

# AGENDA

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# New Data Ecosystem

Houston  
EXPO 2023

May 9 - 10, 2023

## May 9, 2023 (Morning)

Time (in CST)	geoLOGIC systems Stage	All Other Rooms
7:30-8:00 AM	<b>Breakfast</b> , sponsored by Katalyst Data Management	Closed
8:00-8:10 AM	<b>Introduction &amp; Welcome</b> Amii Rozell (Houston Leadership Team)	
8:10-8:50 AM	<b>The Data Ecosystem &amp; PPDM Update</b> Trudy Curtis (PPDM Association)	
8:55-9:15 AM	<b>How to Build an Ecosystem on Purpose and For Good</b> Joey Sanchez (Ion Houston)	
9:15-10:00 AM	<b>Information Coming Soon!</b> TBD	
10:00-10:15 AM	Morning Break	
10:15-11:00 AM	<b>Automating Geo Data Management Workflows and Taking an Enterprise Approach</b> Seth Tribbey (S&P Global)	
11:00-11:40 AM	<b>Board of Directors Discussion</b> Allan Huber & Curley Thomas (PPDM Association Board of Directors)	
11:40-12:10 PM	<b>Enterprise Asset Management in the Data Ecosystem</b> Robert Lovelace & Kate Stevenson (Novus Consulting)	
12:10-1:00 PM	Lunch	

### Stage Sponsor Spotlight - geoLOGIC systems Ltd.

geoLOGIC systems Ltd. is a leading and trusted information services company driven by a mission to provide premium-quality data, software, analytics, education, news and actionable insights to the energy industry. The solutions we deliver empower our clients globally to make decisions that drive growth and efficiency, and enable them to provide the cost-effective and reliable energy solutions that are vital to supporting the needs of modern society. Our customers include primary energy companies across the spectrum of energy transformation as well as the financial sector, government and regulatory organizations, and educational institutions.

Founded in 1983, geoLOGIC is based in Calgary, Alberta, Canada with offices in London (UK) and Houston (US). As we have grown, we have retained a laser-like focus on our customers' experiences. Our teams of data scientists and engineers, geologists, analysts, journalists, designers and developers are dedicated to delivering premium information and critical data-driven intelligence – ranging from surface and subsurface well/asset level information and insights to corporate performance benchmarking data, commodity pricing and A&D transaction data.

For more information, please visit [www.geologic.com](http://www.geologic.com) or email [info@geologic.com](mailto:info@geologic.com).



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## May 9, 2023 (Afternoon)

Time (in CST)	geoLOGIC Stage	Room 2	Room 3
1:00- 1:40 PM	<b>Data Quality in Oil &amp; Gas Exploration – Everyday Challenges</b> Boris Makarov (Apache Corporation)	<b>Data Modeling for Modern, Self-Service Analytics</b> Greg Baldini (Argus PBI)	<b>Accelerating Exploration &amp; Production Data Transfer from Field to Processing</b> Kristy DeMarco (Lyve Mobile)
1:50- 2:20 PM	<b>Information Coming Soon!</b> TBD	<b>The Intersection of Public Data &amp; Technology</b> John Ferrell (WellDatabase)	<b>A New Approach to Data Identity and Data Identity Resolution</b> Dag Heggelund (Pando Scape Inc)
2:20- 2:30 PM	Afternoon Break		
2:30- 3:10 PM	<b>geoLOGIC systems Sponsor Presentation</b>	<b>A Systematic Approach To Enhance The Asset Performance Using Data Analytics</b> Sethupathi Arumugam & Vimal Amaldas (Infosys)	<b>Expanded Data Manager Competencies</b> (PPDM Association)
3:20- 4:00 PM	<b>Leveraging New Data Ecosystems to Accelerate Lower-Carbon Pathways</b> Raj Kannan & Patrick Dineen (SLB)	<b>Heat Exchanger Reliability Management with OMNI HXR</b> Raleigh Presnell (EcoLab)	<b>S&amp;P Global Cocktail Reception Sponsor Presentation</b>
4:00- 6:00 PM	<b>Cocktail Reception</b> - sponsored by S&P Global		

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## May 10, 2023 (Morning)

Time (in CST)	geoLOGIC Stage	Room 2	Room 3
7:30-8:00 AM	Breakfast Available	Closed	
8:00-8:45 AM	<b>Keynote - <i>Storytelling: Turn Your Data Into Compelling Insights That Inspire Action.</i></b> John Hetherington (We Deliver Your Vision)		
9:00-9:40 AM	<b>Information Coming Soon!</b> TBD	<b>A Trusted Seismic Archive is More Than Just Online Data</b> Paul Thompson (Talus Technologies)	<b>Automated Image Digitization using Machine Learning</b> Sunil Garg & Samir Jain (DATAVEDIK)
9:40-9:50 AM	Morning Break		
9:50-10:30 AM	<b>Alignment of Data Platforms and Data Management</b> Chris Hanton (IKON Science)	Room 2 Sponsor Presentation	<b>International Energy Data Standards Updates and Workshop</b> (PPDM Association Work Groups and Committees)
10:40-11:20 AM	<b>OSDU – Turning Concepts on Paper to Early Business Success</b> Samanda Bell (Shell)	Short Talks <b>Bridging the Gap Between Data Analysis and Process Mining</b> Tom Broussard (evolv Consulting)  <b>Information Coming Soon!</b> TBD	
11:30-12:10 PM	<b>Enhance Your Data Ecosystem with Blockchain As A Solution For Seismic Entitlements</b> Cindy Cummings & Rebecca Hofmann (Repsol)	<b>Information Coming Soon!</b> TBD	Room 3 Sponsor Presentation
12:10-1:00 PM	Lunch		

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## May 10, 2023 (Afternoon)

