

## Upstream Oil and Gas Planning Performance Blueprint



## Introduction

The oil and gas industry is often divided into three major sectors: upstream, midstream, and downstream. This particular IBM Cognos® Performance Blueprint addresses performance management in the upstream sector, which includes searching for potential oil and gas fields, drilling exploratory wells, and operating the wells that recover and bring the crude oil or raw natural gas to the surface.

The upstream oil and gas sector is characterized by rapidly increasing demand, increased reliance on unconventional sources, rig shortages, and resource nationalization. The emergence of the “digital oilfield” has driven a need for integration. Systems of record that collect large amounts of data are often geographically dispersed and may classify the same items differently, adding additional complexity to reporting and analyzing results.

Operations across various regions and countries with different reporting standards have also made consolidation difficult. A volatile pricing environment and difficulty in predicting future political and legislative environments require that companies be able to forecast the impact of any unforeseen changes quickly. Business analysts need to be able to analyze the impact of various scenarios on their financial results to ensure that the appropriate reaction to this new information is taken quickly and effectively, and makes the best use of the resources available.

The *IBM Cognos Upstream Oil and Gas Planning Blueprint* addresses the many challenges that affect the planning process, and assists in the planning, managing, and evaluation of operating plans by

- Retrieving key data from various source systems into a single view of the entire organization.
- Incorporating commodity-pricing driver assumptions that feed into the plan for consistency across the business.
- Enabling scenario planning that produces scenarios based on different operating assumptions.
- Standardizing data across all regions and operations for ease of consolidation and reporting.

**Blueprint benefits**

The *IBM Cognos Upstream Oil and Gas Blueprint* provides a performance management framework—including planning, metrics, and reporting—that allows the upstream oil and gas sector to plan production, revenue, expenses, and capital expenditures at the well, field, or area level. The Blueprint is designed to reconcile company-wide strategic plans, so that all parts of the organization are planning with a single set of financial goals and business objectives.

The *Blueprint* provides the flexibility for meeting the various challenges in the upstream oil and gas sector. Customers benefit from proven practices in model design that greatly reduce investment in implementation time and resources. Using the predefined data model, customers can focus on applying the technology to solve business problems, rather than dealing with fundamental process analysis and technical design.

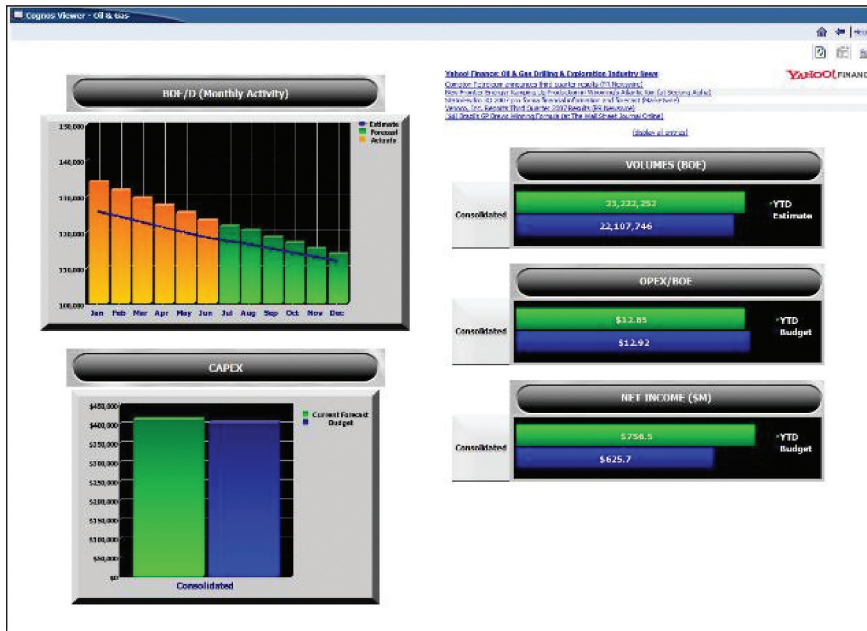
The capabilities of the *Blueprint* allow you to

- Access various systems of record to obtain both projected and historical volumes, as well as financial data needed as a starting point for the budget or forecast process.
- Identify operating expense and production variances, trends, anomalies, and opportunities, and model the effect of drivers against various scenarios.
- Structure data and reporting to comply with Sarbanes-Oxley and other regulatory compliance initiatives.
- Integrate operational and financial planning in real time for immediate insight into resource requirements and future consolidated business results for various scenarios.
- Understand the impact of increased or decreased production volumes on cash flow, distributions, and financial statements.
- Incorporate exchange rate assumptions to roll up to a consolidated forecast in the company's local currency.

