

Navigating Your Way Through the SAP® Testing Jungle

Winning Tactics for Survival



An Original Insight



Original Software

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It's a Jungle Out There!

There's no denying it - SAP® systems are complex, very often business-critical and are the heartbeat of many companies. If you run your business on SAP, you rely on it to receive orders, ship products, invoice customers, control financials, manage human resources and do so much more.

Such a complex web of SAP modules, integrations, configurations and extensions is akin to the intricate nature of the world's tropical rainforests and jungles, where the unruly and lawless setting leads a 'survival of the fittest' philosophy.

Now you wouldn't go into the jungle without the proper precautions, would you? Forward thinking individuals would pack enough fluids, food, insect repellent, etc. to protect themselves of the inherent risks of exploring the jungle landscape. The same is true for SAP – companies must take the necessary safety measures to protect their business from the threats and perils of an SAP implementation or upgrade.

Your only protection against failure or downtime, and the subsequent impact it can have on the business, is a robust quality assurance process within your own SAP jungle. Effective testing has to be a vital part of your strategy, elevating it from a tactical function to a strategic and critical process for the business. This approach will not only minimise downtime, but will also protect the value of your SAP implementation to the business.

But it's not easy – your SAP environment is no doubt customised, undergoes continual change with SAP patches and fixes, new module implementations and configuration changes. Testing every change can seem like a daunting, time consuming and expensive activity!

This 'Original Insight' has been put together to help you figure out how to survive, adapt, and thrive in the testing of your complex SAP eco-system. Join Original Software, as we take you on a quick safari expedition on how to survive in the SAP testing jungle and avoid the common dangers of dehydration, crocodile attacks and threat of malaria!



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Survival Tactic No. 1

Involve all stakeholders in your SAP expedition, especially business users

Your SAP expedition, and in particular your SAP testing team must include all the necessary players. Failure to involve line-of-business stakeholders in your SAP expedition, whether it is an SAP implementation or upgrade, is exposing the project to the threat of jungle fever! OK maybe that analogy is a little extreme, but not involving the business users is definitely opening the door for a potential disaster. Without these users' input, the system may not be implemented in an optimal way and you can be sure that the use of the system will be low at best.

The same can be said for the QA function. Test teams that exist in serene isolation from the rest of the expedition: cut off not only from the development and delivery effort, but also from each other, are risking a 'near death' adventure. With SAP, the testing team is often made up of business users, so it is even more important to ensure that your QA function is part of the overall SAP project management team.

By enabling everyone involved to participate in the quality process – from the business analyst to the business user and from the developer to the tester, management executives are fully empowered by having instant visibility of how your SAP expedition is going.

Survival Tactic No. 2

Plan and manage your trek efficiently

Just like the intrepid explorer uses his or her compass to navigate through the jungle via the plotted journey, SAP project teams must also look to managing and planning their adventure optimally.

With more complexity in SAP projects and a need to respond faster to changing markets, development teams have had to adapt the way they work, often utilising different methodologies on different projects in order to support the dynamic nature of their businesses. Enterprise Agile versus waterfall is a hot talking point and SAP even has its own 'ASAP' methodology.

If your chosen application quality management (AQM) solution does not support the way that you work, you will encourage maverick teams working outside of the expedition, putting everyone at risk. Make sure that your AQM solution empowers your teams and allows the flexibility to aid and not impede them. A centralised library of test assets for re-use is key to providing the agility to support ongoing changes while reducing maintenance costs.

Staying on target during the trek is the ultimate goal, but don't be too focused on the task at hand and forget the wider picture. You need complete visibility into every aspect of the project at any given time; but don't just look at this one project, managers should be able to look at staff resources across multiple projects. If team members are swamped, tasks can be re-assigned elsewhere.

A single point of reference is needed for informed decision making when sending your explorers into the jungle. You need complete visibility of the individual skirmishes that are going on, so that you can re-assign your explorers where they are needed most. Milestones should be created to mark checkpoints and ensure that your SAP journey is running to schedule.

“ Just like the intrepid explorer will plan the trek carefully, making sure that he or she understands the jungle terrain, so too must you discover what has changed in your SAP system before you upgrade. ”



Survival Tactic No. 3

Unforgiving terrain of custom code needs impact analysis

Independent upgrade cycles, multi-system landscapes and the prospect of merging production systems all weigh heavily on the minds of business and IT. Just like the intrepid explorer will plan the trek carefully, making sure that he or she understands the jungle terrain, so too must you discover what has changed in your SAP system before you upgrade.

Traditionally this discovery has been through manual analysis - a process that is time consuming, expensive and risky. The ability to pinpoint specific problems at code level and clearly see where all your potential upgrade conflicts may be, will reduce costs and eliminate the risk of upgrading. Using an automated tool for impact analysis can further reduce your planning, development and testing time by as much as 50 percent.

Survival Tactic No. 4

Make the manual testing voyage easier for your business users

The testing of any SAP system requires business process expertise in order to check that the application meets business expectations. This means relying on business users to test the upgraded system. More often than not business users have no IT skills and equipping them with a tool that is technical will impede your SAP journey. It would be like throwing someone in to the jungle with no means of survival.

The assistance you provide has to be non-intrusive and capture the day-to-day processes of the business users so that their knowledge is retained and shared within your organisation. This means that the tool used should not be code-driven or require programming skills by the users. Make sure that you empower all your users to define and execute their tests without the need to use any kind of code, accelerating your quality process and allowing for faster delivery of your business-critical SAP project.