Time (in CST)	geoLOGIC Stage	Room 2	Room 3
1:00-1:40 PM	<b>Understanding Emotional Intelligence and Leading in Data</b> - Interactive Melinda East (Focus Forward)	<b>Time-lapse Seismic Metadata Extraction for Carbon Capture and Storage Monitoring</b> TBD (Ovation)	<b>To Define the Problem of "Orphan" Wells</b> Dwayne Purvis (Dwayne Purvis PE)
1:50-2:30 PM	<b>Building Digital Capability is Everyone's Responsibility</b> - Interactive Douglas Frisby (Sword ITS)	<b>CPDA Prep Program Curriculum</b> PPDM Association	<b>Digital Oilfield for Sustainability and Operational Excellence</b> Sandeep Ghosh & Frank Whyte (Perficient)
2:30-2:40 PM	Afternoon Break		
2:40-3:25 PM	<b>Cross Industry Data Panel Discussion</b> Greg Foley (The FerVID Group) Sean Hanrahan (Platypus Brewing), Andre Pontin (Melax Technologies) and Jim Holl (ExxonMobil).		
3:25-3:40 PM	<b>Closing Remarks</b> Trudy Curtis (PPDM Association)		

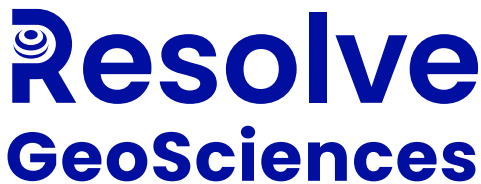


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# New Data Ecosystem

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## The Data Ecosystem & PPDM Update

Trudy Curtis (PPDM Association)

### How to Build an Ecosystem on Purpose and For Good - Joey Sanchez (Ion Houston)

**Description of Presentation:** In order to build an ecosystem, you must bring together all of the elements that make up that ecosystem. In the biological sense, An ecosystem is a geographic area where plants, animals, and other organisms, as well as weather and landscape, work together to form a bubble of life. What is your bubble of life? What is your domain area of expertise? Who are the "plants", the "animals" and other "organisms"? These are the first questions to define. Once you define the inputs, what is the environment in which you contain these inputs? That is the "weather" and the "landscape". It is the world that your ecosystem exists in. But the most important piece of the puzzle to drive outcomes for your ecosystem is the foundational force to propel everything forward. The Purpose. That invisible force that guides your ecosystem forward, for good. Let's define our purpose here today. Why are you here? Why did you show up? You are the most important element in the ecosystem because your purpose will dictate your future. Now imagine if all of our purposes created a collective purpose to build a New Data Ecosystem where we can come together and collaborate for the greater good. Now let's go build together. The future is yours.

**Short Biography:** Joey Sanchez is the Senior Director of Ecosystems for The Ion Houston, and Founder of Cup of Joey. Joey works in the Houston early-stage investing and startup community to further establish The Ion's role as a destination for entrepreneurship and startup opportunities. He delivers program activations that position the Ion as a destination for founders, early-stage startups, scaled startups, early-stage angel investors, venture capital investors, and corporate partners.

### Talk TBD

TBD

### Automating Geo Data Management Workflows and Taking an Enterprise Approach - Seth Tribbey (S&P Global)

**Description of Presentation:** We have been in a new era in the oil and gas industry for the last decade - an era unlike the last 30 years in our industry. Despite three significant commodity price recoveries since 2010, the number of employees in the industry has declined by almost half (43%) rather than growing in line with commodity prices, as in the past. This is in major part due to consolidation of companies and the assets they own and operate, alongside pressure from investors to operate within cashflow. The hiring sprees of the past appear to be gone for the foreseeable future. At the same time, we are entering into a new era of data management in oil and gas. We have seen the transition from desktop/project-focused data management in the 90s to server-focused trends in the 2000s, the emergence of SaaS and data lakes/warehouses in the cloud in the 2010s, and on to the beginning of the era of data automation through AI and ML today. The evolution of data management through these eras has led to bloated application landscapes, considerable technical debt, reliance on manual data-focused workflows, and a lack of agility - limiting the ability to embrace automation. Trends have shifted from numerous, custom point solutions (and the staff to support them) to a situation in which data movement, data quality, and analytics are being largely driven by AI and ML. As a result, the other big trend we are seeing in the industry is a consolidation of software in-use and the redundant infrastructure, data, and custom code that support it. Most upstream operators have a similar suite of geotechnical applications in place and, as such, oil and gas software has been somewhat commoditized. Unlocking the value of data that is created, flowing between and consumed by these applications to make better, faster decisions than your peers is the true key to achieving a competitive advantage and embracing automation - it is not about the specific piece of software you choose. However, in the era of consolidation, the data tells us we must do so efficiently and with fewer resources than ever before. Because of the way oil and gas companies work with diverse disciplines, data types, and applications, an enterprise approach is required to pivot to this era of automation and to unlock the value of your organization's data. In this presentation we will discuss these trends; why data (not software) is the differentiator in the era of consolidation; why an enterprise approach to data management is necessary in oil and gas; key elements of enterprise-oriented data solutions; and best practices for taking an enterprise approach to data management and positioning yourself for success.

**Short Biography:** Seth Tribbey has spent the last 16 years in enterprise data management with a strong emphasis on geospatial data and software for the oil and gas industry. Seth started his career at Chesapeake Energy after college and after moving to Colorado for graduate school in 2009 has been focused on delivering solutions that align technology with impactful business outcomes for the energy industry since. In that pursuit he's worked at companies like esri, Enverus, and IHSMarkit (now S&P Global).



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## Board of Directors Discussion

Allan Huber & Curley Thomas (PPDM Association Board of Directors)

## Enterprise Asset Management in the Data Ecosystem

Robert Lovelace & Kate Stevenson (Novus Consulting)

**Description of Presentation:** Presenters will highlight data optimization activities within an Enterprise Asset Management project. The focus will be on value derived from standardization and enhanced data management capabilities.

Overview:

We will present and discuss how standing up a new Corporate Gas Plant Standard Application (Maximo) for Facility Asset Management and PSM Compliance fits within the O&G Data Ecosystem.

