

White Paper: The Living Business Plan

Adapting business strategies to the iEconomy

Executive summary

In today's rigorously competitive business environment, every step taken by an oil and gas firm must be measured in terms of value. Every decision needs to contribute to the ultimate goal of increasing company value and shareholder returns.

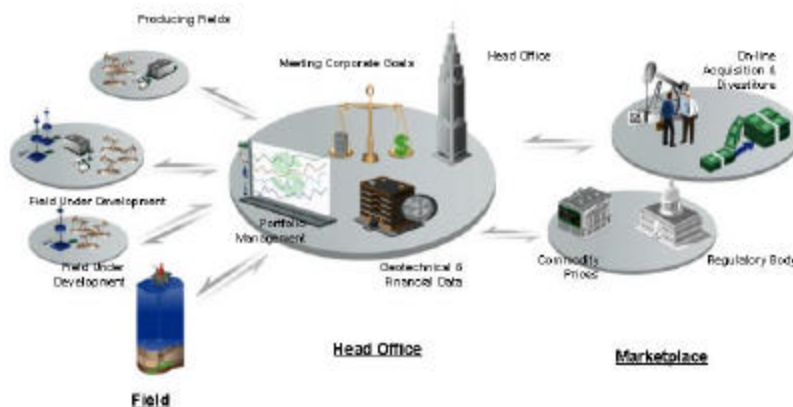
Current advances in computing power, communications technology, software and connectivity offer tremendous opportunities for the astute, forward-thinking oil and gas company to operate at a dramatically elevated level of efficiency and productivity. An effective integrated information model is the key. However, a true integrated information model requires a comprehensive workflow that harnesses the latest technologies to produce maximum results.

The Living Business Plan by Schlumberger Information Solutions (SIS) is such a system. The Living Business Plan is a sophisticated business workflow concept that integrates and drives technology to inspire solid, strategic decision making at all levels of a corporation, at all times. The Living Business Plan focuses on increased access to information, precise interpretation of data, informed risk management and solid, timely decision making. Better decisions lead to greater responsiveness amid fluctuating market conditions and, ultimately, to enhanced, sustainable value for shareholders and investors.

The oil and gas industry is a turbulent environment, heavily influenced by changing commodity prices, high-risk investments and fluctuating conditions. The pressure to remain competitive while continually improving corporate performance is intense.

Schlumberger Information Solutions (SIS) is the global industry leader in integrated business solutions comprised of GeoQuest software, information management services, information technology and a complete range of expert services. SIS enables petroleum companies to drive their business performance and enter into the iEconomy.

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Contributors to this paper

Stuart O'Connor
Vice President and General Manager Merak and Production Software, SIS

Joel Nana Kontchou
Product Marketing Manager, SIS

Mike McGovern
Product Marketing Manager Merak and Production Software, SIS

Sharon McIntyre
Branding Manager, SIS

Lori Sorensen
Marketing Communications, Merak and Production Software, SIS

Continual changes in the corporate environment—ranging from production levels and the price of oil to corporate acquisitions and divestitures—make static business plans quickly obsolete. The Living Business Plan workflow provides organizations with access to the timely information and tools needed to optimize corporate performance. Data standards and flexible business processes are also essential elements in achieving the dynamic corporate stewardship benefits of the Living Business Plan.

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Introduction

The oil and gas industry is a high-risk arena. Its players operate within a turbulent market environment marked by changing commodity prices, high-stakes investments, and fluctuating technological, business and political influences.

Exposure to the inherent risks of the industry has, for many oil and gas companies, resulted in a poor track record of meeting corporate goals. Companies slow to respond to market conditions risk suffering reduced revenues, ineffective use of capital and missed opportunities. Historically, the result across the industry has been a consistently low rate of return.

Meanwhile, companies face constant, high expectations from industry analysts and investors to manage risk to minimize fluctuations in their revenue. Managing risk, however, becomes extremely challenging when, every day, companies face a deluge of information—data from disparate sources provided in inconsistent formats and delivered with variable frequency. Navigating that flood of incoherent information to identify trends, uncover new opportunities and be ready to act quickly is difficult at best.

The ability to dynamically respond to sudden changes and make good decisions is a quality that defines superior companies. But how is that ability achieved? The solution is to implement a system that empowers users at the exploration, production and corporate levels to make relevant decisions at their respective levels using a standard set of tools and processes.

The Living Business Plan incorporates industry-proven, reliable software tools into a business strategy that dramatically refines the information gathering and distilling process. Using technology tools to evaluate economic data and consider portfolio management options, or to introduce risk into decision making can be a powerful way to gain standardized, consistent information to feed the decision-making process. Project analysis becomes tied to corporate analysis in a timely, consistent and structured manner.

