Oil and Gas Company Develops Cost Efficiency, Optimized Production

Saves time, thinks deeper, decides faster, and makes more money

DETAIL

5 TO 10%

Estimated production increase using Spotfire

CHALLENGE

When oil prices are low, cost efficiency is absolutely necessary. "We have less people, more assets, more questions, and more scenarios. We need to work more efficiently," explains the analytics team lead. "We've used TIBCO Spotfire® for the last eight years and have grown our internal user base from two to 200. Those 200 users build analyses for other people, so we probably have another four or five hundred people using it.

"We started using Spotfire for analyses that needed data at second or sub-second intervals. When you pull 10 years of data second by second, you have hundreds of millions of rows, too big for any conventional product. Spotfire could handle it, but our databases weren't fast enough.

"We had people dumping data into Excel and trying to graph it, a huge waste of time as none of it was repeatable. We moved users to Spotfire, but they were still manually loading data. It was just not efficient. If we can't answer a question fast enough, we can't optimize production, decide on acquisitions, or ultimately move our business forward, which can cost millions of dollars a year."

SOLUTION

"We needed an automatically updated data system that we could hook into Spotfire. We started using Hadoop because it handles billions of rows of data, and Spotfire allowed us to visualize these really big data sets.

"Using Spotfire, we have constantly improved efficiency because everybody can work in the same software package whether they're an engineer, economist, or geologist. We can answer questions and build solutions in minutes that otherwise would take hours or days."

BENEFITS

ULTIMATE FLEXIBILITY, DEEPER THINKING

"All the repeat calculations and the copy/pasting people were doing in Excel was just throwaway time. By making accessing live data easier and integrating with Spotfire, we gave people back time so they can think deeper about the challenging problems facing us.

"Our users need to see every piece of data. Now, they just click a couple of dropdown boxes and get a complete picture. We can look through 10 years of production data down to the minute and quickly zoom in and find that one data point that answers or drives the next question. Spotfire allows our engineers to do a thousand times more work than Excel. It is absolutely revolutionary to most teams. When a team adopts it, they holistically become better.

"We need to work with 15 different systems, pull data in, and analyze it without having to make changes. With most other systems, you buy the tool that comes with the database, and you have to use that tool. So people can get stuck and not look across all the different datasets and systems. That's a big hurdle for a lot of companies that aren't using something like Spotfire."

OPTIMIZED PRODUCTION

The company has built prototype algorithms and systems to optimize oil production. "We've estimated they will increase production 5 to 10%. We don't have to spend capital to do this, we just need to set the pumps and injection right, and it optimizes across the field. We use Spotfire to view our estimations and models, and visualize the results, so people can quickly ascertain whether the assumption is valid or not. The data is integrated with Spotfire, so all a user needs to do to update the calculations is hit the Update Data button. We can make decisions faster, implement sooner, and make more money."

TIME SAVINGS AND EASE OF USE

Spotfire increases efficiencies by saving everyone time. "We funnel data into Spotfire so that every time a user opens their analysis, all their graphics and calculations instantly update. They don't have to go to five different websites, download data, copy/ paste into Excel, do a bunch of math, or fill in formulas just to get an update. Every day, every person using these live data sources saves hours.

"Ease of use is essential because when you deploy a product that is not easy to use, it fails. Several times we've tried something, and people would say, 'It's hard, we don't like it, we won't use it.' When we can build things easily and make them easy to use, clients adopt it, and they ask for more, and that's what we want."

FUTURE

"Our business goals are to build competitive advantage with faster access and analysis of our data, reduce overhead in prepping data and pushing it to professionals, increase bid round efficiency, and optimize production assets. Generally, this means using more Spotfire.

"We're building up a library of always up-to-date information assets. It's a beautiful system. I would like to someday see all our staff working in one environment where they can do any type of analysis, and thus far, the only product we've seen that can do that is Spotfire."