With increasing legislative demands and a complex mix of energy resources and service lines, data is an important enabler in achieving cost efficiency, transparency, and compliance. Therefore, a common data platform supporting and enabling the ever-increasing demand for fast access to data from all parts of the business lines will become an imperative.

OSDU FORUM RESPONSE

The energy transition will materialize over a considerable time frame, with some geographical regions progressing faster and with more focus than others. Consequently, OSDU Operators will progress with their transition according to the areas of operation and, at any one time, be at different maturity levels. The OSDU community's goal and vision is to support this transition by enabling the liberation of the data supporting the business workflows.

This means that the OSDU Forum needs to ensure that the following key principles are followed:

- Governance: Highly Agile governance ready to adopt change with new players coming to the market
- Open Source-based: Enabling faster adoption in a rapidly changing world
- Architectural control of data is placed at the platform level
- Data types: Fast addition and development of new data types supporting new business workflows
- High-speed real time: Ensure full support of real-time data capture and streaming
- API flexibility: APIs need to be flexible with full backwards compatibility
- Cost effective: The Data Platform and associated services need to be cost effective as margins in the "new world" will be tight

To ensure this is achieved, the scope of the OSDU Forum is to deliver:

- A scalable Data Platform and related (common) services
- Enable OSDU community access in any technical setting: Cloud; On-Premise and Edge
- One set of APIs, therefore providing stable platform services to applications being developed on top
- A broad set of OSDU services to enable utilization for a wider group of energy companies
- Services using the latest developments to improve and monitor data quality

We believe there are several important steps to delivering the overall vision:

- **"Integrated Upstream"**: Making sure that the full spectrum of Upstream services (Exploration to Production) is enabled by the OSDU Data Platform
- **"Realtime as the standard"**: Making sure that any amount of real time data can be handled by the OSDU Data Platform and linked Edge facilities
- **"Support for End-to-End services":** Supporting the complete supply chain for existing (gas) and new Energy sources
- **"Any mixture of Energy sources"**: Enable OSDU Data Platform readiness for adopting new data types and service in support of new business domains

ORGANIZATION

The OSDU Forum is organized around Subcommittees and Projects

OSDU Focal Points
(Each OSDU Member appoints 1 representative, each representative has 1 vote).

OSDU Management Committee
11 Members (5 x Operators, 3 x Application/Service Providers, 3 x Cloud Providers)
OMC Leader to be an Operator

OSDU Standards

OSDU Data Platform Delivery Org

NEW MARKETINGSITE AND CATALOG

In December 2020, the OSDU Forum launched a new website for anyone looking to find out more about OSDU Data Platform-related information, applications, and services.

You can access the site at: www.osduforum.org
The OSDU **MarketingSite** is a place of discovery for the energy industry looking to learn about:

- The OSDU Forum vision and goals
- Marketing materials
- Communities
- Application development materials
- Documentation
- News and updates
- Blog

In the OSDU Catalog, you can find OSDU Data Platform-related applications, products, and services. The Catalog lists applications, services, data sets, and training materials available for the OSDU Data Platform.

- Well-defined classifications, with free text and faceted search makes it easy to find the resources you are looking for
- Catalog entries contain links to the Marketplace of the provider you selected to enable installation or progress your request

Creating OSDU Catalog Entries

Application, Product, and Service providers can register their solution for free in the OSDU Catalog through a registration form.

The registration form will guide you through the required fields to support the search, classification, and filtering of the solution.

Catalog entries can be made private and are then visible only to users authorized by the catalog creator.

NOTE: No commercial transactions will take place on the MarketingSite.

For Application Developers

Before and during the development process:
- Check the site regularly to get the latest information from the Developer Community and documentation
- Check the Catalog for existing applications, training, and data sets

Getting ready for availability:
- If desired, register your application at the Cloud Service Provider Marketplace(s) of your choice
- Register the application within the OSDU Catalog
- Provide a short description, logo, and contact details
- Provide the link to your application in the Catalog

Commercial Options for Application Vendors

There are two options available:

1. Through CSP Marketplace(s)
    - The OSDU Forum is working on optional standard Terms & Conditions pre-approved by major operators
    - Using your own T&Cs
2. Direct sales – Link to your own website/delivery mechanism

Visit the OSDU MarketingSite at: www.osduforum.org

OSDU FORUM VIRTUAL GLOBAL MEMBER MEETING

Wednesday, February 24, 2021
7:00am to 12:00pm CET, 1.00pm to 6.00pm GMT

This Webex meeting will provide Members of the OSDU Forum with the latest information on the Mercury Release of the OSDU Data Platform and explain the applicability of the platform to upstream production and new energy sources.

If your organization is not a Member of the OSDU Forum and would like to get involved, email: membership@opengroup.org

MEMBERSHIP UPDATE

The OSDU Forum was officially launched in March 2019 and membership has steadily increased every quarter since then.

As of December 2020, there are 217 current Member organizations of The Open Group who are entitled to participate in the OSDU Forum, with 175 active OSDU Forum Member companies. There are approximately 1,200 individuals from Member organizations participating in the OSDU Forum activities.

New organizations who became Members of the OSDU Forum in 3Q, 2020 were:

SOCIAL MEDIA LINKS

"As a founding Member of The Open Group OSDU™ Forum, we believe the Forum will continue to thrive if collaboration, contribution, and the desire to drive innovation remains at the forefront. The OSDU Data Platform offers the energy industry and its partners a vibrant, open-ecosystem to unlock the value of data so that we can all make smarter decisions faster. We look forward to seeing where the passion of 1,200+ Members takes us."
Kevin Chambers, Chevron, VP of Subsurface

"The OSDU Forum is committed to supporting the adoption of the Open Source OSDU Data Platform by the academic community. We see great opportunities for academia to accelerate their research initiatives whilst preparing the next generation of engineers and scientists to use the Energy Industry's premier Open Source data platform. Further, we welcome students and academic institutions alike to participate in the development of the OSDU standards and Open Source community development projects."
David Holmes, OSDU Management Committee Member and CTO-Energy, Dell Technologies

Join our LinkedIn Group

Use the following hashtag on Twitter
#ogOSDU

The Open Group OSDU™ Forum
Listed group

About The Open Group

Leading the development of open, vendor-neutral technology standards and certifications

The Open Group is a global consortium that enables the achievement of business objectives through technology standards. Our diverse membership of more than 800 organizations includes customers, systems and solutions suppliers, tool vendors, integrators, academics, and consultants across multiple industries.

Vision

Boundaryless Information Flow™ achieved through global interoperability in a secure, reliable, and timely manner.

Mission

The mission of The Open Group is to drive the creation of Boundaryless Information Flow™ achieved by:

• Working with customers to capture, understand, and address current and emerging requirements, establish policies, and share best practices

• Working with suppliers, consortia, and standards bodies to develop consensus and facilitate interoperability, to evolve and integrate specifications and open source technologies

• Offering a comprehensive set of services to enhance the operational efficiency of consortia

• Developing and operating the industry's premier certification service and encouraging procurement of certified products

Keys facts include:

• Over 800 Member organizations, with 43,000+ participants in The Open Group activities from 126 countries

• Our Platinum Members are DXC Technology, Fujitsu, HCL, Huawei, IBM, Intel, Micro Focus, Oracle, and Philips

• Developing and operating the industry's premier certification service and encouraging procurement of certified products

• Services provided include strategy, management, innovation and research, standards, certification, and test development

• Over 103,000 TOGAF® 9 certifications worldwide

Further information on The Open Group can be found at www.opengroup.org.