PUTTING PIPELINES IN THE CLOUD

Stacey Hensley, Group Product Manager, Quorum Software, USA, outlines three ways cloud-based software protects your pipeline operations.

When cyber-attackers famously hit the Colonial Pipeline a little over two years ago, the aftermath was swift. Not only did the pipeline have to shut down for five days, which led to a steep increase in gas prices as well as consistent shortages, but it sent the industry as a whole into a spiral.[1] To this day, there's plenty of uncertainty on the best way to manage data and protect systems against would-be hackers.

Meanwhile, many oil and gas companies build convoluted and expensive in-house systems to manage their pipeline operations. In addition to being a huge drain on resources, internal systems can be error-prone, as the exhaustive amount of data can be difficult to manage, and are often unable to keep up with rapidly changing rules and regulations.

The best way to protect your data and operations – both from a financial and security standpoint – is with commercial pipeline management software from a trusted third-party vendor. Let's take a look at three of the biggest challenges facing the broader industry right now, and how software can alleviate these concerns and even generate additional return on investment.

Cybersecurity and ransomware threat

With the Colonial Pipeline attack still fresh in the back of their minds, pipeline operators are especially concerned on how to beef up security and protect against the growing ransomware threat.[2] It's crucial to ensure your organisation has the correct security protocols in place to help respond to an event, should it ever become necessary. That's where

third-party, cloud- based software comes in handy. By working with a trusted vendor, operators have access to their response teams to work through responding to a cyber event. It's also important to look for industry certifications to make sure your data is safe – for example, SOC is an industry compliance standard that confirms there are no vulnerabilities in the code, providing much-needed peace of mind.

Many companies are struggling to keep up with the increased flurry of cybersecurity regulation, especially those who rely on home-grown systems located onsite. To remain in compliance with new standards, these organisations need specialised cybersecurity knowledge and have to use significant resources to constantly change and re-test data. Using a trusted vendor to store backups of your data in cloud-based, third-party software that is constantly up-to-date is the best way to navigate.

From a security standpoint, the biggest benefit of external software is having this vendor store backups of your data. Ransomware attackers are generally after your organisation's data to either demand a ransom or sell it to other parties, and those who are successful often fail to return or restore stolen data. Using a trusted software vendor that stores your data in the cloud and consistently backs it up can help your business get back up and running quickly following an event, avoiding costly downtime like in the Colonial Pipeline incident.

Price volatility

Price volatility in the oil and gas sector was a key issue in 2022, and Deloitte predicts it will continue in 2023.[3] When transporting natural gas, pipeline operators need to make sure volumes and invoicing are correct or they risk facing major financial repercussions. For example, as prices swing, companies can see huge gains or losses if the inventory is inaccurate, and are bound by rules and regulations to ensure accurate measurements.

Companies who use a home-grown pipeline operations system spend lots of money to maintain the code and also lack the trusted strategic support of a veteran industry partner. Aside from being a drain on resources, these systems can struggle to maintain consistency across large pipeline workflows. In fact – though not as common as the wider oil and gas industry – some companies still manage complex allocations and invoicing in Excel, which is bound to have a whole host of accuracy and version control issues.

With price volatility such a concern for pipeline operators, ensuring total accuracy is crucial. Third-party commercial pipeline operations software can approach 100% accuracy, allowing users to monitor, validate and report volumes easily with the touch of a button. Though these concerns are likely to continue throughout the year, ensuring total accuracy of your calculations is a great way to limit surprise costs and price swings.

Rapidly changing rules and regulations

For pipeline operators, a key goal of the ongoing energy transition is to turn gas into CO_2 pipelines. However, there are still plenty of unknowns from a regulatory standpoint, especially in the US. Companies are unsure what they need

to report (such as emissions data), how often to report, and how to remain compliant with rules that seem to change on a daily basis. Not only can software help navigate the energy transition, it can help save time and money along the way.

Here, it's important to work with a trusted vendor with strong back-end reporting capabilities. Your software contains all your operations data, and a robust reporting tool helps companies respond much quicker to incoming inquiries or new regulations from ruling bodies. Companies that use home-grown software to manage operations have to build up this reporting engine from scratch to manage new rules, further draining resources and risking errors that could be detrimental down the line.

One of the reasons DTE Energy chose Quorum to embark on its digital transformation journey for pipeline management was the always-on reporting feature. As they discovered quickly, auditors often want data within a short timeframe, and having access to Quorum's dashboards made it a breeze to respond to incoming inquiries.[4]

It's also important to note that states often change what they want reported, so having a dynamic reporting function is key. Cloud-based software often has this capability built in, avoiding the need to manually adjust your system. This capability further helps companies avoid flaring penalties, which is especially important as post-pandemic oil production increases.[5]

Summary

For some of the top issues facing pipeline operators today – from price volatility to cybersecurity and the energy transition – it's worth taking the time to find a trusted, third-party vendor who can supplement data capabilities and offer their noted expertise.

Managing internal pipeline operations can be clunky and a huge drain on resources, while third-party vendors actually help tailor the software to the specific needs of your business, as opposed to a one-size-fits-all approach. For example, My Quorum Pipeline software is built based on feedback from our large and diverse user community to support the needs of the industry to help operators improve regulatory compliance, security and business processes aiding functionality.

Over the coming decade, more and more companies will need commercial software to manage pipelines, especially in the post-COVID-19 world. In addition to supporting the trend of working remotely, software tightens the knowledge gap by providing business continuity as our current workforce evolves. Those who get ahead of this trend are better positioned to reap the financial rewards, improve internal auditability and help move the industry forward. **WP**

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