Information management for energy and resources

Elevate human potential to safely deliver energy and essential commodities to the world

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"Energy and other critical commodities have never been delivered to the world this fast or as safely. We will never move this slowly or with this level of risk again."

Phil Schwarz, OpenText Industry Strategist – Energy and Resources

Industry backdrop

The world is in a race for energy and other critical commodities, such as clean water, rare earth minerals, and chemicals. This race is just as much about information management as it is about energy and the essential resources themselves.

Global power demand is expected to increase by a third in the next 10 years.[1] Global LNG demand is expected to grow by 50 percent by 2040.[2] Production volumes of seven key chemicals are projected to rise nearly 70 percent through 2050.[3] The outlook for key mining minerals is expected to more than double by 2030.[4] Clean water will also need to scale to satisfy the needs of a 22-percent increase in global population, including the needs of an industrial sector that uses about 19 percent of global freshwater withdrawals.[5][6]

This race will require executive leaders to redefine their business, reframe their goals, and elevate human potential across their organization. Reimagining information is the only way to safely deliver energy and essential commodities to the communities they serve.

This paper explores what operators, manufacturers, and service companies across oil & gas, utilities, chemicals, and metals & mining industries can achieve with information management.

The OpenText vision for elevating human potential in energy and resources

Information is an organization's most valuable asset, and it needs to be managed accordingly. Just as all HSE accidents are preventable, so are delayed capital projects, unplanned asset downtime, regulatory fines, cyber breaches, unsatisfied customers, and other operational risks. There are two fundamental ingredients necessary to prevent these events: information and human action.

Information + Human Action = Business Outcome

1 S&P Global, *Five trends that will define global power markets in the next 10 years*, 2024
2 Shell, *Global LNG demand to grow beyond 2040*, 2024
3 pwc, *Sustainable emissions pathways in the chemicals industry*, 2024
4 IEA.org, *Outlook for key minerals*, 2024
5 UN.org, *World population projected to reach 9.8 billion in 2050*
6 Unwater.org, *UN World Water Development Report 2023*, 2023

However, not just any information or human action will create business value. What was considered productive work decades ago may be considered unproductive today. The best use for human action is addressing tasks that machines don't perform as well, as safely, or as cost effectively. Likewise, the best jobs for machines are tasks that humans don't perform as well or as effectively. The best information can be trusted to boost productivity, free knowledge workers from manual and error-prone steps and minimize risk. Just as human action needs to be managed to achieve business outcomes, so does information.

With advancements in AI there's an opportunity to elevate human potential to tackle some of the most complex challenges faced across the energy and resources sector. Bad data in creates bad data out, so great AI requires great information management.

If any of the following ring true across your enterprise, there's an opportunity to reimagine information:

- **Information silos and information inefficiencies** cause delays or errors across a project or operation lifecycle of an asset.
- **Regulatory compliance challenges** are increasing due to fragmented information systems.
- **Supply chains are neither autonomous nor strategically used** to make progress towards predictive maintenance methodologies.
- **Cyber risk and data breach vulnerabilities** are increasing.
- **Customer conversations and engagement** are less than adequate.

"We have to manage the lifecycle of tens of thousands of controlled documents, including for safety-critical manufacturing processes and maintenance procedures. Having documentation centrally managed by OpenText gives us one single, reliable source of the truth, as well as review and approval workflows through the entire lifecycle."

– Racehael Sandel,
Head of Integrated Planning and Architecture, Orica

Information management in energy and resources

The race for energy and essential commodities will include record capital expenditures, operational expenditure efficiency gains, and continued progress towards zero HSE incidents.

Executing capital projects on time and on budget and keeping critical assets running to meet production targets and keep people, the environment, and communities safe requires overhauling how information is used.

To elevate human potential across any department or business unit in the energy and resources sector, information must be:

- **Trusted**
  Large data sets must be organized and governed to boost productivity.
- **Autonomous**
  Free knowledge workers across all departments to focus on the big picture by handing off routine and error prone business workflows to machines.
- **Innovative**
  Reap the benefits of compliance, data protection, governance, and GenAI throughout your department or entire business.
- **Secure**
  Protect your people, data, and infrastructure so you can grow your business with confidence.

