

Squeeze Your SAP Lifecycle Costs With the Right Impact Analysis Tool

by Derek Prior

Tourists to London are frequently tempted to take a ride on one of its famous, big red buses to duck out of the rain during their sightseeing trips. Those that do often hear the conductor shout, “All change, please” at the end of their journeys.

Project and support teams working on **SAP** lifecycle activities hear the same cry from their business users. Even in the current economic downturn, there’s a growing backlog of change requests, both large—“When will you rollout SAP ERP to Mexico?”—and small: “When can we have those three extra reports that were approved three months ago?”

Most companies tackle the following types of changes to their SAP production systems differently, although they may group some of these together, especially within projects:

- Emergency fix
- Problem resolution
- SAP Support Package
- SAP Legal Change Patches for SAP HR
- SAP enhancement pack
- Small project enhancement
- Large project enhancement (using release management)
- Upgrade project (to get to the next release).

Gaining consensus and budget approval can be challenging, much like the job of executing these changes to existing, highly complex SAP landscapes.

Regression testing is a large part of this work. Many clients tell us they need better tools not only to determine what to test, but to determine what not to. In the absence of this insight, they have to err on the side of caution. They do too much testing rather than too little.

Tools to help

What if you had reliable SAP Impact Analysis tools to pinpoint what you need to test as well as what you don’t? SAP customers that AMR Research has spoken to agree that one could greatly reduce lifecycle costs.

So which SAP Impact Analysis tools should your company consider? All four can identify how any proposed change will impact a long list of SAP objects, including code (standard, modified, and custom), configuration tables, master data, screens, and reports interfaces (see Table 1).

IBIS Reverse Business Engineer (RBE) Plus tool

Products and services from IBIS Prof. Thome have always focused on the analysis of how live SAP systems are used, especially from the functional point of view. The Reverse Business Engineer (RBE) Plus tool analyzes how transactions, authorizations, and objects are customized and utilized, especially for SAP’s industry applications.

The easy-to-use analyses can be between systems and two time frames, with the application insight allowing impact analyses to be performed, although it’s used more for updating business process models within SAP Solution Manager. The analyses are geared mostly toward upgrade and customer enhancement-type changes, providing less information on SAP code objects than SAP data-type objects. The strong integration between RBE Plus Analysis tools and SAP

Table 1: SAP impact analysis tools, version 2

| Factor | IBIS | IntelliCorp | Panaya | SAP |
|---|---|---|--|--|
| Product names | RBE Plus Analyses - Potential Analysis | Live Compare plus Live Model | SAP Upgrade Automation, SAP Support Packs Automation | Solution Manager 7.0 EhP1: Business Process Change Analyzer |
| Java-based SAP Solutions supported? | No | Yes | No | No |
| Supported SAP Solutions | ERP, CRM, SRM, APO, Industry Solutions, BW/SEM | ERP, Business Suite, Industry Solutions, NetWeaver | ERP, all ABAP-based Solutions | ERP, all ABAP-based Solutions |
| Types of changes analyzed | Upgrades, Customer Enhancements | Upgrades, Support Packs, Enhancement Packs, Customer Enhancements | Upgrades, Support Packs, Customer Enhancements | Upgrades, Support Packs, Enhancement Packs, Customer Enhancements |
| Impact analysis prerequisites | SAP Transaction Monitor must be active | None | None | Solution Manager 7.0 EhP1: Business Blueprint configured for processes being tested. |
| Impact analysis system | On the SAP system being analyzed, typically the Test or Production system | Separate small IntelliCorp system, after extracting data from the SAP system being analyzed | On the Panaya remote system after extracting data from the Test/QA and Production systems | On the SAP system being analyzed, typically the Test/QA system |
| Analysis technique used | Static analysis | Static analysis of entire system, with intelligent filters | Full run time analysis on a simulation of the entire system | Run time analysis on preconfigured processes only |
| Impact analysis of program code differences | Only code length, partner tools required for detailed code analysis | Frequency of usage plus closeness to the changed object | Simulation of dynamic runtime behavior, identification of predicted program failure points | Static and dynamic modes. In the latter all impacted objects are detected |
| Impact analysis severity ranking provided | Ranking by own reference hierarchy | Code line linkage with other objects, plus analysis filters | Patented severity ranking algorithms | By business process priority or criticality settings |
| Test software vendor interfaces supported | SAP Solution Manager | HP (Mercury), Worksoft, SAP Solution Manager | HP (Mercury), others | SAP Solution Manager, HP (Mercury), Compuware, Borland |
| Product licensing metrics | By packaged consulting service or software tool license | Organization type plus company annual revenue determine a software tool license | Monthly subscription, Software-as-a-Service model | Free with SAP Enterprise Support |
| Number of global customers live with these products | 160 | 120 | 93 | 2 |

Source: AMR Research, 2009

Solution Manager can be used to optimize testing, but not with other test automation products.

