WHITEPAPER

Identify your Accounting and Reporting System Requirements

for the upstream exploration and production oil and gas industry CFO

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Reader ROI:

- To help you identify signs of stress in your current systems that are preventing you reaching your business objectives
- Provide you with a basis for preparing and documenting your current and future financial management and reporting requirements

Introduction

The oil and gas company that can clearly see their requirements in terms of their objectives and what is complex, unique and critical to the success of its project is much better positioned to see successful outcomes realised.

You may have read in the media how many technologically based solutions have ended with disappointment, failing to meet the needs and expectations of the stakeholders in the project. It is not uncommon for companies to underestimate the complexity of their oil and gas requirements. The company makes assumptions that the implementation consultants have a higher appreciation of their business needs, processes and goals than they actually do. They place undue reliance on the consultant's knowledge and expertise of their business.

This paper seeks to guide you, the CFO of an oil and gas business, to understand your requirements. Once you know why your business is complex and what strategies you need to adopt in your situation, you are far more likely to end up with a solution that delights rather than 'will do' or does not meet your initial expectations.

Understanding your requirements at this deeper level means you can approach the design and operation of your system with a strategy that looks at the whole rather than functional statements such as 'must be able to do multi-currency'. At Professional Advantage, we have frequently seen requirements that set out detailed specifications as to what functionality a system should have such as making payments or how it does payment terms. Whilst these are important, it is hardly a differentiator in choosing between alternative solutions.

Primarily this paper sets out the requirements that CFOs should use when they discover they have outgrown their accounting and reporting system and are forced to spreadsheets in order to provide the outcomes and controls they need.

This paper will give insight into each of the most relevant areas and how to go about choosing and designing a solution that meets the current needs and the needs for future stages of operation of your business.

We address the following considerations:

- Areas that benefit from applying technology.
- Typical business characteristics of an upstream oil & gas company.
- Typical processing and reporting pain points.
- Control issues in an international business operating environment.
- Factors in getting the information efficiently and accurately reported.
- Considerations in satisfying multiple stakeholders' needs (local regulatory, budgetary, taxation, statutory).
- Intercompany, multi-company, consolidations and multi-currency considerations.
- Future proofing – ensuring that your reporting and processing solution fits with future business change.

Key areas of scope

When looking at addressing new requirements, your solution will depend on the stage you are at. Each oil and gas company has different needs. Your business can be at different stages, be it a junior focused on smaller scale exploration and production activities to more established oil and gas companies with a wider, more varied portfolio of production and exploration assets.

You need to assess which areas your needs are coming under. Most solutions for oil and gas companies would come under the following broad headings, and your objectives and point on the spectrum would determine which solution(s) you should be considering.

Each one has its own set of requirements. This paper focuses on the financial accounting, control and reporting aspects. You may already have an accounting system which you want to extend, perhaps to add more reporting power or extend a process such as moving into web procurement.
Areas of scope that could be considered:

- financial management/accounting and reporting system
- web procurement
- budgeting & forecasting and planning
- business intelligence/extended reporting solution
- business process workflow to manage the AFE creation/OHS/ procurement processes
- web deployed time writing and staff expense reimbursement
- document/contract management

What are the typical characteristics of oil and gas upstream companies?

Using an example of a fictitious oil and gas company, ABC Energy Ltd, this whitepaper illustrates an operating environment typical of many in this sector. This company manages multiple entities including subsidiaries and joint ventures (JV). The business operates in an international environment where operations reside in a foreign country with that country imposing its own regulatory compliance and reporting. The country of operation imposes rigid standards on the operator with extensive penalties for misstated reporting.

In addition to its legal, regulatory obligations, the business will have to manage the operational demands from its exploration, development and production activities carried out on the field. Operationally, it maintains multiple exploration or production assets.

Costs are controlled through the Authorisation for Expenditure (AFE) mechanism (though not always). The AFE is the agreed program of work signed off by the investing partners. It is the estimate of the procurement of equipment/consultancy, technical expertise time from the operator and relevant corporate costs.

