

Introduction

It is recognised that an SAP implementation often provides significant challenges. However, because SAP is a packaged application, organisations may develop the belief that “someone else” will have solved all the performance and functional issues before they implement their package or upgrade.

Often the statement is made that the project is “not customising” the application. In reality, most ERP implementation forget the critical factor – their data, the system is always customised simply by adding their own data sets, company codes, and small configurations. All these and standard setup issues lead often to performance problems, along with the need to regression test every 6 months due to patches from SAP.

SAP Testing Strategies

To ensure the success of your SAP implementation or upgrade, you need a quality management process that thoroughly tests all key business processes and allows you to go live with confidence.

TestPro blends its rich experience in managing and executing testing projects with experience in SAP implementations to make the testing of SAP deployments more efficient (from a time and cost perspective) and more effective (test more thoroughly in the available time to achieve better quality).

With SAP applications, there are a variety of testing strategies which address a range of different business contexts and requirements.

1. A common testing strategy is *risk based*:
Testing should focus on the highest areas of risk.

This is based on the premise that there are areas of high(er) risk in any application system and

when these are identified, to focus testing on those areas as this will reduce risk the most. With SAP deployments, higher risk will typically exist in areas where customisations have been done and/or where new business processes have been implemented.

2. A second testing strategy is *priority based* :
Test should find the *most important defects* first.

Most important means often “in the most important business functions”. These functions can be found by analyzing how every function supports the mission, and checking which functions are critical and which are not.

You can also test more where you expect more defects, for example where new business processes have been implemented. Focusing early on the worst areas in a release and testing them more helps reduce risk.

3. A generally applicable strategy is to make testing more *efficient* in general.

Many companies still use a significant amount of manual testing during SAP projects, but the manual approach often lacks coverage, reusability, and repeatability and may create delays in the completion of the project.

A major efficiency gain and reduction in risk to the business, can be achieved by using tools that automate test execution.

TestPro practitioners are experienced with leading test automation tools and frameworks. We are able to implement automation for SAP projects with minimal overhead and provide large gains compared to manual testing.

Without relevant automation experience, automation can be time consuming and expensive to implement, because the costs of creating and maintaining the automation scripts

can outweigh the benefits derived from them. In this situation the scripts fall into disuse.

TestPro provides a range of specialised testing services to ensure a timely and cost-effective deployment of an SAP implementation.

The services we offer range from Test Management, Performance and Load Testing, through a range of automation solutions, to 'straightforward' manual testing.

Manual Testing

There are a number of essential components to the Functional testing process that apply with any approach – manual or automated.

- Business requirements
- Documentation of business process
- Generation of Test Cases
- Execution of Test Cases (either individually or as scenarios)
- Analyzing/Reporting of Execution

End to end testing relies on the generation of the test case from documented business process and the involvement of the BPO or SME during the translation of the business process to a logical series of SAP transactions and the test case. In this way ownership of the business process is maintained with the business. Execution and analysis of the test cases are controlled.

Tools Suggested

- HP Quality Centre

Estimated Effort

- 75 days small
- 200 days average
- 400 days large

Automated Functional Testing

Automating the manual task of testing is a powerful way of reducing the operational costs to a test team.

Primarily used during upgrades for SAP systems as significant functionality needs to be tested in several environments like DEV, TST and Staging/UAT before go live.

Also used heavily in patch or technical upgrades to make sure previous functionality has not been broken, because transports can often cause functional failures.

An automated regression testing framework can deliver major savings in test efficiency and time when repeated testing is required over the life of an SAP implementation e.g. due to patch releases and upgrades.

Benefits of Automated Functional Testing

Automating testing provides:

- Fast, automated REGRESSION testing
- Higher coverage
- Higher quality
- Repeatability
- Lower resources

Finds errors in:

- Configuration
- ABAP Customisations
- Transports that are incomplete
- Environment differences
- Interface issues

Tools Suggested

- HP Quality Centre
- Quick Test Pro (QTP)
- Business Process Testing (BPT)



Estimated Effort

- 100 days small
- 300 days average
- 500 days large

Performance & Load Testing

Creating a test of the real load that a system is expected to have before the system goes live. This enables the project to have certainty that the application and system will NOT FAIL under load.

Benefits of Performance & Load Testing

Automating testing provides:

- Risk Mitigation
- Performance of system prior to “go live”
- Tuning of the system using real load information
- Capacity planning

Tools Suggested

The task cannot be easily done without specialist tools.

- HP LoadRunner plus
- SAP VU testers

Estimated Effort

- 40 days small
- 80 days average
- 130 days large

Performance Tuning

Tuning can be carried out either in isolation or as part of a load test. Each case offers a method of identifying areas of the infrastructure that can be improved for better performance.

SAP may demonstrate performance issues in application servers, Load Balancing and APO servers. MRP and sales order systems regularly have performance issues within SAP.

Benefits of Performance Tuning

- Accurate and expert performance analysis based upon years of extensive and in-depth experience by senior TestPro system performance specialists.
- Tuning of systems
- Identification of bottlenecks
- Reporting SLA, CPU, MEM, I/O etc

Tools Suggested

- Openview
- LoadRunner
- Business Process Monitoring

Estimated Effort

- Often linked to LoadTesting
- Additional 10 -30 days in basis and performance specialists.