

SAP Customer Success Story Oil and Gas



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AT A GLANCE

Summary

When Oil and Natural Gas Corporation Limited – India’s largest oil exploration and production company – set out to completely transform its business, it turned to SAP® solutions and services. As a result, the company was able to overcome the challenge of standardizing business processes across its 500-plus locations.

Web Site

www.ongcindia.com

Key Challenges

- Standardize more than 200 business processes for 13,000 users across a total of more than 500 offshore and onshore locations – all in under 30 months
- Cleanup and migration of huge amount of data from legacy systems and creation of data from hard copies
- Create one of the largest data centers in Asia Pacific

Project Objectives

- Optimization and standardization of business processes
- Higher visibility of operations to improve productivity
- More efficient processes with higher visibility of costs
- Integration and extension of value chain

Solutions and Services

- SAP Project Management service of the SAP Consulting organization
- mySAP™ Business Suite family of business solutions
- SAP for Oil & Gas solution portfolio

Why SAP Solutions and Services

- SAP has experience with global oil and gas production companies
- Solutions and services complemented existing SAP finance and human resources applications

Implementation Highlights

- SAP Consulting blended expertise with ability to improvise as complexities of project required
- Excellent knowledge transfer from collaboration with SAP consultants
- Project team consultants from SAP played critical role in rollout and education of users

Key Benefits

- Improved, disciplined approach to accounting, procurement, and financial systems
- Rapid acceptance and improved performance by workers
- Improved ability to compete through the strategic use of new IT platform
- Improved visibility of business processes across different business functions from exploration to production to sales and offshore joint ventures

Implementation Partner

SAP Consulting organization

Existing Environment

PC-based legacy system for material management, project monitoring, and maintenance planning

Database

Oracle

Hardware

HP, Compaq, IBM, and Sun

Operating System

Microsoft Windows NT, Sun Solaris, and UNIX

OIL AND NATURAL GAS CORPORATION LIMITED

SAP® Consulting Creates a Platform for Business Transformation at One of the World’s Largest Oil Exploration and Production Companies

Applying 21st century technology to a complex business is a challenge, but a timetable of less than 30 months adds new complications. Modernizing one of the world’s largest oil exploration and production companies was a personal and professional goal for chairman and managing director Subir Raha. His vision for Oil and Natural Gas Corporation Limited (ONGC) involved bringing about quantum improvements in daily work processes for personnel separated by thousands of miles on land and at sea on offshore drilling platforms.

With a market capitalization over US\$20 billion, ONGC contributes more than 80% of India’s oil and gas production. Over decades, ONGC evolved from being a commission to a state-run corporation. Today, it is a publicly traded company with the Indian government owning an 84% stake. It must comply with unique regulations as a state enterprise, yet be flexible enough to compete against other global gas and oil companies in the wake of deregulation and globalization of the economy.

Challenge: Transform Business Operations

In 2001 Raha announced plans for “One Organization, One Data, One Information” to integrate data and transform operations. According to Raha, “The ERP package will enable the availability of information on a real-time basis and the elimination of duplicate activities across business processes by capturing data at the source point. This will, in turn, facilitate decision support, better operation control, and efficient cost management.”

To ONGC, information is as valuable as oil – and sometimes harder to locate. Collation, consolidation, and analysis of operational data was difficult and time-consuming. Raha unveiled Project ICE – Information Consolidation for Efficiency – to achieve global standards in operations and introduce new business processes. It would require retraining thousands of people, all without interrupting daily work that spans 10 countries outside India – from Russia to Venezuela.

By 2005, Raha's vision was a reality for ONGC's 36,000-plus employees. The result took shape in less than 30 months – using the mySAP™ Business Suite family of business solutions that enables information sharing quickly, reliably, and effortlessly.

New Platform Integrates Existing SAP® Solutions

The cornerstone of Project ICE was a comprehensive implementation of mySAP Business Suite and the SAP for Oil & Gas solution portfolio, including the SAP® Strategic Enterprise Management (SAP SEM®) application, SAP Business Information Warehouse component (part of the SAP NetWeaver® Business Intelligence component), and SAP portal technology (now found in the SAP NetWeaver Portal component). The implementation also included other SAP solutions, such as the Collaboration Projects suite, as well as supplier relationship management and upstream oil and gas exploration and production solutions.