Key Objectives:

- Manage facilities through structured workflow to meet regulatory and safety requirements
- Monitor performance of midstream assets and track key metrics feeding management decisions relating to continual improvement, costs, and inventory management
- Establish and utilize best practices across one corporate platform
- Manage and control spend through business processes and system controls across midstream assets

Impacts:

- Decommission legacy application
- Increase use of Purchase Orders within the new application
- Manage MOCs (Management of Change) within the new application
- Manage via workflow all plant tasks for preventative maintenance and corrective maintenance in the new application
- Digitize all inventory and documents

Data-specific Accomplishments:

- Defined Data standards (show example)
- Formed Data Governance Committee (with defined roles and responsibilities)
- Defined processes (Corporate & IT), SOPs (show examples)

**Short Biography:** Robert Lovelace is Partner and Co-Founder of Novus Consulting, a consulting firm who offers comprehensive data, process, and technology services across Energy (Upstream, Midstream, and Downstream), Healthcare, Construction, and Retail industries. We focus on driving technology efficiencies and cost-saving solutions to improve asset performance within digital transformation efforts, mergers and acquisitions, and operations.

He brings more than 20 years of industry and consulting experience focused on technology strategy, complex project/program management, process improvement, and ERP implementations. He worked with small, private to large public companies in industries ranging from energy to manufacturing, transportation, retail, and government. Prior to starting Novus, Mr. Lovelace was in management consulting working for firms such as Accenture, Deloitte Consulting, EAG Services, and Stonebridge Consulting building business and industry practices focused on improving client performance and returns on investments ranging from technology implementation/adoption to business alignment to mergers and acquisitions.

## Data Quality in Oil & Gas Exploration – Everyday Challenges

Boris Makarov (Apache Corporation)

**Description of Presentation:** Data quality is a foundational component of decision-making processes. It is the biggest success or failure and most time-consuming factor in the geoscience domain of Oil & Gas field exploration and development. Many dry holes, missed deadlines, mineral rights violations, and failed investments are caused by the wrong data or a lack of critical data. Various approaches and data management practices to address the data quality in the geoscience subsurface data domain will be discussed during the presentation.

**Short Biography:** Boris Makarov is an IT Supervisor, Geoscience Data – IT Data Management & Analytics at Apache Corporation. Prior to joining Apache in 2017, Boris worked for more than 20 years in various Information Management positions at Schlumberger and BHP. Boris has a master's degree in Theoretical and Mathematical Physics from Francisk Skorina Gomel State University, Belarus.

Talk TBD

## geoLOGIC systems Sponsor Presentation

**May 9, 2023**

## Leveraging New Data Ecosystems to Accelerate Lower-Carbon Pathways

Raj Kannan &amp; Patrick Dineen (SLB)

**Description of Presentation:** Digital is set to make a material impact in our industry by reducing cycle times and risk, accelerating returns, increasing productivity, while also lowering costs and carbon. The key to delivering this relies on several techniques including automation, hyper-scale computing and efficiently combining first principle based and data-patterns based insights. Leveraging innovations in cloud, big-data, and artificial intelligence as a foundation is key to delivering such a transformational platform. Such data-centered approaches focus on automated DataOps pipelines that deliver the latest, reliable, and fit-for-purpose data products to applications and end-users generating business insights. Any data-centered approach should be open, extensible and ready to integrate with both customer and third-party solutions effectively. This requires a new approach to data, one that begins with an open-source, vendor-neutral, consortium-driven approach, rather than proprietary or closed-loop solutions. The open subsurface data universe (OSDU) is the result of this realization and currently boasts more than 230+ active members, including SLB. Together with operators, cloud services providers, software vendors, and start-ups the OSDU community aims to reduce data silos, enable transformational workflows, and accelerate the deployment of emerging digital solutions for better and faster decision making. A digital platform built on OSDU that leverages automation to drive efficiency, enables scalable multi-realization analysis to improve and reduce risk and uncertainty, and brings first principle physics to supplement AI/ML driven data insights will be the essential vehicle for any energy operator's digital transformation journey. One concrete example is agile and intelligent reservoir modelling, which streamlines subsurface workflows, longer-term modelling, and surveillance of CO2 sequestration. Such workflows enable faster, more informed decision making, while considering the risks and uncertainties and reducing time for surface studies from months to days SLB has been an active contributor towards OSDU since its inception, working to create an open, standards-based ecosystem that drives innovation for the energy industry. With OSDU at its core data platform, the SLB DELFITM platform delivers an open, cognitive digital transformation environment comprised of innovations from SLB, our partners, and open-source technologies. One such partner is Microsoft and together we are jointly delivering an open, secure, reliable, and fully managed cloud-based data platform solution for the energy industry. Microsoft Energy Data Services is an enterprise-grade data platform that brings together the capabilities of the OSDU™ Data Platform, Microsoft's secure and trusted Azure cloud platform, and SLB's extensive domain expertise. Together DELFI and Microsoft Energy Data Services accelerate operational performance by leveraging the compute power of the cloud enabling transformational levels of efficiency. As the world focuses on environmental, social, and governance goals, solutions from companies like Microsoft and SLB will go beyond oil and gas and will continue to leverage the power of digital as an accelerator of operational performance and lower-carbon pathways.

**Short Biography:** Raj Kannan is an enterprise and cloud technology leader, a SLB recognized Advisor and contributing to upstream oil and gas for 25+ years. As a firm believer in openness and community innovation, he actively contributes to the OSDU open-source data platform as an elected OSDU Management Committee member. He is a trusted advisor for several enterprise customers around the world and has helped map their specific needs to digital solutions tapping into OSDU data platform.

Paddy Dinneen - Geologist (M.Sc) by training. Started in the industry in 1985. Initially worked for a couple of operators in the North Sea (Mobil & Shell) as a geologist focused on exploration and appraisal. Joined SLB as a Geologist in 1995 as a mapping and modeling specialist working on client projects globally. Joined the 'data' business in SLB around 20 years ago and have been involved in the development and creation of all SLB subsurface commercial data products and solutions to date. Have been intimately involved with the development of the new SLB digital solutions for data including OSDU and Enterprise data management solutions. Currently the Business Owner for the 'data' domain for Digital & Integration in USLand working with clients in the US on their digital & data strategies to leverage data to drive greater insights, automated workflows, and enhance decisions for better ROI's.

