

## Blending the Data You Need to Make Rapid, Informed E&P Decisions

### Benefits of Petroleum Enterprise Intelligence

#### *Data Cleansing Quality Control*

— *As an expert in master data management*, we guide you through the Petroleum Enterprise Intelligence framework to integrate your systems and data into one unified system — as we federate multiple autonomous database systems into an energy standard data model — we separate your old, outmoded data from your good data.

#### *Vendor Agnostic — As a leading*

*systems integrator*, we are committed to delivering the best solution with the best available hardware and software solutions. Leveraging our combined knowledge and track record in the oil and gas industry, we teamed with Oracle and iStore to create this powerful solution.

#### *Cost Savings — As leading*

*petroleum industry experts*, we understand the business of finding and producing oil and gas — allowing us to concentrate on quickly creating solutions that impact your bottom line and minimize disruption and time away from your operations.

In the digital oilfield era, exploration and production (E&P) companies face a growing challenge: integrating and then comprehending the wide variety of data available for decision making. Evaluating a problem and deciding what information is required to understand the nature of the problem and its solution is a critical business issue. It's about situational awareness — the creation of a “360 degree” business awareness by digitally uniting all the related information and views of the problem into a visual or tabular form so a timely decision can be made.

While the digital oilfield is introducing new work processes and technologies to assist E&P companies, it is also producing increasing volumes of information from a mounting number of data inputs — escalating the complexity and number of possible solutions. Multiple scenarios must be understood and presented with their associated pros and cons.

How can you know which solution strategy is best?



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By collaborating with our customers in asset and data-intensive industries, we have developed a point of view on what types of data must be integrated and displayed. CSC's Petroleum Enterprise Intelligence solution uses four key domains of intelligence necessary for rapid, accurate decision making:

- **Business Intelligence** to improve profit generation by doing the “right” projects while controlling costs
- **Process Intelligence** to standardize best practice work processes and techniques while adapting them to global work environments
- **Location Intelligence** to track the location, movement, and availability of critical resources and assets
- **People Intelligence** to understand in real time, the organizational capabilities and essential skills of your employees

This powerful combination of knowledge visualized on one screen, allows your decision makers to quickly drill down to all the information they need to make timely, accurate, and confident decisions.

### **Challenge: Comprehending Data From Multiple Sources**

Massive amounts of data reside in multiple systems and data formats, within data warehouses or on the laptops of your managers, geoscientists, and engineers. In an attempt to help, software vendors have introduced specialized data viewers and data extraction tools that use proprietary data models, further increasing the complexity of information management.

But, with the increasing amount of data available, decision makers across every area of your operations are overwhelmed because the tools needed to integrate and blend the information are not readily available. In a recent study by CSC and Hart Energy Publishing, the number one issue facing decision makers is timely access to information. As a result, your most valuable decision makers are spending up to 50 percent of their time chasing down data and less time making critical decisions.

There is a growing need to share financial, operational and technical information among your Asset Team. These employees are now integrating their jobs, but are unable to assemble the data needed to streamline their interaction. For example, your engineers are expected to consider the cost and revenue implications of their technical decisions by wading through well histories, maintenance records and budgets that reside on a mix of disparate, back-end systems.

Today, numerous innovations — real-time data capture, modeling, simulation, analysis, collaborative visualization and business intelligence — have improved your ability to make more informed decisions, but still exist as point solutions that are not fully connected to your workflows.

Few have the foresight to integrate the information gathering, visualization systems and decision making capabilities — until now.

### **Solution: Petroleum Enterprise Intelligence**

Petroleum Enterprise Intelligence is a business intelligence framework that helps you integrate all technical, operational and financial information across your enterprise into one unified system.

*Technical Information* — You have produced and accumulated massive amounts of E&P data to map drilling areas — data that is likely stored in hard-to-access data warehouses. Our solution gives your geoscientists the ability to quickly “drill down” to the precise data they need to make drilling decisions.

