

# Digitalization & Automation in the Oil and Gas Industry Challenges and Opportunities

Creating Value through Partnerships & Innovation

24-25 June 2019, Tel Aviv, Israel

Come learn how the oil and gas industry is changing and hear about the **latest technological trends** in the industry

Come learn about the **digital and business transformation** the oil and gas industry is undergoing as it transitions to become an energy industry

Come learn about **the Israeli Innovation Ecosystem** and how to effectively engage with the Start-Up Nation





## Target Audience

### Oil and Gas & Oilfield Service companies

CTOs, CIOs, Corporate Technology Venture Units, VPs Innovation/Digital Transformation, VPs Operations, Senior Technology and Engineering Management, Directors New Energy Business

### Israeli Technological companies

CEOs and CTOs of companies in fields related to industrial digitalization, industrial automation, industrial cyber security and new energy solutions

## Rationale and objectives

Following the success of [last year's event](#), which attracted key professionals from the oil and gas industry and 125 Israeli tech companies for discussions on how novel digitalization and automation technologies can create value in the oil and gas industry, we are pleased to continue and deepen this important, business-oriented dialogue.

The oil and gas industry is in the midst of major transformations. The need to increase efficiencies and cut costs, to increase productivity and further exploit known reservoirs, and to comply with strict HSE regulations are all key drivers for major changes in the way the industry has operated in recent decades. In addition, be it because of regulation, public opinion, or a shortage of natural resources, it is clear that the future energy portfolio will have a higher share of sustainable resources in it. As a result, oil and gas companies are proactively seeking a transition path to become truly holistic energy companies.

Technology and innovation, and more specifically, digitalization and automation technologies are increasingly being deployed in the oil and gas industry, helping the industry to successfully address the challenges it faces. Technological breakthroughs in fields like energy storage and energy management have a key role to play in enabling and accelerating the transition to the future energy world.

Israel, known throughout the world as the "Start-Up Nation", is a global innovation hub, with the highest share, globally, of R&D investments as a percentage of GDP. Israel hosts over 300 R&D centers of multinational companies; for many, it's the only R&D center out of their home countries. Israel has been traditionally strong in ICT-related technologies and today has a thriving ecosystem abundant in researchers, start-ups, accelerators, incubators, mature companies, MNCs, and investors in fields such as Industrial IoT, big data & analytics, AI & machine learning, deep learning, machine vision, AR/VR, scalable computing systems, cloud environment, unmanned systems, blockchain, industrial cyber security, and more.

In addition to the conference itself, new this year, the program will integrate a field visit to meet the Israeli innovation ecosystem. This will help decision makers from the oil and gas industry form first-hand impressions of the local ecosystem and deepen their understanding of how to effectively engage with it and the value they could generate as a result.

Israeli industry and its innovation capacities provide a unique opportunity to create immense value in the oil and gas industry. Clearly, this will happen only through dialogue and cooperation. The 2nd "Digitalization and Automation in the Oil and Gas Industry – Challenges and Opportunities" event, organized by the [Israel Innovation Authority](#), is designed to do exactly that: create a focused and engaging forum for discussing the challenges the oil and gas industry is facing and innovative technologies that bear the potential to successfully address them.

## Program (\*)

**Sunday, 23 June 2019**

**18:30-20:30** Welcome dinner for speakers and international guests, hosted by [Delek Drilling](#), [ICV](#) and [OurCrowd](#) (admittance by invitation only)

**Monday, 24 June 2019**

Conference Venue: Tel Aviv Stock Exchange (TASE), 2 Ahuzat Bayit, Tel Aviv

**08:00-09:00 Registration**

**09:00-09:30 Opening remarks**

Aharon Aharon, CEO, Israel Innovation Authority

Dr. Yuval Steinitz, Minister of Energy, Israel

Dan Brouillette, Deputy Secretary, US Department of Energy

**09:30-10:30 Session 1: Overview**

**Moderator: Gil Shaki, Head of Energy, Israel Innovation Authority**

• **Leviathan field: Current state of activity**

Moshe Kivshany, Subsea Engineering Supervisor, Noble Energy

• **Karish field: Current state of activity**

Simon Warren, Operations Manager, Energean

• **Digital Transformation: Outcome driven with AI at the core**

Dale Sperazza, Upstream Digital Director, Baker Hughes, a GE Company

• **Digital Transformation: Petrobras's Challenges and Perspectives**

Dr. Sthener R. V. Campos, Digital Transformation, CENPES – Petrobras R&D Center

• **From the prospective of an Indian oil and gas industry: Opportunities and challenges in adoption of digital technologies**

Deepak Agarwal, Executive Director (Information Systems), Indian Oil

• **Challenges in discovering and developing hydrocarbon resources offshore Israel**