Step 1: Establishing goals

Strategic goal setting is vital to achieving a Living Business Plan. Goals act as the final target for the plan: Numerous small strategy adjustments steer the company toward the goals.

For a plan to be successful, goals should be defined at several levels within the organization. The durability of goals will be directly related to the level within the organization that set them. Goals for individuals may change often to reflect larger strategy adjustments, but corporate goals are typically much more stable.

Step 2: Creating the infrastructure

To make the Living Business Plan a reality, a company needs a strong infrastructure of business processes and tools—prerequisites for an effective integrated information model.

Processes

Typically, oil and gas companies perform their planning, forecasting and budgeting activities once in the calendar year. The workflow involves passing information in different formats across many different disciplines, from technical staff to planners to finance to the board. But the traditional process is time consuming and prone to errors. Data are collected and entered many times by different people. Consultation between disciplines is often poor. Market conditions change radically in the interim. The result is a strategy document that risks being out of date by the time it is presented for evaluation and decision making.

In contrast, the Living Business Plan is a dynamic process whereby companies are operationally attuned to their business. It is a process that utilizes an efficient workflow, standardized tools and processes, and the idea that each team member is contributing positively to the organization by sharing information effectively and involving everyone in dynamic corporate stewardship. The Living Business Plan empowers employees to identify and access the necessary decision-making data, to gather that data automatically, keep it up-to-date, perform rapid and effective data analysis, and act upon that information.

Technology

Information technology makes it feasible and economical for companies to implement the Living Business Plan, transforming their annual business planning into a more dynamic planning cycle. Important technology trends include

- increasingly sophisticated database tools
- broadband communication technologies
- distributed access to data via the Internet
- ever increasing computing power
- Component Object Model-based technology initiatives.

Gathering the right data

The exact data required for the Living Business Plan to work depend on each company's goals and strategies, but some of the data types that are universally required include



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- well data, to allow accurate forecasting of production and the identification of production shortfalls
- project data, to track the effectiveness of capital expenditures
- operating costs, to identify unexpected costs or opportunities for savings
- price forecasts for the products produced.

The data gathered can come from many sources, including

- data services on the Internet
- human knowledge
- automatic data-gathering systems in the field
- accounting/budget systems
- public data.

To avoid being overwhelmed with data—or being in the position where there are not enough data—it is essential to choose an appropriate level of detail for storage and analysis. Consider the best balance of detail and impact. If assets are tracked with too little detail, a company can respond only with broad initiatives. If data are tracked with extensive detail, time can be wasted in maintaining and analyzing information that has little impact on the company. The size of a company and its available resources are often key factors in determining what types of data are tracked, analyzed and stored.

Storing the data

Once the data-gathering systems are operating, a repository is needed. Ideally, the data-storage system should meet the needs of the entire organization from the very high level view to the very low level view.

Companies operating across multiple continents or in areas with poor communications may be forced to limit combined data tracking to the national or even local level to avoid contending with more expensive and complex data systems. At the other end of the spectrum, there is also a need for data access at the individual level so that each employee can effectively manage the portion of the process for which he or she is responsible.

Analyzing the data

With the data stores in place, the next step is to find tools that allow rapid data analysis. Ideally, such tools should be in the hands of those closest to the properties being managed—that is, the geotechnical staff. This is important because the goal is to build efficient feedback loops into the business plan. Feedback loops should be short for maximum efficiency. Therefore, individuals closest to the issues

should be provided with the data, tools and authority to adapt to changes in the business environment.

The exact tools required depend on the goals of the organization, but most companies use tools to perform such functions as

- decline analysis using public and corporate data
- economic analysis to allow assessment of properties at the moment, based on such factors as prices and new decline information
- risk analysis in the form of “what ifs” based on prices, purchases and dispositions
- portfolio analysis based on various scenarios
- enterprise information management (i.e., a corporate “digital dashboard”).

Even in a system with carefully chosen data collection priorities, the automatic collection process can turn data flow into a data flood. Tools that automatically filter this flow to identify high-impact information are essential. Well-designed triggers, rules and filters allow staff to spend their time optimizing the business rather than searching for—or being unaware of—key information for the Living Business Plan.

Finally, software tools should be integrated so that they can access and provide data for other tools to act upon. For the Living Business Plan to work, individuals in different functional groups within the company must be able to seamlessly share their conclusions and data with one another. Without integration, the information flow will be broken.

Acting on information

Decision-makers are seeking two types of information—reports about the company and information about the marketplace. To be valuable, information must be relevant, accurate and easy to use.

