

The ‘Secret Sauce’ Driving ConocoPhillips’ Operational Excellence

An Interview With Mark Hutcherson, ConocoPhillips’ Director of Operations Excellence.

Not having a clear view of all the factors that impact the operational reality results in operational inefficiencies, long wait times for frontline work teams, unplanned downtime and the potential for process safety losses. Learn how industry leaders are managing hazards on a real-time basis and the importance of continuously monitoring process safety barrier health to reduce incidents.

In this edited interview from [Sphera’s 2020 Safe Operations Summit](#), Mark Hutcherson, ConocoPhillips’ director of operations excellence, talks to Scott Lehmann, Sphera’s vice president of product management for Operational Risk Management, about ConocoPhillips’ “secret sauce” approach for empowering the connected worker.



Scott Lehmann

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Mark Hutcherson

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Scott Lehmann:

Please tell us about your role and what Operational Excellence means to ConocoPhillips.

Mark Hutcherson: I’ve been in this industry for about 20 years now, and for 15 of those years I’ve been with ConocoPhillips. And just as I have been in various roles relating to engineering projects, engineering operations, I have been through quite a few assets across the globe as well. I’ve been in Operational Excellence for a little over three years. In addition to traditional Operational Excellence, I look after our programs. This includes sharing best practices across our business and supporting some of those foundational elements and systems.

The last three years has been a time of transformation as it relates to the Digital Age and how that relates to our operations at ConocoPhillips and how we can continue to evolve and transform.

Scott Lehmann: ConocoPhillips has been a Sphera customer for 17 years. Let’s look at the last five years because of the broader macroeconomic conditions. At the end of 2015, the West Texas intermediate price per barrel was right around \$41. As of October 2020, it’s just south of \$36 per barrel. So, it would seem the lower-for-longer oil price has become pretty much permanent. From your perspective, how have the operational and safety challenges changed over the last five years especially given possible budget constraints?

Mark Hutcherson: As I think most of us are aware, about five years ago we were getting into that last big oil price downturn. The industry was going through some major adjustments at that time, and we were making plans for a new way of operating in a market of high volatility and probably longer periods of depressed prices. This is also about the time that Digital Transformation themes were starting to grow. This was an opportunity to take that challenging time and determine if and how we could apply data analytics, robotics, automation, Industrial Internet of Things (IIoT) and cloud technology to mold our business and take advantage of the efficiencies and cost savings these emerging technologies promised. Technology over the last five years

has evolved very quickly, and it has strengthened our company. Now that the oil price recovered a bit, we're in a similar situation again—this time, from COVID-19—in addition to the demand side of things has given us this global supply glut that continues to be a challenge. However, I think we're better prepared now to weather the storm. We've changed things within our company. We've certainly changed our strategies as we talk about Digital Transformation, and it has presented an opportunity for us to accelerate some of our technology efforts to further bring down our overall cost of supply.

Scott Lehmann: Clearly over the last five years, technology has matured and evolved as well. One of the interesting things we've seen, especially over the last two or three years, is the use of cloud technologies that have moved from being optional to being the only option. I think adoption of these technologies was fairly easy to promote when it came to office productivity, like Office 365, as well as some EHS&S use cases. But Oil & Gas in particular has had a challenge and a bit of reluctance at getting adoption closer to the work site. Some of that had to do with offshore assets that didn't have a lot of bandwidth, or there was a lot of latency with satellite conditions. Now, most of those are wired with fiber.

Since ConocoPhillips has a cloud-first strategy, how does that relate to operations in general and maybe specifically to Control of Work?

Mark Hutcherson: ConocoPhillips sees the potential efficiencies of cloud. I think the question that comes about is if there's ever a proposal for any of our solutions to not be



cloud-based, we challenge it and we ask, 'Why would we?' We see there's a lot more flexibility, and we have a lot more options with regard to how we use the data and how we apply analytics. But we recognize this transparency and the evolution of open-source Software as a Service (SaaS) is where society is going. We want to take advantage of these off-the-shelf products.