Survival Tactic No. 5

Don't make the maintenance of test scripts part of your SAP testing expedition

Scripting is essentially programming and requires advanced technical skills, which excludes the very business process experts whose knowledge is required for effective testing. Companies who decide to make the investment in coding soon find themselves with thousands of lines of code that has to be maintained. This code itself is rarely documented and creates an unreasonable maintenance burden, reducing the time and resources available to add new tests.



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SAP have recognised this to a certain extent with their introduction of SAP TAO, which allows users to easily create componentised automated test scripts which are then easy to maintain. However, technical skills are still necessary for script creation and maintenance.

A solution that requires no programming skills, empowering your subject matter experts to define and execute sophisticated tests without the need to use any kind of code is utopia to the ears of many SAP explorers. By having a completely code free solution you effectively remove the need for technical skills to carry out tests for your SAP implementation or upgrade.

There is now scripting technology available that allows users to run existing test scripts over updated versions of the SAP application. Differences are detected and changes incorporated to update the scripts, automatically producing revised scripts for future use, minimising maintenance effort and delivering re-use.

Survival Tactic No 6

Explore test automation to reduce the time of your SAP expedition

When time and resources are limited, continuous manual testing is not a feasible option in the long run. But the maintenance burden of coded test scripts can mean that most test automation efforts are abandoned or left to engineers who are well versed with programming concepts and automation techniques, but not with business processes.

It simply takes too long to develop and maintain all of the code, and costs too much to have skilled coders on staff or as consultants. Most revert to manual testing after much frustration and expense. This is evidenced by literally billions of dollars of test tool shelf ware that is abundant in all market segments.

However, by following survival tactics 4 and 5, you can leverage the business process knowledge to build automated test regression packs. Results of your manual SAP tests can be automatically documented in detail for defect diagnosis or re-use purposes, removing the tedium of manual screen prints. The transition from manual testing into automation is easily achieved through one click conversion of manual results into automated test scripts. This approach has shown to cut up to half the time spent in manual software testing and give you a robust regression suite ready for future use, providing a fast start to SAP test automation.

This way test automation can and will be used in future upgrades and patch implementations, giving a far quicker ROI to the automation costs. Every SAP jungle expedition should have one!



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Survival Tactic No. 7

Ensure that test data is included in your test environment for survival

Whether it is for SAP upgrades or consolidations, when it comes to SAP testing, all project teams face the same challenge: how can we properly test business scenarios without valid, timely and real-world data? The options are few and unappealing. The project teams can create data from scratch, developers can create interfaces, or Basis teams can perform a client copy from production.

Each of these choices has its own unique set of difficulties, but they all share a common theme - they can be costly, inaccurate and time-consuming. In addition, you have the added challenge of having the confidence that you have covered all the required input data combinations optimally.

This survival tactic advises the use of an intelligent SAP data extraction tool to create manageable real-world data scenarios that improve the quality of development and testing. Not only will this reduce the time involved for testing, but it will also minimise the costs and risks.

Another consideration, and one of the hardest aspects to check, is the integrity of the database. Your testing strategy must also include the effects of test processes in the database to enable end-to-end validation. Users would need to have an in-depth and independent verification of the database to show developers and testers exactly what happened during a test. Plus having a tool with checkpoint and rollback functionality can provide SAP users/testers with a database 'undo' ability, which returns the data to a prior state in a few moments so the error can be corrected and the test repeated.

Survival Tactic No. 8

Ensure that you have explored your complete end to end testing journey

One of the most critical success factors in your SAP testing journey is not just the testing of your SAP application, but testing the entire end-to-end business process. This would typically include non-SAP technology as well. It is most often in these cross-platform integration points where problems can occur.

There is a need to repeatedly check systems end-to-end because of greater dependencies in integrated systems and reused services. However, the testing of services and integration points within your SAP implementation introduces a great deal of complexity for your quality management process, whether you use the SAP NetWeaver® stack or some other middleware provider. What is needed is a reusable framework for the constant regression testing that is required.

“Without the proper procedures and tools in place, the upgrade process can turn into a jungle nightmare where one wants to scream: ‘I’m an SAP user, get me out of here!’”



Survival Tactic No. 9

Choose your testing tools and partners wisely

It goes without saying that having the right tools in place will help with all of the survival tactics mentioned in this paper. When it comes to SAP testing the criteria for tool selection has to be carefully agreed to ensure your investment in both SAP itself and the testing tools is maximised.

A key requirement has to be ease of use. As a software vendor in the SAP testing market, Original Software, together with its technology partners IntelliCorp and Green Hat, has always made ease of use its number one priority. After all, SAP is a business application and if your business users can't test the final application due to the complexity of the testing software, then your entire SAP roll out or upgrade will be threatened.

So choose your testing tools wisely and don't let the SAP testing jungle get the better of you!

Thriving in the SAP Testing Jungle

A recent SAP Upgrade Benchmark Survey¹ discovered that efficient testing and project management were both key upgrade challenges. Without the proper procedures and tools in place, the upgrade process can turn into a jungle nightmare where one wants to scream: **“I’m an SAP user, get me out of here!”**

So to avoid the perils of malaria, dehydration, crocodiles and utter exhaustion during your SAP testing expedition, make sure you plan on efficient quality checking activities that start from the project kick-off right the way through to the last few weeks before the project go-live. If application testing is not managed well, it can result in serious doubts by business users over the acceptability of the upgraded SAP system and the system can potentially fail to deliver the promised business value.

Make your SAP project a great expedition and avoid getting perilously close to disaster.

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About Original Software



With a world class record of innovation, Original Software offers a solution focused completely on the goal of effective quality management. By embracing the full spectrum of Application Quality Management across a wide range of applications and environments, the company partners with customers and helps make quality a business imperative. Solutions include a quality management platform, manual testing, full test automation and test data management, all delivered with the control of business risk, cost, time and resources in mind.

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