



## SUMMARY

### Noble Energy

#### Industry

Oil and Gas, Petroleum, Natural Gas, Shale, Deep Water Drilling

#### Business Value

- Business Intelligence
- Operational Insight
- Regulatory Compliance
- Performance Optimization
- Process Controls

#### PI System™ Components

- Enterprise Agreement (EA)
- PI Server™
  - Data Archive
  - Asset Framework
  - Event Frames
  - Asset Analytics
  - Notifications
- PI to PI Interface
- PI Interface for OPC DA
- PI Interface for Relational Database (RDBMS)
- PI Interface for Universal File and Stream Loading (UFL)
- PI Connector for CygNet
- PI Integrator for Business Analytics
- PI Integrator for Esri ArcGIS
- PI ProcessBook™
- PI DataLink™
- PI Vision™

## How Noble Energy Made the Case for an OSIsoft Enterprise Agreement

Headquartered in Houston, Texas, Noble Energy is a global oil and natural gas exploration company. Noble has over 1.4 billion barrels of oil equivalent in reserves and a production rate equivalent to 400,000 barrels of oil per day, landing it squarely at number 703 on the Fortune 500 list. With a reserve mixture of petroleum, natural gas, and natural gas liquids; Noble has deep water drilling sites and shale/unconventional exploration locations around the world. Initially, Noble installed stand-alone PI System implementations across its sites. However, to drive efficiency and grow, Noble needed to go another route.

#### The PI System Implementation

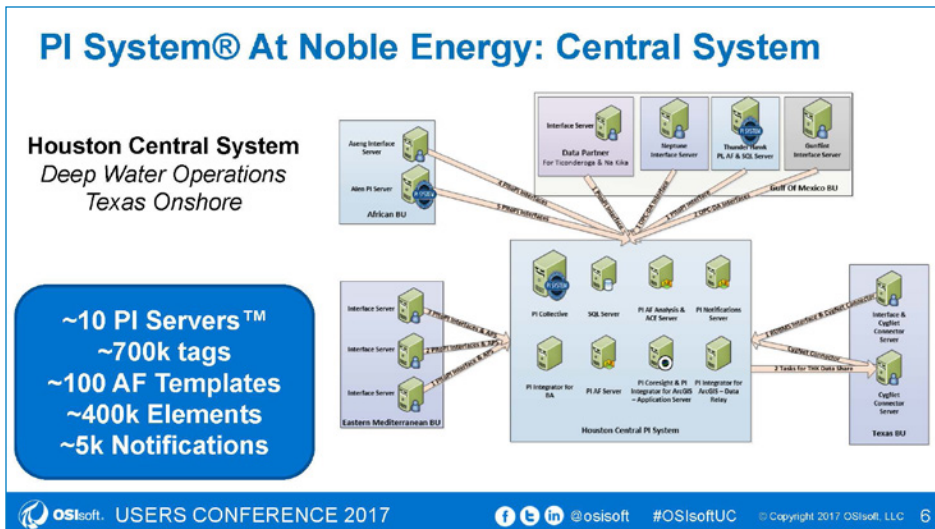
Prior to 2010, Noble used a SCADA system to collect and analyze data. Given the sheer volume of information, Noble needed a better way to manage its data, so the team embarked on a search. After a thorough review, Noble selected the PI System. “The real-time data historian for the PI System was just far superior,” said Joe Hill, PI Team Lead at Noble Energy during the 2017 OSIsoft Users Conference. Over the next four years, Noble installed the PI System at each of its sites, but managing separate deployments proved to be inefficient during periods of growth.

#### Moving to an Enterprise Agreement

In 2014, the team knew that to extract the insights they needed, ensure a predictable cost structure, and operate self-sufficiently without licensing constraints, it was time to move to an Enterprise Agreement with OSIsoft. Making the business case for the change meant educating executives on the differences between the PI System and their SCADA system. “A lot of companies try to make the SCADA system a one-stop shop, all-in-one encompassing tool and they’re just not designed for that,” said Hill. “SCADA is designed for controlling [the] field, designed for providing views for your lease operators, your production foremen, so that people can see at a quick glance what’s going on... It doesn’t do a whole lot for analytics.”

#### The PI System + SCADA = a Data Match Made in Heaven

After achieving the necessary buy-in, Noble Implemented one centralized PI Server in Houston and all other sites were equipped with PI to PI Interfaces which connected their local PI Servers to Houston. Noble then embedded PI Vision<sup>1</sup> into the existing Wonderware system, which married the SCADA and PI System technologies. With this arrangement, Noble is able to use its SCADA system more effectively while leveraging the strengths of the PI System and, for the first time, employees have a single source of truth for operational data.



**Massive Amounts of Data:** For Noble, a centralized PI Server was imperative to generating operational insights from all of its locations.

### A Centralized System of Benefits

Not only did these operational insights give team members, from any location, true analytics capabilities to better do their jobs, implementing one, centralized PI Server had numerous other benefits, including:

- Giving Noble engineers and EPA regulators access to real-time data. This allowed Noble to help the EPA establish regulatory baselines.
- Eliminating direct access to the SCADA system by connecting all users to the PI System. This allows users to run large queries without crashing the SCADA system.
- Standardizing well performance calculations in the PI Server and creating a well performance dashboard in PI Vision to replace existing spreadsheets. “Instead of 10 engineers with 10 spreadsheets... everybody’s wells have the same calculations and the same results,” said Hill. “We literally are spitting out a yes or no answer, is that well running at optimal performance.” The dashboard allows engineers to quickly spot check well performance and drill down for more information.
- Helping Noble meet new tank pressure regulations and avoid costly fines.
- Providing visibility into alarms for the Environmental Health, Safety, and Regulatory Group so they can address safety and compliance concerns.
- Incorporating real-time asset data, metadata, and weather information into an Esri® ArcGIS® map to gain important insights into well activity, better route personnel to remote locations, respond to emergencies or inclement weather, and ensure vendor compliance.

<sup>1</sup> PI Coresight was renamed to PI Vision in 2017

“Why would you to go an enterprise agreement? Well, we want to stay relevant and be on the leading edge – we don’t want to be a company that’s behind. We want to be a data-driven company rather than wishing we had the data that we needed.”

– Joe Hill  
PI Team Lead at Noble Energy