Begun in 2002, this enterprise-wide project was designed to integrate with existing SAP financials and human resource solutions used in more than 500 ONGC locations. SAP solutions support ONGC's exploration, production, maintenance, procurement, finance, payroll, sales, offshore logistics, joint ventures, treasury, and quality management processes, including the monitoring of key performance indicators.

Moving Beyond Paper and Legacy Systems

ONGC's new computing platform introduced technology to many job functions that had relied on paper or legacy computing applications. More than 200 end-to-end, daily business processes were replaced, yielding unparalleled insights into operations, real-time reporting on oil exploration and production, inventory, financial analysis, and accurate and efficiently delivered data.

Solutions had to meet stringent regulatory controls considering its state ownership, yet remain adaptable enough for users throughout the company. Redefinition of work roles and duties meant greater transparency and accountability for expenditures. Daily and weekly reports replaced quarterly data and facilitated real-time reconciliation.

Ensuring New Procedures Adopted at Remote Sites

One crucial area was ensuring the adoption of new processes at remote sites, such as offshore drilling platforms and seismic field parties. The project management group quickly grasped the importance of training employees to use the single-window views of daily reporting activities. However, merely shifting existing reports on surveys, drilling, and well services to new tools would not be enough; achieving acceptable adoption rates would depend on consistent use and ensuring that workers could not bypass the new tools.

The project management group also excelled in meeting the logistical challenge of connecting hundreds of sites across India – even on nomadic drilling rigs and seismic field parties. Innovative solutions included secure satellite and radio-based communication network access to offshore locations and other remote locations deployed through a tightly coordinated schedule between the ONGC project team and service providers.

Improvisation: Key to a Successful Project

Facing its first deadline just months away, the Project ICE team adapted its methodologies for project management and education to make optimum use of its own personnel, third-party providers, and ONGC staff. Merging technology with an operational understanding of ONGC was critical. The first rollout was for 3,000 users in the company's offshore operations centered at Mumbai. By the time the project was completed in May 2005, the project team had added other geographical locations and functions to the implementation, making new solutions available to a total of 13,000 users – 65% more than the user base originally planned.

“What is best about SAP Consulting project management is that it brings an open mind to the improvisation that is necessary,” says K. S. Jamestin, general manager and head of Project ICE. “Prior to undertaking such a massive operation at ONGC, they looked into our requirements and immediately tried to modify the design instead of just following their own standards. That helped create a good team spirit.”

Improving Access Across Corporate Network

Although ONGC had been among the earliest users of IT solutions, the company had some legacy applications that could not be easily integrated – and an average ratio of seven people per computer limited access to the corporate network. Project ICE raised this ratio to an almost even ratio of one PC per person.

“A prerequisite for those six people who made do without computers before was training them and making them IT-savvy,” said Jamestin. The electronic payment system for vendors or direct

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payments for employees to their banks was a ‘metachange.’ That’s a lot of cultural change for someone who now has data entered at one point and has it seamlessly integrated and visible all across the company.”

Critical Areas First, the Rest Will Follow

The tight, 30-month project schedule meant huge investments in planning – from integration testing with more than 400 power users to the codification of a huge number of materials and services. Providing support to 3,000 initial users was just the start. A comparable number of new users had to be brought up to speed just 90 days later. One key test was making the transition at the most challenging sites: offshore and onshore oil drilling platforms, where daily activity reports are required by 6 a.m. without fail.

“Instead of trying a ‘soft’ target first, we chose the hardest and most critical areas first: production and drilling, where processes and actions had to be documented in a standardized format and recorded in a time-bound period,” says Jamestin. “We believed that if we made progress with a hard target, then all the others would fall in line. We deliberately chose the first day of a quarter as a go-live date, so there were no options for anyone to delay – it was meant to be a D-day – and then we gave 30 or 60 days of post-go-live support,” Jamestin adds.

Collaboration and Sharing Best Practices

Teaming SAP Consulting project management with ONGC executives produced a combination of technical expertise and operational knowledge. Identifying power users in every location to assist with data migration and training helped validate and share best practices. Logistical planning and course scheduling grew more complex as the number of users requiring classroom training expanded to nearly double the initial estimate – at one point requiring 14 classrooms in Mumbai (Bombay) to manage the flow of students.

Some companies view consultants as external contractors focused only on their contract deliverables, but at ICE, project management was entirely collaborative. Project management support from the highest levels ensured that SAP Consulting would train ONGC personnel, who would serve as mentors at all levels. “At the end of the day, SAP Consulting excelled, I must say,” says Jamestin. “They gave us good support and tried to understand our business to deliver the product we were looking for.”

