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BPCL: Delivering New Functionality Faster and Reliably with SAP® Software and SAP Enterprise Support

Bharat Petroleum

Company
Bharat Petroleum Corporation Ltd.

Headquarters
Mumbai, India

Industry
Oil and gas

Revenue
US$45 billion

Web site
www.bharatpetroleum.com

SAP® solutions and services
SAP® Enterprise Support services, SAP Solution Manager application management solution, SAP Quality Center application by HP, and SAP Test Acceleration and Optimization application

Serving business users better through automated testing

The IT organization at India's Bharat Petroleum Corporation Limited (BPCL) provides technical support for business users throughout the oil and gas giant's vast enterprise. To meet emerging needs, more than 14,000 SAP® software users count on **quick delivery of reliable new software** with leading-edge functionality. This calls for a robust testing environment that delivers the reliability users need and test automation to help ensure rapid delivery.

To serve its users better, the IT organization created a robust, highly automated testing solution. First, the staff documented the company's business processes and then used that information as the basis for its testing environment. Since the majority of BPCL's processes use SAP software, the group implemented testing software from SAP and engaged assistance from SAP Enterprise Support services delivered by the SAP Active Global Support organization.

SAP transferred its knowledge of the testing software and best practices so well that the IT team became self-sufficient and is now managing its test assets completely on its own. With the automated testing solution, the IT organization is fulfilling its promises to users better than ever, as proven by the company's recent upgrade of its highly complex environment using the SAP ERP application. It was a smooth affair – on schedule, within budget, and with no major issues after going live.

Read more

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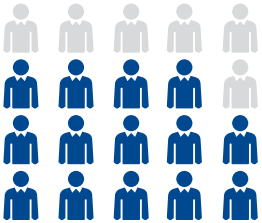
Hurdling challenges and fulfilling aspirations

With 14,000 employees working at home and abroad and US$13 billion in assets, BPCL is one of India's largest oil and gas companies. The company prides itself on customer service, environmental friendliness, social responsibility, and a record for reliably serving the needs and interests of both its employees and its shareholders.

BPCL runs most of its operations with SAP ERP and other software from SAP, but it uses some non-SAP software as well. Users located across more than 350 locations employ these applications in their daily work.

BPCL has a dynamic business environment where challenges and aspirations can change overnight. To remain highly nimble and able to respond quickly to business environment shifts, it's essential for BPCL to maintain state-of-the-art functionality for its IT infrastructure.

As a result, the IT staff members created the company's automated testing solution. They wanted to better satisfy the constant need to enable new functionalities by bringing new and changed software into production frequently, swiftly, and with high levels of reliability. They also needed to reduce dependence on key developers responsible for changes, who had always been required personally to conduct manual testing of new and changed software.



14,000

Employees

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A valuable source for software and process expertise

BPCL knew that a vital prerequisite for an automated testing solution was a thorough understanding of the business processes employed by its users. Only then could developers know exactly what to test when finding and fixing defects in the software. For this reason, the company prepared for automating the testing environment by documenting its business processes. Besides forming the foundation for software test and change management, creating this documentation had many other benefits. It enhanced transparency into the way the company operates, and it enabled an important future step: business process monitoring.

The SAP Solution Manager application management solution was the ideal medium for documenting BPCL's business processes. It has been tightly integrated not just with SAP ERP but also with the key applications comprising the testing software from SAP, including the SAP Quality Center application by HP and the SAP Test Acceleration and Optimization application.

However, the IT group wanted more from SAP than just the right tools for the project. It had a goal of becoming a world-class enterprise resource planning competency center, providing ongoing value to the business through process innovation and the use of new technologies. The IT organization desired to be a trusted partner to business users – collaborating with them on decision making, delivering knowledge-based leadership, and proactively finding ways to satisfy their needs. For such an ambitious goal, the IT team chose SAP Enterprise Support services to get a better understanding of the software and learn best practices.

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BPCL documented all its business processes in SAP Solution Manager, including those that are conducted with non-SAP software, and proceeded to automate testing of all transactions related to SAP software. Transactions using other software are currently tested manually.

BPCL's strategy was to automate the testing of end-to-end business processes, rather than individual transactions impacted by a change. This made for more efficient and effective use of its automated testing solution. In the final tally, the IT team was able to automate testing of 135 business scenarios that contain 764 business processes and 3,200 individual process steps. These automated tests can be used to create technical bills of materials needed by the business process change analyzer functionality of SAP Solution Manager.

Experts from SAP Enterprise Support assisted the IT organization in many ways throughout the implementation. The SAP team shared product and best-practice expertise and actively collaborated with BPCL to meet project expectations. To help ensure success, BPCL joined SAP Enterprise Support Advisory Council, a group of customers and SAP working together to improve the offerings around SAP Enterprise Support.

BPCL opted for minimal on-site support from SAP, except for training and a proof of concept. Choosing these services gave the IT team the support it needed to conduct future implementations on its own – a key step in developing in-house competence to manage and enhance its test assets.

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Closed-loop testing built around SAP Solution Manager

BPCL's testing solution is a fast and convenient way to generate automated test cases. The test management process begins with the definition of requirements and creation of a business process repository in SAP Solution Manager that contains information about all business processes. The requirements are then transferred to SAP Quality Center, which is used to complete a risk assessment and schedule. SAP Quality Center is then used to develop or update a test case and create a traceability matrix by linking test cases to requirements or vice versa. Next, SAP Test Acceleration and Optimization is used to create reusable, automated test components. Finally, SAP Quality Center runs automated tests, reports results, and transfers these results back to SAP Solution Manager.

The team developed change control processes that are designed to ensure that business process documentation is always updated when any change is made to the software.

> "With the expertise of SAP Enterprise Support, we were able to automate 60% of our test cases and complete our upgrade project on time."
>
> Sanjay Mehrishi, Chief Manager, Bharat Petroleum Corporation Ltd.

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Smooth, issue-free upgrade for a quick return on investment

Shortly after the automated testing environment went live, it faced its first big test – an upgrade of SAP ERP to a major new enhancement package that had a tight schedule. The IT team used its test repository fully to run automated test cases, which helped decision makers better understand areas that are impacted by a change and form a corrective action plan.

There were almost no issues after going live – far fewer than in any upgrade project previously undertaken by BPCL – even though the technical infrastructure is quite complex. Since anyone on the team could run the business processes, the team did not have to depend on specific individuals with certain expertise.

"The automated testing tools from SAP have helped BPCL save costs and obtain a quick return on investment by minimizing the testing resources we need to engage."

Sanjay Mehrishi, Chief Manager, Bharat Petroleum Corporation Ltd.

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Even more ahead

BPCL's next step is to integrate the test assets, which have already been automated with its regular change management processes. In the future, the IT team intends to conduct an impact analysis on its business processes directly from its change requests.

The firm is also planning to bring other documentation into the business process repository (such as configurations, procedures, and manual testing) and integrate it with its change management processes. BPCL will also enable system-based intervention in its testing strategy by using SAP Test Acceleration and Optimization.

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