- Conduct what-if modeling that allows managers to analyze the impact of changes in operating costs, exchange rates, commodity prices, and the effects of other scenarios.
- Engage in break-back distribution of production, revenue, and expense targets across fields and areas.
- Compare incremental increases in production volumes related to capital expenditures.
- Forecast field expenses at gross and net levels.
- Manage royalties and provide insight into the impact of royalty rates on profitability.
- Integrate workflow to manage and consolidate plans with a visual scorecard, so that the status of the planning process can be easily determined and actions can be taken to complete the planning process.
- Streamline reconciliation with company-wide strategic financial plans, managing consistency between top-down and bottom-up plans.
- Summarize calculated metrics and link them to scorecards and reports to measure financial performance at any level of the organizational hierarchy of plans compared to actual or budget values.

### **The Blueprint in action**

The *IBM Cognos Upstream Oil and Gas Blueprint* provides information in a customized set of reports. The screenshot shows a dashboard with the charts relevant to a decision-maker. From this dashboard, the manager can access the full range of relevant reports, analyses, and plans. All the charts provide the capability of drilling through to more detailed analyses, and include up-to-date information from source systems. Dashboards are customized to the different roles and responsibilities found within an oil and gas company, and show the relevant information for each stakeholder.



For example, if an executive opens a dashboard and sees that the trend of operating expenses is higher than planned, they can drill down to the level of detail needed to identify the source of the problem and form a subsequent action plan. At the same time, a reservoir engineer could update their assumptions, and the executive would immediately be able to see the impact on the overall forecast.

Additionally, the executive can identify the impact of different scenarios on the entire company. What happens if net operating expenses increase by 10 percent, for example? What if net prices increase an additional 10 percent? Will we be able to accelerate our drilling schedule? Should we alter our hedging strategy? Using a financial summary dashboard, the executive can immediately see the impact of these and other changes on performance.

**A final word**

The *IBM Cognos Upstream Oil and Gas Blueprint* maximizes insight into production, capital expenditures, and financial performance, and allows decision-makers to build and continually fine-tune plans that achieve business goals. The standardized planning format that incorporates local currency maximizes the ease of planning for the both those responsible for submitting their plans and the managers assigned to review these plans. The result is more accurate planning, reduced data collection times, and automated consolidation into a total company view that leads to better decision-making.

**Summary**

With IBM Cognos Performance Management Blueprints, oil and gas enterprises get an integrated, best-practices solution for performance management. As a result, many of the leading players in oil and gas have chosen IBM Cognos solutions, including five of the top seven global oil and gas companies worldwide.

To learn more about the *IBM Cognos Upstream Oil and Gas Blueprint* or other blueprints, please visit <http://www.cognos.com/innovationcenter>.



### **About the IBM Cognos Innovation Center for Performance Management**

The IBM Cognos Innovation Center was established in North America and Europe to advance the understanding of proven planning and performance management techniques, technologies, and practices. The Innovation Center is dedicated to transforming routine performance management practices into “next practices” that help cut costs, streamline processes, boost productivity, enable rapid response to opportunity, and increase management visibility.

Staffed globally by experts in planning, technology, and performance and strategy management, the Innovation Center partners with more than 600 IBM Cognos solutions customers, academics, industry leaders, and others seeking to accelerate adoption, reduce risk, and maximize the impact of technology-enabled performance management practices.

### **About IBM Cognos BI and Performance Management**

IBM Cognos business intelligence (BI) and performance management solutions deliver world-leading enterprise planning, consolidation and BI software, support and services to help companies plan, understand and manage financial and operational performance. IBM Cognos solutions bring together technology, analytical applications, best practices, and a broad network of partners to give customers an open, adaptive and complete performance solution. Over 23,000 customers in more than 135 countries around the world choose IBM Cognos solutions.

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