Once valuable information is available, steps can be taken to act on this information. With a Living Business Plan in place, response time can be very short. Individuals at each level are simultaneously aware of information upon which they need to act. If a situation is serious enough to require the assistance of higher management, those individuals with authority are notified at the same time as individuals at a subordinate level. Examples of such situations include

- a dramatic change in the price of oil renders some properties economically unviable, and the system alerts the engineer responsible for these properties as well as the production manager authorized to shut them in



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- a hurricane warning is flagged in the system, which alerts the crew of an offshore drilling rig and the planners at the head office, allowing the two groups to coordinate a strategy that keeps the crew safe and optimizes production and operations costs until the storm passes
- well tests indicate a high impact project is performing below expected levels, and the system alerts planners, who can coordinate a cost-effective solution with the engineer on-site.

Step 3: Successful decision making

When a decision is to be made, three areas are crucial to the process: economics, risk and portfolio management.

Economics

The oil and gas industry has many stages of analysis: exploration, assessment, development, improvement, evaluation, extensions and abandonment. At each stage there are many critical decisions. The criteria upon which these decisions are based can change at any stage.

A strong, robust economics program that is able to model all fiscal regimes and has both consistency of calculation and output is a key tool for providing standardized and consistent economic information. The GeoQuest Merak Peep* economic evaluation and decline analysis software provides comprehensive economic models for almost every fiscal regime in the world and provides detailed cash flows and financial analysis to estimate the oil and gas production of any company.

Risk

For decision-makers to proceed confidently, they require the most complete picture possible of what lies ahead. A risk analysis software application establishes a range of critical sensitivities (for price, production, capital expenditure, operating expenditure, etc.) to create a tornado diagram or sensitivity analysis. The GeoQuest Merak Decision Tree* risk management and analysis software is the oil and gas industry standard. It performs sensitivity, decision and risk analyses, enabling companies to make more knowledgeable decisions.

Portfolio management

Determining the balance of value and risk that is acceptable within a company's corporate strategy requires careful analysis. A portfolio management tool enables companies to easily identify what is missing from or required for their portfolio. It gives executives better information with which to make informed decisions and check strategy, thus increasing profitability. The Merak Capital Planning* decision support software provides companies with the

perspective to help manage their portfolio proactively and is integrated with other GeoQuest Merak products.

The value of integrated

applications Closely integrated applications significantly reduce the time it takes to make a business decision. They also increase the decision-maker's confidence in the information being considered. As an example of the value of integration between applications, the GeoQuest ECLIPSE* reservoir simulator brings production information into a Peep economic case. This means information is shared among the reservoir engineers and the economists—quickly, easily and accurately. Alternative exploitation strategies can be swiftly assessed on an economic basis, and an informed decision can be made.

Tightly integrated software tools designed to collect production data and assign values to that data are also extremely important. The GeoQuest Merak FieldView* software simplifies field data collection and analysis for petroleum facilities by collecting the data associated with production and engineering disciplines.

Timely access to accurate exploration and production data is essential for successful decision making, and the FieldView application is therefore integrated with the GeoQuest Merak Finder* data management system. The Finder application securely stores and efficiently manages growing volumes of data and delivers that data worldwide.

The Finder application is, in turn, linked to Merak OilField Manager® software, which is designed to view, relate, and analyze reservoir and production data. The OilField Manager application is further integrated with the Peep application to help companies analyze and calculate the value of oil and gas properties, make economic evaluations, and perform decline analysis and fiscal modeling. This integration allows OilField Manager forecasts, as well as historical and forecasted monthly production numbers, to be used as input for a Peep economic analysis.

The ability to aggregate and visualize data from many disparate sources, whether internal, third party or public, has long been a crucial aspect of an oil and gas producer's success. The Merak PetroDesk* data integration and data mapping analysis is an engineering integration tool designed to browse, visualize, report, and analyze oil and gas data. PetroDesk software provides direct access to multiple public and proprietary databases, and it is a key factor in a producer's ability to determine the feasibility of acquiring, developing and/or operating business assets, as well as monitoring oil patch dynamics such



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as land sales and drilling activity. The PetroDesk application links to the Finder application, or any other data source, and is integrated with Merak applications and the Microsoft Excel program, which makes the visualization of data from different sources easier than ever.

Other components

Many decisions are made as the result of a collaborative effort among individuals or teams. To effectively analyze and assess all the data available, several companies rely on iCenter* networked virtual-reality environments as a means to evaluate information. These collaborative environments provide the ability for a group to see value calculated in real time.

The ability to access information and tools necessary to support each person's workflow strengthens the decision process at all levels. The DecisionPoint* information management solution is the digital dashboard that provides this capability. It uses Web-based technology to enhance collaboration and provide employees with personalized access to validated information.

Data from the field are automatically transferred to head office, typically via application service providers (ASPs). The LiveQuest* ASP solution provides easy Internet access to GeoQuest software and information management services.