This company also operates a Production Sharing Contract (PSC) with the government where the asset is located.

The environment the company operates in means that operations can start up or stop rapidly. For instance, new fields are taken on and the company has to act very quickly putting in the contractors and equipment. Accounting and control regimes need to be quickly implemented with minimum fuss.

Legislation in local operating countries can change taxation laws that effect the decisions of investors to invest/divest their interest.

It is this potential for rapid expansion which means that a company with a single well may suddenly be operating multiple wells in multiple countries, highlighting the need for scalability by the accounting, control and reporting systems.

Pain points

Oil and gas financial management requirements are not unique to that industry. Many other industries also experience similar pains requiring comparable solutions to those that are highlighted here.

The oil and gas operating environment has some unique facets though and brings in multiple stakeholders such as JV partners, stakeholders from the country where the exploration and production activities are taking place, investors and shareholders amongst others. The shareholders' stake is quite involved as oil and gas exploration and production is such a high risk/reward, high cost business with each new announcement of new finds, political instability or technical issues in the field having a great impact on the share value. This leads to a lot of volatility in the share price and ownership stakes.

This white paper refers to a hypothetical company, ABC Energy Ltd, with the following characteristics:

- upstream oil and gas company
- manages multiple entities - subsidiaries and joint ventures
- international operations in high risk economies
- local government regulation, taxation and legislation considerations
- multiple exploration and production assets
- potential for rapid expansion into new fields and countries
- Authorisation for Expenditure (AFE) program
- Production Sharing Contract (PSC) with host nation

Your business may have some or all of these characteristics. Each of these industry issues impact on accounting and reporting requirements.

The PSC leads to complexities of the accounting environment. The contract with the government means that the operator is able to claim its costs of developing the asset. This obviously means close scrutiny of the JV accounts and processes by the government. The issue is that not all costs are claimable and that costs need to have transparency and readily accessible audit trails. The accounting system will therefore need a reliable method of disclosing the claimable and non-claimable costs and reporting in the manner prescribed by the government.

The consequence for oil and gas businesses is that the accounting and operating environment is complex. A solution that addresses these in a simple and effective way will mean less work arounds, spreadsheet management, paper trails and risk.

The joint venture environment leads to complexities in consolidation and inter venture accounting in particular. When you add an international operating environment and project accounting into the mix, a well thought out system design is needed.

Localisation

Localisation is the situation where the operations are in a different location to the head office – perhaps in a developing country. These are high risk economies where the regulations and taxation regimes can change arbitrarily. It is common to instigate risk mitigation measures such as the risk of carrying costs not recovered from local governments such as local tax. There are local cultural issues. For instance, developing countries tend to have a large cash economy and operators need tight controls in their expense management carrying long paper trails. Even high cost expenses such as diesel may be paid in cash, further increasing the controls and evidence needed in the local operation.

Control is the important issue here. Local sites often have their own financial management system. This may not have the level of oversight needed by the head office thereby creating multiple processes and data sources. Another issue may be that cost coding on site is not carried out to the level of quality required.

The government where the operation is carried out is likely to impose strict standards of reporting and disclosure. It is not uncommon for an operator to be heavily fined by the government of the country for misstating reporting and then imposing further, even greater fines if these misstatements are discovered in arrears. There will not be the same level of flexibility in the country the oil and gas company is listed.

The system goal here is the effective integration of the accounting and operational functions of local sites and head office.

To achieve this level of integration, a single accounting and reporting database would be desirable requiring a robust configuration that ensures the integrity of data and transactions. The use of business rules in the accounting system will provide integrity of the coding that data entry officers are allowed to enter into the accounting system. This level of security will provide assurance that the data in the system is valid from the start.