Dr. Miki Gardosh, Head of Geology & Geophysics, Ministry of Energy, Israel

**10:30-10:45 Keynote: How to make machines smarter in the oil and gas industry?**

Dr. Greg Powers, VP Global Innovation, Halliburton

**10:45-11:15 Coffee Break and Networking**

**11:15-12:40 Session 2: Unlocking the Hidden Value of Data**

**Moderator: Eldad Weiss, Founder and ex CEO, Paradigm**

• **Automation of seismic driven analysis through Machine Learning technologies**

Anat Canning, R&D Director for Seismic Reservoir Characterization and Quantitative Interpretation, Emerson E&P

• **How could AI and GPU-accelerated computing reduce the cost of finding, extracting, processing and delivering oil and gas?**

Ofir Zamir, Director Solutions Architecture, Nvidia

• **Creating value in the O&G Industry through Artificial Intelligence, data analytics, and automation technologies**

Christos Toyas, DELFI Champion, Europe, Schlumberger

• **Repsol Transformation: Towards full potential value through data**

Juan Antonio Monterroso Martin, Digitalization Director, Upstream, Repsol

• **Technician of the Future: How AI and IoT transform productivity, engagement, and safety?**

Dr. Asaf Adi, Senior Manager, IoT and Wearables, IBM Haifa Research Lab

• **Maximizing ROI from AI in oil and gas**

Michael Zolotov, CTO, Razor-Labs

• **Technology Pitches**

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**12:40-14:00 Session 3: Automated & Unmanned Systems**

**Moderator: Zvi (Kul) Karcz, VP Exploration, Delek Drilling**

- **Cyber plant: Unmanned design and digital operational requirements for critical equipment**  
Ilaria Parrella, Data Science and Business Analysis Engineering Manager, Baker Hughes, a GE Company
- **Study case: Field services with Augmented Reality**  
Zach Wilcock, Intelligent Operations Manager, BPX  
Evyatar Meiron, CEO, Fieldbit
- **Achieving full lifecycle gas transmission automation through digitalization**  
Yehiel Viner, Innovation Manager, Israel Natural Gas Lines
- **Learning from other industries: autonomic heavy-duty machinery in mining**  
Elad Abbo, Business Development Manager, Robotic Systems, Israel Aerospace Industries
- **Analytical neural network detection for mooring integrity**  
Peter O'Toole, Maintenance & Integrity Manager, Energean
- **Study case: Refinery TAR management using advanced cellular tools**  
Yariv Gratz, VP, Refinery Business Unit Manager, Bazan  
Amir Green, Co-Founder & CTO, Mobideo
- **uROV: a new paradigm for autonomous underwater vehicle platforms**  
Jack Vincent, Product Champion Subsea IMR Services, OneSubsea
- **Technology Pitches**

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**14:00-14:45 Lunch Break and Networking****14:45-15:30 Session 4: Cyber Protection of Critical Infrastructure**

**Moderator: Avi Shavit, Cyber Security Expert, Israel Innovation Authority**

- **Leviathan: Secure by design**  
Yaki Almozilino, International IT Director, Noble Energy
- **How did the oil & gas cyber security space change in the last 5 years?**  
Mille Gandelsman, CTO, Indegy
- **Lessons learned from applying customer data encryption, consent and "right to be forgotten" in the energy sector**  
Alon Rosenthal, CEO, Secupi
- **Oil and gas cyber security – how advanced players deploy modern OT security**  
Lior Frenkel, CEO, Waterfall Security
- **Technology Pitches**

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**15:30-16:15 Session 5: Show me the Money: O&G Investments "Hotspots"**

**Moderator: Gil Shaki, Head of Energy, Israel Innovation Authority**

Presentations and panel discussion, with:

- Chad Bown, Venture Principal Upstream, BP Ventures
- Luis Alcoser, Venture Principal, Chevron Ventures
- Aurore Dochy, Early Investments Associate, External Technology Engagement, TechnipFMC

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**16:15-17:15 Session 6: The Transition from Oil and Gas to Energy Companies**

**Moderator: Meir Bengio, Advisor, ex. VP Production Group Software, Schlumberger**

- **Transforming E.ON from an integrated utility to a customer facing company driven by innovation**  
Dr. Philipp Ulbrich, VP Head of Scouting & Co-Investments; Managing Director of E.ON :agile Accelerator, E.ON
- **Wireless Electric Roads: The future of EV charging**  
Oren Ezer, Co-Founder & CEO, Electreon
- **EV charging impact on future "fulling"**  
Doron Frenkel, CEO, Driivz
- **Eliminating range anxiety with ultra-fast charging**  
Avraham Edelstein, Senior System Architect, Storedot
- **Propelling growth, strategy and innovation with AI**  
Sagie Davidovich, Co-Founder & CEO, Sparkbeyond
- **Technology Pitches**

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**17:15-18:00 Refreshments and Networking**

## Tuesday, 25 June 2019 (for international guests only)

Join a **Field Visit to the Israeli Innovation Ecosystem**. The program consists of visits to selected R&D, acceleration and open innovation centers active in Israel. Along the day participants will get exposed to cutting edge technologies developed in Israel in the energy, transportation and digital fields, and to various modes of engagement with the Israeli innovation ecosystem. Arranged transportation will be offered to participants throughout the day.