Growing User Acceptance, New Lexicon at Work

The project management team charted the number of users and interactions with various aspects of the new system. Within two months of rollout, usage patterns showed increasing popularity of the system – a desired result of the introductory training. Momentum continued to grow, in part because it was easier for users to perform daily work and also because project management had set deadlines for change. Throughout its engagement, the SAP Project Management service’s team worked collaboratively with ONGC project management and other members of the project team. As a result, ONGC benefited from the knowledge transfer. In fact, in addition to obtaining the desired outcomes they wanted, ONGC executives – by working alongside SAP and third-party experts – also saw how the goals were accomplished.

In addition to the knowledge transfer itself, another indicator of the success of the ONGC project was that some of the key phrases and methodologies introduced by Project ICE became part of the everyday lexicon at ONGC. Terminologies such as “go live,” “release strategy,” and “fund center – commitment item” became common terms among ONGC employees in their daily work.

Using Built-In Checks to Ensure Compliance

Despite the time and money they invest in new IT platforms, companies often find that employees inevitably resist change and often try to find ways to continue daily work without adapting. However, at ONGC the new solution meant that paper-based contracts and vendor payments were complemented by electronic transactions – workers had to begin using the new system. Also, to ensure compliance and data integrity, the project team implemented built-in checks to make sure users followed the correct procedures when entering data and identifying themselves.

For example, in the area of procurement – using SAP business intelligence functionality – the team built in validations to ensure that users could place a purchase order only with an approved requisition and available budget. In addition, the company now sends out payments for purchased products only after invoice verification. Likewise, payments for services are made only after service entries have been completed and the project's progress has been updated.

In addition, system design included detailed transaction monitoring reports. These reports – for review by the project management team, operations heads at live locations, and members of the executive committee – showed progress of usage and adoption and bottlenecks.

Raising the Visibility of Critical Data

A key benefit of the new solution is that it creates high visibility for critical data. The new solution ensures that critical operational data is available online for all levels of management.

Benefits extend well beyond the bottom line to new capabilities for designing and conducting end-user training, in-house competencies for mapping new business processes to the SAP system, managing business expectations, managing critical areas during data migration, and the management of post-go-live issues and queries.

“Over the last two years, a lot of expertise has been gained,” Jamestin says, referring to the new knowledge management functionalities. “Our plant maintenance solution now has a service history and a method of capturing the total cost of ownership. Decisions are made faster and are more informed by data from across the entire organization.”

Award-Winning Multidisciplinary Team

From its earliest interactions in the project, SAP Consulting quickly recognized that Project ICE meant far more to ONGC than simply the implementation of new hardware and software. And this realization affirmed ONGC's decision to use SAP Consulting in the first place. What ONGC had in mind, in fact, was a total transformation of its business, and the SAP track record and experience with customers in oil and gas industries worldwide was a key reason ONGC believed SAP Consulting was up to the job.

“For this kind of change, it is important to choose a multidisciplinary team. Ours looked like a miniature version of the ONGC culture,” Jamestin says. Other companies in India and abroad have contacted ONGC project management for reference visits and to seek their views about selecting a solution and how best to implement it. Jamestin's recommendation considers an approach that integrates processes and blends financials, operations, technology, and culture with management responsibility and commitment.

The successful efforts of the Project ICE team have been recognized far beyond the boundaries of the ONGC organization. In fact, the International Project Management Association chose Project ICE as one among the nine finalists for its prestigious International Project Management Award for excellence in project management practices. The award – based on a rigorous, on-site evaluation by experienced assessors drawn from different nations and a cross section of industry and academia – focuses on the project management methodology, practices, and tools adopted in the project.

Ready to Explore New Frontiers

The potent combination of a new business culture supported by a new IT tool and the flexibility to adopt new business innovations, along with an in-house leadership capability, prepares ONGC to explore new frontiers, including joint ventures overseas. ONGC has also implemented the employee self-service (ESS) functionality of the mySAP ERP solution, thereby expanding its reach to cover 36,000 users, making it one of the largest ESS implementation in India. ESS – christened “SAMPARC,” meaning “connect” – facilitates employees to apply for leave, submit their claims, and view their payment details online. For ONGC, SAP solutions have equipped the world's second-largest oil exploration and production company with the reliable, available data it needs to manage the magnitude of the 21st century challenges it will face.