

A photograph of an industrial facility at night, illuminated by blue and white lights. The scene shows a complex network of pipes, metal structures, and large cylindrical tanks. A prominent yellow rectangular box is overlaid on the left side of the image, containing the title text. The overall atmosphere is industrial and modern.

Digital labor: a pipeline for efficiency in oil and gas

EY

Building a better
working world

Forget robots and androids. Digital labor is transforming many industries. And the oil and gas industry has the potential to be the next burning platform.

The digital revolution disrupting so many industries has been slow to make its presence felt in the oil and gas sector. But that is beginning to change, and the pace will undoubtedly pick up in the months ahead as companies seek a new operating model in a lower-for-longer price environment.

The energy industry has traditionally lagged behind other sectors when it comes to adopting technology for “above-ground” uses, preferring instead to invest in innovation that drives the core business – finding and producing oil and natural gas. But the dramatic changes digital is bringing to the modern enterprise can’t be ignored forever, and oil and gas executives are beginning to recognize the promise – and challenge – of adopting a digital strategy.

A recent EY survey of global oil and gas executives showed the impact of digital technology was the issue that would be “most prominent” in boardroom thinking over the near term.¹ Nearly two-thirds of our survey respondents, 60%, believe looming advances in technology will require their companies to retrain and redeploy existing employees; 53% believe it will create opportunities and necessitate hiring new talent.

While those numbers are encouraging on the surface, they provide insight into how executives still view the digital revolution – as something “for the future.” But digital technology is here now, with benefits too valuable to ignore, and smart companies are already utilizing it to great advantage.

¹ EY Global Capital Confidence Barometer, 15th Edition

The first step

For many oil and gas executives, the biggest obstacle to adopting a digital strategy is simply getting started. Deciding where to begin and what elements to deploy can seem overwhelming. There are often concerns about costs and the difficulty of ensuring that various tools and technologies fit together seamlessly. Some executives are wary about being too far ahead of the innovation curve, adopting technology that is quickly surpassed by second-generation developments.

In addition, the use of terminology such as “robotics” to describe key components of a digital workplace can be misleading, creating an image of robots roaming the hallways and replacing human workers.

The best way to understand the digital landscape is to think of these new technologies as “digital labor” – behind-the-scenes software and related tools that perform routine transactional work in areas such as accounting and finance, tax and supply chain, and human resources.

Digital labor can be deployed quickly and easily, and its return on investment can be realized in as little as eight weeks. Digital labor works in any function where you currently have staff who are manually:

- ▶ Accessing and gathering data from several different applications to complete their activities
- ▶ Moving data from one system to another
- ▶ Checking the consistency of data between multiple systems
- ▶ Updating the same information in multiple systems
- ▶ Waiting for alerts/events to initiate their activities
- ▶ Remediating data across several accounts

In short, digital labor is *software that executes repetitive processes in an audited, controlled manner*. It works with your company’s core systems and existing applications, and handles transaction processing, data manipulation, communication and response triggering.

Once in place, digital labor delivers repetitive, high-volume tasks efficiently and cost effectively, working whenever you need it. That not only drives performance and effectively manages the risk of human error; it also frees your people to focus on value-added or customer-facing activities.

We would be remiss to ignore the various components of deploying digital labor. There are many things to consider, such as the operating model of where such a value-added service resides in the organizational construct – not to mention the cultural implications, leadership alignment, change management, and communication requirements. Yes, you can begin with one process in one function to gain immediate benefits and initiate the cultural paradigm shift of next generation automation. However, we believe the benefits are so profound oil and gas companies will want to deploy this approach across the enterprise. So establishing an operating model and organizational construct that allows this to be leveraged and scalable should be part of any holistic program. This, coupled with a targeted approach to migrating the organization through defined business engagement and adoption programs, will make certain the benefits are realized and replicable throughout the organization.

Digital labor in action

Here's a hypothetical example of how digital labor can make a difference.

Your tax department relies on fixed asset data owned by finance. Each month after close, employees in finance collect the necessary data from a number of different systems and deliver it to tax – a process that takes up to three business days.

Once tax gets the data, it must be formatted correctly before it can be analyzed, which takes additional time and employee effort. That leaves just a small window of opportunity to actually interpret and analyze the data before the reporting deadline.

How would this same process work with a digital labor platform in place?

At 1:00 a.m. on the first of every month, a “bot” residing on your company's network queries each

applicable system, collects all necessary data related to fixed assets, formats it properly, compares it to the report from the previous month and highlights any major discrepancies.

When your tax staff comes in to the office, the tedious, repetitive work is complete, and they have three or four extra days to analyze data – as well as make recommendations based on their review. A similar process could be followed for many varied tax functions, especially tax compliance and all of the supporting processes leading up to completion of tax returns.

Your tax professionals are now involved in more than just simple tax computation. Digital labor allows your knowledge workers to spend more time on strategic analysis and advising, and less on collecting and formatting data.

Value from the start



The benefits of implementing digital labor are real and immediate.

Our studies show in information technology services, 30% of staff time is spent on low-level, repetitive tasks. As much as 20% of the typical company's costs are related to supply chain problems caused by transactional issues. In human resources, digital technology can deliver an 80% reduction in payroll processing costs. In finance and accounting, it can deliver a 60% reduction in the cost to process an invoice.



Digital labor can be utilized across all those functions and more, and in many cases, departments can share the same bot to perform different tasks at different times. The bot that pulls fixed asset data for the tax department could be used the rest of the month by human resources for the onboarding communication process or for uploading job openings to a recruiting system or by finance to streamline accounts payable.