In addition, we want this to be a catalyst for our global operations to standardize our work processes and reduce inefficient workflows, custom maps and business rules—especially as it relates to our Control of Work processes. We see this as a catalyst to standardize across our business. We seek out strong partners that will challenge us and ask, 'Why not?' 'Why do we do certain things the way we do?' and 'Why can't we try it this way or that way?' We've developed a really good partnership with Sphera because we're able to have those open conversations.

ConocoPhillips had our own electronic permit to work (ePTW) system in place for quite a while. We saw huge benefits from the system, and it grew

to be part of our company's culture as something we heavily relied upon. Sphera has been very willing and open to incorporating some of the ideas and some of the developments that have evolved within our tool as well as our way of thinking. It's kind of a three-way win: it's a win for ConocoPhillips, it's a win for Sphera to be able to hear and incorporate some of our learnings, and, I think it's a win for the industry.

I think it's imperative to have an open dialogue across the industry about cloud and safe operations and Control of Work. This is a way of sharing learnings and best practices so that we're all making improvements. Safety performance should not be competitive intelligence.

Digital Transformation has offered a new world of savings and efficiencies. I think we've also identified there are some new risks around security and the integrity of our data. The industry needs to consider and begin to solve these challenges. As for ConocoPhillips, we're going to be continuing to move most of our business to the cloud when the opportunity presents.

Scott Lehmann: Let's look at Digital Transformation initiatives as a whole. Typically, these occur at the intersection of technology and organizational culture. These two things come together because investments are not usually just an IT deployment. There's more to it because oftentimes the implications are a transformation of how people work. Today's investments connect business processes end to end by using cloud and IoT and other technologies to bring disparate data and disparate workloads closer together. So, they're more challenging, but they're also more transformative. In some cases, they may be higher risk, but also higher reward.

I've recently read a research report from Gartner on Digital Transformation projects. The research analyst stated that up to 50% of Industry 4.0 projects fail. One of the big reasons why is that these projects get stuck in what's becoming commonplace, 'proof of concept purgatory.' Based on your experience, how can organizations avoid getting stuck in that phase?

Mark Hutcherson: That's a continuous challenge that we have. Specific to Operational Risk Management, our Control of Work solution started with a very clear understanding of our needs. We had our own in-house ePTW system established, so our problem statement was that the solution was becoming unsustainable due to the age and customization of code across assets. We used this as an opportunity to reset with new technology, but also to standardize processes into the line. This is a specific example, but I think even broader, even if the opportunity

doesn't present itself as clearly as it has with this specific work we're doing with Sphera, I think companies need to link the problem statement with clear-success criteria: What are the objectives? How can they be measured? Will the PoC alone solve the unique business challenge that you're going after?

I would encourage organizations to understand if they have made a direct connection with pain points, business challenges and what the PoC is intending to deliver. Also, it's important to identify a clear path to implementation assuming the organization has checked the boxes on the success criteria.

Sometimes you just have to take on a bit of risk and make a decision, too, relating to proof of concepts. Organizations can't wait around for the perfect solution to come about. All of us are constantly evolving, and there will be trade-offs. Understanding this upfront will help balance immediate needs and allow organizations to think about long-term potential.

A lot of times companies wait until a perfect solution comes along, and it never presents itself. However, making an investment without proper assessment and due diligence could potentially yield bad consequences as well. Businesses need to find the right balance and consistently communicate potential value across teams and functions.

Scott Lehmann: We've all heard the famous phrase from Peter Drucker, that 'culture eats strategy for breakfast.' But I think you might even be able to add to that and say that it also eats innovation for lunch and Digital Transformation for dinner. Now we know that at the core of any

of these projects there's going to be an element of change. There's no beating around the bush; change is hard.

It's not always a matter of top leadership setting a vision and a strategy, and everybody goes and executes. Even the most visionary C-suite will have limits to their patience. They want to see ROI, whether it's safety performance, operational efficiency or cost management.

Oftentimes, maybe unfairly, middle management is referred to as the 'concrete middle.' This is because these people could be in fear of losing their jobs. Perhaps they don't want to change and do things in a new way.

Frontline adoption, especially in asset-intensive industries where people have wrenches in their hands, there's pressure to maintain equipment and keep production going. It's complicated. How has ConocoPhillips tried to address these multilevel challenges related to organizational culture and change?

