

Case Study



Oilfield Services Company partners with Infosys to implement SAP Testing Center of Excellence (TCoE)

Partnership ensures Faster, Better and Efficient Test Validation

Abstract

The client, a major oilfield service company, faced the challenge of initiating a complex SAP upgrade program, which would impact 7 divisions of business, spread across 5 continents. To ensure successful completion of the program, the client organization partnered with Infosys to implement a Testing Center of Excellence (TCoE) to modernize its SAP testing practice. This centralized, shared testing organization, which the client established jointly with Infosys, enabled a process-centric approach towards testing and enhanced the business value delivered by optimizing overall cost, time and effort.

Client Profile

The client, a major oilfield services company, with operations in multiple countries, provides oil and natural gas products and services globally for drilling, formation evaluation, completion and production. The company also provides reservoir engineering and other consulting services.

A major oilfield services company was looking to break the boundaries of its existing ERP application and move towards an enterprise-wide SAP platform. It strategically decided to roll out SAP applications across new geographies to capitalize on the forecasted wave of future energy development in these locations. However the requirement of multi-language capability demanded solutions supported by Unicode which were provided by only the newer versions of SAP. The client also wanted to leverage the advanced capabilities and technological innovations provided by the enhanced SAP NetWeaver Platform.

The client thus initiated a complex mySAP upgrade program which impacted 7 divisions of Business, spread across 5 continents and involved 9 modules of SAP like Sales and Distribution, Material Management, Inventory Management, Warehouse Management, etc.. Additionally these modules had over 21000 active named users.

Challenges Faced by the Client

While initiating an upgrade program without implementing robust testing procedures appears economical, delivering substandard releases can lead to unpleasant outcomes. Realizing this, the client clearly identified a few pain points in the system, which it definitely wanted to set right, before embarking on this SAP upgrade journey.

THE PAIN POINTS INCLUDED

- Lack of a process-centric approach towards testing led to the creation of functional silos.
- Lack of automated testing capabilities led to inefficient utilization of business SME's and project teams.
- Lack of structured test knowledge management and inadequate test artifacts resulted in ad-hoc testing measures and sub-standard releases.
- Lack of a centralized testing approach led to huge time consumption and duplication of testing efforts of the project/divisional teams.

OWING TO THESE PAIN POINTS, THE CLIENT ANTICIPATED UNCERTAINTIES RELATED TO THE SUCCESS OF THE CURRENT SAP UPGRADE PROGRAM:

- **System vulnerability due to multiple technologies:** There were multiple point solutions with different user interfaces, being implemented by different vendors, which could cause compatibility issues with the upgraded version of SAP. This could cause these point solutions to stop working, affecting business adversely.
- **Disruptions in the on-going implementations** and the significant planned development initiatives due to conflicting timelines and technology risks mentioned above.
- **Owing to high degree of customization and integration** with Complex Portal and Identity Management Solutions, any change during the upgrade process could cause an **adverse ripple effect** on the functionality of the SAP applications, unless they were validated end-to-end. Thus, ensuring optimal coverage during the testing of the SAP customizations was critical for the success of the program.
- **The availability of the business SME'S** as per the upgrade program's tight testing timelines **and their dedicated testing effort** to carry out the voluminous testing was uncertain. Hence some form of accountability was required to ensure high quality of testing and zero critical defects in production environment.

The client was looking for a partner who could work with it in setting up a centralized testing center of excellence, and facilitate a smooth transition of testing from the present project/division teams to the permanent owners in the new structure. The client was also looking forward to the partner providing it with much needed assistance in establishing accountability for change management and motivating stakeholders, and users, to leverage new processes and systems of the planned centralized structure.

On analyzing various market offerings, the client decided to take Infosys Technologies on board, owing to its past experience of implementing several successful **centralized testing models**, for SAP related programs, under similar set of circumstances and anticipated business risks.



**Implementation
of SAP TCoE**

Having understood the pain points, Infosys worked on first establishing strong quality processes across the client organization. Then the client and Infosys worked together and clearly established that for the organization to deliver a successful SAP based platform, without any roadblocks, *a centralized, shared test organization or TCoE* that could cater to all SAP testing needs (current upgrade, future functional releases and country releases) and employ stringent quality assurance practices, would be most appropriate.