## Data Modeling for Modern, Self-Service Analytics

Greg Baldini (Argus PBI)

**Description of Presentation:** This session explores data modeling techniques to make data approachable to self-service users and to optimize performance. With examples of real problems and (attempted) solutions, this presentation will examine dimensional modeling techniques which simplify and speed up analytics. A fast-paced look at some common and uncommon reporting scenarios, including: - All manner of date calculations and comparisons - Slowly changing dimensions - Events in progress and time series By the end of this talk, you should have a stronger understanding of the right questions to ask that will make your BI solution simpler and faster.

**Short Biography:** Greg Baldini has a decade of experience building high performance analytics solutions for clients across industry verticals. He is cofounder of Argus PBI an operations and monitoring solution for your Power BI ecosystem.

**May 9, 2023**

## Heat Exchanger Reliability Management with OMNI HXR

Rileigh Presnell (EcoLab)

Description of Presentation: Data management and analysis provides means for improved decision making and optimized operations. Ecolab has been using data management to support Energy customers with advanced analytics and insights as heat exchanger reliability accounts for an average of 80% of heat exchanger maintenance costs within a refinery or petrochemical plant. These costs arise because of heat exchanger condition variability, which is difficult to identify while a heat exchanger is in operation. Our learnings help to predict what's happening inside the heat exchanger using data and expertise across thousands of heat exchangers to identify characteristics that coincide with critical heat exchanger reliability issues. With data and insights collected on maintenance history, cooling water flow and temperature, process flow and temperature, and turnaround characteristics of heat exchangers, productivity of a plant can be improved, which also helps avoid unnecessary maintenance and reliability expenses. The outcome of this discussion will be a clear understanding of the way data management and interpretation can directly affect heat exchanger reliability and operational performance, with concrete examples from application.

## A Systematic Approach To Enhance The Asset Performance Using Data Analytics

Sethupathi Arumugam &amp; Vimal Amaldas (Infosys)

**Description of Presentation:** Globally, two-thirds of oil and gas operations are governed by joint ventures (JVs) in which companies pool capital, share risk, and transfer knowledge and best practices. JVs have an equal responsibility as operators to monitor the assets and challenge any losses, emission, deferrals, shutdown, etc. The operator and JVs work in tandem to improve the performance of the assets. However, it is not an easy task to aggregate the data from daily and monthly reports to monitor and assess the productivity of assets. Other significant issues such as data coverage, protection, visibility, and transparency, etc hinders in-depth analysis of data in hydrocarbon value chain. A systematic approach has been adopted through agile scrum methodology. The business needs are categorized into three functional areas such as upstream monitoring, reservoir analysis and financial reporting. Based on the functional areas, the Minimum Viable Product (MVP) has been defined. Cloud provides scalable, secure resources to collect and process data from multiple sources. The field and well production and sales parameters are captured from daily production reports and visualized with time-series charts along with the forecast data. An email is sent on daily basis to JV team with the snapshot of field production status. The immediate benefit was, JVs observed heavy injection of MEG (MONO ETHYLENE) at field level, which could kill well performance and seal reservoir pores. Further, this helped JVs to request MEG injection data by well level, so the injection can be monitored at individual well level to assess the impact of well productivity. The second part of MVP is reservoir analysis. Predictive analytics was applied on historical, latest well parameters and pressure build-up test data to determine the trend of reservoir pressure, drawdown curves, gradient, well performance and reservoir recovery at each geological section. The outcome of analytics enabled JVs to brainstorm with operators to improve the reservoir recovery factor. The last part of MVP is the group financial reporting. The descriptive analytics was applied to track the gas price with respect to floor price, ceiling price, Brent, JKM prices on each bidding rounds. With the advent of cloud computing and Agile Scrum process have paved way for better collaboration, greater efficiencies, and streamlined business practices. Also, the data is transparent and visible to the entire business community. The proposed solution helps to track individual molecules of hydrocarbon from the point of production to point of sales. Also identifies opportunities for any performance improvements.

**Short Biography:** Sethupathi Arumugam is a Geologist, having 22 years of experience in the upstream digital technologies. His key skillsets are Geological & Geophysical data management, Real-Time Drilling Solutions and Hydrocarbon Value Realization. Vimal Amaldas is a Microsoft certified cloud architect. He is having 15 years of experience in the Information & Technology domain.

## The Intersection of Public Data & Technology

John Ferrell (WellDatabase)

**Description of Presentation:** Public data in oil and gas dates back over 60 years. Over that time, and especially over the past two decades, publicly available oil and gas data has drastically changed. The types of data recorded have increased, as has the availability of that data in the public space. Over that same time, technological capabilities have grown exponentially as well. Today we have more data than ever and more technologies than we know what to do with. This presentation will focus on where technology and public data meet. What data is available, what technologies can be used with the data, the proper usage, and the hidden pitfalls few know about. You will leave knowing what data can and should be used with varying technologies, the inherent issues that come with public data, and most importantly, when data is being misused.

**Short Biography:** John Ferrell has spent the past 20+ years in Oil & Gas, primarily with data. John has worked at major operators, service companies, start-ups, and everything in-between. As Co-Founder & CEO of WellDatabase, John has spent the past 10 years immersed in all things public data. John is also a published author and an accomplished speaker. When not neck deep in data, John likes to spend time with his wife and five kids in the mountains of western Montana.