A single reporting repository also provides real time, on demand reporting without the need for complex consolidation processes. In our example, ABC Energy Ltd needs to transact and report in the local currencies. They need to report to local government with reporting structures mandated by governments of that country. (See section *Multiple views of the same information*).

Additionally, a solution may need to be put in place for high risk areas such as expense management and spend control where audit trails and visibility are paramount.

Getting the information you need when you need it

The challenge in getting valuable, timely and accurate reports is to capture the right information with ease at data entry.

The key to achieving this is a single, consolidated data source capturing all the necessary analysis at source. Solutions which will, where possible, automate and verify data entry based on other data fields help greatly in this respect.

Many low end accounting/ERP systems cannot manage project costing and multi company simply, and so sets of multiple databases need to be created. The consequence is that much of the analysis and reporting on AFEs and consolidation is stored and processed in spreadsheets.

“The system goal here is the effective integration of the accounting and operational functions of local sites and head office.”

Multiple views of the same information

The same data needs to be reported to meet different stakeholders' requirements, eg. management, statutory, local regulatory views. These may need different accounting treatments, different taxation requirements, and the need for accounting and taxation accounts. The local regulatory reporting format is also not going to be in the format that your internal chart of accounts dictates.

A very useful feature of a financial management system is to have parallel charts of accounts. The functionality here is that you have your core set of 'natural' account codes which represent the logical coding structure meeting internal detailed reporting needs. Each chart of account record is then tagged or grouped with a reporting field which displays how it would be represented for a different stakeholder. In addition, the source transaction itself is tagged in multiple ways such as AFE, cost centre, project type, entity/JV, JV/AFE partnership, etc.

This sophisticated and flexible structure allows the easy application of different reporting perspectives of the same financial transactions.

Typically, spreadsheets are used to create these reports due to the difficulty of the system to hold the multiple dimensions needed. The characteristics of these spreadsheets are complexity of design and operation needing a high degree of maintenance, thorough oversight and regular review.

The new solution needs to produce reliable and accurate reports on demand. The key for this to happen is that the reporting structures exist in the database and not the report writer itself. Therefore the report writer 'surfaces' the information rather than 'processes' it. You would know if this is the case as the report would be very simple and easy to write. Putting complexity into the report itself only moves the problem to the end, a similar approach in fact to the spreadsheet reporting environment, increasing the risk and reliance that the 'report is right'. These reports also lack the flexibility to change, meaning maintenance would be required to meet new conditions such as new cost centres or fields.

A solution for a company that has already invested in an accounting system but needs to achieve better reporting is to add a reporting solution on top of the data held in the accounting system. It may be that the reporting structures referenced above are not present and that the relevant data has not been captured at source.

An approach here could be to add a powerful reporting solution onto your source data systems. This approach takes the source accounting data and enriches the data using rules as it is imported into the reporting database. For instance, the AFE could determine many other characteristics which need to be reported on such as project type, project phase, cost centre and so on.

Case Study

NIDO Petroleum in Perth approached their reporting issues from a different perspective. The business already had the financial management system in place to achieve reporting to the multiplicity of stakeholders in their business. However, NIDO's reporting issue was around the timely and effective reporting of cash flow forecasting. As Ashley Gilbert, the CFO, said "…we found the process of forecasting and reporting on these forecasts difficult to achieve in a timely and efficient way using spreadsheets. Our spreadsheets were complex and interlinked, so it was very difficult for someone who did not design the spreadsheets to understand them and therefore there was not a clear audit trail to the underlying numbers. In addition, this environment was not flexible enough to efficiently view and compare the various sensitivities and amendments resulting in the frequent forecasts from operational factors."

NIDO's approach was to implement a specialised type of budgeting and reporting database that allowed them to replicate their financial system's structure and at the same time, add extra reporting detail to the data coming out of the financial system. It allowed their staff to enter forecast information directly into the database creating immediate 'cause and effect' analysis where updates to the forecasts were immediately reflected in the reports.

