

ORACLE

Unlocking untapped value with technology

Connecting efficiencies across the energy value chain



Four key energy transition challenges for Energy, Oil and Gas companies

As Energy, Oil and Gas (O&G) companies like yours make the transition to renewable and sustainable energy, now is the time to transform digitally to overcome the challenges this change brings and be ready to evolve.

As a result, Energy and O&G companies face four big energy transition challenges that need to be resolved. Technologies such as AI, automation and High Performance Computing can help to overcome these challenges, yield financial and operational benefits, and create competitive advantage. But the foundational element is a cloud environment that's ready to evolve, that can support applications that streamline and automate manual processes, and solutions that centralize and intelligently analyze data to sharpen your processes and decisions.

Challenge 1: Diversify portfolio to most competitive decarbonized assets

Established Energy and O&G businesses are shifting and diversifying away from hydrocarbon-centric offerings, and towards decarbonized energy sources like wind, hydrogen and solar. And they're adopting new clean energy technologies, such as carbon capture and hydrogen-based energy storage, that lower emissions on a significant scale.

The major challenge faced by businesses is how to efficiently manage the portfolio shift, and how to model and plan this changing mix of energy sources, technologies, and products, while using the transition to create new sources of competitiveness, revenue and client value.

Challenge 2: Cope with supply disruption and price volatility

Energy and O&G companies are grappling with multiple economic and supply and demand issues at present.

They are seeing reduced and changing end-user demand patterns, while facing disruptions to both supply and demand. Resources are depleting and costs rising for exploration and extraction, pushing up operational costs and reducing margins. Meanwhile, oil and gas prices continue to fluctuate.

The challenge is to understand disruption as it happens and have the decision support required to quickly react to changing market conditions and customer demand. Companies need the means to apply financial controls to counter price uncertainties, and operational controls to manage production and global logistics.

Challenge 3: Streamline operations and corporate functions to reduce cost baseline

The transition towards a new decarbonized energy system will test the processes, systems and operations in place at Energy and O&G companies and highlight ones that are siloed, inefficient or cumbersome.

These factors can stall new energy projects, large and small, and hinder business growth. To be successful, projects must be connected with finance and other lines of business throughout the organization. The advantages of using technology to connect, streamline and simplify operations and corporate functions include greater speed, cost-efficiency, quality, and productivity.

The challenge is how to model project costs and returns in a unified way, monitor costs against forecasts, and quickly make project portfolio adjustments.

Challenge 4: Attract, develop and retain industry talents

Retooling the future energy company will require new skills to equip an efficient modern workforce. The problem is that the industry has experienced mass layoffs of permanent employees and is subject to cyclical employment, making it hard to attract, develop and retain skilled employees.

Businesses will need to rethink their HR business process architecture and target operating models that fit the new workforce paradigm.

The challenge is for businesses to fill the talent gap, developing skills around data-rich talent planning and management, and embracing greater levels of automation and self-service.

How Oracle's technology can unlock latent value

Oracle's price-competitive cloud-connected technology solutions can help you address each of the challenges above and deliver value through financial and operational outcomes.

Challenge 1: Diversify portfolio to most competitive decarbonized assets

Oracle's Solution: Oracle Enterprise Performance Management with Connected Planning

Today's most successful companies are moving from siloed to connected planning and seeing better business performance as a result. Connecting financial, operational, and line-of-business planning improves

decision-making and gives organizations the agility to outperform the competition.

Oracle Enterprise Performance Management (EPM) helps you model and plan across business departments to streamline processes and drive better decisions. It's built to collect all your data and can carry out advanced simulations in minutes.

EPM features Connected Planning to give finance teams a unified view of financial, operational, and line-of-business planning, to improve planning accuracy and make your company more responsive to change.



Challenge 2: Cope with supply disruption and price volatility

Oracle's Solution: Oracle Supply Planning, Logistics, and Integrated Business Planning

Today's Energy and O&G businesses need to understand disruption as it happens and have the decision support required to react fast. With integrated business planning and execution, you can connect financial and operational planning, align plans with execution, reduce decision latency, and enhance global visibility.

Oracle Supply Planning and Logistics apps put you in charge so you can embed resilience into your business. With them, you can strategically plan across your entire supply chain, make better decisions faster, and save time by unifying your actions.

Oracle can tighten your controls further with Integrated Business Planning & Execution (IBPX), an application that consolidates sales, operations, logistics and supply chain planning in a single hub. It also uses advanced technologies to mitigate dis-

ruptions, such as Internet of Things (IoT), AI and prescriptive analytics to monitor real-time plan execution, and detect future improvement opportunities.

