Schlumberger

Schlumberger IPM Bolsters Project Management with Enterprise Solution

Overview

Country or Region: United States
Industry: Oil and gas exploration

Customer Profile
Schlumberger is a global leader in oil and gas field technology solutions. It has more than 77,000 employees in more than 80 countries, with operating revenue of U.S.$22 billion in 2009.

Business Situation
As its business grew, Schlumberger needed to provide greater support to its project managers—leading to a desire to enhance the entire project management process with a technology solution.

Solution
With support from Sogeti, Schlumberger created a custom project management and collaboration solution called Avance, based on Microsoft technologies.

Benefits
- "One version of the truth" speeds time to resolve issues
- Standardization makes cost-saving processes possible
- Process measures are improved
- Flexible foundation supports growth to meet new needs

"Our enterprise project management solution has improved processes at Schlumberger, reducing costs, accelerating schedules, and delivering even better service to clients."

Vishy Narayanamurthy, IT Project Manager for Avance, Schlumberger

Integrated Project Management (IPM), a division of oilfield services provider Schlumberger, has experienced rapid growth. Its challenge was to support this growth and provide a uniform and high level of project management, global sharing of best practices, and a central source of information for projects. To meet these needs, IPM created Avance—an enterprise project management and collaboration solution based on Microsoft technologies. Avance gives IPM project managers a centralized repository for their project-related information, providing "one version of the truth" for users from any level in the organization. It enables staff to address project-related issues quickly and effectively—for example, a purchase order reconciliation process went from days of manual labor to minutes when done in Avance. The solution is scalable to meet the division's growing needs.

Microsoft®

Situation

Schlumberger has approximately 77,000 people working in more than 80 countries around the globe and saw revenues of U.S.$22 billion in 2009. Integrated Project Management (IPM) is the project management segment of Schlumberger, whose projects can involve rig management, well completion, and field management and production activities. Some of the larger projects can generate more than $1 billion in revenues and significant returns, provided they run on or ahead of schedule and cost estimates. When projects run behind schedule or over budget, IPM may have to pay for the difference. When a project can involve up to 70 subcontractors, the risk to delivering on time and on budget—and to maintaining a high level of safety performance—is increased.

Managing these projects effectively is of paramount importance for IPM. Until a few years ago, the various IPM project managers managed their activities and resources with sets of forms created in Microsoft Office Excel spreadsheets and Microsoft Office Word documents. Project managers would maintain completed forms on their computers and share them as email attachments. IPM was a much smaller segment of Schlumberger then, and the system worked, largely because the company had a core group of project managers who took the initiative and had the skills to complete and update the appropriate forms, to consult with their colleagues and share lessons learned and best practices, and to keep their documents current.

"What we had was an ad-hoc system for project management," says Andy Peters, the Avance Product Champion. "It worked because we had good, solid project managers with experience. We still do, but

it's becoming increasingly difficult to run the business in this way as we grow and expand."

Over the past four years, the division's business has grown considerably. With that explosive growth came an increase in the demands for effective and uniform project management practices and workflows for all projects, knowledge sharing across projects, and greater accuracy in forecasting business trends based on past performance. To keep projects running smoothly and on time, the company looked for a technology solution.

The solution needed to provide a centralized data set for standardized project measures to which all departments—such as business development, finance, health and safety, risk management, and human resources—could subscribe. This "one version of the truth" would eliminate redundant data entry and, more importantly, enable IPM to work from an agreed-upon set of data.

The solution also needed to provide standardization of forms, processes, and workflows so that information could be easily found and consumed by any of the IPM project managers or the management users at headquarters. It also had to provide a comprehensive interface that would eliminate the need to open multiple windows or drill down too deeply to obtain relevant project data. Finally, it had to be flexible enough to grow with the division's needs.

Solution

Schlumberger now has the project management system that it wanted, in a custom solution called Avance.

"We needed a collaborative environment in which people could work with and

share their Microsoft Office documents, spreadsheets, and presentations," says Vishy Narayanamurthy, IT Project Manager for Avance. "We needed an environment tied to the Active Directory service for the authentication of corporate users, with security groups built in. When we saw Microsoft Office SharePoint Server 2007, we knew we had found the collaborative part of our solution. When we saw Microsoft Office Project Server 2007, we knew we had found the project scheduling part of our solution."

To support the development of the solution, IPM turned to Sogeti, a Microsoft Gold Certified Partner. "Sogeti's ability to work on time and on budget was very useful to us," say Peters. "Its team had the expertise we needed to get the job done."

Several types of information workers use Avance. Project managers are obviously the prime users. They use Microsoft Office Project Professional 2007 to connect directly to Office Project Server 2007 to create project templates, project plans, and key performance indicators (KPIs) for each project and to track resources such as drilling rigs.

Administrators and project team members who don't have the same in-depth needs as project managers use a custom web interface in Avance that enables them to update project plans—for example, to insert new information when a project runs ahead of or behind its original schedule. A simple grid enables these workers to view plans and resources and to pick the view that makes it possible for them to edit the changed information.

