Trust Issues: Despite Potential, E&Ps Wary of Generative AI

The sooner companies start using generative AI, the sooner they’ll reap benefits, experts say. But some E&Ps worry proprietary data and methods will get passed to other customers.

By Jennifer Pallanich, Hart Energy

"Wrap-Up Panel: IMAGE 2023 Digitalization Pavilion" panelists Robert Bloor of SLB, Marc Spieler of NVIDIA, Lisa Helper of Hilcorp Energy and Jay Shah of AWS along with moderator Alexandros Savaidis of the Texas Seismological Network and Seismology Research at University of Texas at Austin. (Source: Hart Energy)

Generative artificial intelligence (AI) offers massive productivity potential, but the oil and gas industry remains tentative about wide scale adoption of the technology.

Having a clear idea of the business problem that needs to be solved, as well as how to deploy the technology at scale are only two of those challenges, experts said during the IMAGE 2023 Digitalization Pavilion wrap-up panel on generative AI in August.

Some E&Ps also worry about how much of their knowledge—and even skill—absorbed by the technology will be leaked out to competitors.

Robert Bloor, geophysics technology manager at SLB, said education is necessary to help people understand what tools are available and how they can be used.

"I think sometimes people look at it and they're overwhelmed. Or it's a big project and I don't think they fully understand the amount of tools that are available in the market today to help developers, help industry experts to leverage and get started and go from R&D to production," he said.

The tools are out there, he added, and what's been done in medical imaging using generative AI can be adapted for use
in geoscience.

“You just have to go and look and ask the questions and find people that can help you,” Bloor said.

Jay Shah, principal for energy marketing and innovation programs at Amazon Web Services (AWS), said companies should consider where they are in their AI technology journey as they consider next steps for deployment in areas such as operations, site safety, health and safety improvements and emissions reductions.

Companies are deploying such technologies already, he said.

“The democratization of AI and ML (machine learning) is what we’re enabling for our customers, and we’re about to see some really exciting things,” Shah said. “We’re still seeing operators, organizations starting to see key benefits, the things that we all care about—more production, lower risk, faster at lower cost, greater speed to value with more safety, lower emissions. There’s still a lot of progress to be made using all of these technologies.”

Lisa Helper, a geologist at Hilcorp Energy, said one of the difficulties in moving AI-based technology projects forward is that outcomes can be hard to quantify. A request for software that will help interpret data faster or identify information from hundreds of wells should also include an outcome for the company, she said.

“As a value perspective, how do you actually quantify what that time save actually is worth?” Helper said. “You’re constantly looking at how much money am I putting in? What am I actually getting out of it? I think the trouble with operators is going to be defining what actual value creation is happening from you being able to do your job faster.”

One of the other concerns companies have is around trust, she said.

The worry is that a vendor that promises to revolutionize the way seismic data is interpreted won’t be forthcoming — or might share proprietary information and methods.

“How do I make sure that they’re not going to take that piece of my interpretation skill and be able to then give it to another company, and now they have another Lisa Helper who can interpret just the way that I do, but they don’t have to pay for it?” she asked.

Communication and openness about how data is used is critical, she said.

Shah said one of the “fundamental questions for AI” is around how models are trained.

“We'll never use a customer’s dataset to inform and train our own model. That's the customer's data,” he said.

Marc Spieler, NVIDIA’s global business development for the energy industry, said every company embarking on an AI journey must choose whether to use on-premises equipment or take advantage of the cloud.

“The sooner you get started, the better outcomes you're going to see and the more comfortable people are going to become more efficient,” he said.

Some companies understand the technologies and are deploying and scaling it, Shah said. Others may have yet to align their visions with the outcomes a technology can help deliver.

“The biggest challenge is really to get that alignment, top-down vision on a specific problem” started, he said. “It can be as small a problem as you want to make it, but to start getting your head and teams and organizations around these technologies that really, frankly, aren't going to go away.”

He said the faster organizations act on the technologies, the sooner they’ll receive benefits than companies that remain stuck in the “hesitant loop.”
Jennifer Pallanich is Hart Energy's senior editor for technology. She has reported on the technology that fuels oil patch exploration, development and production for more than two decades.

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