Digital labor works around the clock, 365 days a year, and never needs a day off. With the proper access rights, it can work with all of your existing tools, utilities, databases, applications and systems, as well as the internet.



Companies can use centralized scheduling, either time- or trigger-based, to complete priority processing during off-peak hours and to smooth out the workload during peak times. If a backlog occurs, one bot – or all of them – can be quickly rescheduled to address the issue.



Digital labor improves security by reducing the number of individuals who have access to sensitive data. And it can improve quality – many companies report double-digit error reduction in data entry and other repetitive tasks.



Digital labor also learns as it works, and can emulate business user behavior. It learns from exception handling and scales up or down as needed to prevent system/application overloads or crashes. And it allows for innate knowledge to be socialized, rather than individualized. No longer will your company struggle when the employee who “knows how this report is done” retires or takes another job; the bot knows, and work continues on without the need for detailed information transfer.

Digital labor can also help companies adapt to changing regulations more easily. For example, tax and accounting rule changes often require companies to update numerous legacy systems to ensure the proper data is captured, a time-consuming and challenging process. But with a digital platform in place, only the bot needs to be updated. Even though staff might not be focused on the new rules, the bot is working to ensure the proper data is collected and formatted when accounting and tax professionals need it.



Supporting the cultural shift

Perhaps most importantly, digital labor allows companies to begin making moves toward a broader, more aspirational transformation – but on a small scale is easy to implement and manage and delivers quick wins. Digital is the buzzword of the day, but many companies recognize that it is a complex strategy that requires time and investment. Once you get started with digital labor, the digital transformation initiated and leaders and employee alike become more eager to invest time and effort in a broader digital transformational agenda. Downloading your first app is the hard part, but once you see the immediate benefits, the fear factor and apprehension is gone and you become a digital native.

This measured approach allows you to gain proof of concept, which is an important element in supporting the cultural shift to a digital future. In our experience, employees are skeptical – and in some cases, worried – about robotics and what it will mean for their jobs. But seeing the value digital labor delivers, and how it frees them up to focus on more value-added tasks, can be a game-changer. Once employees understand how a bot works, they are quick to brainstorm new uses to solve problems and improve efficiency. And once finite processes are piloted – and proven to be successful – digital labor can be easily expanded to benefit other parts of the organization.

In most cases, digital labor is not about eliminating full-time equivalents (FTEs), although it can make that possible. Its true value is in giving existing employees more freedom to think strategically, build relationships, provide analysis and oversight, and make recommendations. By eliminating as much as

20% of staff capacity, digital labor can help create opportunities for new initiatives and provide the impetus for employees to think differently about their jobs. The new operating model will be about finding the right balance between physical and digital labor.

In time, companies that want to fully capture the gains made possible by digital labor will need to provide training and support to adjust their employees' skill sets for the new reality. What does it mean when a worker no longer spends most of his or her day collecting data or doing repetitive tasks? With the proper training, the extra time can be utilized in a number of beneficial, or even revenue-generating, activities, including customer service and outreach, analytics and forecasting, business intelligence, and research into the competitive landscape, quality improvements and much more.

It may also mean FTEs are redeployed to areas that require more personal interaction or communication, leaving the data crunching to their "virtual colleagues." Or it could allow companies to reduce their hiring; as individuals leave functions with a heavy digital labor presence, they won't need to be replaced.

For some industries, the strategic and cultural shifts to a digital workplace are well under way. Oil and gas companies that want to drive efficiency and capture value should move quickly to follow their lead, rather than adopting a wait-and-see approach. Implementing digital labor will allow you to be the leader and not the laggard.



How EY can help

EY is a multidisciplinary global network of firms that can support the transactional approach to deploying digital labor in one functional area for one process to gain traction and realize immediate value; or we can support an end-to-end transformational agenda focused on a new operating model, an optimized organizational construct, process redesign, technology enablement, business engagement and adoption, risk management and tax benefit realization. We are a first mover in digital labor, as well as the broader digital agenda, and as such, we have brought all of our services together to help our clients navigate this journey to an accretive and successful conclusion.

EY's Oil & Gas professionals combine a unique set of skills, insight and experience from across the organization to provide focused service and advice to clients who seek assistance with a digital labor implementation or digital transformation. EY brings

deep industry knowledge allowing us to help our clients apply digital labor technology to oil and gas efficiently and effectively. EY developed a global framework for key Processes in Oil and Gas Organizations (POGO) to fundamentally improve and overhaul business processes to achieve cost savings. More than just identify the end-to-end processes in the delivery chain, POGO identifies common business risks within processes and provides integrated controls to mitigate or prevent them which is especially critical when introducing digital labor. In addition, our oil and gas Tax and People Advisory professionals help optimize tax planning and address people aspects as companies digitalize their operations. Our team is focused on leveraging the power of digital technology to drive efficiency across your organization, from strategy to execution, and we are working with several clients to make this innovative concept a reality.

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The oil and gas sector is constantly changing. Increasingly uncertain energy policies, geopolitical complexities, cost management and climate change all present significant challenges. EY's Global Oil & Gas Sector supports a global network of more than 10,000 oil and gas professionals with extensive experience in providing assurance, tax, transaction and advisory services across the upstream, midstream, downstream and oil field subsectors. The Sector team works to anticipate market trends, execute the mobility of our global resources and articulate points of view on relevant sector issues. With our deep sector focus, we can help your organization drive down costs and compete more effectively.

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