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Challenge 3: Streamline operations and corporate functions to reduce cost baseline

Oracle's Solution: Oracle Portfolio Management and Project Delivery and High Performance Computing on Oracle Cloud Infrastructure (OCI)

Business growth is often fueled by projects, large and small, but to be successful, these projects must be connected with finance and other lines of business throughout the organization. Oracle Portfolio Management and Project Delivery solutions enable you to model all project costs and returns on one platform, monitor costs against forecasts, and quickly make project portfolio adjustments.

And with High Performance Computing (HPC) on Oracle Cloud Infrastructure (OCI), it's possible to streamline operations further by accessing powerful, cost-effective computing capabilities through the web. For example, it can be used to model reservoir simulations and provide projections of supply from oil wells to help with field development planning.

Oracle Cloud Infrastructure – a cloud environment ready to evolve

Oracle applications can be implemented individually and integrated into a company's existing infrastructure, but you will gain the best outcomes when Oracle Cloud Infrastructure (OCI) is used as a key connector across all departments and operations.

OCI is a next-generation public cloud, cheaper than competitive offerings, and designed to run any application, faster and more securely, for less.

With OCI, Energy and O&G companies can have a Connected Energy Cloud environment that's ready to evolve.

Challenge 4: Attract, develop and retain industry talents

Oracle's Solution: Oracle Human Capital Management

Oracle Human Capital Management (HCM) is a complete Human Resource (HR) solution natively built for the cloud that connects every HR process from hire to retire. It provides a consistent experience across devices and one source of truth for HR data that aids speed and accuracy.

By modernizing and future-proofing systems and processes with HCM and modules like Oracle Recruiting and Oracle Dynamic Skills, you can create a modern, collaborative, remote-enabled workplace that will attract, develop and retain skilled industry talent.



Industry perspective: Innovation leaders discuss improving productivity in complex capital project delivery

In July 2021, Oracle held a roundtable for project and innovation leaders at European Oil & Gas organizations. Led by Geoff Roberts, a director of energy industry strategy for Oracle Construction and Engineering, participants discussed how digital innovation can improve productivity in complex capital project delivery.

The innovation leaders said they are engaging in increasingly complex investments while navigating a shrinking supply chain, a digital revolution, and a mounting focus on sustainability. But they agreed technology innovation can play an important role in improving productivity in the delivery of complex O&G capital projects and should be used more in this area.

Six key learnings from the roundtable

- 1 Digital technology can cut costs on active and future projects, with instant access to data allowing project teams to make more informed and efficient decisions.
- 2 Establishing and understanding ROI and incremental gains upfront is critical to digitization.
- 3 Moving applications and data storage to the cloud is scalable, easy to deploy, and provides easy access to the supply chain, but integrating different frameworks is a concern.
- 4 Organizations must be comfortable “failing fast” with new technologies to reap the biggest benefits from digital transformation.
- 5 The internal tech adoption rate will increase once organizations experience technology success.
- 6 Digitization offers a more collaborative future in the delivery of capital projects.

Read the blog in full here: [Improving productivity in complex capital project delivery with innovation.](#)

How Oracle Cloud is transforming companies across the world

Case Study: Vopak

Cloud enables finance and procurement for 400-year-old global tank-storage business

Vopak is a 400-year-old worldwide tank-storage business and one of the oldest companies in the Netherlands. It stores chemicals, oil, and gas for their clients worldwide.



Challenge

Amid a digitization program, Vopak faced several big transformation challenges which included making sure employees could work in a more collaborative and efficient way across the world.



Approach

The company implemented the Oracle Fusion Cloud Enterprise Resource Planning platform worldwide to standardize its finance and procurement systems and processes.