**May 9, 2023**

**Accelerating Exploration & Production Data Transfer from Field to Processing** - Kristy DeMarco (Lyve Mobile)

**Description of Presentation:** Data-intensive data processing workflows performed at the field level have always presented challenges in the Energy Exploration and Production Industry. From limited edge infrastructure storage and barriers to scale to limited transmission bandwidth and network capacity, companies have continuously strived to find and develop new recoverable hydrocarbon reserves. To solve these data management issues, Seagate Technology introduces strategies for improving data workflows for each phase of upstream production, from seismic data acquisition to legacy data migration. For example, when it comes to managing data in the field, instead of recording seismic, survey, and surveillance data on hundreds of tapes, upstream operations can significantly reduce their hardware footprint by recording data to field-ready storage arrays, substantially increasing disk space, reducing IT support requirements at the edge, and maximizing edge data storage resiliency. This session will address the key challenges to Energy Industry data management in upstream applications and discuss strategies and solutions that can be implemented at each stage of the data lifecycle to ensure data compliance and entitlement and promote ease of accessibility, both internally and externally, when shared by multiple companies.

**Short Biography:** Kristy DeMarco is the Director of PLM and Vertical Markets for Lyve Mobile Services at Seagate Technology. Joining Seagate 5 years ago, she now leads the Lyve Mobile Services PLM and go-to-market team focusing on accelerating time to data for edge applications across multiple data intensive workflows. Kristy and her team are chartered with translating key market and customer requirements into innovative solutions for future roadmap development and market enablement. Kristy also regularly presents at industry forums and conferences.

**A New Approach to Data Identity and Data Identity Resolution** - Dag Heggelund (Pando Scape Inc)

**Description of Presentation:** This paper presents a new approach to Data Identity and Data Identity Resolution. Identity Resolution, in the context of this paper, focuses on finding the identity of Common Data Objects (CDOs) identified by different natural keys. Examples of CDOs in the oil industry are Wells, Completions, Perforations, Casings, Log Curves, etc. PPDM has spearheaded the development of Well and Wellbore Identification Standards. However, there are many other Common Data Objects within the oil industry, such as log-curves, deviation surveys, marker-picks, perforations, etc. that do not have an established Identification Standard. Data identity resolution is the process of identifying and linking different data records that refer to the same entity. The database community describes the process as merge-purge, data deduplication, and instance identification. The AI community describes the problem as database hardening and name matching. Having a clear identity of data is essential in many situations such as reducing data duplication, connecting data from different sources and Data Quality Management. As new technologies are being developed the need for strong data identity is becoming more and more important. Examples of these technologies are Web 3.0, digital-twins and block chains. The authors have worked in several industries, including oil & gas and food traceability. A key problem in food traceability is that food products may change their identity as they move down the supply chain. This creates a disconnect digital supply chain causing great problems during a food safety event. Similar identity problems are encountered in the oil and gas industry. As CDOs move between applications, vendors, users and partners the CDO's Identity is often missing or changed. There are two key problems that need to be addressed. One, develop a standard for how to represent a CDO's identity and two, develop a methodology for creating and resolving CDO identities: The traditional approach to Identity resolution is to construct a list of "matching" attributes for each CDO, the Attribute Identity Vector. Using Attribute Identity Vector, various similarity functions have been developed to obtain a "measure" of how similar CDO S is with CDO T. A common approach is to "construct" a normalized name and use the name as the CDO identifier. Our approach is based on using the Attribute Identity Vector (AIV) combined with a weight matrix (WM). The value of WM is obtained using standard machine learning algorithms. We propose the use of a Uniform Resource Name (URN) as the structure for creating unique identifiers for Common Data Objects. The URN structure as defined by the W3C has been successfully used in the food traceability industry to create the Electronic Product Code (EPC) to establish a permanent identifier for food products. We propose that the PPDM group considers establishing a URN structure that can be adopted by the industry for creating URNs for the oil and gas industry. We recommend the URN over other internet identifier structures such as URI and URL. This is because the URN allows for a standard governing the identifier structure and interpretation to be submitted to the IETF and filed as an official standard for the URN type. Having strong standardized CDO identifiers along with advanced algorithms for determining the CDO identifiers can greatly benefit the Oil & Gas industry as we are facing an increasing demand for more data, better data, and more consumable data. Having a standard way of expressing a CDO's Identity is essential to the Oil & Gas industry in the age of the fourth industrial revolution (Industry 4.0).

**Short Biography:** Dag Heggelund has 30+ years in software & business development with a PhD in Petroleum Engineering from Texas A&M. In 1987 he was a founder of TSDI & later it was purchased by Scientific Software Inc. In 1998 Dag founded InnerLogix to focus on data quality problems, resulting in QCLogix & the DQM process. In 2007 Schlumberger acquired InnerLogix. In 2012 he joined Trace Register as their CTO. In 2022 Dag was part of the team that started Pando Scape.

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## Expanded Data Manager Competencies

(PPDM Association)

## S&P Global Cocktail Reception Sponsor Presentation

**May 10, 2023**

### Keynote - **Storytelling: Turn Your Data Into Compelling Insights That Inspire Action.**

John Hetherington (We Deliver Your Vision)

**Description of Presentation:** In a recent study by Stanford University, 63% of business leaders remember stories but only 5% could remember a single chart. It's not enough to analyze data. You have to communicate the value of your data in a clear, compelling manner using stories. Storytelling not only connects us to our data but it's essential ingredient for boosting your career with the power skill everyone wants—executive presence. In this session, John will give you a deeper understanding of the art and science of data storytelling with frameworks and practical tips for you to share your data in ways that persuade, motivate, and inspire.

**Short Biography:** John's clients often say he has a super power for simplifying complexity and that's why he founded "We Deliver Your Vision.com". His team have helped 100's of data managers and analysts to persuade, motivate, and inspire decision makers. He has 10 years strategic consulting experience with Deloitte and Ernst & Young and 25 years delivering data and technology projects in UK and Canada. He lives in Calgary with his wife Rebecca, two dogs and a cat and travels around the world for his clients.