In order to obtain complete support for the proposed SAP TCoE, the client and Infosys teams conducted various workshops showcasing the NEED-FIT analysis and, immediate and future benefits of the TCoE, to the various stakeholders, before obtaining sign-offs for the same. Transitioning to a SAP TCoE model was meticulously considered prior to implementation, with exhaustive planning based on

impact and business risk assessment, application profiling, and evaluation of transition readiness. A comprehensive transition plan was then built by the client and Infosys around the strategic assets and a robust governance model was outlined to transform the current IT test organization into a TCoE.

A robust two-tier governance structure that could manage resources and monitor the functioning of the TCOE under a single umbrella was established. The executive team comprising of the client's TCoE sponsor and Infosys' key stakeholders set objectives for the relationship and provided guidance. They also set long-term and upcoming quarter's goals, set evaluation parameters and reviewed the quarterly performance and overall health of the relationship. The Test Management Office

(TMO) involved the client's TCoE champion and Infosys TCoE onsite/offshore leads, with their respective teams, who would work under the guidance of the executive team. The TMO in turn would collaborate with various program managers to realize the full potential and benefits of the TCoE and update the executive team on the current status. The SAP TCoE was a test "Force Multiplier" which adopted an enterprise-wide process standardization approach, across various building blocks. These included:



The team developed a base of shared test management practices by creating re-usable templates with mandatory workflows and propagating them automatically across projects. This helped in standardizing various details like levels of testing, scope details, testing timelines/milestones and deliverables, responsibility matrix and assumptions/dependencies. Maintaining a repository of templates helped in emulating real life business processes and provided a framework for future effort estimation. Another aspect of planning was to proactively identify all the non-Unicode compliant interfaces that existed, so that the client could work with the respective vendors to ensure compliance. This process helped accelerate roll-outs immediately.



Regulation of the defect tracking mechanism, throughout the defect life cycle, helped the development teams find, prioritize and resolve defects based on business priorities.

Test Data Management

The TCoE helped in regulating many decisions like how much test data needs to be made available, in which test environment it needs to be made available, etc.. This ensured that greater value could be extracted from the available test data and that validated test data was delivered in an organized, consistent and secure manner. Very efficient system validation testing, cutting across product lines/divisions, could be carried out due to optimal test data management and automation.

Test-Scope Change Management

The TCoE had an inbuilt mechanism to handle changes in test scope. The team established adequate guidelines to ensure that scope changes could be identified, tracked and taken to logical closure in a consistent manner. A standardized Business Impact Analysis (BIA) was included before implementing any major change.

Test Automation Standards

Standards like log file formats, tools, library routines, etc., were developed for test automation. This ensured increased productivity of test automation teams.

Performance Benchmarking

As a part of the SAP TCoE, a global performance testing centre was established. This was utilized for benchmarking performance of all SAP and SAP portal roll-outs.

Benefits Delivered

By embarking on a journey towards deploying a holistic and centralized testing capability or TCoE, the client was able to extract value/benefits across multiple areas.

Testing Process Standardization

TEST PLANNING

Effective test planning helped optimize the test processes and reduce test effort while ensuring schedule adherence.

DEFECT MANAGEMENT

The client reduced post go-live defects by 30%. This was largely due to the ability of the defect detection system to identify and resolve defects earlier in the life cycle.

TEST AUTOMATION and REUSE

Automation of regression testing helped reduce testing execution effort by 40%. Further, the use of SAP Test Automation Optimizer helped reduce maintenance effort by 25%. The client also reduced test case preparation time by 20%, for subsequent releases of SAP, through reuse of existing test cases.

Performance Benchmarking

TCoE proactively suggested network accelerators and application tuners to improve the overall application response time by 30%.

Infosys was able to deliver significant value to the client organization through the above mentioned benefits by

- Reducing hyper-care, post go live, from 3 weeks to 1 week which helped reduce post production costs for the organization, and,
- Significantly reducing the time required for UAT from 8 weeks to 3 weeks. This helped the organization improve overall time-to-market.

Based on the phenomenal performance of the centralized testing center of excellence, during the upgrade program, the IT leadership team of the client organization decided that the SAP TCOE, established with the help of Infosys, would be responsible for all testing requirements in future.

Today, the TCoE established jointly by the client and Infosys focuses on providing uninterrupted business support through a well integrated release management system involving all relevant stakeholders.



For more information, contact askus@infosys.com

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