Mark Hutcherson: If I only knew the real answer! We need digital buy-in and support at all levels of the organization. I think ConocoPhillips has done well at the strategic direction coming from our top leaders. They've set clear direction and clear expectations. So, our focus has been on trying to figure out how we support the middle management and drive that culture of support to the frontlines. We want our middle management to be truly bought in to new investments so that they can help promote them to the workforce. We've also looked for ways to bring in the experience that our frontline workers offer as well as those pain points.



Some practical steps we've taken, the Operational Risk Management Control of Work project that we're working on with Sphera started with the right support and governance model. We had an active executive sponsor. This person is in our senior leadership and is helping to deliver the right messaging around our company's strategies, including standardization and SaaS.

We have a steering committee that's comprised of all of our senior operations leaders across all of our global businesses and also IT managers. But really, it's that ownership from the business through that steering committee that's yielding dividends. As they share messages with each of their organizations, they can bring in those high-level pain points and feed those back to the project team.

Another role that's come about relates to the frontline workers. We've selected some trusted individuals with expert experience directly from the business who are supportive of the investment and can share it

with their established relationships in their organizations. These people have intimate knowledge of work processes and understand how those processes impact the business. Involving them as a translator to the project and implementation teams and supporting their colleagues in the workforce has made a real difference in how we've been able to execute this project.

Scott Lehmann: That's an interesting point. The frontline are the people who are going to use these systems and potentially be impacted by them on a daily basis in terms of keeping themselves safe and productive so that they can go home when their shift rotation ends. It's important to have frontline adoption. I know you've spoken about the connected worker in other presentations you've done in the past. Could you give us a few more details about what the connected worker means to ConocoPhillips?

Mark Hutcherson: Sure. So, more broadly than the operation element we've been speaking to, this is about

connecting our operations—the data, the systems, the people, the processes—across all of our field operations. The thing that comes to mind specific to ConocoPhillips are the pursuit of task prioritization, route optimization, materials, asset tracking and how all of those workflows and parts of the organization come together to make the business more efficient. Technology is an enabler, but the success is not about some fancy application that's on a device. Understanding how we transform our work processes and our relationships is really the secret sauce.

It ties into a lot of the ERP work that we're doing as well, specific to creating a solid foundational data set, whether that be formatting, how things are structured, or where they're stored. Understanding that the better we can get that all aligned, the better we can enable some of these tools and some of these technologies and the analytics. Getting that all squared away is going to allow us to standardize much easier and allow us to get alignment across our global ops.

Scott Lehmann: What's interesting about standardization is the balance. With standardization comes efficiency, increased safety, etc., because the organization is doing things in the right way every single time.

But in large organizations like ConocoPhillips, with operations across the world in different countries, languages, cultures, regulatory bodies and histories or ways of doing things, footprint growth by acquisition makes standardization the objective. Of course, it can be difficult to gain alignment across business units and ways of doing things. I know you've touched on it in some of your previous answers, but it would be interesting to learn more about how you're driving alignment, where you need to standardize and what techniques you are using to account for needed flexibility to support local variation?

Mark Hutcherson: I would reiterate the broader theme and necessity of driving standardization initiatives from leadership. There is opportunity to configure or to flex things to support unique needs—whether regulatory or another aspect of your operation. I think just knowledge-sharing including operations successes, even through our PoCs, establishing best practices and getting teams pulled together work through best practices will help align the business to scale.

I don't think we're ever going to achieve perfect success because it's always a moving target, right. But it's important to make those networks

and ensure everybody is given the ability to speak their mind, encourage dialogue and questioning, and challenge the status quo. However, I'm not sure there's a perfect formula.

Scott Lehmann: I suppose it depends on the specific kind of configuration or how your organization is built. I think every organization has this challenge.

To wrap things up, what do you think is the next frontier, from a technology perspective, in terms of potential to further safe operations in asset-intensive hazardous industries?

Mark Hutcherson: I think it's important to create learning and sharing organizations that are curious about technology, particularly automation, robotics and remote surveillance. Organizations need to figure out how to do these in practical, cost-efficient ways for their organizations to lower the overall cost of supply.



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