Executive Summary

A Fortune 500 Oil and Gas company began a major infrastructure upgrade as part of a multiyear growth plan. In the process they faced both technical problems and user adoption obstacles. PTR along with its channel partner (PTR Team henceforth) remediated the technical issues and implemented a plan to expand user adoption.

Quick Overview

- Industry: Oil and Gas
- Revenue: 5 Billion USD
- Employees: 2500
- Geography: HQ in Abu Dhabi

Objectives

- Fix technical problems related to the client's business intelligence infrastructure
- Create a plan to increase user adoption of new BI software
- Identify and validate appropriate metrics to help transform seven business processes and create operational efficiencies

Challenges

- Understand problems causing slow data load times
- Improve reports and dashboard performance
- Ease the transition to new BI application for users accustomed to older software

Results

- Improved report performance to 2 times as fast
- Reduced data load times from 26 hours to three hours
- Made significant improvements in user adoption

Technologies Supported

- Microsoft Business Intelligence Applications
- SQL 2012 Enterprise Edition
- Dundas Charts/Tableau /Third Party Tools

Client Profile

The client is a Fortune 500 energy company that engages in crude oil and gas exploration and production. It is headquartered in Abu Dhabi.

Industry Landscape

Oil and gas is an extraordinarily competitive and expensive industry. Companies operate in a volatile market in which prices fluctuate rapidly and greatly. They also face high production costs and significant financial risks related to exploration and extraction. In addition, government regulations and political developments can change the landscape dramatically.

With these challenges, along with heavy competition from other players, the success of oil and gas companies rests on their ability to achieve operational efficiencies and prudent fiscal management; given the need for careful management as well as the agility to pivot with changing conditions, many oil and gas Companies are adopting advanced Business intelligence (BI) solutions.

BI solutions can drive efficiencies in operations, such as reducing waste, negotiating the best procurement deals and managing staff. The rich business insights BI provides can also help foster sound financial and portfolio management.

However BI systems cannot exist in a vacuum. Successfully implementing BI depends on integrating and reconciling data from multiple sources to create an accurate view of company trends. Frequently, achieving accurate and fast BI requires upgrading or overhauling technology infrastructure. It also relies on the company's employees embracing the system. If either of these components fails to happen, businesses can find themselves left with an expensive but essentially worthless investment.

The Case

Looking to enhance their operational efficiency and poise themselves for future changes, the client embarked on a five- year plan to upgrade their IT infrastructure. They specifically wished to transform seven business processes related to finance and human resources, including the procurement life cycle, hiring and turnover, asset planning and accounts receivables.

The first phase of this business transformation was to purchase SharePoint and SQL server 2012 Enterprise edition and restructure their technology stack. The client hired PTR to build a new Intranet Portal for Ramadan and data warehouse and implement MS BI solution.

With 10 data sources, the client had trouble integrating different types of information to create a clear picture of business processes. The lack of integration created inefficiencies and obstacles, including the slow, manual collection of data, time spent reconciling different versions of the data, and an inability to produce a unified version of the truth. The client wished to remove barriers to data integration, improve seven critical business processes, and create a platform capable of scaling with their business.

After making this change, the client faced two problems that prevented them from realizing full return on Investment. First, the data load time, in which data was fed into their warehouse and rendered for reports and dashboards, was slow. That means users weren't receiving up-to-date data. Many of the individual reports were also slow to retrieve data from the system, causing frustrated users to abandon the reports. Even without the slow data, many users, particularly in the finance department, were unwilling to adopt the new technology. Many circumvented the new system, preferring to rely on older Oracle Discoverer reports to load data into Excel spreadsheets, where they would manually manipulate it.

The client called on Microsoft team of PTR to perform a health check of their implementation and make recommendations for how to increase return on their investment.

Solution

During the assessment, PTR team uncovered the causes of technical problems. We also made several recommendations for building a formal user adoption plan. Based on PTR expert's suggestions, the client awarded this project to PTR to fix the technical issues and implement the other recommendations, including determining appropriate business metrics for new reports and dashboards, and creating and helping implement a user adoption plan.

PTR would begin by addressing the major technical problems. We would analyze extract-transfer-load processes to determine which programs were causing delays, and then reconfigure them for better performance. We would also use our proprietary model of regression testing tool to see how long it took individual reports to access data in order to prioritize which reports to fix.

Working with the client's BI team to understand business processes, we would establish the correct metrics to use for the seven processes the clients wished to overhaul. For instance, the client wished to refine and understand their procurement processes. We would help them choose the most suitable metrics for supplier scorecards, allowing them to create a unified view of the merit of using different suppliers, including quality, price and speed of delivery.

This would be used to help internal customers make the best procurement decisions. It would also allow a unified view of procurement patterns, enabling the client to better understand why their buyers made certain decisions, such as bypassing the preferred vendors.

We would test these metrics using our proprietary metric validation tool to ensure the correct relationship between the source data and the information produced. The validation program would also create report mockups so users could preview dashboards and reports before approving the choice of metrics.

For the Power user we gave the ad-hoc reporting facility using power Pivot. This would allow users to view and extract the data through the familiar Excel program but with auto-refreshes and other functionality to ensure access to the most up-to-date data.

Along with this we developed reports using SQL server reporting services and PPS reports with drill down, drill trough capabilities. Finally, we would create custom role-based dashboards and reports that would open a wide array of data to an extended group of users.

Results

PTR Team troubleshot and fixed the technical problems while providing a foundation for widespread user adoption.

On the technical side, we reduced the system's data load time from 26 hours to three hours. We also reduced individual report loading times; they are now three times as fast to retrieve data.

PTR BI team built more than 20 custom dashboards and 50 reports.

This work expanded BI system access from about 200 employees to more than 2,000, with varying levels of access based on their roles.