The collaborative environment in Avance includes a series of tabs for each set of users, corresponding to the key departments mentioned earlier. One of the

most-used tabs provides a "look-ahead view" that shows upcoming tasks for the next 7 and 30 days and an interface that shows when drilling is scheduled to begin on the next series of wells. These views make it possible for engineers to be proactive in accessing the resources they need to complete upcoming tasks.

Business development users initiate projects by submitting project bids to clients. Once the bids are accepted, project managers use this data to create their in-depth project plans and KPIs. All authorized users can view the status of project KPIs in the form of green, yellow, and red "traffic light" indicators that show if a particular measure is in or out of acceptable range, or in danger of falling out of range. Automated notifications alert managers to critical issues. Heat maps (where values are represented as colors) are used by the Procurement department to show variations in prices for supplies across geographic regions.

Benefits

Among the benefits that the Integrated Project Management segment is seeing from Avance within its first year of use are greater awareness and faster resolution of key project issues, new processes—such as sharing of best practices and resource prices—that enhance project performance, and improvements in key process measures that indicate better support for clients. The flexible system foundation has allowed Avance to grow along with the segment's growing needs. As a result, IPM is managing more complex projects much more effectively.

"One Version of the Truth" Speeds Time to Resolve Issues
A key goal of the Avance project was to eliminate duplicative data entry and the redundancies and inaccuracies associated

with different departments maintaining their own versions of the same information. That goal has been achieved with Avance.

"We've eliminated the need for each of our departments to 'reinvent the wheel' when they need to generate data," says Peters. "We have one master set of data that every department can draw upon as needed—one version of the truth, with everyone seeing and sharing the same information. Whilst the benefits are not empirically quantifiable, we feel we have made significant time and cost savings in many areas. Departments aren't basing their projections and other work on inconsistent numbers. Everyone has the same understanding of where a project stands. That means they can spend less time resolving inconsistencies in data and more time solving—and preventing—real issues associated with projects."

The project management difference with Avance is readily apparent to the solution's users. "With Avance, we find the documents we need faster than when everyone had copies of files on their laptops and local servers," says Charlie Pratten, a Schlumberger IPM Project Manager for a large multiyear project in North Africa. "Communications and collaboration within the team are improved. Avance will help reduce reporting time by completing our monthly and quarterly project reports to a large extent automatically—this is huge."

Standardization Makes Cost-Saving Processes Possible
The standardization and centralization of information made possible by Avance also means that new processes are possible. For example, the company formerly paid different prices for the same resources because there was no centralized place to store pricing information. Schlumberger now has such a place in Avance, which

makes possible a common "price book" with information about resource costs. Project managers can consult the price book prior to procurement, helping to ensure they are acquiring resources on behalf of clients at the lowest possible cost. "Whilst it's still too early to quantify these savings, it should be considerable," says Peters.

Similarly, IPM now has a standard way to capture and share best practices and lessons learned on projects. In the past, best practices were largely pushed out in an inconsistent way by project managers volunteering such practices in email or by those managers responding to email queries from others. In reality, that process meant that best practices often weren't available when needed.

Now, with best practices and lessons learned stored in Office SharePoint Server 2007 and available to everyone all the time, IPM can capitalize more fully on the collective experience of its employees—engineers, financial analysts, and project managers. Keyword searches are implemented within and across projects to quickly identify solutions to issues that may have been seen on projects before.

Process Measures Are Improved
The overarching goal of Avance was to further develop and drive project management excellence at IPM. All of the people involved with the development of Avance measure their success on this goal by the segment's improvement on KPIs and measures that demonstrate that IPM is operating more efficiently and cost-effectively on behalf of its clients.

For example, purchase-order reconciliation has been reduced from days to minutes. The difference means that financial analysts now have time to analyze purchasing

activity to find more competitive pricing and more efficient suppliers, to improve quality and increase profitability. Material-receipt paperwork—which could run up to 2,000 pages a month on a single large project—has been eliminated, freeing up significant staff time for other activities.

"Our enterprise project management solution has improved processes at Schlumberger, reducing costs, accelerating schedules, and delivering even better service to clients," says Narayanamurthy.

Flexible Foundation Supports Growth to Meet New Needs

IPM was looking for an open, flexible system that would grow with its needs. It has managed to find that with Office SharePoint Server 2007. For example, the solution includes several third-party products, such as the Nintex workflow engine that drives the business process management workflows. The interoperability of third-party products with the Microsoft foundation gave Avance developers increased functionality without requiring them to create that functionality themselves.

Now that documentation is standardized and available to all workers, follow-up phases of Avance development will add enhanced enterprise integration and business intelligence capabilities. IPM and Sogeti are currently working to expand the business intelligence interface of Avance to show higher-level trend information. Through the use of Microsoft Office PerformancePoint Server 2007 functionality, KPIs will roll up into groups that provide, for example, a single financial trend indicator or a single health, safety, and environmental indicator, with an at-a-glance view of the group's status.

The Avance team envisions linking KPI data to underlying causation information. For example, clicking a financial indicator would bring up a report on the events contributing to that indicator. The team also envisions the possibility of using mapping services to create a three-dimensional, topological map of well locations, with each well identified as an icon that can be clicked to bring up detailed data on that well's performance.

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