Accessing the marketplace

The IndigoPool.com site is the SIS Internet marketplace for acquisition and divestiture activities. This resource provides a secure neutral workspace for oil and gas property acquisition and divestiture, data sales, and services. For example, when theoretical cases are put into a company's database and continue to come back requiring the same type of asset to meet specific goals, a company knows exactly what they are looking for on the IndigoPool site. A company can search for an exploratory asset that is expected to be producing in 10 years or an asset that is currently producing—whatever is required to achieve the corporate strategy.

Industry alliances

Strategic alliances with industry experts can assist companies in improving and refining their analysis techniques. GeoQuest continues to strengthen these key alliances with standard-setting industries such as Microsoft, Oracle and SAP through joint marketing, advertising and presentation initiatives. Other alliance partners include Decision Frameworks, Portfolio Decisions Inc. and Sproule Associates.

Taking the plunge

Moving to a Living Business Plan model does not mean extra work—it is a shift in how the current work is done. Instead of maintaining information separately in economics and asset teams, data are shared back and forth dynamically. Each group understands the corporate goals and sees how its individual contribution leads to the achievement of those goals. People focus on high-value projects, recognizing the importance of consistently considering economics, value and risk in their decision-making process.

Scenarios: Responding to change with the speed of a hurricane

To illustrate the benefits of a Living Business Plan, we developed the profile of an imaginary mid-sized, publicly traded company named Bravo Incorporated, based in Houston.

Reacting to opportunity

Before the start of its fiscal year, Bravo set corporate goals for production, reserves, cash on hand and cash flow. Those goals necessitated an aggressive growth strategy, but shareholders were demanding an acceptable level of risk.

Should Bravo expand through exploration, acquisition or a combination of both? How does management know when acceptable risk is exceeded?

To react quickly to opportunity while staying within risk parameters, Bravo incorporated a Living Business Plan. If a significant event occurred, whether positive or negative, the effect on Bravo's business could now be determined quickly.

For the data solution Bravo adopted LiveQuest ASP, which offers Internet access to SIS GeoQuest software and information management services. Bravo's engineers, who roam throughout North America, were able to access all the information they needed, but LiveQuest and SIS services also allowed for comprehensive data services at the head office in Houston.

Shortly after Bravo adopted the Living Business Plan, an undeveloped deepwater gas reservoir adjacent to Bravo property became available for acquisition. A series of high-level questions over the purchase arose:

- Would the acquisition help or hurt Bravo's existing portfolio?
- Would the new mix of assets continue to reinforce Bravo's corporate objectives?
- Would the acquisition leave the company too capital intensive?



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- Would it need to scale back in other initiatives?
- Given the new combined portfolio, would the level of risk now be higher or lower than acceptable?
- How would the company need to readjust the portfolio going forward to account for developing the acquisition?

Bravo purchased the reservoir with stock to maintain cash on hand, then brought in a nonoperating partner to share development costs and reduce overall risk.

By having the ability to see all the information through its Living Business Plan, Bravo was able to immediately react and optimize this opportunity.

Revising business strategy in extreme weather

Bravo had been operating several offshore fields in the Gulf of Mexico for two uneventful years. Unfortunately, one of the company's fields found itself in the path of a hurricane. The crew was evacuated, and production ceased until the danger passed.

Bravo had a Living Business Plan in place, and the company was able to combine process and technology with domain expertise to dynamically run the business in real time. With up-to-date data and the correct tools to assess the problem, Bravo projected the amount of production that would be lost and then began to investigate opportunities to replace it while engineers monitored the situation in the Gulf. Corporate planners found a way to replace lost production through small projects and an acquisition—before the close of their fiscal year. The result? Production targets were maintained, cash flow and cash on hand reductions were minimized, and total reserves actually increased.

Benefits of the Living Business Plan

The implementations and benefits of the Living business plan are not fixed. They depend on individual companies needs. Some of the common benefits include

- effective information flow model: data and information are readily available for the people who can use it most effectively
- informed, timely decision making, leading to a competitive advantage
- risk as an integral part of the decision making
- efficient workflows
- dynamic corporate stewardship shared at all levels of the company
- corporate value.

Conclusions

The ingredients of a Living Business Plan are not fixed; there are no absolutes in the process. A Living Business Plan varies from company to company, depending on the business strategy of each company. The common elements are a process and tools that are applicable and available in all areas, whether among asset teams or geographical regions. Everyone in the company contributes to the process.

The stock markets reward those companies that provide the marketplace with timely information on their competitive performance. Savvy investors seek a complete story that interprets those numbers and explains how the numbers reflect a company's ability to achieve their goals and objectives in the long and short term. The Living Business Plan gives a company the ability to prove shareholder value, which is invaluable in attracting investors in a competitive environment.

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