### Information Coming Soon!

TBD

### **Alignment of Data Platforms and Data Management** - Chris Hanton (IKON Science)

**Description of Presentation:** Open data platforms such as OSDU promise to deliver radical gains in productivity and innovation in the subsurface space through streamlining of data and application infrastructure. Improved accessibility will allow creation of new data-rich innovative workflows that will generate new insights in our industry. However, data accessibility is not enough. With centralized data sourcing there is a risk that without understanding and implementation of appropriate data management and data governance that data quality will be detrimental to end users, leading to the dreaded 'data swamp' and damaging confidence in the entire platform. This presentation showcases, with examples, how traditional data management processes and technology feed directly into contemporary data platforms to promote both data quality and data accessibility - ultimately powering next generation insights in the subsurface space.

**Short Biography:** Chris is a 15 year member of the energy industry, a career which has incorporated all facets of data, from acquisition, management and utilization. As Director of Digital Transformation at Ikon Science, Chris uses his experience to assist the energy industry make strides in productivity and impact by empowering business units through digital technology. Chris comes from a geoscience background with masters in Geology and Integrated Petroleum Geoscience.

### **OSDU – Turning Concepts on Paper to Early Business Success** - Samantha Bell (Shell)

**Description of Presentation:** Participating companies in (O)SDU have different perspectives on what drives their decisions. Decisions include why, how, and when to participate in OSDU plus the pace of adoption in order to meet business goals, create efficient workflows and lead to new subsurface insights. During this interactive discussion, you will gain practical insights from Shell's journey to date on how to get ready for the change and what your future can look like (how you can drive future outcomes by prioritizing your future actions).

**Short Biography:** Samantha has spent over 30 years in the Global Upstream Oil & Gas industry. Her experience extends the full life cycle from Exploration through Development to Abandonment. Samantha has worked in Australia, The Middle East, Asia, UK, India, Europe & the Americas. As Manager Technical Data and Digital Americas, she leverages her broad experience as a Geoscientist, Subsurface Operations Lead, Front End Development Manager, Digital Transformation Lead, Change Manager & Consultant

**May 10, 2023**
**Enhance Your Data Ecosystem with Blockchain As A Solution For Seismic Entitlements**

Cindy Cummings &amp; Rebecca Hofmann (Repsol)

**Description of Presentation:** Seismic is a long-lived asset the oil and gas operators and service company hold. Seismic is not static: A survey may be processed many times as new technologies become available, generating new versions of final and intermediate products. Seismic is used both to lease/license to others, or as a negotiation element in Joint Ventures. The ways that seismic is exchanged are many, and complex. Yet conditions on how it may be used varies. Because of its longevity and complex contractual framework, tracking the Entitlements of seismic can be difficult. Blockchain provides a way to track, in an immutable way, all the transactions between companies. Using Smart Contracts allows the rapid verification of conditions of use. Using a decentralized Blockchain ensures confidentiality of the transactions. Through the Blockchain for Energy Consortium, a Seismic Entitlements Minimum Viable Product (MVP) is being developed to create the first working Blockchain for Seismic Entitlements. Blockchain for Energy, Seismic Entitlements projects is a consortium led by Repsol and comprised of active members from Chevron, ConocoPhillips, Devon, Catalyst, ExxonMobil, Repsol and Schlumberger. Each company dedicates subject matter experts to develop requirements, workflows, attributes, and project direction. Catalyst recently dedicated seismic and workflow expertise to complete the MVP Storyboards, Object Matrices and Workflows to expedite the MVP. Some benefits of the B4E Seismic Entitlements Project MVP and future phases are to: Facilitate seismic marketplaces; Company Entitlements in Cloud Environments could be managed faster, safer and more cost efficiently. The PPDM Association (PPDM) and the Blockchain for Energy (B4E) have signed a Memorandum of Understanding that intends to support integration and harmonization of the work being done by both organizations. PPDM and B4E will collaborate to harmonize terminology, data contents and identify opportunities for best practices.

**Short Biography:** Cindy has over 35 years of work experience in the oil and gas industry in areas of exploration, development, production and information management. Cindy worked for Conoco, IHS, and is currently in IM at Repsol in the Woodlands, Texas. She has presented papers on Oil and Gas Data Management, Data Governance, Technology, over the years at PNEC, PPDM conferences. Cindy is also a certified PM, currently working on the PMO team and BC Seismic Entitlements for the B4E and PPDM co chair of PDC.

Rebecca Hofmann is an accomplished finance and compliance leader with over 20 years of experience in the energy industry. Her past operational assignments have covered the development and improvement of processes over governance and compliance to support onshore and offshore operations. She is the founder and visionary behind the Blockchain for Energy consortium — where she is the standing CEO and served as chairman of the board two years prior. Hofmann's many industry awards and accolades include the 2018 GRIT Award for Creativity and Innovation, the 2019 GRIT Award for her team's work in emerging technologies, and the 2021 Global Supply Chain Leaders Blockchain CEO of the Year Award. She has also authored several thought leadership articles related to blockchain technology. <https://www.blockchainforenergy.net/>

**A Trusted Seismic Archive is More Than Just Online Data - Paul Thompson (Talus Technologies)**

**Description of Presentation:** In the past digitization meant moving from physical media to online documents and files; now, it's about being able to use your seismic data in the cloud. A trusted seismic archive is much more than simply having SEG-Y data available online or in the cloud.

In this presentation we will look at some of the question regarding a trusted seismic archive. When a seismic survey has thousands of files available for use, which is the correct one for you? Is the online seismic data workstation-ready? What does workstation-ready even mean? What is real-time availability for seismic data? How do you quickly adapt to change in the digital world? And not least, with the ongoing resource cutbacks, how can you manage more data with fewer people?

**Short Biography:** Paul has over 20 years of experience in designing and developing software applications for seismic data management. Paul has been with Talus for over 10 years and before joining Talus, Paul worked as a consultant at Calgary EDM Solutions. Paul has very broad and in-depth knowledge of seismic data management practices. He currently manages Talus' integration services team and is one of the lead engineers behind Exploration Archives.