Information management enables energy and resource organizations to embed these qualities and reimagine information in seven fundamental areas summarized below. These areas can be combined to reimagine work across any department or business process. For example, elevating project execution, asset operations, and emergency readiness and response, HSE, predictive maintenance, human resources, and service quality.

OpenText™ Content Cloud™

The largest companies in this sector manage millions of operational documents, including engineering drawings, operational procedures, safety forms and checklists, supplier contracts, personnel files, legal documents, and equipment manuals. This massive amount of information is often siloed, unorganized, and lacks governance best practices.

Through GenAI content management, organizations can:

- **Optimize operations** by finding information faster.
- **Enhance regulatory compliance** with sound information governance, improve content quality via automation, and free up time for their knowledge workers that support any phase of the asset lifecycle directly or indirectly.

"With OpenText B2B Managed Services, we will increase global visibility across our base of B2B transactions with considerably improved monitoring capabilities. The global footprint of OpenText is very important to us as we need to ultimately be able to connect to a customer anywhere in the world."

– David Toulotte, Domain Manager - IT Europe, ArcelorMittal

OpenText™ Business Network Cloud

Machines generate one million times more information in one day than all humans on this planet do in an entire year.[7] There is no industry that is more capital or machine intensive than the energy and resources sector.

Secure B2B integrations connect people, processes, and things across and between operators, manufacturers, and service providers. **Supply chain automation and collaboration** accelerates decisions so that equipment is delivered on time for capital projects while spare parts and equipment replacements can be tracked and traced from the shipment to delivery to help keep critical assets running. **Industrial IoT asset management** can unlock the power of greater visibility so that your strategic supply chain partners can help you in your journey to predict failures before they occur. **GenAI B2B integration** automates the process of establishing secure connections and insights to exchange business documents and machine sensor information with your strategic suppliers.

"The business can easily make ad-hoc changes to correspondences. What used to take four to five days can now be done in less than a day."

– Anu Iver, IT Advisor, Puget Sound Energy

Business OpenText™ Experience Cloud

Consumers now have more energy choices than ever before. Utilities and downstream energy companies with retail petrol and charging stations are seeking ways to influence customers in their energy choices, drive customer engagement, and modernize the customer experience with personalization and self-service.

Responsiveness is a necessity, especially for emergencies, equipment recalls, and service downtime. Emergency readiness for companies across the energy and resources sector fosters confidence, trust, and long-term loyalty. Notifying customers, partners, and employees quickly via text, call, web, or email can make the difference between a catastrophic emergency and one with minimal damages to brand and reputation. GenAI for the customer journey can be used to create content for powerful moments that matter.

7 Barrenechea, Mark, Versant, Decoding the OpenVerse, 2022

"Some of the heaviest hourly queries that took more than five hours to run previously would run in less than five minutes in OpenText."

– Dario Almeida, Executive Systems Architecture Manager, CCEE

OpenText Analytics Cloud

In the global race for energy, insights at scale need to be unlocked with AI and analytics so that safety is never compromised. Problems with equipment can be detected before unplanned downtime occurs, hazardous events can be detected through images or drone videos, and ungoverned documentation for an asset or department can be automatically organized, classified, tagged, and migrated to a modern technology system.

Fast computing on large data sets can be the difference between profit and loss, asset uptime and downtime, or project delays. AI-powered business intelligence analytics must be precise and provided in real time. Business insights must be able to overcome the data chaos and unlock answers of data in any structure, at any volume, in any location and turn it into actional insights.

"By taking a different approach to visualizing our risk themes, embracing modern, business-enabling technologies such as ArcSight, and establishing an advanced Security Operations Center (SOC), we have experienced a 30% reduction in alarms, ensuring our resources are direct most effectively."

– Mr Jacob Jacob, Cyber Security Specialist, Dubai Electricity and Water Authority

OpenText™ Cybersecurity Cloud

Sophisticated cyberthreats are putting organizations across the energy and resources sector at increased risk. The average cost of a data breach in this sector has reached a new record high at $4.7 million.[8] If Leon Panetta, former US Secretary of Defense is correct that, "the next Pearl Harbor we confront could very well be a cyberattack that cripples our power systems, our grid, our security systems, our financial systems, our governmental systems"[9] then this cost could go much higher.