This reporting database would then have the reporting structures built in such as hierarchies, which represent logical groupings, for presenting the different kinds of reports eg. management, local, regulatory and so on.

Some reporting solutions also have processing abilities to further take the load off your less flexible accounting/spreadsheet systems. For instance, automating allocations of joint venture partners share would mean you can create reports by JV partner easily. Or you can use it to take the load off performing your consolidations.

Intercompany

Oil and gas businesses need to manage the interrelationships between the joint venture, the partners and the operator. The joint venture entity is funded and resourced by all the JV entities (including the operator) and so there are intra venture debtor and creditor relationships to consider.

These interrelationships form the basis of billing of partners (billing statements) and the functionality is needed for managing the requests of funding from the partners (cash calls). The inter venture accounts will consist of time billed by the operator, Parent Company Overheads (PCO) and invoices incurred and paid by the operating entity.

It would be desirable to be able to process an intra venture transaction without leaving the transaction entry screen. Typically the accounting users would be required to change to a different company database to update and complete the transaction.

A significant improvement to this would be if you can access all your companies and all intercompany/venture accounts from the same transaction entry screen. Some accounting systems can manage this, otherwise staff may have to log into a separate database each time to complete the transaction with the associated risks of human error and omission.

Multi-currency

An accounting system which can easily operate in an international environment can greatly reduce the processing and reporting burden.

For example, an oil and gas company is listed in Australia on the Australian Stock Exchange. It is funded through US dollar (USD) debt, sells mainly in USD and therefore is mandated to have USD as the functional currency. But the staff and local procurement are paid in the local currency as it has its operations in the Philippines.

In this example, we have a functional base currency of the ledgers in USD and a second base/reporting currency being the local currency, both being fixed currencies Then there is the transaction currency being the actual variable currency of the transaction.

Being able to process in multiple currencies means that the currency is not being calculated on the fly, for instance in a report. The exchange value is in fact stored in the database. This is a much more robust solution maintaining a full audit trail. Having more flexibility in currency processing options reduces the number of data sources (business units) needed as you can store multiple fixed currency within the same ledger.

It should be easy to create a trial balance of the ledger in both fixed currencies.

Being able to manage foreign currency translation reserves (FCTR) effectively is also desirable. This can get quite complicated and messy especially if the effect of FCTR movements needs to be tracked by AFE.

Accommodating business change

Joint ventures come and go. AFEs have different partnership shares at different times causing a headache for consolidating and evaluating the corporate budget.

Operations might start up in different countries very quickly or new wells need to be drilled. You may suddenly be required to report in a different way and need to add a new dimension of analysis. All these things need to happen through extending the core accounting and reporting system. You don't want to have to rip out and replace the existing configuration because it is not flexible enough to change 'on the fly'. This is one of the reasons why spreadsheets creep into the life of an accounting system as ways to bridge the gap and work around new challenges that arise in the course of business life.

Scalability of the software providing flexibility and a pathway for future growth is the key requirement here. Consider not just what your potential software solution can do now but, as business change comes, you don't want to tie your accounting and reporting solution into knots.

Conclusion

The aim of this paper is to simplify and break down your requirements so that you will have a solid foundation to approach your implementation. It can seem like a daunting task and there are pitfalls for the unwary. By being clear on your requirements at the start of your review process you will be in a better position to build a robust and future-proof system that will provide both rigour and flexibility.

For updated information on the oil and gas industry please visit our blog: http://blog.pa.com.au/oil-gas

About Professional Advantage:

Professional Advantage has a vibrant and growing community of upstream and downstream oil & gas customers. We have been providing solutions unique to the needs of oil & gas for many years and continue to specialise and evolve our systems to suit the specific needs of this sector.

Whatever your business pain, we have a tailored solution around complex financial management, AFE budgetary control and reporting, web-based expenses, procurement and timesheets as well as tailored reporting and analysis solutions that will ensure you always have accurate visibility of your business at your fingertips.

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