IBIS claims that some customers have achieved 70% project cost reductions.

IntelliCorp LiveCompare/LiveModel tools

IntelliCorp has long specialized in providing SAP application lifecycle management tools, including full impact analysis of all types of SAP changes. The LiveCompare tool automates the comparison of application code and SAP data-type objects across different SAP systems. IntelliCorp's various Impact Analysis templates perform sophisticated dependency analyses of an entire system, including ABAP or Java-type SAP objects. LiveModel is a companion-modeling and documentation tool that can pass test plans to **HP's** Quality Center, SAP Solution Manager Test Workbench, or the increasingly popular **Worksoft** Certify test automation products.

IntelliCorp customers are extremely enthusiastic about the ease of installation and use of its products, as well as with the quality of its technical support. The products support the broadest range of SAP software, including all currently available SAP Impact Analysis tools. The company claims some of its customers have obtained an ROI of 80% with these products.

Panaya SAP Impact Analysis services

In many respects, Panaya has a different approach from the other SAP Impact Analysis tools. For starters, the company offers a convenient, turnkey, software-as-a-service (SaaS) remote delivery model. Second, it can simulate the actual dynamic behavior of your SAP production systems on its own supercomputers to perform an impact analysis on your behalf. The simulation can predict where all programs will fail as a result of the change, suggest how to fix them, and determine

what to retest. It uses SAP configuration information automatically uploaded from your systems after just a 20-minute installation of an extraction program on your development system.

The Impact Analysis is geared toward specific SAP lifecycle changes, such as upgrades and recent support packages. Panaya services also have strong integration with HP Quality Center products.

The company has excellent customer feedback on upgrade changes, but it's too soon to judge the experience from Support Package changes. It claims some customers have experienced a 50% reduction in their SAP upgrade project costs.

SAP Business Process Change Analyzer tool

SAP recently introduced a brand new Impact Analysis tool within SAP Solution Manager 7.0 Enhancement Pack 1 called Business Process Change Analyzer (BPCA), which potentially can handle all types of SAP changes. BPCA aims to identify all the SAP objects used when business processes are executed. It can perform a static or a dynamic analysis using the SAP trace function.

To use BPCA, companies must preconfigure the Solution Manager Business Blueprint module and a new technical bill of materials for the business processes of interest, which can be time-consuming tasks. The tool produces a test plan that can be passed to the Solution Manager Test Workbench.

In November 2009, SAP plans to ship Release 2 of its Test Acceleration and Optimization (TAO) product for the HP Quality Center test automation product. It will also accept test plans from BPCA.

BPCA is free to enterprise support customers, but there are currently only two reference customers, so it's not yet field proven.

Which one is right for you?

Customer references from these four vendors confirm their abilities to squeeze SAP test-related costs and deliver change projects faster. Be sure to evaluate them to determine their suitability for your own testing environments, since different companies have different approaches.

If you currently use one of the test automation tools included in Table 1, consider the following guidelines to help determine the best option:

- If you want a proven tool that can analyze the most SAP products (including Java) for all change types, then the IntelliCorp option could have the most appeal.
- If you prefer the convenience of a SaaS approach, especially for upgrade and Support Package change types, and need to predict program failure points, the Panaya tool could be attractive.
- If you need the least cost option and already use Solution Manager extensively for your SAP project documentation, then the new SAP BPCA option may suit you, but expect some teething problems.
- If you already use the IBIS SAP application analysis tools, then you may be able to adapt or extend them to provide some form of SAP Impact Analysis. It won't provide the sophisticated code analysis of the other options, though.

When deciding whether or not to purchase any software tool to automate SAP activities or squeeze your lifecycle costs, prove first that the tool will work in your SAP environment, then determine its overall ROI and check its references. Won't it be nice to finally know what you don't have to test?