**Bridging the Gap Between Data Analysis and Process Mining - Tom Broussard (evolv Consulting)**

**Description of Presentation:** Process mining bridges the gap between traditional model-based process analysis (e.g., simulation and other business process management techniques) and data-centric analysis techniques such as machine learning and data mining. Process mining seeks the confrontation between event data (i.e., observed behavior) and process models (hand-made or discovered automatically). Example applications can include: analyzing treatment processes in hospitals, improving customer service processes in a organization, understanding the online behavior of customers using commercial sites, analyzing failures of a baggage handling system, and improving the user interfaces of an X-ray machine. All of these applications have in common that dynamic behavior needs to be related to process models. This will attract the interest of senior executives, who can easily see where problems and opportunities lie. It will reinforce your organization's dedication to data-driven decision making.

**Short Biography:** Accomplished servant leader with 29+ years of experience leading complex data projects and managing resources while supporting strategic and tactical business objectives. Hands-on capable technical leader with a track record of delivering projects with focus in discovery, design, analysis, engineering, automation, governance, security, science, and visualization. Proficient in driving effective processes, tools, methods, and re-usable artifacts which support core capabilities, efficient work-streams, rational decision making and successful outcomes. Deep understanding of strategies and solutions for data, cloud, AI/ML, governance, security, migration, and management.

# New Data Ecosystem

Houston  
EXPO 2023

May 9 - 10, 2023

**May 10, 2023**

## Information Coming Soon!

TBD

## Information Coming Soon!

TBD

### **Automated Image Digitization using Machine Learning** - Sunil Garg & Samir Jain (DATAVEDIK)

**Description of Presentation:** Vast amounts of Oil and Gas knowledge is hidden in documents (e.g. well reports, drilling reports, permits etc.) and images (e.g. logs, core photos, thin sections etc.). Extracting data from these unstructured sources is often manual and extremely time consuming. Recent advances in Machine Learning and AI technologies can help to extract useful information from these documents and images at scale and then augment and fill the gaps in the data stored in structured repositories. This presentation will focus on the research work done to extract data from Well Log Images using a combination of several big data processing techniques and machine learning models. The extracted data is then converted into digital LAS files which are further used to train machine learning models for several geoscience/drilling workflows, some of which will be discussed in this presentation. We will present the challenges faced in the various steps of the process as well as the solution approaches to overcome these challenges. Finally, we will discuss the operational efficiencies achieved as a result of the automation done using the power of AI/ML.

**Short Biography:** Sunil Garg is the founder and CEO of dataVediK, a Houston based startup building DataMoKsha Hyper-Converged Data and Analytics Platform for Oil & Gas industry. Prior to this, he spent 20+ years establishing and growing Data Management, Big Data and Analytics business for Schlumberger. Sunil has deep understanding of Oil and Gas data, Data Science & ML and uses the combination to build end user centric solutions. He is a member of several industry organizations and forums like SPE, AAPG, PPDM. Data and Information Management Leader with over two and half decades of International Experience in Upstream Data, Analytics and Digital Transformation. Experience working on high level initiatives like Enterprise IM, Defining/Executing Future Roadmaps, Governance, MDM in the field of Upstream Oil and Gas. Currently also involved in growing OSDU initiatives across companies and communities. Good understanding of Houston's rapidly growing startup ecosystem.

### **International Energy Data Standards Updates and Workshop**

(PPDM Association Work Groups and Committees)

#### **To Define the Problem of "Orphan" Wells**

Dwayne Purvis (Dwayne Purvis PE)

**Description of Presentation:** The US industry has entered a new phase of its lifecycle with the large majority of wells close to or ready for retirement. The issue sneaked up on the industry, and we are not strategically or financially prepared to address the problem. In fact, we do not have a functional vocabulary to talk about the physical situation or financial measures to understand the issue. The first step to solving any problem is to define it and to measure it. This presentation offers a template to define and measure both the physical and financial situation, and it calls for further discussion and standardization through the PPDM.

**Short Biography:** Dwayne Purvis, P.E. offers consulting and advisory services for the oil and gas industry, building on two and a half decades in reservoir engineering and executive leadership as a consultant and operator. From engineering studies and reserve reports to strategic decision-making on the energy transition, Mr. Purvis helps operators and investors with reliable analysis for prudent decisions.

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## **Understanding Emotional Intelligence and Leading in Data** - Interactive - Melinda East (Focus Forward)

**Description of Presentation:** Emotional Intelligence is something that we all have, but do we know how to leverage it and use emotional information in an effective and meaningful way. In this interactive talk we will discuss the science behind emotional intelligence and the tools and concepts that you can use to influence and lead data transformations at your organization and within your teams. Progressing your leadership skills through effective navigation and use of your emotions and the emotions of others.

**Short Biography:** A Certified EQ-i Trainer/Facilitator and Executive Coach as well as a Data Strategy Consultant. 25+ years as a Data Professional and Leader. Worked in the energy industry, telecommunications, and financial services industries all through the lens of data strategy.

## **Building Digital Capability is Everyone's Responsibility** - Interactive - Douglas Frisby (Sword ITS)

**Description of Presentation:** The ongoing digital evolution of the oil and gas industry depends on the ability to enhance the capability of our staff. To achieve the required digital progress, it is becoming more critical that companies have access to competent, capable data professionals with domain knowledge and the ability to work collaboratively. How do all the stakeholders in the industry either as data professionals, operators and suppliers discharge our responsibilities to grow the capability in this ever-evolving digital landscape. Realizing the value from the ever-increasing volumes of data and disparate data sources requires more engaged, energized and capable data professionals. This presentation will present some questions, suggestions and thinking to address the following challenges: • What is the right combination of digital, domain and interpersonal skills that we can build from and how to engage and energize individuals to be committed to their lifetime development? • How can we as employers in all stages of the business value chain work to build the capability that our organizations need to thrive in the digital environment today? • How can operating companies support the development of talent in suppliers whilst still maintaining the appropriate business relationships to the benefit of all stakeholders? The long-term competitiveness of our industry needs more digitally capable data professionals and from this presentation maybe there is something that inspires you to contribute to this important agenda.