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### 08:15 Pick up from conference venue (TASE, 2 Ahuzat Bait, Tel Aviv)

#### 09:00-10:30 Alliance Innovation Lab Tel Aviv

Address: Building 7, Kyriat Atidim, Tel Aviv

About:

The Alliance Innovation Lab Tel Aviv was founded by Groupe Renault, Nissan Motor Company, and Mitsubishi Motors, and represents the world's largest automotive alliance. The Lab aims to advance state-of-the-art technologies in mobility, with a main focus on sensors for autonomous driving, cybersecurity and big data. Its mission is to identify and test Israeli technologies that could be implemented in future cars and services offered by the Alliance member companies. The Lab collaborates with the local innovation ecosystem through joint prototyping efforts. Since February 2018, it has operated under the new Open Innovation Labs program of the Israeli Innovation Authority. The Lab is a leading partner of CityZone, Tel Aviv's smart city environment and experiment zone in Atidim Park, where its facility is located.

The Innovation Lab in Tel Aviv works in close cooperation with Alliance Ventures, a venture capital fund which will invest up to \$1 billion over the next five years. The fund, launched in 2018, operates globally, including in Israel and has already invested in Maniv Mobility.

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#### 11:00-12:30 Drive TLV

Address: 7 Shevah , Tel Aviv

About:

DRIVE is a leading innovation center for smart mobility technologies. At DRIVE startups gain meaningful market opportunities while partners are provided with early insights into the startups' cutting edge technology ahead of their competitors. DRIVE was founded by Mayer Cars and Trucks Ltd and is sponsored by leading partners in the international and Israeli industry like Honda, Volvo cars, Hertz, Volvo Group, NEC, Ituran, and Aptiv.

DRIVE is selecting startups with a unique value proposition in the smart mobility domain. Startups can be from the following areas: sensors, computer vision, cyber, market place and shared economy, smart city solutions, predictive analytics and business intelligence, machine learning, autonomous vehicles, urbanization applications, fleet management, mapping, parking and more.

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#### 13:00-14:30 IBM Haifa Research Lab

Address: Hashahar Tower, 4 Ariel Sharon, Givataim

About:

IBM was the first international IT firm to establish a science center in Israel back in 1972, later evolving into the company's Research Lab in Haifa and is IBM's largest research center outside the US. IBM was also the first company to establish a unique Global Technology Unit (GTU) to promote joint activities with hi-tech companies and startups, which generate over \$1B in yearly revenues for IBM and its partners. Over the past decade, IBM has acquired 13 companies with R&D centers in Israel.

IBM Research - Haifa grew into a major lab that leads the development of innovative technological products and cognitive solutions for the IBM corporation. The Lab works with IBM development and services arms, partners with clients to answer their needs, and collaborates with universities to promote industrial research. Continuously reinventing and refocusing to stay at the forefront of the technology, most projects today fall under cognitive computing, cloud data services, healthcare informatics, and image and video analytics, alongside IoT, security, and quality.

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#### 15:15-16:30 Emerson E&P Software (ex. Paradigm)

Address: 9 Shenkar Arie, Herzliya

About:

Emerson's Exploration & Production Software Group, comprising Paradigm and Roxar, is the

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largest independent developer of software-enabled solutions to the global oil and gas industry. For over 30 years, the Paradigm mission was to help natural resources companies increase confidence in their exploration and production decisions by providing deeper insight into the subsurface. Today, Emerson E&P Software offers an end-to-end portfolio of software solutions, from seismic processing and imaging, to interpretation, structural modeling, reservoir modeling and engineering, drilling, and production management. Backed by the financial strength of Emerson, the E&P Software group is continuing to invest in short and long-term development projects. We offer support in 50 locations, in all major energy centers around the world.

The largest R&D center is located in Herzliya, Israel. The team in Herzliya is responsible for many of the company's key innovations. The powerful combination of out-of-the-box thinking and high-level technological skills makes this center pivotal to the success of the worldwide operation.

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**16:45-18:15 Round Table with Energy-Tech Innovation Hubs, Scouting Teams and VCs**

Address: 9 Shenkar Arie, Herzliya

About:

Introductions and open discussion with representatives of international energy companies scouting for technologies in Israel, as well as local VCs and incubators active in the energy sector. Companies represented will include (in alphabetic order): Bazan Group, Capital Nature, Centrica, E.ON, EDF-EN, Enel, Engie, Infralab, ISROG, IVC, OurCrowd, Terra Labs & Ventures, Schneider Electric, and more.

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**19:00 Drop-off in conference venue (TASE, 2 Ahuzat Bait, Tel Aviv)**

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\* The program is subject to changes