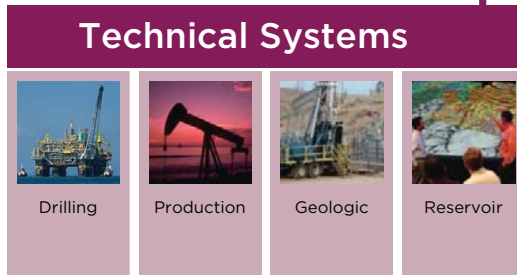
*Operational Information* — Petroleum Enterprise Intelligence allows your operations staff to monitor production performance and health, safety and environmental data in real time. Screen views can be configured to display the performance variables of the wells a particular engineer is responsible for overseeing — and give them the ability to quickly analyze, and respond to, changing conditions in the field.

*Financial Information* — Your partners and employees demand instant access to financial data. They want detailed information about how much revenue is being produced, how many reserves remain, and how many undiscovered reserves may exist. Our solution gives you the ability to produce real-time financial reports tailored to the requests and access privileges of your organization, as well as those of your partners.

## Understand the Financial Impact of Field Decisions



## Optimize Well Production and Maximize Profitability



## Optimize the Effectiveness of Operational Decisions



### The Integration of Technical, Operational, and Financial Systems and Data

Our solution allows your geoscientists and engineers to quickly access the integrated information they need from a large number of structured and unstructured data sources, including technical information from E&P applications, operational information from real-time oilfield systems and financial information from your ERP systems.

Petroleum Enterprise Intelligence's visualized dashboard view makes data analysis and decision-making fast, accurate and easy.



PEI Dashboard for Well Information

### Integrated Dashboard View

By employing Oracle's business intelligence applications and the Information Store's (iStore) data access and visualization technology, our solution allows your decision makers to see, in an orderly dashboard view, the financial impact of their field decisions.

The Petroleum Enterprise Intelligence screen displays a portal-style view that correlate to the "business objects" specific areas — e.g., wells, fields, reservoir — that a particular engineer is responsible for overseeing; tabs enable users to access specialized viewers that link the appropriate information. The information can be configured to display maps, tables, charts, and dashboard gauges — depending on the information needed.

Rather than chasing down data from multiple systems and multiple locations, your engineers will be able to view and analyze the precise data they need to make rapid, accurate and informed decisions — sound business decisions that produce the greatest return on investment. By understanding the fundamental causes of production or drilling problems, various remediation scenarios can be developed. Engineers can then look at the relative costs of the various scenarios versus the expected operational benefits, and choose the alternative that has the best return for money spent.

### Right Information, Right People, Right Time

While digital oilfield innovations have advanced efficiencies for E&P companies, your ability to make business decisions comes down to your ability to manage your greatest asset: information and knowledge.



BUSINESS SOLUTIONS  
TECHNOLOGY  
OUTSOURCING

Our solution offers a potent combination of CSC's world-class systems integration capabilities with Oracle's business intelligence solutions and iStore's powerful data visualization tools to give your decision makers complete command over your technical, operational and financial data.

Petroleum Enterprise Intelligence, combined with our deep knowledge of the oil and gas industry, will arm your decision makers with the business intelligence they need to improve every area of your E&P operations.

Result: Improved production, improved profitability and improved safety.

#### **About Petroleum Enterprise Intelligence**

*Our solution is built on the capabilities of CSC's Petroleum Enterprise Intelligence offering, the Oracle Business Intelligence software suite (OBIEE and Oracle BI Applications), and the visualization and data management tools provided by PetroTrek® from iStore.*

To learn how you can make timely, accurate decisions by getting the right information to the right people at the right time, contact us at [poweryourperformance@csc.com](mailto:poweryourperformance@csc.com), 1.800.272.0018, or visit [www.csc.com/unified\\_data](http://www.csc.com/unified_data).

#### **About CSC**

*The mission of CSC is to be a global leader in providing technology-enabled business solutions and services.*

*With the broadest range of capabilities, CSC offers clients the solutions they need to manage complexity, focus on core businesses, collaborate with partners and clients, and improve operations.*

*CSC makes a special point of understanding its clients and provides experts with real-world experience to work with them. CSC is vendor-independent, delivering solutions that best meet each client's unique requirements.*

*For 50 years, clients in industries and governments worldwide have trusted CSC with their business process and information systems outsourcing, systems integration and consulting needs.*

*The company trades on the New York Stock Exchange under the symbol "CSC."*

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