The pressure is on corporations to advance cybersecurity measures. In the spirit of less is more, 75 percent of organizations seek to consolidate the number of cybersecurity vendors they use to reduce operational complexity and improve risk mitigation.[10] By leveraging cybersecurity vendors with full stack security solutions and AI-powered threat hunting and detection, energy and resource companies can have new threat detection models in place within hours to stay ahead of new and evolving threats.

8 IEA.org, *Cybersecurity – is the power system lagging behind?*, 2023
9 Financial Times, Panetta warns US of 'cyber Pearl Harbor'
10 SecurityIntelligence.com, *Most organizations want security vendor consolidation*, 2023

"OpenText SMAX transformed our IT service management, delivering faster issue resolution and empowering data-driven decision-making. The end-user experience is streamlined, reporting is robust, and with SMAX's AI capabilities we continue to drive innovation and efficiency across our organization."

– Engin Kavas, CTO/CIO, Aydem Energy

OpenText IT™ Operations Cloud

Most energy and resource organizations live in a multicloud environment. Data, assets, and applications are in public clouds, private clouds, and on premises. Managing thousands of applications across multiple environments is highly complex. Adding in the convergence of information technology (IT) and operational technology (OT) can overwhelm any IT organization.

Reimaging cloud operations with automation and AI enables IT Operations to become a value-sustaining organization that enables machines to do the work, including:

- **Autonomous asset discovery** across multiclouds from IT, OT, and IoT.
- **Observability** of applications, networks, infrastructure, and opentelemetry.
- **Security everywhere**—extended detection and response for endpoint protection and predictive threat intelligence.
- **AI driven roles, workflow, resolution** across the IT landscape.
- **Fin-ops with predictive AI** to contain cloud-consumption costs.
- **Green ops** to track and see various layers of impact for sustainability goals.
- **GenAI assistants** as level 1 support employees.

"With OpenText, a person who understands the business process can develop effective test scripts even if they have no software-engineering skills whatsoever."

– Joe McKamey, IT Product Owner GIS, Citizens Energy Group

OpenText™ DevOps Cloud

The global race for energy and resources will require DevOps engineering to scale substantially. As the efficiency of DevOps teams scale, so will the efficiency of all knowledge workers across the enterprise. By integrating development and operations, DevOps teams can streamline application delivery and IT infrastructure management, ensuring faster, more reliable deployment of services.

Leveraging automation and real-time analytics, companies can enhance operational efficiency, improve system performance, and maintain robust security standards. GenAI testing done with less human involvement can accelerate timelines from days to minutes, driving productivity. This approach fosters innovation, scalability, and agility. Energy and resource companies can adapt quickly to market changes and regulatory demands while optimizing their IT investments.

Why OpenText

OpenText is the world's leader in information management and offers the most complete and integrated information management platform. We serve industries with the most complex information challenges and largest data sets, including thousands of utilities, oil & gas, chemical, metals & mining, EPC, and industrial manufacturers. We service companies across the world, helping them organize, automate, connect, and protect data. No information management platform is more secure or scalable, capable of managing high volumes of information to elevate human potential across your organization.

We welcome the opportunity to be your strategic partner in your journey to safely deliver energy and essential commodities to the world.

Proposed next steps

Together, we can outline a vision and identify opportunities to support you in your information management journey. Below are suggested next steps:

Introductory meeting

Bring together the OpenText Global Account Director or Senior Account Representative with your organization's Business Unit President, COO, CIO, CTO, or departmental leader. Together, we will explore your company or departmental strategy and vision.

Joint roadmap exchange

Conduct a day-long information exchange with key staff. OpenText will gather detailed insights about initiatives, current approaches, and obstacles. We will then provide an overview of information management technologies and best practices that support those initiatives and examples of how we've helped similar companies solve similar challenges.

Business Value Consulting workshops

The OpenText Business Value Consulting team will engage with your teams to assess their current state and quantify the business impact of potential OpenText solutions identified in the roadmap exchange.

Contact

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