**Short Biography:** Douglas Frisby established the Houston branch for Sword Group in 2020, to provide quality data and information management services to the local energy industry. This leveraged his 30+ years' experience at Amoco and BP in all phases of the Exploration and Production business across multiple continents. Douglas has been based in the US, UK and Argentina and he has worked extensively with local staff and leaders in many different countries. His assignments in the oil and gas industry include leadership roles of teams in Petroleum Engineering, Geoscience, Drilling, Exploration, Business Development, Learning and Data Management. Douglas has had great success through building multi-disciplinary teams to work collaboratively across organizational lines to resolve complex problems. He is recognized for his development of technical staff and leaders through coaching, mentoring and support. He holds a bachelor's degree in Chemical Engineering from the University of Birmingham, an MBA from Cranfield University, and a Coaching qualification from Rice University.

## **Time-lapse Seismic Metadata Extraction for Carbon Capture and Storage Monitoring**

TBD (Ovation)

**Description of Presentation:** Essential for successfully monitoring a Carbon Capture and Storage (CCS) project, time-lapse seismic is a proven technology for direct CO2 plume tracking. In addition, the data can be used to detect the presence of a leaking gas chimney and monitor reservoir integrity, including structural and caprock integrity. A workflow for extracting metadata from time-lapse seismic data is designed to gather in-depth information for CCS monitoring data integration.

## **CPDA Prep Program Curriculum**

PPDM Association



**May 10, 2023**

Room 3 Sponsor Presentation

**Digital Oilfield for Sustainability and Operational Excellence**

Sandeep Ghosh (Perficient)

Description of Presentation: For decades, the oil and gas industry has innovated on incredible ways to find, extract, and produce the energy resources the world needs. With the rise of easily available telemetry data from oilfield equipment and other related data feeds, oil and gas companies have immense opportunities to increase operational efficiency and react faster to the changing world. This technological shift is occurring just as the industry must reinvent itself to meet growing energy demands while reducing emissions and addressing the surge in Environmental, Social, and Governance (ESG) issues and requirements. In the world of petroleum production, these shifts require the oilfield to go digital. That means being able to utilize near-real-time measurements to create a digital twin of the oilfield. This virtual model, combined with predictive and prescriptive analysis, enables more sustainable Upstream operations: optimizing production, tracking, and reducing emissions, improving operational efficiency and worker safety, and increasing productivity. While there are many software solutions available that tactically address aspects of a digital oilfield, e.g., digital logbooks, SCADA systems, inventory management, workforce management, and business process systems, there is, however, no holistic commercial off-the-shelf digital oilfield platform (SaaS or otherwise) on the market. Each enterprise must individually prioritize business drivers and design a Digital Oilfield solution that stitches together a collection of custom-built workflows and components. Business drivers could be varied, ranging from sustainability, record keeping, reporting, production optimization, or some combination. Data is the key to success. That data needs to be discoverable, available, and trustable. Leaders across industries are focused on becoming data-driven enterprises – join us to learn how yours can be too. Short Biography: Sandeep Ghosh – Perficient, Director Sandeep Ghosh is a Director at Perficient, focusing on the energy and utilities industry delivering custom application development and data modernization solutions. Before joining Perficient, Sandeep worked for Anadarko Petroleum, an upstream E&P company, initially focusing on building Well Lifecycle Management, Well Planning, and other business solutions. After the formation of the Advanced Analytics and Emerging Technologies (AAET) organization, Sandeep served as an IT Advisor, where he oversaw a team building an Integrated Production Surveillance and Optimization Digital Oilfield solution for the Gulf of Mexico (GOM) asset. The Digital Oilfield solution involved implementing several workflows that ranged from fast-loop processes for near real-time alarms and alerts, medium-loop processes such as well route optimization, and slow-loop processes such as reservoir production optimization, downtime optimization, and production forecasting. Frank Whyte is a Data and Intelligence leader at Perficient, with over 25 years of experience designing and delivering solutions for many industries around the world – from Logistics in South Africa, Government in the UK, Utilities in Australia, Manufacturing in Mexico, to Insurance, Finance, Manufacturing, Chemical, Oil and Gas and Healthcare in the US. Before joining Perficient, Frank was a Solution Architect/Enterprise Account Executive for Software AG/webMethods, focused on the TOLA region, and prior to that was a lead architect/delivery manager for TIBCO Software in Australia/Europe/NAM. In Oil and Gas, Frank has led projects across the value chain – from exploration and production, transportation, refining and retail to energy trading – and solutions as diverse as predictive maintenance, material master data management, trading arbitrage, and executive dashboards.

**Cross Industry Data Panel Discussion**

Greg Foley (The FerVID Group) Sean Hanrahan (Platypus Brewing), Andre Pontin (Melax Technologies) and Jim Holl (ExxonMobil).

Greg Foley will moderate a panel of data consumers representing manufacturing (beer), medical research and innovation.

Our panelists: Sean Hanrahan - Owner Platypus Brewing. The use of data, both in the chemistry and marketing of beer. Andre Pontin - CEO Melax Technologies. The use of biomedical Natural Language Processing to create opportunities for medical breakthroughs. Jim Holl - Technology Integrator at ExxonMobil Technology and Engineering Company. How ExxonMobil uses data in innovation across all its business units.

**Short Biography:** Greg Foley joined The FerVID Group in April 2017 and is responsible for Business Strategy and Business Development. Previously he had introduced Brisbane based startup, RedEye, to the US market. With 31 years of market development experience applying technology to solve business problems including 24 years in Oil & Gas, he is very focused on customer satisfaction. Prior to moving to the United States in 1999 and joining Petris Technology where he spent 11 ½ years followed by 4 years at Stonebridge, he was responsible for establishing HAHT Software in South East Asia. Mr. Foley has also worked in Australia for Fujitsu, Digital Equipment Corporation and ComputerLand. He previously taught for 12 years at St. Aloysius' College in Sydney. Outside of work, Greg has served on the Board of the Australian American Chamber of Commerce for 21 ½ years, serving 6 as President. He has also served 2 years on the Board of the Woodland Heights Civic Association.