Result

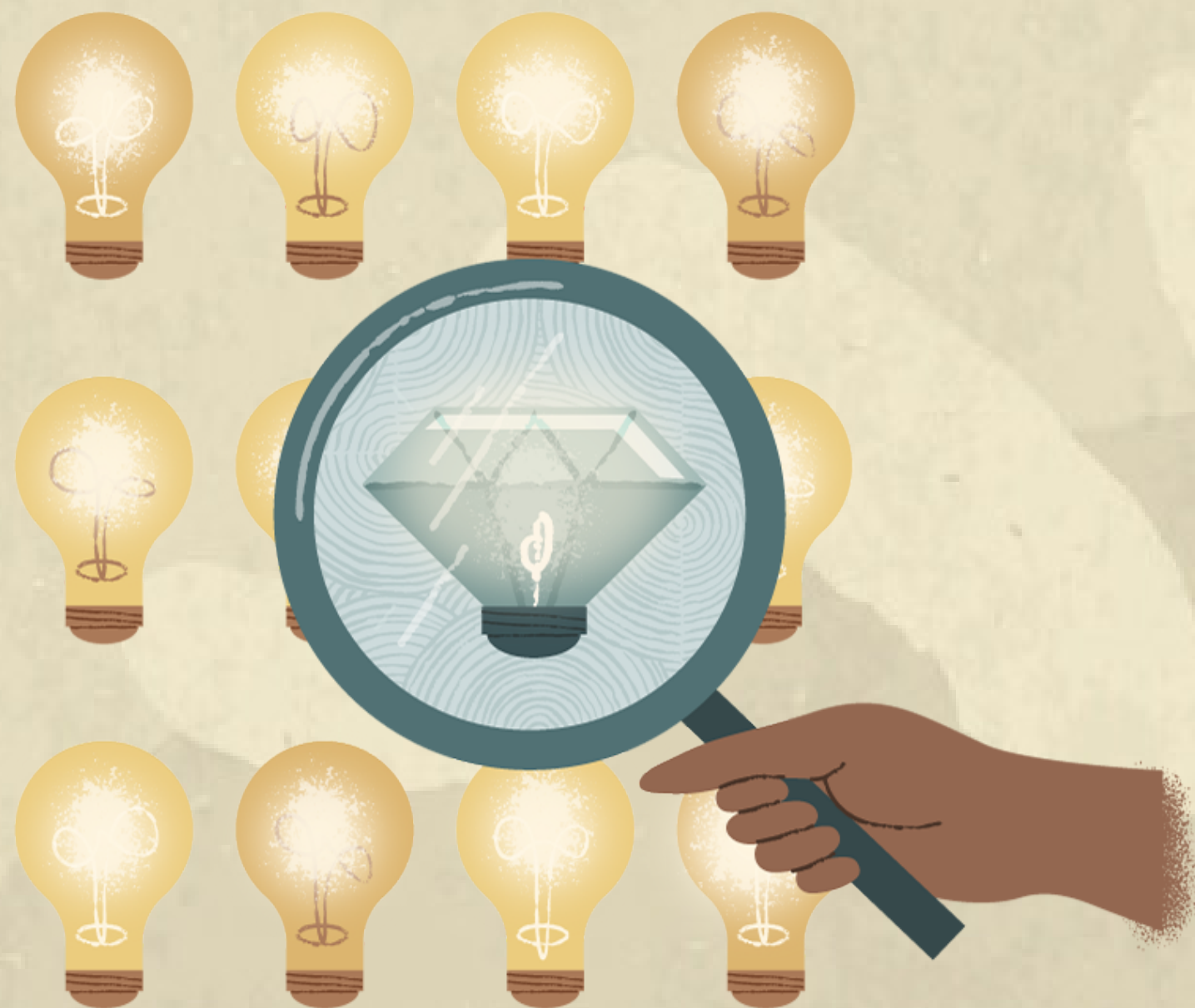
Vopak successfully rolled out the platform globally and localized it for each of its country regions, with employees adapting well to the new system and experiencing new efficiency and productivity gains.



Case Study: National Grid

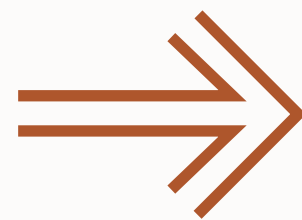
National Grid analyzes weather better with Oracle Cloud

National Grid is one of the world's largest publicly listed utilities focused on transmission and distribution of electricity and gas to ensure UK citizens get power when they need it.



Challenge

The UK's National Grid needs to accurately predict renewables so it can lower the carbon footprint of the UK's energy system and pursue a goal of zero-carbon electricity.



Approach

National Grid applied machine learning on Oracle Cloud Infrastructure, and NVIDIA's Tesla Cloud Solution that features energy-efficient GPUs, to analyze renewable energy sources.



Result

The solution allows National Grid to run advanced models and predictions. It's 40% more accurate than previous solutions and reduces query times from hours to minutes.



Start the conversation

To start a conversation with us about how we can assist with your energy transition, contact us [here](#)

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